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ENVIRONMENTAL HEALTH PRACTICE IN A SOUTH AFRICAN METROPOLITAN MUNICIPALITY: PROFESSIONAL, ETHICAL AND LEGAL RESPONSIBILITIES AND CHALLENGES

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A thesis submitted to the Faculty of Health Sciences, University of the Witwatersrand, in fulfillment of the requirements for the degree of Doctor of Philosophy.

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DECLARATION

I **Tobius Thobile Poswa** declare that this thesis is my own work. It is being submitted for the degree of Doctor of Philosophy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

Signature … 

2nd day of November, 2017

DEDICATION

I dedicate this research project to three people who contributed immensely to the initiation of this project.

- Professor Bonganjalo Claude Goba who mentored me on ethics and encouraged the ignition of this project. Thus, all those who may benefit from this work, do so because of his guardianship. Regrettably, he passed on whilst I was preparing the final submission of this work.
- I dedicate this work to my mother, Sarah who from the day I was born called me a doctor. I owe this doctoral work to her and regard it as a fulfillment of her wish. I prayed that God would keep her alive to witness the culmination of this work. I thank God for honouring my request.
- I dedicate this work to my wife, Nozuko who consistently urged me to undertake this PhD project even when I saw no need for it. She further committed to stand in for me on some commitments as a pledge of support. Therefore, had she not insisted, this work would not have reached fruition.

PUBLICATIONS AND PRESENTATIONS

During this study I have shared the results with a number of audiences at national and international platforms. These presentations were aimed at inviting debate and obtaining wider opinion on the study observations prior to the drawing up of the final findings.

First, Poswa, TT and Davies, TC. (2014) *"Environmental Health Hazards and Ethical Concerns in South Africa"*, an oral paper presentation abstract on pages 171-172 of the proceedings of the Joint Closing Workshop of the IGCP/UNESCO/SIDA Projects 594 and 606 held in Prague, Czech Republic on 25-28 May 2014. The theme was Addressing Environmental and Health Hazards of Active and Abandoned Mines in Sub-Saharan Africa. The abstract is available online at:

http://www.geology.cz/igcp594/prague2014/closing_workshop_igcp_prague-2014.pdf

Second, Poswa, TT (2015). *"The Landscape of Environmental Health Ethics in South Africa",* a poster paper presented at the Twenty-Fourth Annual International Conference of the Association for Practical and Professional Ethics held at Hilton Orange County, Cost Mesa Hotel, California, USA on 19-22 February 2015. The programme reflecting the title is on pages 42 and 61 and the abstract on page 20 of the abstract booklet. Available online at http://appe.indiana.edu/files/5314/3014/9430/2015AbstractsFinal.pdf also see related link http://varsitypost.com/global-support-for-muts-new-bsc-environmental-health/

Third, Poswa, TT (2015). *"Environmental Health Ethical Practice and Challenges: A Case Study in a Metropolitan Municipality in South Africa"*, a poster paper presented at an International Environmental Health Conference 2015, held at Pullman Hotel, Kuching, Sarawak, Malaysia on 27-28 October 2015. The conference brochure is available at http://www.ifeh.org/asia-pacific/Kuching.programme.pdf

Fourth, Poswa, TT (2015). *"Sharing Insights on Environmental Health Practice in a South African Metropolitan Municipality: Professional, Ethical and Legal Responsibilities and Challenges"*, an oral presentation at the South African Local Government Association 2015 Summit, held at St Georges Hotel and Conference Centre, Pretoria on 19 -20 August 2015. This summit was attended by various environmental health leaders, representatives from environmental training institutions, and politicians from municipalities in South Africa.

Fifth, Poswa , TT and Davies, TC. 2017. The Nature and Articulation of Ethical Codes on Tailings Management in South Africa. *Geosciences*, 7(4), p.101, http://dx.doi.org/10.3390/geosciences7040101.

ABSTRACT

The purpose of this study on environmental health practices in South Africa was two-fold. It first attempted to articulate what the "ideal" ought to be regarding the legal, professional and ethical practice of Environmental Health Practitioners (EHPs) in South Africa. Thereafter, empirical research was undertaken comprising a case study of a group of EHPs practising in a metropolitan municipality to assess the "reality", on the ground, in terms of the level of awareness and understanding among EHPs about their legal, professional and ethical responsibilities and related challenges. The ultimate aim was to perform a normative analysis in which the ideal was compared to the reality on the ground, in order to identify shortcomings and propose possible interventions or other actions to rectify the shortcomings. Another way to express this aim is to say that the "ideal" represents how things ought to be, and the "reality" represents how they actually are.

The study had four objectives: First, to articulate the ideal in terms of the fulfilment of the professional, ethical and legal responsibilities of environmental health practitioners in South Africa. Second, to explore the awareness and understanding among environmental health practitioners regarding their professional, ethical and legal responsibilities in practice, using eThekwini Metropolitan municipality as a case study; Third, to examine challenges facing EHPs in fulfilling their professional responsibilities as found in the case study; and Fourth, to normatively compare the ideal versus the reality on the ground to identify shortcomings.

A qualitative research design was employed using two methods of data collection. A normative approach was adopted involving a literature review and analysis of relevant legislation, policies and procedures to determine the current designation of legal, professional and ethical responsibilities of EHPs in South Africa. Thereafter, empirical data were collected using one-on-one interviews with a total of 35 EHPs employed in the metropolitan municipality that served as the site of the case study. This approach helped in gathering EHPs' views on their understanding of the legal, professional and ethical aspects of environmental health practice and how they enacted these responsibilities "on the ground". Findings from the study revealed that a combination of South African laws makes provisions for the scope of the work of EHPs. However, whilst the laws promote enforcement and compliance, the qualitative data clearly show that many EHPs feel that they have not been adequately prepared and trained to handle

complex situations, where legal measures fell short. EHPs interviewed in this study experienced difficulties in making decisions on non-technical issues, for example, in the investigation of environmental health complaints. They thus relied on their own discretion which often caused conflicts with their superiors.

Professionalism of EHPs in South Africa is governed by the Health Professions Council of South Africa (HPCSA), through the professional Board of Environmental Health Practitioners. EHPs have been found to be aware of their professional responsibilities but are concerned about the lack of active engagement with their professional board. Moreover, the EHPs interviewed held general ideas about ethics but lacked specific environmental health guidelines at their workplaces as well as ethical support to assist them in handling ethical issues. The study noted the absence of a code of ethics for an environmental health ethics in South Africa and lack in the workplaces of ethics support programmes and ethics training for EHPs.

Among the recommendations emanating from the study, was that support was needed to address challenges faced by EHPs in enforcing laws and adopting strategies to sensitise them about people's rights. It is also important to help people to understand the reasons for compliance and the impact of non-compliance, coupled with advancing justice through the review of the laws. A better communication and engagement strategy between the professional board and EHPs needs to be developed. Moreover, an ethics infrastructure to promote a culture of ethics within the environmental health workplaces should be established. This programme should ideally be driven by an ethics structure with appointed lead agents.

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This work has been carried out with the cooperation of a number of people and organisations that made a direct and indirect contributions to its success. I wish to acknowledge the contribution of the following:

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- I thank the eThekwini Metropolitan Municipality Head of Department and her management team for supporting the use of the Environmental Health Unit as the case study for this research and allowing access to staff who offered help during the data collection period. I particularly thank the participating Environmental Health Practitioners for sharing their experiences in environmental health practice.
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- It would not have been possible to carry out this task without the wisdom, guidance and divine power of God. I owe this project to my Lord and Saviour Jesus Christ, who gave me strength to carry on even during times of doubts.

ACRONYMS

AAEH	-	Africa Academy for Environmental Health
ADKAR	-	Awareness, Desire, Knowledge, Ability and Reinforcement
DEA	-	Department of Environmental Affairs
EH	–	Environmental Health
EHO	-	Environmental Health Officer
EHPs	-	Environmental Health Practitioners
EHAI	-	Environmental Health Association of Ireland
EHIA	-	Environmental Health Impact Assessment
EHOA	-	Environmental Health Officers' Association
EHSM	-	Environmental Health Services Manager
EMI	-	Environmental Management Inspector
HI	-	Health Inspector
HO	-	Health Officer
HPCSA	-	Health Professions Council of South Africa
IDP	-	Integrated Development Plan
IFEH		International Federation of Environmental Health
IHR	-	International Health Regulations
INECE	-	International Network for Environmental Compliance and Enforcement
iTrump	-	Inner Thekwini Regeneration and Urban Management Programme
MHS	-	Municipal Health Services
MISTRA		The Swedish Foundation for Strategic Environmental Research
MUT	-	Mangosuthu University of Technology
NEHA	-	National Environmental Health Association

NEHP	-	National Environmental Health Policy
NEMA	-	National Environmental Management Act
NEPAD	-	New Partnership for Africa's Development
NIH	-	National Institute of Health
OECD	-	Organisation for Economic Co-operation and Development
PHC	-	Primary Health Care
PSC	-	Public Service Commission
SAIEH	-	South African Institute of Environmental Health
SALGA	-	South African Local Government Association
UN	–	United Nations
UNESCO	-	United Nations Educations Scientific and Cultural Organisation
UNICEF	-	United Nations Children's Fund
UNDP	-	United Nations Development Programme
UNEP	-	United Nations Environmental Programme
USEPA	-	United States Environmental Protection Agency
WASH	-	Water, Sanitation and Hygiene (Strategy)
WHO	-	World Health Organisation

TABLE OF CONTENTS

DECLARATION ..... **II**
DEDICATION ..... **III**
PUBLICATIONS AND PRESENTATIONS ..... **IV**
ABSTRACT ..... **VI**
ACKNOWLEDGEMENTS ..... **VIII**
ACRONYMS ..... **X**
TABLE OF CONTENTS ..... **XII**
LIST OF FIGURES ..... **XIX**
LIST OF TABLES ..... **XXI**
CHAPTER ONE **1**
THE STUDY OVERVIEW **1**
1.1 INTRODUCTION 1
1.2 THE GROUNDS FOR STRUCTURING THE STUDY AROUND THE LEGAL, PROFESSIONAL AND ETHICAL RESPONSIBILITIES OF EHPS 4
1.2.1 Clarification of the Notions of Legal, Professional and Ethical Responsibilities *5*
1.2.1.1 Legal responsibilities 6
1.2.1.2 Professional responsibilities 9
1.2.1.3 Ethical responsibilities 12
1.3 A BROAD REVIEW OF THE PRACTICE OF ENVIRONMENTAL HEALTH 16
1.3.1 Organisations Shaping International Environmental Health *21*
1.3.1.1 The World Health Organisation (WHO) 21
1.3.1.2 The United Nations 25
1.3.1.3 The International Federation of Environmental Health [IFEH] 26
1.3.1.4 Africa Academy for Environmental Health [AAEH] 27
1.4 TAKING ACCOUNT OF INFLUENCES ON THE BEHAVIOUR OF EHPS 27
1.5 AIM: THE PURPOSE THE STUDY 29
1.6 STATEMENT OF THE PROBLEM AND RATIONALE FOR THE STUDY 29
1.7 ASSUMPTIONS, RESEARCH QUESTIONS AND OBJECTIVES 32
1.7.1 Assumptions Underpinning the Study *33*
1.7.2 Research Questions *33*
1.7.3 Objectives *34*
1.7.4 Outcome of the Study *34*
1.8 THE THEORETICAL LENS FRAMING THE STUDY 34
1.9 THESIS OUTLINE 35
1.10 SUMMARY OF THE CHAPTER 36

CHAPTER TWO **37**
METHODOLOGY **37**
2.1 INTRODUCTION 37
2.2 STUDY DESIGN 38
2.2.1 Design of normative component *39*
2.2.2 Design of empirical component *39*
2.3 SITE OF STUDY 40
2.4 STUDY POPULATION 44
2.4.1 Sampling and Selection of Research Participants *47*
2.4.2 Inclusion and Exclusion Criteria of Research Participants *49*
2.4.3 Profile of Research Participants *49*
2.5 EMPIRICAL DATA COLLECTION: 54
2.5.1 Step 1: Development of empirical data tools and pilot *54*
2.5.2 Step 2: Data Collection via an Empirical Approach *54*
2.6 DATA MANAGEMENT 57
2.6.1 Data Processing and Analysis *57*
2.6.2 Procedures to Enhance Trustworthiness of the Data *60*
2.7 ETHICAL CONSIDERATIONS 60
2.7.1 Institutional Ethics Approval *61*
2.7.2 Field Site Approval and Recruitment of Study Participants *61*
2.7.3 Ethical Considerations during the Data Analysis and Presentation of Findings *62*
2.8 SUMMARY OF THE CHAPTER 62

CHAPTER THREE **63**
NORMATIVE "IDEALS" IN ENVIROMENTAL HEALTH PRACTICE **63**
3.1 INTRODUCTION TO THE NOTION OF "IDEAL" VERSUS "REALITY" STUDIES 63
3.2 AN ACCOUNT OF THE "IDEAL" REGARDING THE PRACTICE OF EHPs 64
3.2.1 IDEALS IN DEVELOPING A REGULATORY FRAMEWORK FOR EHPS 68
3.2.2 IDEALS FOR ADVANCING PROFESSIONALISM OF EHPS 71
3.2.3 IDEALS FOR CREATING A CULTURE OF ETHICAL PRACTICE AMONG EHPS 73
3.3 SUMMARY OF THE CHAPTER 75

CHAPTER FOUR **76**
THE LEGAL RESPONSIBILITIES OF ENVIRONMENTAL HEALTH PRACTITIONERS IN SOUTH AFRICA **76**
4.1 INTRODUCTION 76
4.2 A SUMMARY OF LAWS APPLICABLE TO EHPS IN SOUTH AFRICA 77
4.3 SELECTIVE EXAMPLES OF LAWS WITH MANDATES FOR ENVIRONMENTAL HEALTH PRACTITIONERS IN SOUTH AFRICA 81

4.3.1 EHP MANDATE IN CONTEXT OF THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, ACT NO. 108 OF 1996 82
4.3.2 EHP MANDATE IN CONTEXT OF THE NATIONAL HEALTH ACT (NHA), NO. 61 OF 2003 84
4.3.3 EHP MANDATE IN CONTEXT OF THE FOODSTUFFS, COSMETICS AND DISINFECTANT ACT, NO. 54 OF 1972 .. 86
4.3.4 EHP MANDATE IN CONTEXT OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 107 OF 1998 87
4.4 SELECTIVE EXAMPLES OF LAWS ENFORCED BY ENVIRONMENTAL HEALTH PRACTITIONERS IN SOUTH AFRICA 89
4.5 INSIGHTS IN RESPECT OF LAWS APPLICABLE TO ENVIRONMENTAL HEALTH 90
4.5.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA ACT, NO. 108 OF 1996 91
4.5.2 THE NATIONAL HEALTH ACT NO. 61 OF 2003 92
4.5.3 THE FOODSTUFFS, COSMETICS AND DISINFECTANTS ACT, NO. 54 OF 1972 (FCD) 93
4.5.4 THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA), NO. 107 OF 1998 94
4.5.5 TOBACCO PRODUCTS CONTROL ACT, NO. 83 OF 1993 95
4.5.6 OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993 96
4.5.7 OTHER ENVIRONMENTAL HEALTH RELATED LEGISLATION 96
4.5.8 REGULATIONS AND PROCEDURES FROM LEGISLATION 97
4.5.9 POLICY GUIDELINES AND NATIONAL ENVIRONMENTAL HEALTH NORMS AND STANDARDS FOR PREMISES AND ACCEPTABLE MONITORING STANDARDS FOR ENVIRONMENTAL HEALTH PRACTITIONERS 99
4.5.9.1 The National Environmental Health Policy 99
4.5.9.2 The Batho Pele White Paper 100
4.5.9.3 National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners 102
4.5.10 BY-LAWS 103
4.6 PERCEIVED LEGAL CHALLENGES IN EHPS' WORK 105
4.6.1 CHALLENGE 1: INCONSISTENCIES IN APPLYING LAWS TO DIFFERENT SITUATIONS IN THE MUNICIPAL AREAS AND OVERLAP OF LEGISLATION REQUIREMENTS 105
4.6.2 CHALLENGE 2: ESSENTIALS FOR DEALING WITH ETHICAL CONCERNS DURING LAW ENFORCEMENT 109
4.7 SUMMARY OF THE CHAPTER 111

CHAPTER FIVE 112
THE PROFESSIONAL RESPONSIBILITIES OF ENVIRONMENTAL HEALTH PRACTITIONERS IN SOUTH AFRICA 112
5.1 INTRODUCTION 112
5.2 THE PROFESSIONAL SET-UP OF ENVIRONMENTAL HEALTH IN SOUTH AFRICA 113
5.3 PROFESSIONAL IDENTITY OF EHPS IN SOUTH AFRICA 118
5.3.1 Professional Description of an EHP in South Africa *118*
5.3.2 Distinguishing Characteristics of Professional EHPs *121*
5.4 EHPS' VIEWS REGARDING BELONGING TO A PROFESSIONAL BODY – THE HPCSA .. 125
5.5 EHPS' VIEWS ABOUT PROFESSIONAL IDENTITY AND THE ROLE OF THE HPCSA 127

5.5.1 How EHPs Understood their Professional Identity 128
5.5.2 EHPs' Understanding of the Role of the EH Professional Body - the HPCSA 129
5.5.2.1 Part 1: Statements expressing positive role of HPCSA 129
5.5.2.2 Part 2: Statements expressing concerns on the role of the HPCSA 131
5.6 PROFESSIONAL PRACTICE RELATED CHALLENGES FACED BY EHPs 136
5.6.1 Performance of Professional Acts 137
5.6.2 Reporting of Unprofessional Conduct 138
5.7 SUMMARY OF THE CHAPTER 140

CHAPTER SIX 141
ETHICAL PRACTICE OF ENVIRONMENTAL HEALTH IN SOUTH AFRICA 141
6.1 INTRODUCTION 141
6.2 FUNDAMENTALS OF ETHICAL PRACTICE 143
6.2.1 A Brief Description of the Meaning of Ethics 143
6.2.2 Three Major Decision-making Considerations in Ethical Practice 144
6.2.3 Examples of How Applying Ethical Judgements Impacts on Practitioners' Work 147
6.3 REGULATORY FRAMEWORK FOR ETHICAL PRACTICE OF ENVIRONMENTAL HEALTH IN SOUTH AFRICA 148
6.3.1 Ethical provisions in the Constitution of the Republic of South Africa Act, no. 108 of 1996 149
6.3.2 Ethical provisions in the National Health Act, No. 61 of 2003 as amended by Act, no. 12 of 2013 152
6.4 THE ETHICAL FRAMEWORK FOR ENVIRONMENTAL HEALTH PRACTICE 153
6.4.1 Utilitarianism 154
6.4.2 Deontology 155
6.4.3 Virtue Ethics 156
6.4.4 Principlism 157
6.4.5 The Social Contract Approach 159
6.4.6 Public Health Ethics 160
6.5 EMPIRICAL VIEWS ON ETHICAL PRACTICE OF ENVIRONMENTAL HEALTH 161
6.5.1 Grey Area Challenges in the Routine Environmental Health Inspections and Handling of Complaints 162
6.5.1.1 Handling of business licensing related environmental health challenges 162
6.5.1.2 Handling of uncooperative client challenges 163
6.5.1.3 Unequal attention given to special work compared to routine inspections 164
6.5.1.4 Resource constraints 166
6.5.1.5 Addressing the safety of EHPS at remote workplaces 167
6.5.2 The EHPs Understanding of the Meaning of Ethics 168
6.5.3 Prevailing Ethical Practice in the EHPs' Workplace 171
6.5.3.1 Relationships among EHPs and teamwork 171
6.5.3.2 Relationships of EHPs and Management in the workplace 175

6.5.3.3 Effect of the reporting lines on EHPs' work output 177
6.5.3.4 Proactive approach, feedback and collaboration 178
6.5.4 Ethical Challenges Faced by EHPs in the Workplace *180*
6.5.4.1 Ethical challenge 1: Absence of an ethical guide of environmental health 180
6.5.4.2 Ethical challenge 2: Gender discrimination 181
6.5.4.3 Ethical challenge 3: Keeping confidentiality 183
6.5.5 Infrastructure and Support for EHPs Ethical Practice *183*
6.5.5.1 Best Practices on ethical practice infrastructure and support 185
6.6 SUMMARY OF THE CHAPTER 187

CHAPTER SEVEN 189

DISCUSSION 189

7.1 THE CONTEXT OF THE STUDY IN RELATION TO THE FINDINGS 189
7.2 CONTRIBUTIONS OF THE STUDY TO THE LEGAL, PROFESSIONAL AND ETHICAL KNOWLEDGE BASE OF ENVIRONMENTAL HEALTH PRACTITIONERS 194
7.2.1 Study Contribution to Environmental Health Intervention Programmes *194*
7.2.1.1 Study affords EHPs with an opportunity to reflect on their practice 195
7.2.1.2 Study creates awareness about ethical issues in the practice of environmental health 196
7.2.2 Benchmarking Against Selected Studies Related to Environmental Health Practice *203*
7.3 IMPLICATIONS OF THE FINDINGS 208
7.3.1 Implications for the Municipal Environmental Health Services *208*
7.3.1.1 Implication pertaining to law enforcement 208
7.3.1.2 Implication pertaining to the safety of EHPs whilst carrying out duties 209
7.3.2 Implications to the HPCSA Professional Board of Environmental Health Practitioners in South Africa *210*
7.3.2.1 Implication pertaining to the task of establishing professional standards 211
7.3.2.2 Implication pertaining to creating a Code of Ethics of Environmental Health 212
7.3.2.3 Clarity pertaining to dual role of serving as both a professional board member and executive member of professional association 212
7.3.2.4 Better engagement of the professional board and the EHPs community 212
7.3.2.5 Mechanism for handling inter-professional issues 213
7.3.2.6 Mechanism for addressing challenges of female EHPs 213
7.3.3 Implications to the Training Institutions Offering Environmental Health Programmes in South Africa *214*
7.4 INTERPRETATIONS ON HOW FINDINGS MATCHED THE STUDY ASSUMPTIONS 215
7.4.1 Assumption 1: Relating to Knowledge of Legislation *215*
7.4.2 Assumption 2: Relating to the Likelihood of Acting Unethically *216*
7.5 SUMMARY OF THE CHAPTER 217

CHAPTER EIGHT 219

CONCLUSIONS AND RECOMMENDATIONS **219**
8.1 INTRODUCTION 219
8.2 CONCLUSIONS 220
8.2.1 Conclusions on the Legal Dimensions of Environmental Health Practice *220*
8.2.2 Conclusions on the Professional Dimensions of Environmental Health Practice *221*
8.2.3 Conclusions on the Ethical Dimensions of Environmental Health Practice *222*
8.3 LIMITATIONS OF THE STUDY 224
8.4 RECOMMENDATIONS 225
8.4.1 Recommendations on Environmental Health Professional Practice *225*
8.4.1.1 Recommendations to the metropolitan municipality 225
8.4.1.2 Recommendations relating to the environmental health profession 232
8.4.2 Recommendations on Environmental Health Ethical Practice *234*
8.4.2.1 To the metropolitan municipality 234
8.4.2.2 To the environmental health profession 237
8.4.3 Recommendations for Future Research *238*
8.5 A MODEL FOR STRENGTHENING THE BALANCE OF THEORY AND PRACTICE IN ENVIRONMENTAL HEALTH IN SOUTH AFRICA 238
8.5.1 Context of the Proposed Model *238*
8.5.2 Interpretation of the Phases of the Proposed Model *242*
8.5.2.1 EHP Beginner Level: Preparation for Work Phase 242
8.5.2.2 EHP Intermediate Level: Orientation Phase 243
8.5.2.3 EHP Advanced Level: Active Environmental Health Practice Phase 243
8.5.2.4 EHP Scholarship Level: Active Applied Research Driven Phase 244
8.5.2.5 Team of EHP Experts Level: Strategic Input Phase 245
8.6 CONCLUDING COMMENTS 246

REFERENCES **249**
ANNEXURE 1: INTERVIEW SCHEDULE FOR ETHEKWINI METROPOLITAN ENVIRONMENTAL HEALTH PRACTITIONER (EHP) MANAGERS **266**
ANNEXURE 2: INTERVIEW SCHEDULE FOR ETHEKWINI METROPOLITAN ENVIRONMENTAL HEALTH PRACTITIONERS (EHPS) **269**
ANNEXURE 3: LETTER REQUESTING RESEARCH SITE CLEARANCE **271**
ANNEXURE 4: GRANTING OF RESEARCH SITE CLEARANCE **272**
ANNEXURE 5: PARTICIPANT INFORMATION SHEET **273**
ANNEXURE 6: CONSENT FORMS **274**
ANNEXURE 7: ETHICS CLEARANCE CERTIFICATE **275**
ANNEXURE 8: A SYNOPSIS OF SOCIETAL INFLUENCES ON THE BEHAVIOUR OF EHPS WITH KOHLBERG MODEL **276**
ANNEXURE 9: APPLYING DREYFUS'S MODEL TO INTERPRET THE DEVELOPMENTAL STAGES OF AN EHP IN SOUTH AFRICA **281**

ANNEXURE 10: ELEMENTS IN THE THEORY AND PRACTICE OF ENVIRONMENTAL HEALTH 289
ANNEXURE 11: GRANTING OF PERMISSION TO USE MAPS 296

LIST OF FIGURES

Figure 1.1: The diagrammatical illustration of the interconnection of legal, professional and ethical responsibilities whose application is context based. 8

Figure 1.2: The 10 essential services of Environmental Health that apply generally to environmental health practice. 18

Figure 2.1: Map showing the location of Kwa-Zulu Natal Province in the South African map where eThekwini metropolitan municipality is located. 41

Figure 2.2: eThekwini Metropolitan in Relation to Kwa-Zulu Natal District Municipalities. 43

Figure 2.3: Map of eThekwini Metropolitan Municipality showing operational areas for environmental health services. 45

Figure 2.4: A brief outline of the reporting structure of the eThekwini Metropolitan Municipality showing how the research participants feature in the organisation. 46

Figure 2.5: Distribution of research participants for empirical data collection. 48

Figure 2.6: Graphical presentation of the lowest to the longest years of experience as an EHP. 50

Figure 2.7: Home language of research participants. 50

Figure 2.8: Gender distribution of research participants. 51

Figure 2.9: Research participants' qualification in the field of Environmental Health. 52

Figure 2.10: Age distribution of the research participants. 53

Figure 2.11: Distribution of research participants across the case study area. 53

Figure 5.1: The Twelve Professional Boards of Health Practitioners in South Africa Including one for Environmental Health 114

Figure 5.2 A diagrammatical presentation of the main health professions guideline in South Africa Showing the responsible structures, key functions they perform and the involved Stakeholders in the Implementation and HPCSA Communication Stakeholder Engagement Strategy 117

Figure 5.3: Key components in the professionalism of EHPs 122

Figure 5.4: Statements given as reasons why EHPs retained their membership of the Professional body, the Health Professions Council of South Africa (HPCSA) 126

Figure 6.1: Major ethical regulatory guidelines applicable to environmental health Practice in South Africa 149

Figure 6.2: An illustration of key Ethical Theories and Ethical Principles that Can be Used in Environmental health Practice 154

Figure 7.1: The channging profile of EHPs in South Africa: A 10 year Contrast of male and femal HPCSA registered practising Environmental Health Practitioners 214

LIST OF TABLES

Table 2:1	Table Depicting Coherence between Objectives, Methods, Data Source and Data Analysis	38
Table 2.2:	Comparison of eThekwini metropolitan municipality performance status in relation to other South African metropolitan municipalities	42
Table 2.3:	Table showing the main questions and their purposes in line with the three aspects: legal, professional and ethical responsibilities of EHPs being addressed in this study.	56
Table 2.4:	Table Showing Key Areas Addressed in the Data Analysis	58
Table 4.1:	A Comprehensive List of Laws Applicable to Environmental Health i in Sout Africa	78
Table 4.2:	List of Key Legislation Providing for the Formulation of EHP Mandates in South Africa	83
Table 4.3:	Selective Examples of Laws with Enforcement challenges faced by EHPs in South Africa	90
Table 8.1:	Model for balancing theory and practice of legal, professional and ethical aspects of Environmental Health in South Africa	241

CHAPTER ONE

THE STUDY OVERVIEW

1.1 INTRODUCTION

The purpose of this study on environmental health practices in South Africa is two-fold. Firstly, it attempts to articulate what the "ideal[1]" ought to be regarding the legal, professional and ethical practice of Environmental Health Practitioners (EHPs[2]) in South Africa. Secondly, it engages an empirical research comprising a case study of a group of EHPs practising in a metropolitan municipality to assess the "reality", on the ground, in terms of the level of awareness and understanding among EHPs about their legal, professional and ethical responsibilities and related challenges.

The ultimate aim is to do a normative analysis in which the ideal is compared to the reality on the ground, in order to identify shortcomings and propose possible interventions or other actions to rectify the shortcomings. Another way to express this is to say that the "ideal" represents how things ought to be, and the "reality" represents how they actually are. The basic model for this research design is based on what Alexander Kon describes as "Ideal Versus Reality" studies in his article *The Role of Empirical Research in Bioethics.* He writes of a typical ideal versus reality study that it "starts with a premise regarding ethical norms and then seeks to assess the extent to which actual … practice reflects this ideal." (Kon, 2009, p.60).

[1] Understanding what constitutes an "ideal" of practice is informed by a clear understanding of what the practice entails. Thus, while the "ideal" and "real" situations are distinct they are also closely intertwined – the distinction is not solely a process of identifying what is going "wrong" in situ, but rather also learning from in situ practices to better inform what we understand as an ideal of practice. Going from "ideal" to "real" is not a unidirectional process, but a continuous back and forth.

[2] An EHP denotes "An environmental health professional or specialist who is a practitioner with appropriate academic education and training and registration or certification to: investigate, sample, measure, and assess hazardous environmental health agents in various environmental media and settings; recommend and apply protective interventions that control hazards to health; develop, promote, and enforce guidelines, policies, laws, and regulations; develop and promote health communications and educational materials; manage and lead environmental health units within organisations; perform systems analysis; engage community members to understand, address and resolve problems; review construction and land use plans and make recommendations; interpret research utilising science and evidence to understand the relationship between health and environment; and interpret data and prepare technical summaries and reports" (National Environmental Health Association, 2013, p.72). More details on Annexure 11 that presents Elements in the Theory and Practice of Environmental Health.

Later in Chapter Three discussion dedicated to describing the ideal regarding the legal, professional and ethical practice of EHPs in South Africa is presented. Subsequently, Chapters Four to Six describe the results of the empirical research which represents the "reality", and Chapter Seven provides an account of the extent to that the ideal matches the reality.

First, it is important to clarify why an ethical inquiry on the practice of environmental health was deemed necessary in South Africa. This study paid attention to how provisions in the key professional, legal and ethical guidelines played out on the ground. This line of thought was based on the understanding that "… [in practice] professionals [as] people don't blindly follow rules and standards procedures, but ideally, reflect and evaluate what works best in a given situation" (Connolly et al., 2009, pp.54-56). The assumption was that determining what EHPs experience and ascertaining their views about environmental health practices was important to understanding the effectiveness of the environmental health interventions.

The Health Professions Council of South Africa (HPCSA) through its generic guidelines administers both environmental health professional and ethical practices in South Africa, for Good Practice in the Health Care Professions (Health Professions Council of South Africa (HPCSA), 2008a). The HPCSA guidelines compel all healthcare practitioners to subscribe to certain rules of conduct which include registering with their respective Professional Boards [EHPs are part of such practitioners] (Health Professions Council of South Africa (HPCSA), 2008). However, unlike other disciplines that have "developed specific codes of ethics for their professions" (London et al., 2014, p.2), the environmental health profession has remained with no distinct code of ethics for Environmental Health Professionals (EHPs) in South Africa. The reason for this lacuna is unknown but can be attributed to the nature of the environmental health profession whose application cuts across and draws from different disciplines. The continuation of this situation is concerning given that ethics has been identified and embraced even in the business sector as key to success in companies for ensuring that dignity, fairness, honesty and justice prevail . In this regard, the Ethics Institute of South Africa has acknowledged that ethics is an integral part of responsible business: for example in the King III Report there are ethical principles, which aim at ensuring that the business sector adheres to the protection of the integrity of consumers and that it instils a sense of corporate social responsibility (Landman, 2009, Institute of Directors in Southern Africa, 2013). The Institute of Directors in Southern Africa developed King Reports on corporate governance as ideal guiding tools that could be used as a framework for good governance marked by effective leadership that subscribe to fair, transparent decision-making and accountable practices. The King Report on Corporate

Governance requires that the Board and directors should provide effective leadership, based on ethical foundations, and ensure that ethics is effectively managed in a coordinated manner; that there is compliance with legal and other imperatives and that there are ethics awareness and training programmes in place as well as secure means of identifying unethical behaviour in the form of whistle-blowing (Institute of Directors in Southern Africa, 2009a). The latest released King IV Report stresses the responsibility of leadership by requiring that they disclose how they are held accountable for their leadership, and are to set direction, approach and conduct for the organisation (KPMG, 2016, Institute of Directors in Southern Africa, 2016).

Given that environmental health is a public service, it is important to have an understanding and ability to apply "ethical instruments as these serve as catalysts for advancing transparency and accountability in service delivery" (Public Service Commssion (PSC), 2010, p.6). Ethical instruments are paramount to providing guidance in situations where EHPs are likely to exploit their clients in the course of carrying out their responsibilities by for example failing to follow proper channels of "obtaining consent and/ or protecting confidentiality" of sensitive information during investigation of complaints or when conducting environmental health inspections (Swanepoel and De Beer, 2011, p.168). The understanding of ethics by EHPs is important in creating awareness about the "possibility that their work may [negatively] affect communities in ways that may be difficult to anticipate in advance" (Resnik et al., 2005, p.17).

From my personal observations, it is of great concern that, whereas, (i) the international code of ethics for Public Health has pointed out that "the mandate of ensuring the protection of the health of the public[3] comes with an obligation to care for the wellbeing of communities coupled with an element of power to carry out the mandate", (Thomas et al., 2002, p.1057), (ii) EHPs in South Africa operate with no ethical code of conduct. With a code of ethics, it is likely to have a practice that advocates for the balancing of the exercising of power and to take precautions to avoid the abuse of the same power. Thus, avoid [or enable to handle] situations that can lead to ethical dilemmas. Principles[4] underpinning "the practice of ethics in public

[3] The protection of public health is central to the functions of EHPs.

[4] Examples of principles of the ethical practice of public health applicable to EHPs provides for a practice that ensures: (i) community health should be achieved in a way that respects the rights of individuals in the community; (ii) public health institutions should act in a timely manner that on information they have within the resources and the mandate given to them by the public; (iii) public health programmes and should incorporate a variety of approaches that anticipate and respect diverse values, beliefs, and cultures in the community,(iv) public health institutions should protect the confidentiality of information and exceptions must be justified where there is high likelihood of significant harm to the individuals or others; and (v) public institutions and their employees should engage in collaborations and affiliations in ways that build public trust and the institution's effectiveness (Thomas et al., 2002, p.1058).

health" (Thomas et al., 2002, p.1058), which are relevant to environmental health, require public health professionals "to embrace inputs from, show respect towards and be accountable to those they serve" (Lee, 2012, p.24).

In focusing on the professional, ethical and legal responsibilities of EHPs in South Africa, the knowledge and awareness of EHPs regarding both the legal framework and the professional ethical guidelines applicable to their discipline were explored. Such an exploration assisted in identifying pertinent factors in the training, practice, context and regulation of EHPs that either hinder or promote the fulfilment of professional, ethical and legal responsibilities. Moreover, I believe that these findings were the grounds for motivating for the development of a relevant code of ethics for EHPs in South Africa which could potentially enhance service delivery, as well as for other applicable actions or means like the balancing of theory and practice that would assist EHPs to fulfil their obligations more effectively.

A discourse on the legal, professional and ethical dimensions of EHPs practice is presented in the rest of this thesis.

1.2 THE GROUNDS FOR STRUCTURING THE STUDY AROUND THE LEGAL, PROFESSIONAL AND ETHICAL RESPONSIBILITIES OF EHPS

This study is structured in terms of three dimensions of the responsibilities of EHPs: the legal, the professional and the ethical. Common to the three dimensions is the notion of *"responsibility"*[5] which is central to this study. Responsibility is used in this thesis from a "role-responsibility" context. In drawing from the work of Carl Mitcham: the general description of the "role" concept is that it refers to "the behaviour expected of the occupant of a given position or status" (Mitcham, 2003, p.274). Applying this from a normative context, the notion of role responsibility pertains to the description of "what is expected of the [practitioner] and the prescription of "how such a [practitioner] ought to behave [in playing the] unique role for the "good of the whole" group.

So, role responsibility implies that practitioners operate in different contexts: (i) they are expected to take responsibility to own up and account for their roles in their individual capacity. (ii) They also have a "collective role responsibility" which is exercised through "professional codes of conduct [where they are expected for example to] "adhere to professional principles

[5] A more general reference to responsibility is given under section 1.3

[and speak against] "fraud and misconduct" (Mitcham, 2003, pp.274-276). (iii) As expanded in Chapter Three, section 3.2 that addresses the notion of stewardship, practitioners play their "role-responsibility" as agents where they "serve more than their [professional] interests [but] serve as representatives" of the public and the state (Mitcham, 2003, pp.282-283). This view of role-responsibility relates to what the society expects of the practitioners, hence good conduct of practitioners is important to gaining public trust.

The relationship of legal, professional and ethical responsibilities which are described briefly in this section and in detail in subsections 1.2.1 – 1.2.3 respectively are depicted in Figure 1.1. It is important to point out that the legal, professional and ethical aspects are interconnected in practice. In other words, they are not seen in black and white, as the lines between the three are blurred. Nonetheless, it is both convenient and useful to consider the three aspects separately.

In broad terms, legal responsibilities are those of EHPs, in their professional capacity, that are established on the basis of law. This includes any international law that applies, the provisions of the Constitution, common law, statutes and associated regulations and applicable case law. Professional responsibilities are those that are clearly expressed in the rules of conduct and guidelines of professional bodies. Defining what is meant by ethical responsibilities is a little more difficult, since EHPs have an ethical responsibility to obey the laws that apply to their practice as well as to adhere to professional rules and guidelines. However, there are ethical obligations that professionals may have, that are not specified in laws or professional rules. Sometimes situations arise in which there is no guidance from the Law or the profession. It is therefore not enough for professional conduct just to be a matter of compliance and obedience. Ethical behaviour is also driven by motivation. There needs to be a deeper commitment to doing the right thing, other than just obeying rules. If there is not, professionals might think that it is acceptable to ignore the rules whenever it is likely that they will not be found out. A deeper motivation to do what is right needs to be nurtured in professionals. All of this is in the realm of ethical responsibilities.

1.2.1 Clarification of the Notions of Legal, Professional and Ethical Responsibilities

One of the challenges in carrying out this study was having to provide a clear distinction between the legal, professional and ethical responsibilities. In this section these notions are clarified.

1.2.1.1 Legal responsibilities

Legal responsibilities are those of EHPs, in their professional capacity, that are established on the basis of law. This includes any international law that applies, the provisions of the Constitution, common law, statutes and associated regulations and applicable case law. The importance of law in professional practice is underscored by Section 22 of the South African Constitution which provides that "every citizen has a right to choose a profession" with a proviso that "the practice of a profession may be regulated by law". This provision can be interpreted as implying that EHPs must operate within the provisions of the law as much as their entry to the profession is a matter of choice.

The general dictionary meaning of the concept 'legal' denotes that an act or behaviour is interpreted as acceptable or unacceptable in accordance with the provisions of the law[6] (Hornby, 2010, p.849). When applied to EHPs, legal responsibilities refer to the functions directed or prescribed by law. Laws carry with them authority that require people or institutions to meet their requirements without exceptions. Laws are established by government as a "set of consistent universal rules that are published to be accessible to everyone within the society, [that are] accepted to be obeyed and are enforced to all members of society" (Anstead, 2001, p.2). EHPs are among the enforcing agents of law. Since laws either "restrict or permit an action or activities", it is important for any law enforcing agent [like the EHPs] to be clear about the restrictive and permissive nature of laws, so as to determine whether one's actions are within the allowable limits or have transgressed the set rules (Scott, 2004, p.1).

From a legal responsibility perspective EHPs need to be conversant with all applicable law in the field of environmental health. This knowledge of applicable legislation is important for ensuring that EHPs operate within the scope of their professional practice and the law. In terms of this principle EHPs should be able to carry out their duties without fear or favour.

The legal responsibilities of EHPs in South Africa, as pointed out above, refer to the requirements in the law by which EHPs are appointed, their duties are defined and the laws that EHPs are legally required to enforce and abide by. The legal responsibilities component of

[6] The use of legal terms in this thesis particularly in the legal component is from an EHP professional practice perspective and embraces applicable legislative guidelines. Thus, general dictionary definitions are used in the absence of better technical explanations. Three terms commonly used interchangeable in this thesis which meaning is drawn from the Oxford Advanced Learner's Dictionary are: First, *"the law"* which denotes the whole set of rules that everyone in a country or the society as a whole must obey. Second is "*legislation"* which refers to a law (an Act) or a set of laws passed by a parliament (The Legislature comprised of a group of people that has the power to make and change laws).

environmental health practice addresses the legal mandate i.e. the specific responsibilities stipulated in the law that EHPs are required to carry out, for example in the National Health Act, no. 61 of 2003 and its amendments. It can be said that EHPs have a fiduciary duty to act in the interests of the public health, to carry out their duties in a way that ensures the best standard of care and exercise of skill and diligence, in fulfilling their legal mandate.

The success of enforcing laws and rules is affected by the knowledge of the legislation and the user-friendliness of the laws in question. It is therefore important that EHPs have a good grasp of the laws they enforce and the associated challenges of law enforcement. In emphasising this point, the Organisation for Economic Co-operation and Development (OECD), (2000a), has pointed out that non-compliance is high when "the legal requirements are too complex to be understood by those who are meant to comply with them". In addition, cognizance needs to be taken of the fact that law requirements can be vague and inappropriate to address the issues at hand i.e. they can be "unreasonable and unresponsive" (Organisation for Economic Co-operation and Development (OECD), 2000a, pp.14-16). In such situations, continuing education of those who enforce laws is essential to impart the knowledge that laws are "inflexible tools designed to promote compliance" and as such can harm relationships (Organisation for Economic Co-operation and Development (OECD), 2000b, p.37). This point is significant given that a study conducted on 144 public health officials in nine States in the United States of America (USA) has found that there were instances where such officials lacked a clear understanding of the purpose of the law they were meant to enforce. The USA study identified "legal training as paramount to empower the officials" (Jacobson et al., 2012). As will be demonstrated in Chapter Four, these findings are relevant to my study as the current legal landscape governing EHP practice is highly complex.

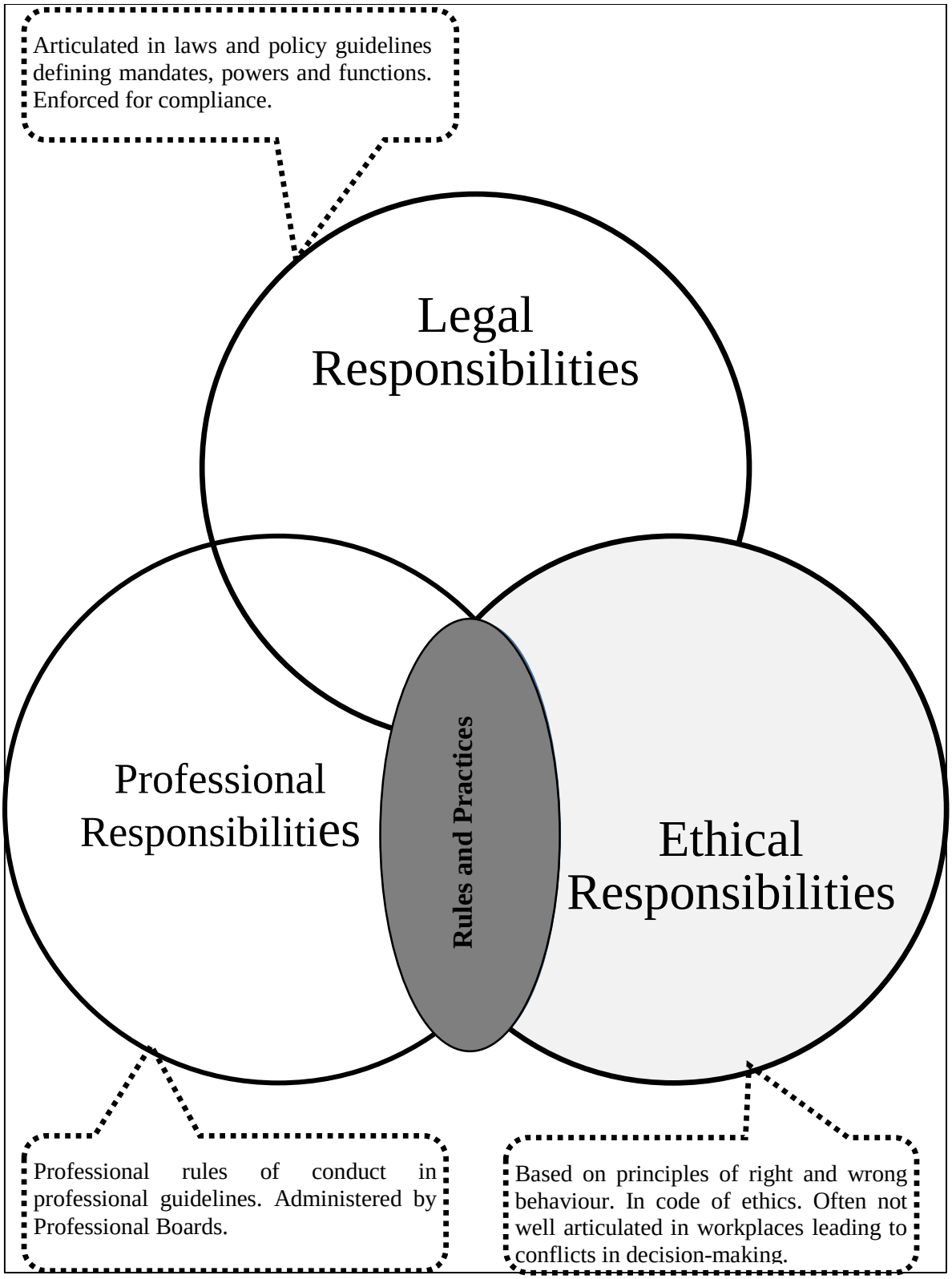


Figure 1.1: **Diagrammatic illustration of the interconnection of legal, professional and ethical responsibilities whose application is context based**.

In applying legal responsibilities it is important to avoid stressing legal knowledge alone without involving personal values, as that approach is likely to promote compliance without commitment. Hence, De Cremer (2014) asserts that "where practitioners only have knowledge of the prescripts of the law without being sensitive to the relationships that they have to those they serve, encourages a practice of merely meeting the minimum requirements without attaching their personal values to what they do". [The resultant effect of this, is that] "where there are too many laws and rules, a tick-the box mentality occurs, with people only concerned about the written declared acceptable issues and disregard any other bad behaviour like taking bribes", as long as it is not written down (De Cremer, 2014, p.4). This example indicates that legal responsibilities do have an ethical connotation. When the laws are applied within the framework of a profession they are professional rules of conduct, leading to professional responsibilities of the EHPs discussed in the following paragraphs.

1.2.1.2 Professional responsibilities

Professional responsibilities are those that are clearly expressed in the rules of conduct and guidelines of professional bodies. To understand what is meant by professional responsibilities, it is necessary to explain what is meant by the term "profession". Clearly, not all occupations are regarded as professions. Traditionally the professions included medicine, the clergy, and law, but these days there are many other occupations that have been professionalised. All of the Health Professionals that fall under the HPCSA are professionals by virtue of being regulated by their professional Boards. A "profession" has distinctive characteristics[7] that have been identified as important by some scholars like (Greenwood, 1957, Swick, 2000, Freidson, 2001, Van Rensburg, 2004, Witschge and Nygren, 2009). The profession elements allow members of the profession to have control of their work and autonomy in their day to day practice. These include the following:

- ✓ *A profession has a knowledge – monopol*y that prevents those outside the profession from doing the work of the profession (Witschge and Nygren, 2009). The professional knowledge as Van Rensburg (2004) asserts is organised to include technical skills and mode of

[7] Greenwood (1957) provides five core attributes of a profession from a social work context that includes: having (a) a systematic body of theory (b) professional authority; (c) sanction of the community; (d) regulative code of ethics; and (e) professional culture on one hand. While the work of Freidson (2001) sums the ideal-type profession from a sociology medical perspective on other, to be consisting of three logics: first, members of the occupational group must be able to control their own work; second, they must have autonomy in their everyday practice and third, there must be an ideology by which all members subscribe that asserts greater commitment to doing good work over economic gains and prioritise the quality of work.

reasoning that a person must acquire through the process of education, training and socialisation before being allowed into the ranks of the profession.

- ✓ *A profession has autonomy[8] to work and collective self-control*. In this regard, the profession has formal and informal controls through which professionals regulate their individual and corporate behaviour and by which the profession is distinct from other occupations. In other words, the profession has a clear occupationally controlled division of labour and power to keep non-professional people outside the profession.
- ✓ *A profession has strong professional education and research* components which create a controlled labour market that requires the profession credentials to enter or follow it as a career thus making the profession distinct from a mere occupation that sets no entry professional requirements to be hired.
- ✓ *A profession has value components of service, commitment and calling that are normally contained in codes of ethics and codes of conduct as well as in oaths conveying unto the professions the fiduciary, service oriented nature*. This element of profession delineates specific responsibilities for professionals as a centre of focus in serving individual and group needs as well as the common good of the society (Van Rensburg, 2004). It is within this context that a profession has ethical rules and standards that govern conduct of its professionals.

Becoming a professional is an ongoing process that begins with gaining entry to a profession followed with the acquisition of profession's scientific knowledge leading to being recognised to practice as a competent practitioner. Some scholars emphasise that being a professional should not be limited to the acquisition of skills, but should also include the integration of theory and practice being conscious of what kind of a professional you ought to be. This is best captured in the following assertion:

"the unfolding way of becoming a professional, incorporates not only our knowing and how we act but, also who we are as professionals. The process gives meaning to the knowledge and skills being developed within professional practice, while also incorporating an understanding of the practice itself. [So,] as the professional learns to deal with new situations, their embodied understanding of the practice evolves in different ways. Their learning progressions [as a result]

[8] It is worth noting that for the profession to enjoy autonomy, it must meet its expected responsibilities. The profession is likely to earn high public respect when its professionals espouse "the profession's social values and regard the profession as a calling and way of life as opposed to merely an occupation" (Swick, 2000, p.613).

may lead them to comprehensive understanding of practice or may involve refinement of an existing understanding of practice" (Adams et al., 2011, p.590).

The dictionary meaning of a professional refers to a term used to delineate that a particular occupation is performed by people who received special training or have acquired special skills that makes them competent in doing the work concerned. Professionalism[9] is central to professional responsibilities in that it locates professionals in relation to the profession to which they belong. It is "the collection of a professional's attitudes, values, behaviours and relationships on which the society based the conduct of the professional in performing their duties" (Hornby, 2010, p.1170). Moreover, professionalism identifies EHPs with the purpose of the profession they pursue, which sets standards to follow and distinguishes them from other professionals.

The recognition of a professional occupation and its professionals requires "enabling legislation" (Pretorius, 2004, p.549) that creates their professional identity. In South Africa, the Health Professions Act, no. 56 of 1974 with its amendments provides for the development of a professional guide for health professionals including EHPs in South Africa. The Professional Board of Environmental Health Practitioners uses the Health Professions Council of South Africa (HPCSA) generic rules that define how health professionals should ideally conduct themselves and the parameters under which to carry out their duties.

The professional responsibilities of EHPs in South Africa are measured against the HPCSA professional guidelines. These responsibilities are carried out with the observance of professional rules that set out what is acceptable and not acceptable within health professions in South Africa. There are overlaps between legal and professional aspects as shown in Figure 1.1. Hence, the professional regulation of EHPs is provided for under the Health Professions Act, no. 56 of 1974. For example, this Act requires that EHPs should receive special environmental health training in accredited institutions and be registered with their Professional

[9] Herbert Swick (2000) in his paper titled "Towards a Normative Definition of Medical professionalism" argues that professionalism is best explained than described. He asserts that professionalism entails the commitment of professionals to apply the profession's knowledge and continue to improve themselves, and the relationships with colleagues, clients and the community at large. Swick suggested a set of essential behavioural attributes for medical professionalism that can also be applied by EHPs: These include: 1. Subordinating own interests to the interests of others; 2. Adhering to high ethical and moral standards; 3. Responding to societal needs; 4. Showing humanistic values of honesty, integrity, caring, compassion, apathy trustworthiness and respect for others; 5. Exercising accountability for self and for colleagues; 6. Demonstrating a continuing commitment to excellence; 7. Exhibiting a commitment to scholarship and to advancing own field; 8. Dealing with high levels of complexity and uncertainty; and 9. Reflecting upon own actions and decisions.

Chapter Five of this thesis provides a discourse on professionalism of EHPs from a South African context.

Board during their training and before practising environmental health in South Africa. Moreover, EHPs are required in terms of their professional guidelines to only practice what they are competent to practise by virtue of the approved training they have received. Failure to adhere to this requirement exposes them to disciplinary actions (Health Professions Council of South Africa, 2014a). The overlap between the legal requirements and professional guidelines makes it illegal for EHPs to practise environmental health when they are unlicenced to do so. Any unauthorised practice constitutes the breaking of the law and breach of contract of EHPs practice as set out by their profession. Such an act is a violation of both law and professional guidelines.

In practice, at times EHPs are faced with the predicament of making decisions in difficult situations necessitating acting in a compassionate manner towards the clients instead of being firm and consistent. By so doing EHPs are likely to contravene the professional rules. In this regard, the idea put forward by Ingram (2013) becomes relevant. According to Ingram, "a professional should be emotionally balanced over and above knowing the professional procedures [and legal requirements] in order to be able to arrive at a best decision. [If so], the professional would strive to build good relationship with the clients, be aware and avoid personal shortcomings from affecting decision making process" (Ingram, 2013, p.6). Further details on professional responsibilities and related challenges applicable to EHPs as found in this study are presented in Chapter Five.

1.2.1.3 Ethical responsibilities

The general use of the term 'ethical' refers to "beliefs and principles about what is understood to be right and wrong" (Hornby, 2010, p.500). Ethics refers to what a community defines as "norms and institutionalizes to prevent individuals from pursuing self-interest at the expense of others" (Dalla Costa, 1998, p.71). Dalla Costa also asserts that ethics is necessitated by the assumption that people generally tend to fail to self-regulate but rather choose the option of doing things that have personal benefits even if their actions are to the detriment of the society. Therefore, ethical conduct is essential as a guide towards inculcating behaviour that promotes conformity without a threat of punishment. Rossouw and van Vuuren (2015) have reiterated that ethical behaviour occurs when "a person does not merely consider what is good for oneself but also considers what is good for others". In that way the person would continue to do the right thing even when no one is watching (Rossouw and van Vuuren, 2015, pp.4-5).

An ethical issue is a situation that requires that EHPs make choices in carrying out their duties using ethical standards as the basis of their decisions (Braunack-Mayer, 2001, pp.99-100). Ethical problems arise when EHPs have to make difficult choices in choosing which action to take in conflicting situations where they need to balance their options between what is considered right and not right in terms of their professional rules or practices in their employment capacities. Such conflicting situations present dilemmas that cause EHPs to be pulled to two directions: one being choosing to stick by the rules and the other is choosing what they believe to be the best action in a given situation which might be in conflict with what is considered a desirable act. Thus, they find themselves in trouble. Ethical problems also arise when EHPs face challenges of arriving at a decision because the situation requires the taking of a decision on the spot but they have to seek permission from a superior who might not be available or who does not have the competence in the area concerned. This issue is commonly referred to as "the locus of authority problem" (Purtilo, 1999, p.67).

There are common ethical issues in environmental health which have been cited by various authors. These include difficulties due to conflicting ethical obligations in handling confidentiality in cases where information on illegal activities ought to be reported to authorities; difficulty in obtaining consent in community settings when implementing community intervention programmes; being unable to report results to participants due to restrictions imposed by the institutions where environmental health research is conducted; making decisions on resource allocation; negotiating political interference in environmental health programmes; and questioning the role or scope of EHPs (Sly et al., 2009, Baum et al., 2009, Rabinowitz, 2015).

Solving ethical issues is made difficult by instances where there are no clear ethical guidelines in the workplace. EHPs are thus left with no option but to use their own discretion. Ethical guidelines are articulated in the code of ethics which ideally should "harmonise and balance the EHPs and community needs" to create an enabling environment where ethical practice is managed through proper guidelines (London et al., 2014, p.9). Being ethical calls upon EHPs to be sensitive to the people's needs when carrying out responsibilities. EHPs ought to know what is expected of them, be sensitized about the importance of relationships that they have with their clients, and the reputation they need to maintain as professionals. Ethical responsibilities cover conduct over and above making ethical guidelines the centre of focus and seek to address the motives of EHPs' actions and rationalise the reasons for continuing to do the right things in the right way. It is a significant component of practice of environmental

health that encourages EHPs to balance serving professional interests through compliance with their legal obligations and using their professional competences on the one hand, while being conscious of the need to be sensitive to people's needs in the exercise of their duties.

I mention just a few examples of challenges in the exercising of ethical responsibilities. The first challenge is that ethical requirements are interwoven in the legal and professional responsibilities in practice as shown in Figure 1.1. Thus, it is hard to clearly distinguish the ethical issues when executing legal and professional responsibilities without having the necessary ethics competencies to identify ethical issues in practice. This problem is exacerbated by the "absence of clearly defined ethical programmes: thus creates grey areas" on managing ethical issues in the workplace (Bruhn, 2008, p.205). Where there are grey areas, organisations tend to have environments that emphasise "rule-following" to guide decision-making processes which inadvertently produce the ticking-box mentality. People as a result, only concern themselves with what is listed as acceptable behaviour in the rules" (De Cremer, 2014, p.2) . Further, an internal culture is likely to be created, where people rely solely on decisions made by top management but are not sensitised to applying their own values in their practice. A remedy to such a situation would be to devise a clear ethical code and inculcate a culture that encourages individuals to internalise moral values and commit to ethical practice.

The inception of the democratic order in South Africa in 1994, has created awareness among people about the importance of human rights enshrined in the Constitution of the Republic of South Africa. Ethics also became a part of the service delivery package in the public sector (Republic of South Africa, 1996a). These changes brought about a need to render public services in a manner that shows respect for people's dignity and wellbeing. Additionally, the resultant public service delivery transformation policies like the Batho Pele White Paper (Republic of South Africa, 1997) promoted ethical considerations such as transparency, consultation and respect for communities. A new landscape in the delivery of environmental health service has resulted. EHPs, particularly those who are members of the local government, are expected in terms of the Municipal Services Act, 32 of 2000 to conduct themselves in a manner that promotes the employing of ethics in their work in accordance with the provisions of the Code of Conduct in the Local Government Municipal Systems Act, no. 32 of 2000 (Republic of South Africa, 2000b).

Although some authors make various distinctions between the terms "ethics" and "morality", in this thesis I treat the terms as synonymous. This is in line with the usage of most

professional ethicists. Rachels and Rachels write: "moral philosophy is the attempt to achieve a systematic understanding of the nature of morality and what it requires of us - …'of how we ought to live' and why" (Rachels and Rachels, 2012, p.1). Sulmasy and Sugarman describe normative ethics as that:

"branch of philosophical… enquiry that sets out to give answers to the questions, What ought to be done? What ought not to be done? What kinds of persons ought we to strive to become? Normative ethics sets out to answer these questions in a systematic, critical fashion and to justify the answers that are given" (Sugarman and Sulmasy, 2010, p.3).

What is clear from these two quotes is that both the terms morality and ethics are used to refer to questions related to "oughts" or the right ways in which we should behave, act and live our lives. Conventionally, when discussing the moral expectations on professionals in their professional capacity, the term "ethics" is more commonly used. Thus, the term "professional ethics" is generally preferred over "professional morality" - and there are usually professional codes of ethics, rather than professional codes of morality. This usage is followed in this thesis.

A distinction does need to be made between ethics and the law. It can be said that there is a *prima facie*[10] moral obligation for citizens to obey the law. To the extent that this is true, obeying the law is also an ethical requirement. However, there are times that laws themselves may be ethically judged to be wrong – consider many of the unjust and "discriminatory laws of the Apartheid State" as examples (Bayles and Henley, 1989, p.16). So, ethics stands apart from the law, and might even stand in judgement of it. Ethics relies on fundamental universal principles of morality to judge behaviour - not simply on what is codified in legal prescripts. Furthermore, neither the law nor professional codes of ethics and guidelines provide instructions or guidance for every possible ethical dilemma that might arise in the practice of a profession. In fact, there is no guidance many situations. It is exactly because of this that teaching ethics to professionals is so important. At times, professionals need to use their own judgement to decide on the right course of action - and training in ethics can help them to do this.

The next section provides a broad view to locate environmental health from an international practices perspective.

[10] Prima facie is described as "an obligation that is to be fulfied unless it conflicts with an equal or stronger obligation" (Lee, 2012, p.4).

1.3 A BROAD REVIEW OF THE PRACTICE OF ENVIRONMENTAL HEALTH

This section briefly addresses the fundamentals of environmental health including the key organisations shaping international environmental health practices. It aims at providing a basis for better understanding of how environmental health in South Africa links with global practices. For more details, a summary of elements in the theory and practice of environmental health is presented in Annexure 10.

Environmental health is a professional discipline concerned with safeguarding the public health from the risks associated with hazards from the environment. Environmental health management is complex and cross-cutting amongst other disciplines making it interdisciplinary in nature. Literature on environmental health has documented this, emphasising that knowledge of environmental health has been embraced in various disciplines, primarily public health and other applied and social sciences disciplines (Parkes et al., 2003, Resnik, 2012). The scope of environmental health is broadly captured in the World Health Organisation definition, namely:

"Environmental health addresses all the physical, chemical and biological factors external to a person, and all related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health and is targeted towards preventing diseases and creating health-supportive environments. This definition excludes behaviour not related to environment, as well as behaviour related to the social and cultural environment, and genetics" (World Health Organisation, 2015b, no page number).

The abovementioned WHO definition encompasses the many definitions developed by other bodies, some of which emphasise different aspects of environmental health. For example, the USA-based Center for Environmental Health, defines environmental health as follows:

"Environmental health is the discipline that focuses on the interrelationships between people and their environment, promoting human health and wellbeing and fostering a safe and healthful environment" (Frumkin, 2010, xxxi).

This particular definition emphasises the relationship between people and the environment. On the other hand, the South African National Health Department, has used the 2004 WHO definition to define environmental health in its National Environmental Health Policy developed in 2013 that states:

"Environmental health encompasses those aspects of human health, including quality of life that is determined by physical, chemical, biological and psychological factors in the

environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that have a potential to adversely affect the health of present and future generations" (Republic of South Africa, 2013a, p.7).

Such definitions of environmental health focus serve as a good frame of theory and practice of environmental health. Therefore, given the diverse and complex nature of environmental health, it is necessary to harmonise the practice of environmental health, while preserving contextual sensitivity. Hence, the international bodies[11] responsible for the practice of environmental health developed a framework in terms of which environmental health services are to be provided. In drawing from the principles of Public Health and generic environmental health, an essential services framework has been developed which can be used as a benchmark for rendering all round services by various bodies worldwide. The framework is depicted in Figure 1.2 and provides a comprehensive list of essential environmental health services to ensure that all environmental health service providers are aware of the common and minimum services they are required to render. However, the extent of offering the services depends on the capacity of the institutions in question and prevailing conditions in the local environment.

[11] Selective examples of international bodies shaping environmental health practices are presented in section 1.3.1 and include primarily the (i) WHO that established benchmark environmental health policies and advocating for state support of environmental health programmes; (ii) the United Nations that has led to the launch of the World Environmental Health Day and (iii) the International Federation of Environmental Health that promotes uniformity of environmental Health practices worldwide.

As will be seen in Chapter Six, section 6.5.5.1 on best practices on ethical practice both the WHO and the United Nations have useful ethics guidelines that are relevant to environmental health.

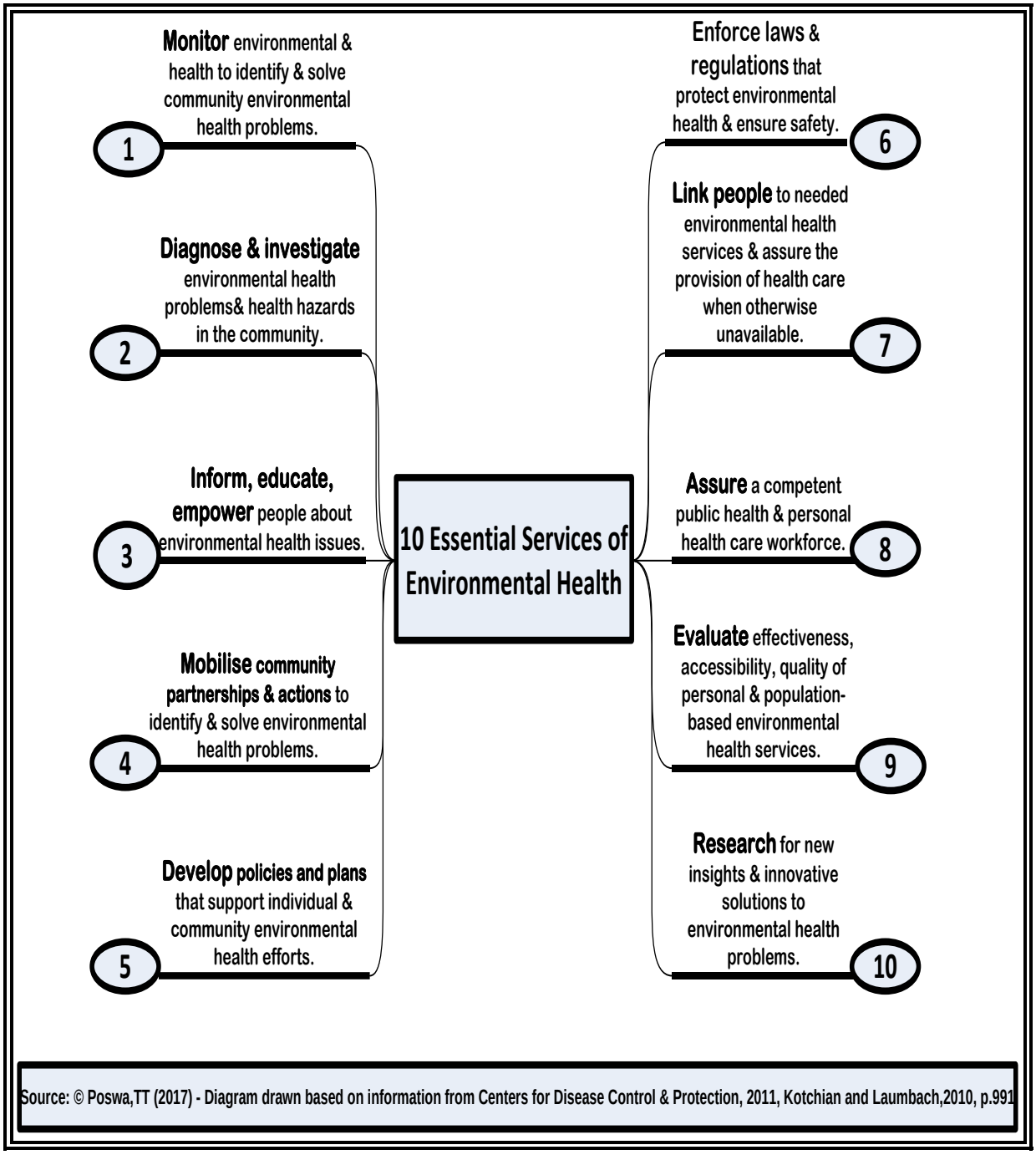


Figure 1.2: The 10 essential services of Environmental Health that apply generally to environmental health practice[12]. Source: Diagram is author compilation based on information adapted from Public health services developed by the Institute of Medicines, 1988 and put in the context of environmental health by the Centers for Disease Control and Prevention, and National Center for Environmental Health as per Kotchian and Laumbach, 2010.

[12] The diagrammatical presentation of the essential environmental health services is opted for to easily illustrate and capture the services. The content is the same with the other references which list or use table formats.

The essential environmental health services shown in Fig 1.2 have been embraced by various environmental health organisations, for example South Africa[13] (Republic of South Africa, 2009), the African Continent[14] (Africa Academy for Environmental Health, 2010b), the United Kingdom (Burke et al., 2002), the United States of America (National Environmental Health Association, 2013) and Europe (Drew et al., 2000). Nonetheless, it is important to note that notwithstanding this overarching framework, these organisations have generated their own scope of environmental health practices and/or programmes to address their local or regional environmental health needs.

All these factors point to the complexity of environmental health and its practice. My study investigates this within a South African context, critically evaluating current standards of practice. It also examines parameters governing their preparation during the training, the requirements they have to meet during their practice and the conduct they need to display as professionals in executing their duties.

In this study the legal, professional and ethical responsibilities of EHPs are addressed as applicable to the practice of environmental health in South Africa.

The normative analysis in this thesis is based on the notion of role responsibility, which is central to this study from both a general perspective as well as the context of environmental health practice. From a general point of view, I derived the meanings of role responsibility[15] from the Oxford Advanced Learner's Dictionary which defines:

"responsibility as a duty to deal with or take care of something and in so doing be blamed if something goes wrong" (Hornby, 2010, p.1258) and role as a concept that denotes "the function an individual is expected to perform by virtue of the position one holds for example in an organisation or society" (Hornby, 2010, p.1282).

The term 'role responsibility' as used within the context of environmental health, refers to the duties assigned to EHPs in keeping with their professional roles relating to implementing environmental health services per applicable legislation, professional and policy guidelines in

[13] The Health Professions Council of South Africa (HPCSA) is responsible for the environmental health profession and professional issues of EHPs. The key elements in the scope of practice of the Profession of Environmental health in South Africa have embraced those in Figure 1.2.

[14] Africa Academy for Environmental Health is a body that was formed to harmonise the practice of environmental health in Africa. It developed an African based environmental health curriculum that embraces international perspectives in environmental health, yet focuses on the unique needs of Africa. Such a curriculum is used as a framework for harmonising the training of EHPs in the African Continent and resonates with that of South Africa.

[15] Also refer to section 1.2

South Africa. The rendering of such environmental health functions is underpinned by the provisions in Section 24 of the Constitution of the Republic of South Africa which provide for the right of everyone to an "environment that is not harmful to their health or wellbeing" (Republic of South Africa, 1996b). This provision makes reference to the wellbeing of the people which is beyond merely addressing the state of the environment. Wellbeing[16] is best described as "the favourable state of life: [which is] something desirable for every human being in the world at all times" (Böhnke and Kohler, 2010, p.5). Wellbeing though, is a widely used concept that is beyond the scope of environmental health services. For instance, some authors suggest that reference to wellbeing should be widened as the concept of quality of life is diverse. To this end, wellbeing should be treated as a connected issue that includes the "socio-economic status [which factor the poverty] of the population; the health status which includes people's fitness and nutritional status as well the consideration of the quality of the environment [wherein EHPs play a key role]" (Higgs, 2006, Posel and Casale, 2010). It would appear from this description that EHPs would have to work with various disciplines for the realisation of the well-being of the people they serve. It is on this basis that EHPs should be individuals who are able to interact with multiple disciplines.

Environmental health services are intended to promote preventative measures for improving the quality of people's health and the environment in which people live and work. To this end, environmental health focuses on "ensuring the safety of air, drinking water, food consumption as well as carrying out inspections of dwellings and permitting operations and mitigating environmental health threats in workplaces" (Murphy and Neistadt, 2009, p.8). As the providers of preventative measures, EHPs are thus at the forefront of safeguarding communities from maleficent influences.

Due to its direct link to the public health sector, environmental health should also be considered an essentially "communal practice". EHPs necessarily engage in designing measures and practices that are responsive to the needs of the communities they serve. A communal practice refers to "collaborative activities over those limited to individuals and are multi-directional and can be rendered at multi-levels. Practitioners in communal practices work in a structured regulated manner with norms within the profession and those found in external guidelines which are outside the practice" (Hicks and Stapleford, 2016, pp.5-13). For this

[16] Whilst the concept of wellbeing is commonly used in social and health sectors, its meaning is often not described. I have used Bohnke and Kohler's description of wellbeing in their paper titled *"Wellbeing and Inequality"* published in the "Handbook of European Societies" by Stefan Immerfall and Göran Therborn.

reason, the environmental health profession has a defined scope of practice which provides the frame and boundaries within which EHPs are expected to operate. Coupled to this requirement, are national norms and standards which are external guidelines that are used by EHPs to enhance their accountability and harmonise the rendering of their activities notwithstanding their differences of opinions on issues they handle.

In practice however, this range of legal and professional responsibilities tend to be poorly articulated, thus making it difficult to act on by EHPs. Moreover, clearly identifying ethical responsibilities of EHPs in South Africa has received little directed attention. This state of affairs creates imbalances which contribute to challenges in environmental health practice on the ground in South Africa as will be seen in the detailed discourse of legal, professional and ethical responsibilities in Chapters Four, Five and Six respectively. Consequently, this study suggests that each of these aspects should be understood in the context of environmental health practice in South Africa. By so doing, I believe that one would be able to provide the desired support and where applicable identify problematic areas that need improvement.

1.3.1 Organisations Shaping International Environmental Health

A synopsis of selected examples of international organisations that have played and are still playing an important role in environmental health, are briefly discussed in this section.

1.3.1.1 The World Health Organisation (WHO)

The World Health Organisation provided an international definition of environmental health that has already been explained under 1.3. In this section I am addressing it from the context of strategies that support environmental health practice.

The WHO environmental health definition is vital in linking the United Nations evolutions on policy matters relating to the protection of human health and the environment. It serves as a guide and a broad framework that countries and various organisations can use to develop distinct environmental health programmes. The WHO particularly emphasises the creation of supportive environments for the rendering of environmental health related services. Notably, the WHO perspective of environmental health dovetails with the 1972 United Nations conference on Human Environment resolutions that appealed to world leaders to: *first*, appreciate the interdependence of nations and the necessity of international cooperation and *second*, to provide institutional support for creating awareness about the importance of

environment and the curbing of the negative effects of pollution of the environment (United Nations Environmental Programme (UNEP), 2012, pp.9-10).

There are five fundamental strategies implied in the WHO environmental health definition, relating to WHO's advocacy for supportive environments for worldwide environment health practices that are worth mentioning:

First, the WHO's later definition of environmental health embraces and underscores the principles of the United Nations Agenda 21 Rio Declaration which required countries to adopt developmental strategies that promote sustainable development (United Nations Division for Sustainable Development, 1992). To this end, the Agenda 21 advocates for an integrated approach marked by active and collective participation of various stakeholders such as the community, government, business, and industry, organised labour, educational and other societal institutions and political leaders to safeguard the degradation of the environment. The ultimate aim is to create an enabling environment where stakeholders are conscientised to act in a manner that avoids harm to fellow humans and safeguards the environment. For example, the Agenda 21 provides for *inter alia:*

"That there should be international cooperation towards the prevention of illegal trafficking of hazardous wastes between countries and pollution of natural resources. This role is central to environmental health as a discipline responsible for safeguarding human health against harmful factors from the environment" (Republic of South Africa, 2013a).

In this regard, clear financially backed policies and technically supported implementation plans are essential. Undoubtedly, environmental health is one essential area that needs to be resourced and supported financially to enable EHPs to deliver to their expectations, namely: being able to "control communicable diseases" and mitigate against "health risks from hazards related to environmental pollution" (United Nations Division for Sustainable Development, 1992, p.35).

Second, the assessment and control of environmental factors requires the active involvement of EHPs in research that would provide evidence-based inputs into developing and implementing "environmental health interventions" designed to lower the "burden of environmental health risks" which could not be solved through medical interventions (Lafronza, 2003, no page number). By so doing, EHPs would contribute to steps taken to "prevent diseases before they occur" and simultaneously "eliminate associated health-care costs as well as providing "more sustainable interventions" (World Health Organisation, 2006b,

pp.26). Agenda 21 requires the carrying out of "multidisciplinary research" in environmental health to determine the vulnerable groups and devise appropriate correctional methods. This role requires a good working relationship with research institutions as well as government support (United Nations Division for Sustainable Development, 1992, no page number).

Third, the WHO has further made international health regulations (IHR) an integral part of environmental health. The IHR lays down a foundation and a standard for environmental health practice that emphasises the universal control of the spreading of infectious diseases. These regulations in their amended versions are tools that have stood the test of time, as they were established after the 1851 International Sanitary Conference in Paris, where world leaders acknowledged public health as central to people's health and to the realisation of peace and security in the world (World Health Organisation, 1998, p.10). The IHR were officially adopted as enforceable rules in 1969 and are still enforced now with the latest the development of "an IHR monitoring framework" to enhance uniform reporting of outbreaks of communicable diseases worldwide (World Health Organisation, 2015a). The WHO - through the IHR strategy, intended to "strengthen worldwide collaborations" for curbing the spread of diseases "across borders and building capacities" to enable implementation of a uniform approach to the control of diseases (World Health Organisation, 2015f). This strategy is instrumental in handling international health crisis issues related to environmental health. Examples of common diseases where EHPs are involved, include cholera, yellow fever and ebola outbreaks which require taking stringent measures to regulate the transmission of diseases through international travelling (World Health Organisation, 2015f).

Fourth, the WHO affirmed the vital role of environmental health in 2006 through its strategy that promoted:

"preventing diseases through healthy environments: towards an estimate of environmental burden of disease" (World Health Organisation, 2006b, p.13).

This strategy recognises and incorporates the expertise of EHPs in preventing the scourge of diseases. To this end, EHPs and other healthcare professionals are encouraged to collect and analyse data on the state of health in different environments to determine populations groups vulnerable to environmental health hazards. In turn, the WHO generates reports to inform the public and other interested parties. It is through such endeavours that the WHO is able to make estimates and report on how environmental factors impact on human health. Examples of estimates include those which, state that:

"children less than five years old are the most affected population group that suffer death five times more than any other age group due to exposure to environmental risks factors associated with diarrhea, malaria and respiratory infections" (World Health Organisation, 2006b, p.13).

The WHO reported that "as of 2012, there were 842, 000 deaths worldwide due to diarrhea which is associated with problems of polluted water sources, poor sanitation and poor hygiene practices (World Health Organisation, 2015d, no page number) ". Furthermore, WHO reports that "annually there are 4.3 million deaths caused by exposure to indoor smoke from cooking fuels as well as 3.7 million deaths due to exposure to fine particular matter" (World Health Organisation, 2015d). All these examples are pointers of the complexities of environmental health practice and its importance towards safeguarding the health of the population. Linked to this factor is a 2013 USA based study that found that EHPs supported the use of "one health disease reporting concept for the early detection of and expedient recovery from pandemic disease events" and development of "an integrated disease prevention strategy for cautioning people about risks prior to and during epidemic and pandemic events" (Eddy et al., 2013).

Fifth, the WHO's 2015-2020 global water, sanitation and hygiene (WASH) strategy deals with the neglected tropical diseases that identified environmental health as a critical area that needs to be prioritised for "research and development of learning programmes geared towards reducing burdens of diseases" (World Health Organisation, 2015g, p.16). The WASH strategy promotes the creation of "strong working relationship among different stakeholders and seeks to gain knowledge of what works in practice" (World Health Organisation, 2015g, p.5). The formulation of the WASH strategy acknowledges that sanitation and water pollution are central to the elimination of the spread and minimizing the negative impact of diseases. This strategy is important given that the 2015 WHO/UNICEF Joint Monitoring Programme reported environmental health related statistics, namely: an increase in world population from 5.3 billion in 1990 to 7.3 billion in 2015. Of these, "663 million people in the world lack improved drinking water sources, whilst 946 million people [i.e.one out of eight people in the world] practice open defecation" (World Health Organisation, 2015h).

Therefore, the universal view of environmental health highlights the need for creating supportive environments for the rendering of environmental health services. Central to this goal, is the need to clarify roles and cooperation amongst role players. The WHO has international strategies that promote international cooperation and active involvement of key role players in the environmental health sector. EHPs are key role players in ensuring the realization of

environmental health strategies and pivotal in controlling the spread of diseases, conducting of research and environmental pollution control.

1.3.1.2 The United Nations

The United Nations provides the basis for the handling of environmental and public health issues worldwide. The United Nations Environment Programme (UNEP) and United Nations Development Programme (UNDP) are the bedrock for sustainable development which is central to environmental health practice. Notably, UNEP originated from the "first United Nations conference on Human Environment held in Stockholm, Sweden on 5-16 June 1972" (United Nations Environmental Programme (UNEP), 2012, p.7) where there was consensus on prioritising the protection of environment and devising mechanisms:

"…to reconcile man's legitimate, immediate ambitions with the rights of others, with respect for all life supporting systems, and with the right of generations yet unborn" and recommended the "planning and management of human settlements for environmental quality; identification of pollutants of broad international significance; educational, informational, social and cultural aspects of environmental issues" (United Nations Environmental Programme (UNEP), 2012, p.13).

UNEP came up with the setting aside of "5 June as the World Environment Day" (United Nations Environmental Programme (UNEP), 2012, p.128) where nations roll out programmes to create awareness about the responsibility to protect the environment and safeguard public health. Moreover, on 3-14 June 1992, the United Nations conference on Environment and Development held in Rio De Janerio, Brazil, produced the Agenda 21 commonly referred to as the "Rio Declaration" which advocates sustainable development through an integrated approach that ensures active participation of all stakeholders and clearly defined roles that include environmental health. Chapter Six of Agenda 21 is dedicated to promotion of environmental health with implementation of programmes to *inter alia:* "control communicable diseases and reducing health risks from environmental health pollution and hazards" (United Nations Division for Sustainable Development, 1992, no page number). Local governments are expected to provide support for environmental health services and educational programmes with the involvement of all affected parties. EHPs play a key role in carrying out research and coordinating the community activities.

In line with the World Environment Day concept, the "26 September World Environmental Health Day", was launched on 26 September 2012 by the environmental health fraternity as a special day where all environmental health institutions worldwide join forces to annually promote environmental health (International Federation of Environmental Health (IFEH), 2012, no page number).

1.3.1.3 The International Federation of Environmental Health [IFEH]

The emphasis in the rendering of environmental health services is on addressing "local environmental health problems"; however, diseases in particular, have a potential to spread to the other parts of the world, thus necessitating "international cooperation" (Republic of South Africa, 2013a, p.18). For this reason, the environmental health community has international bodies that foster unity in environmental health practice, while allowing diversity at local and regional levels. One such body is the International Federation of Environmental Health (IFEH). This international body is the vanguard of promoting unity of purpose towards achieving a united approach in environmental health practice worldwide, through exchange of expertise, experiences and information amongst environmental health professionals, educational institutions and organisations in different countries (Young, 2015). The universal understanding of environmental health helps in promoting and embracing of the universal principles of environmental health in dealing with local situations. The IFEH has its footprints across the world. It operates through "five regional groups" which are reported in the IFEH magazine (Ryan, 2013, p.3) as including the Africa Regional Group in South Africa; the Americas Regional Group in the United States of America; the Asia and Pacific Regional Group in Singapore; the Middle East Regional Group in the Kingdom of Saudi Arabia and the Europe Regional Group in Denmark.

The development of environmental health programmes, however, are based on the prevailing local conditions which are determinants of strategies responsive to service delivery needs. Local conditions are paramount to understanding realities on the ground that inform policies on service delivery which make environmental health services distinct from country to country and area to area. In this regard, Drew et al. suggest that "environmental health services should be situation specific and responsive to the prevailing socioeconomic circumstances" (Drew et al., 2000, p.35). Therefore, environmental health programmes that are informed by local conditions - but also embrace global principles - are likely to be effective and sustainable.

1.3.1.4 Africa Academy for Environmental Health [AAEH]

The Africa Academy for Environmental health (AAEH) seeks to promote development of environmental strategies and training programmes geared to capacitate EHPs on the African continent to play a key role in contributing to the advancement of the distinctive environment health practices in Africa. Equally, the South African environmental health profession is a key role player and partner of the International Federation of Environmental Health (IFEH) to ensure embracing of the international developments.

The South African National Department of Health has developed a National Environmental Health Policy (NEHP) as a government mechanism that embraces international practices and aimed at both eliminating disparities in environmental health practice and priortising environmental health services in South Africa.

1.4 TAKING ACCOUNT OF INFLUENCES ON THE BEHAVIOUR OF EHPS

Legal, professional and ethical responsibilities need to be understood in the context of the influences of the societal values[17] which define what could be construed as ethical: [meaning it is an acceptable or unacceptable thing to do]; the applicable laws; the organisations or institutions where practices take place as well as from an individual's perspective. The common denominator is that there are rules governing almost everything with differences in application relative to the environment and the acceptable practices by the concerned society, groups and institutions. It is on this basis that I deemed it important to describe factors that are likely to be influential in shaping EHPs' behaviour and the way they take decisions pertaining to their legal, professional and ethical responsibilities. A synopsis of influential factors is briefly outlined in the next paragraphs and more details in Annexure 8.

Factoring societal influence: Societal influence locates behaviour of EHPs as public servants from a societal context which I regard as the springboard of the life we live. Every person comes from a society that has moulded the person's view of life and behaviour in maintaining order in almost all other spheres of life, particularly conduct at the workplace. Various formations within the society are affected by the societal behaviour which is captured in the laws passed by the government and compliance with them and family institutions.

[17] Values in this context refer to what is believed in the society to be right and wrong behaviour in as far as being able to make people live harmoniously and in peace with one another. Purtilo (1999) refers to these values as "qualities that constitute a good life"

EHPs are an example of a professional group responsible for rendering environmental health services, a task that involves enforcing compliance with the laws. In doing their work EHPs must to observe the socially acceptable standards which are provided for in the laws of the country. These laws mirror the kind of society envisaged and the expected behaviour by the members of the public as well as the other stakeholders like business and agents of the state.

Besides laws, it is important for EHPs to understand prevailing health beliefs amongst the society. By health beliefs is meant "attitudes , values and knowledge people have about health services that might influence how they perceive the need and use of such services" (Andersen, 1995, p.3). Accordingly, the use of health services which in this case applies to environmental health services is encouraged among the communities when enabling resources like personnel and resources exist. In this regard as Anderson (1995) asserts, consideration should be made as to whether people have the means such as financial ability and knowledge of how they can gain access to and use of the services. This makes it important to understand the influential role of the proximity of the EHPs offices to the service areas and the visibility of EHPs on the ground to encourage the maximum use of environmental health services. In line with this line of thinking, the Batho Pele principles which aim at improving services delivery provides a most fitting recommendation by stating "that service departments must develop strategies aimed at eliminating the disadvantage of distance by ensuring that resources are closer to those in greatest need" (Republic of South Africa, 1997, p.18).

Factoring individual influence: Individuals play an important role in the interpretation of practices in the workplace especially in respect of what they personally regard as right or wrong behaviour. This role is important in the case of EHPs pertaining to the understanding of their work. Personal beliefs coupled with the habits of individual EHPs are influential in interpreting activities in their workplace. These individual beliefs determine whether EHPs can work harmoniously and cooperatively with each other to achieve the set goals. The type of individual EHPs determine the speed by which decisions are taken and implemented to produce good results.

Factoring organisation and professional group influence: The other important consideration is that EHPs who participated in this study are employees of an established municipal organisation. These EHPs are also professional members governed by the professional body, the HPCSA in the case of South Africa. The EHPs are to be understood from the perspective of being individuals who have personal values they were brought up with and

which they bring with them to the workplace. EHPs are likely to find themselves caught up in conflicting situations where their autonomy (freedom to choose their own action) is restricted by the organisation's rules of conduct which they need to uphold. Being members of the organisations, EHPs need to be conscious of the fact that they can only exercise their "autonomy" within the confines of the rules governing their conduct as professionals as well as that of government employees, which also apply to the society as a whole (Giannou, 2009, p.38). EHPs then need to be orientated to the practices in the workplaces. Such orientation is important in preparing EHPs to act in accordance with the prevailing values of the organisation, otherwise conflict is inevitable.

1.5 AIM: THE PURPOSE THE STUDY

The aim was to do a normative analysis in which the ideal in terms of fulfilment of the legal, professional and ethical responsibilities of EHPs is compared to the reality on the ground, in order to identify shortcomings and propose interventions or other actions to rectify the shortcomings.

1.6 STATEMENT OF THE PROBLEM AND RATIONALE FOR THE STUDY

The initiation of this study was informed by a number of things. First and foremost, having been involved in environmental health practice for over 30 years both in the field as a practitioner as well as in the teaching and reviewing of the environmental health curriculum in South Africa, I have observed that the practice of environmental health tended to emphasise legal enforcement with little attention paid to other essentials in this profession's practice. To be more specific, environmental health practice in South Africa paid little attention to ethical practice compared to the professionalism and legal aspects. This focus created a lacuna in the development of ethically competent EHPs that are able to handle intricate ethical issues relating to the fulfilment of their professional responsibilities. I therefore argue that EHPs are likely to better serve the public and maintain higher standards of professional ethics when they have adequate knowledge of all three of the legal, professional and ethical aspects of environmental health. Hence, I carried out this study incorporating these three fundamental components of environmental health practice. This combination of the three aspects is rare, thus making the study a unique contribution to environmental health practice in South Africa.

The difficulty in addressing ethical practice in particular, is aggravated by the apparent lack of ethics research studies on the practice of environmental health in South Africa. In this regard, research conducted on environmental health has focused much attention on the scope, developments and challenges EHPs faced as the profession evolved within the fast changing democratic political landscape in South Africa. To this end some authors have recorded trends in the development of practice of environmental health in South Africa. These authors highlighted the important role played by EHPs in the delivery of environmental health services under challenging conditions marked by lack of resources, inadequate support and the development of scope of practice (Mattee et al., 1999, Agenbag and Balfour-Kaipa, 2008, Balfour, 2013, Wright et al., 2014, Mathee and Wright, 2014).

In contrast, in my study, I explored how EHPs interpreted the provisions for environmental health from the context of practice on the ground. I then explored environmental health practice from the position of an EHP in relation to the policy and legal guidelines. I believe that this approach is important, given for instance findings that emerged from Heimer's study titled "Wicked Ethics: Compliance Work and the Practice of Ethics in HIV Research" that examined the effect of formal policies and the practice on the ground conducted in four countries, namely the US, South Africa, Uganda and Thailand. Heimer's study observed that there is tendency to pay more attention to the regulatory aspects of policies and disregard how these match the practice on the ground (Heimer, 2013). This finding has relevance for the focus of my study in exploring how the formal guidelines governing EHPs' practice impact on their work on the ground. In addition, there is a gap in studies in the field of environmental health in South Africa that examine what really satisfies and concerns EHPs in their work. My study attempts to contribute towards knowledge on the how EHPs understand and view their practice.

Moreover, the premise of my study is that the monitoring role is central to the work of EHPs, as shown in the WHO definition of environmental health [more details in section 1.3] and in the scope of practice of environmental health. However, there seems to be no commissioning of studies by for example the Professional Board of Environmental Health to ascertain actual facts pertaining to how EHPs understand their role responsibilities on the ground and how local settings impact on their work. I regard such understanding to be important as the practice of Environmental health in South Africa is underpinned by provisions articulated in a number of legislative and policy guidelines. Key environmental health mandates[18] are found:

[18] Chapters Four and Six detail legal and ethical provisions applicable to EHPs in South Africa.

First, in the Constitution of the Republic of South Africa Act, no. 108 of 1996 as amended. Accordingly, Section 24(a) provides that:

"Everyone has the right to an environment that is not harmful to their health or wellbeing…" Furthermore, Section 195(1) sets out ethical values and principles that must be upheld by all public servants and organs of state. These values and principles prescribe amongst others, that public servants' conduct should demonstrate:

"the promotion and maintenance of a high standard of professional ethics, the promotion of efficient, economic and effective use of resources, the provision of services in an impartial, fair and equitable manner without bias, and accountability for public services".

Second, EHP mandate which is the bedrock of environmental health practice in South Africa is found in the National Health Act, no. 61 of 2003 as well as the National Health Amendment Act, 12 of 2013. In this regard, Sections 80-89 and related regulations mandate EHPs to amongst others:

"Monitor and carry out routine inspections and environmental health investigations to identify and deal with conditions that cause or have a potential to cause health nuisances".

The above mandates necessitate that EHPs be well versed in professional ethics and other legal requirements governing their profession. They also encountered a myriad of challenges in the enforcement of laws, because some laws were not enforceable as they were not suitable for addressing some situations on the ground. Thus, necessitating reviewing of the laws, while in the meantime EHPs had no alternative strategies on which to rely.

In examining the literature, I observed that although there are professional guidelines in South Africa that provide for the legal and ethical issues, specific ethical guidelines within the workplaces of EHPs which can be used to guide environmental health practice were lacking. I ascribed this gap to the lack of ethics infrastructure[19] which I believe could help EHPs with the know-how of identifying and using ethics provisions articulated in different policy guidelines. For example, those that pertain to service provisions like the Batho Pele principles in the Batho Pele White Paper (Republic of South Africa, 1997) and the Code of Conduct in the Local Government Municipal Systems Act, no. 32 of 2000 (Republic of South Africa, 2000a). The

[19] In Chapter Eight reference is made to institutionalised ethics practice as having established and implemented systems for handling ethics issues. The Oxford Advanced Learner's Dictionary defines infrastructure as "basic systems and services that are necessary in an organisation to run smoothly" (Horny, 2010, p.770). This context is the one I am referring to considering ethics practice within the environmental health in my case study.

same applies to the professional and generic[20] HPCSA ethical guidelines (Health Professions Council of South Africa, 2008b).

Many EHPs' inability to apply ethical principles could be attributed to the lack of ethics training and lack of promotion of an ethics culture in the workplace. This situation necessitates the development of ethics practice programmes within environmental health workplaces with clear educational and implementation plans plus appointed lead agents and coordinating structures. Otherwise EHPs would continue to be exposed to challenges which without interventions, could lead them to commit unacceptable acts. Such conduct could be for example, succumbing to temptations to contravene the provisions of the same law they are meant to uphold by accepting bribes and failing to report unethical conduct. This state of affairs is exacerbated by the apparent absence of a specific code of ethics for Environmental Health Practitioners in South Africa which could encourage public professionals to account to the community they serve as suggested in the code of ethics for public health (Thomas et al., 2002). The King III Code suggests that organisations should ideally have ethical strategies that balance "rules-based" directional codes of conduct which prescribe acceptable and unacceptable behaviour with the aspirational "values-based" code of conduct that encourages personal responsibility (Institute of Directors in Southern Africa, 2009b).

This ethics inquiry seeks to understand the awareness of EHPs about their role responsibilities in fulfilling their mandates, particularly how ideals in policy guidelines match the actual behaviour on the ground.

1.7 ASSUMPTIONS, RESEARCH QUESTIONS AND OBJECTIVES

In this section I present the study assumptions, followed by the research questions and the study objectives.

[20] The HPCSA Booklet 2: Guidelines for Good Practice in the Healthcare Professions: Ethical and Professional Rules of the Health Professions Council of South Africa as Promulgated in Government Gazette R717/2006 provides generic professional guidelines for all health professionals in South Africa. These professionals include EHPs. Annexure 4 of these rules specifically highlights rules of conduct pertaining to the profession of Environmental Health stating that "An Environmental Health Practitioner … shall in addition to rules of conduct that require them to confine their practice in the field of environmental health in which they were educated and trained, adhere to the general rules 2 to 27 [which apply to all health practitioners]. Failure to comply with the rules of conduct shall subject them to disciplinary action.

1.7.1 Assumptions Underpinning the Study

I used the South African Constitution, Act no. 108 of 1996 (Republic of South Africa, 1996b) as the Supreme Law in South Africa, and the National Health Act, 61 of 2003 (Republic of South Africa, 2004b) which governs the appointment and defines the duties of EHPs, as a frame of reference for formulating assumptions. These legislative tools contain sections that provide for the formulation of EHP mandates to monitor and take steps to protect everyone from exposure to possible adverse effects of the environment. However, based on my observations (anecdotal evidence) and my experience in the field, I have made the following two assumptions:

First Assumption: - I have assumed that EHPs in South Africa are generally aware of their legislative mandates, but in practice, there is insufficient guidance of EHPs on fulfilling their professional and ethical responsibilities.

Second Assumption: - I have also assumed that EHPs are likely to be exposed to conditions that would increase the likelihood of them being exposed to conditions that would increase the likelihood of acting in ways that infringe ethical principles in the course of carrying out their duties. Should that happen, they might compromise delivery of service in a fair, impartial and professional manner.

These assumptions formed the basis for the empirical enquiry, and the questionnaires used were designed to test them.

1.7.2 Research Questions

In the light of the above assumptions, this study has attempted to answer the following questions:

The main research question, which aligns with the study aim, was to establish what shortcomings there are when comparing the ideal in terms of the fulfilment of the legal, professional and ethical responsibilities of EHPs with the reality on the ground.

In order to answer that question, the following sub-questions were asked:

(1) What is the ideal in terms of the fulfilment of the legal, professional and ethical responsibilities of EHPs?

(2) What kind of awareness and understanding is there amongst EHPs regarding their professional, ethical and legal responsibilities in the exercise of their duties? In other words, how are these role responsibilities understood and articulated in situ (if at all)?

(3) What challenges confront EHPs in fulfilling these role responsibilities?

(4) What interventions and strategies can be proposed to overcome these challenges and better align ideal and real practices?

1.7.3 Objectives

The study had four objectives and these were:

(1) To articulate the ideal in terms of the fulfilment of the professional, ethical and legal responsibilities of environmental health practitioners in South Africa.

(2) To explore the awareness and understanding among environmental health practitioners regarding their professional, ethical and legal responsibilities in practice, using eThekwini Metropolitan municipality as a case study.

(3) To examine challenges facing EHPs in fulfilling their role responsibilities as found in the case study**.**

(4) To normatively compare the ideal versus the reality on the ground to identify shortcomings.

1.7.4 Outcome of the Study

The final envisaged practical outcome of the study was: to formulate recommendations aimed at addressing identified shortcomings and challenges faced by EHPs in the fulfilment of their role responsibilities

1.8 THE THEORETICAL LENS FRAMING THE STUDY

The theoretical lens[21] framing this study cuts across three areas.

First, the legislation and other aspects of the legislative framework served as a basis for addressing the legal aspects affecting EHPs in South Africa. The analysis of these assisted in obtaining information about the mandates, powers, appointment and the functions of EHPs.

[21] *Lens* is a term used in qualitative research context to mean "the use of viewpoint for establishing validity in a study" (Creswell and Miller, 2000, p.125). This basically denotes the basis for framing the study design as detailed in the Methodology Chapter (Chapter Two).

Second, the theoretical framework for professional aspects is based on the professional guidelines including, but not limited to the Health Professions Act, no. 56 of 1974, the ethical and professional guideline rules of the Health Professions Council of South Africa (HPCSA). I also made reference to Dreyfus's five-stage model of adult skill acquisition and Kohlberg's moral development theory as it relates to the practice of EHPs. The Dreyfus model (Dreyfus, 2004) was instrumental in the interpretation of the different behaviour of EHPs and their understanding of the EHPs' work. The Dreyfus model was particularly relevant in describing the genesis of the professional development of EHPs in South Africa. Therefore, the Dreyfus model has helped in illustrating that EHPs are different and their differences are influenced by their level of exposure to the theory and practical experience which extend across their years of studying environmental health and practising as EHPs. More details on how I have used the Dreyfus model to interpret the different developmental stages of EHPs in South Africa are presented in Annexure 9. The Kohlberg model (Kohlberg and Hersh, 2009) assisted in interpreting EHP individuals' behaviour and how they are likely to respond to challenges they face in the course of fulfilling their responsibilities. See more details on Kohlberg model in Annexure 8.

Third, issues of ethical concern have been raised drawing from the different ethical theories to show how EHPs can learn ethics on the job and the considerations they should make when handling ethical issues. Examples of relevant ethical theories are presented in Chapter Six, section 6.4 and include the deontological theory which looks at the universality of actions, utilitarian theory that concerns itself with the choice of action that benefits the majority, and virtue ethics whose focus is on the character of the person. Reference is also made to ethical approaches with a particular focus on how these principles could assist EHPs towards managing relationships with the various stakeholders they interact with in the course of carrying out their duties.

1.9 THESIS OUTLINE

Chapter One provided an orientation and background to the study. The chapter contains an overview of environmental health practices, highlighting the importance of global supportive environments in the rendering of environmental health services. Chapter Two sets out the methodology followed in this research and locates the study within a local government context which is a level close to the people and thus enables the evaluation of the impact of an environmental health service delivery programme.

Chapter Three argues for what the "ideal" ought to be regarding the legal, professional and ethical practice of Environmental Health Practitioners (EHPs) in South Africa.

Chapter Four presents findings on the legal mandates of EHPs in South Africa and the challenges EHPs face on the ground when they endeavour to enforce the environmental health laws. Chapter Five addresses the professional aspects of environmental health in South Africa, pointing out the importance of professionalism in environmental health, whilst Chapter Six discusses the ethical aspects of environmental health practice in South Africa and related challenges.

Chapter Seven discusses the extent to which the ideal matches the reality. It synthesises the study findings and highlights the implications thereof for the municipal environmental health services, the Professional Board of Environmental Health Practitioners, and the training institutions offering environmental health programmes in South Africa. This chapter also interprets how the findings matched the assumptions made on initiation of this study.

Lastly, Chapter Eight discusses the conclusions and recommendations of the study to address the identified gaps and challenges EHPs faced in carrying out their responsibilities. It suggests the establishment of ethics infrastructure for the management of ethics, underpinned by ongoing ethics training of EHPs to impart competencies that would help them identify ethical issues and deal with ethical challenges.

1.10 SUMMARY OF THE CHAPTER

In this chapter, I presented an overview of the study, highlighting the fact that the study covers the legal, professional and ethical responsibilities of EHPs in South Africa. The chapter offers an overview of the study design, emphasizing both the theoretical and empirical components that will be discussed in subsequent chapters.

The next chapter discusses the methodology underpinning the study.

CHAPTER TWO

METHODOLOGY

2.1 INTRODUCTION

The purpose of this chapter is to provide details of the study design and methodology used. As stated in Chapter One, the study objectives were: (i) To articulate the ideal in terms of the fulfilment of the professional, ethical and legal responsibilities of environmental health practitioners in South Africa; (ii) To explore the awareness and understanding among environmental health practitioners regarding their professional, ethical and legal responsibilities in practice, using eThekwini Metropolitan municipality as a case study; (iii) To examine challenges facing EHPs in fulfilling their professional responsibilities as found in the case study***;*** (iv) To normatively compare the ideal versus the reality on the ground to identify shortcomings. The final envisaged practical outcome of the study was: to formulate recommendations aimed at addressing identified shortcomings and challenges faced by EHPs in the fulfilment of their responsibilities.

The study employed a bi-phasal approach to answering these questions. First, a normative analysis of current legislation and ethics guidelines was conducted. This provided not only a clear indication of the current expectations placed on EHPs, but also on the areas of confusion, lack of clarity or absences in these expectations (Chapter Three primarily and to some degree in Chapters Four to Seven).

The second phase of the study involved an empirical investigation of what EHPs in South Africa identify as their professional, ethical and legal responsibilities. This study provided a better understanding of *what* – if anything – EHPs identified as moral duties, as well as what they identified as challenges. This enabled the making of conjectures regarding how policy governing EHP activities can be strengthened, and how ethics training amongst EHPs can be enhanced (Chapters Four to Chapter Eight capture this information).

A qualitative study was chosen based on the fact that, qualitative studies are good in obtaining new knowledge on issues "where insights and awareness of human experience is a priority" (Tanya and Heather, 2004, p.238). For example, in Australia, a qualitative study using semi-structured interviews was used with a group of general practitioners to determine their understanding of ethical problems (Braunack-Mayer, 2001, p.98). In Scotland a qualitative

study was commissioned to investigate ethical issues in public health professions (Rogers, 2004). In another setting a study investigating the use of qualitative data on environmental health to a sample of 3155 peer reviewed journal records between the period 1991 and 2008, found that one-to-one qualitative studies were the most preferred method for determining the opinions of people as well as their understanding of events (Scammell, 2010).

2.2 STUDY DESIGN

This qualitative study design was informed by an extensive literature review. Table 2.1 is a schematic presentation of how the objectives of the study linked to the approaches used to collect and analyse data. The approach begins with a normative analysis of ideals defining the role responsibilities of EHPs, followed with empirical component of the study that involved one-on-one interviews with the research participants to collect data on evidence of the realities on the ground interpreted via thematic content analysis.

Table 2:1 Table Depicting Coherence between Objectives, Methods, Data Source and Data Analysis

Objective	Approach	Data Source	Activity	Data Analysis
1 To articulate the ideal in terms of the fulfilment of the professional, ethical and legal responsibilities of environmental health practitioners in South Africa.	Normative	Legal, policy and operational guidelines for environmental health	Literature survey	Thematic content analysis
2 To explore the awareness and understanding among environmental health practitioners regarding their professional, ethical and legal responsibilities in practice, using eThekwini Metropolitan municipality as a case study.	Empirical	eThekwini EHP Managers and EHPs	One-on-one interviews	Thematic content analysis
3 To examine challenges facing environmental health practitioners in fulfilling their professional, ethical and legal responsibilities as found in eThekwini Metropolitan municipality.	Empirical	eThekwini EHP Managers and EHPs	One-on-one interviews	Thematic content analysis
4 To normatively compare the ideal versus the reality on the ground to identify shortcomings.	Normative			
The final envisage practical outcome was: to formulate recommendations aimed at addressing identified shortcomings and challenges faced by EHPs in the fulfilment of their responsibilities.	Empirical	Transcripts	Formulate final recommendations	Thematic content analysis

2.2.1 Design of normative component

The purpose of the normative component was to examine the current guidelines, policies and legislation that offered ethical guidance to EHPs. A variety of texts were consulted, including national legislation (such as National Health Act, 61 of 2003), professional guidelines (such as Health Professions Act, no. 56 of 1974) and codes of conduct (such as that of the HPCSA).

I also assessed provisions of the Constitution of the Republic of South Africa Act, no.108 of 1996 as amended. Section 195(1) provides guidelines on how public servants should conduct themselves when carrying out services and emphasises the need to promote and maintain professional ethics. The Health Professions Act, no. 56 of 1974 states that EHPs as professionals in South Africa should be registered and carry out their work within the professional framework. The Batho Pele White Paper (Republic of South Africa, 1997), also expands on how the provisions of Section 195(1) of the Constitution should be applied during service delivery. The legislation applicable to EHPs are listed in Table 4.1 in Chapter Four and practices guidelines for environmental health were consulted with the purpose of identifying evidence of legal, professional and ethical responsibilities of EHPs.

The normative inquiry is two-fold. Firstly, it examined the ideals in terms of the prescribed legal, professional and ethical responsibilities of EHPs. Secondly, the inquiry identified areas currently lacking sufficient oversight and guidance, with the aim of identifying shortcomings and propose possible interventions or solutions to rectify the identified shortcomings and challenges faced by EHPs in the fulfilment of their responsibilities. The findings from this stage of the study were then used to inform the design the empirical tools detailed below.

2.2.2 Design of empirical component

I employed an exploratory-descriptive case study design located within "an interpretive qualitative research paradigm[22]" (Creswell and Miller, 2000, p.125) for capturing views from the participants in order to understand the environment in which they work and identify challenges they experience. Given the fact that there has not been any environmental health study that combines the legal, professional and ethical dimensions of environmental health

[22] The use of "qualitative research paradigm" suggests that the 'reality" [which in this case refers to empirical findings] is what participants perceive to be" Creswell and Miller (2000, p.125).

practice in South Africa, I found the "qualitative[23] research " design (Golafshani, 2003, p.600) to be suitable because it enables "exploring people's experience and understanding of events" (Harding, 2013, p.56). This aspect was essential in this study, particularly in determining how EHPs understood their responsibilities and how they felt about the impact of the policies on their work. The proponents of qualitative research like (Sim and Wright, 2000, p.7); (Dahlgren et al., 2004); and (Katz, 2006) recommend such an approach in studies where the research aims at acquiring an understanding of a social or human problem and where the study involves "clarification of ideas and formulation of questions and hypotheses for a more precise investigation" (Sim and Wright, 2000, p.7).

The fact that the qualitative research design is context sensitive enabled me to "understand situations that influence" EHPs' actions in their areas of operation and obtain information on the actual practices and challenges EHPs experience in carrying out their duties (McMillan and Schumacher, 2010, p.322). Conducting my research within a municipal environment provided a conducive environment for exploring the practices on the ground and enabled me to determine how they matched the provisions in the policy and legislative guidelines as detailed in the findings in Chapters Four to Six.

2.3 SITE OF STUDY

The eThekwini metropolitan municipality (with Durban as the largest city[24]) in the Kwa-Zulu Natal Province was chosen as the site of the empirical research amongst the eight[25] metropolitan municipalities in South Africa (Figure 2.1). Permission to use the maps is attached as Annexure 11. Environmental health services in South Africa fall under health services which, according to Section 32 of the National Health Act, no. 61 of 2003 (Republic of South Africa,

[23] Qualitative studies by nature derive findings via naturally unfold processes dominated by use of interview methods contrary to statistical methods used in quantitative studies (Golafshani, 2003, pp.597-606).

[24] This confirmed by Yes Media. 2017. *Provincial Government of South Africa* [Online]. Yes Media. Available: https://provincialgovernment.co.za/ [Accessed 25 October 2017.

[25] Whilst South Africa has **Nine Provinces,** there are ***eight metropolitan municipalities*** such as: Buffalo City and Nelson Mandela Bay Metropolitan Municipalities (both in the Eastern Cape Province); City of Cape Town (in the Western Cape Province); [City of Johannesburg, City of Tswane and Ekurhuleni Metropolitan Municipalities (all three in the Gauteng Province)]; eThekwini Metropolitan (in the KwaZulu Natal Province); Mangaung Metropolitan Municipality (in the Free State Province). Ibid.

2004) and are the responsibility of metropolitan and district municipalities[26](South African Local Government Association (SALGA), 2011). Of the eight, eThekwini metropolitan municipality was the most convenient in terms of location, and thus formed the site for my study.

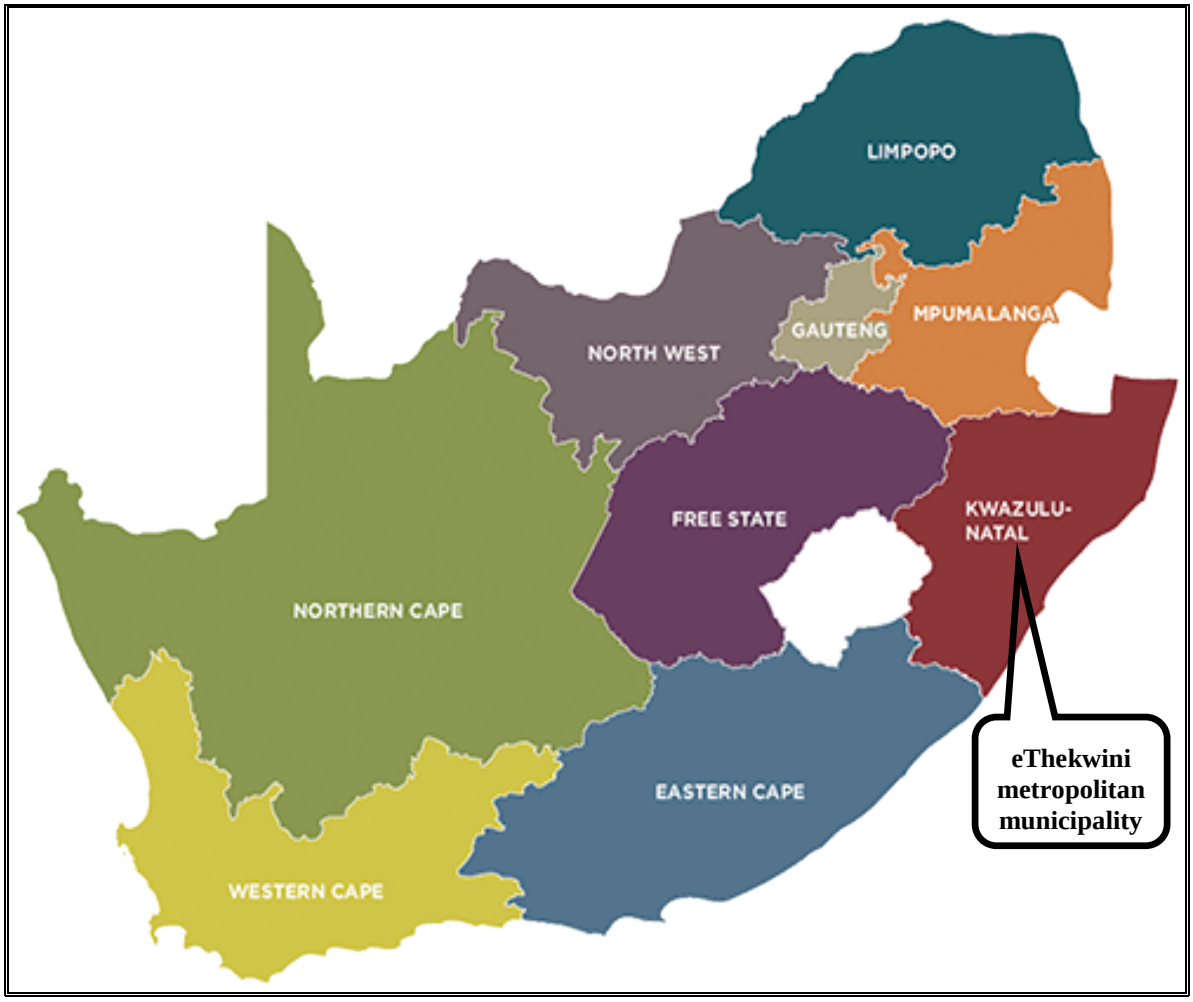


Figure 2.1: Map showing the location of Kwa-Zulu Natal Province in the South African map where eThekwini metropolitan municipality is located. Source: Map adapted and used with permission from Yes Media [Online]. Available *https://provincialgovernment.co.za/* - The Local Government Handbook.

[26] The South African Local Government Association (SALGA) defines municipalities based on the provisions of the Constitution and the Local Government Systems Act, no. 32 of 2000 as organs of state that consist of the political structures and administration of the municipality and the community within the municipal area. These are categorised into three types: A *metropolitan municipality* has exclusive authority to make rules over its area of jurisdiction; a *local municipality* shares authority with district municipality in whose area it falls and a *district municipality* has authority to administer and makes rules in areas which includes more than one local municipality. (SALGA. 2011).

eThekwini metropolitan municipality is a "Category A municipality" in terms of Section 155(1)(a) of the Constitution of the Republic of South Africa, and performs all functions of the local government for a city that employs EHPs and offers environmental health services (Republic of South Africa, 1996b).This site provided a good mix of environmental health practitioners in terms of gender, age distribution and cultural groupings.

eThekwini metropolitan municipality is also the *only metropolitan municipality* amongst the 10 Kwa-Zulu Natal district municipalities (Figure 2.2). According to the 2011 census (Statistics South Africa, 2012, p.95), it has a total population of 3 442 361 distributed across an area of 2 297km^2 with 956 713 households (Statistics South Africa, 2014). This municipality population mix has a diverse culture that I presumed to be a good source for determining challenges to service delivery. eThekwini metropolitan municipality is predominantly Zulu speaking city with a racial makeup of 73,8% Black Africans, 16,7% Indians, 6,6% Whites and 2,5% Coloured persons. This municipality has an average household income distribution of R112 830 which is 73.6% higher than the R83 050 of the Kwa-Zulu Province (Statistics South Africa, 2012, p.42).

In terms of rankings in service delivery related categories with the other seven South African metropolitan municipalities per (Statistics South Africa, 2014), the eThekwini metropolitan municipality ranking is depicted in Table 2.2:

Table 2.2: Comparison of eThekwini metropolitan municipality performance status in relation to other South African metropolitan municipalities

Category	Rank	Size	Leading City Ranking	
Population size	3	3 442 361	City of Johannesburg	4 434 827
Number of households	4	956 713	City of Johannesburg	1 434 856
Weekly refuse removal	4	86,1% of population	City of Johannesburg	95,3%
Flush toilet connected to sewerage	7	63,4% of population	City of Cape Town	88,2%

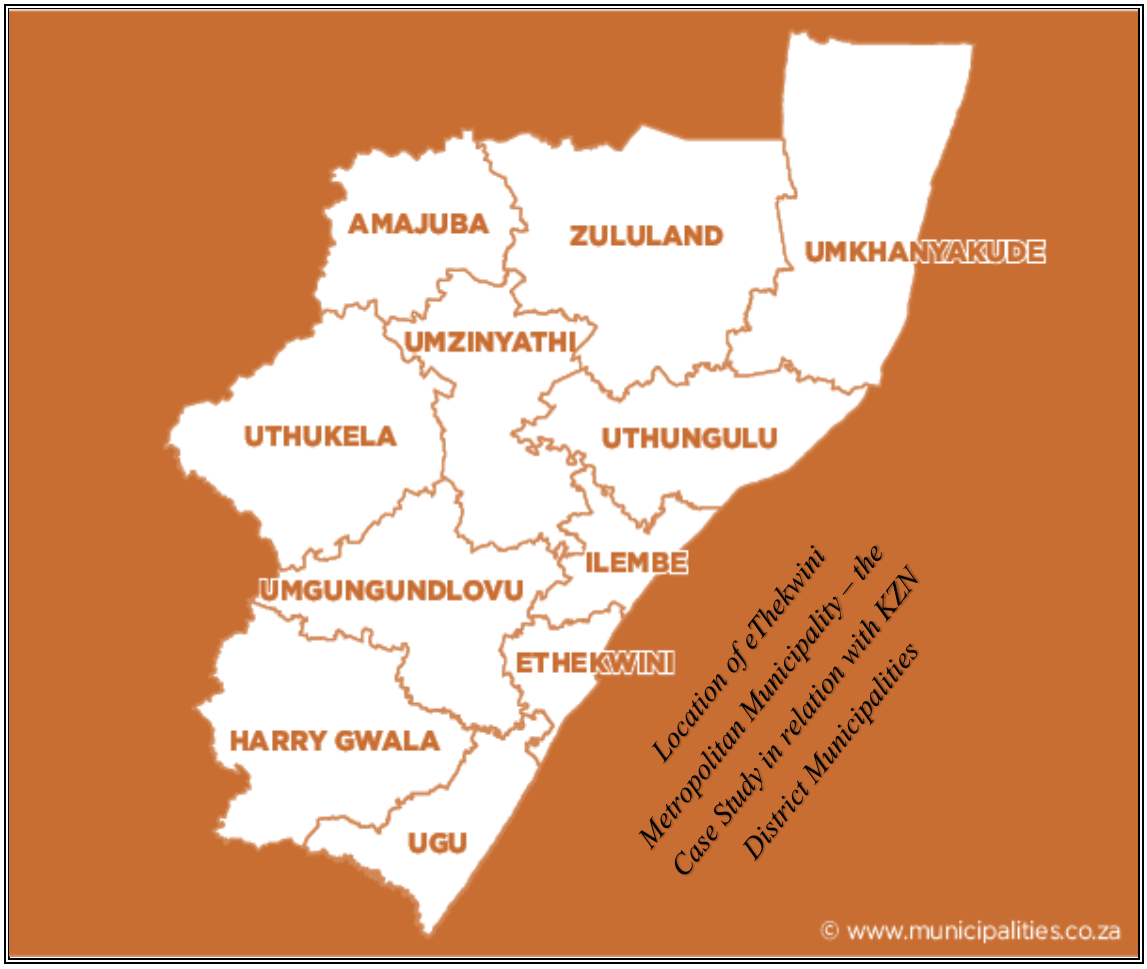


Figure 2.2: **eThekwini Metropolitan in relation to Kwa-Zulu Natal District Municipalities**. Source: Map adapted and used with permission from https://municipalities.co.za/provinces/view/4/kwazulu-natal - The Local Government Handbook: South Africa.

The eThekwini municipality attained its metropolitan status in 2000 resulting in the full merger of the formally independent small municipal entities into the metro. New boundaries combined township, semi-rural, urban and industrial environments. This restructuring made eThekwini a good case study area to test the effectiveness of environmental health practice and challenges faced by environmental health practitioners, being a mix of both a rural and urban households. The area distribution of health facilities (eThekwini Municipality, n.d., eThekwini Municipality, 2011) is shown in Figure 2.3.

New boundaries are broken down into 3 main areas, the West, North and South districts units, where the environmental health offices are located as shown in Figure 2.3. These district health units are sub-divided into 18 sub-districts offices denoted by letters S1-S8 in the south, N1-N6 in the north and W1-W4 in the west. The southern and western areas are predominantly

rural compared to the more urban and industrial north district. I considered these features when sampling the study population so as to ensure balance between the three formerly independent entities which provided a rich and diverse environment with different socio-economic conditions. Such history is important in determining the provision of environmental health services and understanding the nature of challenges faced by EHPS, the nature of public constraints and how EHPs respond to them.

To summarise, the eThekwini metropolitan municipality provided the following:

- ✓ A suitable ground to evaluate environmental health services covering city centre, township and rural setting conditions.
- ✓ Enabled the evaluation of environmental health practice in a diverse cultural environment that mirrors the South African society, thus affording a good environment for obtaining diverse views.
- ✓ As one of the leading metropolitan municipality in South Africa, environmental health findings in respect of eThekwini metropolitan municipality, would seem to reflect the picture of South African practice.

2.4 STUDY POPULATION

Research participants consisted of two groups of practising environmental health practitioners (EHPs) distributed across 18 sub-district health units within the eThekwini metropolitan municipality shown in Figure 2.3. The environmental health services unit is part of the eThekwini health department whose reporting structure is outlined in Figure 2.4.

Figure 2.4 illustrates the structure of the health department in eThekwini metropolitan municipality where the environmental health service unit is located. The Department has a Head of Department with Deputy Heads, one assigned to each district, and three responsible for the specialties of clinical services, communicable diseases and pollution control services. Below district deputy heads are primary health care (PHC) managers distributed across the 18 sub-district health units. The PHC managers supervise the environmental health services managers (EHSM) who in turn supervise environmental health practitioners (EHPs) and environmental health assistants in the 18 sub-districts. The research participants were selected from amongst the environmental health personnel (managers and practitioners) who are directly responsible

for carrying out the environmental health services as mandated by South African laws such as the National Health Act, no. 61 of 2003 and the Health Professions Act no. 56 of 1974.

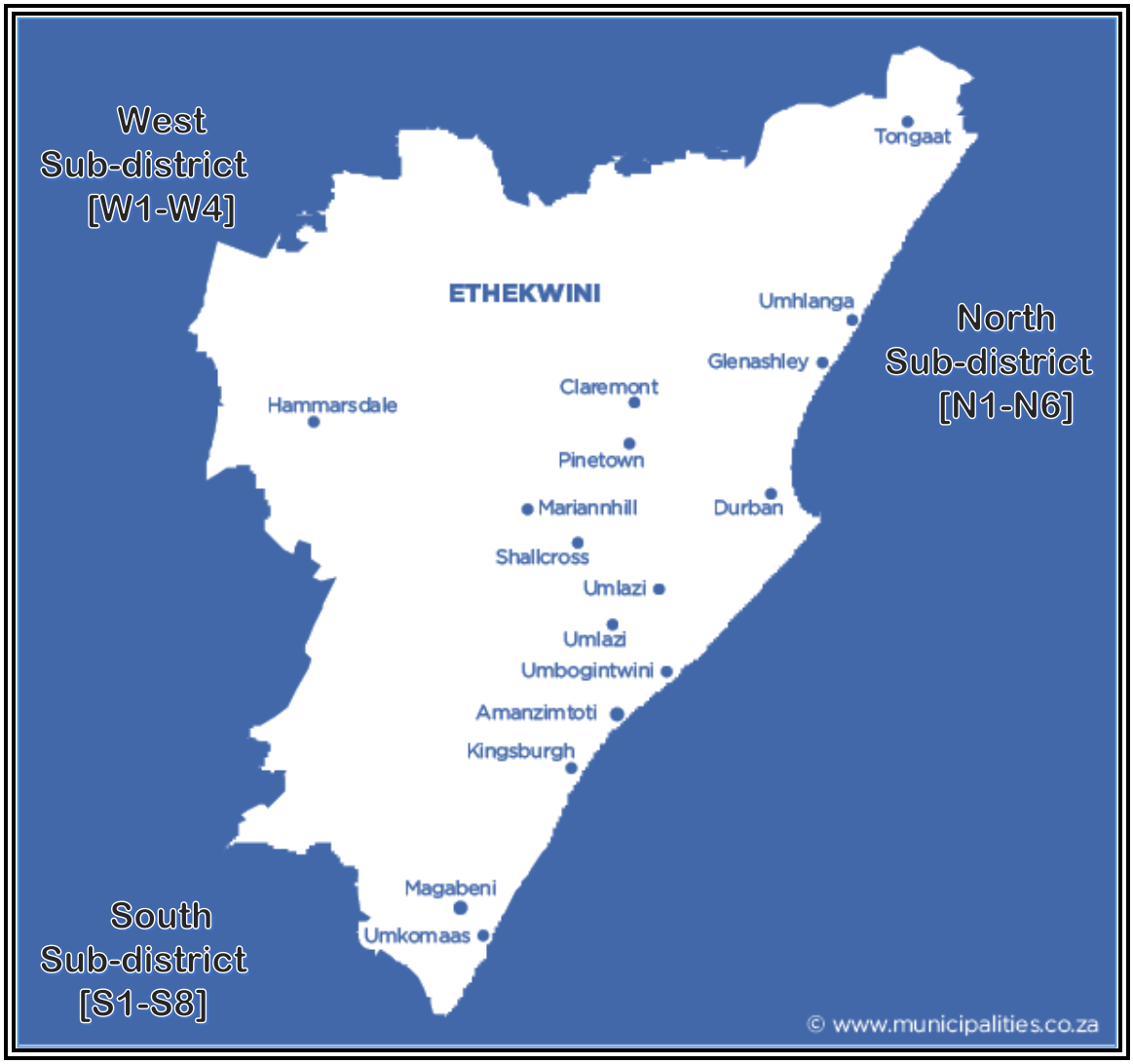


Figure 2.3: **Map of eThekwini Metropolitan municipality showing operational areas for environmental health services.** [18 offices distributed across the north [N1-N6], south [S1-s8] and west [W1-W4] sub-districts. Source: Adapted and used with permission from www.municipalities.co.za. [Online]. Available at: https://municipalities.co.za/metropolitans/view/5/eThekwini-Metropolitan-Municipality#map

Only personnel who were registered or by virtue of their qualifications were eligible to be registered in the professional register of the Health Professions Council of South Africa as independent environmental health practitioners were included. To this end, the HPCSA stipulates qualifications that entitle one to be eligible to register as an EHP and practise environmental health in South Africa, namely one needs the National Diploma in Public Health or Environmental Health (Health Professions Council of South Africa, 1994).

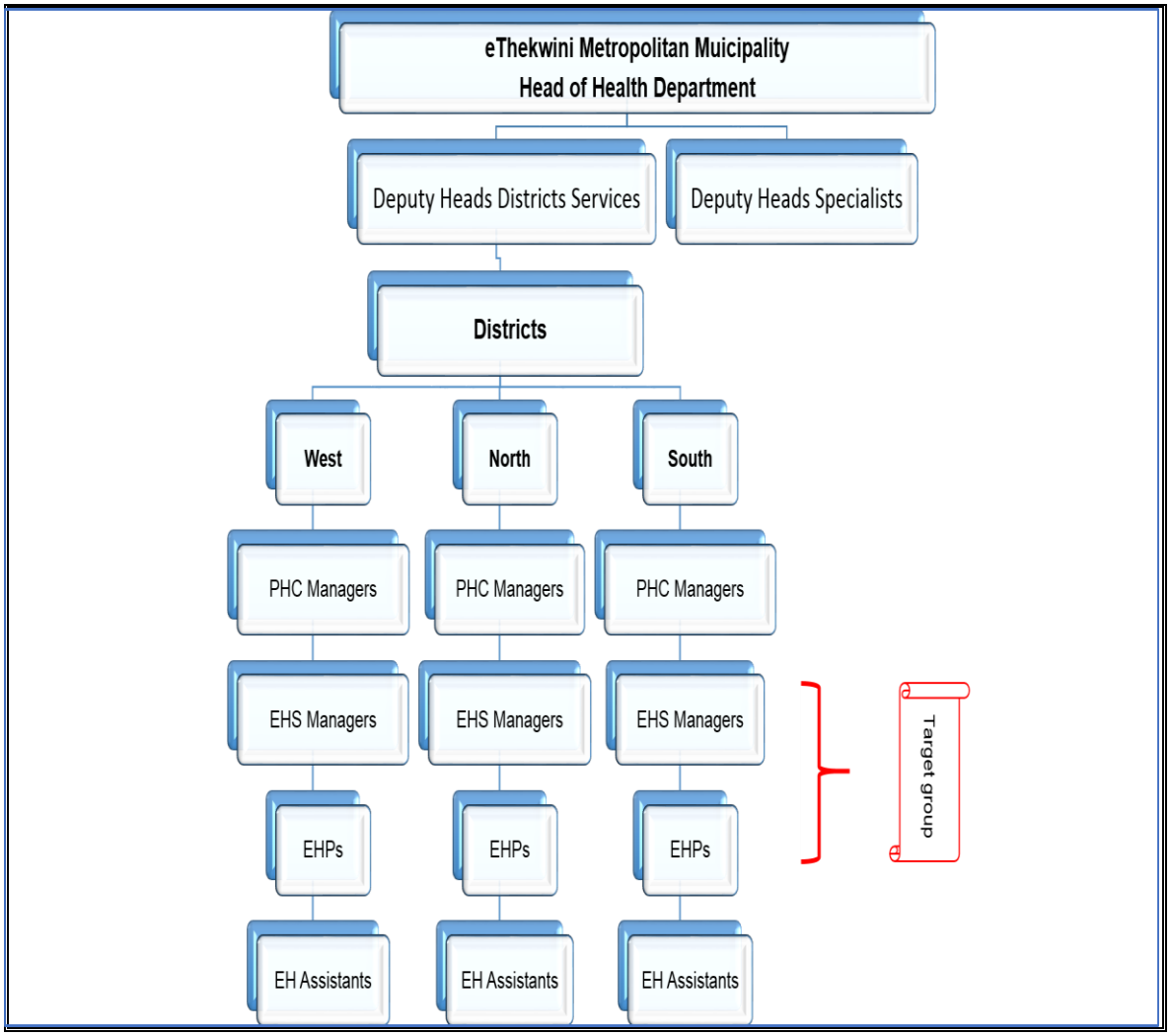


Figure 2.4: **A brief outline of the reporting structure of the eThekwini metropolitan municipality showing how the research participants feature in the organisation.**

The first group of research participants was selected from environmental health service managers (EHSMs). The eThekwini metropolitan municipality had a total complement of 25 environmental health service managers during the period of this research of which 16 participated in the study. Environmental health service managers are an important group of

participants as they are responsible for the control and direction of operations. They implement policies and are expected to have a good understanding of environmental health service operations. The challenges faced by their units presumably end at their doorstep**.** I anticipated that this group would assist with access to pertinent information on environmental health practice. The inclusion of managers in the study was paramount in addressing the aim of this study that was to investigate the professional, ethical and legal responsibilities of environmental health practitioners in South Africa using eThekwini metropolitan municipality as a case study.

The second group so research participants were the EHPs - the practitioners responsible for daily practice in situ. A total of 19 EHPs out of the 77 EHPs in the study area participated in the study. The investigation of complaints and general inquiries are mainly undertaken by these officials. It was anticipated that the insights of environmental health practitioners would help in informing the direction to be taken to shape the profession towards improving services.

2.4.1 Sampling and Selection of Research Participants

I approached the eThekwini metropolitan Health Department for assistance with information on environmental health services. This strategy assisted me in obtaining details of the set-up of environmental health services, within the case study area. Thereafter, with the information given, I recruited research participants from amongst the EHPs within the eThekwini metropolitan municipality. In this regard, I made telephone calls to various EHPs from the list I obtained from the municipality, which showed the spread of the environmental health staff and location. In this way, I endeavoured to ensure the spread of the research participants across the four health districts offices as illustrated in Figure 2.3, so that all areas were represented.

I selected research participants using non-probability sampling techniques that involved purposive and sequential sampling (van Rensburg et al., 2010, De Vos et al., 2002, Maykut and Morehouse, 1994). Non-probability sampling is a technique commonly used in applied social research where the researcher is clear about the target group to be investigated and has predefined criteria for the study population which would make it difficult to use random methods for selecting participants (Trochim, 2006). Results from this approach are not generalisable. Thus making it best for use in qualitative research whose primary aim is to determine opinions on a particular issue in order to gain a better understanding and ultimately come up with a solution. It is important in this regard, to have a good spread when selecting research participants.

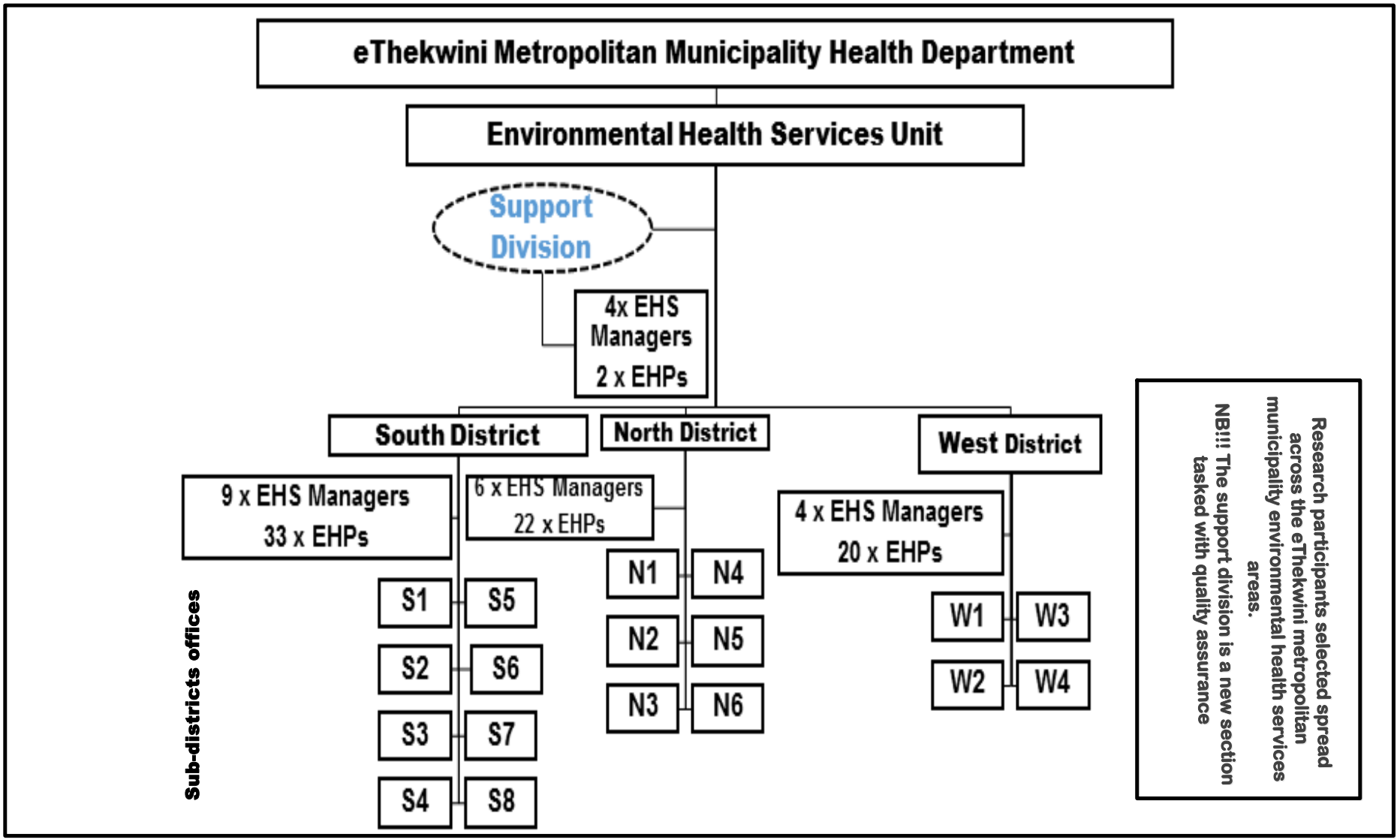


Figure 2.5: Distribution of research participants for empirical data collection [the abbreviations denote: **S** – South District, **N** – North district and **W** – for West district. This is demarcation of the eThekwini Health Facilities depicting EHPs operational areas per Map of eThekwini Metropolitan Municipality on Figure 2.3

Purposive sampling in selecting the research participants ensured that environmental health service professionals from different ranks who are spread across the study area were included in the sample. This sampling method afforded me an opportunity to ensure a balance in terms of the geographical settings and representation of personnel according to gender and age as well diverse socio-economic conditions and both old and moderately young environmental health professionals as recommended in the works of (Katz, 2006, Mouton, 2001, van Rensburg et al., 2010). Such an approach presented a situation that was conducive to establishing diverse views and experiences that could provide rich diverse findings in terms of operations and environmental health service delivery needs of the recipient communities.

2.4.2 Inclusion and Exclusion Criteria of Research Participants

The only selection criteria used to be able to participate in the study were (i) being qualified with an environmental health qualification and (ii) registered with the HPCSA as an independent environmental health practitioner. The third criterion was that research participants had to be employed practising environmental health practitioners within the eThekwini metropolitan municipality regardless of any specialization in the environmental health practice. I was fortunate that, none of the research participants declined to participate in the study. Even those who were busy rescheduled to accommodate the interviews.

2.4.3 Profile of Research Participants

In this section, I provide a brief description of the profile of the research participants.

First, participants' length of experience as an EHP ranged from a minimum of 1.7 years to 39 years as depicted in Figure 2.6. This broad range of experience enabled me to draw upon the views of both the newly qualified young EHPs and the mature EHPs who had a wealth of experience and who understood the developments within the environmental health practice in the eThekwini metropolitan municipality.

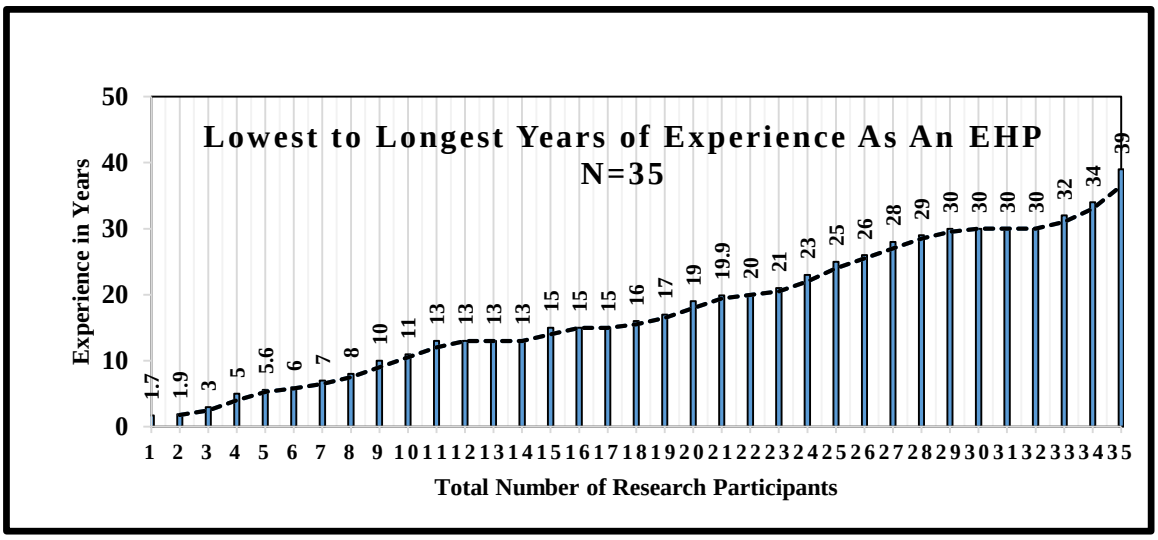


Figure 2.6: **Graphical presentation of the lowest to longest years of experience as an EHP**
Source: Graph drawn based on the data collected from the interviews from the case study area.

Second, the home language of participants is shown in Figure 2.7. The analysis showed that English ranked high 43 % (15) followed by Zulu 40 % (14) and Xhosa with 17 % (6). All participants were fluent in English even though they had different home language. The language profile is important given that the municipal authorities are expected to provide the necessary resources in accordance with the mandatory provisions of the National Health Act, no. 61 of 2003. In this regard, the National Health Act, Section 82(2) stipulates *that "a health officer or inspector may be accompanied by an interpreter and any other person reasonably required to assist him or her in conducting the inspection"* (Republic of South Africa, 2004a).

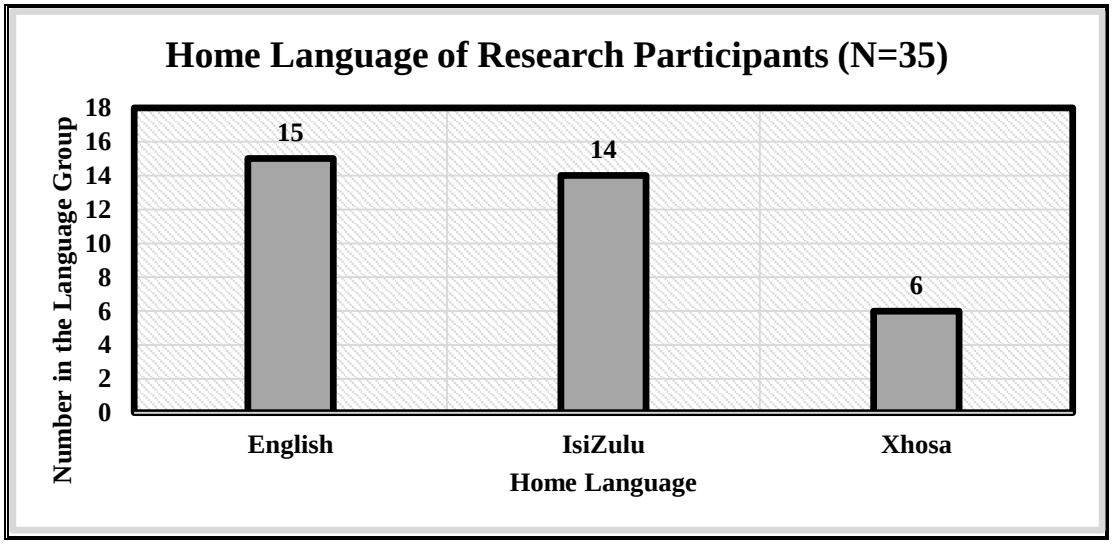


Figure 2.7: Home language of research participants. Source: Data from interviews

The majority of the eThekwini metropolitan municipality population speaks Zulu (Statistics South Africa, 2012), making adequate interpreter availability an important concern.

Third, the gender profile of participants is presented in Figure 2.8.

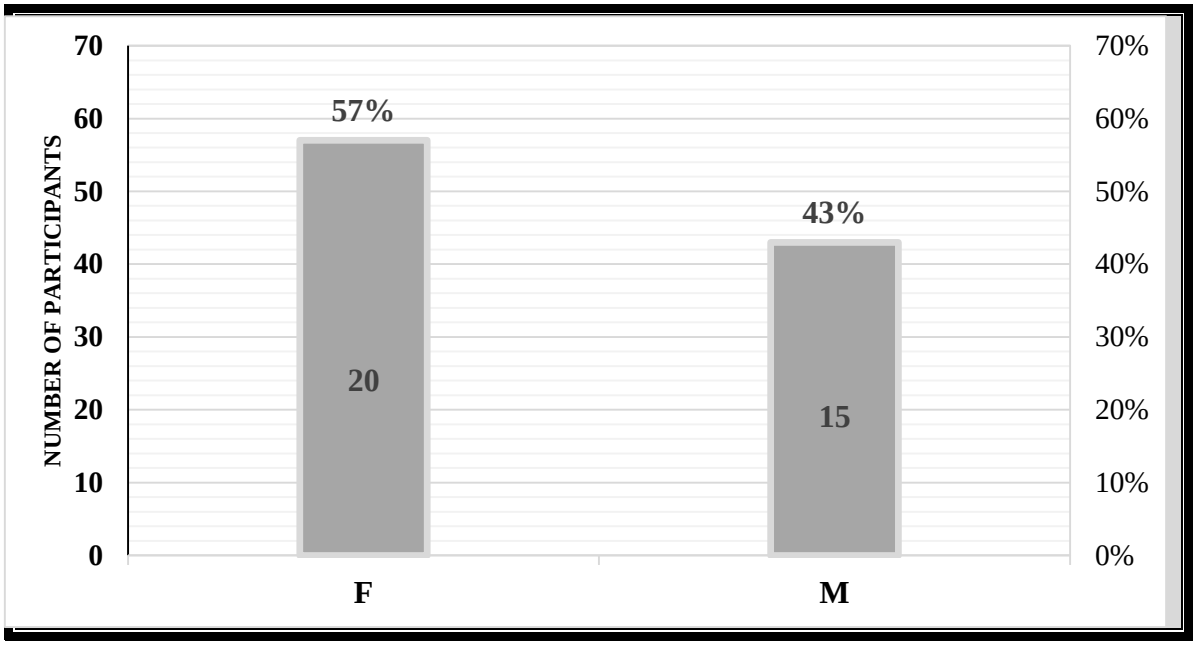


Figure 2.8: Gender distribution of research participants (N = 35). Source: Data from the interviews.

The research participants' gender profile depicted in Figure 2.8 resembles the profile of the eThekwini metropolitan municipality environmental health staff as of July 2014 records, the analysis of which showed that females constituted 54 % (67) whilst males represented 46 % (56) of the total number (123) of environmental health staff which I calculated based on the database I was given for selecting research participants.

Fourth, another important profile feature of the research participants was the professional qualifications whose results are shown in Figure 2.9.

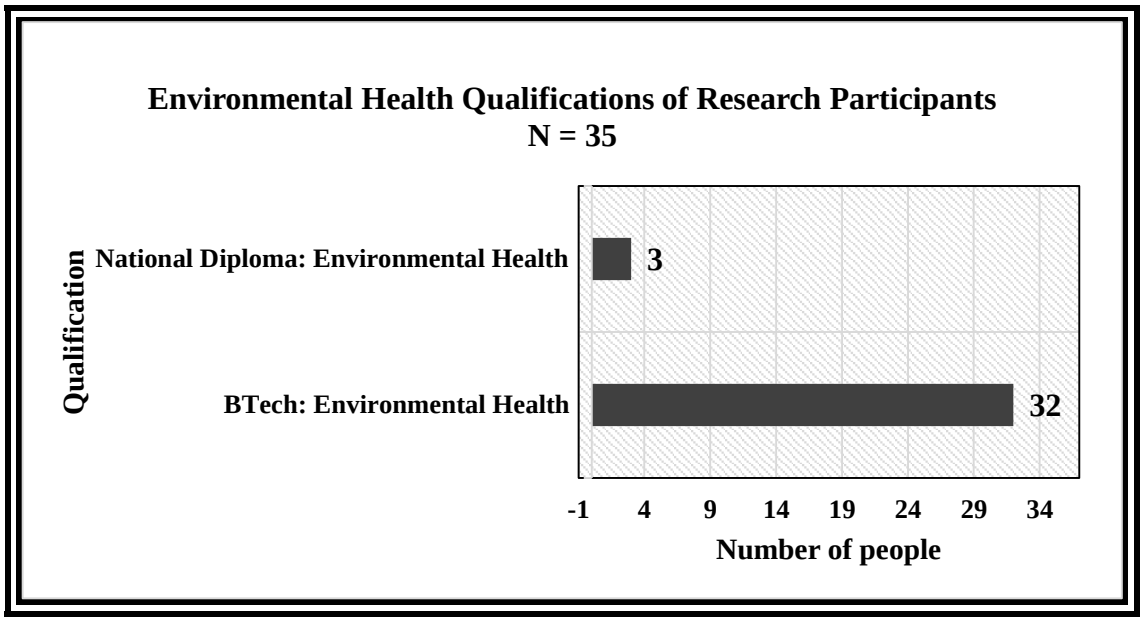


Figure 2.9: Research participants' qualification in the field of Environmental Health. Source: Information collected from interviews.

The results of the analysis of the research participants' environmental health qualification show that the majority 91.4 % (32) were in possession of a BTech: Environmental Health qualification and 8.6 % (3) qualified with a National Diploma: Environmental Health. The National Diploma: Environmental Health is the recognised undergraduate qualification for registration in the HPCSA professional register to practise as an Independent Environmental Health Practitioner in South Africa (Health Professions Council of South Africa, 1994). The BTech is an additional post National Diploma: Environmental health qualification that offers EHPs additional skills to improve their management practice and introduces EHPs to scientific research as part of carrying out their EHP responsibilities. All the EHPs who participated in the study were thus appropriately qualified to practise environmental health.

Fifth, the age distribution of the research participants is shown in Figure 2.10. The youngest research participant was 25 years of age and the oldest 61 years, with an age group distribution showing the majority, (23 or 66% of the total 35 research participants) falling within the 31-50 year age group bracket.

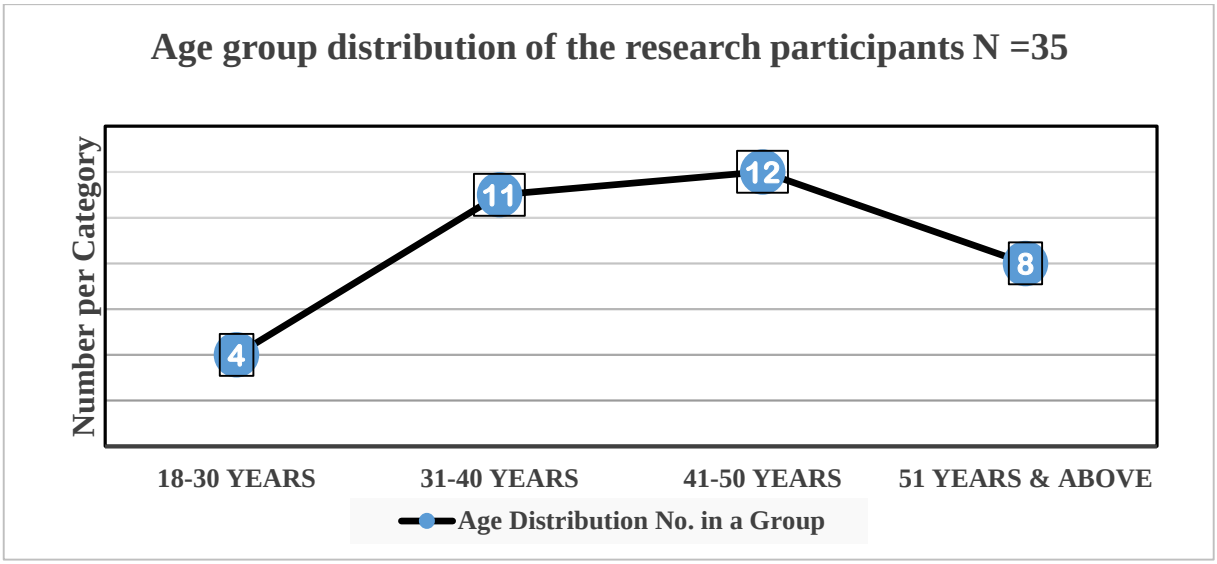


Figure 2.10: Age distribution of the research participants. Source: Information collected from interviews.

Notwithstanding the importance of race of research participants, the university's Ethics Committee deemed it inappropriate to seek information on the participants' racial groupings due to the sensitive nature of racial relations in South Africa.

The distribution of the research participants across the case study area is shown in Figure 2.11.

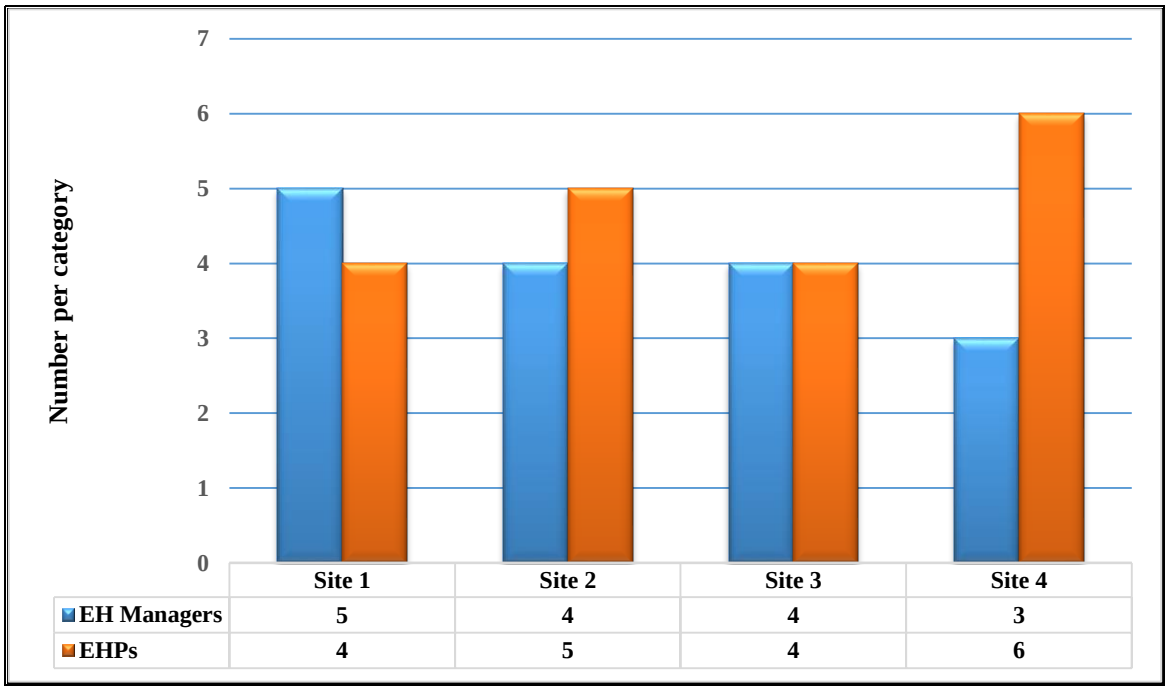


Figure 2.11:- Distribution of research participants across the case study area (N = 35)**.**

Source: Graph drawn based on the findings of interviews

The next section outlines how data were collected and prepared for analysis.

2.5 EMPIRICAL DATA COLLECTION:

The empirical component of this study focused on the realities of the legal professional and ethical responsibilities of EHPs. Putting this in another way, the empirical ethics component of this research project attempts to determine how realities on the ground match with the ideals. This empirical component of the study had two key objectives: (i) first to explore the awareness and understanding among environmental health practitioners regarding their professional, ethical and legal responsibilities in practice, using eThekwini metropolitan municipality as a case study. (ii) Second, to examine challenges facing eThekwini environmental health practitioners in their daily practice that may arise from conflicting or competing responsibilities.

2.5.1 Step 1: Development of empirical data tools and pilot

Interview schedules consisting of semi-structured questions were developed for EHPs who were managers (EHMs) and general EHPs within the eThekwini metropolitan municipality. Such interview schedules are attached as Annexure 1 and Annexure 2 respectively. These interview instruments were piloted or pre-tested on a similar group of participants to check the correctness of the instruments and identify areas needing adjustments so as to enhance validity of data collection. In this case, I conducted the pre-test with four fellow colleagues: two were EHPs not in the employment of the municipality and two were academic EHPs. A "pre-test or pilot study refers to the administration of a measuring instrument to a group of people to determine any difficulties that research participants may experience in answering questions" (Grinnell and Unrau, 2013, p.571). The pre-test participants were excluded from participation in the actual study and their feedback did not lead to changes to the research instruments, but has helped in affirming the clarity and relevance of the questions. The tool was thus deemed adequate.

2.5.2 Step 2: Data Collection via an Empirical Approach

I conducted all the interviews myself to ensure the reliability of the data collection process. Further, I separated the interview schedules for EHMs and the general EHPs so as to easily manage the data collection process.

Research participants were purposively selected from the supplied list of names and locations of all EHMs and EHPs within eThekwini metropolitan municipality. This was

followed by arranging appointments and conducting of interviews with both EHMs and EHPs at times and venues that were convenient for them. Each research participant was issued with a study information sheet and informed consent form which detailed the process of the interview and the recording of the interview using a digital recorder. (More details on this aspect are provided in section 2.7 which deals with ethical considerations).

Research participants were asked to share their knowledge about ethics in environmental health and how it affected their work, their experience in handling public complaints, their understanding of the legal framework governing their profession, as well as the challenges they faced in carrying out their duties.

The interview process was divided into four main sections and the main questions addressed during empirical data collection are tabulated in Table 2.3. The interview schedule covered (i) the demographic data of the participants; (ii) questions on knowledge and awareness about ethics and professional responsibilities; (iii) questions on knowledge of legal guidelines for environmental health as well as (iv) questions designed to determine challenges experienced by EHPs during the execution of their duties.

Table 2.3: Table showing the main questions and their purposes in line with the three aspects: legal, professional and ethical responsibilities of EHPs being addressed in this study

Section	Question	Purpose	Location in thesis
Legal Responsibilities	**Q.11:** Please tell me which main laws and policies you are using in guiding environmental health practice?	To determine the EHPs knowledge of applicable legislation in carrying out their work.	Chapter 4 ✓ 4.4
	Q.11.1.2: Please give examples of any challenges you encountered in applying the laws and policies?	To determine challenges EHPs faced when enforcing laws.	Chapter 4: ✓ 4.6
Professional Responsibilities	**Q.8:** I would like to know what you understand to be the role of the HPCSA in environmental health profession?	To determine the knowledge and understanding EHPs have of the HPCSA which govern their profession.	Chapter 5: ✓ 5.5
	Q.10: How do you feel about belonging to a professional body and what are the reasons for being a member of such a body?	To find out the real reasons EHPs have for belonging to a professional body.	Chapter 5: ✓ 5.4
Ethical Responsibilities	**Q.1** Please tell me in your own words, your understanding of the concept of ethics?	To determine what the understanding EHPs had of the ethics concept.	Chapter 6: ✓ 6.5.2
	Q.2.1: Are there any ethical guidelines that are used in your workplace?	To find out if there are any ethical instruments that EHPs use to guide their conduct at work, the aim being to determine the ethical infrastructure for environmental health practice.	Chapter 6: Generally covered in various parts of the thesis
	Q.5: In your workplace, how would you describe the ethics culture in terms of relationships with colleagues?	To discover the relationships amongst colleagues which might impact on their work ethic.	Chapter 6: ✓ 6.5.3
	Q.3: Drawing from your own experience, kindly describe what you regard as ethical challenges in the practice of environmental health?	To determine issues EHPs regard as ethical challenges in carrying out their duties.	Chapter 6: ✓ 6.5.4

2.6 DATA MANAGEMENT

The collected data was safely stored to restrict access and maintain confidentiality. All recorded interviews were labelled with specific codes unique to the participants and no names were included to protect the identity of the participants. The interview transcripts and tapes are stored in password protected computer folders and no one is allowed access other than my supervisors. The collected data will be kept for two years following publication thereof and for "six years" (Health Professions Council of South Africa, 2008d, p.8), if no publications emanate from the study.

2.6.1 Data Processing and Analysis

Data analysis covered three main focal points as per the aim of the study such as professional, ethical and legal responsibilities of environmental health practitioners. These areas were divided into five parts as per the interview schedules. A summary of areas of data analysis addressed is presented in Table 2.4.

I obtained information through interviews and tape recording was transcribed for each interview I conducted and categorized according to areas where the research participant worked. The transcripts were then organized into themes, and coded for further analysis using the NVivo qualitative computer programme. A thematic content analysis (TCA) method was used to engage with the data. This method is defined as "a data collection method in which communications are analysed in a systematic, objective, and quantitative manner to produce new data" (Grinnell and Unrau, 2011, p.561). Further, TCA was used as the method that enabled the examination of common issues and areas where there were differences as well as relationships amongst the variables (Harding, 2013, p.56).

Table 2.4: Table Showing Key Areas Addressed in the Data Analysis

	KEY FOCUS	SCOPE OF DATA ANALYSIS	PURPOSE
PART 1	Professional and Ethical Responsibilities	1. Knowledge and Awareness of Professional ethics and ethics instruments	Data involved questions that assessed: a. Participants' own understanding of ethics concept. b. Participants' training in ethics and how they regarded importance of such trainings. c. Presence of ethics guidelines and ethics champions in participants' workplaces. d. Prevailing ethics culture as denoted by relationships amongst colleagues. e. Participants' understanding of the Role of the Health Professions Council of South Africa (HPCSA) and need for reporting cases of misconduct of EHPs.
PART 2	Legal Responsibilities, Complaint Management and Professional Practice Challenges	2. Legislative Framework and Policy Guidelines in Environmental Health Practice	Data involved questions that assessed: a. Current legislative instruments being used by EHPs. b. How the legislative tools were accessed and applied. c. Current challenges in applying policy guidelines, regulations and legislations.
PART 3		3. Challenges in Handling Complaints and Routine Inspections	Data involved questions that assessed: a. Mechanisms used for receiving and handling public complaints. b. Examples of common public complaints. c. Mechanisms for carrying out routine inspections. d. Main challenges faced in handling complaints and carrying out routine inspections. e. Method/s used for evaluating effectiveness of handling complaints and routine inspections.
PART 4		4. Participants Own Inputs	Data involved questions that assessed: a. What participants recommend as solutions to the challenges they face in fulfilling their duties. b. What participants feel strongly about regarding environmental health profession?

In analysing the data, I used as a framework the key steps recommended by (Terre Branche et al., 2006) with some guidelines from (Grbich, 2013) and Harding (2013):

First, *familiarisation and immersion* – Here I familiarised myself with the data by reading and re-reading the information from the transcripts categorised according to the interview

schedule questions that addressed various study objectives. This process assisted me in identifying issues that emerged from the data.

Second, *inducing themes* - Conceptual themes were identified within the different categories of the study. I used the theme concept here to mean an idea that is common or repeated throughout most research participants' responses (Harding, 2013, p.6, Grbich, 2013, p.261). From normative context, each of the consulted guideline documents mentioned in section 2.2.1 pertaining to EHPs functions and conduct were carefully analysised to see evidence of legal requirements, professional responsibilities and ethical guidelines for EHPs. When evidence was found, provisions applicable to EHPs in all three areas were noted and further used to interpret the empirical data. The empirical data key themes were on EHPs' knowledge about ethics of environmental health; awareness and understanding of applicable legislation and professional guidelines: understanding of the role of HPCSA and EHPs professional responsibilities; existence of ethical and knowledge of applying ethical guidelines. Related challenges on applying legal, professional and ethical guidelines to EHPs work.

Third, *coding*: Coding refers to "the process of gathering or tagging content related to a specific theme or idea" (QSR and International, 2012, p.56). I arranged data according to themes that emerged from the interview transcripts and observations made during the data collection process. I labelled each interview transcript by assigning it with a unique code to protect the identity of participants. These codes linked the research participant, the participant's response to each question, and the area of work. Coding assisted in facilitating and cross checking during data processing. The coding exercise enabled me to interrogate the data according to what really happened on the ground. It helped in identifying the research participants' views and their interpretation of what took place in their working environments and how they viewed ethics practice in environmental health. I used NVivo computer assisted qualitative data analysis software to locate and quantify the themes and sub-themes according to the number of research participants' articulation. NVivo computer programme was instrumental in identifying and tagging similar data.

Fourth, *elaboration and checking* – Having coded the data, I then used correspondence checking via my supervisors to confirm if the themes and sub-themes I identified corresponded with those identified by the external raters.

Fifth, *interpretation* – I analyzed and interpreted the findings in accordance with research questions, the study aim and the study objectives outlined in Table 2.1. The codes names for

participants were grouped into four categories aligned with the sites of study. For instance codes from site 1 were CD, site 2 were ND, sites 3 were SD and site 4 WD.

2.6.2 Procedures to Enhance Trustworthiness of the Data

In order to enhance the trustworthiness of the data, attention was given to issues of credibility (internal validity or believability), dependability (reliability), transferability (external validity) and confirmability (objectivity).

- ✓ Credibility was promoted through the provision of a detailed description of the methodology, research tools, study setting and theoretical framework.
- ✓ Dependability was enhanced through tape recording of interviews and simultaneous capturing of field notes, and having the same researcher conducting all the interviews using the same interview schedules.
- ✓ In terms of transferability, although some of the findings may be applicable to other EHP settings, the qualitative nature of the research precludes generalisation of the findings to the broader population of EHPs. The findings of this research will be shared and workshopped with a number of stakeholders beyond the study area and by so doing involve a wider community to engage with the findings.
- ✓ Correspondence checking was adopted as a measure to ensure that data analysis was confirmable and was as an attempt to eliminate researcher bias (De Vos et al., 2011). Several interviews were randomly selected and passed on to one of my supervisors to code independently. The findings of this independent coding were checked against my own work. Similarly, tables of key quotes together with the codes they represented were passed to my supervisors prior to the final analysis.

2.7 ETHICAL CONSIDERATIONS

Ethical issues pertaining to this study involved a number of steps taken in designing the study up to the point of drawing conclusions. Such steps were essential for the integrity of the results and respect for the research participants as well as gaining necessary support of authorities where the study was carried out. Details of steps taken are described below:

2.7.1 Institutional Ethics Approval

Ethical clearance was obtained from the Human Research Ethics Committee of the University of the Witwatersrand with Clearance Certificate No. M130758 dated 07 August 2013 (Annexure 7). Moreover, the approval of this study research proposal and endorsement of this research title by the Faculty's higher degree committee was obtained on 03 December 2013 before carrying out the field work.

2.7.2 Field Site Approval and Recruitment of Study Participants

Application was made and permission obtained for conducting research from the eThekwini metropolitan municipality where research participants were recruited. The application and the granted permission by the eThekwini metropolitan municipality are attached as Annexures 3 and 4 respectively.

Research participants were given study information and explanations to ensure that they understood the purpose of the study and procedures and conditions of their participation before agreeing to be part of the study. The Information Sheet is attached as Annexure 5 and Consent Forms for both interviews and tape recording are found in Annexure 6.

Whilst other sources were consulted, I paid particular attention to the ethical considerations set out in Booklet 6 of the Health Professions Council of South Africa (Health Professions Council of South Africa, 2008c, pp.2-6). The summarised steps taken included the following:

(1) All research participants were given sufficient information about the nature and purpose of the study and thereafter asked to consent to participate in the study.

(2) Research participants were advised that they had the right to withdraw from participating in the study at any time without any prejudice.

(3) Each participant was assured that the information gathered would be kept confidential and used only for the research purpose.

- ✓ I assured each participant about utmost respect of privacy and dignity at all times.
- ✓ As a researcher, I carefully listened to each participant and respected diverse opinions of each.
- ✓ I made every attempt during the study to treat research participants fairly and without subjecting them to any risks associated with revealing their identities by protecting their

anonymity and providing assurance of confidentiality of shared information (Oliver, 2010, pp.77&81).

2.7.3 Ethical Considerations during the Data Analysis and Presentation of Findings

I endeavoured to the best of my ability to present data in an honest and truthful manner in order to be objective in handling and interpreting the data. Such a measure is important in ensuring the protection of the research participants' identities and fairly present their ideas (Oliver, 2010, pp.77-81). While attempts were made to protect the personal identity of research participants, full anonymity could not be guaranteed especially given that the site of study required public acknowledgement.

2.8 SUMMARY OF THE CHAPTER

This chapter presented the methodology followed in the study design, data collection and data management. The next chapter discusses the normative ideals in Environmental Health, giving an account of the ideal regarding the practice of EHPs.

CHAPTER THREE

NORMATIVE "IDEALS" IN ENVIROMENTAL HEALTH PRACTICE

3.1 INTRODUCTION TO THE NOTION OF "IDEAL" VERSUS "REALITY" STUDIES

The focus of this study, as already pointed out in Chapter One, is on the responsibilities of EHPs from the legal, professional and ethical perspectives. This chapter is devoted to giving an account of the "ideal" regarding the practice of EHPs. In other words it sets out to provide a description of the most desirable norms that ought to apply to the practice of this profession. This description of the "ideal" provides a basis upon which to adjudicate the extent to which current practices are morally more or less acceptable. Expressed in another way, the "ideal" represents how things ought to be, compared to the "reality" which represents how they actually are. The purpose of the empirical component of this study is to establish how things actually are on the ground (the "reality"). In doing my final ethical analysis of this "reality", after presenting my results, I will rely on the account of the "ideal" given in this chapter as the measure for analysis. The basic model for this research design is based on what Alexander Kon describes as "Ideal Versus Reality" studies in his article *The role of empirical research in bioethics.* He writes of a typical ideal versus reality study that it "starts with a premise regarding ethical norms and then seeks to assess the extent to which actual … practice reflects this ideal" (Kon, 2009, p.60).

When it comes to the ideal for the practice of individual EHPs, in general terms, it is quite obvious what is expected of them morally: they need to know, apply and enforce the relevant law and regulations; they need to abide by the standards of professionalism set for them by their profession; and they need to seek to act in ethically acceptable ways in the conduct of their professional duties. However, it is clear that EHPs are often likely to fall short in terms of adhering to these standards. It is not possible to force professionals to act within the law, professionally and ethically, and guaranteeing that they will is impossible. That is not all there is to say, though, because there are ways in which society can take steps to try to encourage professionals to live up to the standards professional conduct expected of them. These include training, providing clear codes of expected conduct, rewarding appropriate conduct and punishing inappropriate conduct. In this chapter I will show that the state has an obligation to do as much as it can to encourage EHPs to abide by their legal, professional and ethical responsibilities. What this chapter will primarily do is give an account of the "ideal" in terms

of both EHP's legal, professional and ethical responsibilities and the state's[27] obligations to ensure that measures are in place to maximise the extent to which EHPs are able to fulfil their responsibilities.

This chapter begins with a normative overview of ideals for environronmental health practice, elaborating on the interconnection of legal, professional and ethical dimensions for optimal practice. A stewardship model is used to explain the ideal role of the state, then, a regulatory framework is presented idealising how state policies frame and shape environmental health practice. This regulatory framework highlights ethical provisions based on major legislation governing how EHPs ought to practice in South Africa with the aim of highlighting the ideal for EHPs work as a frame of discussion.

3.2 AN ACCOUNT OF THE "IDEAL" REGARDING THE PRACTICE OF EHPs

The purpose of this section is to give a normative account of the "ideal" with respect to both EHP's legal, professional and ethical responsibilities and the state's obligations to ensure that measures are in place to maximize the extent to which EHPs are able to fulfil their responsibilities.

This addresses study objective 1 which was designed to articulate the ideal in terms of the fulfilment of the professional, ethical and legal responsibilities of environmental health practitioners in South Africa. The discussion seeks to clarify (i) what role the state, [through its governance structures] ought to play to equip EHPs to apply the law and regulations; (ii) what is ideally required to ensure that EHPs operate professionally and ethically.

Context of the discussion: Given that the focus of this thesis is on responsibilities, in the following paragraphs a brief overview of the role and relationship of the state with society and EHPs is presented. The notion of "*stewardship"* is used as a frame to interpret the central role of the state and its agents in delivering public (environmental health) services. Henry Kass's (1990) work, titled "*Stewardship as a Fundamental Element in images of Public Administration"* provides helpful information on *"stewardship"*. He defines stewardship as:

[27] I use the term "state" here in a very broad sense. I mean it to include statutory bodies established by the State to regulate the environmental health profession. These include the HPCSA as well as the Professional Board and any committees or other entities formed under the auspices of these professional bodies. Essentially, the State (proper) in a sense delegates a great deal of its responsibility in regulating the health professions to the statutory professional bodies it has established for this purpose. These professional bodies are largely responsible for overseeing the training of professionals, providing legal and ethical guidelines for practice and the discipline of professionals who fail to uphold professional standards. Thus, when I use the term the "State" in this chapter, I refer to the State proper as well as these bodies as having a joint responsibility.

"the administrator's willingness and ability to earn the public trust by being an effective and ethical agent in carrying out the republic's business" (Kass, 1990, p.1).

The word, administrator is used here broadly to denote the role of the state as the official body assigned by society to deliver public services through bureaucratic systems. By bureaucratic[28] systems is meant structured systems of governance which government follows in carrying out its business. In other words, the state exercises its authority to apply official rules via legitimate structures charged with various responsibilities. The stewardship model of the state denotes practice that is underpinned by "administrative norms … informed and subordinated to general ethical norms of justice and beneficence" (Kass, 1990, p.5). This model embraces the principles of agency theory to describe role relationships from a public sector perspective which are relevant to the environmental health practice. For the purpose of this thesis the state[29] is assumed to be the principal and the EHPs as agents bestowed with the power to perform the duties assigned to them. The state is an agent and the public the principal when it pertains to the role of developing policies and regulatory framework [that are discussed in the next section].

Principal-agent relationship occurs in a set-up that operates by "having one party or person playing the role of being the principal with decision-making authority and another as an agent with delegated authority, for example an employer [principal] and an employee [agent] relationship or the public [principal] and the state [agent]". In this set-up, the principal delegates "decision-making authority to the agent and assigns the agent to perform some services on their behalf" (Delves and Patrick, 2008, p.1). This kind of relationship is commonly referred to as the "acting for another" relationship (Mitnick, 1973, p.1, Kass, 1990, p.8). EHPs in practice act on behalf of the state, hence even their functions are defined by the state through the regulatory framework discussed in detail in this thesis. The *acting for another* relationship presupposes that the agent has adequate capacities to competently make judgments and decision-making that would ideally be made by the principal and /or that are in line with the desired outcomes of the principal. However, if the agent lacks the competence to perform to the standard set or expected by the principal, that renders the agent unfit for the purpose. Consequently, a problem might arise that requires the principal [in this case the state] to incur costs to "motivate the agent to act in a manner that will achieve the principal's goals" (Delves and Patrick, 2008, p.2). In applying this to EHPs, this would mean that the state has an obligation to provide training to

[28] The Oxford Advanced Learners Dictionary (2010) defines *"bureaucracy concept"* as meaning the systems of official rules and ways government strictly follows in carrying out its business.

[29] State as used in this thesis refers to government and various government institutions that play a role in environmental health practice.

equip EHPs to optimally perform to the desired level. Moreover, the state ought to provide incentives that would keep EHPs motivated and loyal to their call. Such incentives according to Delves and Patrick (2008) might be positive when there are gains associated with good performance or may be negative when there are sanctions associated with reprimands for bad conduct. This suggests that there should a mechanism in place to continually monitor agent performance. The principal–agent relationship helps in understanding that there are conflicting situations in practice when agents are faced with problems of making decisions on the best course of action to take to balance their actions with their principal and own interests (Delves and Patrick 2008). In the next paragraphs three ideals fundamental to a good working structured stewardship relationship of the principal (state) and agents (employees) are discussed.

First, the principal-agent relationship ought to be based on consent and trust*: A* stewardship relationship is based on earning the public trust. Trust works on the assumption that there is loyalty between parties involved in a relationship resulting in one person relying on another for achieving a goal. It is "an optimistic disposition that a person pursuing a goal displays in taking the risk of relying on another person for attaining the set goal" (Rossouw and van Vuuren, 2015, p.147). Based on the fact that trust is a risk-taking conduct, steps need to be taken to avoid situations where the agent and the principal exploit each other. For example EHPs as agents are likely to misuse trust bestowed on them when the principal (state) lacks ability to monitor their activities. Attila (2012) describes this situation as hidden action, [technically referred to as] "moral hazard" which refers to actions of the agent driven by "self-interest in which the agent uses the lack of monitoring by the principal as an opportunity for [pursuing] personal gains even if [they act in a way that] is detrimental to others" (Attila, 2012, p.709). The principal can also abuse the agent's trust by compelling the agent to perform activities knowing that those activities will be posing danger to others, and doing so is against agent's will or hinders the agent from exercising their own ethical autonomy. In this case, the agent is vulnerable and is prone to being manipulated to commit acts that are construed to be unethical. This could be corrected by having "a professional code[30] of conduct" that provides guidance on best ways of resolving situations with potential conflicts between parties (Kass, 1990, p.11). Such codes need to spell out the competence of the principal and the rights of the agent over and against the unfair demands of the principal. Professional codes are important for setting out "obligations that guide how agents ought to observe the tenets of justice and beneficence" (Kass 1990, p.12). This ideal does not mean that the codes can guarantee change

[30] Professional code of conduct and code of ethics are used interchangeable and are regarded as essential mechanisms for ensuring professionalism (Gilman, 2005, p.5).

of behaviour as they have shortcomings. The codes are "fundamental documents that provide a framework to be used by public servants to carry out their public responsibilities" (Gilman, 2005, p.5) and thus useful guidelines for dealing with conflicts particularly where there is no other provision. By consistently and honestly following the provisions of a code, the agents become good stewards. But to sustain the status of good steward, the agent needs to observe fiduciary and integrity norms.

***Second, the principal-agent relationship ought to embrace fiduciary and integrity norms*:** Fiduciary norms call upon agents to always commit themselves to acting in good faith and in the best interest of the principal when carrying out their assignments. The agent in addition, ought to make a solemn pledge to accurately and honestly represent facts. This is important given that in a fiduciary relationship, "one person trusts another and thus becomes vulnerable" (Smith, 2002, p.1400). This type of relationship as applied in this thesis, involves an EHP's duty to faithfully serve clients. It is based on two assumptions: first the relationship is based on an assumption that clients exhibit "trust and confidence" (Purtilo, 1999, p.190) to a practitioner which earns the practitioner a "superior position and influence" (Darr, 2007, pp.125-126). Secondly, the relationship presupposes existence of loyal and responsible conduct of the practitioner in carrying out assigned duties. The EHPs' fiduciary role would be to protect and act in the best interests of clients who are beneficiaries in a fiduciary relationship.

In terms of the integrity norms, employers ought to ensure the protection of personal integrity of the agents (employees) to carry out their assigned functions without constraints or being intimidated to commit wrongful acts. The principal (state) here ought to take steps to ensure individual safety and wellbeing of employees (Kass, 2012). Integrity in practice is used as an approach to raise "level of ethical performance in organisations by having "ethics management strategies for internalising ethical standards" (Roussouw and van Vuuren, 2015, p.66). In this regard, management ought to be exemplary and lead the process of inculcating ethical culture[31].

[31] The King IV Report, regards ethical culture as an important component of corporate governance together with good performance, effective control which should shape ethical and effective leadership. In this regard, ethical leadership should be "exemplified by integrity, competence, responsibility accountability, fairness and transparent [practices aimed at preventing [any possible] negative consequences of the organisations activities to [both] society and the environment" they [operate in]. Institute of Directors in Southern Africa. 2016. King IV Report on Corporate Governance for South Africa. Available: https://c.ymcdn.com/sites/iodsa.site-ym.com/resource/collection/684B68A7-B768-465C-8214-E3A007F15A5A/IoDSA_King_IV_Report_-_WebVersion.pdf [Accessed 02 December 2016].

Third, the principal-agent relationship ought to make stewardship an integral part of practice: From a stewardship perspective, the issues of trust apply to both the agent [EHPs as employees) and the principal (state). Drawing from Kass' conception of stewardship, to exist, the agent ought to be trusted by all involved parties. The agent therefore ought to make it a personal commitment to be effective and display ethical conduct when carrying out duties. This means that for the [EHP] to be a good steward requires a personal effort to remain true to the call of duty being cautious of not misusing power and misrepresenting facts. Agents ought to prioritise self-development and the attainment of organisational goals and public services.

The agent needs as suggested by Kass (2012): (i) to confine their performance to constitutional and legislative mandates – this relates with the HPCSA requirements of EHPs to confine their performance of professional practice to what they have been educated and trained on. (ii) to submit their actions to review; (iii) to observe constitutional rights of persons; and (iv) to be accountable for their actions at all times. Applying these guidelines would ideally earn the agent credibility. Retaining such credibility requires extra effort, hence, Kass (2012) has cautioned that: if the agents' performance is poor and remain unchecked, the public is negatively affected and similarly, the agents organisations lose credibility. Hence, organisations (as employing bodies) have a moral obligation to empower their employees to optimally perform at the expected level. Stewardship promotes professionalism of agents as the basis by which they earn the respect of the public. More details on this are shared under 3.2.2.

The above ideals point out roles of the state and EHPs in carrying out responsibilities within the framework of the stewardship model that promotes earning public trust. In the next paragraphs the state role is viewed from a regulatory context with a focus on policymaking which is fundamental to understanding ideals in legal, professional and ethical responsibilities.

3.2.1 Ideals in developing a regulatory framework for EHPs

Given that EHPs' functions involve law enforcement, this section is dedicated to policymaking; explaining the role of the state in shaping the environmental health regulatory framework which influences how EHPs carry out their responsibilities. This is done on the understanding that "the policy making process and role played by those involved" [primarily the state is fundamental to ensuring] "a greater degree of professionalism in implementing policies" (Roux, 2002, p.418). The discussion draws from various sources and uses as a frame the works of Saltman and Ferroussier (2000) on *"the concept of stewardship in health policy"* and the Nuffield Council on Bioethics concept of stewardship.

The discussion begins with the conception of environmental health to provide purpose and context: on the understanding that policies and laws are formulated to address specific purposes. Environmental health practice embraces "theory and practice of assessing, correcting, controlling and preventing those factors in the environment that have a potential to adversely affect the health of present and future generations" (Republic of South Africa, 2013a, p.7). The conception of environmental health is traced from the early concept of public health by Winslow (1920) which resonates with the practice of environmental health. Winslow defines public health as:

"The science and art of preventing disease, prolonging life, and organised community efforts for sanitation of the environment, the control of communicable infections, the education of individuals in personal hygiene, … the early diagnosis and preventive treatment of disease, and the development of social machinery to ensure everyone a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen his[/her] birthright of health and longevity." (Winslow, 1920, p.8) cited in (Nuffield Council on Bioethics, 2007, p.6).

In terms of the aforementioned definition, environmental health services need a regulatory framework to guide implementation. Such a framework is informed by the nature of the functions of EHPs which are intervention orientated. The EHPs regulatory function focuses on serving public interests, hence it should be viewed from a collective rather than individual interests' perspective. In brief, the main functional areas of EHPs include (i) *monitoring functions:* where EHPs carry out routine inspections and assess meeting of set standards and identify potential risks which might cause harm to human health. (ii) *Control functions*: which involve continually evaluating the effectiveness of systems in use and programmes for creating awareness about behaviour and practices leading to safety of environment and interactions that positively contribute to the wellbeing of everyone. (iii) *Surveillance of premises* for compliance, which require EHPs to enter premises where they suspect that a condition exists or an activity takes place that is contrary to acceptable legal requirements and for licensing purposes. (iv) *Interventions*: a function that requires EHPs to develop strategies and implement actions plans to remedy situations identified to be possible risk to the health of others and harm to the environment. (v) *Responding to public complaints and unpredicted incidents* like outbreaks of diseases: a function that requires EHPs to investigate and resolve complaints and play a key role in multidisciplinary teams.

The role of state in law and policy-making process in this thesis is viewed at a national level for the following reasons: (i) reference to laws applicable to EHPs in this thesis refers to the

environmental health profession as a whole and applies to all EHPs in South Africa; (ii) the Constitution of the Republic of South Africa (Section 146) provides that national legislation is necessary for dealing with matters that require uniformity across the nation. This applies to EHPs functions as the Scope of the Environmental Health Profession caters for the whole country and applies uniformly to all EHPs regardless of their operational areas. Section 146(2)(b)(i)-(iii) stipulate that national legislation provides for uniformity on establishment of norms and standards [for example the National Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners]; national policies and frameworks; (iv) Accordingly, national legislation is necessary for the promotion of equal opportunity or access to government services and the protection of the environment [Table 4.1 lists national legislation applicable to EHPs in South Africa]. All these apply to environmental health services and are the frame by which the regulatory framework of environmental health is considered in this thesis. This approach is informed by Section 147(2) of the Constitution which provides that national legislation prevails over laws applicable to provincial and local contexts.

Ideally, the state ought to develop relevant policies and corresponding implementation plans aligned to good governance principles. These principles require the state to further realign its bureaucratic systems employing "transparent processes which maximise public participation and prioritise public interests to achieve the desired outcomes" (Saltman and Ferroussier-Davis, 2000, p.732). It is thus prudent for the state to review practices of enforcing its authority through regulatory framework to eliminate techniques that might be construed as oppressive or discriminatory and strive towards attaining equitable service delivery of environmental health services.

The stewardship notion of the state suggests the use of ethical norms to aid decision-making processes and practices which would result in a conduct of EHPs that earn them public trust. Earning trust requires the state to make efforts to create an enabling environment. The stewardship approach is significant to promoting governance with a regulating function that "serves the public interests [and is carried out with an attitude that shows] "willingness [of government agents] to be accountable for [own actions] by operating [as rendering a] service rather than in control of those around [them]" (Saltman and Ferroussier-Davis, 2000, p.733). The stewardship conception of policy making embraces the integration of values and democratic ideals in policymaking and regulatory processes. This approach advocates for the role of state denoted by a political will and designing of policy and regulatory frameworks

based on ethical principles and practices that advance the serving of public interests, accountable public service, as well as equitable, effective and efficient service delivery.

The Nuffield Council on Bioethics stewardship model, is relevant in dealing with policy framework. It views policies from the premise that the state has "the duty to enable people to lead healthy lives" (Nuffield Council on Bioethics, 2007, p.13). Accordingly, the state ought to develop policies that prioritise both individual and collective interests of the general population. Primarily, the state ought to strike a balance between serving individual and public interests.

Essentially, the ideals in a state envisaged in the stewardship model are those that embrace ethical principles that provide for the obtaining of consent of individuals when implementing environmental health intervention programmes. The state ought to have a regulatory framework that ensures that individual and group rights are protected to the extent that there is no harm caused to others. Significantly, the state ought to develop policy guidelines for educating the public on making informed choices, and participating in decision-making processes affecting their wellbeing. Such a step would afford individuals the opportunity to challenge interventions at both preparation and practice stages (Nuffield Council on Bioethics, 2007). The state ought to have mechanisms to ensure that environmental health programmes are implemented in, informative, persuasive and less intrusive ways to reduce exposure to risks. Moreover, the state has a role to guide how EHPs should conduct themselves particularly the obtaining of individual consent. The state has a duty to train EHPs to be able to professionally carry out their duties without applying invasive techniques but respect the human dignity of the individuals in the course of implementing intervention programmes in compliance with their mandated duties.

In summary, the environmental health practice is preventative in nature. It thus requires preventative intervention policy framework. Policies ought to strive for a balance between protecting individual rights and public interests. Implementation plans involve educational programmes to promote voluntary participation and change of behaviour. However, the state intervention through legislative measures applies when either the educational means fail or apply both educational and legislative means to address the interests of those who are not able to make informed choices.

3.2.2 Ideals for advancing professionalism of EHPs

Another important element in this thesis is professional responsibilities. This section highlights the ideals for advancing professionalism of EHPs. Stewardship promotes professionalism of agents as the basis by which they earn the respect of the public. By

professionalism is meant "engagements for a profession [within] set or defined professional standards of a field …" (Mieg, 2009, p.91). The professionalism of agents is governed by the profession to which they belong. This of course applies to EHPs as discussed in Chapter Five of this thesis. Ideally, the profession defines profession competences with a framework that depicts the "interconnectedness of how the public perceives and appreciates the professional service" (Klass, 2007, p.529). Therefore, the profession ought to understand what role the society expects of it and its professionals to play, so as to define competences that would enable the rendering of responsive public services. The profession thus has a moral obligation to ensure that its professional members possess "distinctive competence (an ability) that enables them to provide services of a standard recognised by law and valued by individual members of the society" (Drach-Zahavy and Somech, 2006, p.1893).

So, professional attributes are the basis by which "the society bestows on professionals the privilege of high level of autonomy, professional authority and job discretion with a right to make own judgments". This then compels agents [EHPs) to act professionally at all times. To this end, Drach-Zahavy and Somech (2006, p.1893) stress that "professionals need to acquire skills that are based on [their profession] technical and scientific information to ensure their professionalism". In addition, due to the lack of competence of the general members of the public to judge the professional's performance, professionals [EHPs] have a moral duty to commit themselves to honestly act within their profession competence and be persons with self-monitoring and self-discipline demeanour. Such attributes would earn the profession public trust which will in turn boost the confidence, self-esteem and morale of professionals as well as earning them high respect from their colleagues. Continually acting professionally justifies the special respect, power and autonomy the society grant to professionals in recognition of their expert knowledge in their areas of practice. Since there are chances that the agents [EHPs] might abuse their autonomy, codes of ethics are important to provide professional guidance to encourage "accountability to clients and the general public" (Kass, 2012, pp.35-36).

Professionalism should be taught to EHPs in much the same way as is done in the training of medical doctors. The main reasons for teaching professionalism is that professions evolve and so do the demands on the professional conduct of professionals. By being taught professionalism, EHPs would be better positioned to meet two important roles: (i) they will be prepared "to fully understand their obligations of satisfying public expectations and (ii) to maintain their professional status" (Cruess and Cruess, 1997, p.1674). To this end, EHPs professionalism ought to involve teaching on the relationship between legal and ethical

obligations. This is significant given that the conduct of people in general, and particularly in the professional world of work, is guided by rules of conduct.

Professionalism of EHPs ought to help them understand the normative notion of *"duty"* which refers to "actions that are required to be done or commanded to do by an ethical norm: [A norm here denotes a] "rule or standard that determines ethical rightness or wrongness, or the goodness and badness of a person, action or attitude" (Frame, 2008:16). When one is said to be acting from a duty that means the person's actions are motivated by a principle. "Principles are laws that [one] personally embraces and commits to following as opposed to following the prescripts [that might be imposed by a provision] of a law" (Panza and Potthast, 2010, pp.144-145). The HPCSA guidelines for Good Practice (Health Professions Council of South Africa, 2008a, p.4) cite four kinds of duties that health practitioners need to embrace. The duties are: *natural duties* which they are "[not] acquired but professionals have as members of humanity". *Moral obligations* which are duties they acquire on the basis of "being qualified and licenced professionals". *Institutional duties*, are duties EHPs ought to do as conditions of their employment and *legal duties* are imposed on EHPs by law and they ought to follow to comply with the law. By acting motivated by a duty, one is taking charge of own actions. So when EHPs address ethical issues, they need to understand the nature of what is expected of them to be able to make an informed decision and choices.

EHPs professionalism orientates EHPs on understanding the concept of *rules* which is "a set of guidelines imposed on you by external authorities like government: if you break them you face punishment" Panza and Potthast (2010, p.145). The Health Professions Council of South Africa has rules of conduct for all health practitioners that govern how health professionals ought to carry themselves. In ethical practice, it is important to know what really motivates one to behave in a certain way. The attitude of EHPs to do their work is influenced by their motivation to be EHPs.

3.2.3 Ideals for creating a culture of ethical practice among EHPs

As in the case of professionalism, ethics ought to be taught. As pointed out under professional section and elaborated in Chapter Five of this thesis, the professional and ethical provisions of health practitioners in South Africa are governed through the Health Professions Act, no. 56 of 1974, as amended by Act no. 29 of 2007. Also the fact that environmental health has "theory and practice" as the major component of the discipline, makes ethics an important part of EHPs practice. The culture of ethical practice needs to be inculcated in a structured and focused manner. There seems to be no better place for this than to introduce it at the education

and training level. To this end, the Health Professions Act delineates the function of education and training to the Professional Boards of the Health professions Council of South Africa as the custodians of the professions. Environmental Health profession is among the professions falling into this group of professions as shown in Figure 5.1. According to Section 16 of the Health Professions Act, the Professional Board [in this case for Environmental Health Practitioners] is tasked with regulating the training of EHPs and accredits the training curriculum.

Ideally the curriculum ought to cover ethics. In realising the gap in the training of ethics in the curriculum of health professions in South Africa, the HPCSA resolved to introduce a core curriculum for the teaching of professional ethics, health law and human rights. Such a step was necessitated by "lack of a uniform structured approach to training and a lack of guidance on the application of ethics…" (Behrens and Fellingham, 2014, p.143). In expanding on this matter, these authors have also pointed out the fact that, the "teaching of ethics to healthcare professionals is intended to inculcate ethically desirable attitudes and moral character in healthcare professionals… and [should] include the teaching of behaviours, which reflect values, attitudes and character traits required of a healthcare professional".

Therefore, teaching ethics to EHPs is fundamental to inculcating a uniform culture of ethical practice. The Professional Board of EHPs ought to make it its responsibility to see to it that the ethics curriculum is integral part of the teaching curriculum for EHPs. This responsibility is possible given that the Professional Board accredits the training curriculums of all training institutions offering environmental health programmes in South Africa. Teaching ethics to professionals is vital for "reinforcing value of antithetical to the human rights principles of equality and respect" (London et al., 2007, p.1269). By teaching ethics and making it an integral part of producing EHPs, the Professional Board would deepen the ethical culture in EHPs which would help them remain committed to ethical practice denoted by acting in "responsible, accountable, fair and transparent" manner in their places of work, even if the organisational culture does not provide for such (Rossouw and van Vuuren, 2015, p.307).

Ideally, an ethical culture practice of EHPs ought to be a priority of the Professional Board working with all affected parties including the educational institutions, employers and the willing and cooperative spirit of EHPs. Ethics training ought to be part of the mandatory continuing professional development of EHPs as required by the Health Professions Act, no. 56 of 1974.

3.3 SUMMARY OF THE CHAPTER

This chapter presented an account of the ideals regarding the practice of EHPs. This normative discourse articulates the ideal of the fulfilment of the legal, professional and ethical responsibilities of EHPs. It has particularly discussed the stewardship model to highlight the important relationship of the state as the employer and representative of the public interests and also EHPs as the employees who act on behalf of the state serving the interests of the public. The stewardship model emphasises the building of trust in an employer-employee and state-public relationships.

The state is responsible to develop intervention policies that serve as a regulatory framework for EHPs. It is within this framework that EHPs ought to function in a uniform manner. Further, the state is responsible to advance professionalism of EHPs so that they can self-regulate understanding what is expected of them by the state, the profession and the public. EHPs needs to be taught professionalism to prepare them to fully understand their obligations. The same is true for ethics to inculcate a uniform culture of ethical practice.

The following chapter discusses the findings of the study focusing on the legal responsibilities of EHPs, namely laws that govern the environmental health profession and those that EHPs enforce in South Africa.

CHAPTER FOUR

THE LEGAL RESPONSIBILITIES OF ENVIRONMENTAL HEALTH PRACTITIONERS IN SOUTH AFRICA

4.1 INTRODUCTION

The purpose of this chapter is three-fold. First it provides a general description of the responsibilities of Environmental Health Practitioners (EHPs) in South Africa as found in the legal guidelines. In this regard, EHPs have legal requirements that are set out in the laws governing the Environmental Health profession whose provisions they are expected to obey. A comprehensive list of laws applicable to environmental health in South Africa is presented in Table 4.1. Environmental health in South Africa is a regulated profession governed under the Health Professions Act, no. 56 of 1974 with its amendments (Republic of South Africa, 2007a, p.13). The provisions of the Health Professions Act and other related laws have to be complied with by EHPs by virtue of being health professionals. Conversely, the provisions of the Constitution of the Republic of South Africa, which are all-embracing and not designed for EHPs per se, but apply to the citizenry of South Africa even though they impact on how EHPs carry out their legal functions [e.g. the need to respect the dignity of persons], affect how EHPs enforce the laws. Challenges arise particularly in areas where the laws are less articulate on environmental health issues, thus requiring the use of general law enforcement techniques. Hence, EHPs are required to undergo law enforcement training that enables them to be appointed as Peace Officers to enforce the provisions of the Criminal Procedures Act, no. 51 of 1977 that are embraced in their enforcement responsibilities.

Second, the chapter presents examples of laws enforced by EHPs in South Africa and their corresponding challenges during enforcement. These laws outline legal requirements that EHPs need to enforce in order to promote compliance. The provisions of such laws are articulated in routine activity checklists. I drew from findings from the case study to capture realities on the ground and highlight implications of situations that arose from having laws that are less coherent on environmental health practice.

Third, the chapter discusses some challenges EHPs face or are likely to face during enforcement of environmental health laws. These challenges particularly address the need for ethical considerations during law enforcement of environmental health laws. In addressing the legal responsibility perspectives of EHPs, it is important to note that EHPs' mandatory responsibilities are found in various laws in South Africa. This factor makes the scope of their

work wide and diverse. The mandates state what EHPs are expected to do and set parameters within which EHPs are appointed and are allowed to operate. The meaning of mandate as used here refers to "an official order or authority given to a person or organisation to perform a specified duty" (Hornby, 2010, p.903). The use of mandates in addressing EHPs' responsibilities is important as it helps in knowing the scope of work of EHPs and the boundaries within which they operate. More importantly, it helps in providing and / or motivating for essential resources and in ensuring accountability in the performance of duties.

4.2 A SUMMARY OF LAWS APPLICABLE TO EHPS IN SOUTH AFRICA

The functions of EHPs have a regulatory component that requires them to enforce legislation for promoting compliance. In this section, legislation applicable to the daily practice of EHPs in South Africa is presented as a legal frame for the environmental health profession and as part of addressing the legal responsibilities of EHPs. All EHPs are to be acquainted with relevant legislation to effectively carry out their legislated professional functions (this points to the importance re: professionalism of EHPs). It is acknowledged that the scope of application of legislation is influenced by a number of factors for example, the employment of EHPs in municipalities and in National and Provincial Health Departments, where some legislation or sections thereof may not apply.

Laws presented in this section apply to all EHPs in South Africa. A comprehensive list of these laws is presented in Table 4.1. The list cannot be claimed to be exhaustive as conditions under which EHPs practice vary and the scope of application as well as the content of legislation are likely to change from time to time. The list was compiled through drawing from various relevant sources that cover relevant laws applicable to EHPs primarily from Environmental Management (Smith, 2015); South African Environmental Legislation (Van der Linde, 2006); Occupational Health (Acutt and Hattingh, 2016); National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners (Republic of South Africa, 2015a), National Environmental Health Policy (2013) and the Health Professions Council of South Africa, just to name a few.

The application of legislation by EHPs ought to be understood from the premise that EHPs function within the Scope of Practice under the auspices of the HPCSA Professional Board of Environmental Health Practitioners as provided for in the law. Even the places of practice for EHPs is legislated. Section 32 of the National Health Act no. 61 of 2003 directs that municipal health services [MHS] (which constitute the major functions of EHPs) are to be provided by metropolitan and district municipalities. The municipalities as the main organs of state within

and by which local government operates, serve as vital instruments of service delivery (South African Local Government Association (SALGA), 2011). This legal assigning of municipal health services to municipalities has resulted in the movement of EHPs from Provincial Health Departments to municipalities. As a result, municipalities became the major employers of EHPs in South Africa and places that can best reflect the application of laws applicable to EHPs [the reality experiences of EHPs are addressed in the empirical component later in this chapter and in the following chapters].

The practice of EHPs ought to be conducted with observance of the guiding principles in the Constitution of the Republic of South Africa that protect the rights of persons to respect, human dignity, equal treatment and privacy as well as to access to services. This highlights the importance of ethical conduct of EHPs and being aware of the ethical behaviour expected of them in carrying out their professional duties.

Table 4.1: Comprehensive list of laws applicable to Environmental Health in South Africa

Summary of Laws Applicable to Environmental Health Practitioners Practice in South Africa		
Acts		**Relevance to EHPs everyday practice**
1.	Constitution of the Republic of South Africa, Act no. 108 of 1996	Provides a Bill of Rights with constitutional rights to safe and harmful free environment. Contains basic values and principles for the rendering of public services upholding high standards of professional ethics as well as the right to choose a profession.
2.	Criminal Procedures Act no.51 of 1977	Provides for training and appointment of EHPs as Peace Officers with powers to issue warrants of arrest for contraventions as part of law enforcement.
3.	Environmental Conservation Act, no. 73 of 1989	Guides the process of effectively protecting, controlling and utilising the environment.
4.	Foodstuffs, Cosmetics and Disinfectant, Act no. 54 of 1972 (as amended)	Makes provision for measures to be taken to control the manufacturing, importation and sale of foodstuffs, cosmetics and disinfectants.
5.	Hazardous Substances Act, no. 15 of 1973, amended by Hazardous Substances Amendment Act no.53 of 1992	Provides for the control of substances likely to cause injury, ill-health or death of human beings due to their toxic, corrosive, irritant and sensitising or inflammable nature. Provides a hazard risk profile catalogue of substances.
6.	Health Professions Act, no. 56 of 1974 as amended by Act no. 29 of 2007	Provides guidance for the establishment and operations of health professions in South Africa.
7.	Housing Act, no. 107 of 1997 (as amended)	Provides for the development of houses to meet the Constitutional right to have access to adequate housing.

Acts		Relevance to EHPs everyday practice
8.	International Health Regulations (IHR), 2005	Provides for public health response measures to prevent, protect against and control the international spread of disease. Global World Health Organisation (WHO) strategy that assesses public health risks, alerts and offers a rapid response to unexpected cross boarder disease outbreaks through international collaborations.
9.	Local Government: Municipal Finance Management Act, no. 56 of 2003	Guides the budgeting, accounting and proper spending on municipal services delivery.
10.	Local Government: Municipal Structures Act, no. 117 of 1998	Provides for the establishment of local government institutions and regulates internal systems and structures within municipalities.
11.	Local Government: Municipal Systems Act, no. 32 of 2000	Provides framework with core principles, mechanisms and processes for a functional municipal. Contains Code of Conduct for Municipal Staff members. Provides for universal access to essential services, community participation, performance management and framework for local public administration and human resources development.
12.	Meat Safety Act, no. 40 of 2000	Provides measures for food safety and national standards for abattoirs. Regulates importation and exportation of meat.
13.	National Building Regulations and National Building Standards Act, no. 103 of 1977	Regulates and promotes uniform standards of structural requirements for various building facilities.
14.	National Environmental Management Act, (NEMA) no. 107 of 1998 (as amended)	Provides overall cooperative governance amongst agencies involved in matters dealing with environmental management with principles for decision-making on environment.
15.	National Environmental Management: Air Quality Act, (NEMAQA) no. 39 of 2004	Regulates air quality by providing measures to prevent air pollution and ecological degradation with the aim of securing ecological, economic and social sustainable development. Provides for national norms and standards that regulate air quality monitoring, management and control by different levels of government.
16.	National Environmental Management: Biodiversity Act, no. 10 of 2004	Provides for the protection of pollution of environment by regulating practices that are likely to threaten the conversation of ecosystems and indigenous species (the fauna and flora).
17.	National Environmental Management: Waste Act, (NEMAWA) no. 59 of 2008	Instrumental to promoting compliance and enforcement. Regulates waste management to protect human health and prevent pollution of environment. Provides for national norms and standards for regulating management of waste, the licensing and control of waste management activities as well as remediation of contaminated land.

Acts		Relevance to EHPs everyday practice
18.	National Health Act, no. 61 of 2003 (as amended)	Provides a framework for establishing a structured health system and assigning functions of different levels of government and guidelines for the abatement of pollution. Provides for norms and standards for premises and acceptable monitoring standards for Environmental Health Practitioners.
19.	National Health Amendment Act, no. 12 of 2013	Provides for the establishment of the Office of Health Standards Compliance. Provides for the appointment and functions of EHPs factoring the ethical provisions of the Constitution of the Republic of South Africa Act no. 108 of 1996.
20.	National Radioactive Waste Disposal Institute Act, no. 53 of 2008	Provides basis for the regulation of staff organisation, management and disposal of radioactive waste.
21.	National Road Traffic Act, no. 93 of 1996	Provides for the safe transportation of waste and other hazardous substances on national roads.
22.	National Water Act, no. 36 of 1998 (as amended)	Regulates water related matters including supply, responsible use and protection of water resources from pollution.
23.	Occupational Health and Safety Act, no. 85 of 1993 (OCHS) (as amended)	Provides a framework for regulating safety of workplaces from a wide spectrum including exposure to hazards substances, risks associated with dangerous working conditions, unconducive living and working environments (ergonomic issues) considering the various needs of employees and those with disability. Prioritises the protection of health and wellbeing of workers and safeguarding the community. Ensures that safety everyone's responsibility. Regulates the licensing of major hazard installations (MHIs) by classifying premises according to the risk of activity involved or substances used.
24.	Older Persons Act, no. 13 of 2006	Provides standards for structural and operational requirements of old age homes facilities. EHPs issue health certificates to certify compliance of premises for occupation.
25.	Promotion of Administrative Justice Act, no. 3 of 2000 as amended by Act no. 53 of 2002	Provides guideline on how EHPs ought to administer their decisions and actions taking cognisance of the constitutional rights of people to be given reasons for actions, ensuring of respect of human dignity and receiving fair treatment.
26.	Promotion of Access to Information Act, no. 20 of 2000	Promotes access to information and taking of precautions to prevent release of information which might jeopardise the rights of those involved. Promotes sharing of information to make informed consent. EHPs are to observe confidentiality principle in their practice.
27.	Promotion of Equality/ Prevention of Unfair Discrimination Act, no. 4 of 2000	Promotes practices that for example prevent discrimination according to gender, race, disability and promotes equal treatment of everyone.

Acts		Relevance to EHPs everyday practice
28.	The Children's Act, no. 38 of 2005	Provides for constitutional rights of children, safety standards of children in childcare centres. EHPs are to ensure that childcare centre premises meet the standards of indoor and outdoor design, location as well as safety and general hygiene conditions.
29.	Tobacco Products Control Act, no. 83 of 1993	Regulates the use and sale of tobacco. Encourages responsible behaviour relating to handling of tobacco products by manufacturers, sellers and smokers to reduce the incidence of tobacco-related illnesses and deaths.
30.	Water Services Act, no. 108 of 1997	Provides for the responsible use of water supply by both members of society and industries as well as provision of basic sanitation to everyone. EHPs monitor the quality of water.
31.	Various regulations from the Acts; norms and standards, codes of conduct and municipal bylaws	The enforcement of the legislation is enhanced by: ✓ Various regulations that provide practical steps for the implementation of the Acts; ✓ Norms and standards regulating the management and uniform implementation of specific issues covered in various Acts applicable to Environmental Health. ✓ Codes of conduct for example, the Office of the Public Service Commission Code of Conduct for the Public Service (1997); Code of Conduct for Municipal Staff Members (2000) and the Health Professions Council of South Africa (HPCSA) General Ethical Guidelines for Health Professions (2008) revised in 2014. ✓ Municipal bylaws that municipalities are constitutionally mandated to develop and administer to address specific local matters.

4.3 SELECTIVE EXAMPLES OF LAWS WITH MANDATES FOR ENVIRONMENTAL HEALTH PRACTITIONERS IN SOUTH AFRICA

The EHPs' mandates are found in several laws[32] and these provide a frame of reference by which EHPs' functions are formulated. In this section I have extracted key relevant sections from laws applicable to environmental health as examples that are mentioned in the official scope of the Profession of Environmental Health in South Africa. These examples are not exhaustive and it is worth-noting that the laws governing the practice of EHPs are not solely designed for environmental health.

[32] The Environmental Health Profession in South Africa is underpinned by provisions in a number of laws. This section describes the main laws that contain mandates for EHPs. It should however, be noted that these laws are not solely providing for EHPs work but are broader in scope even though they contain provisions that are used as the basis for the appointment of EHPs, and description of the functions of EHPs that are spelt out in the Scope of Practice of the Profession of Environmental Health. The list of laws here is not exhaustive.

The main legislation that is used to govern the Environmental Health Profession in includes:

(1) The Constitution of Republic of South Africa Act, no. 108 of 1996;
(2) National Health Act (NHA), no. 61 of 2003 read with the National Health Amendment Act (NHAA), no. 12 of 2013 and regulations;
(3) Foodstuffs, Cosmetics & Disinfectants (FCD) Act, no. 54 of 1972 and regulations; and
(4) National Environmental Management Act (NEMA), no. 107 of 1998.

The summarised version of the main laws with EHPs' mandate is depicted in Table 4.2 and briefly described in sections 4.3.1 to 4.3.4.

4.3.1 EHP Mandate in Context of the Constitution of the Republic of South Africa, Act No. 108 of 1996

The Constitution of the Republic of South Africa, Act no. 108 of 1996 hereafter referred to as the Constitution, states in Section 24(a) that "everyone has the right to an environment that is not harmful to their health or wellbeing" (Republic of South Africa, 1996c). This clause motivates the functions of EHPs as professionals responsible for promoting safety in the environment and safeguarding the health of the people against factors that may harm their wellbeing. So the Constitution is used as a broad framework whose provisions on the protection of the environment and human health are embraced in the EHPs' functions. It is important in that EHPs' primary duty involves protecting and mitigating against situations that have the potential to harm the health of people and degrade the environment through pollution.

The Constitution further provides basic values and principles that govern how services in all spheres of government, including environmental health services, should be conducted. EHPs as public officials and employees embrace in their functions the provisions of Section 195(1)(b)(c)(f) of the Constitution which requires the rendering of services in an efficient manner, and that they be developmental in their approach, be responsive to people's needs and accountable for their actions. (More ethical provisions of the Constitution in Chapter Six).

Table 4.2: List of Key Legislation Providing for the Formulation of EHP Mandates in South Africa

Legal Tool	Relevant Provisions to EHPs Work	Subordinate Regulations/Policies
1. The Constitution of Republic of South Africa Act, 108 of 1996	*In terms of the Constitution, EHPs fall under the Public Servants with responsibilities of ensuring safety of the environment.* ✓ Section 24(a) provides for the right of everyone to an environment that is not harmful to peoples' health or wellbeing. This provision is used as a base for framing the mandate of EHPs towards safeguarding the environment as well as the health and wellbeing of people. As a result EHPs enforce laws and take measures to mitigate against pollution of air, water and land. ✓ Section 195(1) provides for the basic values and principles that foster conduct of public servants to demonstrate the upholding, promoting and maintaining of a high standards of professional ethics. Moreover, EHPs as public servants should accordingly, apply developmental approaches, be transparent and account for their actions. ✓ Section 10 provides that everyone has a right to respect and protection of dignity. This provision is fundamental to the conduct of EHPs in exercising their powers during enforcing laws and promotion of compliance.	a. ***The Batho Pele White Paper on Transforming Public Service Delivery (1997)*** is a policy designed to ensure embracing of the Constitution's values and principles in service delivery. These are important to EHPs' conduct when carrying out environmental health investigations.
2. National Health Act (NHA), 61 of 2003 read with the National Health Amendment Act (NHAA), 12 of 2013 and regulations	*In the National Health Act EHPs are referred to as Health Officers/inspectors.* ✓ Sections 80(1), 80(3) and 80(4) provide for appointment of EHPs entitling them as (Health Officers or Health Inspectors) to function either in National, Provincial and Municipal Health establishments. The appointment comes with issuing of certificates (cards) which EHPs ought to carry and produce to identify themselves when conducting their official duties. EHPs are required per Section 80(4) to be appointed as Peace Officers so as to be able to issue warrants and prosecute for non-compliance in terms of the Criminal Procedure Act, 51 of 1977. Section 82 mandates EHPs to carry out environmental health investigations. EHPs are thus empowered to enter business premises to inspect for determining compliance and investigate nuisance conditions that may pose a danger to the wellbeing of others or may cause harm to environment. EHPs are mandated to issue compliance notices for violation of environmental health requirements. EHPs are required to (i) seek services of an interpreter where they have language problems and (ii) be accompanied by a Police Officer where they are refused entry when serving warranties. The NHA embraces the provision of the Constitution by requiring that EHPs should take precautions during investigations by respecting personal dignity, freedom and personal privacy of individuals. Defines the scope of environmental health and municipal health services which constitute 64% (9 out of 14) of the Scope of practice of EHPs.	a. ***National Environmental Health Policy, Notice 951 of 2013***. Guideline and framework for implementing environmental health services in South Africa. b. ***Norms and Standards relating to Environmental Health, Notice 1229 of 2015*.** These norms and standards provide guidelines for standardizing handling of environmental health services by EHPs in South Africa embracing the Scope of Practice of the Profession of Environmental Health in South Africa.
3. Foodstuffs, Cosmetics & Disinfectants (FCD) Act, 54 of 1972 and regulations	*In the FCD Act, EHPs are appointed as Environmental Health Practitioners following the 2007 amendments.* ✓ The FCD Act amended version 39 of 2007 permits all duly appointed professionally registered EHPs to enforce this Act by ensuring safety of food premises, food processing and rodent infection. ✓ The process and requirements of appointment, power to conduct investigations bestowed on EHPs overlap with that of the National Health Act in item 2 above. ✓ EHPs are empowered and expected to take food samples to monitor the standards of food prepared for public consumption in food premises.	a. ***Regulations Governing General Hygiene Requirements for Food Premises & the Transport of Food (R962) 2012.*** Regulations that prescribe hygienic standards to be maintained by food handlers and requirements for food premises including process and conditions to be followed in applying for a certificate of acceptability of premises to safely handle food for public consumption. ***b. Regulations relating to the Powers and Duties of Inspectors and Analysis of Foodstuffs at Food Premises (R328) 2007.*** Guide on powers, sampling and sampling procedures
4. National Environmental Management Act (NEMA), 107 of 1998	*In NEMA EHPs are appointed or designated as Environmental Management Inspectors (EMIs) upon receiving special training.* ✓ NEMA is umbrella legislation on environmental management in South Africa. Provides guidelines on the management of water, air, and land pollution. EHPs are involved in developing environmental management plans during Environmental Impact Assessments (EIAs) on proposed developments. ✓ The NEMA overlaps with the NHA and the FCD Act [in 2 and 3 above] in that it also requires appointment of EHPs before being allowed to carry out investigations and issue contravention notices that result in prosecution for failure to comply.	a. ***Environmental Health Impact Assessment (EHIA) 2010 guideline.*** A tool that ensures integration of environmental health principles in the Environmental Impact Assessment (EIA) process. Enables active participation of EHPs in environmental management developments.

4.3.2 EHP Mandate in Context of the National Health Act (NHA), No. 61 of 2003

The National Health Act (NHA) no. 61 of 2003 as amended by the National Health Amendment Act (NHAA), 12 of 2013 (Republic of South Africa, 2013b), provides for the EHPs' appointment, powers and sets out parameters that allow and restrict EHPs in carrying out their legal responsibilities. It is one piece of legislation that comprehensively covers the roles of EHPs in South Africa. This Act defines an EHP as a person employed and appointed or designated as a "Health Officer" by either the Minister [in case of National or Provincial Health Governments] or the Mayor [in case of a Municipality].

Section 80(1) read with 80(3) and (4) of the NHAA provide for the appointment of the EHPs as health officers or health inspectors in the different spheres of government, namely: national, provincial departments of health or at the municipality level. Such appointment involves the issuing of certificates that authenticate EHPs as duly appointed. This Act prescribes that EHPs ought to have the certificate in their possession to identify themselves when conducting their official responsibilities.

Section 80(4)(c) of the NHAA affirms the law enforcement role of EHPs by empowering them to be appointed as Peace Officers[33] and exercise the powers conferred on Peace Officers by law in terms of the amended Criminal Procedure Act, 51 of 1977. EHPs by virtue of being Peace Officers are authorized to issue notices of compliance where environmental health inspection warrants such an action as per Section 82(3). In carrying out this mandate, it is significant for EHPs to be well-versed about enforcement procedures. Particularly, conditions for serving notices [for example that a notice is "in force" until the requirements have been complied with and is valid for up to four years (Section 82(7)]. More importantly, the NHA stipulates conditions that EHPs need to adhere to whilst carrying out their mandates. For example, EHPs are required while they carry out inspections to issue a receipt and return any item they removed as soon as the reason for its removal has been achieved as per Section 82(5)(a)(b) and they are required to properly dispose of perishable stuff or keep other items as evidence in court] in accordance with provisions of the Criminal Procedure Act, no. 51 of 1977 as amended (Republic of South Africa, 1977).

[33] The National Health Amendment Act 12 of 2013 defines a Peace Officer as a person who is empowered in terms of the Criminal Procedures Act 51 of 1977 to search, seize, issue notices of compliance and warrants of arrest and prosecute for failure to comply with the provisions of applicable law being enforced. The role of EHPs as Peace Officers applies to both the FCD Act discussed under Sections 4.3.3 and the NEMA under 4.3.4 respectively.

EHPs are mandated in terms of Section 82 to carry out environmental health inspections as part of their responsibilities. In line with this mandate, the NHAA empowers EHPs to enter premises (except private dwellings) to inspect, so as to determine if practices or conditions therein comply with the provisions of the National Health Act. EHPs may in the process obtain copies of information or take samples of any substance relevant for the inspection as per Section 82(a)-(d). In instances where there might be language or technical knowledge barriers, EHPs should be accompanied by an interpreter to assist where such assistance is needed during the inspection (Section 82(2). This provision is very important given the diversity of languages in South Africa and the racial mix of population.

EHPs are mandated in terms of Section 83(1) - (3)(1) to carry out investigations: (i) Where conditions exist which violate human rights pertaining to Section 24(a) of the Constitution of the Republic of South Africa namely, causing harm to human health and the environment thus jeopardising the wellbeing of those affected. (ii) Where pollution occurs that poses a risk to the health of those exposed to it. (iii) Where a condition causing nuisance exists – [In terms of this Act, nuisance means that "a situation exists which could put the life of those affected at risk"].

The NHA has integrated other legislation that impacts on EHPs' legal mandate. For example, it touches on the professional status of EHPs by providing in Section 83(5) that EHPs should not practice environmental health if they are not professionally registered under the Health Professions Act, no. 56 of 1974. Section 83(5) of the National Health Amendment Act, 12 of 2013 categorically states that:

"only a health officer who is registered as an environmental health practitioner in terms of the Health Professions Act, no. 56 of 1974, may exercise powers [of environmental health investigations] conferred under this section".

This provision makes environmental health services exclusive to EHPs in South Africa. It would appear therefore that non-EHPs are barred from practising environmental health services.

Further, the NHA also made it a requirement that EHPs should observe the Bill of Rights enshrined in the Constitution when they carry out investigations through search warrants as per Section 84. Accordingly, EHPs need to take precautions during investigations and ensure that they respect the personal dignity, freedom, security and personal privacy of those affected and remain professional in their conduct. This behaviour involves being accompanied by a police official where they are refused entry to premises.

In summary, in addressing the legal mandate of EHPs, the National Health Act, defines health nuisance[34] that forms a major part of EHPs' investigations to safeguard human health and the environment wherein people live and work. This Act defines the municipal health services (MHS). The MHSs constitute nine out of the total of 14 duties of EHPs in the 2009 Scope of Practice of EHPs (Republic of South Africa, 2009). The NHA also transfers the major part of environmental health services in terms of Section 32 to metropolitan and district municipalities. As a result, municipalities are the major EHPs employers in South Africa. The NHA has made it a legal requirement that EHPs should be professionally registered with their Professional Board and any unregistered EHPs are barred from practising environmental health.

The NHA however, does not provide for specific training support of EHPs on law enforcement, even though it requires that they be appointed as Peace Officers to serve contravention notices and prosecute offenders. Such a training need would be provided in terms of the requirements the Act imposes in Chapter Seven to employers to capacitate their human resources to perform the duties assigned to them. The Acts describes EHPs' appointment, assigns their powers and outlines conditions under which they are to carry out their responsibilities such as respect for peoples' freedom, privacy and personal dignity.

4.3.3 EHP Mandate in Context of the Foodstuffs, Cosmetics and Disinfectant Act, no. 54 of 1972

The Foodstuffs, Cosmetics and Disinfectants (FCD) Act no. 54 of 1972 is commonly known as the FCD Act. It is an important piece of legislation that provides guidance on environmental health practice pertaining to food safety and inspection procedures for food premises (Republic of South Africa, 1972). The FCD Act has important regulations that provide useful guidelines for setting of hygiene standards in food processing and for food handlers. Such a measure is vital in preserving the safety of food prepared for public consumption. Similar to the National Health Act, the FCD Act provides for the appointment of EHPs as inspectors authorised to enforce the provisions of the FCD Act and the issuing of a signed letter of authority declaring the EHP as an authorised person (inspector) to administer the provisions of the FCD Act as well as powers to enter premises and carry out inspections.

One important provision of the FCD Act is on the taking of samples of foodstuff or cosmetic or disinfectant products for analysis by competent persons, as per Section 13 and 14. This

[34] **Health Nuisance** is defined in the National Health Act no. 61 of 2003 as "a situation or state of affairs that endangers life or adversely affects the wellbeing of a person or community".

provision forms an important part of EHPs' routine inspections for monitoring food premises and other related business activities. The FCD Act sets standards to be achieved and procedures to be followed in conducting inspections. Among the regulations are "Regulations governing general hygiene requirements for food premises and the transport of food" [R962] issued on 23 November 2012 (Republic of South Africa, 2012a). R962 is a vital legal tool that guides EHPs in the carrying out of inspections regarding food safety in both premises and by food-handlers.

The FCD Act regulates through R962, the issuing of Certificate of Acceptability [COA] for all premises where a business involving food handling is conducted. The R962 laid out a process that standardises the lodging of application to regularise the inspection process and promote uniformity of approach among EHPs. It further requires business owners to display the certificate of acceptability in a conspicuous place for the public entering the premises to see and understand the nature of the approved business activity. This requirement is important for EHPs' routine environmental health inspections and monitoring of compliance and transparency to the public to make informed choice of using an approved business entity. The FCD Act also prevents the handling and transporting of food. To that end, EHPs are required to prevent anyone from conducting a food handling business and/or transporting food without being authorised to do so.

The FCD Act also prescribes hygienic standards on premises where food handling operations occur to avoid food contamination. It requires that the premise's structure meets the prescribed standards such as, for example, properly constructed walls, ventilation, illumination, ablution and hand-washing facilities. It prescribes good hygienic practices that promote wearing of protective clothing by food-handlers where food is prepared for public consumption to avoid food poisoning outbreaks, thus safeguarding public health.

4.3.4 EHP Mandate in Context of the National Environmental Management Act, 107 of 1998

The National Environmental Management Act, no. 107 of 1998, commonly known as NEMA (Republic of South Africa, 1998a) is an umbrella Act that deals with environmental management issues in South Africa, particularly management of water, air, and land pollution. Environmental pollution control is one of the EHPs' responsibilities as stipulated in both the National Health Act, 61 of 2003 and the Scope of Practice of EHPs in South Africa. NEMA is an important legal tool to fulfil the constitutional right to a safe environment (du Plessis 2011). NEMA provides environmental management principles that promote protection of water

resources in terms of the Water Act, no. 36 of 1998 as amended. This Act requires the taking of steps to compel polluters to clean pollution on water sources, a role that matches with the functions of EHPs (Republic of South Africa, 1998b).

The work of EHPs that requires provisions under NEMA also involves the handling of waste management issues such as applications for waste management facilities and scrutinising plans to ensure that provisions are made for proper waste management within the business facilities. The involvement of EHPs in projects that include developing environmental management plans during Environmental Impact Assessments (EIAs) of proposed developments, necessitates specialist environmental management technical knowledge, which they acquire through close working with environmental management specialists. Hence, NEMA is a vital legal tool that best promotes integration that would require EHPs to adopt multiple approaches that embrace expertise in other disciplines.

Furthermore, the National Department of Health in South Africa, realising the important role of EHPs in environmental management, developed Environmental Health Impact Assessment (EHIA) guidelines. These guidelines affirm EHPs' active participation in the development of environmental management plans and environmental impact assessment processes (Department of Health Republic of South Africa, 2010). The guidelines provide measures aimed at enhancing integration of environmental health principles in the EIA process. The ultimate aim is to ensure that the EIA process makes recommendations that would have environment and health balanced decisions.

Key provisions of the NEMA in environmental health practice also include the strengthening of law enforcement expertise in areas of prosecution drawing on the Criminal Procedures Act, 51 of 1977 which provides for the Peace Officer role of EHPs. Law enforcement in accordance to NEMA regulations and training offered by the Department of Environmental Affairs, dovetails with investigation requirements in the amended National Health Act, no. 61 of 2003 and the Food, Cosmetics and Disinfectants Act, no. 54 of 1972. These pieces of legislations all require abatement of conditions that are likely to result in contravention of set standards, especially pollution of the environment (See Table 4.2). Integration of NEMA principles in environmental health practice prepares EHPs to better handle the carrying out of environmental investigations, serving compliance notices where contraventions occurred and preparing cases for prosecution in court where the contraventions warrant such actions. NEMA thus contributes to the realisation of the EHP role of risk analysis which, according to the National

Environmental Health Policy entails "risk assessment to implement appropriate corrective environmental health interventions" (Republic of South Africa, 2013a, p.13).

Unlike the National Health Act, no. 61 of 2003, the NEMA involves capacity building of EHPs for its enforcement. In this regard, special training tailor-made for EHPs in South Africa is conducted through the Department of Environmental Affairs (DEA). Such training embraces the requirements of the National Health Act, no. 61 of 2003 and the Foodstuffs, Cosmetics and Disinfectants Act, no. 54 of 1972 and other pertinent legislation, all of which require competencies in law enforcement. Accordingly, the Department of Environmental Affairs (DEA) together with leading agents in the environmental health profession in South Africa such as the National Department of Environmental Health, the Professional Board of EHPs, the South African Institute of Environmental Health (SAIEH)[35] (South African Institute of Environmental Health (SAEIH), 2013) and all environmental health training institutions in South Africa, have forged links to develop a special Environmental Management Inspector [EMI] training to bridge gaps in environmental health training in the area of enforcement to develop better EHP enforcement competencies (Jarden, 2010). This capacity building prepares EHPs to handle legal matters on pollution better.

The next section highlights examples of laws enforced by EHPs in South Africa.

4.4 SELECTIVE EXAMPLES OF LAWS ENFORCED BY ENVIRONMENTAL HEALTH PRACTITIONERS IN SOUTH AFRICA

Table 4.3 lists and briefly describes examples of legislation that is enforced by EHPs and related challenges they faced in enforcement of laws in South Africa. Examples of legislation taken from the comprehensive list of laws applicable to environmental health in South Africa presented in Table 4.1 which also helped in examining which of the laws EHPs mentioned as

[35] The South African Institute of Environmental Health (SAIEH) is the predominant current active professional association for EHPs in South Africa. Membership of this professional body is voluntary and it has a National Executive committee and nine Provincial committees located in each Province in South Africa. SAIEH's objectives are stated in its constitution available in its webpage as amongst others:

a. To advance and promote and practice of Environmental Health
b. To protect and promote interests of its members
c. To promote professionalism of its members
d. To promote unity amongst its members
e. To promote basic training and specialised advanced education of environmental health professionals as well as environmental health research

SAIEH was mentioned by some research participants in section 5.5.2 as playing an instrumental role in addressing the affairs of EHPs.

commonly used in their day to day practice. More details on EHPs experiences on enforcing the laws on the ground are discussed in sections 4.5 and 4.6.

Table 4.3: Selective examples of laws with enforcement challenges faced by EHPs in South Africa

Legal Tool	Relevance to EHPs	Challenges of Enforcement
1. National Health Act, 61 of 2003	✓ EHPs conduct routine inspections including taking samples in business premises to check compliance with the provisions of the Act per Section 82. ✓ EHPs carry out environmental health investigations where there is suspicion of a violation by either pollution of environment or health nuisance as per Section 83 and serve contraventions notices.	✓ Difficulty in balancing routine inspections and handling complaints activities. ✓ EHPs need special training to gain prosecuting competence and be appointed as Peace Officers.
2. Environmental Management Act, 107 of 1998	✓ EHPs are trained and then appointed to enforce the provisions of the Act in their areas of operations. This Act strengthens the EHPs' abilities to handle prosecutions.	✓ Special training is needed before being appointed as an EMI. The process of designating EHPs as EMIs is long.
3. Tobacco Products Control Act 83 of 1993	✓ This Act prohibits smoking in public places including stadiums, sport facilities and outdoor eating places, parking areas and beaches. EHPs are expected to enforce this Act as part of their routine business inspections.	✓ Smoking is a behavioural issue that is hard to change by law enforcement but requires education on importance of compliance and health effects.
4. Occupational Health & Safety (OCHS) Act, 85 of 1993	✓ EHPs are appointed as inspectors by virtue of their qualifications to enforce the Health and Safety Act.	✓ Competence in administering occupational health and safety requires special training of EHPs on the use of instruments.
5. The Children's Act, no. 38 of 2005	✓ EHPs are part of teams responsible for handling problems involving removal of children from the street.	✓ Services involving handling street children issues require counselling skills. Counselling is not a strong EHP competence.
6. Regulations R363 – Disposal of the Dead	✓ EHPs are required to monitor practices at cemeteries and other facilities for the disposal of the dead bodies as well as to manage and control exhumations and reburials or disposal of human remains. They are required to inspect and issue certificate of competence	✓ The high rate of burials and competing responsibilities makes it hard for EHPs to keep pace with demands. ✓ Training on infection control and provision of essential safety equipment is needed.
7. By-laws Examples in Case study	**i. eThekwini Municipality: Nuisances and Behaviour in Public Places Bylaw, 2015** ✓ EHPs are required to take steps to abate nuisances and charge offenders in their capacity as Peace Officers.	✓ Handling health nuisances requires cooperation of the public where individuals ought to be vigilant and report offenders. ✓ Some nuisances occur at night and it is hard to change wrong behaviour by enforcing rules.
	ii. eThekwini Municipality: Informal Trading Bylaw, 2014 ✓ Regulate, license and control informal trading with aim of promoting social and economic development. ✓ EHPs are required to ensure that informal traders keep their trading environments clean and free of litter and other pollution.	✓ The management of informal trading relaxes the strict measures imposed on the formal business entities. ✓ The EHPs are required to adopt a developmental approach that promotes education rather than strict conformity to the rules. Thus, EHPs need special training. This requirement is time consuming and often in conflict with the practice in the formal businesses.
	iii. Scheduled Trade and Occupations ✓ Regulate different trades within the municipality.	✓ EHPs faced difficulties where some business owners cannot afford to meet the minimum requirements for their business entities.

4.5 INSIGHTS IN RESPECT OF LAWS APPLICABLE TO ENVIRONMENTAL HEALTH

Obviously, as evident above in sections 4.3 and 4.4, there are a plethora of interlinking laws defining the EHPs' mandates, but no single body of legislation that comprehensively deals with it. This situation could be problematic for EHPs despite their mandatory legal education articulated in the Scope of Practice of the Profession of Environmental Health covering the enforcement of laws to promote compliance as pointed out in the previous sections. It was

therefore important in the fieldwork to get an understanding of the extent of EHPs' legal awareness. It was on the basis of this understanding that this section covers responses to questions 11 of the interview schedule which required research participants to list and describe the main laws and policies they were using to guide the practice of environmental health.

In the following paragraphs, I present highlights of views expressed by research participants on the laws enforced by EHPs as part of the process of carrying out their duties.

4.5.1 The Constitution of the Republic of South Africa Act, no. 108 of 1996

Seven research participants, which constituted 20% of the total sample of 35 research participants listed the Constitution as one of the key laws in environmental health. The majority (six) of these research participants were holding the position of Manager. They regarded it as the Supreme Law of the country - as pointed out in the following statement:

> *"The Constitution of the Republic of South Africa is the Supreme Law of the country"* (WM03).

Concerning the above view, I would like to highlight the fact that the Constitution serves to motivate the functions of EHPs as professionals responsible for promoting safety in the environment and safeguarding the health of the people against factors that may harm their wellbeing. The fact that only one in five research participants mentioned it as a legal tool enforced by EHPs could be construed as an indicative that the Constitution is understood as a broad frame for EHP functions and does not form part of the EHPs' day-to-day activities. It is possible that more EHP managers regarded the Constitution as important compared to the ordinary EHPs, because it provides for the protection of environment and human health aspects that are embraced in the EHPs functions at an administrative level. It was hence mentioned by the manager group of EHPs as an important legal tool which they enforced.

The EHP research participants who were managers appeared to have been more aware about the provisions of the Constitution used as the base for environmental health work such as Section 24(a) and the provisions on municipalities in Part 2 of Schedule 4 which cover the role of air pollution and Municipal Health Services that are provided for in Section 156 of the Constitution. EHPs on the ground appeared to have not valued it the same degree as the EHP managers, even though it contains fundamentals that are used as the basis for the protection of environmental rights. I view this observation with concern given the importance of the Constitution to the work of EHPs.

4.5.2 The National Health Act No. 61 of 2003

Findings indicate that a total of eighteen (51.4%) of the 35 research participants, which translates to one in every two research participants, mentioned that the National Health Act, no. 61 of 2003 was the key legislation governing their work. As with the Constitution, the EHP managers were in majority (13) of the 18 compared to the five EHPs in the case study. One of the reasons they gave for this understanding was captured in the following verbatim quote:

> *"The National Health Act (NHA), 61 of 2003 has the nine core functions in Scope of Profession of Environmental Health and defines the Municipal Health Services (MHS). It is therefore, a cornerstone to the environmental health services"* (NDM04).

The research participants' reference to the National Health Act, 61 of 2003 is important given that nine out of 14 EHP functions [64% of the total EHPs functions] in the Scope of Practice of the Profession of Environmental Health in South Africa are defined as Municipal Health Services (MHS) in Section 1 of the NHA. It would appear that research participants valued the NHA as the key legislation because it provides for their functions. Moreover, the NHA is one that is used for appointing EHPs and outlining their mandates as previously pointed out in Table 4.2 and section 4.3.2. These findings show that EHPs were more aware about the NHA and regarded it as an important legal tool in the practice of environmental health.

Research participants however highlighted some concerns relating to the constraints in the workplace that affect the enforceability of the NHA which included for example statements like:

> *"The National Health Act has nine core functions that are important for setting out targets and allocating work to available EHPs in the areas of operation. But, limited resources make it hard to reach the set targets"* (NDM04). *"Implementing the nine core functions is not easy where staff need to be supervised as the Scope of Environmental Health profession is wide, yet, the available resources are limited: for example the ratio of EHPs does not match the population size"* (SDEHP04).

It appears that EHPs identified inadequate resources as a contributory factor that limits the realisation of the ideals provided for in the NHA. Linked to this finding is the need to train EHPs on the implementation of the nine core functional areas covered by the NHA.

Research participants made some suggestions on the approach to addressing the wide scope of EHPs functional areas specified in the NHA. They pointed out:

"EHPs should specialise by taking one or two core functions of doing all the functions so as to be more effective in their work" (SDEHP04). *"Not all EHPs have expertise in all core functional areas in the National Health Act, it would be better that the more experienced EHPs mentor others to share information"* (CDEHP02).

The research participants' statements suggest that while the National Health Act defines the scope of work of EHPs and outlines powers they have, enforcing this Act is hindered by limited resources. Hence cognisance needs to be taken to ensure the balancing of the diverse functions of EHPs in the NHA with other demanding responsibilities on which the Act pronounces. For example, a strategy to harmonise investigation of complaints and conducting routine inspections for monitoring purposes is essential.

4.5.3 The Foodstuffs, Cosmetics and Disinfectants Act, No. 54 of 1972 (FCD)

Results showed that fifteen (43%) of the total sample research participants mentioned the FCD Act. Unlike the Constitution and the NHA where more EHP managers mentioned the two laws, both EHP managers and EHPs regarded the FCD Act as an important legal tool in the practice of environmental health. In this regard, results showed that eight EHP managers and seven EHPs regarded the FCD Act as an important legal tool that provides guidance for food safety. The importance of the FCD Act amongst others was cited as having regulations that deal with the analysis of food content as per the following statement:

"The Foodstuffs, Cosmetics and Disinfectant Act, has related regulations namely, R328 for setting microbial standards on colourants, caffeine content in milk and milk products" (CDM02).

Regulation R328 (Republic of South Africa, 2007b) referred to in the above statement is instrumental in empowering EHPs to carry out sampling of foodstuffs during their routine inspections they are mandated to carry out per both the FCD Act, no. 54 of 1972 and the National Health Act, no. 61 of 2003. The guidelines set in the R328 regulation provide EHPs with powers, technical procedures to follow and legal requirements to meet during the sampling process. Notwithstanding the requirement of taking samples by all EHPs as per the FCD Act, the effect of specialisation on Food Safety within the case study metropolitan region is likely to have affected a number of research participants' references to the importance of the FCD Act.

4.5.4 The National Environmental Management Act (NEMA), no. 107 of 1998

A total of twenty four (69%) of research participants mentioned NEMA as amongst the primary laws they used in their practice. This high response can be attributed to the fact that some research participants mentioned the NEMA principal Act and sub legislations of NEMA like NEMA: Air Quality Act, NEMA: Waste Act, NEMA: Biodiversity Act, all of which raised the number of references to NEMA.

It was however, thought-provoking to discover that many EHPs saw NEMA as an umbrella Act regarding environmental pollution. For example, seven (20%) of research participants mentioned that enforcing NEMA presented a challenge regarding technical knowledge, which is often limited amongst EHPs who have not received the special training for Environmental Management Inspectors[36]. The need is thus for prior training of EHPs, who are then appointed, or designated to enforce it. One research participant articulated this theme as follows:

> "*To enforce the National Environmental Management (NEMA) Act and all its underlying Acts – like Air Quality Act 39 of 2004 with various amendments, the National Environmental Management (NEMA): Waste Act, 59 of 2008, the National Environmental Management (NEMA): Biodiversity Act, 10 of 2004, you need to be designated"* (SDM03).

This example illustrates that as much as EHPs might know and be willing to enforce the NEMA, in practice they are precluded from doing so unless they have been officially appointed to enforce this law. Whilst the accreditation of EHPs to be EMIs is an important and good thing that adds value to EHPs' practice, the appointment process is long, due to its political and legal ramifications. From a political point of view, the designation as an Environmental Management Inspector (EMI) resides with the Minister of Environmental Affairs and political leadership of the municipality [Mayor]. Legally, EHPs would be contravening the law by enforcing provisions of NEMA when they are not appointed or designated to do so, as was the case in the case study metropolitan municipality. Thus EHPs, find themselves caught in the middle and that has created a loophole which is likely to impact negatively on ensuring compliance. The delays in the designation or appointment of EHPs to enforce NEMA has been seen by some EHPs as a hindrance to the smooth enforcement of NEMA within the case study area. Accordingly, research participants remarked that:

[36] See last paragraph of section 4.3.4 for more details on capacity building of EHPs in South Africa to prepare them to be Environmental Management Inspectors (EMIs).

"The main problem of designation as EMIs at the moment is its effect on compliance and monitoring. For example, we [EHPs] can't enforce licences that we issue". Our EMI is just on paper as without the designation by the Minister of Environmental Affairs, we [EHPs] can't enforce the legislation and the industry [happen to] know this, and does not take us [EHPs] seriously (NDM04). Being EMIs that are not designated renders us ineffective and become like lions without teeth" (SDM04).

Apparently, some business owners who know the law took advantage of the situation and perpetuated non-compliance by ignoring contravention notices served by EHPs within the case study municipality. So as much as NEMA is a vital legal tool for the practice of environmental health, enforcement by EHPs is limited by pre-requisite conditions attached to its enforcement, namely the requirement that EHPs need to be designated only after they have been trained as EMIs.

Results showed that NEMA was the last among the highly mentioned laws enforced by EHPs. Research participants highlighted some other laws which are discussed from 4.5.5 to 4.5.10.

4.5.5 Tobacco Products Control Act, No. 83 of 1993

Only three of the 35 research participants commented on the Tobacco Products Control Act. This number translates to 8.6%. This low number could be attributed to the fact that smoking is linked to air pollution control which is a specialised function within the case study municipality. The Tobacco Products Control Act, no. 83 of 1993 as per the amended Regulations under the Tobacco Act via the gazetted Government Notice R264 of 30 March 2012 prohibits smoking in certain public places and stipulates stringent rules which are hard to enforce (Republic of South Africa, 2012b). One such rule is Section 2(2) of R264 which states:

"No person may smoke any tobacco product in outdoor public places …such as stadiums, sports facilities, schools premises, outdoor eating or drinking areas, parking walkways and covered parking areas, and beaches where public bathing is permitted, not less than 50 meters away from the closest person near the demarcated swimming area".

The three participants pointed out that enforcing the Tobacco Act is made difficult due to the fact that it is a behavioural issue that involves educating and soliciting cooperation of members of the public. One research participant commented:

"The Tobacco Products Control Act is very challenging because there is a clause that needs a specific floor area and people don't comply – since 25% of the floor area is very difficult to understand by other business owners and you as an EHP have to explain the technical aspects like partial enclosure and why people can't smoke in an enclosed area" (SDEHP01).

This requirement is difficult to enforce as people continue to smoke in public places, disregarding how smoking affects people around them. How much more difficult then would it be to monitor people in open public places as mentioned above? Such a task is likely to pose challenges relating to the manner EHPs enforce compliance.

It seems that the smoking problem cannot be managed by law enforcement alone, but requires versatile measures that must appeal to the smokers' behavioural patterns. I believe that such a task might be overwhelming for EHPs and is likely to strain the limited resources at their disposal. It can be inferred from the participants' experiences that the management of smoking is not an easy issue to deal with because as pointed out by The Health Systems Trust bulletin, "smokers tend to be ignorant [or play ignorant] about changes in smoking controls. [This is exacerbated by the fact that] "new laws place more responsibility on business owners, especially restaurant owners who in practice are not able to control the situation" (Health Systems Trust, 2013, no page number).

4.5.6 Occupational Health and Safety Act, No. 85 of 1993

A total of four participants - which translates to 11% of the total sample - pointed out that for this Act to be a legal tool,it requires occupational health technical knowledge in some industrial settings. There were no comments on the challenges of this Act. Suffice to say, it is a law that by its very nature primarily addresses occupational hazards in workplaces. Safety issues are the employers' responsibility and EHPs who are active in safety are normally those who have specialised in Occupational Health and Safety.

4.5.7 Other Environmental Health Related Legislation

Other laws that research participants mentioned which presented peculiar challenges to EHPs included The Children's Act, no. 38 of 2005 and the National Liquor Act, no. 59 of 2003. The Children's Act, no. 38 of 2005 is cited here as an example of legislation where EHPs are partly involved in its enforcement, but does not form a core business of their practice. The enforcement of The Children's Act, no. 38 of 2005 primarily requires social science expertise

[which is not a specialty of EHPs]. There are two examples that demonstrate key role played by EHPs regarding the enforcement of the Children's Act**,** no. 38 of 2005.

First, EHPs at the eThekwini Metropolitan Municipality participated as Law Enforcement Officers in the "Street beggar project" driven by the Safer Cities and the Inner Thekwini Regeneration and Urban Management Programme (iTrump) which use the provisions of the Children's Act, no. 38 of 2005 to remove children on the street to places of safety and /or refer them to the Social Welfare and Children's Society where they received professional social services" (eThekwini Metropolitan Municipality, 2015a, pp.279-280). Programmes involving the Child Care Act require counselling service expertise that EHPs need to be trained in, as that is not one of their professional competencies. Hence, EHPs on the ground devise ways of having a common understanding of issues relating to The Children's Act no. 38 of 2005 - as reported by one research participant,

> *"We sit down as staff members and discuss issues pertaining to various legislation provisions like The Children's Act, no. 38 of 2005 to have the same understanding and interpretation and make enforcement task easier"* (NDM02).

Second, EHPs render children's related services that involve addressing concerns about the state of the environment and the suitability of facilities [like creches] that house children, so as to ensure that the places are safe and suitable for children's health protection. This role requires teamwork with other professionals like Social Workers. The success of enforcing requirements of this nature necessitates formal cooperation arrangements amongst the team of health workers. I presume that lack of such arrangements is likely to present service delivery challenges - particularly where there are individuals who might advocate for a silo approach.

4.5.8 Regulations and Procedures from Legislation

The difference between legislation and regulations is important. Legislation refers to law or a set of laws passed by a legislative body or Parliament to provide a general framework on how certain activities are to be carried out and the body responsible accountable for such activities. Regulations are rules or restrictions made from the law usually passed by a Minister or a government regulating agent to provide details of how certain activities are to be carried out during operations (World Health Organisation, 2016). Such regulations are required to be enforced to realise the principles set out in the law.

Research participants mentioned regulations that were commonly used by EHPs as tools for carrying out their duties. These included regulations like (i) R962 for governing general

hygienic requirements for food premises and transporting food; (ii) R328 that provides for the powers and duties of inspectors regarding food safety issues as well as the analysis of foodstuffs [outlining sampling and sampling procedures]; and (iii) R363 that deals with the disposal of the dead. I have made reference to these regulations in Tables 4.1 and 4.2. In this section, I selected R363 as an example of a regulation that was pointed out by the research participants as having challenges of enforcement.

Regulation R363 - The disposal of the dead:- This regulation was made in terms of the National Health Act, no. 61 of 2003 and was gazetted on 22 May 2013 in Government Notice 36473 (Republic of South Africa, 2013d). It regulates activities relating to the disposal of the dead. The primary tasks of EHPs in this regulation are to inspect and issue certificates of competence (COC) to funeral undertaker premises and to take steps to prevent health hazards during exhumations in terms of Section 27 (f).

According to the research participants, the challenge that EHPs faced on the ground regarding enforcing the R363 was the difficulty of balancing this role with other competing responsibilities like routine inspections. They pointed out that this task tends to be time consuming as one participant remarked:

> *"Exhumations are difficult to handle [particularly] in the semi-rural areas because it takes the whole day to find one particular body and graves are not clearly marked"* (NDM01).

The disposal of the dead function is listed as item 8 in the Scope of Practice of EHPs in South Africa, wherein EHPs are expected, amongst others, to:

"Monitor practices at cemeteries and other facilities used for the disposal of dead bodies. They need to "manage, control and monitor exhumations and reburials, or disposal of human remains" (Republic of South Africa, 2009, p.10).

The exhumation guidelines of the eThekwini metropolitan municipality Environmental Health Unit even demands more responsibility of EHPs by stating:

"An EHP must be present prior to and during the exhumation to ensure privacy and to protect public health" [by ensuring that] "there is adequate provision of and use of approved protective equipment". EHPs need to ensure that "all used discarded equipment is properly disposed of and that there is no smoking or eating during exhumations" (eThekwini Metropolitan Municipality Health Unit Environmental Health Services Quality Support, 2015, no page number).

The EHP's role in exhumations is primarily prevention of infection control (East Lindsey District Council, 2015). It would seem prudent for municipalities to provide resources for this important task, given that the R363 places more monitoring responsibility on EHPs. Section 27(d) of R363 even requires that municipalities without an EHP, solicit help of EHPs from other municipalities and prescribes that no exhumations can be done nor a certificate of competence be issued to undertaker premises without the services of an EHP.

It therefore appears that the EHP functions set out in R363 place demands on services of EHPs. An increase in burials coupled with the lack of proper coordination and inadequate resources, are likely to compromise accomplishing this task and other pertinent responsibilities of EHPs.

4.5.9 Policy Guidelines and National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners

Research participants mentioned the National Environmental Health Policy, 2013 and the Batho Pele principles in the Batho Pele White Paper, 1997 as well as the Draft National Norms and Standards Relating to Environmental Health, 2013, which has now been replaced with the officially approved version: National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners in the Government Notice 1229 of 24 December 2015 as guiding support legal tools related to environmental health practice. A brief description of the two policies and the Norms and Standards of Environmental Health is outlined in the following paragraphs.

4.5.9.1 The National Environmental Health Policy

This policy came into operation after its promulgation in the Government Gazette 37112 as Government Notice 951 on 04 December 2013 (Republic of South Africa, 2013a). Surprisingly, only two research participants (6% of the total sample) mentioned the National Environmental Health Policy as one of the tools used by EHPs. This response could be ascribed to the fact that the policy was new at the time of data collection and many EHPs might have been unaware of it. It is also possible that the municipality had not yet integrated it into its regulatory framework.

The National Environmental Health Policy provides comprehensive information aimed at ensuring the development of environmental health service delivery plans in South Africa. It embraces the functional areas in the Scope of Practice of EHPs. Thus, positioning EHPs at the

centre of environmental health service delivery. This policy particularly emphasises the need for a cooperative government approach so as to ensure the rendering of environmental health services in a manner that ensures the sharing of responsibilities by all other government institutions, and other key role players in both public and private sectors. This approach is aimed at avoiding duplication of resources on one hand, while encouraging teamwork and intersectoral collaboration amongst different disciplines that play a crucial role in environmental health service delivery on the other. The policy aspires to create an environmental health framework that is able to offer equitable environmental health services in a climate where all stakeholders are made aware of their key roles, thereby encouraging voluntary compliance.

The Policy encourages the empowering of communities through education to be aware of and play a leading role in maintaining their environments to be safe and free of pollution. Consequently, a compliant conscious society is likely to be established. The Policy intends to encourage "enforcement of environmental health legislation and policies" where prosecuting authorities including the Department of Justice have knowledge of the EHPs' needs and support them on handling prosecutions relating to enforcing compliance with environmental health related legislation (Republic of South Africa, 2013a, p.31).

Hence with a policy in place that provides for environmental health services in South Africa, there is hope that EHPs might in future receive support for their capacitation in law enforcement, and compliance with legal requirements might improve as stakeholders become aware of their roles.

4.5.9.2 The Batho Pele White Paper

This paper is a Policy on Transformation of Public Service Delivery in South Africa that was developed and published in Government Gazette 18340 as Government Notice 1459 of 1997. It was a government attempt to prioritise service delivery of public services to the people in line with provisions of the Constitution of the Republic of South Africa. The Batho Pele Policy was designed "as a policy framework and a practical implementation strategy for the transformation of public service delivery. Its purpose was to improve efficiency and effectiveness of the way in which services are delivered" (Republic of South Africa, 1997, p.9).

Six (17%) research participants made reference to the Batho Pele principles. The following are examples of such statements:

"The local authority has a range of documents that guide the way we [EHPs] interact and the way we [as EHPs] conduct ourselves. For example, the Batho Pele principles are

important in guiding how we treat people, ought to be unbiased and guide the services we render" (CDM05). *"The municipality has a Batho Pele champion every year where an award is issued to a best employee, I remember a lady from Engineering [who received it] based on dealing with other stakeholders"* (WDM01).

The above statements show that EHPs in the municipality had an idea of the Batho Pele principles[37]. However, there was no finding pointing to the internalization of the Batho Pele principles in the practice of environmental health. Instead research participants regarded it as simply a municipal policy in which EHPs play no active role. This situation is unfortunate given that the Batho Pele Policy provides fundamental guidelines on promoting harmonious working arrangements marked by feedback which EHPs can use as public servants to promote cooperation of community members as service recipients. This envisaged result happened even though the eThekwini metropolitan municipality had designed a Batho Pele competition [which was alluded to in one of the above-mentioned research participants' statements]. The competition was open to eThekwini staff members, members of the public and school learners as a strategy "to promote customer services and improve service delivery" (eThekwini Metropolitan Municipality, 2015c).

Findings did not show any active role played by EHPs in the Batho Pele programmes that are aimed at putting into practice the Batho Pele Principles. Instead some research participants pointed out that they regarded the distance of their offices from the operational areas as a situation that contravened the Batho Pele principles of promoting access. Hence, the statement:

"The distance to the operational areas is a challenge – offices are remotely located with other EHPs having to travel 45 minutes before they can reach their places of operation and that is against the Batho Pele access principle which requires that community be able to access services" (WDM03).

The Batho Pele Policy has indeed highlighted the fact that many people who live in remote areas are disadvantaged by travelling long distances to get access to assistance from public services. It is for this reason that, "the Batho Pele Policy recommends that service departments must develop strategies aimed at eliminating the disadvantage of distance by ensuring that resources are closer to those in greatest need" (Republic of South Africa, 1997, p.18).

[37] There are generally 11 Batho Pele Principles published by the Department of Public Administration in South Africa namely: Consultation; Service Standards, Access, Courtesy, Information, Openness and Transparency, Value for Money, Encouraging Innovation and Rewarding Excellence, Customer Impact and lastly, Leadership and Strategic Direction.

Consequently, based on the findings that some EHPs are placed far from where they are supposed to be working close with communities for easy access, the municipality would need to devise a strategy to solve this challenge for better environmental health services delivery.

4.5.9.3 National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners

On 24 December 2015, the National Health Department promulgated a set of Norms and Standards Relating to Environmental Health in South Africa (Republic of South Africa, 2015a). These were first published as a draft in 2013 in terms of the National Health Act, no. 61 of 2003. The purpose of the National norms and standards is to:

"provide a national approach for standardising functions and activities in the delivery of environmental health services as well as the level against which such services will be assessed to ease the identification of gaps" (Republic of South Africa, 2013c).

These norms and standards were designed to embrace existing legislation and encourage inter-sectoral collaboration amongst stakeholders involved in the delivery of environmental health in South Africa. Most important, the environmental health norms and standards provide guidelines for the delivery of environmental health services in accordance with the scope of practice of EHPs in South Africa. It has identified EHPs as the main professionals driving implementation on the ground and the District and Metropolitan municipalities and Provincial Health departments as service providers who implicitly would provide the necessary resources. The norms and standards aspire to have the cooperation of the general public and optimal delivery of environmental health services in South Africa to ultimately promote the culture of compliance (Republic of South Africa, 2013c, p.44).

The 2015 version of the national norms and standards sets out practical steps that EHPs ought to follow for instance when investigating public complaints. These regulate the process and attainment of the same standards across the South African Environmental Health sector. It encourages the development of checklists for carrying out routine inspections. The eThekwini metropolitan has developed a series of Standard Operational Procedures (SOPs) that serve as inspections tools for investigating public complaints and conducting routine inspections. I found these to be in line with the approach proposed in the norms and standards for premises[38].

[38] The Norms and Standards suggest the development of inspection checklists that are to be implemented whilst carrying out inspections of premises as per Item 3 of the Environmental Health Monitoring Standards section on pages 18-19 of the Norms and Standards.

However, standardisation also has its shortcomings. Examples were pointed out by some research participants in the following statements:

"We [EHPs] have monthly inspection reports but these are statistics which are mere numbers that do not consider quality and impact of our work" (NDEHP05). *"In practice EHPs do not engage the statistics and use to interpret the data effectively to develop mechanisms that would engage the public regarding complaints"* (CDM05).

The above statements show that there are good inspection tools in place, however, precautions need to be taken to avoid creating a tick-box mentality where EHPs would not consider other salient factors not listed in the tools. This situation occurs where poor practice prevails. Cremer has stressed that "the tick-the box mentality" is a common challenge that occurs in organisations with highly regularised practice (De Cremer, 2014, p.4).

4.5.10 By-laws

The Constitution of the Republic of South Africa, in terms of Section 156(2) and Section 11 of the Local Government: Municipality Systems Act, no. 32 of 2000 (Republic of South Africa, 2000a), allows the municipalities to draw up their own by-laws. The eThekwini metropolitan municipality has developed a set of by-laws over the years. A review of the by-laws was taking place during the time of the data collection in 2014.

A total of 15 out of 35 research participants (43%), mentioned that they used various municipal by-laws in carrying out their duties, particularly in the handling of public complaints. They used the complaint management system which allowed the handling of different issues and thus required EHPs to make reference to different by-laws within the municipality. In this regard, one participant commented:

"Public health by-laws, nuisance by-laws and scheduled trade and occupations by-laws are one of the main by-laws that are heavy used" (CDM05).

The above-mentioned by-laws were listed by several other research participants. Some of the challenges EHPs faced in enforcing by-laws were that they were old. Hence they made statements like:

The by-laws that are old and outdated are inappropriate to the current situations. It seems to be taking time to update them" (WDEHP05). *"When a person starts a backyard business for instance, you will not be able to enforce the by-laws as the old by-laws also do not*

pinpoint on exactly what you want to serve a notice on. So you have to play around with it so that it suits the situation you want to serve notice on" (SDEHP04).

In regard to the above, the scheduled trade and occupations by-laws for example were first published in the Provincial Gazette No 40991 as Provincial Notice 134 of 1979 dated 22 March 1979 and adopted for the current eThekwini municipality area of jurisdiction through a Municipal Notice No 70 of 22 December 2005 (eThekwini Metropolitan Municipality, 2011). The purpose of these by-laws was to regulate by listing permitted activities and setting conditions for the carrying out of such activities whether in public places or premises or vehicles within the eThekwini municipal area. In the absence of a newer version of by-laws, these ones are applied.

Some of the eThekwini municipality's newly developed by-laws, which were not yet published during the data collection period provide for the addressing of a number of offences and associated actions to be taken and penalties to be charged for such offences. Issues addressed by the by-laws are not only focused on environmental health but are broader and inclusive of environmental health scope of practice activities. To mention but a few examples, there are two recent by-laws pending official proclamation:

First is the *Informal Trading by-laws*: These provide for the setting up and operation and management of informal trade businesses. Among the issues these by-laws address is the incorporation of the use of a developmental approach which requires that enforcement considers the promotion of "economic and developmental" needs of the people (eThekwini Metropolitan Municipality, 2014). Tthus, allow the regulating of informal trading within the municipality. Informal traders are required to comply with Environmental Health requirements which are explicitly mentioned in Section 29 of these by-laws. This proviso obviously gives EHPs an edge to handle informal trading challenges.

Second is the *Nuisances and Behaviour in Public Places By-laws*: - Nuisances and Behaviour in Public Places By-law was adopted by the Municipal Council on 24 June 2015. It was proposed to come into effect six months after the pending proclamation. Its purpose is to "provide for measures for prevention, minimising or managing public nuisances as well as to prohibit certain conduct or activities in public places" (eThekwini Metropolitan Municipality, 2015b, p.2). These by-laws repealed previous by-laws that dealt with public health issues. EHPs enforce these by-laws by virtue of being Peace Officers and are thus allowed to serve contravention notices to identified offenders where applicable. One of the challenges that research participants pointed out was the problems of small fines that made transgressors not

take EHPs seriously. This situation is likely to contribute to an increase in non-compliance. The Nuisances and Behaviour in Public Places by-laws came with a fine of up to "R40, 000.00 or imprisonment of 2 years" (eThekwini Metropolitan Municipality, 2015b, p.18). This by-law might serve as a deterrent to the committing of public health hazard offences.

Based on the findings, it would appear that, whilst the municipality has by-laws, EHPs do come across challenges in enforcing them. The public health nuisance and business handling related by-laws are ones commonly used and relevant to the practice of EHPs. These by-laws cover the routine activities of EHPs such as curbing nuisance in public spaces and business premises. The specialisation practice within the Environmental Health Unit and diverse geographical settings across the municipality is likely to make some by-laws more appealing to some EHPs e.g. some might use animal by-laws over the litter abating by-laws.

4.6 PERCEIVED LEGAL CHALLENGES IN EHPS' WORK

In the previous sections I addressed the laws that provide for the mandates of EHPs in South Africa. Section 4.4 listed examples of laws enforced by EHPs while section 4.5 described some insights into specific challenges EHPs faced in enforcing the laws. This section provides an overview of the major challenges to law enforcement highlighting the scope of the problem in the light of the findings of this study.

The discussion addresses objective 3 of the study, particularly, question 11.2 of the interview schedule that required research participants to give examples of challenges they encountered in fulfilling law enforcement duties. Results showed that there are basically three challenges relating to enforcing laws that hindered EHPs from doing that work. These challenges have ethical connotations as they impact on the conduct of EHPs in carrying out their duties.

4.6.1 Challenge 1: Inconsistencies in Applying Laws to Different Situations in the Municipal Areas and Overlap of Legislation Requirements

Research participants reported that they experienced difficulties in enforcing the same piece of legislation in the Central Business District or Centre (CBD), in the townships as well as the rural sections of the municipality, due to the different settings in those areas. One of the challenges EHPs faced, arose from the evolution of eThekwini municipality from different municipal entities [some of which had more rural sections with laws that permitted certain practices like the keeping of animals], to a metropolitan municipality status at the advent of the democratic government. The merger of the different areas within the municipality resulted in

new democratic order which required the use of same municipal by-laws across the metropolitan municipality. However, some of these laws were designed for urban lifestyle with no consideration for the different settings in the other areas that were predominantly rural in nature and governed by by-laws that required the use of different approaches. For example, EHPs experienced difficulty in enforcing the animal keeping by-laws consistently across the metropolitan municipality areas. One of the reasons highlighted by the research participants was captured in the following verbatim response:

> *"The animal keeping by-laws state that a dog should be kept in fenced premises. This is applicable in a suburb (formal area) but not in informal areas, as premises in the latter are not fenced and dogs are permitted to roam. So as an EHP, I cannot apply the same legislation in a rural area in the same way I do in the formal area. This is a problem given that, there is a high rate of dog bites in the rural areas. In such situations, each EHP has to use own discretion"* (CDEHP02).

The above situation presents a challenge to EHPs in that the law requires compliance with the provisions of the by-laws but the conditions on the ground require a different approach which is not provided for in the law. Moreover, the problem being addressed escalates causing pressure on the part of EHPs to come up with a solution. It appears that the municipality should have made some relaxation in some areas to accommodate the different developmental status of their areas and progressively phased in the changes. The current situation in the example above, demonstrates that whilst there seemed to be rapid change in the political sphere that resulted in the attainment of the metropolitan municipal status, a mismatch occurred as the adjustments in service delivery mechanisms on the ground, especially as the application of environmental health service provision laws did not keep pace with the change in governance. Apparently, some communities were ignorant about enforcement implications that demand compliance in the new municipal set-up. Hence, they started to question EHPs as to why they expected them to do things differently from the way they were used to doing regarding the standard of living and the carrying out of business. As a result, EHPs find themselves having to treat these rural communities differently from others in the urban settings even through the laws they used had the same requirements to be met. This disjuncture has the potential of subjecting EHPs to criticism of discrimination, should they be challenged in court, with no legal grounds in the current by-laws to stand on.

The other complicating factor raised by research participants was that EHPs grappled with balancing enforcement of legal trade requirements between informal traders, struggling small

formal businesses and other formal business entities. The small businesses and informal traders compete against big businesses. The eThekwini "Scheduled Trades and Occupations By-laws" as amended, prescribes in Section 8(c) that:

"any person who fails to comply with the notice served in terms of these by-laws, is guilty and liable to conviction" (eThekwini Metropolitan Municipality, 2011).

It is common practice to expect all businesses to comply with their trading requirements without exception. However, the reality on the ground showed that at times the different socio-economic situations had made some struggling business owners unable to comply with the minimum requirements. This situation posed a challenge as EHPs find themselves faced with a dilemma of having to apply double standards. This dilemma is vividly reflected in the following comment:

> *"As an EHP for example, you sometimes come across situations where you go out to licence a restaurant and ask for everything – [like the towels, double basin, the hot water, the storeroom and the change rooms].Yet <u>four metres</u> outside, there is someone who is selling informally. The challenge is when now the business person challenges you, and says "But hold on a moment – you ask me to spend R80, 000.00 on fixing the shop, yet there is someone directly outside my shop, who is competing with me and has none of these?"* (CDM05).

Consequently, while there might be the will on part of EHPs to enforce, the challenges are likely to demotivate them and in the process negatively affect the spirit of law enforcement. It is therefore important that EHPs receive continued support and refresher training to gain competence on law enforcement which may assist them in addressing the complicating issues they come across in the course of their duties. For example one participant remarked:

> *"Sometimes when serving notices you have a challenge of wording the notices correctly. You need to be very careful how you word them so that they stand the test of the court"* (WDEHP03).

It could thus be inferred that when laws and regulations are vague, the interpretation depends on the person who enforces them and this interpretation can easily confuse the person to whom the notice is being served. The problem is aggravated by the fact that EHPs are required to use more than one piece of legislation in dealing with the same issue, and that, as pointed out in the above statement, makes it difficult for some EHPs to handle this responsibility. In such cases competence via training is essential coupled with institutional support on law enforcement. The municipality has a moral duty to provide training support for EHPs as provided for in the Local

Government: Municipal Systems Act, no. 32 of 2000 (Republic of South Africa, 2000a). Sections 68(1) read with Section 72(1) (v) of this Act state that a municipality has a responsibility to develop the capacity of its human resources to reach a level desired to perform the assigned duties. The training support is important given that eThekwini Municipality has declared in its 2015/16 IDP that it has identified a need to step up enforcement of regulations as preventative measures to abate pollution, which is a key role of EHPs. In addition, the eThekwini municipality realised that enforcement skills of EHPs were lacking. Hence it resolved to compel "all EHPs to be registered as enforcement or Peace officers".[39] (eThekwini Metropolitan Municipality, 2015a, p.62). This resolution is in line with the requirements of appointment of EHPs in terms of the National Health Act as already pointed out in section 4.3. EHPs having been designated as enforcement officers, needed to understand criminal procedures, serving of notices and prosecution procedures so as to operate within the confines of the law.

Added to the issue of support, the process of law enforcement is hindered by the process it takes to resolve cases. Research participants pointed out that EHPs also experience challenges relating to the long time it takes to process notice and this delay contributes to non-compliance. For example as one research participant reflected:

> *"The current process is very tedious in terms of applying laws. First a personal notice is served, and then a written notice which requires a certain amount of time for compliance. Then, prosecute. This takes a long time to process as there are 18 regional offices. The public is aware of this and take advantage not to comply* (SDEHP03).

The contributory factors to this long process were ascribed by research participants to the absence of an in-house legal office directly handling environmental health legal issues. The process is linked to support for enforcement. Support is very important, as the law enforcement process involves critical issues which "law enforcers need to prove to the court regarding the contravention or violation of a policy of law to justify the case" (International Network for Environmental Compliance and Enforcement (INECE), 2009, p.66). It is on this basis that the National Environmental Health Policy provides for the development of "enforcement of environmental health legislation and policies" where prosecuting authorities like the Department of Justice need to have knowledge of the EHPs' needs so as to support them in

[39] While compelling all EHPs to be registered as Peace Officers appears to be addressing an internal problem of EHPs within the municipality, such an undertaking is also a compliance issue that is in line with the provisions of the National Health Amendment Act, no. 12 of 2013 that requires that EHPs be Peace Officers.

handling prosecutions relating to enforcing compliance as has been previously pointed out in section 4.5.9.

4.6.2 Challenge 2: Essentials for Dealing with Ethical Concerns during Law Enforcement

Legal responsibilities of EHPs have enforcement as their primary focus aimed at promoting compliance with the requirements prescribed in laws or regulatory procedures as has been pointed out in sections 4.3 to 4.5. Enforcement is a multi-faceted responsibility that involves, for example, processes to be followed, taking of actions and justification of the decisions. All these run the risk of putting others at a disadvantaged position and hence, extra care by law enforcers is required. The success of enforcement depends firstly, on law enforcement infrastructure [programme, and relationship of management and officials], secondly, the adopted organisational approach to law enforcement practice, and thirdly, the officials' credentials and conduct. These ideals however, often do not exist in workplaces thus posing challenges to the practice. It is on these grounds that I was also keen to know what challenges EHPs faced as a group of professionals in the forefront of law enforcement. This section briefly address the essentials for handling ethical considerations in carrying out of environmental health responsibilities.

First, there is a need to have law enforcement infrastructure**:** The Oxford Advanced Learner's Dictionary defines infrastructure as "the basic systems and services necessary for an organisation to run smoothly" (Hornby, 2010, p.770). Law enforcement systems need to be in place and articulated in a well-designed programme. Such a programme according to the USEPA, ought to "promote the rule of law and good governance by ensuring fairness in the application of laws. [This entails] "ensuring that the laws are applied in a consistent manner that makes the affected individuals or companies feel fairly treated and thus see value of compliance" (2009, pp.5-6), (United Environmental Protection Agency (USEPA), 1992, p.4). This programme implicitly requires training of EHPs on law enforcement to be prepared for handling complexities involved in law enforcement so as to enforce while being mindful of their expected conduct.

Second, law enforcement needs to be conducted by credible individuals. The laws of appointing EHPs prescribe that they should possess some abilities that entitle them to enforce laws. For example, EHPs are expected to exercise vigilance and ensure that they treat people with respect and not showing any favour or discrimination during investigation of cases. They are required to ensure that they have the correct credentials obtained through proper training in

law enforcement so as to avoid misrepresenting the organisations. To this end, the South African EMI code states that law enforcers [of which EHPs are included] should "respect human rights and [whilst being] firm but [they should be] fair to offenders" (Department of Environmental Affairs (DEA), 2015). Attaining such a standard of practice requires the taking of steps to train and retrain EHPs to be true to their call of duty. This task is important given that one of the requirements in the appointment of EHPs is to conduct investigation with observance of the Criminal Procedures as well as respecting the right of persons to dignity, privacy, freedom and security as enshrined in the Constitution of the Republic of South Africa (Republic of South Africa, 1996b).

Third, the conduct of EHPs during law enforcement should embrace professionalism by demonstrating knowledge and application of elements of professional ethics normally reflected in a professional code of ethics. However, with the absence of a code of ethics for environmental health, EHPs have to rely on the generic health professional code of ethics which may not directly suit their situation. As a result EHPs have to grapple with issues of handling "confidentiality, honesty and [having] integrity in carrying out enforcement, [ensuring] obtaining informed consent when asking for information and exercising high levels of competence" (Jameton, 2010, p.198). For this expectation to happen, EHPs need support and training. Moreover, EHPs' conduct should be underpinned by the values and principles in the South African Constitution. Accordingly, EHPs as public servants ought to ensure that they act in such a way that their conduct contributes to the "maintaining and promoting of high standard of professional ethics as well as towards rendering services in an impartial and fair manner without any bias" as per Section 195 of Constitution of the Republic of South Africa.

Therefore, the attainment of legal responsibilities in a manner that ensures that EHPs are prepared for handling ethical considerations in the course of their duties, is dependent on their readiness to embrace ethical practices in their scope of work. This approach calls for the creation of a climate where EHPs are prepared by being capacitated through training on ethics and operating in an environment that has clear programmes for promoting law enforcement of environment health legal requirements to promote compliance. Only then would we have EHPs who observe a high standard of professional ethics characterized by upholding the constitutional rights of respect for the dignity of affected persons while simultaneously protecting their professional integrity as law enforcers.

4.7 SUMMARY OF THE CHAPTER

This chapter discussed the legal responsibilities of EHPs within a South African context. The Environmental Health Profession in South Africa is underpinned by provisions in a number of laws. The legislation that contains mandates for EHPs is not solely to provide for EHPs' work but is broader in scope even though the laws contain provisions that are used as a basis for the appointment of EHPs, description of the functions of EHPs that are spelt out in the Scope of Practice of the Profession of Environmental Health. The laws in this chapter are not exhaustive but serve as examples. The legal mandate of EHPs in South Africa is defined in various legislation, primarily the National Health Act, no. 61 of 2003 and its amendment no. 12 of 2013. The Constitution of the Republic of South Africa provides a base for laws including those governing the issues of environmental protection and the rendering of services in accordance with the Bill of Rights. This legislation has brought about the need to consider the dignity and privacy of individuals, including those who contravene the law. Thus, EHPs need to be trained on law enforcement.

Legally speaking EHPs are appointed to enforce laws and by-laws and the laws give EHPs powers to prosecute cases where there are contraventions in order to enforce compliance. The EHPs in the study faced challenges in enforcing the laws in situations that were not catered for. The findings on my study revealed that participants reported challenges marked by inconsistencies in applying laws across the municipality area. For example different approaches were needed when addressing issues relating to animal keeping in formal areas to those in informal areas. Yet, the laws treat these areas alike.

In Chapter Five, I discuss the professional aspects pertaining to EHPs in South Africa.

CHAPTER FIVE

THE PROFESSIONAL RESPONSIBILITIES OF ENVIRONMENTAL HEALTH PRACTITIONERS IN SOUTH AFRICA

5.1 INTRODUCTION

This chapter builds on the previous chapters and addresses professionalism of EHPs in South Africa. Chapter Four, presented the legal responsibilities. The difference between legal and professional responsibilities is important here as the two ocerlap in practice.

The notion of legal responsibility has been explained in Chapter One under section 1.2 subsection 1.2.1.1 as including any applicable provisions in the international law, the Constitution, common law, various statutes, associated regulations and applicable case law. It generally refers to prescripts set out in published law which require individuals to obey and failure to do so may subject them to a conviction in a Court of Law. On the contrary, professional responsibilities mean rules either in the law governing a profession or rules of a profession that must be complied with by the professionals or institutions in order to meet or satisfy the requirements of the profession to which they belong. The legal and professional aspects overlap in practice as both lead to a penalty for compliance failure.

Professional responsibilities of EHPs are handled by a responsible Professional Board under the auspices of the HPCSA. The implication of failure to comply with legal requirements is a conviction that may result in imprisonment or paying of a penalty fee or both by those affected. Conversely, breaking the professional requirements can result in a charge which may be a loss of professional recognition or accreditation status. An individual may either pay a penalty for the restoration of the professional status. A Professional Body can if conditions so warrant, approach a Court of Law for the conviction of a member who has contravened its requirements. Compliance with the professional board's requirements makes an EHP fit to practice environmental health and accredited as a recognised EH practitioner.

Hence this chapter is dedicated to elaborating on the professional responsibilities of EHPs in South Africa as prescribed by the HPCSA. I first describe the professional regulatory set-up to locate EHPs' professional identity amidst other health professions in South Africa. This process highlights the difficulties of defining professionalism for EHPs and the challenges EHPs face as professionals. Second, I present the practitioners' perspective on how professionalism plays out on the ground using findings from my case study. The empirical

views help in understanding EHPs' perceptions of their professional responsibilities and the ideal of a profession they envisage compared with the existing one.

5.2 THE PROFESSIONAL SET-UP OF ENVIRONMENTAL HEALTH IN SOUTH AFRICA

The Health Professions Act no. 56 of 1974 as amended serves as a baseline for professional guidelines in South Africa for the creation of professional identity (Republic of South Africa, 2007a). The Health Professions Council of South Africa (HPCSA) is established under this Act as an autonomous legal professions governing body to regulate health professional activities in South Africa, under the political leadership of the Minister of Health (Health Professions Council of South Africa, 2013b). Section 15 of Chapter 1 of the Health Professions Act provides for boards that are established and operated under the auspices of HPCSA. Environmental health is one of the health professions in South Africa established and controlled through the provisions of the Health Professions Act.

Figure 5.1 depicts the existing twelve health professions' professional boards in South Africa including the Professional Board of Environmental Health. Each professional board[40] is tasked in Section 15A (g) of the Health Professions Act to maintain and enhance dignity and integrity of persons practising the health profession under its ambit. Each professional board is also tasked with providing guidance to professions under its control on the best ways of protecting the public (Section 15A (h). Environmental health (EH) has its own Professional Board with 14 members (Health Professions Council of South Africa, 2015d, pp12&19). The Professional Board of EHPs has responsibilities that the Health Professions Act has accorded to all other professional boards and which are not only specific to Environmental Health. Hence the presentation below should be understood from the perspective of the practice of Environmental Health.

[40] Professional Board composition is regulated in terms of Section 15.5(a-f) of the Health Professions Act no. 56 of 1974. Members comprise of nominees from practising members of the Profession and non-practising ones all appointed by the Minister of Health to serve on the Board. Such members should have representatives from the community (not practising in the Profession), a person with law expertise, a person from the Health Authority (Department of Health), and as well as persons from relevant educational institutions. Whilst the invitation to serve on the Board is open to the public, the practice Environmental Health in South Africa is that members of the Board are predominantly from the professional associations, and the South African Institute of Environmental Health (SAIEH).

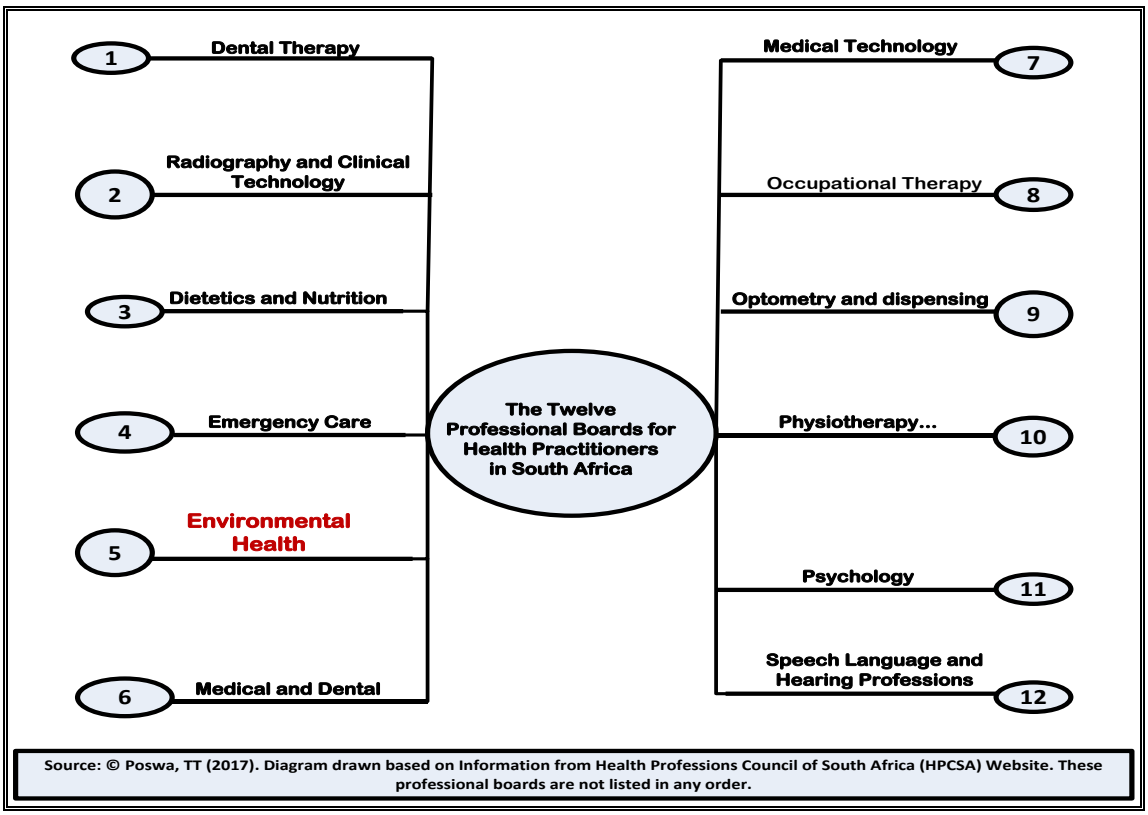


Figure 5.1: The Twelve professional boards of health practitioners in South Africa including one for Environmental Health

The main duties that the HPCSA performs through the professional boards include amongst others the following:

(1) A Professional Board regulates the professional activities and interests of the environmental health profession.

(2) A Professional Board is expected to play an important role in the development of the Scope of the Profession. This role also includes contributing to the smooth running of the Health Professions Council of South Africa (HPCSA) particularly, in determining strategic policy of national health pronounced by the Minister of Health and decisions made on matters pertaining to *inter alia*: education, training, registration, ethics and professional conduct, disciplinary process, scope of the professions, inter-professional matters and maintenance of professional competence as per Section 3(c). These aspects are in line with Section 33 of the Health Professions Act that provides that the Minister of Health in consultation with the professional board of a profession promulgates a regulation defining the scope of practice of a registered health profession that specifies acts applicable to the profession. Accordingly, the Environmental Health Scope of Practice of Professions was promulgated on 26 June 2009 (for Environmental Health

Practitioners) and on 03 December 2014 (for Environmental Health Assistants) respectively (Republic of South Africa, 2009, Republic of South Africa, 2014b).

(3) A Professional Board is tasked with regulating the education and training of practitioners [EHPs] by accrediting the programmes and examining private individuals and / or bodies to balance theory and practice of environmental health and ensure relevance of the content of the training per [Chapter II, Section 16(1)] of the Health Professions Act. It conducts audits of the accredited institutions in terms of Section 31 of the Health Professions Act to assess alignment of the training programmes with the profession's minimum requirements. EHPs in South Africa are as a result, only trained in HPCSA approved institutions. As of end of 2015, there were seven such institutions where EHPs could register with the HPCSA as student EHPs with an HI professional identifier at their first enrolment for training as EHPs (Health Professions Council of South Africa, 2014b)].

(4) A Professional Board is mandated to establish a professional register that it uses to exercise the powers to enter, remove, restore or suspend any EHP's name from the register as conditions dictate. Unregistered EHPs are therefore, not allowed to practise environmental health in South Africa, nor any person who has not received training as an EHP. This rule is a professional requirement with a legal implication that confines environmental health practice to properly trained persons. In this regard, the HPCSA Amended Guidelines for Good Practice in the Healthcare Professions, Section 51.14(a) (1) (i) to (v) stipulate that:

> "A practitioner [an EHP in this case], can only practice or be regarded as adequately educated and or trained if: they "successfully completed an educational training programme approved and accredited by the HPCSA within the field of practice and category of registration and in a training programme [offered] in training institutions accredited by the professional board for the particular profession or discipline for that particular competency". The practitioner must have completed undergraduate or postgraduate training with the duration stipulated by the professional board" (Health Professions Council of South Africa, 2014a). The HPCSA further stipulates in the Ethical and Professional Rules (Annexure 4 of Booklet 2) that "an EHP shall be confined to practice in the field of environmental health in which they are educated and trained" (Health Professions Council of South Africa, 2008a).

(5) A Professional Board sets rules for the continuing professional development (CPD). To this end, Section 26(a)-(c) of the Health Professions Act, no. 56 of 1974, empowers the

HPCSA to make rules in consultation with a professional board that regulate conditions and define criteria for continuing professional development for a category of professionals. These rules include penalties for non-compliance in terms of Section 26(d) of this Act. As a consequence, EHPs are required to accrue CPD points on an annual basis and are periodically and randomly audited for compliance. (Health Professions Council of South Africa, 2015a). This process helps in monitoring to ensure that EHPs remain on the cutting edge of professional developments through active involvement in professional activities, exposure to a variety of practices and retraining where applicable.

A summarised version of the health professions' set-up in South Africa is presented in Figure 5.2.

In summary, the Health Professions Act, no. 56 of 1974 as shown in Figure 5.2 is the main professional legislation being implemented through various structures governing professional issues and the functions. One of the other main functions that the HPCSA performs is the regulation on performance of community service. Sections 24A(1)(2)(a)(b) of the Health Professions Act, no. 56 of 1974 provide powers to the Minister of Health to designate a category of registered professions to perform a one year remunerated community service at approved healthcare facilities under defined terms and conditions of employment. This service applies to environmental health and a list of approved sites has been gazetted (Health Professions Council of South Africa, 2013a). However, as of end 2015, there was a big backlog in placements of EHPs who completed their training, thereby making community service a contentious issue in environmental health practice in South Africa (Cele, 2012).

The HPCSA devised a communication strategy for engaging with the practitioners on the ground and the public at large to clarify its role and accept inputs as shown in Figure 5.2. To this end, the HPCSA has conducted roadshows annually in different parts of South Africa where one-day seminars were held to allow the HPCSA to present a number of issues and explain new proposals and make appeals for cooperation with practitioners and members of the public. Attendance is open to all EHPs and encouraged by allocating CDP points (Health professions Council of South Africa, 2015g, Health Professions Council of South Africa, 2015e).

The fact that environmental health forms part of the health professions in South Africa makes understanding the professional identity of EHPs important. It is for this reason that the next section (5.3) is dedicated to addressing the professional identity of EHPs from the health professions' perspective in South Africa.

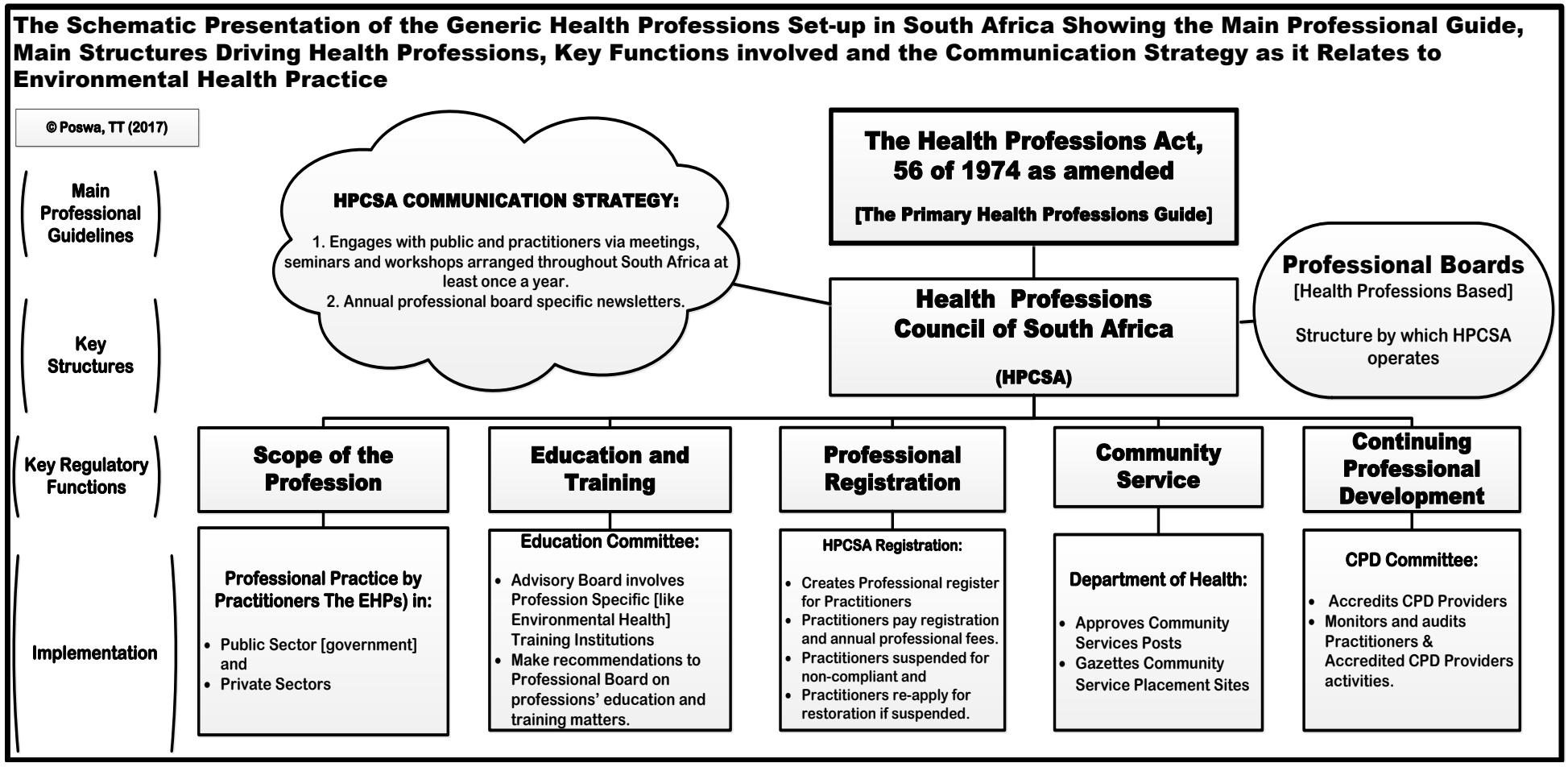


Figure 5.2 A Diagrammatical presentation of the main health professions guideline in South Africa Showing the Responsible Structures, Key Functions they perform and the involved stakeholders in the implementation and HPCSA communication stakeholder engagement strategy.
Source: Diagram drawn based on information from the Health Professions Act, no. 56 of 1974 and Environmental Health Practice in South Africa

5.3 PROFESSIONAL IDENTITY OF EHPS IN SOUTH AFRICA

In section 5.2, I presented an overall picture of the professional set-up of the health professions in South Africa. In practice EHPs need to identify themselves as professionals by knowing *"who"* they are in relation to others and the scope of their work. I regard professional identity as important in the context of this study as it attempts to answer questions I developed such as:

(1) *"Who is an EHP in relation to other professionals, i.e. what sets EHPs apart from others?"*

(2) *"Who are peers or fellow colleagues that EHPs need for support and belonging to share views on common practices and with whom can they identify?"*

(3) *"Who defines and governs the professional training, scope of work and associated competencies of an EHP?"*

(4) *"Who determines the disciplining and counselling of an EHP, in relation to professional conduct and accountability for contravening commonly accepted professional standards by which an EHP can be held accountable?"*

(5) *"Who grants accreditation to qualify one to be a professional EHP and practise as such?"*

These are hard questions to answer given the diverse nature of the environmental health profession whose scope is wide and overlaps extensively with other related disciplines. Attempts are made in 5.3.1 and 5.3.2 to address the professional definition of EHPs and what distinguishes them as professionals from the South African Health Professions' perspective.

5.3.1 Professional Description of an EHP in South Africa

An EHP is the common term that defines professionals who are tasked with enforcing environmental health services in South Africa. As pointed out in Chapter Three, reference to EHPs has its roots in Public Health which grouped these practitioners as Sanitarians: a group of practitioners whose training covered a specified content that enabled them to conduct specific professional responsibilities in protecting public health. Such training leads to certification and/ or recognition by a professional authority and needs to include the element of continued professional development to remain competent in carrying out the set responsibilities.

It is somehow difficult to address precisely EHPs as professionals using the current HPCSA guidelines. This difficulty is exacerbated by the lack of clear pronouncements by the

Professional Board of EHPs which continues to maintain the status quo. One of the challenges is that the guidelines are not exclusive to EHPs but are generic and pro-medical science in nature. As a result they emphasise a "doctor-patient relationship" over a "client-based relationship" that applies to environmental health practitioners. Given this situation, the professional identity of EHPs is made difficult in South Africa, especially because the environment under which EHPs operated has for a long time placed emphasis on treatment over prevention solutions. This state of affairs is acknowledged in the National Environmental Health Policy where it is stated that "the health system in South Africa was dominated by the curative" [mind-set], and thus regarded "primary prevention as a secondary approach of Primary Healthcare (PHC)" (Republic of South Africa, 2013a, p.34).

The description of an EHP in the documents that provide for the environmental health profession in South Africa is lacking a comprehensive reference to EHP professional status. For example the following primary reference guidelines lack details in this regard:

First, in the Health Professions Act, no. 56 of 1974 which is the main legislation governing health professions in South Africa, an EHP is referred to as someone who is registered as an "Independent Environmental Health Practitioner" in terms of this Act.

Second, the National Health Act, no. 61 of 2003 and its amended version regard an EHP as "someone who is "registered as an Environmental Health Practitioner according to the Health Professions Act, 56 of 1974".

Third, the same reference in the National Health Act is made in the Regulations [R986] Defining the Scope of the Profession of Environmental Health, which refers to an EHP as "a person who is registered as such in terms of the Health Professions Act, 56 of 1974" (Republic of South Africa, 2009, p.3).

Fourth, in the 2013 National Environmental Health Policy an EHP is defined as "any person registered as such with the Health Professions Council of South Africa, and includes an Environmental Health Practitioner doing compulsory community service subject to the provisions of the Health Professions Act, 56 of 1974" (Republic of South Africa, 2013a, p.10). The added advantage of this policy is it advocates for the recognition of professional bodies like the HPCSA in promoting public awareness about environmental health. This policy provides for the advancement of professionalism of EHPs "through continued professional development, recognition of the Scope of the Profession of Environmental Health with the ultimate aim of promoting best practice in environmental health in South Africa" (Republic of South Africa, 2013a, p.36).

Fifth, further, the recent 2015 National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners in South Africa had broadened this definition to cover EHPs registered for practising Community Service and accommodates the new reference to EHPs as Health Officers in terms of the National Health Amendment Act, no. 12 of 2013.

Other than the details advocating the professional status of EHPs, in the National Environmental Health Policy, it appears that there is no specific reference to EHPs as professionals per se in legislation that governs environmental health in South Africa. However, the fact that EHPs have to comply with professional requirements for recognition as EHPs is what distinguishes them as professionals. More details on the distinguishing characteristics of EHPs is provided in 5.3.2.

The existing gap in the national legislation to pronounce on the professional status of EHPs has created a situation where employers of EHPs devised their own reference to EHP professionals. In this regard, the City of Cape Town which I refer to here as a good example, has contrary to other metropolitan municipalities in South Africa pronounced on EHP professional identity. Accordingly:

"EHPs are practitioners with specialised training in the discipline of environmental health that are recognised as constituting a specific professional group. [They] qualified at graduate level and have completed a period of compulsory practical training in the environmental health profession, [are] registered with the Professional Board of Health Professions Council of South Africa as Environmental Health Practitioners. [They] are also required to develop skills through a Continued Professional Development programme in order to develop their level of professional competency" (City of Cape Town, 2016, no page number).

The City of Cape Town's description of an EHP is more relevant and best captures the professional status of an EHP which is missing in most references to an EHP in the legal guidelines in South Africa as described above. Common aspects in the professional status that identify a practitioner like an EHP is the presence of the distinctive characteristics of a professional. The other compounding factor to the professional identity of EHPs is that there seems to be no recent study conducted that has evaluated how communities refer to or understand EHPs as professionals. A related study conducted for example in Gauteng Province has shown that some communities had little understanding of the role of EHPs in rendering environmental health services (Tjale, 2012). Tjale's study supports the need for intensification

of awareness about who EHPs are and what they do. Coupled with community awareness is the need to determine how the EHP community views itself.

5.3.2 Distinguishing Characteristics of Professional EHPs

The key components of professional practice of EHPs are diagrammatically presented in Figure 5.3. I considered five important elements[41] that set EHPs apart as professionals as highlighted in Figure 5.3. These include:

(1) Belonging to a profession with its training philosophy
(2) Having a professional body that regulates professional practice
(3) Being registered in a profession register
(4) Operating within a Scope of Profession
(5) Undertaking Continued Professional Development

Details of each element are provided in the following paragraphs:

First, ***EHPs belong to a profession by virtue of special professional training:*** By having a profession that instils professional pride and encourages fellowship amongst EHPs with other colleagues. EHPs belong to the Environmental Health profession by virtue of special knowledge they acquired through training in recognised institutions for environmental health. They constitute a "group of people" who qualify to work in this profession by virtue of their qualification. The training enables EHPs to possess competences to exercise judgement in the performance of their professional [occupational] responsibilities (Hornby, 2010, Weil, 2008). EHPs as professionals within the profession of Environmental Health are members of an occupational group that enables them to associate with their peers (Weils, 2008). There is consensus with other EHPs beyond South Africa that being an EHP professional, requires one to be "a practitioner with appropriate academic education and training and then be registered or certificated to perform responsibilities accorded to such a practitioner" (National Environmental Health Association, 2013).

[41] I choose these elements to describe the main issues that form the base for professional practice of EHPs in South Africa and what they need to undergo as part of meeting their professional requirements. This description is informed by a number of factors but primarily the fact that EHPs are an occupational group delineated in Booklet 1 – Guidelines for Good Practice Annexure 4 of HPCSA Rules of Conduct pertaining to the Profession of Environmental Health as responsible for the performance of environmental health professional acts. It is thus imperative for anyone becoming an EHP to have acquired the EHP special training; hence the HPCSA guidelines stipulate that the practice of EHPs shall be confined to the field of environmental health in which they have been educated and trained. This parameter is important in describing the professional identity of EHPs.

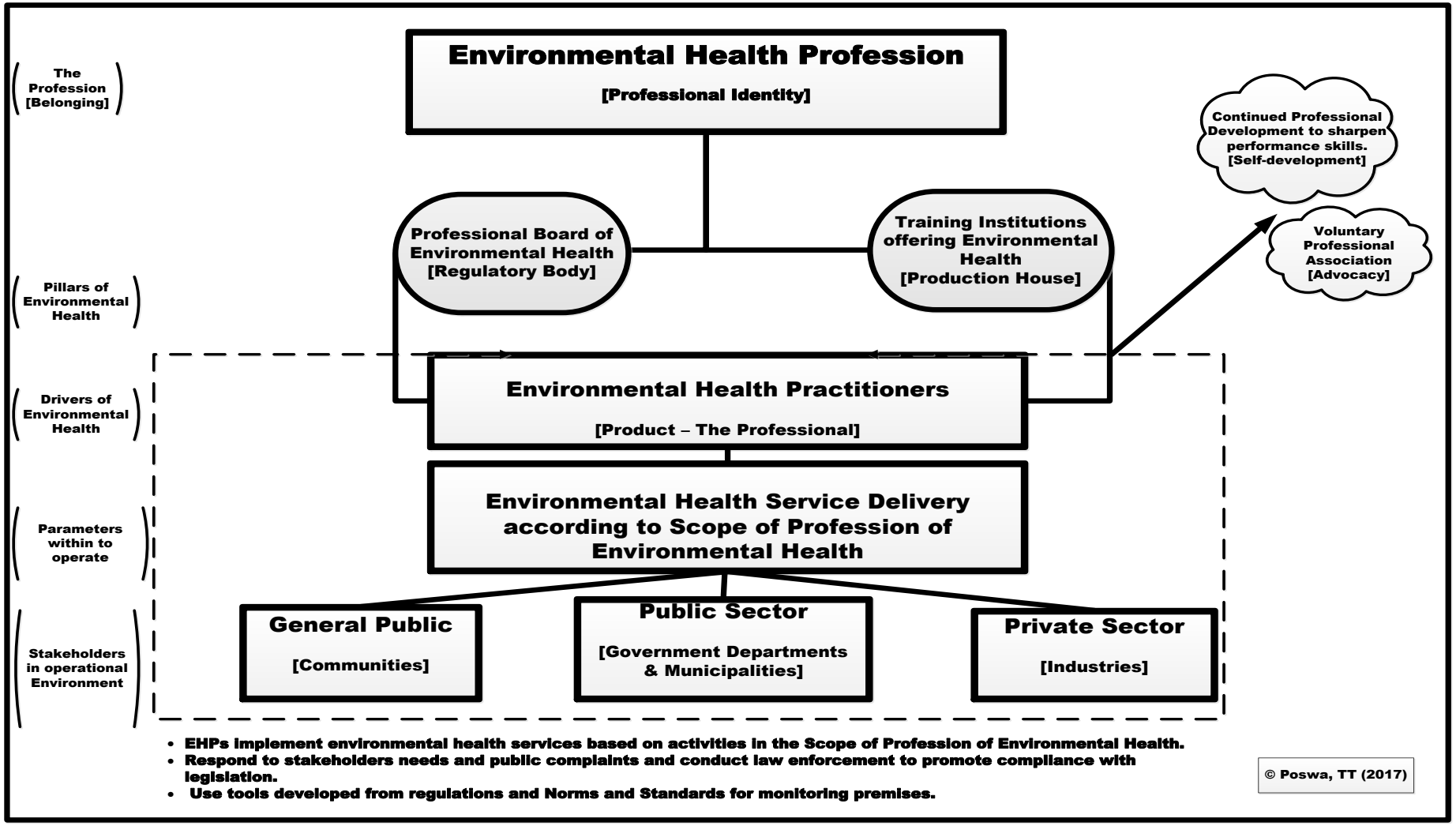


Figure 5.3: Key components in the professionalism of EHPs.

Linked to the mandatory professional body that governs the affairs of the profession like the Health Professions Council of South Africa (HPCSA) is the voluntary professional association which plays an advocacy role for the profession by representing the interests of its members i.e. the South African Institute of Environmental Health. The Association helps EHPs to broaden their networks and collectively deal with professional issues. This approach is likely to keep them strong and promote sharing to keep them motivated. The professional association also provides training over and above advocacy (Thornhill and Cloete, 2014, p.161).

The challenge that professions ought to guard against is the fact they are given free reign to govern themselves without equally stringent measures to monitor their performance. For instance "professions are entrusted with the "autonomy" to be sole custodians of "the body of special knowledge" of their disciplines and which is not understood by an average person. Moreover, they self-rule through their professional boards on the teaching and quality control, as well as disciplining those who deviate from the agreed standards" (Cruess et al., 2000, p.156). These authors have stressed that the success of professionalism is dependent on the proper functioning of the professional bodies, coupled with mutual working relationships with and amongst its members.

Second, ***EHPs are governed by a professional body:*** The Professional Board of EHPs monitors and provides guidance on what the Environmental Health profession stands for in relation to other professions. It regulates EHPs' scope of work and continually reminds EHPs about rules they need to uphold.

Third, ***EHPs must have professional membership:*** EHPs register in the professional register of the HPCSA established in terms of the Health Professions Act. Hence, they are referred to in other legislation like the National Health Act, no. 61 of 2003 as one who is registered as an "Independent Environmental Health Practitioner" in the Health Professions Act, no. 56 of 1974. Without this professional registration, they are barred from practising environmental health.

Fourth, ***EHPs operate with a scope of profession containing professional duties:*** There are activities that the professionals need to operate under and fulfil in carrying out their duties. EHPs have a published Scope of the Professions that cover what they are permitted to do as professionals. Such scope helps in setting limits. Hence, the Health Professions Act prescribes that an EHP should only carry out duties within the scope of the training he or she has received. The Scope of the Profession sets out what EHPs should do and by so doing indicates to the consumers of services what services to expect from EHPs.

Fifth, ***EHPs have to undergo continued professional development[42]:*** Linked to Bond's definition of a practitioner that relates to "the level of expertise a practitioner is required to attain to be able to offer a safe service to the clients, is the requirement of continuing professional development" (Bond, 2015, p.7). The HPCSA has set as a minimum a requirement that EHPs should accumulate 30 CPD points per year. The HPCSA assesses, accredits and monitors accredited service providers that offer CPD accredited programmes. While it would be ideal for the HPCSA to have a list of compulsory training programmes that are tailor-made for EHPs, that information is missing. The HPCSA Professional Board of EHPs leaves the development of such programmes to private service providers.

Linked to the CPD activities, the Professional Board of EHPs in South Africa has mainly identified seven key competence areas that it uses to examine competence of EHPs to practice environmental health who have not been actively practising environmental health for more than two years to see if they are still fit to practice (Health Professions Council of South Africa, 2015b). These are essential competencies that each EHP ought to have but not CPD awarding activities per se. They include for example: (i) Ability to know and apply legislation in the context of the scope of professions of environmental health and general enforcement of laws to promote compliance; (ii) Ability to govern by having knowledge of environmental health functions at different levels of government in South Africa; (iii) Having a sound knowledge of the national health systems' operation at various levels of governance, (iv) Having sound knowledge of the professional and ethical guidelines and their application in practice; (v) Embracing ethics in the interpretation of approaches relating to ethics as provided in the Constitution of the Republic of South Africa and in cases of professional misconduct; (vi) Having administration and facilitation skills so as to be able to manage field work and environmental administrative work and applicable policies; coupled with ability to work in multi-disciplinary settings, and (vii) Being open to receive and having the ability to give feedback as well as adopting a facilitator-educator approach in carrying out duties.

In sections 5.2 and 5.3 I have highlighted the fact that the Environmental Health Profession in South Africa is governed under the generic HPCSA guidelines which were designed for all health professions that are managed by the Health Professions Act, no. 56 of 1974. The EH

[42] The Professional Board of Environmental Health Practitioners uses the generic HPCSA CPD guidelines. However, it would have been better for the Board to have developed core trainings that each EHP should undergo rather than relying on the generic training designed by the service providers who apply for accreditation. Special training on environmental health practice would focus on the Scope of the Profession of Environmental Health and of course embrace other related components in the practice of EHPs. Such a gap leaves the responsibility of ensuring continued development to the employers' discretion. This factor is likely to result in discrepancies on the content, scope and level of continued training amongst EHPs throughout South Africa.

Profession has a Professional Board which is established in accordance with the provisions of the Health Professions Act, similar to the case with the other 11 professional boards listed in Figure 5.1. As much as the EH Profession operates with the generic requirements for other health professions in South Africa, having its own Professional Board has created a platform to address environmental health issues. The advantage of having its own professional board, has enabled the EH Profession to have HPCSA accredited training programmes that are offered in accredited institutions. It is mandatory to register all EHP trainees in the approved institutions thus affording the HPCSA EH Professional Board an opportunity to control the training of EHPs in South Africa. This measure should ideally prevent practising by anyone who has not duly followed the set requirements to be a recognised professional EHP.

The regulation of EH practice through having formal approved training for EHPs coupled with compulsory registration as students and ultimately as a practising EHP contributes to a better professional identity of EHPs. Moreover, the EH Profession has a defined published Scope of the Profession although the areas that are of concern in the Scope of the EH Profession are on its enforcement. For instance due to its broadness, the Scope of the Profession covers areas that have been encroached by other non-EHPs. There are no clear exclusive directives from the Professional Board of EHPs on who is not to practise in areas identified as part of the Scope of Profession of Environmental Health. In other words, there is no ring-fencing of the areas identified within the Scope of Profession of Environmental Health. Persons other than EHPs carry out these functions. Common examples include Waste Management Services. Waste Managers do not need to register as EHPs in order to practise. Hence these areas remain grey.

Further details are covered in sections 5.4 and 5.6 with respect to how the EHP community is involved in the practice of EH in South Africa, particularly in the creation of a sense of identity amongst EHPs as represented by the views of research participants.

5.4 EHPs' VIEWS REGARDING BELONGING TO A PROFESSIONAL BODY – THE HPCSA

The main purpose of this section is to present findings on how research participants felt about belonging to a statutory professional body, the HPCSA and their understanding of its role in relation to environmental health practice. In this regard, the research participants gave reasons depicted in Figure 5.4 on the next page, which is followed by a brief discussion that provides the context. Further insights are discussed in section 5.5.

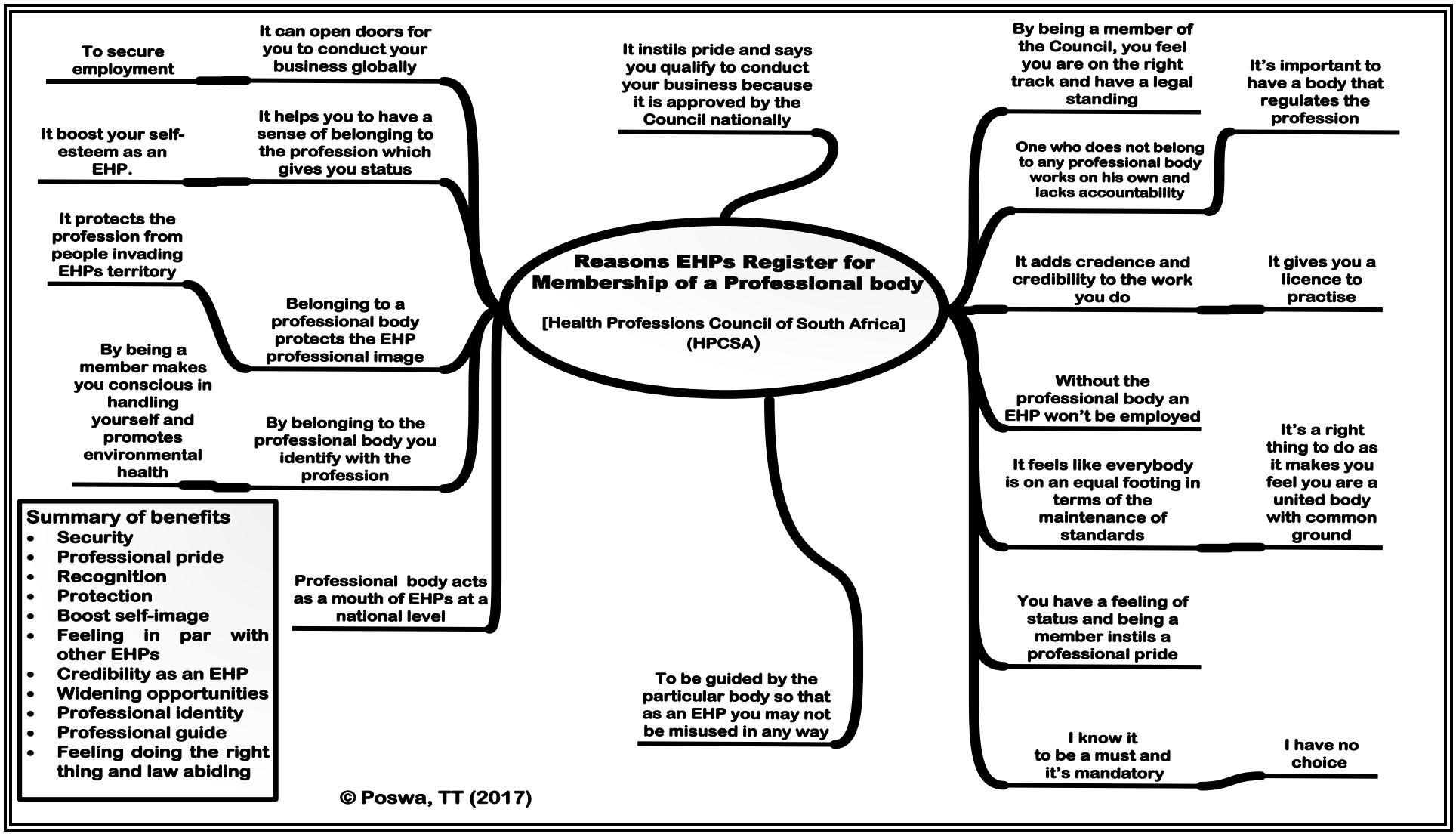


Figure 5.4: Statements given as reasons why EHPs retained their membership of the professional body, the Health Professions Council of South Africa (HPCSA)

The analysis of the results revealed that all 35 research participants were actively registered with the HPCSA to practise environmental health in South Africa as prescribed by the law. This finding was a sign that the practising EHPs met the requirement of the National Health Amendment Act no. 12 of 2013 which makes professional registration a prerequisite for enforcing the responsibilities of EHPs in South Africa.

Membership to the HPCSA as a statutory body is a statutory requirement and a prerequisite to practice. It is thus mandatory for EHPs to professional register and maintain such registration to meet both their employment and professional requirements. Such an act as previously pointed out in section 5.3.2 and elsewhere in this thesis, is what distinguish them as professionals in their discipline.

Three research participants for instance viewed belonging to the HPCSA as a prerequisite for securing employment:

> *"I belong to the professional body to secure my employment and to have a body on my side so that I may not be misused in any sort"* (CDEHP04). *"As much as I don't know what they are doing – but I think it's important because without them I won't be employed - because whatever posts that come out they need you to be registered with the HPCSA. So that's why we pay and registered"* (NDEHP02).

In addition to these two statements one other research participant made a related comment:

> *"I belong to the professional body because I was told that I need to be a member to be employed. I wish somebody could tell me what is their role and contribution to our profession"* (NDEHP04).

This particular statement over and above employment related reasons, also highlights the research participant's ignorance about the role of the HPCSA for EHPs. Belonging to the HPCSA is a prerequisite to practice. EHPs, therefore have no choice but to register to comply and maintain their membership as required by law. It also suggests that the HPCSA needs to increase awareness about the role it plays with respect to the environmental health practitioners' community.

5.5 EHPs' VIEWS ABOUT PROFESSIONAL IDENTITY AND THE ROLE OF THE HPCSA

This section briefly presents how EHPs on the ground, as found in my case study, felt about their professional identity and recognition, and their understanding of the role of the HPCSA in

EH in South Africa. Reference to the HPCSA here includes the Professional Board of EHPs unless otherwise specified since research participants did not distinguish between the different sectors of the HPCSA.

5.5.1 How EHPs Understood their Professional Identity

When asked what they understood to be their professional status, research participants made various statements as follows:

> *"An EHP has to be a person of a good standing and have a professional approach and be able to present himself in a dignified manner. Obviously that comes with having knowledge he has been trained in (*NDM01). *Most of all is not being biased towards one party or another where you use professional judgement"* (CDM05).

Based on the above statements, it appears that research participants regarded the training of EHPs as an important requirement for enabling EHPs to make professional judgements while carrying out their responsibilities in a manner that gains the trust of the public. Such training imparts relevant knowledge which is essential for eliminating bias and promoting professional behaviour as an EHP. This view is supported by Panza and Potthast's idea that professionals are to be "trusted by the society" as people who have the ability to act responsibly and account for their actions and the decisions they take (Panza and Potthast, 2010, pp.270-272).

Since a qualified EHP operate most of the time independently with no supervision, "being competent" is significant, as EHPs might otherwise put other people's lives in danger, as asserted by Jameton (2010, p.199). Research participants also made reference to being "a person of good standing". Being in good standing refers to having met all the requirements for membership of an organisation. This factor is an important element in an EHP's professional status.

One research participant was of the view that:

"*As registered professional EHPs, you ought to behave in a professional manner" (NDM01).*

The term 'professional manner', within the context of this section, refers to acting according to the expectations of the profession to which one belongs. This concept links professional status of EHPs to being registered as a professional and thus licenced to practise, and could be interpreted to mean that EHPs see themselves as professionals by virtue of having a valid professional registration. This finding also highlighted the fact that EHPs as professionals ought to act responsibly. As one participant reflected:

"The responsibilities of being an EHP and a public protector [gives you] a sense of duty, responsibility and accountability" (NDM02).

The above statements are of relevance to the HPCSA Guidelines for Good Practice in Healthcare Professions Booklet 1 which regards "having duty" as the responsibility of each practitioner to continually attempt to answer the questions of "what do I owe others" and "what do others owe me" in carrying out their duties. It also stresses that "professionals [are obliged to] provide services they are "qualified and licenced" to perform (Health Professions Council of South Africa, 2008a, p.4). Hence, it would seem as if the EHPs in the study saw themselves as having a duty to protect public health as central to their professional role and as part of meeting the requirements of their licence to practice as EHPs in the EH profession.

5.5.2 EHPs' Understanding of the Role of the EH Professional Body - the HPCSA

During the face-to-face interviews research participants were also asked to express how they felt about their professional body. I posed the following question to the participants:

"Most regulated professions are monitored by professional bodies and this is true of environmental health. I would like to know what you understand to be the role of the Health Professions Council of South Africa (HPCSA) in the Environmental Health profession?"

On the one hand the research participants' responses to this question conveyed the notion of an ideal HPCSA that would address their needs, while on the other hand they expressed concerns that they regarded as being shortcomings in engaging with the HPCSA on matters affecting the practice of environmental health.

5.5.2.1 Part 1: Statements expressing positive role of HPCSA

A total of twenty which translates to 57% of the total sample of research participants held views on what the role of the HPCSA should be. It is of interest that 60% of the twenty research participants were EHP managers and the remaining 40% comprised EHPs. It was observed that EHP managers' category of research participants articulated what they believed to be the ideal way of the functioning of the HPCSA.

Four research participants, of whom two were managers and the other two were EHPs, were of the view that the HPCSA protects the profession against encroachment by other professions and non-EHP individuals who seek to practice illegally. This theme was encapsulated in the following response:

"HPCSA protects the profession against encroachment by other professions. It also protects us as EHPs from practising if not registered and the community against EHPs from abusing their power" (SDM01).

This theme highlighted the protective role that EHPs expected from the HPCSA as members of the Environmental Health profession. In this regard, research participants' view of the HPCSA was in line with the role of HPCSA Professional Board of EHPs that is entrusted with the power to defend the environmental health profession against those who might for some reasons fail to recognise its role. Accordingly, it protects the integrity of the profession by ensuring that no EHP practices without being registered to do so. Moreover, the HPCSA is perceived as a body that protects the public from EHPs who might be abusing their powers and acting beyond their Scope of Practice of EHPs. The HPCSA is regarded as having a mandate of ensuring that environmental health practice is performed by correct people who are registered in the professional register of EHPs, thus, ensuring that every EHP is in good standing and has the right credentials.

Findings also revealed that understanding of the HPCSA is key to policy making, as reflected in the following statement:

"HPCSA provides policies that should be used by EHPs in general in order for us to conduct our duties in an appropriate manner. It affects the way that EHPs are trained and may influence policy making in the country" (NDEHP03).

This comment showed an understanding that the HPCSA should play an influential role in representing the interests of EHPs so as to promote their recognition and support across a wide spectrum in South Africa.

Another finding was that five research participants (translating to 14% of the total sample) were of the opinion that the HPCSA is instrumental in setting professional and ethical standards for EHPs and enforcing disciplinary measures. The following statements captured this viewpoint:

"The HPCSA as regulatory body, sets standards for professional behaviour and unprofessional behaviour. It guides how professionals should conduct themselves within the confines of the profession and also takes action when guidelines are not complied with. HPCSA is responsible for giving correction and penalty where people do not comply with professional guidelines (NDM02). *"HPCSA should ensure that anyone who falls outside the professional code of conduct of EH is challenged or disciplined. HPCSA should ensure that*

there should be uniform code of ethics and because of the nature of our work, it should be stricter than other professions" (SDM04).

The above statements highlighted the fact that research participants believed that the HPCSA is responsible for devising mechanisms that would help promote a high standard of professionalism amongst EHPs. They were of the view that the HPCSA should subscribe to acceptable environmental health professional standards and as a body should exercise stringent discipline of EHPs who deviate from the acceptable practice. Such discipline amongst EHPs could be a step towards promoting professionalism in practice and creating a strong sense of identity.

Research participants expected that discipline by the HPCSA should be combined with continual professional development of EHPs. To achieve this goal, they expected the HPCSA to assist towards ensuring the continual professional development of EHPs in order to remain abreast of new developments in environmental health practice. Thus, practice should be within the confines of the profession. Additionally, some research participants viewed the HPCSA as a regulatory body that formulates rules of conduct and the scope of the profession and deals with issues that could bring the profession into disrepute. In this regard, the HPCSA is responsible for guiding how EHPs should conduct themselves within the confines of the profession and comply with professional guidelines, and also conduct themselves professionally and carry out their work in a proper manner.

Generally, it appears from the highlights in this session that research participants regarded the HPCSA as a regulatory body that should play an active role in policy making and representing the needs of the environmental health profession. Accordingly, the HPCSA should be active in disciplining EHPs who are not towing the line. However, the discipline should be combined with ongoing education through continuing professional development.

5.5.2.2 Part 2: Statements expressing concerns on the role of the HPCSA

In contrast with the 57% of research participants who expressed positive views, a total fifteen (or 43%) of the sample made statements that showed their dissatisfaction with the HPCSA and questioned its effectiveness in fostering the profession of EH. Unlike the previous situation where 60% of EHP managers have positively commented about the HPCSA, in this case 73% (12 of the 15 research participants) were EHPs and 27% (4) were EHP managers. This

difference of opinion[43] could be interpreted as signifying that the EHPs as people on the ground were eager to see the HPCSA being active and engaging EHPs on issues they face at their workplaces.

The statements made suggest that the EHPs in the study had expectations that remain unfulfilled pertaining to the role the HPCSA plays in the environmental health professional practice. The views were centred on the following three issues: being unaware about what the HPCSA does for EHPs; being unable to separate the role of the HPCSA professional board and the professional association; as well as a concern regarding registration fees and lack of communication thereof.

Concern 1: Ignorance about the Role of the HPCSA

As pointed out in the previous paragraph, research participants expressed concern that some EHPs did not understand what the HPCSA was doing for the environmental health profession. They acknowledged being aware that HPCSA was a professional body that all EHPs needed to be registered with to practice environmental health. However, the exact role the HPCSA plays in handling EHPs affairs other than registration and expulsion for failure to pay annual professional fees, was unclear from the EHPs' perspective on the ground. It would seem that some EHPs needed clarity about the exact roles of the HPCSA in relation to the EH profession; hence they raised concerns that the HPCSA was, in their view, not available when required to act on matters affecting the practice of EHPs. One research participant made a broad comment that contrasted the ideal role with the reality on the ground, pointing to the fact that the two were not the same, for example:

> *"What I understand to be the role and what happens are two different things. I feel that HPCSA are not playing enough role and there is not enough information advocating for environmental health which they should be doing. I feel they are there, more as a body that we should be affiliated to and pay our annual fees to and only use them or approach them in rare occasion. Other than that, it's sad that they don't play enough big role. We had cases where we call on HPCSA, but there was no response at all"* (NDM04).

Other research participants echoed similar sentiments of concern about not knowing the role of the HPCSA in regard to their affairs as can be seen on the following statements:

[43] The difference of opinion happens to be a discovery which was not the main focus of this study. This study aimed at determining the awareness EHPs have of the role of the HPCSA towards addressing EH professional activities.

"Honestly, I don't know the role of the HPCSA and I'm not sure what it does for us as EHPs except for paying money every year and being expelled if you have not paid" (WDM01). *"The only thing I know is that, it is a body by which as an EHP, you need to be registered with, other than that, I don't understand clearly"* (NDEHP02). *"HPCSA should be looking after the profession but I'm not quite sure in what extent it is doing that"* (WDEHP01).

These responses highlight the importance of clarity of roles and communication of those roles to the affected parties. It would seem that even if the HPCSA might be working hard with the aim of serving EHPs, they are unlikely to appreciate the service, if they do not understand the role HPCSA plays in meeting their interests. Lacking understanding of the role played by the HPCSA could have serious implications in assuring that EHPs rely on it for their professional identity. It is therefore imperative that the HPCSA takes steps to determine what works and not just assume that everything is working well and that people are compliant, not realising that they are not pleased with the way things are done.

Concern 2: Serving both on the HPCSA Professional Board and the Professional Association

Research participants also raised a concern over the dual role of serving on the HPCSA Professional Board of EHPs, which is a statutory regulating board and the South African Institute of Environmental Health (SAIEH), which is a professional association. Linked to this concern was the notion that some members belong to both these two bodies that seem to be serving the same roles as far as they are concerned. This anomalous situation raised the question:

"How can a member serve dual roles by playing a prominent role in the Professional Board and simultaneously in the Professional Association?"

Research participants believed that belonging to the Professional Board, the HPCSA and simultaneously being an executive member of the Professional Association (SAIEH) is likely to cause a conflict of interest. This concern is comprehensively captured in the following paragraph as expressed by one of the research participants:

"Currently, some of us as EHPs, are very much confused because we are paying so much for HPCSA to take care of our professional growth, and to be aware of the trends and be guided. HPCSA should make sure that EHPs are always updated about developments in the profession – this is why they renew their subscriptions every year. HPCSA is supposed to take care of the continuous development of EHPs. Presently, there is a great confusion about the role of the HPCSA, compared to that of SAIEH. What I have seen so far is that there is

a conflict as to who sits on the HPCSA, and who sits on SAIEH? If they sit on both sides, is that not a conflict of interest? And what are their common interests? Are their interests common with me as an EHP? Who actually represents me as a professional? Whose interests are served? If HPCSA is no longer interested to take care of my continuous development, what are the agreements between these two bodies? I acknowledge that SAIEH talks my issues – the issues that are handled within SAIEH are much relevant to my profession and even to my daily life – I appreciate that. I just need to understand what is going on between these two and this dual membership – how far it will go? Who controls who? Who is the executor and who is the regulator?"(CDM03).

It could be deduced from this expression that clarity is needed on how one becomes a member and the role one plays in being a member of either a professional body or a professional association. The Professional Board as pointed out in section 5.2 is established through the provisions of the Health Professions Act no. 56 of 1974 with a mandate to regulate the affairs of the profession concerned. EHPs elected or appointed to serve on a professional body do so by own freewill[44]. In this regard, they have a choice to accept or refuse to sign nominations and appointment forms to serve on the Professional Board (Health Professions Council of South Africa, 2008e).

Contrary to a professional body whose role is to guide relevant profession and to protect the public, a professional association, for example the SAIEH, provides an alternative platform for voluntary professional association of EHPs in South Africa. It appears per the concern in this section that a confusion has been created on the ground which needs clarification of roles of members who are appointed to serve on the Professional Board – HPCSA [which is a statutory body] but still actively serve in the executive of the Professional Association – SAIEH [which is a voluntary body]. It appears that the confusion is related to how the member would separate the role of being a regulator when serving on the Professional Board and the advocacy role when he or she is a member of the Professional Association.

A professional association by its very nature has the primary interests of serving its members, unlike the statutory professional body whose scope of service is meant to cover the interests of the profession that affect all professional members within its control. The reality is that even with the ideals of having regulated processes of appointing members of the Professional Board,

[44] The HPCSA regulations governing the nominations and appointments of members of a professional board clearly articulate the processes to be followed in nominating, selecting and appointing candidates for a professional board. The transparency of the processes which involve the gazetting of names afford prospective candidates a choice to agree or disagree to serve as members.

simultaneously serving on both the HPCSA, the statutory professional body and the SAIEH as pointed out by the research participants appears to have sent confusing messages to some practising EHPs, particularly those who were not members of the SAIEH. They might have fears that members of the Professional Board are likely to have a bias towards the interests of their association.

The perceived conflict of interest is difficult to resolve in that as long as it exists, it has the potential to tarnish the image of the Professional Board and its integrity might be questionable to the EHPs who are not pleased with this kind of arrangement, hence raising it as a concern. It would therefore seem prudent for the HPCSA and SAIEH to clarify their modus operandi pertaining to dual role practice that allows members to concurrently serve on both the Professional Board of EHPs and the Professional Association, the SAIEH.

Concern 3: Paying Annual Fees and Lack of Communication

A total of fifteen (43%) of the sampled research participants raised the issue of the paying of annual professional fees by EHPs, which was of a great concern. Apparently, research participants questioned the payment because they felt that the HPCSA only contacts EHPs once a year when they are required to pay or are being reminded to pay. This situation made them associate the payment with the contact the HPCSA arranges to consult with EHPs and the public through roadshows. The concern is encapsulated in the following statement:

> *"I think the HPCSA basically needs money from us and I don't know the role they are playing. The money we pay as EHPs is too high. You come to hear about HPCSA only when you are expected to register. To me, they are not active throughout the year and nothing happens until the next registration. There is no communication or anything else"* (NDEHP01).

The above statement indicates unhappiness about the annual fees paid by the professionals. Apparently, participants needed to know why they pay such fees when they are not aware of the service the HPCSA provides for them. They seem to expect some communication and engagement with the HPCSA (which seems to be lacking) so as to be given reasons for the payment of fees. Research participants to some extent acknowledged the role of the HPCSA, but seemingly would prefer better engagement and exchange of information. The Professional Board of Environmental Health Practitioners has an annual newsletter intended to be distributed to all EHPs in both hard copies and electronic formats. Such a bulletin highlights important Environmental Health Practitioners professional related issues (Health Professions Council of South Africa, 2017). The bulletin is an important communication tool between the Professional

Board and EHPs. The distribution and communication of this newsletter, however still requires attention to better the engagement of EHPs and the Professional Board. Encouraging EHPs to submit articles and sharing their ideas could probably increase EHPs' value attachment to the bulletin.

The participants did not seem to question the legality of the fees, but rather the returns from the fee payments. The truth of the matter is that paying annual professional fees is inevitable given that Section 19 of the Health Professions Act, no. 56 of 1974 read with Section 62(1) prescribes the payment of professional fees by all professionally registered health practitioners in South Africa. Failure to pay leads to removal of the professional's name from the register, meaning that one loses the licence to practise as an independent practitioner (Republic of South Africa, 2007a). Section 61(2)(3) of this Act, further stipulates that if one fails or refuses to pay the prescribed annual fees, the HPCSA is entitled to recover the fees through a competent court and the affected person's name would be removed from the register within three months from the due date.

According to the HPCSA, the rationale for the fees, which seems to be unclear to the EHPs, is to cover the costs of running the professional boards and other administrative duties of the HPCSA (Health Professions Council of South Africa, 2015f).

5.6 PROFESSIONAL PRACTICE RELATED CHALLENGES FACED BY EHPs

EHPs are faced with a myriad of challenges in the course of carrying out their professional responsibilities. The practice of Environmental Health requires that EHPs need to comply with the professional rules governing their practice, amongst other requirements. The rendering of environmental health services involves having to observe the internal professional guidelines for conduct of EHPs within the environmental health profession while executing their mandates. EHPs are expected to act within the confines of their professional competence which simply means that they are to exercise the powers bestowed on them by the laws governing their practice. The HPCSA professional guidelines stipulate that EHPs are to only act in terms of the areas and functions on which they have been trained and educated. However, in practice EHPs grapple with trying to balance the forces arising from pressure outside the ambit of the environmental health profession. Common to these are politically inclined pressures and those from general community members who might not be aware of the scope of the Environmental Health profession per se and the limits imposed on the practice of EHPs. Ideally, within the profession, EHPs are expected to "hold each other accountable in promoting the enforcement

of the professional standards and acceptable norms" (Hicks and Stapleford, 2016, p.8). Moreover, EHPs are expected to put pressure on any EHP who deviates from the acceptable practice.

The mechanism of addressing some professional issues in the practice of environmental health tends to be unclearly defined, thus likely to confuse EHPs and sometimes frustrate them as they find no clear direction of actions to take. Therefore, while there might be some guidelines and requirements to uphold the provisions of the law, it is important to clearly outline and create awareness regarding the persons and structures to whom the EHPs are accountable and which actions they should undertake. To this end, Hicks and Stapleford suggest that it is significant to clearly define "the boundaries of accountability" so as to understand the limit of the practice of practitioners (Hicks and Stapleford, 2016, p.8).

In this section, I discuss a few examples of challenges that EHPs faced in the course of executing their professional activities outlined in the professional guidelines that have ethical implications in practice because the mechanism of their enforcement tends to be grey. I use the provisions in the HPCSA Ethical and Professional Rule Booklet 2 as a framework for the discussion of examples of issues such as performance of professional acts and the reporting of unprofessional conduct.

5.6.1 Performance of Professional Acts

HPCSA rule 21 stipulates that

"A practitioner shall perform only professional acts for which they are adequately educated, trained and sufficiently experienced".

This rule prohibits EHPs from carrying out tasks that are beyond their scope of practice and competence. EHPs face yet another professional and ethical challenge relating to situations where they are required to do work for which they are not competent, especially during investigation of complaints. One example is when EHPs are required to investigate and resolve a noise complaint which appears to be a health nuisance whereas in reality it is an engineering issue due to poor town planning.

The health issue is within the EHPs' scope of practice but the source of the problem requires an engineering solution. Such a situation presents EHPs with a difficulty in decision-making which is not only dependent on EHPs but is rather technical in nature. In other words, ordinarily, it is beyond the competence of an EHP's professional training. Therefore, should an EHP make

a wrong professional judgement, that decision would constitute a breach of professional guidelines and consequently be construed as unethical conduct. One such case is captured in the following example:

> *"In dealing with a complaint from residents involving a noise nuisance from a gym, I discovered that the matter is more related to town planning, and the licensing of the gym. The matter should have been addressed during the licensing phase and coming in at the late stage as an EHP, is a challenge. Early involvement of the EHPs is crucial"* (WDEHP01).

This example illustrates the complex situations that EHPs face in carrying out their professional work.

5.6.2 Reporting of Unprofessional Conduct

The HPCSA ethical and professional rule 25 requires the reporting of a suspected or an existing unprofessional or unethical conduct of a practitioner to the professional board to which the practitioner belongs. Research participants were asked how they felt about reporting misconduct of EHPs to the HPCSA professional board.

Responses showed that the majority (27 which translates to 77%) of the research participants totally supported the reporting as the right thing to do. However, eight (23%) while they supported reporting a misbehaving EHP, had reservations, pointing out that they feared that their colleagues might lose their jobs and that caution should be exercised, to first verify the validity of the complaint against an EHP.

The following are examples of statements from those who strongly felt that unprofessional conduct should be reported:

> *"Reporting EHPs who operate in an unprofessional manner is actually good to ensure that if you operate outside the scope of the profession and in an unprofessional manner, ideally you should be reported and there should be consequences for that"* (CDM02). *"I think is very correct and is right and acceptable because I think we all need to carry out our duties in a professional manner – so reporting is very important not only to EHPs but for the profession. This will bring us back on line and teach the other colleagues to carry their duties in a professional manner at all times"* (CDEP01).

The examples above highlight the fact that the reporting of unprofessional conduct is a good practice that protects the integrity of both individual EHPs and the environmental health profession as a whole. Notwithstanding the appropriateness of reporting unprofessional

conduct, some research participants cautioned that such reporting should be done with extreme care. One participant qualified the need for caution as follows:

> *"I think it is acceptable to report and I support it. But perhaps it needs to be controlled in term of how is to be reported, how trustworthy is the source, what actions does one take when have that report. Do you first verify it or take it as is?"* (SDM01).

This particular research participant raises an important point of verification of the authenticity of the case. Basically, this concern talks about the need to first determine the motives behind the reporting so as to prevent acting on unfounded cases. This procedure would require a clear process of reporting and vigilance on the part of the HPCSA to handle cases reported thus protecting whistle blowers and those who are courageous to stand against wrong doing and likewise discourage the wrongdoers.

Another statement that indicated reluctance to report unprofessional conduct sighted fear of the reported person losing his or her job:

> *"I think it is a scary one as people might lose their jobs when they are reported. Further, reporting might create an uncomfortable environment and tension amongst colleagues once a person knows that others are going to report the unprofessional behaviour. Personally, I would not report someone but rather sit with the person first and then resort to reporting if the person is not cooperating"* (WDEHP01).

The above statement raises issues regarding the importance of managing relationships amongst EHPs and creating a conducive environment for handling unprofessional conduct. It would appear that without a clear mechanism for reporting and assurance of protecting those who want to report, reporting unprofessional conduct is unlikely to take place. Moreover, it is important to have systems and educational programmes in place which are geared towards encouraging the value of reporting unprofessional conduct at the workplaces. The fears of reporting based on protecting other's livelihood whilst compromising the integrity of the environmental health profession, needs to be addressed.

Hence, in the light of the above ethical challenges, it could be seen that EHPs are confronted with a number of practical challenges that make it difficult to carry out their mandated responsibilities. The process of reporting misconduct at the workplace remains grey and as long as that is the case, reporting of unprofessional conduct is unlikely to take place. This scenario might lack peer accountability amongst EHPs which is essential for encouraging good professional conduct.

5.7 SUMMARY OF THE CHAPTER

This chapter dealt with the professionalism of EHPs. The Health Professions Act, no. 56 of 1974 provides for the establishment of a Professional Board of EHPs which governs all professional issues of EHPs in South Africa. This professional board forms part of the total 12 professional boards in the health professions' sector in South Africa. One of the key roles of the professional board is to assist in the development of EHPs' training curriculum, accreditation and monitoring of institutions offering environmental health programmes. All EHPs are required to register in the professional register for EHPs. This registration takes place first at the time of enrolling as a student EHPs and again at the time of registering as an independent EHP after having qualified with the National Diploma in Environmental Health and having performed mandatory community service training under the supervision of a qualified practising EHP.

EHPs are limited to only perform professional acts for which they have been trained and educated so as to restrict their practice to their areas of competence. The existing HPCSA professional guidelines are generic and apply to all health professionals in South Africa. It is somehow difficult to apply these guidelines to EHPs as they by design cater for doctor-patient relationships instead of the client-based relationships that apply to EHPs. The participants in the study highlighted the fact that EHPs would like to see the Professional Board of EHPs playing a leading role in addressing issues of EHPs, especially when they face problems and solicit assistance. Currently, a mechanism of addressing professional issues of EHPs is unclearly defined which is likely to frustrate EHPs when they experience challenges.

The next chapter addresses the ethical practice of EHPs.

CHAPTER SIX

ETHICAL PRACTICE OF ENVIRONMENTAL HEALTH IN SOUTH AFRICA

6.1 INTRODUCTION

This chapter presents the realities on ethical responsibilities of EHPs and builds on the previous chapters. Chapter One provided an overview of the study, Chapter Three is devoted to the normative discussion of the ideals, with Chapters Four and Five dealing with the realities of legal and professional responsibilities of EHPs.

As previously pointed out in Chapter One, legal responsibilities refer to prescripts set out in published law which require individuals to obey and failure to do so may subject them to a conviction in a Court of Law. Professional responsibilities on one hand, refer to rules either in the law governing a profession or rules of a profession that must be conformed to by the professionals or institutions in order to meet or satisfy the requirements of their profession. The legal and professional aspects overlap in practice as both lead to punitive measures for compliance failure. Generally, the legal aspects are pronounced in the law. While the professional aspects are handled by a responsible professional body. The implication of failure to comply with legal requirements is a conviction that may result in imprisonment or paying of a penalty fee or both by those affected. Conversely, breaking the professional requirements can result in a charge which may be a loss of professional recognition or accreditation status. The latter applies in the case of EHPs as discussed in Chapter Five.

Ethical responsibilities which are the focus of this chapter, are discussed first from the premise of ethical issues. An ethical issue is a situation that requires that EHPs make choices in carrying out their duties using ethical standards as the basis of their decisions (Braunack-Mayer, 2001, pp.99-100). Ethical problems arise when EHPs have to make difficult choices in choosing which action to take in conflicting situations where they need to balance their options between what is considered right and not right in terms of their professional rules or practices in their employment capacities. Such conflicting situations present dilemmas that cause EHPs to be pulled to two directions: one being choosing to abide by the rules and the other is choosing what they believe to be the best action in a given situation which might be in conflict with what is considered a desirable act. Thus, they find themselves in a troubling situation. The ethical problem also arises when EHPs face challenges of arriving at a decision because the situation requires the taking of a decision on the spot but they have to seek permission from a superior

who might not be available or who does not have the competence in the area concerned. This scenario is commonly referred to as a locus of authority problem.

One of the areas of interest in the ethical responsibilities is in knowing whether the practitioners value what they do and whether they do it out of their own free will or are doing it to please others or their employers? Hart has pointed out that when people have not internalized laws, they only comply to please others (Starr, 1984). The climate in the organisation impacts on how EHPs practise. The use of climate in organisation is used here to refer to "leadership styles, providing good working environment and opportunities for career path, active participation in decision-making and challenging jobs to employees" (Sethibe and Steyn, 2016, p.162). An organisation is likely to perform better when there are procedures and provision is made for creating an enabling working environment with clearly defined procedures and mechanisms for handling challenging tasks. However, reality often reveals the absence of clearly defined steps to follow thus causing ethical implications when employees are expected to take own decisions for which they are blamed as individuals without owning up by the organisation management. In such situations grey areas result where it is difficult for the practitioners to handle complicated issues as the rules do not provide clear guidelines on resolving provisions in the rules.

The implication of operating in grey area environments is that the uniformity of action is likely to be compromised. Added to this situation, is that shared values diminish or are non-existent; consequently people act on an individual basis as opposed to upholding a shared culture all of which aggravate "unethical contraventions" (De Cremer, 2014, p.3). It is on the basis of this state of affairs that some examples of grey areas in the practice of environmental health are highlighted on the understanding that ethical practice focuses on the rationale behind the actions. [Section 6.5.1 highlights grey areas identified in the case study]. For example, 'Are there any guidelines relating to handling issues of bribery in the practice of EHPs? If EHPs do accept the bribes[45], what course of action is to be taken and are EHPs aware of it? What to do when EHPs in the course of their duties merely give fines for the sake of doing the routine work but disregard the implications of their actions in handling the law abiding issues? Hence, in

[45] Where there are no guidelines pronouncing on accepting bribes, EHPs could draw from other relevant principles e.g. the HPCSA 'Guidelines on perverse incentives…' provide a comprehensive description of improper financial gain in Section 2.9 [which caters for accepting bribes]. Accordingly, practitioners act unprofessional when they "directly or indirectly receive money or any other form of compensation, payment, reward or benefit which is not legally due or which is given on the understanding…that the receipient will engage or refrain from engaging in certain behaviour that is illegal or contrary to ethical or professional rules". Health Professions Council of South Africa. 2016. Guidelines on Overservicing, Perverse Incentives and Related Matters: Booklet 11. Available: http://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/conduct_ethics/Booklet%2011%20.pdf [Accessed 27 October 2017].

ethics it becomes important for EHPs to be sensitive about the relationship they have with their clients and the reputation they need to maintain as professionals'.

Moreover, this chapter addresses ethical practice from an environmental health practitioner's perspective with specific focus on the South African environmental health sector. It seeks to find out what ethical guidelines are in place in the form of codes of ethics that guide ethical practice within the workplaces of EHPs. The chapter discusses how issues of ethics are understood and dealt with and the challenges experienced by EHPs in this regard.

6.2 FUNDAMENTALS OF ETHICAL PRACTICE

The normative context of legal, professional and ethical responsibilities of EHPs are presented in Chapter Three. The literature suggests that the application of ethics cuts across all disciplines and is relevant to almost all human activities. Hence, some works on ethics suggest that "doing ethics is everyone's business" (Cohen, 2012, p.12). However, as ethics tends to be a complex subject to handle and master due to its philosophical nature, it is important to consider ethics from the context of a practitioner. The following paragraphs provide some discourse on the fundamentals of ethical practice building on the normative content in Chapter Three in particular and Chapters Four and Five.

6.2.1 A Brief Description of the Meaning of Ethics

For the purpose of discussion in this chapter, I used a definition of ethics that states that:

"ethics is a reasoned or systematic approach to figuring out what is the right or wrong thing to do or position to stand for" (Jameton, 2010, p.196).

This definition of ethics emphasises that ethics questions the rationale of actions, thus suggesting that individuals should reflect on whether their actions are good or bad. Basically, ethics requires people to consider the impact of their actions. It presupposes that humans cannot "escape in their minds the need to make choices, and thinking about the rightness and wrongness of their actions" (Vaughn, 2013, pp.3-21). In this regard, Panza and Potthast assert that an ethics conversation concerns itself with the questioning of the way the "world ought to be or should be" (Panza and Potthast, 2010, p.10). Singer further warns in his Book on *"Practical Ethics"* that we should guard against reducing ethics to a mere "set of rules of prohibitions" and perpetuate self-interests without considering how our actions or interests help in realising the good of others". [He further explains that] "ethics focusses beyond the idea of serving an individual". So, whilst anyone can justify their beliefs and actions, they should know

that for a conduct to meet the ethical standard, it must surpass serving one's interest but embrace the interests of others" [what he called bigger audience] (Singer, 1993, p.10). Individual actions that are self-centred have the potential of leading to ethical controversies, which necessitate a search for ethical solutions especially where normal regulatory controls lack ability to provide for these situations. This notion supports the viewing of ethics as "*a reasoned or systematic approach"* as stated above. Another perspective of defining ethics is to consider it as standards, for instance Resnik has defined ethics in his writing on environmental health ethics, as "a set of standards or norms that are used to distinguish between right and wrong actions" (Resnik, 2012, p.38).

The notion of ethics originates from the Greek word *"ethos"* which means "customs or habits" (Mastin, 2008). The *"ethos"* according to the Oxford Advanced Learner's Dictionary refer to "moral ideas and attitudes that belong to a particular group or society" (Hornby, 2010, p.500). On the basis of this description, it would seem appropriate to expect a different "ethos" for each profession as determined by the purpose for which the group was founded. For example the environmental health profession should ideally have its own "ethos" that is different to those of the nursing profession. Likewise, we find different emphases and categories of ethics such as for example "philosophers see ethics from a morality view, sociologists focus on customs and behavioural issues, [whilst] health professionals value ethics from the perspective of meeting expectations of their professions and interacting with the community and clients" (Darr, 2007, p.4).

As this study on environmental health practice involves interacting with communities and clients and as a result falls within the health professionals' perspective of ethics. Environmental health being a diverse field cuts across a number of disciplines which necessitate consideration of various ethical standards of practice. In the next section, I present examples of practical considerations essential in taking ethical decisions.

6.2.2 Three Major Decision-making Considerations in Ethical Practice

There are three important issues that should be understood by anyone involved in ethical practice, particularly in the decision-making process. These include:

(1) First, knowing what constitutes an ethical issue,

(2) Second, knowing what an ethical dilemma is, and

(3) Third, understanding ethical distress and being able work around it.

First: Ethical issues: Connolly et al. define ethical issues as referring to aspects dealing with right and wrong, good and bad, virtue and vice, as well as rights and responsibilities" (Connolly et al., 2009, p.52). They are a manifestation of a problem in the workplace (Purtilo, 1999, p.66) and as such vary from situation to situation and different workplace environments. For instance, in the public health sector environmental health professionals experience different ethical issues in accordance with their responsibilities that involve interacting with communities and gathering information during implementation of intervention programmes.

Examples of ethical issues from the work of Rabinowitz (2015) as well as Swanepoel and De Beer (2011, pp.168-169) in community intervention projects which are applicable to EHPs, include but are not limited to (i) grappling with and handling "confidentiality and anonymity"; (ii) obtaining "informed consent to share information" and particularly "community consent" as it is sometimes difficult to reach consensus about those who must consent for others in situations that would compromise individual rights. (The same views were shared by Adler (2004, p.A988) who points out that obtaining "community consent" is hard when carrying out "research" in community settings) (iii) disclosure of information for example amongst members of the community who participated in a project and risks involved and (iv) conflict of interest. The challenge is that more often than not, practitioners are "not adequately prepared to recognise ethical issues, and thus are unable to resolve them" Darr (2007, p.35) and this study sought to identify EHPs' ability to handle ethical issues.

Second: Ethical dilemmas: In practice, practitioners encounter conflicting situations when carrying out their responsibilities that require them to choose to do a right thing which might subject others to harm or make them resort to doing a wrong thing for the sake of protecting those they serve. Such conflicting situations are referred to as ethical dilemmas (Keller, 2009, p.12). An ethical dilemma occurs in two ways:

Ethical dilemmas first arise when a condition occurs before the practitioner makes a decision, creating a conflicting situation that requires "choosing between two morally right things to do" (Purtilo, 1999, p.67)), but in each situation is likely to be blamed for failing to act or violating a moral standard. For instance, the practitioner might encounter a situation that requires taking of actions such as remaining upholding the standard of the profession by enforcing a rule, but by so doing creates a situation that violates the socio-economic rights of a citizen whose survival depends on the business and the practitioner's protection. Alternately, the practitioner could choose to relax the standards to accommodate the person in trouble, but by so doing perpetuate the problem and temporarily subject others to risks thus violating the

rules. In both situations, the actions taken would be morally right, but the practitioner is likely to be blamed for violating some rules or conditions (Beauchamp, 1982, pp.44-45, McConnell, 2014, p.2).

Hence, EHPs as professionals exercise their professional judgement in the course of their duties. Ethics is important as it employs moral judgements as explained above. EHPs are faced with tough decision-making situations that require them to choose between two competing duties, for example, immediately closing down a business for contravening rules and thus upholding the law while, conversely, depriving those who benefit from the business/ activity. Alternately, the practitioner could choose the lenient route and consider giving the business owner some time to solve the problem whilst the situation might still be causing discomfort to some sector of the population. An EHP is likely to be blamed in each situation.

Ethical dilemmas also occur when two essential opposing situations occur that cause the practitioners to "be pulled in two directions" (Darr, 2007, pp.3-4). While the practitioner might have the ability to do the tasks, it is impossible to act on both at the same time due to either different standards required or lack of capacity to handle the situation.

Third: Ethical distress/ challenges: Ethical distress is similar to ethical problems. It is a challenge a practitioner experiences while carrying out the work. This distress occurs when "decisions are taken to go ahead with a project", but situations arise that prevent the practitioners from carrying out their duties or do what they believe is appropriate action. This distress could be due to the lack of the resources or a regulatory control that might forbid the action. In drawing from various sources, research shows common ethical issues of different kinds in the environmental health field. In this regard, a study conducted in Michigan amongst public health professionals that included EHPs identified amongst others "making decisions on resource allocation and political interference in the health professionals' work" as examples of ethical challenges they faced (Baum et al., 2009, pp.370-371).

In some cases the authorities might be the obstacle (Canadian Nurses Association, 2003). Ethical distress could occur when a practitioner is required or forced to "enforce wrong rules" or practices that violate the practitioner's moral beliefs" (Darr, 2007, p.3). The practitioner in such cases suffers distress which according to the Canadian Nurses Association could contribute to "burnout or change of careers". Kälvemark et al. (2004, pp.1077-1078) cited "institutional constraints" which might be economic reasons as one of possible "barriers" to carrying out the desired work.

All three issues are contributors to the challenges of decision-making relating to ethical practice in environmental health being addressed in this study.

6.2.3 Examples of How Applying Ethical Judgements Impacts on Practitioners' Work

In this section, I used Connolly et al. (2009) to categorise EHP professionals into two groups to illustrate how in practice the choice of embracing or not embracing ethics impacts on the work they do. The choices the professionals make impact on ethical practice according to the following two categories.

The Group of Professionals that Embraces Ethics: - This group refers to professionals or practitioners that embrace ethics in their decision-making process. These professionals subject their actions to scrutiny as to whether they uphold the fundamental moral principles of ethics such as for instance those founded on "Socratic philosophy that demonstrates ethics in action" (Connolly et al., 2009). The professionals measure their actions against four moral standards to see if:

(1) *The actions need to be based on reasoning that is comprehensive*: The actions need to pass the test of being able to prevent harm and where harm is envisaged, steps need to be taken to identify and quantify it.

(2) *The actions need to be based on reasoning that is coherent*: Actions must aim at fulfilling a promise made to improve the quality of life.

(3) *The actions need to be based on reasoning that is consistent*: Actions need to be carried out in a consistent manner in relation to all those affected.

(4) A*ctions need to be based on reasoning that is verifiable*: The risk-benefit analysis of all actions needs to be done to make everyone aware as to how they will be affected.

Therefore actions that embrace ethics call upon the practitioners to seriously consider the impact of the actions of their choices and the practicality of the suggested solutions.

The Group of Professionals that Does Not Embrace Ethics: - This group consists of those professionals who decide not to take any action or choose to make no choices. Such professionals are classified as *"amoral".* Amoral people are not willing to factor "ethical concerns in their decisions" (Frame, 2008, p.13). By so doing, these professionals subject themselves to the following situations:

Firstly, by failing to apply moral principles in their actions, professionals, allow the prevailing cultural beliefs or other's beliefs to control the situation and thus render them

ineffective to exercise their personal freedom of exercising their own judgement. These professionals are likely to blame others for their wrongdoings and are likely to have poor interpersonal relationship with their colleagues (Purtilo, 1999).

Secondly, the professionals are likely to experience difficulty in arriving at a proper decision to solve a conflict especially where there are no codes of ethics or where existing codes or policies do not provide for a new situation that has emerged which has no precedence (Vaughn, 2013). In such situations moral reasoning that questions the actions is important.

Thirdly, professionals who are amoral are likely to be sceptical and tend to reject the value of moral beliefs and fall into the trap of subjectivism. This situation makes them resort to using their feelings as a guide for their actions being right or wrong with no measure to test their convictions. In such cases, the professional views ethics as a "personal opinion" and thus promotes the idea that people should be left to do what seems good in their own eyes as long as they believe that it is right regardless of how their actions affect others. In other words, they regard "ethics as a matter of opinion" (Panza and Potthast, 2010, p.20).

6.3 REGULATORY FRAMEWORK FOR ETHICAL PRACTICE OF ENVIRONMENTAL HEALTH IN SOUTH AFRICA

Discussion of the regulatory framework that provides ethical provisions applicable to EHPs in South Africa in this section is, for the purpose of this thesis, limited to those in the Constitution [Section 6.3.1], and the ethical effect of interventions provided in the National Health Act [6.3.2].

Ethical principles in particular assist professionals like EHPs to integrate in their day to day practice, the effect and importance of human rights over and above their basic training competences and legal mandates pronounced in laws. The regulatory component in the EHPs functions is one of examples that shows the interface of legislation with ethics in practice.

Figure 6.1 captures examples of primary legislation that illustrates the interface of legal, professional and ethical aspects of EHPs practice [the provision of some on the legislation not discussed in this section are integrated in various parts of the thesis, where applicable]. The Constitution contains Bill of Rights with basic values and principles that are key to influencing EHPs conduct to take extra precaution when interacting with people. To be specific, Section 195(1) sets out ethical values and principles that must be upheld by all public servants and organs of state. These values and principles prescribe amongst others, that public servants'

conduct should demonstrate: "the promotion and maintenance of a high standard of professional ethics, the promotion of efficient, economic and effective use of resources, the provision of services in an impartial, fair and equitable manner without bias, and accountability for public services".

Some details on the ethical provisions of the Constitution are discussed next under section 6.3.1.from the context of EHPs practice.

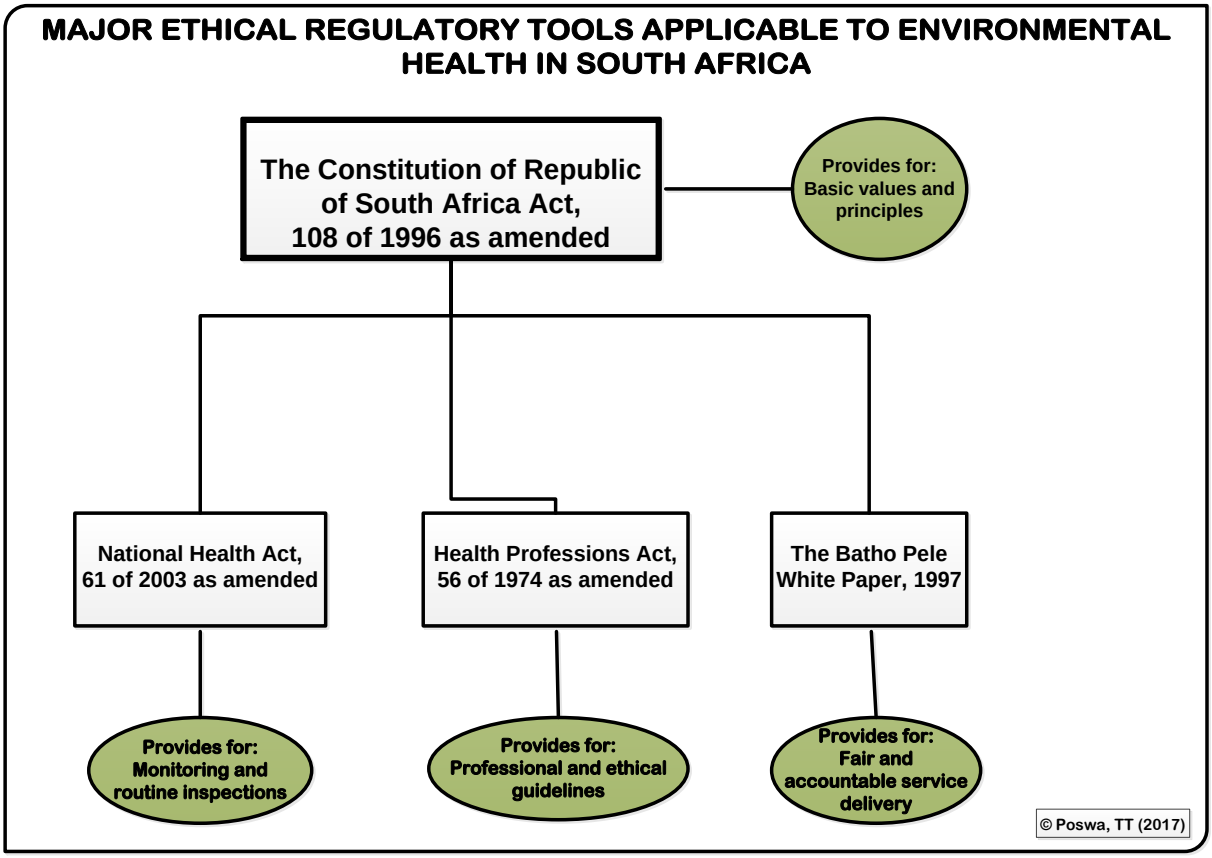


Figure 6.1 Major ethical regulatory guidelines applicable to environmental health practice in South Africa.

6.3.1 Ethical provisions in the Constitution of the Republic of South Africa Act, no. 108 of 1996

Whilst the Constitution contains a number of ethical provisions, discussion of the Bill of Rights in this section is limited to three examples such as the right to equality (Section 9), the right to human dignity (Section 10) and the right to privacy (Section 14).

Section 9(1) and (3) provides for *the right to equality* by stipulating that "everyone is equal before the law and has the right to equal protection and benefit of the law". In terms of this

provision, EHPs ought to avoid discrimination when engaging with clients particularly when enforcing the provisions of the law. This provision compels EHPs to "justify behaviour or action taken [to mitigate] against discrimination" (Van Der Reyden, 2010, p.27). Meeting this provision of the law is not without challenges given the South African history of a social and geographical divided society. The right to equality directs the taking of steps that promote access to services and the equal treating of all citizens regardless of their places of abode. The right to equality makes it mandatory for the state to develop, finance and monitor the implementation of strategies aimed to promote equality during service delivery, especially in areas for "the poor sector of society" (Berry et al., 2004, p.13). EHPs in this case, are likely to experience ethical decision-making conflicts in deciding the allocation of limited resources or striking a balance in addressing issues in low socio-economic status areas on one hand and affluent areas on the other. Therefore, EHPs ought to be prepared to handle conflicts caused by discriminatory practices and sowing of division by people who treat certain behaviours as acceptable even though they discriminate others on either religious or ethnic grounds. An example of gender discrimination challenge is shared in section 6.5.4.2. The right to equality imposes a legal responsibility upon the state to educate EHPs (as service delivery agents on the ground) about mechanisms of deciding what best suits the situation and how to balance meeting the needs of those in need and still remain honest to their personal and professional values.

Section 10 provides for *the right to human dignity* by prescribing that "everyone has inherent dignity and the right to have their dignity respected and protected". EHPs are in terms of this Bill of Right required to respect the rights of individuals to actively participate in making decisions and choices where conditions permits them to choose options of compliance that best suit their situations within the limits of the law. This Bill of Right commands the exercising of good manners by EHPs when handling a client that contravened a requirement of the law. EHPs ought to also provide the client with the right information to be able to make a right choice. This implicitly means that EHPs are morally obliged to educate clients with the purpose of assisting them to make informed choices and voluntarily comply knowing the consequences of their choices or actions. EHPs ought to avoid embarrassing their clients in the act of promoting compliance to protect their clients' human dignity. The application of this right requires mutual respect. Whilst EHPs as professionals are obliged to exercise precautions in carrying out their duties, clients (as members of society) are in their capacity as citizens, responsible to exercise reciprocity by showing respect of EHPs and commit to comply with the provisions of the law. It is however noted that in terms of Section 8 of the Constitution, more responsibility to apply the Bill of Rights is on the organs of state.

Roussouw and Vuuren (2015) asserts that where mutual respect and cooperation prevail, it is easier to arrive at a solution or solving a dispute. The principle of the right to human dignity can also be applied to how employers treat their employees (EHPs in this case). Accordingly, literature documents that organisations with records of treating their employees with respect "attract good people who want to be associated with reputable organisations" (Rossouw and van Vuuren, 2015, p.140). In turn, employees commit to promoting a good reputation of the organisation. The right to human dignity cuts across roles of individuals (EHPs) as servants of the state, citizens as beneficiaries of services and the state or employers as responsible agents to create supportive environments that enable the attainment of the right to human dignity.

Section 14, *the right to privacy* stipulates that "*everyone has the right to privacy, which includes the right not to have: their person or home searched; their property searched; their possessions seized; or the privacy of their communications infringed".* This right is fundamental to the practice of EHPs in two ways:

First is "*the right not to have: their person or home searched; their property searched; their possessions seized*". This right overlaps with and has a direct relation with the legal mandate of EHPs in the National Health Act which addresses the intervention role of EHPs. Accordingly, the National Health Act mandates EHPs in Section 82 to enter premises and conduct routine inspections which involves taking of samples of substances. Further, EHPs are in terms of Section 83 commanded to carry out environmental health investigations on premises where a condition or pollution exists that constitutes violation of the constitutional right to safe environment (Section 24 of the Constitution). Section 84 of the National Health Act also stipulates that EHPs ought to enter and search premises and examine activities and if need be, seize goods for further inspection.

EHPs accordingly, have a moral duty to carry out the provision of the law and also act in the interest of their clients by making sure that they do not infringe the right to privacy. This responsibility manifests interface of law and ethics as provided for in Section 86A of the National Health Amendment Act no. 12 of 2013. According to this Section, EHPs ought to respect the right of persons to human dignity and ensure that privacy of persons being investigated is protected. This right is an ethical requirement that EHPs ought to comply with, while enforcing the provisions of the law. The state (which in this case also includes the employer) has the obligation to provide EHPs with needed resources like having an interpreter (where applicable) when they conduct mandated inspections in terms Section 82 of the National Health Act. The state is also required to provide EHPs with the services of Police Officers when

they serve warrants in terms of Section 84 of the National Health Act. The right to privacy places a moral obligation upon the state to provide support and necessary resources and also imposes conditions on how EHPs ought to behave whilst executing their duties.

The second important provision of the right to privacy pertains to the *"right not to have their communications infringed".* The significance of this right is that it embraces "ethical principle of the respect to autonomy" [further discussed in this chapter under section 6.4.4] as well as EHPs "professional duty of confidentiality" (Van Der Reyden, 2010, p.28). In reiterating what was highlighted in Chapter One, under section 1.2.1.3 when addressing ethical responsibility of EHPs, the effectiveness of EHPs is to a large extent influenced by the trust clients have of them in solving their problems. EHPs ought to be trusted as being able to maintain confidentiality in their engagement with clients. Notwithstanding the fact that confidentiality of information can be breached under certain conditions, "in the course of professional duties" as provided for in the HPCSA ethical guidelines (Health Professions Council of South Africa, 2008a) and Section 14 of the National Health Act, no. 61 of 2003 (Republic of South Africa, 2004b): This provision should be read with the Promotion of Access Information Act, no. 20 of 2000 which provides the right of access to information held by the state and also allows for the restrictions of access to such information if required to protect a third party.

EHPs have a moral duty to protect the privacy of information. In emphasising this point Resnik has even suggested that "even if the breaching of confidentiality may not cause harm, it can still be unethical because it violates the person's right to disclosure of private information" (Resnik, 2010, p.2). Most probably, the more confident clients are about EHPs' ability to maintain confidentiality and assist in solving problems at hand, the more likely they would cooperate with them. This all points out to the importance of understanding the interface of ethics and law in environmental health practice.

6.3.2 Ethical provisions in the National Health Act, No. 61 of 2003 as amended by Act, no. 12 of 2013

The National Health Act could be described as a government framework for providing uniform healthcare system. It came about as a government response to meeting the Constitutional requirement that stipulates in Section 32(2) the enacting of a national legislation to promote access to information held by the state or any other person that is required to exercise or protect any rights. The National Health Act clarifies the role of the state to ensure that the Constitutional right in Section 27 that "everyone to has the right to access to healthcare

services…". Of particular importance to EHPs ethical practice is the role of taking steps to investigate and develop interventions to mitigate conditions that could have a detrimental effect to health and wellbeing of people and pollute the environment. In this regard, the National Health Amendment Act, no. 12 of 2013 provides for the compulsory registration of EHPs with the Health professions Council of South Africa. More discussion of this was given in Chapter Five.

Moreover, EHPs ought over and above their professional training, to be trained as Peace Officers, a role that enables them to exercise the powers of serving warrants or contravention notices which are bestowed to police officers in terms of the Criminal Procedures Act, 51 of 1977. EHPs ought to respect the dignity and privacy of persons they investigate and educate their clients and protect the confidentiality of information they gathered during inspections and investigations. EHPs are required in terms of the National Health Act to obtain consent for the giving of information. The National Health Act provides for the clarity of role of national, provincial health departments and municipalities which is vital to the operations of the EHPs. Employers ought to provide training to capacitate their human resources personnel to perform the duties assigned to them.

6.4 The Ethical Framework for Environmental Health Practice

This section is intended to present a descriptive overview of ethical theories and principles or approaches applicable to practice that would underpin an ethical framework. These theories and principles are suitable examples of important ethical considerations that EHPs could use in handling ethical issues. The theoretical framework for the ethical aspects has primarily been drawn from the different ethical theories to show how EHPs can learn ethics on the job and the considerations they should make when handling ethical issues. A summary of key ethical theories and principles is presented in Figure 6.2.

The value of ethical theories and linking them with ethical principles (approaches) is vital in assisting the development of practical guidelines for ethical practice in environmental health (Darr, 2007, p.25). Darr has also noted that the "principles [or ethical approaches] that are derived from the ethical theories are significant in suggesting a course of action". Moral theories and ethical theories are used interchangeably in this chapter. A moral theory refers to the "explanation of what makes an action right or what is understood to be making a person or something good" and is "useful in facilitating the making of moral judgements in solving conflicts"(Vaughn, 2013, p.67). Vaughn asserts that a moral theory is important in that "it

crystalises important insights and serves as a useful guiding tool for making judgements about cases and issues" (Vaughn, 2013, p.69). There are a number of ethical (moral) theories that have been developed to help in understanding how different people learn and practice ethics in their work. Some selective examples of such ethical theories and ethical principles are briefly described from the context of environmental health practice in sections 6.41 to 6.4.6 in no particular order of importance.

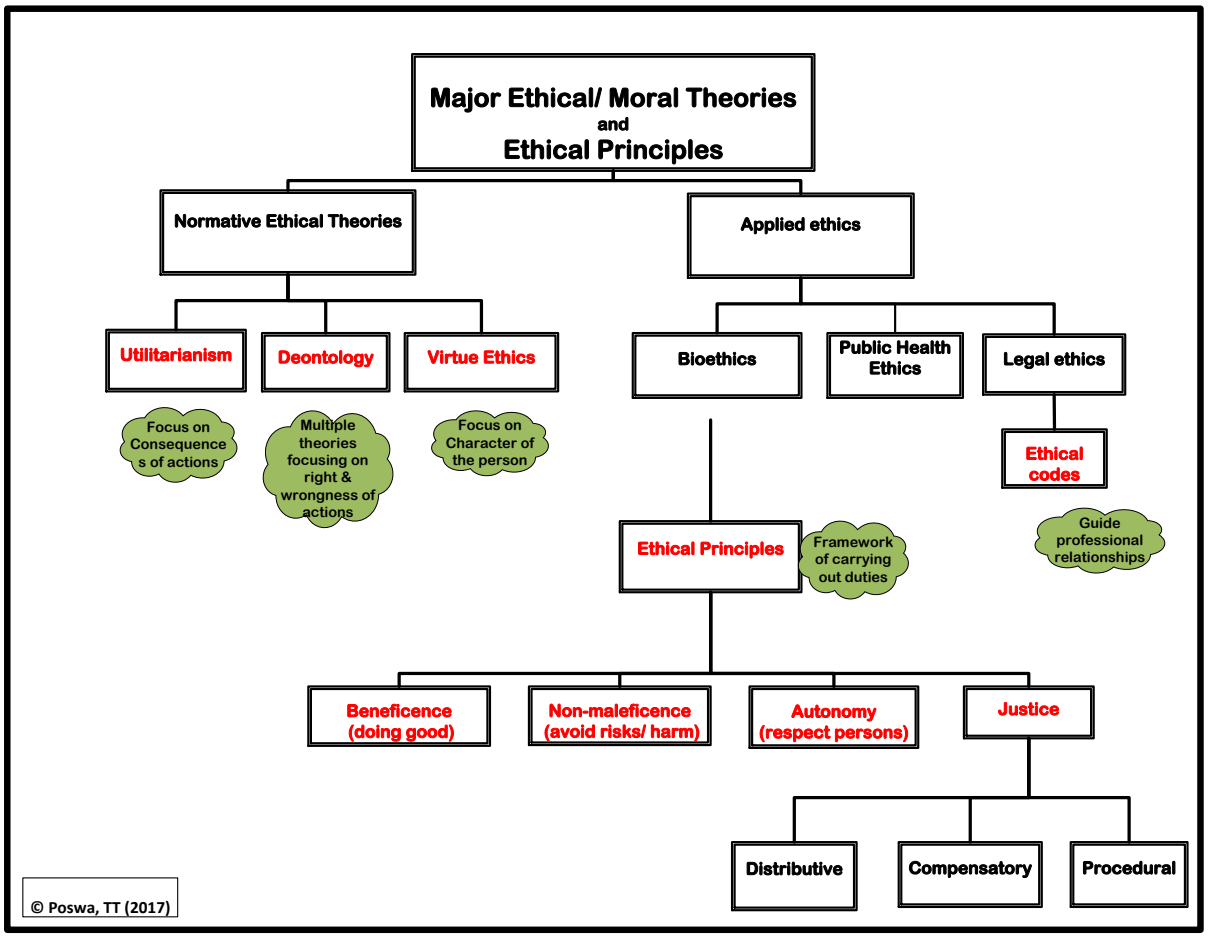


Figure 6.2*:* An illustration of key ethical theories and ethical principles that can be used in environmental health practice

6.4.1 Utilitarianism

Utilitarianism is commonly known as consequentialist theory. It is a theory that aims at appealing for increasing the balancing of good of everyone which may be "happiness, pleasure or wellbeing over [what could be construed as] evil" (Vaughn, 2013, p.7(Panza and Potthast, 2010, p.121, Vaughn, 2013, p.70). According to this theory, we are morally obligated to always act in a way that will result in the best overall consequences for the greatest number of people. The earliest proponent of this approach, Jeremy Bentham (1748-1873) proposes that the best

consequences are those that maximise pleasure over pain. His approach used quantitative means for measuring pleasure (Keller, 2009) while his supporter, John Stuart Mill (1806-1873) also considered the qualitative nature of the theory. Mill developed Bentham's theory, proposing that happiness is the good that should be promoted (Rachels and Rachels, 2012, p.101). Utilitarianism advocates that practitioners like EHPs should take measures to properly determine the impact of their actions. This theory talks of a *Principle of Utility* that insists on considering the wellbeing of everyone or the whole group and thus compels practitioners to carefully consider how the actions of their decisions will affect others associated with the issue at hand. Utility refers to usefulness and allows the balancing of risks over benefits. Such actions allow practitioners to make some trade-offs that might cause temporary discomfort to benefit others who are deemed to be more deserving of attention in a given situation.

Later theorists have proposed a variant of utilitarianism – namely the rule utilitarianism. According to this rule, it is not necessary to weigh up the consequences of each of our individual actions. Rather, we can establish basic rules of moral conduct by asking what sorts of rules or practices, consistently adhered to, would maximise the good in society (Rachels and Rachels, 2012, pp.119-120, Gampel, 2009, p.55). Rule utilitarianism lends itself to being employed when trying to establish the general moral responsibilities of members of a profession. Hence, it is an important theory to use when addressing professional guidelines that contain professional rules identified by the profession as fundamental to meet the profession's goals.

This theory is important to EHPs for balancing risks against benefits when making decisions involving conflicting situations whilst carrying out their duties. The theory is praised for "incorporating the principles of impartiality and promoting people's welfare" (Vaughn, 2013, p.94, Beauchamp, 1982, p.74). However, the criticism levelled against this theory is that it is hard to quantify goodness and that preferring one action over others tends to conflict with principles of justice.

6.4.2 Deontology

Deontological approaches are also known as non-consequentialist theories. It is not a single theory but refers to a number of different moral theories that reject the utilitarian claim that what is right is determined by the consequences of our actions. These theories emphasise moral rules or duties that we are obliged to carry out (such as telling the truth or not taking the belongings of others without their permission) (Keller, 2009, p.30). Some deontologists emphasise what they call the 'common morality' – a set of moral rules with which most people

around the world generally agree. Others base our moral duties on the notion of rights, claiming that our main moral obligation is to respect the human rights of others.

The most influential deontologist is the German Philosopher Immanuel Kant who proposes that we should always act in ways which treat others not just as means to our own ends, but also always as ends in themselves. Expressed another way, he claims that our actions should always ensure that other persons are treated with a basic respect (Resnik, 2012, p43). The effect of this theory is that the notions of human rights, the common morality and respect for persons are frequently used in the literature on professionalism and ethics in the healthcare professions. Kant emphasised that having a good will [acting on good intentions] is the primary reason that motivates people to act on their duties as opposed to merely being intelligent or having courage which does not stop them from engaging in wrongdoings. Kant also highlights the need to act out of duty or moral responsibility so as to promote the culture of respecting moral law. By so doing EHPs will show honesty in their dealings with clients and refrain from being driven by own inclinations or meeting own passions or desires (Darr, 2007, p.18, Keller, 2009, p.31).

The deontological theories are important for the development of a professional code of ethics for EHPs, which could have respect for clients as one of the principles governing EHPs' conduct.

6.4.3 Virtue Ethics

Virtue ethics offers an altogether different perspective on morality to that of the utilitarianism and deontology theories whose focus is on actions that ought to be done. This theory rather than focusing on our moral obligations, emphasises the character of moral agents. Virtue ethics is concerned with what kind of a person one ought to be and such focus is important in knowing how one ought to conduct one's self (Purtilo, 1999). It is a theory with an ancient history, grounded in the work of the Greek Philosopher, Aristotle. Much work in medical ethics draws on virtue theory, emphasising the importance for healthcare professionals to be virtuous persons, or persons of exceptional moral character and integrity (Vaughn, 2013). Some of the important character traits (habits) for health professionals like EHPs that need to be developed through practice over time include for example:

(1) *Honesty* is a trait denoted by telling the truth over deception when dealing with clients.
(2) *Courage*: The practitioner with this trait is assertive and bold and is thus able to confront those who commit unacceptable acts and stand for what he or she believes in.

(3) *Fairness*: This trait is important in that the practitioner treats everyone equally who deserve the same treatment. The practitioner tries by all means to remain impartial when providing services to clients.

(4) *Compassion:* A practitioner with this trait makes effort to understand the plight of the client and is sensitive to the needs of others and avoids taking advantage of those who are vulnerable.

(5) *Humility:* A humble practitioner always regards others as being better than he or she and is respectful.

From a moral perspective, virtue ethics has a practical value that stresses that "a morally good person with right desires is likely to understand what should be done to perform required acts" (Beauchamp, 1996, pp.24-56, Russell, 2013). Virtue ethics are important in environmental health practice and might work best when mentoring younger EHPs is done by more experienced practitioners.

6.4.4 Principlism

This approach to moral decision-making has proven to be very influential in healthcare ethics. The most well-known proponents of principlism are Beauchamp and Childress, who propose that by applying the four principles of respect for autonomy, non-maleficence, beneficence and justice [see Figure 6.2], we can always decide what the most moral course of action is in any situation (Darr, 2007, p.26). The applicability of these principles is supported by the successful uptake of this approach by healthcare ethicists in recent decades. In brief the principles include:

Principle of Non-Maleficence (Avoidance of Harm): This principle requires acting in the best interest and wellbeing of others. For this reason, EHPs would be able to avoid harming others, particularly the community. By virtue of the powers and authority EHPs have over the community, they need to avoid negligence. This statement needs to be understood from the context of the ideals of professionalism of EHPs discussed the "account of the ideal regarding the practice of EHPs" in Chapter Three, Section 3.2.2. In this respect, EHPs ideally possess professional attributes that are the basis by which "the society bestows on professionals the privilege of high level of autonomy, professional authority and job discretion with a right to make own judgments". This then compels EHPs [as stewards] to act professionally at all times. To this end, Drach-Zahavy and Somech (2006, p.1893) stress that "professionals need to acquire skills that are based on [their profession] technical and scientific information to ensure

their professionalism". In addition, due to the lack of competence of the general members of the public to judge the professional's performance, EHPs as professionals have a moral duty to commit themselves to honestly act within their profession competence and be persons with self-monitoring and self-discipline demeanour.

The principle of non-maleficence is an approach that primarily promotes the taking of steps to avoid subjecting others to unnecessary risk in the course of executing duties. The principle encourages the development of rules and operational plans that guide operations. It should however; be understood that, the presence of rules does not guarantee absence of harm, hence a need to take precautions. The non-maleficence principle promotes moral responsibility towards protecting the interest of others, in this case, to protect the community from harm. Moreover, this principle calls for the justification of the action, should there be an incident of risk. Risk should be avoided at all cost (Darr, 2007). Continually acting professionally is profound to justifying the special respect, power and autonomy the society grant to EHP professionals in recognition of their expert knowledge in their areas of practice. Based on the likelihood that EHPs might abuse their autonomy, [in the spirit of *principle of non-maleficence,* codes of ethics are important to provide professional guidance to encourage "accountability to clients and the general public" (Kass, 2012, pp.35-36).

Principle of Beneficence (Prevent Harm): This principle promotes doing good by taking steps to refrain from actions that cause aggression. In expanding this principle, Beauchamp and Childress in (Darr, 2007) explain that beneficence encourages the balancing of benefits and harms. Therefore, EHPs by applying this principle are expected to act in a way that will help or contribute to the improvement of the health and wellbeing of those they serve. The principle calls for the balancing of benefits against risks. The benefits should outweigh the risks, otherwise it would not be in the best interest of the community or those affected if the opposite happens. This difficulty is likely to be encountered in decision-making, especially when resources are limited or when there are competing issues. The challenge with this principle comes when it is considered from a utility perspective [see 6.4.1 utilitarianism], where the trade-offs for sacrificing one's wellbeing are allowed for the greater good thus necessitating the violation of, for instance, confidentiality required to protect a third party. The effect in the case of environmental health, is allowing some communities to suffer a temporary discomfort while the ultimate solution is being sought.

Principle of Autonomy (Respect for Autonomy): This principle requires that the affected parties need to have a say in issues that affect their wellbeing, thereby empowering those

affected to make informed consent when their welfare is affected. The application of this principle represents a challenge to EHPs as professionals tasked with rendering community services. This principle promotes the providing of information by those responsible about issues like potential risks, benefits and burdens to enable informed choices to be made (Connolly et al., 2009, pp54-56).

Justice (Bringing about Positive Good): The principle of justice is concerned with the ensuring of equal treatment or avoiding discrimination. This principle encourages people to be given what is rightfully due to them and to be treated equally, fairly and with respect, irrespective of their origin or status. The application of this principle often causes controversy due to the different understanding people have on issues such as rights, benefits as well as other related issues (Connolly et al., 2009, pp.54-56). It is an important principle for decision-making pertaining to allocating resources. Rawls in (Darr, 2007, p.29) defines the principle of justice as fairness, implying "that persons get what is due to them". Justice can be divided into the following three types:

Distributive justice: This principle refers to a situation where more than one group competes for the same resources and each group believes that it is deserving of priority allocation. The application of this principle requires equitable distribution, meaning that the amount should be distributed in a manner that varies according to different levels of need or merit in a given situation (Purtilo, 1999, p.59). Such a method is a source of problems which could be minimised by having a clear concise system and being understood by all parties involved. Therefore, EHPs need to embark on educating stakeholders and be transparent in relation to their clients.

Compensatory justice: This principle is about compensations for the wrongs done, which is important when it comes to injuries and displacement of communities. However, this aspect is beyond the scope of EHPs but is an institutional responsibility.

Procedural justice: This refers to the application of processes that ensures impartiality as a basis of fair treatment. Policies need to be in place to provide guidance. The best EHPs could do, is to be virtuous and apply available policy guidelines. The value of National norms and standards covered in chapter four under legal responsibilities is important in this case to guide EHPs' work.

6.4.5 The Social Contract Approach

In a great deal of the literature on professionalism in healthcare, there is an appeal to the idea of a social contract between healthcare professionals and society. This notion is often used to

explain why it is right that Healthcare Professionals are often held to a higher set of ethical standards than those expected of the general public. It is also often the basis upon which moral obligations specific to individual professions are identified and justified (Cruess et al., 2004, pp.74-76).

Ethics of virtues, which focuses on the personal attributes of a person and questions action in terms of one's character, and ethics of rules which are about professional standards, are particularly important.

6.4.6 Public Health Ethics

Public health ethics is a component of applied ethics concerned with application of ethical principles to intervention strategies designed for promoting the wellbeing of the general population. It focuses more on "practice than on theory" (Childress et al., 2002, p.170). Its relevance to EHPs pertains to intervention policy guidelines which promote the embracing of public accountability and transparency values for "improving the health of the population to prevent rather than treat sickness and prioritises the whole population rather than the individual" (Nuffield Council on Bioethics, 2007, p.7). In implementing these policies, public health ethics help professionals deal with "tensions" between individual right-based and public interests-based approaches. For example, policymakers are obliged to justify for policies which cannot completely avoid limiting individual rights. In this regard, justification is required for policies requiring "confinement [quarantine] of individuals and restricting movement during outbreaks of diseases", need to embed education of the public to inform and advise those affected about "the level of risk and [inevitable actions causing] loss of liberty" (Bayer and Fairchild, 2004, p.483).

Intervention programmes should aim at (i) clearly explaining the 'ultimate goal of reducing risk and change behaviour" (Kass, 2001, p.1777); and (ii) appealing for their understanding and cooperation, that "all systems and international human rights, permit government to infringe on personal liberty to prevent a significant risk to the public" (Bayer and Fairchild, 2004, p.489). When applying these to EHPs, awareness is needed to caution them about the likelihood of knowingly or unknowingly using the education programmes to "manipulate or coerce" people to conform, instead of informing them to make informed choices" (Cole, 1995, pp.79-83). As a result, "greater awareness through ethics education [to professional and general ethics knowledge] is deemed essential for both professionals and the broader public" (Callahan and Jennings, 2002, p.174). Accordingly, the ideal action would be to integrate "the ethics into the

accredited curriculum and continuing professional education" [for practising professionals. So, as to broaden understanding of ethics and deepen the culture of ethical practice within the workplace of EHPs. Public ethics has an important contribution to environmental health by providing ethical framework for the code of ethics. Public health code of ethics serves as a basic guide for "handling scandals" in the field of environmental health as well as providing the profession with a "moral compass that defines the ideals" to which the profession aspires and which professionals need to uphold (Callahan and Jennings, 2002, p.174).

6.5 EMPIRICAL VIEWS ON ETHICAL PRACTICE OF ENVIRONMENTAL HEALTH

Context: The presentation of ethical practice in this section and the remainder of this chapter is viewed from the practitioner's perspective. The relationship between professional, legal and ethical responsibilities is best understood when we consider the context of their application. Accordingly, while the three aspects are interconnected in practice, a disconnection between the three also naturally occurs in practice, resulting in imbalances marked by tendencies to pay more attention to one over the other.

The approach in this section is based on data collected in the case study area as a way of determining how ethical practice took place within the environmental health sector. The focus during data collection was on exploring the understanding EHPs had about ethics as it applies in environmental health. The inquiry was intended to determine what sort of guidelines EHPs used to guide their ethical practice as a way of enhancing professionalism in environmental health. Attempts were made to explore the existence of codes of ethics of environmental health, the methods used in assisting EHPs' decision-making processes on ethical issues and the basis of EHPs' understanding of ethics. This analysis was conducted on the understanding that as pointed out in Chapter Five, EHPs in South Africa relied on the generic professional guidelines with no specific codes of their own. Another important factor was to determine the relationship between EHPs and Management which I deemed important in ethical practice, particularly in ensuring the smooth delivery of environmental health services. Linked to this aspect was the exploration of how EHPs interacted with the communities they served given that their mandate as pointed out in Chapter Four requires EHPs to investigate public environmental health complaints. Such investigations required engagement with communities and the requesting of personal information which touches on ethical issues such as confidentiality and respect for human dignity. The intervention nature of environmental health policy framework has been dealt with in detail under the Public Health Ethics, section 6.4.6.

The ethical responsibilities of EHPs is a matter that requires motivating people to behave in ways that promote good conduct. It was of interest to me to find out how EHPs were prepared and supported to behave ethically and embrace ethics in carrying out their work. Figure 6.2 summarises some of key sources that constitute the Environmental Health Ethical Regulatory Framework in South Africa.

The empirical section in this chapter begins with highlighting five grey areas and ends with presenting ethical challenges EHPs faced in their workplaces as well as the importance of ethical practice infrastructure and support.

6.5.1 Grey Area Challenges in the Routine Environmental Health Inspections and Handling of Complaints

Objective three of the study addressed the challenges faced by EHPs while fulfilling their environmental health practice responsibilities. The responsibilities of EHPs is centred on routine inspections and handling public complaints. These responsibilities form the core of the practice of environmental health and the municipalities are mandated to provide the necessary resources. The following are grey areas that EHPs face as they sometimes find it hard to resolve because there are no clearly defined mechanisms in place.

6.5.1.1 Handling of business licensing related environmental health challenges

Handling environmental health issues in business licensing requires commitment and a clear understanding of the rules applicable to the case in question. It also requires the full cooperation of business owners so as to promote compliance. However, in practice the results from the study showed that EHPs experienced problems that involved cases where companies did not cooperate. To mention but a few examples - some companies submitted incorrectly completed applications with required important information missing, which made it difficult to locate premises for business licensing. Ownership sometimes differs from the one written on the application. Some companies did not have any idea what was required of them and some did not even see the importance of licensing until the EHPs informed them of the fines involved. It is only then that they began to treat it as a matter of urgency and importance. In some instances, consultants for companies delayed supplying the necessary information for finalising applications within the stipulated time frames. Consequently, this delay affected meeting the turnaround time and impacted negatively on the whole activity plan of the EHPs as more time had to be spent handling one case at the expense of others.

The ethical implication is that there is no system to balance addressing issues where companies submit wrong information and EHPs are expected to process applications within the set turnaround time. EHPs have not been given mechanisms to handle problems created by the clients although they are expected to meet the requirements. This problem is likely to increase the burden on the part of EHPs as they strive to account for their work to their superiors and similarly respond to the pressure from clients who expect outcomes of their applications. In this regard, some authors suggest that the relationships which have an impact on performance of practitioners need to be addressed through ‘’improving organisational culture” (Scammon et al., 2014, pp.219-220), coupled with providing mechanisms for “dealing with challenging jobs” (Sethibe and Steyn, 2016, p.162).

This situation necessitates education of the business community on the requirements of licensing and the importance of cooperation for their mutual benefit as well as the municipality officials. Moreover, a good understanding between management and the EHPs could improve the performance given that municipalities have limited environmental health resources which might be strained by backlogs resulting from the long time it takes to process business applications.

6.5.1.2 Handling of uncooperative client challenges

In the Central Business District (CBD) research participants reported the presence of a high number of business owners, some of whom were foreign nationals whom they described as extremely aggressive, non-compliant and unwilling to accept anything EHPs told them about regulations and what was expected of them. The situation was complicated by instances where some business owners falsified their identities and pretended to be somebody else during the EHP visit to their business premises, resulting in the EHP being forced to leave without getting the required information. There were instances where EHPs were obstructed from entering premises to conduct their duties. Some uncooperative individuals made statements that their bosses were not around, and had given instructions that they should not allow anyone to come in when they (the bosses) were not present. Coupled with these obstacles, were cases where research participants mentioned that business owners made excuses that revolved around crime. In this regard, the business owners refused entry of EHPs to the business premises on account

of high levels of crime. This refusal happened even in cases where EHPs carried and produced their identity cards as required by law[46].

The above situation presents a great concern and is a matter that requires a solution. It becomes even more urgent given that there is an increasing number of instances where bogus EHPs committed crimes and tainted the image of EHPs and caused mistrust by the public. To this end, one can mention the examples of cases reported by the HPCSA Professional Board of EHPs and in the media via the Sowetan Newspaper (Sifile, 2016, p.2, Chaka, 2014, p.7). Currently there is no clear mechanism to curtail these unprofessional practices. Thus EHPs have to operate within environments where their reputation is challenged.

Results have also shown that EHPs, particularly in the townships and in the rural areas, often experienced challenges involving business owners who claimed to have no understanding of business requirements and legislation with which EHPs required them to comply. These business people often made promises that they did not keep. Added to this problem, was the fact that the by-laws had very low fines and thus made it difficult to prosecute non-complying offenders. Moreover, EHPs experienced problems in handling cases of businesses in the rural areas that were recorded on the municipal database.

For these reasons, the mechanism for carrying out routine environmental health inspections and handling complaints needs to be harmonised and reviewed in the light of the challenges experienced by EHPs. In particular, management needs to devise strategies to assist EHPs with handling complicated issues involving business licensing to eliminate errors and expedite the process. In this way, both the relationship between EHPs and the business communities and EHPs' reputation of being efficient would improve. More details are shared on this matter in Chapter Eight section 8.4.2.

6.5.1.3 Unequal attention given to special work compared to routine inspections

Research participants pointed out that due to the different make-up of the municipal operational areas in the metropolitan municipality, in the CBD area EHPs were often required to pay more attention to handling complaint-based work compared to routine-based work. The

[46] As previously pointed out in Chapter Four sections 4.3.2 and 4.3.3, the National Health Act, no. 61 of 2003 as amended by National Health Amendment Act no. 12 of 2013 and the FCD Act, no.54 of 1972 as amended, provide for the appointment of EHPs as health officers or health inspectors in the different spheres of government, namely: National, and Provincial Departments of Health or at the municipality level. Such appointment involves the issuing of certificates that authenticate EHPs as duly appointed. EHPs ought to have the certificate (identity cards) in their possession to identify themselves when conducting their official responsibilities.

CBD is densely populated and more congested thus making it hard to meet the set turnaround times. This state of affairs makes it difficult to comply with the stipulated minimum inspection rates for the different categories of premises[47]. Research participants mentioned that some EHPs find it difficult to cope with routine inspections as they are faced with high public complaint work [which they referred to as demand work] over and above their routine responsibilities that require carrying out follow-up inspections. Failure to attain the minimum inspection rate is caused by the fact that some demand work takes longer to resolve. If for instance the task of scrutinising a building plan requires EHPs to be in office for a number of days, in the process they are obliged to reduce their inspection targets.

It was apparent from this situation that the working arrangement was such that EHP could not merely put aside the demand work and carry on with their routine work because they had to meet their turnaround times. Research respondents mentioned that for EHPs the practice within the municipality requires that they only have 10 days to respond to a building plan and 14 days to finalize a license. This period is three days more than the minimum seven days responding time suggested in the National Environmental Health Norms and Standards (Republic of South Africa, 2015a, p.15).

EHPs needed to account if they failed to either respond to complaints or carry out the routine environmental health inspections. This requirement has ethical implications as it would appear that EHPs found themselves pulled in different directions in trying to balance the demands between these essential services. One was the demand work in accordance with the municipal rules. The other was carrying out routine inspections of premises as per the National Health Act. The challenge was that they could not do them both at the same time and they were blamed for failure to fulfil any of these responsibilities. The public members who did not understand what EHPs were experiencing, put pressure on EHPs and raised concerns that they were not doing their work, which distressed EHPs as they found themselves caught in the middle. A mechanism to harmonise the relationship between handling routine inspections and attending to public complaints is therefore necessary. Leaving this problem to EHPs to decide is likely to

[47] The municipality has minimum frequency of inspection times based on the risk profile of different residential, business and public premises using the framework suggested on p.15 of the National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners (2015). However, difficulties centre around the magnitude of work of EHPs, particularly the investigation of consumer complaints which ought to be acknowledged in 24 hours and investigated in 48 hours with feedback given to complainants within 7 days of lodging the complaints. Priority ought to be given to disease outbreaks where there are chances of high risks to vulnerable groups like children, elderly people or the disadvantage consumers.

create more delivery-related problems, blame and finger pointing for failure of EHPs to meet their mandated duties.

6.5.1.4 Resource constraints

Findings showed that EHPs experienced various forms of resource constraints which impacted negatively on the delivery of environmental health services. Examples include the following:

Lack of administrative personnel support and specialist EHPs: Research participants reported a lack of resources of different kinds, for example, shortage of personnel, particularly dedicated support personnel like administrative staff or clerks. As a result EHPs went out for inspections and returned to their offices to do their own administration that involved writing many reports and follow-ups on people who lodged complaints or any other related environmental health activity. The magnitude of the work sometimes was insurmountable and affected the meeting of deadlines. The problem was exacerbated by the fact that members of the public were expected to lodge complaints during the day, which coincided with the same time EHPs were carrying out field work. Hence, in environmental health offices without anyone to receive complaints or answer calls, the environmental health service delivery was hampered.

The research participants also reported instances where the specialist sections[48] lacked personnel with experience or expert knowledge in areas like air pollution control due to the fact that not all EHPs were competent to deal with these special areas. Consequently, limited environmental health resources were viewed by some EHPs as having contributed to a workplace environment marked by resistance, as well as complaining and demotivated environmental health personnel. It appears that thin resources on the ground coupled with the responsibility of dealing with high density populated areas had put pressure on EHPs and strained their coping levels, particularly in situations where EHPs had to share the workload of an EHP who took a leave of absence. Therefore alternative working models ought to be devised and resources provided to address the identified gap.

Proximity of EHPs' offices to operational areas: The establishment of a metropolitan municipality merged the independent municipalities across the eThekwini metropolitan municipality. Such municipalities had both urban and rural area settings. In the rural areas,

[48] The municipality Health Department has three specialist divisions headed by deputy heads who report to the Head of Department as per Figure 2.4. The three specialties include clinical services (non-environmental health), communicable diseases and pollution control services. The Environmental Health Unit operational specialties include Food Safety section, Air Pollution Control section and Communicable Diseases Control section.

EHPs' offices are located far from the operational areas and as a result they are required to travel long distances between offices and their working areas. Yet, the workload model does not consider these differences and requires EHPs to have the same outputs, regardless of areas of operation. The location of offices far from the community being served does not only affect the EHPs but the community in terms of access to environmental health offices for service assistance. In this regard, affected members of communities are to travel to the distant located EHP offices to lodge complaints or seek assistance.

Therefore, individuals who cannot afford travelling costs were in some way denied access to environmental health service facilities for assistance. This condition is in a way in conflict with the "access principle" of the Batho Pele White Paper on the Transformation of Public Service[49] which requires that communities be able to access help for services. Accordingly, the municipality as a public service provider has a responsibility to ensure that "it optimises access of its services by the citizens" taking into consideration the affordability of services to citizens, which is linked to socio-economic status (Republic of South Africa, 1997, p.10). Hence, by placing environmental health offices far away from where people live created a situation where only a privileged few could access them and the poor were denied services, thus contributing to inequalities. The Batho Pele White Paper on the Transformation of Public Service, has identified distance as an important barrier to accessing services. It also suggested the need for "development of strategies to prevent disadvantaging communities in remote areas" (Republic of South Africa, 1997, p.18). In addition, the municipality as a service provider needs to devise strategies that would address the diverse nature of its geographical setting and eliminate practices that have a potential to widen "disparities amongst the communities", a view supported by (Thomas, 2014, p.7499).

I view this situation as important given that, it could create a culture of ignoring the communities' needs within environmental health services (Brinks, 2008). If this condition is left unattended, the relationship between EHPs and the communities could be strained.

6.5.1.5 Addressing the safety of EHPS at remote workplaces

Research participants highlighted two safety challenges that negatively impacted on their duties. The first challenge manifested itself when EHPs were hindered from carrying out their routine inspections and investigating complaints in for instance premises in the highly affluent

[49] More details of the Batho Pele Principles are provided in Chapter Four section 4.5.9.2 The Batho Pele principles are important guidelines for improving service delivery and working relationships between communities, municipalities and practitioners (EHPs).

residential areas where EHPs could not gain access on grounds of strict security controls. EHPs were unable to investigate and resolve complaints arising from highly secured premises as they could not gain entry. Consequently, complaints remain unresolved and caused inconvenience as well as wasting of the limited environmental health resources as EHPs had to repeatedly visit without success.

The second safety challenge is related to the lack of safety of EHPs in remote areas. In this regard, research participants reported that occasionally it was not safe for EHPs to go to some areas without being escorted by Metropolitan Municipal police. However, the availability of the police was not always feasible at the time EHPs needed such assistance, which meant that they had to either wait or reschedule even in instances where the issue required urgent attention. Women EHPs in particular, were more vulnerable and occasionally felt insecure in carrying out inspections in area that had been identified as dangerous due to incidents of crime against women.

The other safety issues that were highlighted related to reported incidents of hijacking of vehicles which put the lives of EHPs at risk. As a result, EHPs had to go out in teams. Incidents like these could be interpreted as a sign of communities with a weak social fabric and poor social values as violence shows no value for life and human dignity. It would be ideal for the municipality to devise strategies to boost EHPs' safety during carrying out inspections and handling complaints, and create awareness about the importance of safety of EHPs and cooperation within communities.

The next section 6.5.2 provides an overview of essential aspects needed to provide the context applicable to ethical practice.

6.5.2 The EHPs Understanding of the Meaning of Ethics

Issues mentioned in the case study clearly show a need for EHPs to draw on ethics and organisational training when faced with dilemmas. However, the extent to which they are in possession of these skills is unclear. This section describes research participant' responses to the question what they personally understood to be the meaning of ethics in relation to environmental health. This question aimed at determining EHPs' knowledge about ethics from the context of the practice of environmental health. The following responses capture the essence of research participants' statements on the meaning of ethics:

> *"Ethics refers to the way environmental health practitioners conduct their duties with a sense of ownership and commitment to the profession and serving the public*" (SDM01).

"Ethics has to do with the need to respect your profession and act within the prescripts or guidelines of your profession and applicable policies" (SDEHP03).

These statements indicate an understanding that is centred on the way some EHPs carry out their work. For instance, reference to the commitment of EHPs and the manner in which they conduct their duties, has ethical connotations. Respect is highlighted in the ethical principles previously discussed in 6.4.4, as an essential element in ethical practice. Research participants highlighted conduct as central to the meaning they ascribed to their understanding of ethics on the job. For instance, they also made associate statements like:

"For me as EHP, ethics would be the way that I carry myself, conduct myself, and portray the profession, the way that we communicate with our clients out there" (CDEHP02). "My perspective of ethics is really about conducting oneself worth integrity, honesty, openness, and transparency. But most of all is to have a good moral compass and not being up into corruption in your position, not being biased towards one party or another where you use professional judgement" (CDM05).

In the above statements research participants were of the view that ethics places upon them the responsibility of demonstrating good conduct in the course of carrying out their duties. They seemed to understand ethics as influencing their behaviour as professionals. The above-mentioned statements suggest that the EHPs in the study had an understanding of what ethics entails and its relevance to their professional conduct. This understanding is particularly important in their relationship with clients and the community at large. They even mentioned some virtues that EHPs ought to possess like being honest and transparent. Research participants even stressed that ethics is fundamental in rendering services in a fair and unbiased manner as per the following statement:

"Ethics aims to make sure that you are unbiased in all that you actual deal with and making the right decisions in terms of public health and environmental health for the protection and promotion of health. Ethics is a key guiding tool to make sure that we are doing what we ought to do" (NDM04).

As per their statements, research participants also made reference to decision-making and understood ethics to be important in ensuring that they made good decisions affecting their work. They expressed views regarding ethics from the perspective of a professional's attitude to the work, highlighting the fact that ethics impacts on how professionals carry out their work. They saw ethics as influencing the kind of person one ought to be, including the kind of attitude a professional ought to display in carrying out professional duties.

Research participants were further asked to indicate whether they received any ethics training in order to determine the basis of their understanding of ethics. The responses indicated having no formal training in ethics which could enhance their understanding of ethics, as reflected in the following comments:

> *"We don't have specific ethics training and have not attended any ethics trainings"* (CDM04). *"The only training I have ever attended was conducted by the South African Institute of Environmental Health (SAIEH) a while ago and we also attended an ethics presentation last year by Health Professions Council of South Africa (HPCSA)"* (CDEHP02).

Given that the EHPs in the study had not received any formal training on ethics, it appears that their knowledge about ethics was based on general knowledge. Moreover, ethics practice seemingly has not been formalised and made an integral part of environmental health practice in workplaces. Therefore, I cannot rule out the creation of a culture where EHPs continue to view ethics as an aspirational issue, with no ability to apply its principles in practice or internalizs it to solve ethical issues. Moreover, the idea of understanding ethics from the perspective of *"what should EHPs do"* could be attributed to the fact that often, central to an individual's approach to ethics, are personal values which are inherent in a person's upbringing that "influence one's judgement". To this end, Purtilo affirms that when a health professional practices, personal values come into play, and "when faced with situations that present chances to do wrong things, their personalised learning convictions, make them stand for doing good" (Purtilo, 1999, p.8). It seems that the embedded knowledge enabled EHPs to have ideas of ethics and regarded it as important to their commitment to do their work. The challenge could be in terms of handling ethical issues, given that it has been documented that "health professionals often believe that they are inadequately prepared to handle ethical related issues" (Darr, 1999, p.35) thus requiring proper training.

Therefore, it seems reasonable to conclude that the EHPs' understanding about ethics in the study area was based on their own general knowledge and values and their awareness of the professional obligations rather than having received formal training on ethics. There might be a number of reasons for this state of affairs. For instance, I could not rule out the effect of having no formalised ethics practice in the workplaces of EHPs as contributing to EHPs using general knowledge on matters of ethics. A related matter is the challenges facing law enforcement in South Africa due to amongst others lack of implementation plans. In this regard, research shows that South Africa promulgated law reforms that dealt with socio-economic rights, but their

enforcement "remained aspirational (something hoped-for) as there was no government commitment to concretise enforcement measures". Hence, Wiles remarked "unless rights are made legally enforceable, rather than remaining aspirational, they will remain pipe dreams for those who need them most" (Wiles, 2006, p.64). In this regard, Trispiotis, has added that "aspirational will with no mechanism to enforce" is null and void (Trispiotis, 2010, p.3), a view that is supported by Garry (2012).

Therefore, based on my findings on how EHPs understood ethics as per some statements mentioned in this section, it appears that EHPs' knowledge about ethics was based on mere opinion. This situation could lessen the value attachment to ethical practice, unless there is some intervention to formalise ethics practice in EHPs' workplaces so as to improve knowledge about ethics.

6.5.3 Prevailing Ethical Practice in the EHPs' Workplace

Having dealt with how EHPs viewed the meaning of ethics in the previous section [6.5.2], this section addresses the prevailing ethical practice culture in the workplace focusing on the relationships among staff members and their superiors and how people's own cultures have an impact on ethics in the workplace. This focus is important in mirroring ethics practice and the integration of ethics principles in the working environment.

Research participants were asked to describe the ethical culture in terms of the relationships with colleagues, subordinates and superiors where applicable, with the aim of understanding the prevailing work ethic. Key findings that are grouped into themes discussed from the perspective of ethical implications on environmental health practice are presented in 6.5.3.1 to 6.5.3.4.

6.5.3.1 Relationships among EHPs and teamwork

Research participants made statements that describe the prevailing relationships in the workplace. The findings on how EHPs related to their peers and immediate EHP managers were encapsulated in the following verbatim responses:

> *"I think the one word to describe the relationship would be to say, it is a very cordial relationship. What I noticed with colleagues especially with seniors in the supervisory role and EHPs at junior level, is that there is a formal mentorship"* (CDM02). *"I would say at a district level, the level where we [EHPs] are, we do our best to support one another and to encourage one another to be responsible, to be bold and courageous, to take our job*

seriously irrespective of the opposition and the challenges out there. At our level we do our best to work as a team and work as committed individuals. The people I work with take their work seriously. We also discuss ethical challenges we encounter where people expect you to overlook certain things and offer you bribes and at times obstruct you from getting into the premises. We encourage the culture of openness and teamwork and continuous upliftment and encouragement" (NDM02).

The above statements generally show that EHPs were able to work together with support from their immediate EHP supervisors. In such situations the experienced EHPs mentored the newly qualified EHPs. This example of good practice needs to be promoted, especially the mentoring part where the experienced EHPs in some areas within the Scope of Practice of Environmental Health shared information to empower others. This mentoring is important in boosting teamwork.

There were related challenges to the relationships of EHPs. The notable concerns in the working relationship of EHPs were expressed by some research participants as follows:

"I think the work ethic currently is not great, I must be honest with you – but, that is not across the board because there are EHPs who really work their tails off and who are fully committed to the profession and the department. However, there is [also] a significant number [of EHPs] where that is not the case and that is worrying me quite a lot. There is no clear cut between the young and old in this regard, because, there are some of the older people who have also started to say, for various reasons "I'm taking my foot off the gas". So there is an overlap [between old and young EHPs]" (CDM05).

The viewpoint expressed above indicates that there were also concerns regarding lack of commitment amongst the EHPs which affected the work ethic. Accordingly, this lack affected both younger EHPs and older EHPs. Factors contributing to this lack of commitment need to be explored so that the issue can be addressed. Research participants also raised concerns about isolated incidents of cultural intolerance which strained relationships among EHPs, for example, they made remarks such as:

"As a new employee you tend to be looked down upon. There is somehow favouritism among people of the same race. This makes it hard to relate well with others and you often feel this as an outsider. I think this is not purposely done. It also have an impact on how I handle my work and I tend to feel that my things are delayed and other colleagues' work is given quick attention. The delay creates a bad reputation about my work" (WDEHP03). *"I had an incident where I experienced cultural differences, where colour or racial background played*

a role with some people ascribing behaviour to one race. In my experience, I felt undermined and I ended up retaliating" (WDEHP01).

The above statements are linked to some comments by research participants that suggested that some colleagues unintentionally hurt others during their interactions. It appears that even when some felt discriminated against, they tolerated the situation. Hence the following remarks:

"We try to tolerate one another as we work with different races. But I know when it comes to the culture it is a subject we don't deal with" (WDM01). "*We have different race groups and we learn to understand each other as we all come from different backgrounds. For example, in the way you talk: you find that some people don't respect each and they just talk anyhow"* (SDEHP02).

It appears, based on these statements, that the different racial groups had attitudinal differences that hurt the feelings of others, although the prevailing spirit of tolerance prevented potential conflicts among EHPs. Research participants did not indicate the presence of any mechanisms in place to intervene and readily solve culturally related situations, other than the reference in one of the statements above (WDM01) that cultural issues were not dealt with. Cultural tolerance has been embraced by UNESCO as instrumental in promoting a culture of "learning to live together" across different sectors of society (United Nations Educations Scientific and Cultural Organisation (UNESCO), 2016).

There was a perception among research participants that pointed to the likelihood of strained collegiality on the basis of differences of approach by the different generations of EHPs. Some of the following statements pointed to this issue:

"I think within the organisation especially amongst the older staff there is still a quota of good ethics and morally doing things the correct way and upholding law. However, there seems to be a change in culture amongst the younger professionals/ the younger people in that their [the younger people] main objective is to get their salary and it is not work that motivates them, but more the extrinsic rewards – financial type rewards" (CDM04).

"Right now what I'm observing is the difference of behaviour between the older generation [EHPs] and the recently trained generation. The way these two handle their work is totally different. The older generation seems to regard their work as a calling – they like the profession and uphold the ethics of the profession. The newer generation EHPs is more on their rights than the profession itself or than the rights of the community and that affects the ethics of the profession" (WDM03).

It appears from the above statements that a gap existed between the older and younger EHPs that is likely to have a negative effect on the relationships among EHPs. The statements expressed the feeling of the older generation of EHPs about their dissatisfaction with the conduct of the younger generation of EHPs. To this end, the older EHPs strongly expressed concerns that the younger ones tended to have a different way of functioning to the one to which they were accustomed. The following statement also affirmed the situation:

> *"Things are changing at the moment. Previously we had old people [EHPs] who were employed as Health Inspectors and they were operating in a certain manner. But as we are employing new staff – the new young EHPs are coming in with different behaviour – so you find that there are challenges between these two groups. For instance, the new young EHPs are under the supervision of the old people who were more particular in terms of way they should behave and the way things should be done and you find that now the new EHPs are coming up with a total different behaviour and challenges arise from the clashes between the two groups"* (CDEHP03).

There were not many views expressed by the younger generation of EHPs regarding their older fellow EHPs except for a few statements that highlighted the strained relations between the two groups, such as the following:

> *"To be honest we don't have a smooth relationship between junior EHPs and senior EHPs. If you are a younger you are regarded as someone who is not fully trained in the field. This creates a gap between the juniors and seniors – something that needs to be bridged by a policy to guide us"* (CDEHP03). *"I have observed that some of the old EHPs do not do work properly, for instance, you find that there are premises that have never seen an EHP for 26 years – that means someone has not been doing their work"* (NDEHP02).

The differences among EHPs in the workplace have the potential of adversely affecting the camaraderie and respect for each other that research participants mentioned as promoting brotherly-sisterly connectivity and sharing of information between subordinates and managers. Therefore, measures need to be taken to harmonise working relationship between the newly qualified EHPs and the older generation of EHPs. Research participants also suggested that a

policy needs to be in place to guide EHPs. It might be important to factor in the age[50] distribution of EHPs when considering measures to address the differences between the new generation of EHPs and the older generation. For instance data analysis showed that the youngest research participant was 25 years of age and the oldest 61 years, with an age group distribution showing the majority, (66% of research participants) falling within the 31-50 year age group bracket. (See Figure 2.10 in Chapter Two under Profile of Research Participants).

"Age" is useful in the classification of people per age group to determine active working lifetime. Age is important concerning professional life, as it is associated with one's ability to perform as well as attitude towards the quality of work. In this regard, an annual survey conducted in 2013 by a private company called Northcoast99 of 4280 top performers in Northeast Ohio in the USA, discovered that performance varied with age. They found that:

"Workers 30 years and below, prioritise "career development and advancement", those in the 31 to 40 years bracket attach more value to compensation, challenging and meaningful work. This resembles transition to a maturing age, whilst, those above 41 – 50 years tend to be more serious about work performance. Lastly, those 51 years and above value benefits, a sense of autonomy and leadership as more important to work" (Northcoast99, 2013).

Therefore, in the case study municipality steps need to be taken to devise a mechanism that would narrow the differences between the older EHPs and the younger ones given that the two have showed differences in approach that created attitude that if left unattended has a potential to hamper good working relationships (Duncan and van niekerk, 2011, Northcoast99, 2015).

6.5.3.2 Relationships of EHPs and Management in the workplace

Linked to the relationship amongst EHPs previously discussed in 6.5.3.1, was the relationship EHPs had with their Management in the workplace. In this regard, research participants expressed a different picture to the cordial relationship they had as peers. The following statements were made:

[50] The literature gives different groupings of age for various purposes. In South Africa, for instance, people less than 15 years and older than 60 years are regarded as dependants Statistics South Africa. 2015. Mid Year Population Estimates. Available: http://www.statssa.gov.za/publications/P0302/P03022015.pdf [Accessed 24 August 2015].. Professional life is between 20 and 60 years and normally has three age groups wherein 20 to 30 years is early adulthood, 40 to 60 years is middle adulthood and lastly 60 years is the beginning of late adulthood Duncan, N. & Van Niekerk, A. 2011. Adulthood and Aging. *In:* Swartz, L., De La Rey, C., Duncan, N. & Townsend, L. (eds.) *Psychology: An Introduction.* 3 ed. Cape Town: Oxford University Press Southern Africa (PTY) Ltd, 99-116.

"We have beautiful harmonious working relationship between the manager and subordinates. But I can't say the same for the broader organisation. There have been conflicts arising from the Management style. For instance the person above the EHP Manager is a non-EHP and this creates conflict" (NDM01). *"Amongst EHPs ethical culture is quite good. The only difference is that the current Management does not take Environmental Health seriously and regards it as should not be existing and that worries us. If the person is your superior and not from your profession they do not understand what your profession is all about – they don't even understand your deliverables instead they understand it in terms of their own profession"* (WDM03).

The two statements suggest dissatisfaction with the relationship of EHPs and their Management, namely seniors above EHPs being non-EHPs whose management style was not favouring the advancement of Environmental Health. According to the perceptions of participants, the non-EHP Management did not have in-depth understanding of the Environmental Health profession. EHPs identified this organisational arrangement as a source of conflict between Management and EHPs in the workplace. In addition, research participants also remarked:

"Our relationship internally within the office is very good but outside the office, it is not good at all, because the way Management treat us is not good. I understand that it's because they don't understand our profession and they always comment that we are not doing our job, but we are just cruising with big cars that we are driving and they don't see what we are doing. I don't blame them because if you don't understand the profession it's not easy for you to know what is going on. They don't even have interest to come down and see what it is that is happening" (SDEHP03).

It appears that the relationship between Management and EHPs was not smooth and the two groups attached different emphases to handling environmental health issues and as a result, conflicts occurred. The conflicts apparently arose from having non-EHP Managers in charge of environmental health services while having no understanding of the environmental health profession. The statements highlight the fact that Management did not seem to show interest in what EHPs are doing and there seemed to be constant blaming of EHPs for not doing their work which EHPs believed arose from the Management's lack of understanding of their profession. As a result, the necessary management support for the advancement of environmental health objectives was not provided. It seems that something needed to be done to address this situation

to narrow the gaps in understanding of the profession and improving the working relationship between Management and EHPs.

6.5.3.3 Effect of the reporting lines on EHPs' work output

Research participants raised the issues of the lines of communication and the effects thereof on their working relationships. To this end, research participants commented as follows:

"Our reporting line is a problem – the fact that as EHPs are not reporting to EHPs is a huge hindrance. For instance, if I say I need a clerk my manager see no necessity to prioritise that need because of having no clue of what is bothering me. So, I would say our reporting lines are not correct. We need someone who puts value on prevention so as to make prevention of diseases a priority. If that is not your core function or profession, the priority is compromised. Even in the allocation of resources there is a lot of inequality in terms of allocation of offices. If anything needs to be changed – that would be the reporting line. We need to have people who understand and prioritise Environmental Health as a profession and see to it that the environmental health services are delivered at an optimum level" (NDM02).

"Currently, the structure have people above EHP managers being non – EHPs and cannot therefore sign things for EHPs. By changing the structure you could have decision making at a higher level" (NDM01). *"There is only 3 out of 18 higher positions above the EHP manager rank that are occupied by EHPs"* (NDEHP05). *"The structure is a problem – if you are the head or manager you are the first point of contact to effect changes. But if the higher levels don't understand why the changes need to be effected that becomes a problem. For example, when made review of some tools send out for comments and if you escalate that to a senior manager who is a non-EHP, the manager does not see the necessity of the exercise. So if you have a manager who does not understand what I do, there is no urgency in addressing the need"* (CDM03).

These responses seem to highlight the feeling among EHPs that non-EHP Management was unable to handle technical environmental health issues. This situation is likely to cause tensions when urgent issues are not addressed, as the non-EHP managers saw no urgency in these matters. Such incidents caused ethical distress on the part of affected EHPs as they were regarded as a barrier to the realisation of their set goals. One research participant remarked:

"Sometimes we are not sure in terms of the reporting lines who to report to. As a result, sometimes it's difficult for other managers to take decisions and sometimes they don't know

what is expected or they can actually stand for it and say no as EHPs this is how we are supposed to behave and again here the reporting lines are very challenging. They are challenging in the sense that what we have observed is that you find that the senior manager is a non-EHP and the manager is an EHP and there is a senior EHP and EHP and if we don't talk the same language we cannot be a team" (CDM03).

The reporting lines seemed to be negatively affecting teamwork amongst EHPs. The situation was exacerbated by the Management set-up that showed a domination by non-EHP senior managers at the top. The current reporting structure can be seen in Figure 2.4.

6.5.3.4 Proactive approach, feedback and collaboration

Data analysis showed that EHPs were reactive in their approach and in this regard research participants commented:

"EHP are not proactive, if we take for instance the district area that often has mosquito complaints, EHPs could be proactive and conduct community campaigns during the winter month to involve the community in strategies that would minimise the complaints. EHPs in practice do not engage the statistics and use and interpret the data effectively to develop mechanisms that would engage the public" (CDM05).

This statement highlighted the fact that while EHPs handled a number of complaints, their approach was merely reactive rather that devising proactive approaches. A reactive approach is unable to prevent problems before they occur. Linked to this issue, research participants reported:

"We have monthly reports that states how many inspections conducted and complaint received and resolved. We don't evaluate to solve the problem but we just do it for checking how much was done and how it was done or rectify the problem but we fail to evaluate work in order to improve performance" (WDEHP05). "*We have inspection reports but people in this department are mainly interested in statistics which is mere number and quality is not considered. The impact is not evaluated"* (NDEHP05).

The data show that while EHPs collected valuable data, they failed to feed this information into their plans to improve performance. Much emphasis was placed on statistical information with no consideration of transforming the information into operational plans to improve performance.

The responsibilities of EHPs involved working with communities, particularly in terms of the investigation of complaints. In carrying out this task, research participants pointed out some concerns which are captured in the following statements:

"The challenges is that staff members don't give feedback to the community" (WDM02). Another respondent reiterated this by stating that "EHPs have a tendency of not getting feedback to the complainant on time" (WDEHP04).

"There is too much duplication with other departments: there are people who do what we [EHPs] are supposed to do and this confuses the community in knowing what is happening. There is a lot of unnecessary competition with other departments. Ideally, if we work for one organisation we need to talk to each other, but now there is inferiority complex that makes it hard to work together and hinder the rendering of services" (SPEHP03).

These statements indicated that EHPs tended to receive poor feedback when dealing with community issues, which obviously affected the relationships they had with other stakeholders, particularly with the community they served. EHPs work also involved interaction with various departments within the municipality and also liaising with different sections within the environmental health unit.

The responses also show that there was no proper coordination and working together amongst the stakeholders involved in environmental health services. This affected the delivery of environmental health services. In addition there seemed to be a challenge with promoting harmonious uniform environmental health services amongst EHPs operational units. Hence, remarks like:

"The 18 Environmental Health District Managers don't meet to discuss their professional issues as a collective" (NDM04). "In terms of the routine inspections: Environmental Health is not being properly managed because there has been no consistency and uniformity amongst the different districts and that boils down to how we do even simply things like doing inspections the same way and the way we issue trade licences in different areas, and simply report writing" (CDM05).

It appears that there was a weak connectivity amongst EHPs, coupled with poor working arrangements with the different sections/district offices. This set-up was aggravated by the absence of synergies among specialising and general environmental health units, which could expedite the handling of information and dealing with complaints. These findings require the taking of steps to promote a working culture that promotes uniformity in approach, and the devising of proactive strategies to identify potential problems and prevent recurring issues. The

poor collaboration is likely to hamper progress and should there be delays in meeting deadlines, the quality of environmental health service is likely to be compromised. Hence, there is a need for proper environmental health service implementation plans.

6.5.4 Ethical Challenges Faced by EHPs in the Workplace

This section addresses ethical challenges which involve those issues that EHPs find hard to decide on or resolve in the course of carrying out their work and ultimately affect their work output. The legal and professionally related ethical challenges have been addressed in Chapter Four and Five respectively. In this section three important selected ethical challenge cases are presented as examples.

6.5.4.1 Ethical challenge 1: Absence of an ethical guide of environmental health

Research participants mentioned that there were no ethical guidelines in place in their workplace. Hence two participants remarked:

> *"Everyone uses their own understanding since there is no black and white guide about what is ethical and decide by themselves the course of action"* (WDEHP05). *"Occasionally, it becomes difficult to go out and do ones work without having an ethics guideline, as one may do things from their own perspective thinking they are doing right, only to find out that the Department does not agree with what they are doing" (*NDEHP04).

It seems that EHPs regarded it a challenge having to work without ethical guidelines. According to them, the absence of a guide on ethical issues resulted in inconsistencies when handling unusual issues or controversial cases. The problem with the current situation is that when two EHPs handle the same complaint in different ways and reach a deadlock on the correct way forward, they do not have a guide to use as a yardstick, which, in turn, further confuses the public as to what is the acceptable form of action. This type of situation is further complicated by instances when people within and outside the Department have their own ways of thinking and handling environmental health issues, of which they lack deeper understanding. When EHPs' decisions were considered to be improper and not in line with environmental health practice, they did not have a tool to back up their decisions, which could be captured in the ethical code. This state of affairs opens a loophole or gap that is likely to promote the lack of ethical practice by EHPs. In this regard, research participants felt that the environmental health profession needed to take steps to address the issue of an ethical code, as reflected in the following quote:

"For the practising EHPs, the HPCSA Professional Board, should have its own ethics for environmental health. There is a need for something specific to environmental health as the levels of ethics are different" (NDM04).

In drawing from the Public Health Code of Ethics, the fundamental reason for having a code of ethics is amongst others:

"..to clarify the distinctive elements of the profession and ethical principles to follow and make it clear to populations and communities, the ideals an institution serves and for which it can be held accountable" (Thomas et al., 2002, p.1).

It then becomes important to have a clear ethical guide in the workplace in the current situation.

6.5.4.2 Ethical challenge 2: Gender discrimination

Research participants cited incidents of gender discrimination by members of the public against female EHPs, who prevented them from fulfilling their duties. Some examples of these are illustrated in the following statements:

"In some communities EHPs are faced with the challenge of women not allowed to serve communities when there are males and are not allowed to talk without being accompanied by a male EHP. This compromises the meeting of the desired outcomes. You have to compromise in order to express the message. As women you are limited and only allowed to address other women" (NDM03). *"I also find that as a woman, when you walk in a place for inspection and you feel uncomfortable when dealing with a male who questions if I'm qualified enough being a young woman to carry out the inspection"* (WDEHP03).

This kind of behaviour is unethical as female EHPs were unfairly treated in some sectors of the communities that still held rigid religious beliefs that discriminated against women, and by some patriarchal stereotypes that undermine females. In this regard, female EHPs were precluded from exercising their professional duties in those communities, unless they were accompanied by their male colleagues. These EHPs were also refused permission to address males and were only allowed to talk to women, which is not in accordance with environmental health practice. This situation happened notwithstanding the fact that environmental health problems being investigated were not gender-based.

The discrimination against women has two ethics concerns.

First and most important is the fact that this type of action undermines the integrity of the affected EHPs and promotes unequal treatment of EHPs, which is contrary to the letter and the spirit of the South African Constitution, Act no. 108 of 1996 (Republic of South Africa, 1996b). The Constitution Section 9(3) (4) provides everyone with the right to equal treatment and simultaneously forbids any discriminatory act against others on the grounds of gender, amongst other factors. Likewise, Section, 10 provides everyone with the right to dignity which must be respected and protected. Therefore, I am of the opinion that any discriminatory act against women EHPs is unethical as it affects their human dignity and enjoyment of equal treatment accorded to the male EHPs.

Second, preventing female EHPs from freely performing their duties affects the smooth delivery of environmental health services to the needy communities and should not be left unattended.

It appears that as much as South African laws prescribe against discriminatory practices, the EHPs on the ground as exemplified by those in the case study in this thesis continue to suffer from negative behaviour perpetuated by members of society who do not value peace and human dignity. This problem manifested the significant inequality problem, given that Statistics South Africa has acknowledged in its Gender Statistics in South Africa, 2011 publication that women in South Africa are continually being discriminated against and subjected to gender-based violence (Statistics South Africa, 2013, p.vi). Such practices make gender inequality and violence against women one of the key challenges facing South African society (Boonzaier and de la Rey, 2011, pp.366-367), thereby, negatively affecting the rendering of environmental health services where women are involved.

Gender discrimination in environmental health practice, calls for the development of gender sensitive intervention strategies which promote equality in the environmental health profession. This type of intervention would help solve gender discriminatory incidents in South Africa and similar cases in the world denoted by the New York City incident in 2012. In that case, BatteryPark TV reported that a female health inspector who closed down a restaurant that she believed had violated the operational standards, was instead of being commended, described as arrogant and biased with an agenda to find fault. Reference was made to the fact that re-inspection was done by a male health inspector resulting in the reopening of the restaurant (BatteryPark TV, 2012). The gender distinction in this case could be interpreted as insinuating that there is a difference between the male and female health inspectors. Such discrimination disregards the fact that competencies of EHPs are the same regardless of gender.

6.5.4.3 Ethical challenge 3: Keeping confidentiality

Research participants mentioned that they were required to keep information relating to their work confidential. This requirement was however, not without challenges - as encapsulated in the following statements:

> *"We are not supposed to disclose information and confidentiality within environmental health when carrying out inspections. Ethics in a way helps you as an EHP in the way you interact with the people and you have to maintain and respect the person's confidential information"* (NDEHP04).

> *"I need to keep conversations private unless it's something that I need to discuss with the manager, then I will disclose that information as that is beyond my control. It becomes a challenge to keep things private since we deal with many departments and other non-EHP professionals. So, we need to disclose to them when we have a complaint that involves them"* (NDEHP02).

The examples of statements above show that EHPs acknowledged the need to respect confidentiality while carrying out their duties. They however, indicated that this expectation is not always possible due to, for example, the need to share the information with their managers. In some instances, EHPs work with other professionals and such working arrangements require that they share confidential information regarding their clients. This situation is indicative of the fact that keeping confidentiality is not absolute and cannot always be guaranteed. The breaking of confidentiality is permitted under special conditions. In this regard, the HPCSA Ethical and Professional Guidelines state that "a practitioner shall divulge verbally or in writing information of a [client] where justified in the public interest" (Health Professions Council of South Africa, 2008b, p.12).

Therefore, as much as EHPs grappled with the keeping of information confidential, the example cited is not an isolated case. However, steps need to be taken to assist and empower practitioners to manage the situation.

6.5.5 Infrastructure and Support for EHPs Ethical Practice

This section deals with infrastructure and support for promoting ethical practice. The Oxford Advanced Learners Dictionary (Hornby, 2010, p.770) definition is used as frame of reference. Accordingly, the term:

"Infrastructure" refers to *"basic systems and services necessary for an organisation to run smoothly"* (Horny, 2010, p.770), whereas "support", is broadly described to mean any measures to *"encourage", "provide for*" the financial, material and other needs, and *"advocate for"* the course of actions (Horny, 2010, p.1500). These terms are used here in the context of ethical practice.

Research participants were asked to indicate how ethical issues were managed in the workplace. Responses indicated that the workplace environment was characterised by the absence of ethical practice related support in that:

(1) There were no existing ethical guidelines for environmental health or the health sector in general;

(2) There was no structure/s in place or persons dedicated to dealing with ethical issues; and lastly;

(3) The workplace had no ethics support, including specific ethics training and other avenues that promote ethical behaviour or empower staff to better handle ethical issues. EHPs' exposure to ethical conversations (in the form of brief presentations) was limited to occasions when they attended their professional association meetings for the accumulation of CPD points.

The importance of an ethics infrastructure cannot be over emphasised. The current state of affairs is an unfortunate situation and a drawback to inculcating ethical culture practice within the environmental health sector. Ironically, the EHPs on the ground felt that they needed some support or know-how about ethics in carrying out their duties. Statements like the following one, were an expression of the need for ethics support:

"Ethics is absolutely critical but not just for environmental health, but anyone in government. The work that EHPs are involved in, is around approval, authorisations, licensing and also law enforcement. So there are real opportunities for people to become unethical and so, we just need to instil high moral and ethical standards into EHPs and to keep re-enforcing that" (CDM05).

The absence of ethical infrastructure is not surprising given the trend towards managing ethics in the South African public sector. In this regard. the South African Department of Public Service and Administration has developed a "Public Service Integrity Management Framework" as a measure to address the prevalence of "weak institutional capacity to deal with and manage unethical conduct" in South Africa (Republic of South Africa, 2015b, p.6). This framework provides for:

(1) The designation and appointment of an Ethics champion[51] at an executive level to drive ethics initiatives and monitor the ethics performance within the establishment or unit and,

(2) The appointment of Ethics officer/s with the responsibility to amongst others promote integrity and ethical behaviour within the unit; advise employees on ethical matters; identify and report unethical behaviour to the head of department, and develop and implement awareness programmes to educate officials on ethics as well as good governance and anti-corruption measures.

These are just a few examples of measures to build an ethics infrastructure that could be used to address the current situation. It is also well documented in literature that the success of ethical practice is dependent, amongst others, on having an organised ethics environment that promotes good ethical behaviour in accordance with current needs.

6.5.5.1 Best Practices on ethical practice infrastructure and support

There are best practices from international organisations, which provide some guidelines on addressing ethics infrastructure requirements, in particular. One such body is the Organisation for Economic Cooperation and Development (OECD) (2000b, pp.23-25), which suggests the following three essentials for an organisational ethics infrastructure:

(1) *Proper guidance:-* There is a need for an environment with leadership that is committed to promote ethical practice by ensuring the formulation of clear organisational values, and articulate codes of conduct to its members. Moreover, a mechanism needs to be devised to enhance professional activities through rigorous education and training programmes of all members.

(2) *Management:-* It is important to have a special ethics coordinating structure or agency within the establishment. If need be, this responsibility could be assigned to an existing structure which could best house and handle ethics matters. (This arrangement dovetails with the ethics champions mentioned above).

[51] According to literature on Business Ethics, the ethics champion's primary role is to advance ethical culture by owning up, defending and advocating the cause of ethics in the organisation using all possible influence bestowed to an executive level position. It is thus important that an ethics champion earns respect of the organisation executive management and has direct access to the organisation leader to facilitate the establishing and resourcing of ethics management. Ideally, the ethics champion ought to have clear knowledge of the organisation's purpose, to understand the prevailing culture and the core business activities. See p.226 of Rossouw, D. & Van Vuuren, L. 2015. *Business Ethics,* Cape Town, Oxford University Press Southern Africa.

(3) *Control:-* A well-established legal framework for handling ethics issues is needed. Such a framework needs to have clear accounting mechanisms that spell out the do's and don'ts, so that everyone is aware of the permitted practices and reporting mechanisms.

Furthermore, ethics practice seems to be receiving global attention as organisations like the United Nations (United Nations Ethics Office, 2015, United Nations Ethics Office, 2012) and the World Health Organisation (World Health Organisation, 2015c) are taking centre stage in ensuring establishment of ethics infrastructure geared towards promoting good ethical behaviour within their own organisations and recommending the same to all member States worldwide. The good thing about these new developments, is that there is an emphasis on health ethics and the active role of leadership in taking steps to prioritise ethics practice in organisations. In this regard, the United Nations (UN) released the following two publications:

First, in 2012 the UN *"Putting Ethics to Work…*" guideline (United Nations Ethics Office, 2012, p.33), highlighted some guiding principles for "creating a harmonious workplace" that set out ethical duties and obligations for both management (leaders) and staff members. Accordingly, two essential for creating ethical culture that should prevail include:

(1) People in supervisory positions are expected to "display exemplary leadership; paying attention and listening to staff questions and concerns on ethics related issues, and fostering an environment of trust that encourages staff members to freely speak without fear of retaliation".

(2) Equally, "staff members are expected to amongst others: learn details of policies that affect their work assignments, so as to understand and effectively carry out their duties; take required trainings, and be personally accountable and, hold their colleagues accountable for ethical work behaviour and practices".

The UN emphasises the need for commitment, cooperation between managers and their subordinates, and to each take personal responsibility and account for own actions and report unethical behaviours.

Second, the UN has also taken strides towards advancing good ethical practice, through its 2015 publication entitled "A Leadership Dialogue…" which makes a call on leaders to take personal responsibility in creating a supportive ethics alive environment by "assuming ownership of decisions and actions they took, and be willing to accept and answer the consequences of their actions" (United Nations Ethics Office, 2015, p.1). This strategy would possibly realise the need for exemplary leadership, which is vital in ethics practice.

The WHO has on one hand, developed ethics supportive mechanisms that are important in the establishment of an environmental health ethics infrastructure. The 2006 ethical infrastructure practical guide titled "Ethical Infrastructure for Good Governance in the Public Pharmaceutical Sector" provides some basic and practical measures for establishing a supportive environment for ethical practice. It suggests the establishment of an ethical framework that promotes mutual understanding about ethical issues on the part of management and employees. It calls for active participation that embraces cultural diversity to accommodate different views. This framework advocates for an ethical infrastructure that is centred on principles of truth, where practitioners are committed to represent true facts and base their decisions on reliable evidence. They should serve with honesty and remain true to their calling by committing to an open consultative collective decision-making process. Such an approach suggests that leadership should devise measures to conscientise everyone about ethical behaviour and protect those who "have integrity and courage to stand for the truth by speaking against unethical behaviour" (World Health Organisation, 2006a, pp.14-22).

The WHO 2015 "Global Health Ethics" guideline document (World Health Organisation, 2015c), extensively covers the basics of ethics as they apply to the health sector. In particular, it addresses bioethics and strategies to follow in applying moral principles. It identifies "resource allocation; workplace ethics and public accountability" as examples of common ethical issues facing health establishments (World Health Organisation, 2015c, p.18), and includes support provided by WHO to promote an ethical behavioural culture across the globe. This resource is an important educational tool for bridging the gap in ethics knowledge and is useful for ethics training for both academics and practitioners alike whether or not they have been exposed to ethics training.

All this discussion boils down to one thing, namely: a successful Environmental Health ethical culture requires proper infrastructure where there is robust ethical education for good ethical behaviour. To this end, leadership commitment is important as well as employees' willingness to participate voluntarily to advance the course of action for a well-established effective ethical culture.

6.6 SUMMARY OF THE CHAPTER

My findings show that EHPs in the study area came across difficult and conflicting situations which required ethical solutions to cater for the shortfall of ordinary guidelines in resolving situations beyond the scope of the law or policy framework. To this end, comprehensive ethical

guidelines could provide EHPs with various options for analysing and resolving ethical issues. These options include moral or ethical theories which serve as a broad critical framework for justifying why actions are right or wrong rather than merely focusing on the provisions of the rules.

Some moral theorists like the consequentialists prioritise consequences of actions, while the non-consequentialists advocate for the balancing of benefits in evaluating risks. Moral principles are practical guidelines or rules derived from moral theories and serve as a framework to assist EHPs in managing relationships with clients and/ or members of the public and serving their interests. Hence, ethics in this context provides a systematic approach to the addressing of ethical issues. By using moral judgements, EHPs can back up their decisions with evidence or at least consider various options.

Findings in the case study area, revealed that EHPs had some idea of what ethics meant, but had no knowledge of how to practise it. It would therefore seem, that a robust ethics educational drive is needed to help EHPs understand how the law impacts on the rights of the people. Ethical culture in the workplace was characterised by weak ethics guidelines, and strained relationships amongst EHPs and their superiors, which had the potential to negatively affect environmental health work. There was lack of collaboration with other parties involved in environmental health work. As a result, community complaints that involved referrals were not responded to or resolved on time. Gender discrimination against female EHPs was prevalent in some sectors of the community, resulting in unequal treatment of EHPs and poor delivery of environmental health services. Ethical infrastructure and support is recommended to develop an ethical culture where leadership leads by exemplary behaviour, ethics programmes are developed and implemented, and ethical education for good behaviour is provided. A detailed discussion of the findings discussed in Chapters Four through to Six is provided in Chapter Seven which follows this one. The discussion attempts to view the findings within the context of the primary purpose of the study.

CHAPTER SEVEN

DISCUSSION

7.1 THE CONTEXT OF THE STUDY IN RELATION TO THE FINDINGS

In this study, I investigated and obtained findings on three aspects of environmental health practice in South Africa, namely: the legal, professional and ethical responsibilities of environmental health practitioners (EHPs) and related challenges. This study is the first environmental health research project in South Africa that combines the three fundamental areas of environmental health practice, particularly, the ethical practice of EHPs and thus dealt with the following challenges:

First, I found myself having to grapple with ethics as a dimension in the practice of environmental health in South Africa, which has been talked about but not acted upon or formalised among EHPs. For instance, I noted that the legal and professional aspects of EHPs have been articulated in some of the guidelines providing for the practice of environmental health but there is no concomitant attention paid to ethical aspects. The focus of my study was not on the discipline of ethics per se but on embracing ethics principles in the practice of EHPs. Such a task is not easy as it is difficult to motivate people to act in ethically acceptable ways given that ethical practice by its very nature is not dogmatic, but appeals to a person's conscience. In other words, ethics practice tends to advocate for a motivational rather than a prescriptive approach. Hence, in this study I attempted to create awareness about the importance of embracing ethical principles in the practice of environmental health rather than being prescriptive.

Second, guidelines are prescribed for each dimension of the practice of environmental health separately, whereas in practice, the three are intertwined.

Third, guidelines stipulate ideals that should be followed and applied, while practice shows what actually happens on the ground. The challenges experienced by EHPs during their practice manifest realities on the ground and these often do not match the ideals stipulated in laws they enforce. This situation necessitates ongoing research in environmental health practice to determine salient issues needing attention, policy readjustments and development of appropriate intervention programmes.

Fourth, the tackling of practice related issues is complicated by presumed assumptions that once laws and regulatory guidelines are developed and approved, the behaviour of practitioners changes and an impression is created that instant changes would occur without the acknowledgement that more efforts are needed to ascertain how the ideals influence practice on the ground. Such an oversight results in situations that create ethical dilemmas in practice during the implementation of policies or rules.

I followed a two-fold approach in this study which is discussed in detail in Chapter Two. First, I examined existing guidelines for legal, professional and ethical environmental health practice in South Africa to determine the ideals provided for, and second, I employed an empirical approach involving interviewing of 35 practising EHPs in a metropolitan municipality selected as a case study to ascertain realities on the ground and whether requirements in the formal guidelines matched the practice. The aim was to answer questions:

First, what is the ideal in terms of the fulfilment of the legal, professional and ethical responsibilities of EHPs?

Second, what kind of awareness and understanding is there amongst EHPs regarding their professional, ethical and legal responsibilities in the exercise of their duties? In other words, how are these role responsibilities understood and articulated in situ (if at all)?

Third, what challenges confront EHPs in fulfilling these role responsibilities?

Fourth, what interventions and strategies can be proposed to overcome these challenges and better align ideal and real practices?

The exercise has helped in identifying the legal, professional, and ethical responsibilities of EHPs in South Africa. It was important to determine the match between theory and practice in the environmental health profession, given that studies in professional practice, show that official guiding principles differ with practice on the ground. In this regard, Heimer's study dealing with compliance and ethics practice showed that there is a "difference between official ethics and ethics on the ground" and argues that "the official ethics (which are ideals) is often made formal and a preferred choice" (Heimer, 2013, p.2). Applying this notion in the context of this study, would mean that the theoretical aspects provided for in the guidelines for environmental health practice need to be reviewed to see if they match the practice by being able to address the issues on the ground.

Findings of my study revealed that South African laws have defined the scope of the work of EHPs, assigned them legal mandates, and provided a professional framework. It has been

found that while the laws promote enforcement and compliance, EHPs (exampled by those in the case study) have not been adequately prepared and trained to handle complex situations which require application of ethical principles as alternatives, where legal measures fall short. EHPs experienced difficulties in making decisions on non-technical issues as demonstrated, for example, in the investigation of environmental health complaints. They, thus relied on their own discretion which often caused conflicts with their superiors. The use of discretion seemingly widened differences amongst EHPs and compromised the realisation of a uniform approach to service provision. Such state of affairs was viewed as having the potential to confuse the public as the EHPs is likely to send mixed messages that could be interpreted differently. I viewed these situations as having the potential to exacerbate problems in environmental health practice. Therefore, remedial measures are needed to create uniform service delivery practices and boost public trust in EHPs' ability and the integrity of environmental health institutions.

In this study I am raising awareness about the dangers that could arise when EHPs mechanically apply legal prescripts of the law without understanding the spirit behind the law. I presume that while laws provide for clarifying ambiguous areas in the application of right conduct, they tend to fail to provide for all situations. For instance, situations on the ground require a developmental approach which embraces patience and courage to balance compliance with understanding the context of the situation. Misunderstanding and associated tensions between EHPs and communities are likely to occur when members of the public view and make claims that their constitutional rights to services are absolute and plead ignorance about the limitations of those rights as stipulated in Section 36 of the Constitution of the Republic of South Africa. Accordingly, when a more compelling rights-related issue arises, there may be some restrictions on the enjoyment of the benefits the right provides, for example to environmental health services. Hence, the ethical principles talks of *"prima facie rights*" to allow for the making of choices amid conflicting situations" (Purtilo, 1999, p.60). Treating human rights as absolute (i.e. binding in all situations) is a challenge that needs the education of the public to understand the contexts of application as well as preparing the EHPs to handle such complex situations when carrying out their professional duties. Hence, research on environmental health practice is essential to find better approaches and this study is one such attempt to seek solutions to problems in environmental health practice.

I argue that environmental health practice in South Africa, needs to be understood in context. To this end, I believe that the gap in prioritising ethics in the environmental health practice is a situation aggravated by the fact that previous research on environmental health in South Africa

did not cover ethics, but focussed on other service related issues, *inter alia*, policy changes and their impact on EHPs' work during the development phases of the profession. This approach is well documented in literature for instance, in the works of authors like (Mattee et al., 1999, Agenbag and Balfour-Kaipa, 2008, Wright and Godfrey, 2010, Mathee and Wright, 2014). I expand on this aspect later in 7.2.2. My assumption is that the absence of ethical dimensions in the study of environmental health practice in South Africa, could be attributed to the history of South Africa. In this regard, the past [apartheid] political dispensation culture promoted what could be regarded as an unethical culture, as it promoted separate development and racial divisions that widened inequalities in society, a situation attested to by the South African – twenty year review (1994-2014) report (Republic of South Africa, 2014a). Thus, the ethical issues in service delivery were neglected. Hence, my point of departure in this study is to highlight ethical implications of EHPs conduct in fulfilling their responsibilities. (Details on ethical practice have been dealt with in Chapter Six).

EHPs' ability to understand and operate within an ethical framework of accountability, equality and observance of good professional ethics as public servants, is essential to "ensuring consistency" in carrying out their duties (Public Service Commssion (PSC), 2010, p.6). This requirement is underpinned by Section 195(1) of the South African Constitution Act, no. 108 of 1996, which made it mandatory for public servants to "promote and maintain high professional ethics" (Republic of South Africa, 1996b). Therefore, empirical research that addresses the ethics component of EHPs in South Africa is essential, given that the environmental health profession, has stressed law enforcement in both training and practice with limited emphasis on professional ethics (Health Professions Council of South Africa, 2014a). I believe that too much emphasis on law enforcement alone, could create a cadre of EHPs, which rely solely on the prescripts of the law which does not cover everything, but should also have knowledge of ethics to be able to handle those issues that cannot best be addressed using the law. It is possible that such a measure could actually promote consideration of alternative methods that factor in diverse and convergent issues.

Notwithstanding, the fact that other health professions in South Africa like the medicine, have their own code of ethics for the doctors (Health Professions Council of South Africa, 2008a), the environmental health profession remains without its own code of ethics for EHPs, but has and still relies on the general HPCSA ethical rules for health professionals. Linked to this state of affairs, unlike with doctors, there are no publicly available misconduct records for EHPs in South Africa, even on the recent 2015 HPCSA judgement – guilty convictions (Health

Professions Council of South Africa, 2015c). A study "analysing the ethical transgressions[52] of registered members of the twelve professional boards in HPCSA [that are depicted in Figure 5.1 covering a] period of seven years from 2007 to 2013" has also reported one case of misconduct handled by the Professional Board of Environmental Health since 2007 (Nortjé and Hoffmann, 2016, pp46-49). This study has highlighted a concerning fact that, the HPCSA has in "almost all the cases [preferred] to only impose financial and or suspended suspension period penalties [instead of] requiring [some] form of additional ethical awareness for the transgressors. [Treating] ethical misconduct [in that manner] may [inadvertently creates an impression amongst] the professionals that ethical misconduct is merely a business or financial risk [and not] an ethics and integrity matter"

Such convictions are possible with the enforcement of a profession's "distinct code of ethics" (Thomas et al., 2002, p.1057). Reference to the code of ethics does not overlook the limitations of such codes in not causing the cessation of bad behaviour. They however, serve an important role of creating a culture of ethical practice in professions, and provide a frame of reference that everyone can use as a common tool to help decide cases and interpret ethical issues (Gilman, 2005). Even with the codes of ethics in place, continued research for determining "the effectiveness and relevance of the codes" is important as a measure of assessing that ideals match the desired outcomes (Gilman, 2005, p.72). The EHPs in South Africa are required to follow the general code that applies to all professions under the HPCSA and do not as yet have a code that is specific to EHPs as pointed out in Chapter One and elsewhere in this thesis. Therefore without a specific code of ethics for environmental health in South Africa, the situation that Gilman affirms is highly possible, namely, that people tend to rely on their own moral standards and could easily succumb to temptations of behaving unethically.

Among the reasons that prompted the initiation of this research was to seek solutions for addressing the apparent lack of emphasis on ethics in environmental health practice in South Africa. In the next section, I present the main contributions of the study findings to environmental health practice.

[52] Ethical transgressions in this study were described as including three categories: (i) Competence and conduct with client that involve dishonesty, disclosure of information and sexual intimacies; (ii) Business practices for example reports and documentation of cases; and (iii) Professional practice such as obtaining appropriate potential employment opportunities and nonprofessional relationships (Nortje and Hoffmann (2016).

7.2 CONTRIBUTIONS OF THE STUDY TO THE LEGAL, PROFESSIONAL AND ETHICAL KNOWLEDGE BASE OF ENVIRONMENTAL HEALTH PRACTITIONERS

The nature of this study is that it addresses the role responsibility of EHPs in rendering environmental health services which involve interactions with communities. This responsibility is dominated by constant engagement with the communities where EHPs perform the duty of monitoring through intervention programmes. I discuss the salient factors that this study has highlighted and the contribution of the research to the legal, professional and ethical knowledge relating to EHPs' practice in South Africa.

7.2.1 Study Contribution to Environmental Health Intervention Programmes

Central to environmental health practice is the development and implementation of intervention programmes. In Chapter One, I presented the WHO environmental health definition which I expanded from the perspective of the practice of EH. This definition specifies that intervention programmes are central to environmental health, and in essence core to the EHP's functions. To this end, the definition has a component that states:

"Environmental health encompasses assessment and control of environmental health factors".

The realisation of this ideal requires the active role of EHPs in community intervention programmes for sustainable development which the WHO has endorsed as an essential step towards creating healthy environments for improved quality lifestyles and the lowering of the "burden of environmental health risks" (World Health Organisation, 2006b, p.13). Moreover, the monitoring role features prominently in the practice of environmental health as can be seen in the "10 essential services of environmental health" (Kotchian and Laumbach, 2010, p.991) which were adapted from Public health[53] as depicted in Figure 1.1 as well as in various scopes of practice of environmental health including one for South Africa..

This study contributes to improvement of environmental health intervention programmes geared towards solving community problems using the case of a metropolitan municipality, which is a level of government closer to the people. Moreover, the active involvement of the EHPs and sharing of their views on what works best in practice, as well as allowing them to

[53] Environmental health is the branch of Public Health that concerns itself with the preventive aspects in the health sector. The Institute of Medicine in 1988 developed essential elements of Public Health services. The environmental health fraternity has embraced these to harmonise the practice of environmental health across the profession worldwide as reported by Kotchian and Laumbach (2010, p.991).

identify challenges they encountered was vital towards understanding environmental health programmes taking into consideration the practitioner's perspective. The findings in addition, contribute to "evidence based" solutions which emphasise the determination of the context under which environmental health intervention programmes are applied. This approach is in line with public health researchers who maintain that "evidence-based studies are essential for improving public health practice", taking cognisance of the challenges on the ground and the impact of the programme (Brownson et al., 2009, p.176). My study contributes to measures designed to close knowledge gaps between environmental health practice and policy formulation by promoting research that informs the environmental health practice about hard facts to be considered for present and future planning. Similarly, a Swedish Foundation for Strategic Environmental Research (MISTRA), recommends research that "tell hard truths that help towards policy formulation" (Swedish Foundation for Strategic Environmental Research (MISTRA), 2014, no page number). During the study, EHPs were given an opportunity to contribute to finding solutions to environmental health community related problems. Such a step resulted, for instance, in identifying the fact that the investigation of public complaints and conduction of environmental health inspections are key to environmental health practice. To this end, EHPs are actively engaged with communities and in the process exchange information. This collaboration creates a climate where mutual agreement is reached for achieving a community sensitive environmental health practice that is supported by the public. The evaluation of the complaints investigation intervention programme highlighted the benefits gained as well as challenges EHPs experienced in the process of investigating complaints. Carrying out this study added the following benefits to environmental health practice:

7.2.1.1 Study affords EHPs with an opportunity to reflect on their practice

This study is primarily an opportunity that allowed EHPs to reflect on their practice. The essential services for environmental health listed "evaluation of effectiveness" as one of the top 10 environmental health responsibilities. This prioritisation could be interpreted as placing the evaluation of intervention programme high on the environmental health agenda. The participation of EHPs in the study afforded them an opportunity to objectively reflect on the environmental health practices. As a result, they identified areas of concern and areas of strength which they had taken for granted. This empirical research discovered that the investigation of the complaints was not consistent across the municipal areas due to the different geographical and developmental state of the areas. To this end, the rendering of the environmental health services was affected and notably, the more rural areas needed different

approaches, while the complaint intervention programme was designed to offer a more uniform approach. This finding could be used to feed back on the development of better and more effective approaches. However, I identified that feedback was one of the gaps to the smooth running of the complaint management programme as the municipality had not reached a stage where they used the feedback information for the improvement of the complaint management programme. Findings in this regard, revealed that EHPs were failing to give feedback to communities. Some of the contributory factors to the situation were that EHPs felt the investigation process was time consuming and demanding, and competed with the other environmental health routine inspection duties. Consequently, in some instances they could not cope with the demands.

Evidence-based research is important as it allows practitioners to reflect on how they conduct their work and highlight areas that would compromise the quality of their services. In so doing, precautions need to be taken to avoid the falsification of information. Research on the US Food and Drug Administration clinical trials has identified falsifying information as one form of misconduct in doing inspections that compromise good research work and the integrity of programmes (Mayor, 2015).

7.2.1.2 Study creates awareness about ethical issues in the practice of environmental health

This study highlights the importance of ethical issues in environmental health intervention programmes. Discussion in this section draws from various works that recommend the importance of using an ethical framework in evaluation of community intervention programmes. Using the complaints management programme in the case study, this section highlights key areas which the study findings revealed to be of value to environmental health. The "use of an ethical framework in evaluating community intervention programmes" was recommended in public health by Nancy Kass (Kass, 2001, p.1777) and sanctioned by other scholars, such as (Rogers, 2004, Coughlin, 2008, Lee, 2012), as a relevant ethical framework for public health professionals who want to analyse public health intervention programmes to evaluate their ethical implications for service provision. To this end, Lee performed a comprehensive review of practice-based frameworks and concluded that the ethics framework for public health is an appropriate tool that enables addressing "practical public health problems associated with public health interventions that are geared towards promoting facts and not mere beliefs" (Lee, 2012, p.10). Similarly, the University of Kansas, Work Group for Health and Development has developed a practical guide that highlights ethical issues that need to be considered in community interventions (Rabinowitz, 2015). Therefore, for the purposes of this

study the following ethical concerns are of great importance in the investigation of public complaints by EHPs as required by Section 83 of the National Health Act, no. 61 of 2003 as amended by Act 12 of 2013 (Republic of South Africa, 2013b). The following are a few examples of ethical issues in the practice of EHPs:

***Maintaining confidentiality[54]*:** Ideally, EHPs ought to keep information confidential when investigating complaints in order to protect the integrity of the complainants. To this end, the Batho Pele Principles in the South African White Paper for the Transformation of the Public Service Delivery recommends "the protection of the complainant's confidentiality in order to prevent discouraging them from reporting complaints in the future in fear of having their cases treated in an insensitive manner" (Republic of South Africa, 1997, p.22). In practice however, EHPs found it hard[55] to keep information confidential in cases that required disclosure of the source complainant, especially where many parties were involved in the investigation of the complaint. While, some were aware of the obligation to keep confidentiality, they explained that they were unable to do so in practice due to the multi-party effect. Some believed that with ethics training, they would be better prepared to maintain confidential information. The sharing of confidential information amongst colleagues, is a permitted practice[56], however, "the complainants need to be advised of such possibility" (Rabinowitz, 2015, no page number). The disclosing of confidential information needs to be done with caution when it is in the "public interest" to do so, like "contributing to or assisting the process of investigation" (Health Professions Council of South Africa, 2008b, p.13). It would appear that EHPs needed some capacitation to meet this requirement, as it would be difficult to handle ethical issues without ethics training on the approaches to use when they encounter situations that present dilemmas in deciding the best course of action. Resnik highlights the importance of training by pointing out that as much as there is a need to protect the privacy of individuals, "where a situation presents imminent harm to individuals, the person's right to privacy could be overridden, but precautions must be taken on deciding the course of action" (Resnik, 2010, p.3). It is really hard for EHPs in South Africa to balance addressing the public complaint which affects many people

[54] Section 14 of the National Health Act, no. 61 of 2003 provides for confidentiality. In this regard, discussion in Chapter Six, Section 6.3.1 of this thesis presents the keeping of information as an important constitutional right to the privacy of persons.

[55] See Chapter Six, section 6.5.4.3 for EHPs challenges in keeping of confidential information.

[56] Section 15 of the National Health Act, no. 61 of 2003 provides that "A health worker or any healthcare provider that has access to …records of a user may disclose such information to any other person…as is necessary for any legitimate purpose within the ordinary and scope of his or her duties where such access or disclosure is in the interests of the user.

with upholding the constitutional right of the offender to privacy, as they conduct the investigation in compliance with their legal mandate.

Obtaining consent of community members: The practice of environmental health has a strong component of community development which employs interactions with communities to get information relating to service delivery problems. Thus, EHPs are required to introduce community projects as interventions to communal problems. This approach tends to present ethical challenges pertaining to obtaining community consent. In practice, EHPs work with counsellors and community leaders as community representatives but by only obtaining consent from them, their actions are likely to infringe on the rights of individuals who may not agree with the projects. This action in turn affects compliance and the ultimate sustainability of the solution. The problem is exacerbated by the fact that EHPs have no control in the community settings, as politically, the community leaders are the voice of the people. This situation, however, conflicts with the ethical requirements of autonomy (right to own opinion) and consent to an undertaking. This arrangement works when there is cooperation between the community leaders and EHPs as platforms could be created to gain community access. However, EHPs tend to experience challenges when the community leaders become an obstacle to advancing environmental health programmes goals designed to help improve the standard of living. To this end, one research participant commented:

> *"When counsellors interfere because they put their political interests first before the health of the people, they make your life miserable in such a way that you can't go to the community and work freely just because you are not in good terms with them. In such situations, you need to educate them and make them know and understand so as to make it easy to work hand in hand with them and the community"* (SDEHP03).

Kass (2001) has warned that a programme that is based on wrong assumptions is likely to fail, and thus it is important to obtain community consent before introducing it. It is thus important to know beforehand the possible constraints to implementing the intervention and community support is essential for the success of the programme. Findings have shown that EHPs in the study generally did not involve the community in handling complaints except in cases where the problem was communal and when they were ensuring the justification of a complaint. This approach tends to be an end of the pipe solution rather than a preventative measure.

Importance of justice in service delivery: Section 195(1) (d) of the South African Constitution Act, no. 108 of 1996 as amended underscores the importance of justice as it

provides that "services must be provided in an impartial, fair, equitable and unbiased manner". In terms of this requirement, the practice of justice is placed high in the delivery of services. John Rawls's 1971 *Theory of Justice,* revised 1999 edition, has in addressing the role and subject of justice, highlighted pertinent issues that need to be considered when addressing justice, namely: (i) justice is hard to address because there is dispute in the society about what is just and unjust; (ii) while people acknowledge having a need for basic rights, it is difficult to determine proper distribution of benefits and burdens; (iii) the absence of a clear system of managing competing claims is likely to frustrate legitimate expectations; (iv) it is therefore essential that a mechanism be developed to ensure that considering justice should not only be limited to the distribution role but other related issues need to also be considered, and (v) social justice requires the assessment of standards of distribution to see whether the structure and arrangements in place are efficient or lacking and whether these are just or unjust (Rawls, 1999, pp.3-9).

In addition to the above points, the practice of justice is further complicated by inequalities in society, which promote unequal treatment of people according to their socio-economic status. As a result, the poor is the group that suffers most compared to the rich group of people (Darr, 2007, p.29). Rawls's fairness of justice promotes "equality in the distribution of resources and avoiding unfairly treating those who are already poor" (Resnik, 2012, p.45). In environmental health practice, EHPs are caught in the complicated situation of exercising justice when addressing environmental health public complaints. They in particular, are given laws to enforce while the situation on the ground makes it hard to ensure equality as systems in place were designed to treat people according to the societal norms that promote inequality, which expose the poor to high environmental health hazards or levels pollution (Morello-Frosch et al., 2011). There is a higher likelihood of finding unreported poor waste management collection problems in the poor areas of a municipality, than one would find in the upmarket suburbs due to different lifestyles and sensitivity to environmental degrading factors (Poswa, 2001). Related to this factor, Resnik (2012, p.161) has also pointed out that: "socioeconomically disadvantaged people tend to face greater health risks than those who are well-to-do, due to the different affordability status between the two". For example, as pointed out in Chapter Four, from a business economic perspective, some business owners in the study area were trapped in poverty and could not afford to meet the business licence requirements as much as they would have liked to comply. However, EHPs when investigating such cases only had rules that provided the same standards for all business premises with no accommodation for such situations. This scenario highlights the fact that laws sometimes fall short in addressing the justice factor. It

would appear then that EHPs ought to consider other alternatives to address the situation. However, without being prepared for such eventualities, they would not be able to justify their actions.

All these aspects point to the importance of ethics in environmental health community intervention programmes, to assist EHPs in justifying their actions. EHPs need to be sensitised to the exercising of justice when investigating complaints which involve following the rules and serving notices for non-compliance as part of fulfilling their professional responsibilities. This approach is in line with the principles of moral reasoning that require practitioners to apply their minds and carefully choose the course of action, taking cognisance of how the community will be affected. Using the WD Ross theory of *"prima facie duties",* EHPs need to consider the best appropriate action in a given situation to inform their "practical judgement on competing issues", rather than merely enforcing the rules (Coughlin, 2008, p.3, Darr, 2007). Furthermore, EHPs need to value people's input towards finding a solution and encourage their participation, especially those affected by the actions. In this regard, they should avoid being judgmental, but instead examine the situation in an impartial manner to ensure that the correct processes are followed, thus fulfilling the requirements of procedural justice (Childress et al., 2002, pp.171-172, Purtilo, 1999, p.60). Procedural justice promotes the "use of fair procedures in decision-making", Resnik (2012, p70). In such situations EHPs need to consider all alternatives to ensure that their actions in solving the environmental problems minimise burdens. To this end, Kass (2001) asserts that professionals should first consider volunteering by community members and then gradually introduce the mandatory approach. This I believe would be effective in eliminating environmental health problems amongst communities.

Importance of consistency in service delivery*:* This factor also relates to the doing of justice from the context of equality. An important ethical consideration in evaluating environmental health community intervention programmes is acting in a consistent manner, by generally applying the same standards in similar situations (Horny, 2010). Acting consistently presents a challenge given that in practice, conditions are different. However, as Resnik (2012) asserts, consistency from an ethical perspective, is about treating situations that are similar in the same way, and being transparent about one's decisions. Consistency promotes fairness and avoiding discriminating against people in the course of doing one's work (Gampel, 2009).

Findings revealed that EHPs in as much as they tried to ensure fair treatment of the communities, reported that there were instances where they were being discriminated against by the members of the public, with some discrimination based on gender and some on their

nationality. This situation was more complicated as the guidelines often talk of practitioners not discriminating against the people they serve. It would seem that measures need to be taken to educate the public about the reciprocity of equal treatment. To this end, Rawls has highlighted that "the application of the principles of justice to society needs to consider the citizens' sense of justice". Accordingly, "citizens need to be enabled to manage their own affairs and made aware that they should be part of a social cooperation and should exercise mutual respect and embrace the principle of reciprocity" (Rawls, 1999, p.xv). Feris asserts that Rawls's theory factors in peoples' context as individuals and in groups, which makes it more relevant to examining equality as it relates to the environment (Feris, 2013, p.883). It is also relevant to the evaluation of environmental health programmes. A study on "understanding how health inequalities arise at local level" suggests that when dealing with health inequalities, more attention should be placed on contextualising the issues and investigating how to redress inequities (Frohlich and Abel, 2014). Contextualising situations could help EHPs to assess the merits of each case when evaluating intervention programmes, and then be able to take the most appropriate actions to distribute resources, given the past history of South Africa that reflects a divided society.

Competence of EHPs to handle ethical issues in service delivery: Literature documents the fact that the success of intervention programmes is dependent on its implementers. There is consensus on having competent staff members who have the know-how about the job, in terms of relevant training and experience. To this end, Kansas University, places the responsibility for training staff on handling complaints squarely on the employer (Rabinowitz, 2015). In addition, the training should, according to the Commonwealth Ombudsman of Australia (Commonwealth of Australia, 2009, pp.18-19), cover different levels of training, namely: (i) the first level of training should begin by the time the assignment is given: this training covers logistics and mechanisms to use in handling complaints and skilling the staff on best ways of handling the complaints; (ii) the next level prepares staff to better handle relationships with members of the public and the diverse methods to apply when faced with challenges in handling complaints; (iii) the next level of training involves report writing so as to prepare staff to correctly capture the information for easy processing in accordance with the set reporting guidelines and to enhance accountability; and (iv) forums should be established to expose staff to wider audiences for sharing experiences. This training could also lead to the writing of scientific reports to benchmark the best practices in seminars, conferences and other platforms in the industry. The Western Australia Ombudsman, has reiterated that training on complaint handling, promotes the processing of feedback and processing of data to identify common

occurrences and areas that need to be given priority as well as creating a responsive culture for public complaints (Ombudsman Western Australia, 2010).

Findings of this study have shown that this lacuna was one of the gaps in the municipality complaint management system. I believe that training on complaint handling would not only improve the delivery of environmental health services but could enhance confidence of EHPs and produce a complaint management system that embraces the scientific principles and contributes to the advancement of knowledge on environmental health service delivery. It would also be in line with the municipality responsibility to train its staff as Section 68 of the Local Government Municipal Systems Act, no. 32 of 2000 (Republic of South Africa, 2000a).

Summary: By considering environmental health practice, this study enables EHPs to consider gaps and impacts of programmes as well as how their conduct ought to change from merely chasing targets to ensuring quality service delivery. The addressing of ethical issues is important as it also brings another paradigm to the practice of environmental health: that of aligning actions with the advancement of the good of the people, while being conscious of the aspirations of the community in the pursuit of environmental health practice goals. This study challenges EHPs to think before acting and reflect as they act and then adjust in order to remain relevant and effective. It transpired that during the investigation of complaints, EHPs overlooked monitoring their own actions but focused more on meeting targets as given by their superiors. In this regard, some had not taken ownership of the programme the department required them to follow in carrying out their duties and regarded it as an approach unsuitable for environmental health as it emphasises the quantification of the complaints for statistical reporting rather than the long term impact of environmental health practice. Findings revealed that there was no training of EHPs on the rationale for the complaint investigating programme. EHPs were not encouraged to own the complaint management programme as a tool to assist them in improving the quality of environmental health services. It would seem that management took for granted that EHPs just needed to adopt and apply the programme. This stance is a gap that needed to be addressed as it might compromise accountability. Some EHPs as a result, ended up viewing the approach to complaints investigation as an interference[57] with the smooth

[57] Viewing a complaint management programme as interference with EHPs functions is indicative of ignorance about the statutory requirement of Section 18 of the National Health Act, 61 of 2003 which provides that service providers need to establish a complaint management system to be followed for lodging complaints. Moreover, investigation of public complaints is an integral part of EHPs monitoring responsibilities in terms of the National Norms and Standards for Premises and Acceptable Monitoring for Environmental Health Practitioners (2015) designed to strengthen the delivery of environmental health services.

running of the environmental health services as they could not balance doing routine inspections with the handling of complaints.

It then appeared that a mechanism was still needed to ensure that the good intentions of the complaints management system could be realised and equal weighting given to both complaints and routine inspections [which are mandatory functions per Section 82 of the National Health Act]. Thus, considering issues of quantity and quality, there was a need to also take into account the ethical implications of the programme. It is important to clarify roles of all parties in the management of complaints, including those of the community, the municipality and EHPs. In the case study, findings show that these roles were not explicit. When roles are clear, a collective approach can be adopted with everyone contributing to solving the problems.

7.2.2 Benchmarking Against Selected Studies Related to Environmental Health Practice

This study draws upon the work of others; hence this section briefly address the relationship of the findings to previous research that relates to some issues in the environmental health practice study. The study as discussed in Chapter Two (methodology), covered three areas, namely, the legal, professional and ethical practice aspects of environmental health. Most studies in environmental heath in South Africa however, address these issues individually and for this reason, I only refer to specific findings rather than the whole study to highlight how these studies relate to how my study findings contribute to the understanding of South African environmental health practice.

In Chapter Four, one of the key findings was the difficulty of ensuring uniformity in law enforcement by EHPs. This finding seems to be consistent with the findings of Versluis's (2007) study that reviewed the European laws for selected states, namely: the Netherlands, Germany and the United Kingdom. To that end, the study revealed that "whilst there were even laws, enforcement showed "uneven practices" on the ground [what they referred to as "the practical street-level implementation"], (Versluis, 2007) meaning that the laws did not match the provisions of the laws. Hence, the study recommended that more effort needed to be given to addressing the mechanisms of implementing rules. The suggested solution to the problem in my study was consistent with this same line of thinking, as I argue that having good laws is of no use if they cannot be effectively enforced. Hence, studies on evaluating effectiveness of enforcement measures need to be conducted on environmental health practice. Such studies would help in identifying gaps and challenges as has been the case in this study.

Another finding that my study has highlighted was the lack of competencies in law enforcement. The same pattern was echoed in a recent study in the Eastern Democratic Republic of Congo which evaluated the ability of health workers to handle victims of sexual violence. The Congo study found that the health workers had formal qualifications but in practice felt that they lacked "professional skills" they could use to confidently deal with the intricate issues of the victims. The researchers suggested retraining on the specific areas of need as a possible solution (Kaboru et al., 2015, pp.25-30). Likewise, my study has identified a gap in the EHPs' ability to enforce laws due to, amongst other reasons, the lack of practical competences to handle complicated law enforcement cases on the ground. Unlike the Congo study that highlighted the need for re-education, I have over and above suggested the establishment of a law enforcement infrastructure (environment with systems) to provide ongoing back-up services for EHPs in times of need.

In Chapter Five, I made recommendations on the importance of professionalism[58] in environmental health, particularly the need to receive professional training, and having a professional board to regulate the profession. The findings affirm that the same practices are followed by environmental health professions in the international arena. In this regard, the Victoria Government, in Australia has environmental health guidelines as is the case in South Africa that are gazetted, prescribing the training that qualifies an EHP and recognises the training of EHPs in South Africa, thus widening the scope of practice of EHPs (Victoria Government, 2013).In addressing the professional challenges of EHPs while carrying out their environmental health responsibilities, findings have attested to the fact that in practice EHPs are faced with numerous professional challenges. This finding was also confirmed by the study conducted in the USA by Ring (1996) which explored ethical problems of employees in the professional sector. Accordingly, that study stressed that unethical behaviour at work needs to be addressed, otherwise the organisation may suffer from a negative image or may lose some of its best employees. In my study it has been discovered that EHPs did not get cooperation from some business owners and political leaders, and experienced situations that pressurised them to contravene the rules they were meant to uphold. This finding is contrary to a study that investigated the effect of pressure exerted by stakeholders on industry for transparent reporting. According to that particular study findings, "the pressure of some groups of stakeholders [to be precise] clients [yielded positive results marked by] improved quality of [company] transparent reporting" (Fernandez-Feijoo et al., 2014, p.53). My conclusion from this situation could be

[58] A normative discussion of professionalism is presented in Chapter Three, section 3.2.2.

that, pressure from stakeholders is needed as long as it adds value and is done with the purpose of improving the delivery of services and gaining of public trust highlighted in stewardship model discussed under normative component [Chapter Three, section 3.2].

In my study results have shown that while EHPs favoured reporting misconduct, they were reluctant[59] to report to the HPCSA an EHP who contravened the professional rules for fear of them losing their jobs. This act is inconsistent with the professional and ethical rules governing health professionals in South Africa. The HPCSA General Guidelines for Healthcare Professions (Booklet 1) Rule 10.1 requires healthcare practitioners to "report violations and seek redress in circumstances where they have good or persuasive reason to believe that the rights of [clients] are being violated or where the conduct of the practitioner is unethical" (Health Professions Council of South Africa, 2008a, p.10). It would therefore be inappropriate for EHPs to refuse to report misconduct of their peers. In a related but different context applicable to the legal profession, a study by Abramson titled *"The Judge's Ethical Duty to Report Misconduct by Other Judges and Lawyers and its Effect on Judicial Independence"* has reiterated the "ethical duty to report to appropriate authority misconduct by a lawyer who has knowledge that another lawyer has committed an ethical violation" (Abramson, 1996, p.763). Accordingly, there is no exception to avoid reporting or disclosing possible misconduct by a practitioner. Abramson's study has warned that [in practice it happens at times that] where "the standards of the codes are unclear in their language, those affected may be] unwilling to apply them. Special efforts must be made to clarify them" (Abramson, 1996, p.783).

The EHPs situation goes beyond merely reporting, but instead requires the creation of a conductive environment that ensures the protection of those who have the courage to confront the perpetrators of unprofessional conduct. It is against this backdrop that I advocate for the establishment of a conducive environment with ethical infrastructure (systems and programmes) and support that would ensure that leadership show commitment to creating supportive environment for ethical practice in the workplaces as that is best practice embraced by both the World Health Organisation (World Health Organisation, 2006a) and the United Nations Ethics Office (2015). The difference with my study is that the problem is more complex as it needs to be approached holistically by introducing an ethical culture within environmental health practice, given that ethics has not been prioritised in the profession in South Africa in the past.

[59] In section 5.6.2 results show that EHPs supported the reporting of misconduct of EHPs; however precautions need to be taken to verify the authenticity of the case in question. Some who were reluctant to report cases of misconduct felt that such a step would lead to the expulsion of their colleagues.

In Chapter Six, I found that the ethical culture within the environmental health workplace was marked by absence of ethical guidelines for environmental health. Nevertheless, EHPs as public servants, are expected in terms of the Constitution of the Republic of South Africa, Section 195(1)(a) to "uphold a high standard of professional ethics" in the course of providing services to the public (Republic of South Africa, 1996b). I have observed from the findings that as a result of this lacuna, EHPs on the ground have resorted to using their own discretion when resolving ethical issues and that has been identified as a contributing to the widening of differences of approach. Moreover, I believe that this practice has the potential of creating an environment not conducive to valuing ethical practice. In their study on ethics in occupational health, London et al. (2014) found that having ethical guidelines is important in a workplace as they help professionals to balance power accorded to them in their professional capacity with their individual autonomy when serving the public. These authors have also reiterated the fact that the presence of an ethical guide serves as a deterrent for engaging in wrongful acts (London et al., 2014). It appears that my study finding and advocacy for having an ethical guide in the environmental health workplace is consistent with practices in other related professions as is the case in the occupational health profession. Moreover, the study on morals in business organisations by Ruiz Palomino et al. (2011) also recommended that having a proper "ethical management system" is even better as it boosts the morals in organisations and the realisation of a good ethical culture which in turn improves the image and credibility of an organisation (Ruiz Palomino et al., 2011, p.16).

My study findings cut across three major aspects of environmental health, namely, the legal, professional and ethical practices. This approach makes the study unique in its totality and the fact that it involves both approaches: *first*, the normative approach which seeks to articulate the ideals in the work of EHPs primarily through documentary analysis to determine the policy and regulatory provisions of environmental health [primarily Chapter Three]; and *second*, it employs an empirical approach to gather views of EHPs on their actual experiences on the ground. This combination is a strength that balances the ideals aspired to in the policy guidelines and other regulatory directives with the realities on the ground which are determinants of the implementation mechanisms.

There are various qualitative studies that touch on environmental health ethics in other parts of the world. Examples include Rogers' (2004) Scottish study on ethical issues in public health, Baun et. Al's (2009) study in Michigan on ethical issues in the public health practice, McGrath et. Al's (2009) study on community ethical review of environmental health research, and Scammell's (2010) comprehensive literature analysis of qualitative environmental health

research between 1991-2008, and a London based study on perception of EHOs [Environmental Health officers[60]]' understanding of the scope of their professional roles and pertinent approaches to environmental health practice (Reynolds and Wills, 2012) which concluded that EHOs were primarily aware of legislation and had little understanding of other important approaches to environmental health practice. Apart from these studies, to the best of my knowledge there are no similar environmental health practice studies in South Africa.

Environmental health research studies [that address selective key components of the scope of practice of EHPs] in South Africa which are available in the public domain, have been conducted mainly through literature analysis of the environmental health practice. Examples of such studies include work on environmental health services (Mattee et al., 1999), Agenbag and Balfour's (2008) research which mapped the developments in the environmental health services delivery post democratic government, and Balfour's (2013) study that addressed the Municipal Health Service (MHS) challenges and opportunities which are very much related to environmental health practice and an integral part of the scope of environmental health services. Balfour touched on challenges that are still prevalent in municipalities, particularly "inadequate support" for these services (Balfour, 2013, p.10). In 2014, Mathee and Wright (2014) addressed the latest developments and scope of environmental health in South Africa. Even the most recent environmental health research by a team of researchers was a review of bibliometric trends of the South African indexed based environmental health articles between 1998 and 2015 (Wright et al., 2017). This South African study determined the nature of challenges in searching published original, peer-reviewed and review environmental health research articles so as to contribute towards improving visibility and retrievablity of local environmental health research.

All these studies however, did not address the ethical component of environmental health practice; nor did they determined the experiences of EHPs on the ground. These factors make my study unique in the South African context and thus provide some insights into the practitioners' perspectives of the legal, professional and ethical aspects of the environmental health practice. Implications of the findings from the environmental health practice, are discussed in the next section.

[60] EHO is the similar name of EHPs which is still used in environmental health profession in other parts of the world as indicated in Chapter One.

7.3 IMPLICATIONS OF THE FINDINGS

This section presents the implications that emanate from the findings of the study. These pertain to three stakeholders, namely the metropolitan municipality (referred to as "the municipality") which was used as a case study; the professional board of EHPs in South Africa (referred to as "the professional board") as the vanguard for the environmental health profession in South Africa and the training institutions offering environmental health qualification in South Africa as producers of EHPs. The term implication in the context of this study and as used in this section indicates that the finding or issue raised would require action of the party concerned or might have either a positive effect if attended to or negative undesired effects if ignored.

7.3.1 Implications for the Municipal Environmental Health Services

There are two pertinent issues with implications to the delivery of municipal health services.

7.3.1.1 Implication pertaining to law enforcement

Environmental health practice is largely driven by law enforcement as shown in Chapter Four: the legal responsibilities of EHPs. Findings have shown that law enforcement in the municipality was an area that required attention as EHPs were experiencing a myriad of challenges, primarily in ensuring consistency in applying the laws to the different communities [Chapter Four, section 4.6.1]. In this regard, first, in the city centre non-compliance was due to the refusal of businesses to obey instructions, and their questioning the credibility of the municipal laws. Hence, they resorted to tactics that the University of Stellenbosch Centre for Corporate Government in Africa, refers to as the "manipulation of the regulatory system for personal reasons" (Center for Corporate Governance in Africa (USB), 2014, p.27). Such a situation had ethical connotations in that it puts pressure on the EHPs and unduly subjected them to ethical distress as they were hindered from fulfilling their mandated duties.

Second, the semi-rural and township environmental health challenges, were centred on denial of knowing the requirements stipulated in the laws by both residents and business owners. Accordingly, the basis of their claims was that in their areas, they previously practised without restrictions imposed on the running of businesses or the lifestyles they led. While I cannot rule out that such denials were used as excuses, measures need to be taken to improve law enforcement within the environmental health section of the case study municipality, taking into consideration the realities on the ground. Given that the issues the EHPs encountered were

in most cases not provided for in the municipal laws, it would seem appropriate for the municipality to reconsider its approach and revisit the law enforcement implementation mechanisms. Such a review should ideally focus on creating awareness of the communities and the business sector (through education campaigns) highlighting (i) the importance of compliance, (ii) the value that compliance adds to the quality of life and business operations, as well as (iii) the rationale behind law enforcement. Such mechanisms should accommodate conditions on the ground that could not be addressed by the laws in their current form but required different approaches.

It would seem that the prevailing conditions suggest the initiation of legal enforcement change in the environmental health section of the municipality. Such a change should ensure the ongoing retraining of EHPs on effective law enforcement mechanisms. In this regard, EHPs could be capacitated to determine the underlying causes and seek "objective measures" that do not only address the current challenges, but also prevent future recurrences (Adler, 2011, p.139). Moreover, these changes should embrace the "Batho Pele" principles on the transformation of service delivery in South Africa (Republic of South Africa, 1997). Such principles were designed to create an environment where service delivery is characterised by cooperation between the service providers and the communities. In this regard, the municipality needs to strive for a balance between having an enforcement infrastructure with enforceable laws and cooperative, actively participating, well-informed communities that freely raise their views. Such a situation would have a mutually beneficial climate where both the municipality and the communities (including the business sector) are willing to receive feedback. This "give and take" situation would hopefully result in an effective law enforcement environment.

7.3.1.2 Implication pertaining to the safety of EHPs whilst carrying out duties

Another implication of the findings to the municipality, is coming-up with a mechanism that would address the safety of EHPs while they carry out their duties. This matter has been identified as yet another thorny issue to contend with, and seems to require urgent attention as it poses risks to EHPs[61] and a threat to the municipality for fair and satisfactory environmental health services. EHPs' feelings of being unsafe could be a demotivating factor and a reason to exclude communities identified as unsafe to visit. This same issue is linked to law enforcement but calls for the taking of even more serious measures. It would seem prudent for the

[61] The safety of EHPs while conducting their inspections is one of the identified grey issues discussed in Chapter Six, section 6.5.1.5

municipality to not only be concerned about operational issues where EHPs are placed and resourced to perform by meeting the set targets, but to also ensure the security of EHPs. As much as this issue might not have been provided for in the normal conditions of service, it is a constitutional right enshrined in the Constitution of the Republic of South Africa, Act no. 108 of 1996 as amended. In this regard, Section 12(1)(c) read with Section 21 (1) provide for the freedom and security rights of persons, by stating:

"Everyone has the right to freedom and security of the person, which includes to be free from all forms of violence from the public or private sources" and, that "Everyone has the right to freedom of movement".

It would then appear mandatory for the municipality to provide for the safety of EHPs to freely move around without threats of violence of any form by members of the public. Furthermore, the review of the environmental health service programme would be in line with the provisions of section 77 of the Municipal Systems Act, no. 32 of 2000 (Republic of South Africa, 2000a). In addition, section 78(1) (a)(i) stipulates that the municipality should when "reviewing its existing mechanisms, assess how the mechanism addresses the "wellbeing and safety" aspects (in this case of its employees – the EHPs), thus realising the ideals of this Act: namely "creation of a harmonious relationship between municipality structures and local communities", [marked by a commitment] to recognise and respect each other's rights and duties".

The two examples of key implications of the findings to the municipality, appear to necessitate the taking of steps to improve approaches to the practice of environmental health, particularly in relation to education of law enforcement and the safety of EHPs in those areas identified to pose dangers and hamper the carrying out of their duties. I regard this exercise as of paramount importance to the practice of EHPs and the provision of a working environment conducive to supporting EHPs.

7.3.2 Implications to the HPCSA Professional Board of Environmental Health Practitioners in South Africa

Findings captured in Chapter Four on the mandates of EHPs have indicated that the Professional Board of EHPs was established to, amongst others tasks, accredit and continually monitor the quality of environmental health education and training. This requirement involves

balancing theory and practice[62] which is best achieved when EHPs on the ground play an active role in the training of EHPs. To this end, by implication, the professional board is expected to facilitate such engagement of EHPs in the training programmes, so as to influence the environmental health curriculum[63]. Hence, since this study addresses the practices of EHPs on the ground, the Professional Board of EHPs is seen as a key stakeholder that needs to play a leading role in ensuring the balancing of theory and practice.

In Chapter Five which addressed the environmental health professional practice in South Africa, findings revealed that the professional board has a significant role to play in the professionalisation[64] of EHPs.

7.3.2.1 Implication pertaining to the task of establishing professional standards

The professional board needs to address the grey areas regarding the clarity of roles and responsibilities, for instance:

(1) Who in practice, is responsible to see to it that EHPs uphold and obey the professional rules? Is it the employer (the municipality) or the Professional Board of EHPs?

(2) And how is this responsibility ensured?

I believe that as much as this task might appear easy on paper, without any clear mechanisms to conscientise and evaluate effectiveness, the rules will remain on paper, while the practice will continue to fail to match the ideals in the HPCSA professional guidelines Booklet 2, annexure 4 that state that *"EHPs should adhere to the rules of conduct"* (Health Professions Council of South Africa, 2008b, p.29).

[62] I have developed a proposed model for strengthening the balance of theory and practice in environmental in South Africa in Chapter Eight, section 8.5

[63] More details on what the curriculum of environmental health ought to cover is stated in Chapter Three, section 3.2.3.

[64] Chapter Three, section 3.2.2 provides a normative context of professionalism of EHPs which dovetails with the content of Chapter Five.

7.3.2.2 Implication pertaining to creating a Code of Ethics of Environmental Health

A profession is in terms of professionalism supposed to have a *"creed"*[65] or a declaration of beliefs and pledging of commitment to uphold professional standards. This is normally included in the code of ethics. However, this study has found that, there was no established code of ethics for the environmental health profession in South Africa. This places a challenge on the Professional Board of Environmental Health Practitioners to address this issue as it may be a measure of unity amongst EHPs and contribute to the improvement of their professionalism. [Refer to Chapter Eight section 8.2.2.2].

7.3.2.3 Clarity pertaining to dual role of serving as both a professional board member and executive member of professional association

One of the findings on the ground was that there was a feeling that some EHPs needed clarity of roles between serving as a professional board member and simultaneously serving on the executive of the professional association. This dual role was construed as sending confusing messages to EHPs on the ground. It raised the question whether such dual roles do not result in conflicts of interest which may cause bias towards promoting the professional association's interests, thus disadvantaging those EHPs who are not members of the professional association. This matter needs to be addressed by the Professional Board of EHPs as part of building its image and enhancing the trust of all EHPs.

7.3.2.4 Better engagement of the professional board and the EHPs community

Findings of this study also indicated that EHPs expected active engagement of the professional board with EHPs on the ground, which they felt was lacking. It would appear that EHPs needed the professional board with which they could exchange ideas, and have confidence that it is serious about addressing their professional needs. Literature has shown that a good relationship between the practitioners and the professional body is an important

[65] Creed is commonly referred to as the statement of commitment usually made at graduation ceremonies by medical schools. This practice has a long history and dates back over 2400 years as pointed out in Hulkower's (2016) paper titled "The history of Hippocratic Oath: Outdated, inauthentic, and Yet Still Relevant". This commitment has endured the challenges of the times and is still relevant to contemporary professionals. Other authors like Merritt (2016) have shared the same view and have pointed out for instance in the paper "Hippocrates and Socrates: professional Obligations to Educate the Next Generation" that even in the Law profession, there is a gap in terms of using the Hippocratic oath, yet there is a need to draw professionals' attention to putting their self-interests first over the common practice of stressing their duties and the interests of the society. It is also amongst these reasons that in Chapter Eight I recommend the need for a creed for the Environmental Health profession in South Africa [See section 8.2.2.2].

prerequisite for a successful profession (Bond, 2015). This requirement appears to suggest that the professional board needs to revisit its engagement strategy and take measures to build the confidence of EHPs on the ground and improve the professionalism of environmental health. This strategy might address the fears of EHPs regarding reporting of EHP misconduct or impairment to the professional board as required by the rules.

7.3.2.5 Mechanism for handling inter-professional issues

The Professional Board of EHPs needs to address the inter-professional issue as findings revealed that EHPs on the ground were complaining of being undermined by other professionals in the workplace. This matter requires the professional board to devise a strategy for how EHPs can work with other professionals and maintain their integrity as provided for in the Health Professions Act, no. 56 of 1974 as amended. This Act provides in Section 3(b) that:

"the Health Professions Council of South Africa (HPCSA) is responsible for promoting and regulating interprofessional liaison between health professions in the interest of the public" (Republic of South Africa, 2007a).

However, it seems that there is no strategy in place that the Professional Board of EHPs uses to address the inter-professional issues in practice. Hence when EHPs encounter challenges involving other professionals they do not get assistance when they approach the professional board. Thus, while the HPCSA rules restrict EHPs to doing what they are educated and trained to do, other non-EHP professions do not respect such restrictions as per findings of this study. This situation happens notwithstanding the fact that professionals are team players amongst other professionals. EHPs should therefore be respected as people who have "the most relevant knowledge" (Purtilo, 1999, p.77) on environmental health discipline, and that knowledge gives them the authority to decide and provide guidance on environmental health practice issues over other professionals who are not vested with such special knowledge.

7.3.2.6 Mechanism for addressing challenges of female EHPs

One other finding of this study was that there were more female EHPs in the case study than male EHPs (Figure 2.8). When these were compared to the national HPCSA database of registered EHPs, trends showed that the environmental health profession demographics have changed since 2011 to have female EHPs in the majority as depicted in Figure 7.1.

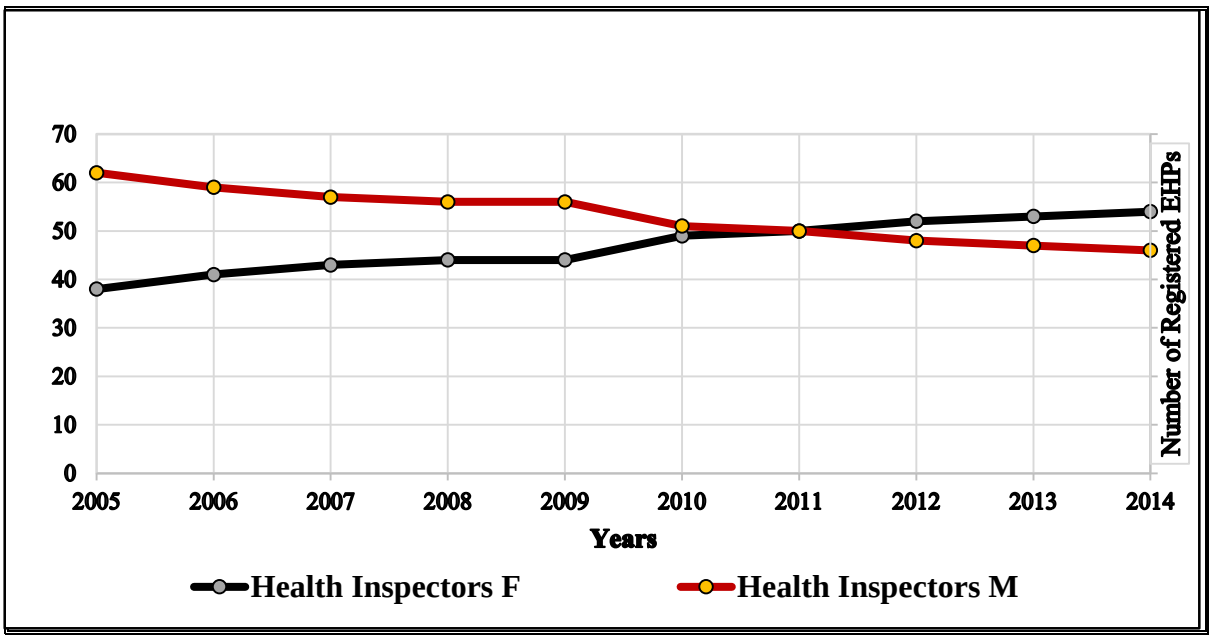


Figure 7.1: The changing profile of EHPs in South Africa: A 10 year contrast of male and female HPCSA registered practising Environmental Health Practitioners [HPCSA database still refers to EHPs as Health Inspectors] Source: Graph drawn based on HPCSA statistics of health inspectors and student inspectors.

Figure 7.1 shows the changing profile, in percentages, of environmental health practitioners over a 10 year period in South Africa, with females dominating the profession amongst practising Environmental Health Practitioners. Males initially dominated the profession and females ended up in the lead from 2012.

It also emerged from the case study area that while the demographics are changing, the female EHPs were being discriminated against in some areas where they practised. This finding appears to send a message to the professional board that there is a need to campaign for gender balanced workplaces and the development of mechanisms that address the unique needs of female EHPs. This approach could start at the professional training level since the student EHP population is showing the same trends.

7.3.3 Implications to the Training Institutions Offering Environmental Health Programmes in South Africa

Findings revealed that EHPs on the ground kept referring to the training institutions as having contributed to the inability of newly qualified EHPs to be readily integrated into practice in the field. This situation suggested that there is need for closer working relationships between the training institutions and the practitioners in their workplaces. It appears that over and above

what the environmental health curricula provide, a tailor-made "ready to work programme" needs to be considered and preferably with active engagement of both the practitioners and final year EHPs students before completing their training. Such a step would ideally impart the needed competencies for balancing theory and practice with key involvement of the practitioners and the academics[66].

7.4 INTERPRETATIONS ON HOW FINDINGS MATCHED THE STUDY ASSUMPTIONS

I had two assumptions for this study whose detailed outcome are presented below:

7.4.1 Assumption 1: Relating to Knowledge of Legislation

Assumption 1:- I assumed that EHPs in South Africa are generally aware of their legislative mandates; however, in practice, there is insufficient guidance of EHPs on fulfilling their professional and ethical responsibilities.

This assumption covers two aspects: namely, the general knowledge of the EHP about their mandates as provided for in the law and the application of knowledge from a professional context and ethical perspective.

First, from a general knowledge point of view, the findings based on the responses of research participants in Chapter Four showed that to some extent my assumption was correct, in that EHPs who were interviewed were aware of their legal responsibilities. The majority had no difficulty in providing detailed descriptions of the legislation applicable to environmental health practice, even though they were not forewarned about the questions. It was only in instances where specialist knowledge was needed, that some EHPs were not aware of applicable or repealed legislation. This ignorance could be ascribed to the specialisation in the municipality carried out by a special group of EHPs for example, those involved with air pollution. Even with specialist legislation like the National Environmental Management Act (NEMA), nearly 70% of participating EHPs regarded this legislation as a key legal tool they used in their practice, notwithstanding the fact that NEMA is only enforced by the specially appointed persons who ought to have technical knowledge in the areas of operation. I therefore, concluded that, the emphasis on legislation in environmental health practice contributed to the EHPs' knowledge of legislation. I suggest that such general knowledge needs to be backed-up by

[66] More details are shared in Chapter Eight on the recommendations for addressing ethical education of EHPs and the model for balancing theory and practice of environmental health.

training to ensure that EHPs understand the context of the legislation and the spirit behind the laws so as to be able to apply them in context.

Second, in viewing EHPs' knowledge of legislation from a professional practice and ethical perspective, I have observed that the environmental health practice was a highly regulated area in the municipality, particularly, the handling of public complaints. This task required EHPs to rely on the prescripts of the law with little consideration of alternative approaches. Hence, they seemed to find it hard to handle situations where law could not be applied or does not provide for the specific situation. It appeared that EHPs tended to follow instructions by ensuring that they complied rather than internalising and taking ownership for administering the laws. In this regard, it is important to realise that a disjuncture between management and the law enforcement team on the ground, is likely to occur and should be well managed to prevent negative effects. I here concur with Heimer's (2012) observation that management should "devise proper mechanisms to prioritise competing claims rather than focusing on trying to keep activities within the mandated bounds". They should also not "rely on individual habits as these can be misleading when some do the work merely to please the managers rather than internalising the issues" (Heimer, 2012, p.18).

I therefore, concluded that, knowing the law and applying its contents is good professional conduct and findings showed that EHPs were engaging in such conduct. However, precautions should be taken to ensure that EHPs genuinely act to uphold professional standards and not out of a mere allegiance to the authorities.

7.4.2 Assumption 2: Relating to the Likelihood of Acting Unethically

Assumption 2:- I have also assumed that EHPs are likely to be exposed to conditions which would increase the likelihood of them being exposed to conditions that would increase the likelihood of acting in ways that infringe ethical principles in the course of carrying out their duties. Should that kind of behaviour happen, it might compromise the carrying out of services in a fair, impartial and professional manner.

This assumption pertains to the professional ethical conduct of EHPs during their practice. It was prompted by the absence of reported EHP misconduct cases in the South African public domain[67], unlike with medical practitioners. Medical practitioners, for instance, when found

[67] Refer to more details on last part of section 7.1 of this chapter about the findings of study by Nortjé, N. & Hoffmann, W. 2016. Seven year overview (2007–2013) of ethical transgressions by registered healthcare professionals in South Africa. *Health SA Gesondheid,* 21**,** 46-53.

guilty of contravening their professional standards are charged or disciplined on the basis of committing unprofessional acts as per the HPCSA guilty conviction records (Health Professions Council of South Africa, 2015c). I wanted to determine what really happen to EHPs on the ground and whether they also encounter situations that pressure them to compromise their professional standards.

Findings showed that EHPs do encounter situations that pressurise them to act contrary to their professional standards. It also emerged that there are instances, particularly in the issuing of business licensing, when EHPs are pressurised by business owners who want to be given permits even though they have not met the minimum requirements for the issuing of a licence.

I concluded that the nature of EHPs' work exposes them to opportunities that subject them to temptations to commit unprofessional acts like accepting bribes and even running the risk of "falsifying information" (Mayor, 2015, United States Nuclear Regulatory Commission, 2013). The situation could be exacerbated by the absence of ethics infrastructure in their workplaces, which is likely to contribute to their failure to identify and report incidents where they see an EHP committing unprofessional acts. It is therefore important that EHPs be given support that involves training on anti-corruption measures and do not need to merely rely on personal morality that might not be able to withstand the challenges they face.

7.5 SUMMARY OF THE CHAPTER

This chapter highlighted the challenge of combining the legal, professional and ethical aspects of EHPs into one study given that there were no such similar studies previously conducted in South Africa. Studies commissioned elsewhere treat these areas separately. Ethics, in particular in environmental health in South Africa has not been researched, if done not in the public domain. This study has contributed to broadening the environmental health knowledge. Notably, by conducting this study, EHPs were afforded an opportunity to reflect on their practice. Moreover, the study created awareness about ethical issues in the practice of environmental health.

In benchmarking this study against selected related studies in environmental health, findings revealed that law enforcement is an area that poses challenges in having effective mechanisms of implementation. As much as EHPs have received professional training there are instances where they lack skills to confidently deal with difficult situations. The study has also discovered that while EHPs support the reporting of unprofessional conduct, there has been reluctance to engage in this practice for fear that fellow EHPs might lose their jobs. This situation is indicative

of a lack of protection for willing whistle blowers. It was also noted that there was no implementation of ethical guidelines in the EHPs' workplaces nor conduction of regular EHP ethics training. The situation is exacerbated by the absence of a code of ethics for EHPs.

A mechanism to handle the safety of EHPs while conducting their duties was found to be non-existent. Thus the protection of EHPs against harm by community members remained a challenge. The Professional Board of EHPs has the task of addressing the dual role of having members who serve on both the Professional Board and simultaneously hold executive positions in their professional association. Moreover, the Board needs to devise a strategy to handle inter-professional issues where EHPs are in conflict with other professionals.

CHAPTER EIGHT

CONCLUSIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

This study has addressed environmental health practice in South Africa, namely, the legal, professional and ethical responsibilities of environmental health practitioners (EHPs) and related challenges they experience. Detailed presentation of the findings was covered in Chapters Four to Seven. Chapter Four dealt with the EHPs' legal mandates and enforcement of laws; Chapter Five addressed the professional dimensions of EHPs mapping out how the environmental health professionals fit within the professional framework in South Africa. This chapter also covered essential elements of environmental health professionalism and related challenges in practice, and lastly, Chapter Six focused on the ethical component of environmental health practice in the South African context. The general EHP challenges relating to the carrying out of environmental health inspections and the handling of public complaints was addressed in Chapter Seven together with the major implications of the findings for the municipality and the profession at large.

In this section of this chapter focus is on addressing the summary of findings outlined in the previous chapters from the context of the objectives of this study which were:

(1) To articulate the ideal in terms of the fulfilment of the professional, ethical and legal responsibilities of environmental health practitioners in South Africa.

(2) To explore the awareness and understanding among environmental health practitioners regarding their professional, ethical and legal responsibilities in practice, using eThekwini Metropolitan municipality as a case study.

(3) To examine challenges facing EHPs in fulfilling their role responsibilities as found in the case study**.**

(4) To normatively compare the ideal versus the reality on the ground to identify shortcomings.

The final envisaged practical outcome of the study was: to formulate recommendations aimed at addressing identified shortcomings and challenges faced by EHPs in the fulfilment of their role responsibilities.

8.2 CONCLUSIONS

8.2.1 Conclusions on the Legal Dimensions of Environmental Health Practice

Environmental health is one of the professions listed in and governed by the Health Professions Act no. 56 of 1974 as amended and is regulated by the Health Professions Council of South Africa. Furthermore, environmental health practice is a mandated activity articulated in a number of regulatory guidelines in South Africa. The primary law influencing these guidelines is the Constitution of the Republic of South Africa Act, no. 108 of 1996 as amended, which provides for the right of persons to a "safe environment free of harmful factors to their health and wellbeing" and also incorporates values that require upholding of professional ethics in the rendering of public services. Second to this law, is the National Health Act, no. 61 of 2003 as amended, which provides for the appointment, defining of powers and the scope of practice of EHPs as well as procedures they need to follow when carrying out their mandated duties in South Africa.

It should be noted that the National Health Amendment Act (2013) stipulates that EHPs need to be registered with their Professional Board, and be trained and appointed as Peace Officers, thus permitting them to apply criminal procedures including the serving of summons and warrants of arrest accompanied by a Police Officer. This legal requirement affirms the importance for law enforcement in environmental health practice. Moreover, one cannot rule out the likelihood of the impression being created among EHPs that laws are the main tools to rely on and that other alternatives can be disregarded. Should this situation happen, it is highly likely that EHPs would be rendered incompetent to handle issues not provided for in the laws.

For this reason, advocacy for giving ethical practice in environmental health, equal attention accorded to law enforcement, is paramount to balance the application of law with other measures. This approach would require the equipping of EHPs to understand the relationship between law and ethics. The two are essential and both serve the purpose of guiding people on acceptable and unacceptable conduct (World Health Organisation, 2015c, pp.10-11). Law in particular, imposes restrictions of actions with the expectation that the rules should be obeyed. Conversely, ethics is concerned with the application of justice in applying the law; the understanding of the rationale behind obeying the law as well as seeing to it that the restrictions imposed by law are fair, and are not "unreasonable" or "discriminatory" (Darr, 2007, pp.5-7, Starr, 1984, World Health Organisation, 2015c). Hence, training in law enforcement is essential.

I therefore conclude that the legal aspects of environmental health practice in South Africa provide a framework for EHPs' law enforcement responsibilities and cater for the delineation of EHPs' expected legal duties. Institutional support is required for addressing challenges EHPs face in enforcing laws on the ground, while needing to be sensitive to people's rights, understanding reasons for compliance and non-compliance, and advancing justice. It would appear that such support should focus on preparing EHPs to balance law enforcement with promoting ethical conduct. EHPs should ideally be equipped to handle issues not provided for in the law. This requirement is important given that EHPs deal with a number of laws that have a diverse scope of application. Hence, the review of the laws to streamline them to help EHPs easily choose the most appropriate laws in addressing situations, is essential. Best practices in the municipalities on what works best should be used as benchmarks, (for example the eThekwini metropolitan municipality has Standard Operating Procedures (SOPs) that serve as guidelines with a checklist of things to consider when conducting inspections in order to standardise the practice). The review where applicable, should include education of the public on the value of compliance for meeting their environmental health needs and the importance of their cooperation with the municipality officials for achieving the common good.

8.2.2 Conclusions on the Professional Dimensions of Environmental Health Practice

The professionalism of environmental health in South Africa is discussed in Chapter Five. Basically, environmental health professional practice is regulated by the Health Professions Council of South Africa through the Professional Board of EHPs. It has five essentials that distinguish EHPs as professionals:

First, to qualify to be an EHP, one must undergo specific EHP training conducted at and by HPCSA accredited training institutions.

Second, all EHPs have to be registered on the professional register of EHPs, starting from the time they enrol as students, during their training and at the completion of the training before practising as independent environmental health practitioners [See the genesis of EHPs in South Africa Annexure 9 and the model being proposed in this thesis in Table 8.1].

Third, EHPs operate within the scope of the environmental health profession promulgated in the Government Gazette. There are also standards that guide practice - particularly engagement with the various stakeholders on the ground.

Fourth, EHPs must, according to the HPCSA professional rules, only practise what they have been trained and educated to practise (Health Professions Council of South Africa, 2014a).

Fifth, EHPs are expected to undergo continual professional development (CPD) to keep themselves up-to-date and maintain their competences as EHPs.

In my case study the assessment of the practice of environmental health on the ground, has shown that generally EHPs have a good understanding of what is expected of them in terms of training, registration and obeying the professional rules. However, some EHPs raised concerns that the professional board role was not sufficiently visible in handling EHP affairs and being there when they needed help. The younger EHPs in particular, expressed unhappiness with the seemingly lack of active engagement of the professional board with EHPs on the ground. In this regard, the impression has been created that the professional board is only interested in their annual professional fees and not in addressing their professional needs. Otherwise, apart from these concerns, EHPs valued being registered members of the environmental health profession. [See Figure 5.4 for statements EHPs gave as reasons for proudly being members of the professional board].

EHPs experienced challenges that ranged from being exploited by members of the public and the business sector and in some instances by management, forcing them to engage in activities beyond the scope of environmental health. Such acts resulted in EHPs committing unprofessional conduct, as they acted on issues for which they were not competent. Furthermore, EHPs experienced reluctance to report to the professional board as well as to their employers, cases of impairment or fellow colleagues who acted unprofessionally for fear that their colleagues might lose their jobs. Failure or refusal to report unprofessional conduct is construed in this thesis as an inappropriate conduct: contrary to the expected behaviour of upholding professional rules by all healthcare professionals in South Africa. Thus is condemned as an unacceptable for promoting professionalism of EHPs.

I then concluded that while EHPs are proud members of the environmental health profession, the professional board communication strategy with EHPs is weak and needs to be strengthened for better engagement of the professional board with the EHPs. The respective roles of the professional board and the employer, in terms of who is responsible for ensuring that EHPs uphold their professional rules when carrying out their duties, is unclear and needs to be addressed.

8.2.3 Conclusions on the Ethical Dimensions of Environmental Health Practice

Chapter Six was devoted to addressing the ethical practice aspects of environmental health in South Africa. The ethical practice of environmental health is governed by the generic HPCSA

ethical guidelines designed for all health practitioners in South Africa. Ideally, each profession develops its own code of ethics that specifically address the profession's unique ethical practice needs. However, the environmental health profession does not yet have its own code of ethics. For this reason, it relies on the generic HPCSA professional ethics guidelines. The challenge therein is that the HPCSA generic ethical rules are biased towards medical practitioners as they tend to emphasise the patient-doctor relationship. Thus, EHPs need to contextualise these rules to suit their own situation, and that is not without challenges. Without a specific ethics programme for environmental health, there seems to be no dedicated ethics training to promote ethical discourse and equip EHPs with ethical strategies to use when carrying out their duties.

Findings from this study revealed that the practising EHPs only appeared to have a general knowledge of ethics and spoke from their personal interpretations and experiences, with no knowledge of the ethics practice position of the environmental health profession. It also emerged that the municipal environment where EHPs practiced had no ethics support programmes and no dedicated ethics personnel to address ethics needs within the workplace. Thus, EHPs had no option, but to rely on using their own discretion when encountering complicated situations that could not be resolved through means other than those provided for in the regulations, but would require employing ethical solutions to guide decision-making.

EHPs experienced ethical challenges that involved discrimination against female EHPs which precluded them from carrying out their duties, thereby depriving them of the right to enjoy equal treatment. Some problems involved situations where it was difficult to decide on environmental issues because the managers were non-EHPs, and by right could not handle a technical environmental health issue for which they lacked the professional competency.

I concluded that the absence of an environmental health code of ethics in South Africa has created the impression amongst EHPs that while they perceived ethics as important, the lack of competencies to handle ethics specific issues, was a challenge to ethical practice. This challenge is exacerbated by the absence of ethics support programmes and ethics coordinating structures, as well as ethics training for EHPs in the workplaces. Such situations expose EHPs to the risk of committing unethical conduct and render them incompetent to identify ethical issues and reluctant to act on unethical behaviour. It would seem prudent to advocate for the establishment of an ethics infrastructure within the workplaces that has strong leadership backing; dedicated ethics coordinating structures and programmes to promote ethics practice. The professional board of EHPs is better positioned to lead the establishment of an ethics culture within the environmental health profession in South Africa. Properly designed ethics training to equip

EHPs about the techniques of handling ethical issues ought to be conducted. Ethics training is important to educate EHPs about associated "corruption risks" they are likely to encounter in the course of carrying out their professional duties. This strategy is in line with international best practices that identified ethics training of public officials backed by established properly coordinated ethics programmes as key to "building integrity of organisations and good governance" (Organisation for Economic Cooperation and Development (OECD), 2013, p.7).

8.3 LIMITATIONS OF THE STUDY

This study was located within a qualitative research paradigm and employed two methods of data collection. It first used a normative inquiry to first, examine the ideals in terms of legal, professional and ethical responsibilities of EHPs in South Africa., This inquiry, identified areas that currently lack sufficient oversight and guidance as well as proposed interventions or solutions to rectify the identified shortcomings and challenges faced by EHPs in the fulfilment of their responsibilities. The normative information applies to the environmental profession as a whole. It could thus, be applied to South Africa at large.

The second part of the study pertained to the use of a case study in a metropolitan municipality. This empirical component involved interviewing 35 practising environmental health practitioners to explore their understanding and knowledge of environmental health practice. The focus was on determining whether the actual experiences on the ground matched the ideals that are found in the general policy and regulatory guidelines identified in the normative component of the study. The information gathered here was limited to the case study area and, while it may be applicable to other parts of South Africa, in terms of the non-probability nature of the sample, the findings cannot be generalised to the broader population of EHPs in South Africa.

The scope of the study was too broad to cover all three aspects of environmental health practice and I realised that I was rather too ambitious as the three areas are very comprehensive and require that they be treated separately. The current approach of focusing only on the practising EHPs was adopted due to the absence of a similar study and information on the areas addressed. In future studies, it would be beneficial to also include more affected personnel involved in environmental health like the non-EHP senior managers and some members of the public to get external views on how they perceive the performance of environmental health practice.

The information gathered in this study, while it might be limited in application is of critical importance to environmental health practice in South Africa and could be used towards improving policymaking and integrated within the curricula of environmental health training and by any other interested parties. It is intended to inform and educate about how environmental health practice plays out in South Africa. I made every effort to remain objective and minimised any bias and accurately report findings in accordance with the study objective.

Despite these limitations, the study yielded important recommendations presented in the next section.

8.4 RECOMMENDATIONS

This section addresses objective four of the study whose purpose was to:

"Formulate recommendations aimed at addressing identified gaps and challenges faced by EHPs in the fulfilment of their responsibilities".

This study focused on environmental health practice and the recommendations are divided into two categories. The first category pertains to the general professional practice while second comprises recommendations specific to ethical practice. This arrangement is merely for ease of reading as in practice these areas are intertwined.

8.4.1 Recommendations on Environmental Health Professional Practice

8.4.1.1 Recommendations to the metropolitan municipality

A mechanism for addressing gaps in environmental health service delivery: The eThekwini metropolitan municipality as one of the leading municipalities in South Africa[68], has provided a good platform for the evaluation of environmental health practice to reflect the picture in South Africa as this municipality is classified in terms of Section 155(1)(a) of the Constitution of the Republic of South Africa as a category "A" municipality which has the capacity to provide all essential services for a city. The study found that this municipality offers all environmental health services components in the scope of environmental health profession. Being a new metropolitan municipality, it has areas that need improvement to effectively offer

[68] There are eight metropolitan municipalities in South Africa as shown in Figure 2.1 in Chapter Two These include eThekwini in KwaZulu Natal Province; the City of Cape Town Metropolitan Municipality in the Western Cape Province, [the City of Johannesburg Gauteng; the City of Tshwane and Ekurhuleni Metropolitan Municipalities, all three of which are in the Gauteng Province]; Mangaung Metropolitan Municipality in the Free State Province and; Buffalo City and the Nelson Mandela Metropolitan Municipalities in the Eastern Cape Province.

environmental health services of a high quality, in the ever changing cosmopolitan society of a new democratic country, whose history is marked by service inequalities. Some key areas needing attention, not arranged in any order of importance, are highlighted in this section based on the findings on environmental health practice:

Environmental health leadership: The municipality ought to address the environmental health leadership given that EHPs across the research area stressed the urgent need for appropriate environmental health leadership. Apparently, the environmental health unit face challenges due to the absence of a strategic head of environmental health within the metropolitan municipality. Strong leadership would direct the environmental health services and restore the lost professional pride and recognition for this profession. Moreover, sorting out the issue of environmental health leadership would put the environmental health profession on a par with other professional services within the metropolitan municipality and enable the municipality to comply with its mandated function, particularly the municipal health services (MHS) which constitute 64% of EHPs' scope of practice in South Africa. The EHP research participants felt that the environmental health services unit in the case study municipality suffers from a lack of resources, recognition and direction due to the absence of appropriate environmental health leadership.

Therefore, steps need to be taken to correct the perception that the current working arrangement is pro-clinical services as there are more senior non-EHP professionals in charge of the environmental health services within municipal health unit. This scenario arises from the fact that the Environmental Health Unit is dominated by nursing professionals at the top, to whom the EHPs report and are thus in charge of environmental health services. Accordingly, only three out of 18 Primary Healthcare (PHC) managers[69] were found to be environmental health professionals. This situation has created an impression among the environmental health staff that there are imbalances in the attention paid to environmental health and nursing services. Findings revealed that in practice, when environmental health challenges arise, the non-environmental health managers merely sympathised with EHPs, but could not assist because they did not have the environmental health competencies and ability to understand the context of environmental health professional practice

[69] In Figure 2.4 read with section 2.4, it was noted that EHPs have the Primary Healthcare Managers (PHC) in charge of EHPs in the 18 district health units in the case study metropolitan municipality. Accordingly, only 3 of the 18 PHC managers are EHPs and the rest are nurses by qualification; hence the distribution of managers is skewed towards the nursing profession. This skewed distribution has also been highlighted as a challenge in Chapter Six, section 6.5.3.3 that presents the effect of reporting lines on EHPs' work output.

Revisiting reporting lines: Linked to the leadership issue above, is the current reporting structure which needs to be reviewed and modified to enhance better environmental health operations. The reporting lines were found to be blurred in some instances where urgent decisions have to be taken on environmental health matters. Consequently, delays occurred with resultant negative effects on the smooth running, and provision of the necessary support and guidance. Findings revealed that research participants expressed their dissatisfaction with the current positioning and reporting structural arrangement of the Environmental Health Unit. Accordingly, since the structure is dominated by non-environmental health professionals above the EH managers, these professionals are by virtue of their qualifications and professional affiliations not permitted in terms of the HPCSA rules[70] to sign documents on environmental health specific professional issues.

Furthermore, the research participants were of the opinion that correcting the reporting lines would result in better representation of the environmental health profession at a higher decision-making level within the department and the municipality as a whole. Presumably, clearly defined reporting lines would among other things, assist in eliminating too much duplication amongst other municipal departments dealing with environmental health services. Such a measure could ensure that preventive health, which is the core of environmental health, is supported with resources. It would be able to protect EHPs as findings revealed that a feeling existed among EHPs that there is tendency within the municipality, of only attacking environmental health issues when problems arise and not seriously taking the needs of EHPs seriously.

Establish environmental health inter-district forums: Findings indicated that there is no forum that allows EHPs from the different sub-districts to share their unique experiences on issues that work and those that posed challenges. Therefore, a mechanism is needed to create an environment that promotes better communication among EHPs. Sharing information among colleagues could assist the development of creative and working strategies. A formalised meeting plan could allow EHPs from the 18 different sub-district units within the Municipality Department of Health, an opportunity to share information on issues that posed challenges as well as tried and tested solutions some EHPs have employed. This strategy is important given

[70] The HPCSA rules prescribes that a health practitioner needs to only practice in the field one has been educated and trained [EHPs are used as example here]. Section 83(5) of the National Health Amendment Act, 12 of 2013 categorically states that *"only a health officer who is registered as an environmental health practitioner in terms of the Health Professions Act, no. 56 of 1974, may exercise powers [of environmental health investigations] conferred under this section".* This provision makes environmental health services exclusive to EHPs in South Africa. It would appear therefore that non-EHPs are barred from practicing environmental health services.

that the EHPs' operational areas in the case study municipality are diverse as pointed out in Chapter Two, thus presenting different challenges. The sharing of pockets of success amongst EHPs could help alleviate problems within the whole metropolitan municipality.

Instilling professional pride and a spirit of teamwork: Study findings have shown that there seems to be a developing trend among EHPs within the municipality that suggests a loss of positive attitude and passion in relation to the environmental health profession. In this regard, some EHPs showed no professional pride, which could be contributed to the loss of recognition of environmental health by other professions. It was concerning to find that some EHPs involved themselves with issues that blocked their personal development, like getting embroiled in the organisation's internal politics which had a negative impact on the profession and confused the newly qualified EHPs. These EHPs encouraged others to join camps instead of bringing about change and adding value to the organisation. This activity created an atmosphere where EHPs failed to pull together in one direction. Therefore, there is an urgent need to instil a spirit of teamwork in order to maximise the use of different forms of expertise towards advancing the goals of the environmental health profession. A strategy is needed to build a sense of camaraderie amongst EHPs so as to rejuvenate pride in the profession and encourage a good work ethic. Emphasis should be on building a spirit of enthusiasm about professional identity, making EHPs know who they are, what they do and what they are good at. Working together would bring a uniform approach to environmental practice across the different municipality sub-districts.

Administrative and legal support and narrowing gaps in resource distribution: Findings revealed that some EHP managers found it hard to meet their service targets as they are faced with financial constraints and felt neglected and always put at the bottom of the list when resources were allocated. They pleaded for parity in the resource allocation amongst professions within the department. EHPs needed administrative support which they believed was lacking in their work stations. This support would assist them in improving the quality of environmental health service delivery, particularly regarding report writing, proper and speedy response to community enquiries, and overall efficient environmental health administration. Some EHPs did not even have proper offices and shared office space in public centres. Such working arrangements were not conducive to consultation with their clients. Without administrative support, EHPs had to go to the field – do inspections, come back and write reports. Concurrently, they are also expected [as part of routine practice] to have time to read all new legislation updates, acquaint themselves with all Standard Operating Procedures (SOPs), as well as having time to do re-inspections. Consequently, they end up spending more time in the

offices doing administration than attending to their other work commitments. Administrative support would enable EHPs to balance office work with field work. Another associated need is the provision of a legal support unit dedicated to environmental health issues. EHPs have pointed out that, while they learn legislation, there is a need to have legal support to deal with the legal technicalities when handling prosecutions.

Career path for environmental health practitioners: Some research participants highlighted the low morale amongst EHPs. They attributed this factor to the lack of upward mobility within the organisational structure. EHPs also mentioned that old EHPs were earning low salaries which was the same with the new incoming EHPs who are inexperienced. It is therefore important to create clear career paths for the EHPs and create platforms to effectively use and embrace the experienced EHPs toward building the profession. A mentoring programme for instance, could be developed where the old EHPs would mentor the young ones and be given incentives and recognition to compensate for the gap in earnings between those who are inexperienced but have higher qualification and those with experience but lower qualification. For example, a recognition and incentive programme could motivate the EHPs who have remained loyal to the organisation for a long time and have received no promotion. A personal staff developmental mechanism would assist towards retaining the current skills.

Adoption of a proactive rather than a reactive approach: Steps are needed to modify EHPs' approach to work from reactive to proactive. The reactive approach reduces EHPs' work to merely going out to find reported problems instead of having preventive measures to solve them before they even become problems. EHPs should be exposed to a variety of spheres of environmental health practice, so that they are competent to deal with all areas of environmental health rather than placed in one area where they are not afforded opportunities to learn about the whole profession. Whilst, there is a place for specialisation, steps need to be taken to ensure that EHPs acquire enough experience to practice within all spheres of the environmental health profession. For this approach to work, management need to set realistic targets so as to pay attention to the most important aspects in the environmental health profession. A similar observation was made in a London study, which found that EHPs who were placed in the health and safety section, had little understanding of other areas of operation in environmental health practice and needed exposure to other dimensions of the profession (Reynolds and Wills, 2012).

Strengthening community engagement programmes: A community awareness programme needs to be developed to educate the public about the role and importance of environmental health to their day-to-day living. As pointed out in Chapter Five, research participants

highlighted the fact that some members of the public especially in the previously disadvantaged areas were ignorant about the duties of EHPs. Peoples' behaviour shows their lack of understanding about what the environmental health profession entails, the EHPs' legal mandate and what EHPs expect from the members of the public. The public as consumers of the public goods seemed to be unaware about EHPs' responsibility of compelling business owners to provide quality services and act in a responsible manner that would ensure the health and safety of the public. For an example, when EHPs inspected business entities and pointed out some wrong doings which warranted immediate remedy because of the dangers they pose to human health, members of the public did not attach the same importance to the wrongful acts. This attitude can be illustrated by cases where EHPs would recommend removal of certain dangerous goods from a business entity like dented and rusted cans, only to find the members of the public going behind EHPs and buying the condemned goods, thereby perpetuating the problem and promoting non-compliance. In some cases parents took their children to creches (aftercare facilities) with squalid conditions and overlooked the effect of exposing their children to health risks on those premises. Such situations, could be interpreted as signs of an existing gap of knowledge between EHPs as protectors of public health and the members of the public as consumers of public goods. Public ignorance about environmental health creates a situation where EHPs get frustrated as they take their job seriously, while members of the public ignore their advice and fail to apply their instructions.

Therefore, a community awareness educational programme is essential to effectively address the public ignorance of their role in preventing environmental health hazards and is an alternative tools that EHPs can use rather than relying on enforcement of the law. Vigorous community awareness programmes should ideally involve the media and other public platforms to yield positive and sustainable solutions. Working with people would likely create a more compliant society that attaches value and dignity to the environmental health profession.

Collaboration: The Environmental Health Unit needs to create formal working relationships with various stakeholders to enhance EHPs' work. This approach could involve first, collaboration with the traditional and other community leaders like Indunas in charge of the rural areas. These leaders could be invited to environmental health departmental meetings to afford them an opportunity to learn more about what EHPs do and the things they need from community leaders. In this way, the leaders will understand why EHPs do not need to make appointments every time they conduct inspections. A cooperative working arrangement would ensure that leaders make alternative arrangements when they are not available so that

environmental health inspections and community awareness programmes continue without interruption.

Second, there is need to formalise inter-departmental working arrangements with all departments involved in the practice of environmental health. Such arrangements could involve specially arranged training and other opportunities for exchanging information. Such initiatives would potentially improve lines of communication and improve cooperative working relationships. It would then be possible to liaise more easily with the counsellors and educate them about the support EHPs need to effectively work with the communities and the role the counsellors could play to advance environmental health services.

"Collaboration" is deemed a pivotal approach in the National Environmental Health Policy (Republic of South Africa, 2013a, p.16) for successful delivery of environmental health services. Such collaboration is broad and includes amongst others inter-sectoral collaboration that focuses on good working relationships among government departments. For example, the municipality works with the Department of Environmental Affairs on air quality matters and the Department of Waters Affairs on water quality matters. Moreover, collaboration needs to be established with organised non-governmental groupings in the communities such as the churches which have diverse memberships that EHPs could use to advocate for support for better cooperation in solving environmental health issues. Primarily, such community structures could be effective platforms to conduct environmental health education campaigns on good working relationships between the communities and the EHPs. The Chambers of Commerce and other similar business and labour organisations are also important stakeholders that need to be considered. This strategy is important given that this study found that some companies were using consulting firms that did a poor job of completing the necessary forms in applying for business licences, thereby contributing to delays that led to complaints that EHPs were inefficient in meeting the expected turnaround times.

Mentorship programme: This type of programme is essential in the environmental health profession. Such a programme should be designed to accommodate the new generation of EHPs who are joining the profession bringing about new ways of doing things as they have their own different worldviews from those of the older EHP generation. The programme needs to be formalised to motivate EHPs and prepare them to be able to work independently. EHPs who have been in the field for long also need to be motivated and made to feel respected. For instance, the most senior (experienced) EHPs should be used as mentors for the new EHPs so

as to prevent loss of the wealth of knowledge they have accumulated over a number of years which could build the environmental health profession.

Upskilling of EHPs: Refresher training courses are recommended for EHPs on an ongoing basis in line with the acquisition of the Continuing Professional Development (CPD) points. Regular training would be very useful in keeping EHPs on their toes and helping them to further their studies. EHPs would also remain on the cutting edge of their professional development. In addition, EHPs need to change attitudes of being complacent and develop a hunger for knowledge and information. Something needs to be done to address relaxed EHPs who have not done anything since leaving school to improve their knowledge. For example, there are EHPs who have remained with diplomas for years and have not even attempted to study for the BTech: Environmental Health qualification. Refresher courses can be conducted in-house or outsourced and should preferably cover contemporary issues, up-coming issues, legislation updates, and developments in the profession.

Enhance monitoring and synergies: Findings in Chapter Five revealed that there were no links between the specialising units of environmental health and the sub-district offices. In this regard, EHPs investigate complaints but give no feedback to the respective specialising units like the food section. It is recommended that EHPs be given mobile field electronic tools that they could use to feed in information on the site and immediately report to the relevant unit. This approach would enhance reporting and cut down on having to wait for month end statistics. The complaint management infrastructure could be used to build this model of managing inspections, which hopefully improve the scientific reporting and accuracy of information. Moreover, it could assist with tracing and verification processes.

8.4.1.2 Recommendations relating to the environmental health profession

Better engagement between professional board and EHPs on the ground: Given the findings that a gap exists between EHPs on the ground and the Professional Board of EHPs, steps need to be taken to address how the working relationships between the two can be improved. Among the aspects to address is clarity regarding the professional board's role and what it can offer and why EHPs are paying high membership fees. In addition, the professional board needs to take steps to enhance the image of the environmental health profession and ensure that it is well recognised like all other professions.

Balancing theory and practice as a step towards preparing EHP trainees for work: First, the training institutions need to ensure that people who join the environmental health field of

study are people who are more passionate about what they are doing rather than what they will get at the end of the day. Training institutions need to work closely with municipalities in order to ensure that the final product is well developed and prepared for the demands of environmental health practice. In emphasizing this need one research participant remarked:

> *"We need to work with the academic institutions to improve the preparedness of the new EHPs for the work".*

Environmental health training institutions should develop a mechanism to balance theory and practice. In this regard, the offering of the curriculum needs to ensure that student EHPs have enough exposure to the latest developments in the field. Theory and practice need to be merged into the curriculum with an emphasis on greater exposure of student EHPs to what the working EHPs do in the field. Ideally, there should be preparatory training and orientation of student EHPs before they come to the field so as to make them understand that field work is different in practice to what they do when studying the theory. The curriculum should be contextualised to integrate and be aligned with the nine core functions of environmental health in their Scope of Practice of EHPs which constitute the municipal health services. The training should trigger interest and ignite passion in the field of environmental health. While there are experiential learning programmes in place, a specially packaged programme is needed with the strong involvement of practitioners in the field. This programme needs to be formalised and continually evaluated for effectiveness, adequate scope and relevance of its content and application. To avoid inconsistences, it would be better if the programme is under the auspices of the professional board and is offered as an additional part of the curriculum at and by all institutions offering environmental health programmes in South Africa. [Further details in this regard are shared in section 8.5 that present a proposed model for balancing the theory and practice of environmental health in South Africa].

Research in Environmental Health: Research needs to be intensified and supported. Currently, there is little or no support for research for the practising EHPs. Supporting environmental health research through sponsorship would strengthen the preventive function of health and promote evidence-based research initiatives that could be useful to policymakers. Research would help towards changing of mind-sets and working together to make the environmental health profession work better and be more effective. Training institutions are vital in providing research guidelines and innovation which would create conducive environments for EHPs to deliver on their mandates. Research should not be limited to the

acquisition of a formal qualification or done merely to meet academic requirements but should be conducted to improve the quality of environmental health within workplaces.

8.4.2 Recommendations on Environmental Health Ethical Practice

8.4.2.1 To the metropolitan municipality

Institutionalised[71] ethics practice: Findings in Chapter Six have pointed out the lack of ethics infrastructure within the municipality. Thus, there is no mechanism to identify and address ethical issues in the EHPs' workplaces. EHPs have indicated a need for proper guidelines on handling ethics in the course of their work. It is therefore recommended that the following measures be taken:

First, the municipality should institutionalise ethics practice i.e. have established systems and responsible persons or committees assigned with the responsibility of coordinating ethics issues within the environmental health sector. Such a structure should ideally have a coordinator with executive powers to drive the process of ethics. For this role, the South African Public Service Integrity Management Framework recommends the appointment of an Ethics champion at a senior level with decision-making powers (Republic of South Africa, 2015b). Moreover, trends show that ethics infrastructure is more sustainable when it is institutionalised and made an integral part of organisational practice (Jose and Thibodeaux, 1999). An institutionalised ethics setting is characterised by having "developed and implemented ethical guidelines for handing ethical issues" within the organisation (Vaage, 2016, p.87). As pointed out in Chapter Six, leadership should be exemplary and provide guidance on ethical practice. It should ensure that an ethics culture prevails with proper controls and accountability mechanisms.

Second, the established ethics agency needs to be functional. This functionality would require the designing of an ethics programme with an ethics education component to conscientise EHPs and other affected people about ethics. It would then be ideal to have a few ethics officers appointed who would work with the Ethics champion within a coordinated structure. These ethics dedicated individuals would be tasked with conducting periodical ethics surveys within the organisation to determine the status and use the results to inform the ethics policy implementation plan.

[71] Institutionalised as used in this context refers to the act of incorporating ethics into the institution's operational system and making it a standard practice in the workplace. While in practice there are ethics committees that consider research projects in terms of checking the balance between harms and benefits of the projects [as has been the case in applying for permission to conduct this study], the focus here is on the actual practice in making ethics an integral part of environmental health in the municipality. An established ethics setting is also referred to as ethics infrastructure elsewhere in this study, particularly in Chapter Six.

Third, an ethics training programme should be developed and offered to all EHPs and other relevant personnel on a continual basis. Ethics training has been recommended to public officials by international bodies like for example, the OEDC (Organisation for Economic Cooperation and Development (OECD), 2013). Steps need to be take to introduce the ethics training and ADKAR model could be used as an effective change model. ADKAR is an acronym for Awareness, Desire, Knowledge, Ability and Reinforcement. The ADKAR model has five sequential steps that guide the process of change and activities that an individual and groups in an organisation need to embark on to achieve the desired goals as per (Prosci, 2017, pp.4-6). The reasons for ethics training[72] are amongst others:

- ✓ To accommodate budget constraints, ethics training should be offered on a group target basis, and should prioritise those who face more risks. Therefore, EHPs as a group of professionals that faces a greater risk of being corrupted, as pointed out in the previous chapters, needs to be given priority in ethics training.
- ✓ Ethics training should be specific to the needs of the group, hence an ethics audit is essential to determine EHPs' areas of concern and where the emphasis should be placed. This focus makes ethics training more practical than it would be when merely giving general ethics training which does not address environmental health needs.
- ✓ Ethics training has been found by the OECD to work best when it combines "anti-corruption and preventatives measures". As findings revealed, EHPs were faced with pressures to accept bribes and ethics training would have to cover remedial measures for these challenges.
- ✓ Ethics training, should incorporate a code of conduct and code of ethics as these provide legal and ethical guidelines that EHPs need to uphold. For instance, EHPs need to be trained on the importance of applicable guidelines for service provision contained in the Batho Pele

[72] Section 8.2.3 makes reference to use of ethics training to educate EHPs about associated corruption risks. Reference to corruption in this context aims at covering corruption risks in the content of ethics training to better prepare and conscientised EHPs about ethical risks which they may be unaware of. Ethics training should be introduced as part of a change management plan. In this regard, ADKAR model could be used.

ADKAR is an acronym for Awareness, Desire, Knowledge, Ability and Reinforcement. The ADKAR model has five sequential steps that guide the process of change and activities that an individual and groups in an organisation need to embark on to achieve the desired goals as per Prosci. 2017. Prosci ADKAR Model eBook. Available: https://www.prosci.com/adkar/adkar-model [Accessed 18 February 2017].This model emphasises that for a change to be successful and sustained, it ought to happen at the individual level and then spread out to the whole group and the organisation at large. The model stresses that the focus of a change plan should be on ensuring that those affected by and effecting the change should understand the purpose of the change and have a self-will to partake in the change processes. It is thus important that the organisation provides the necessary information on ethics and devise a mechanism for ensuring that everyone has the necessary skills to implement the desired change. So ethics training should not been seen in isolation.

principles. They should also be trained on the code of conduct for all municipal employees contained in Schedule 2 of the Local Government Municipal Systems. This code has some ethical provisions which could guide EHPs' conduct during service provision. This code for example, provides that:

"Staff members act in an impartial manner, treat colleagues and other people equally without prejudice"; uphold the provisions of Section 195(1) of the Constitution of the Republic of South Africa which is about upholding professional ethics; maintain confidentiality; may not solicit favours or rewards and to report a colleague who acts against the provisions of the code of conduct".

These are just a few examples that show the importance of ethics training. Ironically, during the interviews, EHPs as municipal employees never referred to this code of conduct for municipal employees, while Section 70 of Local Government Municipal Systems Act, requires that each municipality employee should have a copy of this code (Republic of South Africa, 2000a).

Fourth, given that EHPs are employed in a municipal environment, the municipal heads and the municipal managers should be at the forefront of driving an ethics agenda, as they are instrumental to the success of ethical practice within the municipality. Disoloane's study at the Capricorn District Municipality in Limpopo, has also stressed this viewpoint (Disoloane, 2012, p.84). It would then seem best that the Executive of the municipal Health Department incorporate ethics into the Departmental strategy so as to align it with other deliverables and assign proper resources.

Fifth, ethics infrastructure should promote reporting of unethical conduct which could include gross violations of the rules and other behavioural issues. A mechanism needs to be in place to protect individuals who are committed to promoting good ethical practice by exposing unethical practices. This protection is important given that research literature documents that in local government where there are no ethics programmes, there are high levels of unethical conduct and incidents where management victimises those who expose unethical behaviour, thus, increasing the lack of trust between management and employees (Ethics Resource Center (ERC), 2008). Consequently, whistle blowing system with protection of whistle blowers is recommended.

8.4.2.2 To the environmental health profession

Establishing an Environmental Health Code of Ethics[73]: The importance of having a code of ethics needs no emphasis and has been addressed in several places within this thesis beginning with Chapter One. Furthermore, it has been pointed out that there is no code of ethics in the Environmental Health profession in South Africa which is a lacuna that leaves EHPs with no common tool that speaks to ethics pertaining to ethical practice in their discipline. The place of a code of ethics, in spite of its limitation in application, is still relevant in improving commitment of professionals and enhancing professionalism. Various recent research findings attest to the fact that the existence of a code of ethics has a positive impact in promoting professionalism among professionals. For instance, Merritt (2016) using the legal profession as an example, has recommended that there is a need for "formal education of new members of the profession on the applied realities of the profession" which the academic institutions are not able to adequately provide (Merritt, 2016, p.12). In addition, while the Hippocratic Oath is pro-medical, the act of commitment to professional practice applies to other professions like Environmental Health. Such an act helps in "renewing commitment of members to the profession", particularly on issues relating to "confidentiality, accountability and commitment to do justice" (Hulkower, 2016, p.41). Having a code of ethics in the Environmental Health Profession in South Africa would actually be a way of promoting good practice that has already been started by other similar professions in Africa, namely: the Environmental Health Officers Registration Council of Nigeria. Accordingly, Environmental Health Officers sign a two-page document with 23 statements constituting their "Code of Professional Ethics" on assuming their professional duties (Nigeria Environmental Health Officers Association, 2015, pp.1-2).

The best practice in ethics practice recommends having an agent for establishing ethics practice for a profession. The HPCSA Professional Board of EHPs should co-ordinate environmental health ethics and equate it with other health professions like medicine that have advanced in this regard. I have identified the HPCSA Professional Board of Environmental Health in South Africa to be the best body that could be entrusted with establishing ethics practice for EHPs as it is a custodian of EHPs' professional practice. This Professional Board

[73] A more detailed description of the meaning of creed is provided in Chapter Seven section 7.3.1.2. Callahan and Jennings (2002, p172) suggest three important reasons for having an ethics code for a profession (i) to respond to scandals in the field (profession) and similarly provide a guide for better future conduct by professionals; (ii) to establish the moral credibility of the discipline and its professional status as well as providing guiding principles to help professionals deal with common dilemmas; and (iii) to provide the profession with a moral compass that sets out the ideals of the profession that professionals need to uphold. For more details consult: Callahan, D. & Jennings, B. 2002. Ethics and public health: forging a strong relationship. *Am J Public Health,* 92**,** 169-76.

should ideally develop and implement amongst EHPs a well-established code of ethics. Such a step would encourage an ethics culture and ensure the existence of proper guidance by a recognised body that has powers to regulate, control and ensure accountability on issues of ethical practice of EHPs. This form of managing ethics practice is recommended by international bodies like the OECD as a good practice that encourages transparency and control on matters of ethics (Organisation for Economic Co-operation and Development (OECD), 2000b, p24). Such a Code of Ethics should, have a clearly defined creed which would require all EHPs to make a commitment to upholding the laws and guidelines governing the practice of environmental health. It is advisable that EHPs should make a pledge of commitment effected on the day of graduation as they engage with the public during their undergraduate training to uphold and respect the principles governing the environmental health profession and the safeguarding of public health. The pledge as a public statement of commitment made in front of family and colleagues is likely to have a binding emotional effect and instil public confidence in EHPs as well as deepen their commitment.

8.4.3 Recommendations for Future Research

This study has provided baseline information on the legal, professional and ethical responsibilities of EHPs in South Africa. Ideally, more focused studies addressing each of the aspects individually is recommended. Such an approach would better cover the wide scope of the practice of environmental health, which is important given the continual changing dimensions of environmental health in the South African EHP workplaces.

A further recommendation is for a study evaluating the perceptions of communities on the performance of EHPs which could assist in developing strategies that ensure that EHPs remain relevant to the needs of the communities.

8.5 A MODEL FOR STRENGTHENING THE BALANCE OF THEORY AND PRACTICE IN ENVIRONMENTAL HEALTH IN SOUTH AFRICA

8.5.1 Context of the Proposed Model

The purpose of this section is to present a proposed model aimed at addressing what my study has identified as gaps and challenges EHPs faced in fulfilling their responsibilities in accordance with the objectives of this study. The model represents my contribution towards answering the fourth research question of my study, namely,

*"*What interventions and strategies can be proposed to overcome these challenges and better align ideal and real practices?"

Furthermore, the proposed model endeavours to address the outcome of my study, namely,

"The final envisaged practical outcome of the study was: to formulate recommendations aimed at addressing identified shortcomings and challenges faced by EHPs in the fulfilment of their role responsibilities".

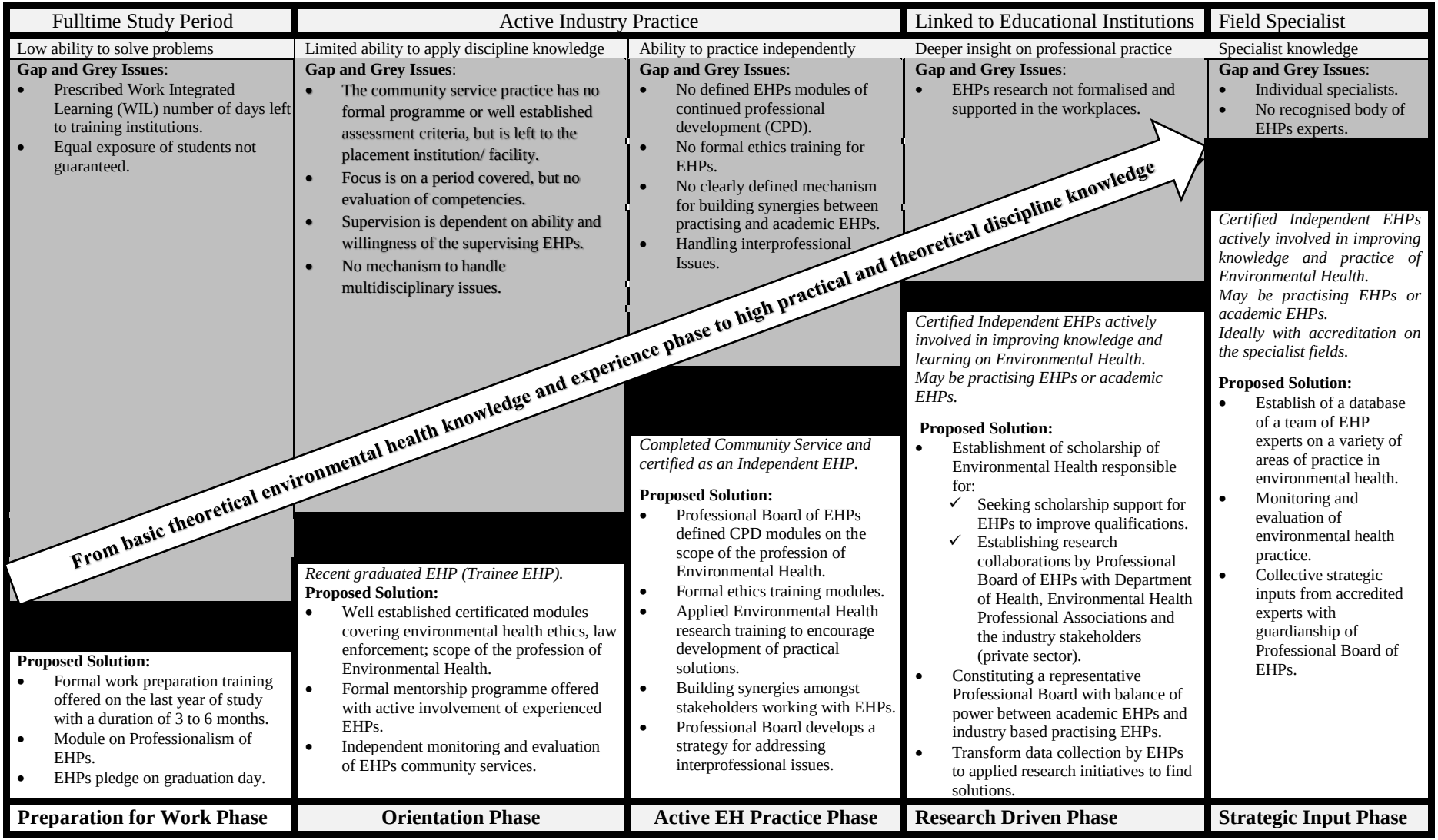
My proposed model concentrates on the theory and the practice aspects of environmental health that I regard as pivotal to understanding the work of EHPs. I believe that the quality and the modalities of rendering environmental health services are dependent upon the theory and practice of environmental health. Given that my study determined the kinds of awareness and understanding EHPs have regarding their legal, professional and ethical responsibilities in the exercise of their duties, I believe that the balance of theory and actual practice is paramount. In this regard, I found Dreyfus's model of skill acquisition (Dreyfus, 2004) to be a good base for developing a model that can be used to address the balancing of the theoretical and practical aspects of EHPs' work in South Africa. The knowledge that EHPs have is influenced by the kind of professional training and systems in place that prepare EHPs to be ready for the world of work. I deemed it fit to consider the genesis of the EHPs' professional life as an appropriate approach for addressing the balancing of theoretical understanding and practical knowledge of EHPs which would determine the cadre of EHPs.

In developing my proposed model I have over and above Dreyfus's model (Dreyfus, 2004) on acquisition of skills, drawn from Kohlberg's developmental model (Kohlberg and Hersh, 2009) which is vital in understanding how EHPs interpret and attach significance to their work. [Details on the two models are presented in Annexures 8 and 9]. The combination of the level of awareness EHPs have, which is influenced by the theoretical underpinnings of EHPs' training, and EHPs' ability to perform their responsibilities which is centred on the practices an EHP is exposed to during training and practising in the field, all point to the theory and practice of environmental health. I am of the opinion that without a good balance of theory and practice, EHPs are likely to find it hard to address their legal, professional and ethical responsibilities. One of the highlights of my study findings, was the lack of synergy between the practising EHPs and the academic EHPs which has the potential of exerting a negative effect on the relationships of the recent newly qualified EHPs with the already practising EHPs. This state of affairs is likely to compromise the essential ideal of ensuring a balance of the theory and the practice of environmental health. Such a balance is needed at all stages of EHPs' professional

life which begins at the student level when an EHP enrols for the Environmental Health profession and undergoes preparation for work through all the other development stages until reaching the highest level of becoming an expert in the environmental health discipline.

I present the proposed model in Table 8.1 followed by a brief contextual discussion. My model is adapted from Dreyfus's model to interpret the developmental stages of EHPs in South Africa. It incorporates the areas that I have identified as gaps and grey areas in that there are either shortcomings experienced in addressing the issues and in some instances there may be no clearly defined mechanism in place to assist EHPs in addressing the issues. The grey top part of the model specifically indicates the areas I regarded as gaps while the lower white background section suggests solutions at each development stage of EHPs' professional life in South Africa.

Table 8.1: Model for balancing theory and practice of legal, professional and ethical aspects of Environmental Health in South Africa



8.5.2 Interpretation of the Phases of the Proposed Model

8.5.2.1 EHP Beginner Level: Preparation for Work Phase

This phase is the level of entry to the Environmental Health profession. The student EHP is being prepared for work of EHPs. This stage is a very important as it involves the imparting of disciplinary knowledge that sets the discipline of EHP apart from other disciplines. The student EHP is introduced first to "the scientific field of study and made to understand the complex relationship between environmental risk factors and human biology within the affected individuals and the populations" and second, to the "applied disciplinary knowledge the EHP ought to use to safeguard the community through measures aimed at preventing illnesses, reducing the spread of diseases and promoting preventative health practices" (Resnik, 2012, p.9). During the EHP study period the Professional Board of EHPs prescribes a minimum of 100 days of work integrated learning (WIL) to expose student EHPs to a real work environment. However, meeting this requirement is left to the training institutions. My experience of over 19 years serving in training institutions offering environmental health in South Africa, has shown that due to constraints in working with environmental health stakeholders academic institutions experience challenges of securing placements for student EHPs. It remains questionable whether students are adequately exposed to the field of work.

In this model I propose that a formal training module for a duration of three to six months be developed by the Professional Board of EHPs with preferable inputs from both the practising EHPs and academic EHPs. The module should include professional aspects of EHP. It should be offered in the last year of training to augment any gaps in exposing student EHPs to the realities of EHP work during the training. This module should ideally be offered by an independent party and on a uniform basis to all training institutions offering environmental health programmes in South Africa. The practising EHPs should be part of the presenters with the special role of integrating field work case studies into the training as well as arranging field visits to overcome issues. A pledge of EHPs should be effected on the day of graduation. This oath-taking ceremony could have three effects: *First*, the pledge has an emotional binding effect on the part of EHPs as they make a public statement of commitment in the presence of their families, student colleagues, academics, qualified EHPs and the community. *Second*, the pledge is likely to deepen commitment of EHPs to the environmental health profession. *Third*, the pledge could instil public confidence as EHPs make a public declaration.

8.5.2.2 EHP Intermediate Level: Orientation Phase

I refer to this level as intermediate as it occurs when the EHP student has recently graduated and enters the second phase of EHP development: the trainee stage. At this stage of professional life the EHP has a limited ability to apply disciplinary knowledge. The amended regulations relating to the performance of community service made under the Health Professions Act, no. 56 of 1974, require that EHPs apply to be registered as Community Service Practitioners (Minister of Health, 2011). This requirement is a pre-requisite step for performing a 12 month mandatory community service under the terms and conditions set out by the National Department of Health. The Community Service Practitioner works under the supervision of a qualified EHP for a mandatory period of a year at an approved facility or institution.

The gap in practice is that there are no well-established assessment criteria for these trainee EHPs. The scope and manner of work is left to the practising EHPs' discretion. There is no evaluation of competence by an independent party, which could disadvantage some EHPs. I suggest in my model that the Professional Board of EHPs should have well-established modules covering a variety of areas in the scope of practice of the Environmental Health profession; environmental health ethics; as well as some in law enforcement. This arrangement would strengthen the trainee EHPs' confidence in decision-making, particularly in handling practical and difficult cases before becoming an independent practitioner. Formal mentorship by experienced EHPs would be encouraged. More importantly, the training modules should be independently monitored and evaluated for their effectiveness in preparing the trainee EHPs for the next level of being independent EHPs.

8.5.2.3 EHP Advanced Level: Active Environmental Health Practice Phase

I refer to this level as advanced in that the EHP has now acquired enough environmental health theoretical and practical knowledge. At this level of development the EHP is supposed to be at the cutting-edge of the environmental health practice. The EHP at this stage has completed the preliminary training requirements and is qualified to be registered to practise as an independent EHP without supervision. The assumption is that the EHP is competent and has the necessary competencies. The HPCSA requires that EHPs need to accumulate 30 continued professional development (CPD) points on an annual basis (Health Professions Council of South Africa, 2015a).

One of the gaps and grey areas is that the EHPs are not given areas to attend to for their CPD. CPD training or activities that EHPs ought to attend should cover ethics but the

Professional Board of EHPs has not yet spelt out which areas of ethics need to be covered. There is no guarantee that the training workshops that EHPs attend include sufficient ethics training on environmental health practice to help them handle ethical issues relating their work. The situation is exacerbated by the absence of a Code of ethics for environmental health which could help in resolving areas that are not provided for in the legal or professional guidelines. The other grey area is the absence of formal mechanism to build synergies between practising and academic EHPs which make it difficult to resolve multi-disciplinary issues or those involving multi-stakeholders.

For these reasons the proposed model recommends that the Professional Board of EHPs should develop a schedule of training modules that EHPs ought to attend as a minimum to ensure covering of the relevant environmental health practice content. A schedule of clearly defined training programmes could be supplied to EHPs employers for incorporation in the staff development programmes. The modules should preferably include amongst others the scope of practice in the environmental health profession, formal ethics training for EHPs, and environmental health research designed for EHPs as an attempt to promote development of practical solutions through applied research initiatives. The Professional Board should also devise a mechanism that EHPs could use to build synergies amongst stakeholders working with EHPs rather than leaving these to individuals to arrange.

8.5.2.4 EHP Scholarship Level: Active Applied Research Driven Phase

Reference to scholarly work in this context denotes active involvement in activities where independent EHPs improve the knowledge base on environmental health issues. EHPs in this level of development may be those from industry who have a passion or acquiring new skills and or those attached to academic institutions who have devoted full-time focus to the scholarship of teaching and learning in environmental health. The scholarship phase of EHPs is significant given that in practice EHPs' work is dominated by the collection of data through routine inspections and handling public complaints prescribed by law, namely, the National Health Act no. 61 of 2003. Unfortunately, this rich source of data tends to end up unprocessed and thus not transformed into developing solutions. Linked to this factor is the possible lack of employer support for EHPs' research initiatives, including improving their qualifications. Notwithstanding this challenge, EHPs as professionals also need to take it upon themselves to see that they maintain their professional self-development. In this regard, section 27A(e) of the HPCSA professional rules prescribes amongst other things that health practitioners including

EHPs have a responsibility to "keep their professional knowledge and skills up to date" (Health Professions Council of South Africa, 2008b, p.19).

The model suggests that a scholarship for environmental health be established through the Professional Board of EHPs. The Professional Board of EHPs could dedicate a scholarship office and task it with the responsibility of seeking scholarship support for EHPs to assist those who want to improve their qualifications. Such an arrangement could help in establishing collaboration with key governmental departments, primarily the National Department of Health which has been identified in the National Environmental Health Policy as responsible for establishing applied research initiatives. Section 10 of the National Environmental Health Policy mentions the conducting of "research on a continual basis to devise mechanisms for the proper allocation and use of resources as well as policy implementation" as one of the approaches for implementing environmental health programmes (Republic of South Africa, 2013a, p.38). Research in environmental health could be strengthened through collaboration between the Professional Board, the Professional Association in Environmental Health and industry stakeholders like the private sector.

It is also suggested that steps be taken to review the constitution of the Professional Board with the intention of strengthening the cooperative working arrangements between the academics and the practising EHPs. The Professional Board should have a balanced power arrangement through having equal representation between academic EHPs and practising EHPs when it comes to training issues. The current consultation arrangement where the academic EHPs have no deciding powers is likely to weaken the value of the academic knowledge EHPs need in solving practical problems and vice versa.

8.5.2.5 Team of EHP Experts Level: Strategic Input Phase

The environmental health profession consists of specialised areas, for example, food safety, water quality management, waste management, air quality management and other areas mentioned as competencies in the scope of practice of the profession of environmental health. Some EHPs have acquired specialist knowledge through further training and practices to the point of qualifying for accreditation by various bodies in those specialist fields. However, there is no organised and recognised body of EHP experts in South Africa. This lacuna promotes individual practices with no opportunities for collective working arrangements.

I suggest in this model that a body or an office be established preferably through the National Department of Health [in collaboration with the Professional Board of EHPs] to create a

database of EHP experts. Such a database would help to serve as a one-stop shop for EHP experts and help expedite the soliciting of collective strategic inputs on environmental health matters of a national but specialist nature. This organized arrangement would also help in having authenticated inputs from accredited and credible experts in the field of environmental health practice. The Professional Board of EHPs as the custodian of the environmental health profession could play a guardianship role to ensure that no bogus EHP experts practise without being licenced to do so. This role will enable the monitoring and evaluation as well as quality control of environmental health services. This role is important given that the World Health Organisation has, as I pointed out in Chapter One, recognised the active involvement of EHPs in providing evidence-based research inputs in developing and implementing more sustainable environmental health interventions designed to lower the "burden of environmental health risks" (World Health Organisation, 2006b, p.26).

I hope this model will contribute towards finding solutions to challenges facing EHPs in South Africa and provide long lasting solutions in this professional practice. The model also builds on earlier models developed by Dreyfus (2004) and Kohlberg (2009) and contributes towards our theoretical understanding of how EHPs learn to integrate theory and practice as they advance from the beginner stage to the expert stage.

8.6 CONCLUDING COMMENTS

Findings of this study have highlighted the fact that the responsibilities of EHPs are centred on the interconnected relationship between the legal, professional and ethical aspects of environmental health. The legal aspects are articulated in laws containing EHP mandates, functions and powers, while the professional dimension deals with the theory and practice of environmental health. EHPs' work is formalised in several laws which are not only designed for EHPs. This situation makes it difficult to resolve EHP issues by solely using legislation. The changing landscape in the society is increasing awareness of human rights, which conversely, diminishes EHPs' power to enforce compliance. Such changes necessitate the adoption of a developmental approach which requires the use of negotiation and time consuming educational measures. The EHPs' professional component is significant in providing for the establishment of a Professional Board of EHPs, the definition of the scope of practice of EHPs that contains areas within which EHPs operate; the nature of the training that EHPs receive which produces the cadre of EHPs in South Africa.

Given the complex and diverse nature of the environmental health profession, it is essential to have harmonious working relationships between the Professional Board of EHPs as the regulator of the environmental health profession; the training institutions for EHPs as the transmitters of environmental health discipline knowledge; and the EHPs as the practitioners responsible for the rendering of environmental health services. The Professional Board of EHPs needs to revisit its engagement strategy with the EHPs on the ground so as to position itself as a trusted body that cares for EHPs' professional issues in times of need. Hence, collectively, the legal and professional aspects constitute the quantitative aspects of EHPs' work and are essential to who EHPs are, "the influential role they play and outcomes of their work" (Hennessey, 2011, p.133).

EHPs engage predominantly with various stakeholders in the course of their duties, thus making EHPs' work client-based and hinging on cooperative working relationships. For these reasons, the executing of legal and professional responsibilities is associated with a myriad of challenges that EHPs find difficult to handle, especially issues not provided for in EHP legal and professional guidelines. It then becomes necessary to introduce EHPs to ethical theories and principles to provide them with other methods of decision-making with respect to difficult situations they face in their day-to-day activities. The ethical dimension in EHPs' work address the qualitative aspects of EHPs that specifically focus on the relationships that EHPs have with their clients. This dimension is largely displayed by the persona of EHPs, shaped by their values and those of their organisations. The EHPs' relationship with clients can be good and thus yield a positive image of EHPs. Alternatively, the relationship may be bad where there are disagreements and lack of cooperation between the EHPs and their clients which strain their relationships. Notwithstanding the challenges EHPs face in their engagement with clients and other professionals, they need to be decisive and use their specialised disciplinary knowledge to offer expert guidance on environmental health issues. By so doing, EHPs are likely to resolve complex environmental health issues and improve the trust that society bestows on them as the protectors of public health. Training of EHPs is essential to create awareness and instil confidence within them in terms of resolving ethical issues.

The Professional Board of EHPs needs to seriously elevate the aspect of ethical conduct amongst EHPs by amongst others start with the introduction of a pledge of commitment at the day of graduation. It also need to develop a Code of Ethics highlighting professional values EHPs need to uphold and some guiding principles on resolving ethical issues not provided for in the legal and professional guidelines. Furthermore, ethics management in environmental health could be promoted by incorporating ethics training in the continued professional

development (CPD) programmes with specific ethical guidelines for identifying and resolving ethics issues in the workplaces. The Professional Board needs to make a clear pronouncement of ethical issues in the scope of ethics training programmes of EHPs to ensure relevance and evaluate effectiveness of such trainings. Finally, once EHPs employers formalise ethics programmes and implement them in workplaces through functional ethics structures in conducive environments where unethical conduct is reported, the quality of delivering environmental health services and the integrity of EHPs are likely to improve. The resultant effect could be improved trust the society bestows on EHPs.

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ANNEXURE 1: INTERVIEW SCHEDULE FOR ETHEKWINI METROPOLITAN ENVIRONMENTAL HEALTH PRACTITIONER (EHP) MANAGERS

	Introduction of the Interviewer
	Hello, my name is Tobius Thobile Poswa, and I will be conducting an interview with you using some guiding questions and a tape recorder. During the interview I would like to discuss professional, ethical and legal responsibilities in environmental health practice with the focus on the following topics: ethical instruments and legislative guidelines used, the handling of complaints, and the challenges faced by Environmental Health Practitioners in carrying out their duties. The interview will last approximately one hour.
	Part 1: Demographic Data
	1.1 Gender 1.2 Qualification/s 1.3 Years of Experience as EHP 1.4 Home Language/s 1.5 Professional Affiliation/s 1.6 Age
	Part 2: Knowledge and awareness of professional ethics and ethics instruments
	I'm interested in understanding what EHPs think about ethics in the context of the environmental health profession. Please tell me in your own words, your understanding of the concept of "ethics".
	What do you think about the importance of ethics in the field of environmental health and how it affects the way you do your work?
	Are there any ethics guidelines that are used in your workplace and how have they helped you in carrying out your duties?
	Drawing on your own experience, kindly describe what you regard as ethical challenges in the practice of environmental health and what you think are the underlying causes of such challenges?
	Please tell me about ethics training that you and EHPs under your supervision may have attended. What are your views on the importance of and need for such training?
	In the place where you work, how would you describe the ethics culture in terms of relationships with colleagues and subordinates as well as the work ethic? I would also like to know who (if anyone) champions ethics in your organisation?
	Environmental health is a regulated profession and this might require EHPs to be reported when they behave in an unprofessional manner. What is your opinion about this requirement? From your experience, how are issues of misconduct of EHPs handled in your workplace?

	What do you consider to be the most common areas of misconduct by EHPs that relate to the carrying out of their duties?
	Ethics could influence the way we carry out our duties. In terms of your experience, how has ethics played a role in your decision-making as an EHP Manager?
	Most regulated professions are monitored by professional bodies and this is true of environmental health. I would like to know what you understand to be the role of the Health Professions Council of South Africa (HPCSA) in relation to the environmental health profession? In your own opinion, do you think it is necessary to report cases of misconduct of EHPs to the Health Professions Council (HPCSA)? Give reasons for your answer.
	How do you feel about belonging to a professional body? Are you a member of any such body and (if so) what are your reasons for being a member?
	Part 2: Legislative framework and policy guidelines in environmental health
	Environmental Health Practitioners are expected to promote compliance through enforcement of environmental health legislation. Can you please tell me which main laws and policies you are using in guiding environmental health practice? Please explain how people under your supervision have access to these laws and policies? And how do you ensure that all members of your team have and use the right legal tools? Please give examples of any challenges you may have encountered in applying any of these laws and policies.
	Part 3: Challenges in Handling of Complaints and Routine Inspections
	EHPs are mandated by laws to carry our routine inspections and respond to public complaints. I'm interested in knowing the mechanism you use to receive complaints from the public. Please tell more about this mechanism? Please briefly outline examples of the types of issues that tend to give rise to public complaints?
	What methods do you use to handle complaints? Please explain to me the steps you follow and how you involve the community in this regard?
	Please also explain the policies/ procedures that inform the way you handle complaints?
	On average, how long does it take to respond to a lodged complaint in your organisation?
	Routine inspections and environmental health investigations are critical in environmental health practice. Please explain how you carry out these functions? Please mention the major challenges you face in fulfilling this mandate?
	In general, what is the level of satisfaction of the public with the manner in which EHPs respond to complaints and conduct routine inspections? Please explain how you evaluate the manner in which complaints are handled and routine inspections carried out?
	Lastly, what would you recommend for dealing with challenges confronting Environmental Health Practitioners?

	Conclusion of the interview Is there anything else that you would like to add that I might not have covered?
	Thank you for your time and contribution.

ANNEXURE 2: INTERVIEW SCHEDULE FOR ETHEKWINI METROPOLITAN ENVIRONMENTAL HEALTH PRACTITIONERS (EHPS)

	Introduction of the Interviewer
	Hello, my name is Tobius Thobile Poswa, and I will be conducting an interview with you using some guiding questions and a tape recorder. During the interview I would like to discuss professional, ethical and legal responsibilities in environmental health practice with the focus on the following topics: ethical instruments and legislative guidelines used, the handling of complaints, and the challenges faced by Environmental Health Practitioners in carrying out their duties. The interview will last approximately one hour.
	Part 1: Demographic Data
	1.1 Gender 1.2 Qualification/s 1.3 Years of Experience as EHP 1.4 Home Language/s 1.5 Professional Affiliation/s 1.6 Age
	Part 2: Knowledge and awareness of professional ethics and ethics instruments
	I'm interested in understanding what EHPs think about ethics in the context of the environmental health profession. Please explain to me in your own words, your understanding of the concept of "ethics".
	What do you think about the importance of ethics in the field of environmental health and how do you think it affects the way you do your work?
	Please mention ethics guidelines that are used in your workplace and how these have helped you in carrying out your duties.
	Drawing on your own experience, kindly describe what you regard as ethical challenges in the practice of environmental health and what you think are the underlying causes of such challenges?
	Please tell me about any ethics training that you as an EHP may have attended. What are your views on importance of and need for such training?
	In the place where you work, how would you describe the ethics culture in terms of relationships with colleagues and subordinates as well as the work ethic? I would also like to know who (if anyone) champions ethics in your organisation?
	Environmental health is a regulated profession which might require EHPs to be reported when they behave in an unprofessional manner. What is your opinion about this requirement? From your experience, how are issues of misconduct of EHPs handled in your workplace? Please tell me about the most common types of misconduct by EHPs that relate to the carrying out of their duties.
	Ethics could influence the way we carry out our duties. From your experience, how has ethics played a role in your decision-making as an EHP Manager?

	Most regulated professions are monitored by professional bodies and this is true of environmental health. I would like to know what you understand to be the role of the Health Professions Council of South Africa (HPCSA) in relation to the environmental health profession? In your own opinion, do you think it is necessary to report cases of misconduct of EHPs to the Health Professions Council (HPCSA)? Give reasons for your answer.
	How do you feel about belonging to a professional body? Are you a member of any such body and (if so) what are your reasons for being a member?
	Part 2: Legislative framework and policy guidelines in environmental health
	Environmental Health Practitioners are expected to promote compliance through enforcement of environmental health legislation. Can you please tell me which main laws and policies you may be using in guiding environmental health practice? Please explain how you have access to these laws and policies. And how do you ensure that you have and use the right legal tools? Please give examples of any challenges you encounter in applying any of these laws and policies.
	Part 3: Challenges in Handling of Complaints and Routine Inspections
	EHPs are mandated by laws to carry our routine inspections and respond to public complaints. I'm interested in knowing the mechanism you use to receive complaints from the public. Please tell more about this mechanism. Please briefly outline examples of the type of issues that tend to give rise to public complaints.
	I would like to understand the methods you use to handle complaints. Please explain to me the steps you follow and how you involve the community in this regard.
	Please also explain the policies/ procedures that inform the way you handle complaints.
	In general, how long does it take to respond to a lodged complaint in your organisation?
	Routine inspections and environmental health investigations are critical in environmental practice. Please explain how you carry out these functions? What do you regard as the major challenges you face in fulfilling this mandate?
	In your opinion, what is the level of satisfaction of the public with the manner in which EHPs respond to complaints and conduct routine inspections? Please explain the manner in which complaints are handled and routine inspections carried out.
	Lastly, what would you recommend for dealing with challenges confronting Environmental Health Practitioners? Conclusion of the interview Is there anything else that you would like to add that I might not have covered?
	Thank you for your time and contribution.

ANNEXURE 3: LETTER REQUESTING RESEARCH SITE CLEARANCE

The Steve Biko Centre for Bioethics

Faculty of Health Sciences, University of the Witwatersrand, Johannesburg
Room 10A01, 7 York Road, Parktown 2193, Johannesburg, South Africa • Tel: + 27 11 717 2635
Fax: + 27 11 717 2639 • www.wits.ac.za/bioethics

04 December 2013

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY

The Manager Research Unit/The Head of Environmental Health Unit
Ethekwini Metropolitan Municipality
DURBAN, 4000

Dear Sir

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT eTHEKWINI METROPOLITAN MUNICIPALITY's ENVIRONMENTAL HEALTH UNIT

My name is **Tobius Thobile Poswa,** and I am registered for the PhD in Bioethics and Health Law at the Steve Biko Centre for Bioethics, University of the Witwatersrand. I am writing to request permission to conduct a research study among the Environmental Health Practitioners (EHPs) within the eThekwini Metropolitan Municipality. The research title is **"Environmental Health Practice in a South African Metropolitan Municipality: Professional, Ethical and Legal Responsibilities and Challenges".** It is hoped that the information derived from the study may enhance knowledge and understanding of professional, ethical and legal responsibilities in environmental health practice and yield recommendations for training, policy, ethical practice and improved service delivery. The eThekwini Metropolitan Municipality has been chosen as a case study as it provides a wide scope and diversity in terms of environmental health services which will help in answering the study objectives.

Procedures and conditions
Participation will be entirely voluntary and refusal to participate will not be held against participants in any way. Semi-structured interviews of approximately one hour duration, will be held with each person who agrees to participate and at times and places convenient for them.

Confidentiality
Information collected will be used only for study purposes and no one other than my supervisors will have access to the data from the interview schedules. The interview transcripts will be kept for two years following any publication or for five years if no publications emanate from the study.

Queries regarding the study
Please feel free to ask any questions regarding the study. I shall answer them to the best of my ability. I may be contacted on 0826356897 or ttposwa@gmail.com. Alternately, my supervisors Dr Kevin Behrens and Professor Eleanor Ross may be contacted on 011-7172636 and 0793964293 respectively.
A copy of the results of the study will be made available on request.

Yours sincerely,



Tobius Thobile Poswa

Encl.:

1. Copy of the Approved Protocol
2. Copy of the Interview Schedule
3. Copy of the Ethics Clearance Certificate

Steve Biko
Centre for Bioethics

ANNEXURE 4: GRANTING OF RESEARCH SITE CLEARANCE

ETHEKWINI MUNICIPALITY

HEALTH UNIT

9 Archie Gumede Place, Durban, 4001
P O Box 2443, Durban, 4000
Tel: 031 311 3523, Fax: 031 311 3530
www.durban.gov.za

20 March 2014

Dear Mr TT Poswa

Subject: Approval of a research proposal.

The research proposal titled: **Environmental Health Practice in a South African Metropolitan Municipality: Professional, Ethical and Legal Responsibilities and Challenges** was reviewed by the eThekwini Municipal Health Department research Committee. The study is hereby **approved.**

The following to be noted:

- Submission of the indemnity form obtainable from the EThekwini Municipality Health Unit before commencement of the study.
- Prior arrangements to be made with the facility and an assurance that all services will not be disrupted.
- No staff member should be used for collecting data for the researchers.
- Progress reports to be provided and the final report of the study to the eThekwini Municipality Health Unit or emailed to: **grace.mufamadi@durban.gov.za**
- Obtain permission from the eThekwini municipality health department for press releases and release of results to communities/stakeholders.
- The department has to receive recognition for the assistance given.
- Any amended to the study to be communicated with the eThekwini Municipality Health Unit and the relevant amendment form obtainable from the unit to be submitted.
- Withdrawal of permission to conduct research will be left to the discretion of the eThekwini Municipality Health Unit.

Yours faithfully

Dr Thando Ngomane Signature:

Deputy Head for Health Department Date: 31.03.2014

ANNEXURE 5: PARTICIPANT INFORMATION SHEET

Good day, my name is Tobius Thobile Poswa, and I am registered for a PhD in Bioethics and Health Law at the Steve Biko Centre for Bioethics, University of the Witwatersrand.

Purpose

I am conducting research regarding "Environmental Health Practice in a South African Metropolitan Municipality: Professional, Ethical and Legal Responsibilities and Challenges". It is hoped that the information derived from the study may enhance knowledge and understanding of professional ethics and legal responsibilities in environmental health practice and yield recommendations for training, policy, ethical practice and improved service delivery. I therefore wish to invite you to participate in my study.

Procedures and conditions

Your participation is entirely voluntary and refusal to participate will not be held against you in any way. If you agree to take part, I shall arrange to interview with you at a time and place that is convenient for you. The interview will last approximately one hour. You may withdraw from the study at any time and you may refuse to answer questions that you feel uncomfortable with answering.

Confidentiality

With your permission, the interview will be tape-recorded. If you agree to take part in the study, no one other than my supervisors will have access to the interview schedules and transcripts. The interview transcripts will be kept for two years following any publication or for five years if no publications emanate from the study. Please be assured that your name and personal details will be kept confidential and no identifying information will be included in the final research report.

Queries regarding the study

Please feel free to ask any questions regarding the study. I shall answer them to the best of my ability. I may be contacted on 0826356897. Alternately, my supervisors Dr Kevin Behrens and Dr Loiuse Bezuidenhout may be contacted on 011-7172636 and loubez@gmail.com respectively or the Chairperson of the Wits Human Research Ethics Committee (Prof. Peter Cleaton-Jones) on 011-7172301. If you wish to receive a copy of the results of the study, an abstract will be made available on request.

Yours sincerely



Tobius Thobile Poswa

ANNEXURE 6: CONSENT FORMS

CONSENT FORM FOR PARTICIPATION IN THE STUDY

I hereby consent to participate in the research study. The purpose and procedures of the project have been explained to me. I understand that my participation is voluntary and that I may refuse to answer any particular items or withdraw from the study at any time without any negative consequences. I understand that my responses will be kept confidential and that all raw data will be kept for two years following any publications or for five years if no publications emanate from the study.

Name of Participant: ……..

Date: ……..……

Signature: ……..……

CONSENT FORM FOR TAPE- RECORDING

I hereby consent to have the interview tape-recorded. I understand that the transcripts from the interview will be kept confidential and will be retained for two years following any publications or for five years if no publications emanate from the study.

Name of Participant: ……..

Date: ……

Signature: ……..……

ANNEXURE 7: ETHICS CLEARANCE CERTIFICATE

R14/49 Mr Tobius Thobile Poswa

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M130758

NAME: (Principal Investigator)	Mr Tobius Thobile Poswa
DEPARTMENT:	Steve Biko Bioethics Centre University of Witwatersrand Ethekwini Metro Municipality,UKZN,
PROJECT TITLE:	Enviromental Health Practice in A South African Metropolitan Municipality: Professional, Ethical and Legal Responsibilities and Challenges
DATE CONSIDERED:	26/07/2013
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Dr KG Behrens/Prof E Ross
APPROVED BY:	Professor PE Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	07/08/2013

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.
I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

ANNEXURE 8: A SYNOPSIS OF SOCIETAL INFLUENCES ON THE BEHAVIOUR OF EHPS WITH KOHLBERG MODEL

Legal, professional and ethical responsibilities need to be understood in the context of the influences of the societal values[74] which define what could be construed as ethical: [meaning it is an acceptable or unacceptable thing to do]; the applicable laws; the organisations or institutions where practices take place as well as from an individual's perspective. The common denominator is that there are rules governing almost everything with differences in application relative to the environment and the acceptable practices by the concerned society, groups and institutions. It is on this basis that I deemed it important to describe factors that are likely to be influential in shaping EHPs' behaviour and the way they take decisions pertaining to their legal, professional and ethical responsibilities.

Factoring societal influence

Societal influence locates behaviour of EHPs as public servants from a societal context which I regard as the springboard of the life we live. Every person comes from a society that has moulded the person's view of life and behaviour in maintaining order in almost all other spheres of life, particularly conduct at the workplace. Various formations within the society are affected by the societal behaviour which is captured in the laws passed by the government and compliance with them and family institutions.

EHPs are an example of a professional group responsible for rendering environmental health services, a task that involves enforcing compliance with the laws. In doing their work EHPs must to observe the socially acceptable standards which are provided for in the laws of the country. These laws mirror the kind of society envisaged and the expected behaviour by the members of the public as well as the other stakeholders like business and agents of the state.

The Constitution of the Republic of South Africa which is the supreme law of the country is a good example of the kind of society envisaged. It contains the Bill of Rights that envisages a society where there is respect for human rights, particularly the protection of human dignity. The provisions of the Constitution apply to everyone in South Africa and affect laws that deal with the rendering of services. More importantly, the Bill of Rights makes it a requirement that public servants, like EHPs, must prioritise respect for human dignity when conducting their work. Section 86A of the National Health Amendment Act, 12 of 2013 attests to this priority

[74] Values in this context refer to what is believed in the society to be right and wrong behaviour in as far as being able to make people live harmoniously and in peace with one another. Purtilo (1999) refers to these values as "qualities that constitute a good life"

as it prescribes that EHPs should ensure that their "entry upon or search of premises must be conducted with strict respect for decency and good order which include the right of persons' dignity, freedom of security and privacy" (Republic of South Africa, 2013b, p.26), all of which are enshrined in the Bill of Rights in the Constitution. In this case EHPs are affected by laws external to their profession. It is important that they understand what is considered right and wrong behaviour within the society so that their behaviour is seen to be aligned to acceptable shared practices. Such knowledge is essential for encouraging EHPs to fulfil both the provisions of the laws of the country and to meet the expectations of the society where they work. It however, becomes difficult for EHPs to behave in the correct manner if the laws are not clearly articulated or have conflicting provisions. Should this situation occur, EHPs might be compelled to consider their personal values which they adopted from their family upbringing (Purtilo, 1999).

Another related factor to societal influence is an understanding of prevailing health beliefs amongst the society. By health beliefs is meant "attitudes , values and knowledge people have about health services that might influence how they perceive the need and use of such services" (Andersen, 1995, p.3). Accordingly, the use of health services which in this case applies to environmental health services is encouraged among the communities when enabling resources like personnel and resources exist. In this regard as Anderson (1995) asserts, consideration should be made as to whether people have the means such as financial ability and knowledge of how they can gain access to and use of the services. This makes it important to understand the influential role of the proximity of the EHPs offices to the service areas and the visibility of EHPs on the ground to encourage the maximum use of environmental health services. It is on these grounds that the Batho Pele principles which aim at improving services delivery recommend "that service departments must develop strategies aimed at eliminating the disadvantage of distance by ensuring that resources are closer to those in greatest need" (Republic of South Africa, 1997, p.18).

Factoring individual influence

Individuals play an important role in the interpretation of practices in the workplace especially in respect of what they personally regard as right or wrong behaviour. This role is important in the case of EHPs pertaining to the understanding of their work. Personal beliefs coupled with the habits of individual EHPs are influential in interpreting activities in their workplace. These individual beliefs determine whether EHPs can work harmoniously and cooperatively with each other to achieve the set goals. The type of individual EHPs determine

the speed by which decisions are taken and implemented to produce good results. Using Kohlberg's moral development model it is possible to interpret individuals' behaviour. According to Kohlberg's model (Kohlberg and Hersh, 2009), individual understanding needs to be interpreted using six stages that help in knowing that individuals' "level of awareness" are different and they affect the person's behaviour at the workplace. The stages move progressively from the childhood stage [which denotes low level of awareness which I have described as referring to as immaturity stage in terms of knowledge on the subject matter] to the adulthood stage which is indicative of having reached full maturity in as far as the practice knowledge is concerned. Whilst the model assumes that all individuals can go through all six stages, it is important to factor in the aspect that there are those who "get stuck in one level" (Larkin et al., 2012, p.2, Hellriegel et al., 2012, p.126).

In both Kohlberg (1971, and Kohlberg and Hersh (2009) the developmental stages are grouped into three levels, namely: the pre-conventional level (stages 1 and 2), the conventional level (stages 3 and 4) and the post-conventional level (stages 5 and 6).

A brief description of the six stages is as follows:

The first stage is *obedience and punishment* - Individuals show good behaviour at this stage primarily to get approval or avoid being punished should they be found on the wrong side of what is expected. EHPs at this stage are likely to show good behaviour only to please their managers, but shy away from problems.

The second stage is *instrumental,* or grounded in self-interest*:* - Characterising this stage, Kohlberg (1971), uses the phrase "you scratch my back and I will scratch yours" to highlight the fact that individuals' actions are not done out of loyalty but to satisfy own needs. They take steps mostly when they are to benefit from the action, such as being given some incentive. Behaviour is driven by self-interest and reward. EHPs operating at this stage, would only consider doing what is right if they stood to gain something from it.

The third stage is *interpersonal:*- In this stage, people conceive of what is right behaviour in terms of conforming to social norms and doing what is good for interpersonal relationships. EHPs that belong to this level of development are loyal employees and trusted colleagues. They value interacting with others to the point of being willing to sacrifice personal benefit for the sake of others in need. When they realise that their colleagues are in need they stand in for them without expecting something in return. These EHPs may avoid conflict at all cost and prefer to give way to what the majority want. These EHPs want to be considered as people of integrity

and kindness by their family, friends and colleagues. In other words, they are people's persons. (Kohlberg, 1971).

The fourth stage is characterised as *law and order morality*:- At this stage people conceive of what is right or wrong in terms of obedience to authority and maintaining the social order. The EHPs at this level of development are known for showing respect and loyalty to their employers. They uphold laws and are loyal citizens who effectively apply the laws within their workplaces and respect their superiors. More important, these EHPs are able to resist any wrongdoing by either their colleagues or those in higher positions. These types of workers refuse to abuse sick leave when they are genuinely not sick (Hellriegel et al., 2012, pp.125-127). They even resist being pressured by their peers to break rules.

The fifth stage is based on the idea of the *social contract*:- People at this stage think that laws and social conventions are not absolutes, but should be based on an agreement on what is best for all. Kohlberg (1971, no page number) asserts that "right action at this stage is defined in terms of general individual rights and standards that have been scrutinised and agreed upon by the whole society". EHPs at this stage have an aptitude to obey rules but may also campaign for changes when such a step is needed. They fight against unjust laws and should there be no change, they are willing to break such laws or rules governing them.

The sixth and last stage is the *universal principles* stage:- In Kohlberg's system, this stage is the highest stage of awareness and maturity, since it is entirely based on principle. The universal principles apply to behaviour driven by internal moral principles which result in being consistent and be sensitive to respecting equality of human rights and dignity of human beings (Kohlberg, 1971). The conduct of EHPs at this stage is marked by advocating for equality of rights and upholding of laws coupled with respect for others.

Hence, in conducting this study, the Kohlberg model (Kohlberg and Hersh, 2009) has helped me to be aware of the different levels of understanding applicable to the different types of EHPs. Further, this model has assisted in understanding why knowledge of environmental health varied amongst EHPs, particularly with respect to the attitude towards work in as far as solving complex situations was concerned. Some examples of difficult issues that EHPs had to contend with are discussed in Chapter Six in other parts of the thesis.

Factoring organisation and professional group influence

The other important consideration is that EHPs who participated in this study are employees of an established municipal organisation. These EHPs are also professional members governed

by the professional body - the HPCSA in the case of South Africa. The EHPs are to be understood from the perspective of being individuals who have personal values they were brought up with and which they bring with them to the workplace. EHPs are likely to find themselves caught up in conflicting situations where their autonomy (freedom to choose their own action) is restricted by the organisation's rules of conduct which they need to uphold. Being members of the organisations, EHPs need to be conscious of the fact that they can only exercise their "autonomy" within the confines of the rules governing their conduct as professionals as well as that of government employees, which also apply to the society as a whole (Giannou, 2009, p.38). EHPs then need to be orientated to the practices in the workplaces. Such orientation is important in preparing EHPs to act in accordance with the prevailing values of the organisation - otherwise conflict is inevitable. The situation is exacerbated by the fact that EHPs are by virtue of being professionals, likely to be pulled in two directions over and above their personal beliefs. In the first instance EHPs are required to obey rules of their employer. Furthermore, EHPs have to adhere to the rules of conduct set out by the environmental health profession to which they belong when carrying out their responsibilities. Consequently, it is important that steps be taken to harmonise both the professional and organisation guidelines regarding the acceptable and expected conduct so as to create workplaces characterised by peaceful and harmonious relationships that embrace both the professional and employer standards. It was for these reasons that my study determined how EHPs understood the professional and ethical guidelines governing their conduct at the workplace. I made reference to the HPCSA guidelines in interpreting the behaviour of EHPs' conduct in handling environmental health practices in South Africa. Some guidelines however, do not pronounce on some issues that EHPs find difficult to resolve - thus creating ethical problems.

ANNEXURE 9: APPLYING DREYFUS'S MODEL TO INTERPRET THE DEVELOPMENTAL STAGES OF AN EHP IN SOUTH AFRICA

The cadre of available EHPs are produced through accredited training institutions for environmental health before they become fully qualified EHPs that are licenced to practice environmental health. It is on this basis that I deemed it important to understand the genesis of how EHPs learn, which is significant in their understanding of their profession and subsequently, the implementation of their responsibilities. The genesis of an EHP is presented in this section to give a description of the kind of EHPs we have in South Africa who are the centre of focus in this study. The Dreyfus model of skill acquisition is used as a frame of discussion. This model takes the practitioner through "five stages of developing competencies" as the theoretical frame of reference to interpret the progression of development of EHPs in South Africa (Dreyfus, 2004, Daley, 1999). I have used the same model in Chapter Eight, section 8.5 to develop a model for strengthening the theory and practice of EH in South Africa.

This model asserts that practitioner learning evolves through five stages of development as illustrated in the Table below. The presentation of the table is followed by a brief discussion.

Stage 1 - The Novice Stage [Student EHP[75]]:- This stage refers to a learning environment where the instruction process begins and knowledge is imparted to the learner. The acquisition of knowledge at this stage is often not connected to practice. It is important at this stage that the learner is taught and guided to be able to make connections to the practice rather than seeing these in isolation. More attention needs to be placed on preparing the learner for the real demands of work and not "merely following rules" (Dreyfus, 2004).

Applied to EHPs, this period is when the student EHPs are doing their professional training in the accredited training institutions. This period normally extends over a minimum of three years. The student EHPs mainly acquire attributes that prepare them for the real work situations such as discipline knowledge, communication skills, problem solving and interpersonal skills, and ability to work independently and as a team player (Republic of South Africa, 2004a). South Africa had seven institutions as of August 2015 that offered environmental health programmes, namely: Tshwane University of Technology (TUT); Mangosuthu University of Technology (MUT); Cape Peninsula University of Technology (CPUT); Durban University of Technology (DUT); Free State University of Technology (CUT); Nelson Mandela Metropolitan University

[75] The HPCSA Professional Board for EHPs prescribes in its rules of conduct specific to the Profession of Environmental Health that a student EHP can only perform professional acts under the supervision of a qualified EHP.

(NMMU) and University of Johannesburg (UJ) (Health Professions Council of South Africa, 2014b). The student EHPs have their own professional registration number which they retain and which distinguishes them as student EHPs during the period of their study. The National Diploma in Environmental Health requires student EHPs to acquire amongst others, community development skills that places more emphasis on the understanding of the socio-economic contexts of the environment, stakeholder management, community participation, conflict resolution, public speaking and facilitation to mention but a few (Swanepoel and De Beer, 2011). They are also exposed through work integrated learning to the field of practice whilst still students in order to experience the reality of work and bridge theoretical knowledge and practical skills.

Changes in the scope of environmental health services necessitated revision of the EHP curricula to prepare student EHPs to be able to conduct research and to lead and confidently participate in multi-disciplinary teams within their work environment. They are also prepared to work creatively and independently. The introduction of a BTech qualification as a fourth year level to national diploma Environmental Health provided added advantage, in that it came with research methodology and management practice instructional offerings that enabled EHPs to collect and process data and transform problems into solutions through research projects. Furthermore, it was an attempt to improve the students' management skills which are needed particularly in exercising leadership responsibilities.

Demands for a scientific approach in environmental health practice as pointed out in the National Environmental Health Policy (Republic of South Africa, 2009), coupled with the need for a cadre of EHPs who meet internationally accepted standards (Africa Academy for Environmental Health, 2010a), resulted in the development of a professional degree curriculum in environmental health. Therefore, by 2014, the HPCSA Professional Board of Environmental Health Practitioners took a resolution introducing a new professional degree qualification that replaces the current national diploma and BTech qualifications. The new professional degree (Bachelor of Science (BSc) in Environmental Health) qualification is wider in scope and offers better quality skills that prepare EHPs to be recognised not only in South Africa but in Africa and worldwide through association with the International Federation of Environmental Health (IFEH). [Further details regarding the IFEH are provided in section 1.3.1.3].

Table:Applying Dreyfus's Model to Interpret the EHPs' Developmental Stages of Acquiring and Applying Knowledge in South Africa

Progression of knowledge from minimum to advanced

Minimal knowledge of problem solving **NOVICE STAGE STUDENT EHP** • 3 Year learning environment. • Gaining work attributes. • Being prepared for work via work integrated learning (WIL) • Student EHPs learn how they ought to practice and behave as professionals.	Limited application of knowledge and dependent **ADVANCED BEGINNER STAGE: COMMUNITY SERVICE EH PRACTITIONER** • Certificated with National Diploma EH • Working under supervision of an EHP. • Limited understanding of work issues. • Assigned straight forward tasks. • Trained to follow procedures (stick to rules). • A practitioner is introduced to the field of work and guided to put theory into practice. An EHP begins to understand the realities in the practice of environmental health practice.	Knows and independently applies rules **COMPETENT STAGE: INDEPENDENT EH PRACTITIONER** • Certified as an Independent EHP • Works independently. • Practises within the scope of profession • Applies own judgement. • Takes decisions on environmental health issues. • Undergoes continued professional development (CPD) to bridge and update discipline knowledge and practices. • Solves problems. • Manages and leads. • Promotes compliance. • Mentors others where applicable.	Deeper understanding and can prioritise **PROFICIENT STAGE: SCHOLARLY EH PRACTIONER** • Certified Independent EHP. • May be attached to teaching and learning environment. • May be a field practitioner with interest in innovation and research. • Applies analytical approaches to solve complex issues. • Provides inputs training, policy-making and environmental health practice.	**EXPERT STAGE: SPECIALIST EHP** • Acquired specialised knowledge through training and experiences. • Accredited practitioner • Confident and decisive in area of specialisation. • On the cutting edge of the specialised knowledge. • Brings change and is innovative
EHP Period of study	**Active Industry Practice**		**Educational Institution Attached**	**Field Specialist**

The Africa Academy for Environmental Health was formed to facilitate the design of a Bachelor of Science (BSc) in Environmental Health programme specific to the needs of Africa and to address the shortage of EHPs in Africa. Subsequently, the BSc in Environmental Health increased the number of institutions offering environmental health trainings from seven South African institutions to 19 on the entire African continent [due to the addition of 11 more institutions beyond the South African ones] (Africa Academy for Environmental Health, 2010a). Moreover, this professional qualification offers EHPs training in scientific and research skills essential to addressing the contemporary challenges in the environmental profession, particularly in the African region, and which could not be covered in the national diploma environmental health qualification (Africa Academy for Environmental Health, 2010a, p10). This degree has a component in environmental health ethics, which fills the current gap in the Environmental Health profession in South Africa.

Therefore, the introduction of the professional degree, BSc in Environmental Health in South Africa affords EHPs the opportunity of broadening their horizons in the context of training opportunities, recognition and work opportunities as well as addressing the issue of environmental health scarce skills on the African continent.

Stage 2 - Advanced Beginner [Community Service EH Practitioner[76]]:- At this stage the practitioner is introduced to the field of work and the discipline knowledge is the centre of focus coupled with the sharing of accepted practices being followed in the profession. A level of tolerance of mistakes is needed, as well as room for understanding that this practitioner still has limited understanding of the complexities associated with the application of rules of the profession. The practitioner here experiences the realities of work. Mentoring is important to help take the practitioners through the set processes and expose them to various phases of practice. The supervisor is necessary to give the practitioners first "straight forward responsibilities" and gradually lead them towards understanding the acceptable standards of practice. More important, the practitioners are taught how to follow processes and apply procedures and they begin to "make own judgements under the supervision" of a competent person (Daley, 1999). In this regard, as Dreyfus has stressed, the practitioner learns how to

[76] A Community Service Practitioner refers to student EHPs who have just completed their training and been awarded a National Diploma in Environmental Health qualification, but have not yet completed their regulated one year probation period of community service under the supervision of a qualified EHP which is a pre-requisite to register for the first time as an EHP as provided for in the Health Professions Act, 56 of 1974 as per Government Notice No R69/2002.

"cope with real situations" and understand issues in the "context" of the profession (Dreyfus, 2004).

The advanced beginner stage in the context of EHPs in South Africa, applies to the Community Service Practitioners. This stage of EHP development is where student EHPs are required to further register as Community Service Practitioners, immediately after completing their basic[77] EHP qualification. These EHPs are required to be registered as such in the HPCSA register and placed in approved community service sites gazetted by the National Department of Health (Health Professions Council of South Africa, 2013a). The Department of Health is informed when the community service has been completed so that the EHP can register as an independent practitioner. The placement of Community Service EHPs is not without problems given the limited resources allocated by the National Department of Health to this function (Cele, 2012).

Stage 3 - Competent [Independent EHP[78]]: - In this stage the practitioner is deemed to have gained experience after having acquired the disciplinary knowledge and procedures of work to be followed. The practitioner has a good understanding of the applicable knowledge in the area of practice. It is expected that the practitioner has the ability to cautiously apply the set rules and make the right choice of applicable procedures when handling complicated issues. The scope of practice of the Environmental Health profession in South Africa is the blueprint that covers the key functions of the EHPs. The EHP is better positioned to apply the guidelines in the National Environmental Health Norms and Standards designed to help harmonise the practice of environmental health by providing both routine inspections and attending to public complaints. Dreyfus (2004) has warned that cognisance needs to be taken of the fact that, more often than not, the practitioner is likely to encounter "frightening" situations which are difficult to cope with, especially where there are uncertainties. It is thus, important to have systems in place to provide support for EHPs' work and by so doing, eliminate frustrations and the making of mistakes.

[77] Reference to the basic EHP qualification is informed by the requirements set out in the HPCSA professional guidelines which require that a "Practitioner must have completed an undergraduate or postgraduate qualification whose duration is determined by the Professional Board" (HPCSA, 2014). Further, the HPCSA Professional Board of Environmental Health recognises the National Diploma in Environmental Health as the main requirement for professional registration of EHPs to practice. Other postgraduate qualifications are classified as additional qualifications.

[78] An Independent EHP is a qualified and HPCSA registered EHP who has met all the requirements of the EHP training, been awarded a qualification and has successfully completed the mandatory community service according to the rules of the HPCSA. The registration of this EHP in the HPCSA professional register is classified as "independent practice" – meaning that the EHP is permitted to practice the environmental health profession without supervision of another EHP as per HPCSA Booklet 2: Ethical and Professional Rules (2009).

Ideally, the EHP has the ability to exercise autonomy marked by exercising own judgement as well as being able to employ analytical skills in managing complex issues. The EHP is considered to be able to plan and fit the plans into the organisational goals. This particular practitioner is deemed "fit for purpose" (Daley, 1999). Being fit for purpose means that the EHP is "well equipped or well suited for the designated role or purpose" (Oxford Online Dictionaries, 2015). However, continued professional development is essential to sharpen skills and ensure that EHPs have updated knowledge that remains relevant to their professional practice. A competent EHP has the ability to effectively apply rules of the profession. Moreover, this practitioner should play an active and leading role in decision- making.

Stage 4 – Proficient [Scholarly EHP]:- The scholarly phrase is used here to denote someone who has continued to study to have more knowledge on the subject matter (Hornby, 2010). This stage of development is important in that it focuses attention on reflection on issues and questions actions as to what are the contributory factors, why some things either work or do not work. The practitioner here approaches issues as a whole rather than in parts. In other words, the practitioner considers all angles before arriving at a conclusion. Research is the main driving force used to find solutions to problems. The practitioner here seeks to understand facts as the bases of decision-making. By so doing, the practitioner is able to address the complex issues through analytical approaches. This process is important for determining the priority areas and those that need to be handled as routine matters. It usually takes more time to arrive at a decision but in the end the decisions taken are often relevant and effective in providing direction and solutions as they are taken with "confidence" (Dreyfus, 2004).

The challenge though, is that there is often no synergy between the scholarly EHPs and those in the field who concentrate on implementing the environmental health functions in the scope of the profession. Research initiatives which are essential for finding new solutions are not supported or formalised as part of environmental health practice. Scholarly EHPs, whilst mostly consisting of those attached to the training institutions, include all those who continue to conduct research by applying formal research methods. These individuals are able to present papers on various subjects that help improve the delivery of environmental health. The National Environmental Health policy in South Africa has identified the performing of scientific research in environmental health as one of the constraints in improving the quality of delivering environmental health services. As a result, the National Department of Health contemplates the commissioning of research in environmental health through collaboration with various research institutions. It also encourages the carrying out of basic applied research at the implementation level, presumably by the field EHPs, to provide solutions to the day-to-day problems. The latter

research is instrumental in developing management strategies (Republic of South Africa, 2013a, p38). However, this goal will remain an unaccomplished ideal if resources are not provided. This issue was raised as a concern and challenge by research participants in my study.

Stage 5 - Expert [Specialist EHP]: - An expert is a person who has acquired specialised knowledge through training and experience in a particular subject matter. At an expert stage the practitioner is focused and selective on those things requiring attention. In this regard, Dreyfus has highlighted that it is "the ability to make more subtle and refined discriminations that distinguish the expert" (Dreyfus, 2004). An expert approaches issues widely but acts decisively on the issue at hand having embraced all other influential factors. The expert is well known for bringing change to the way of doing things and being innovative which I regard as a fresh look at the practice. The main areas I observed in my experience of involvement in the environmental health profession, where specialist EHPs are often attached include air quality management; waste management; food safety and occupational health and safety, to mention a few examples. Air quality management even has a dedicated section within the case study municipality of my study. It is however, important that specialist EHPs keep enhancing their knowledge, which could be a costly undertaking, and which needs to be factored into the continued professional development of EHPs. One of the essential requirements of being a specialist is to affiliate to the professional specialist bodies for the area of practice. It is of paramount importance to be connected with other practitioners in the area of practice and have access to new knowledge.

Section summary: The above discussion mapped the stages which EHPs in South Africa go through during the period of their active practice. Most EHPs' development goes as a far as stage 3 which is about competence, which could be attributed to the fact that the requirement to register as an independent practitioner is having a national diploma. Any other improvement of qualification is more for personal improvement. Notwithstanding this point of view, I cannot rule out the effect of the history of training of environmental health in South Africa. For instance, unlike other disciplines like nursing and medical sciences, environmental health had the national diploma as the highest qualification till the introduction of the BTech qualification in 1995. The late introduction of higher qualifications in environmental health has contributed to the attrition of the profession as EHPs had no alternate but to migrate to other disciplines that offered avenues for growth. Another factor towards the development of EHPs is that employers tend to be comfortable with the minimum qualification and provide no significant incentives for improved qualification. Having said so, the onus also lies with an individual EHP to show interest in improving his or her qualifications. The training institutions have the challenge of developing industry discipline based refresher courses that would improve the knowledge base

of EHPs, particularly the scholarly part which encourages applied research for developing local solutions.

ANNEXURE 10: ELEMENTS IN THE THEORY AND PRACTICE OF ENVIRONMENTAL HEALTH

The discipline of environmental health is underpinned by theoretical principles that shape the scope of practices and nature of environmental health services on the ground. Due to differing local conditions, the areas of focus in the theoretical content of environmental health is likely to differ from place to place. These differences explain why there are various scopes of practice for different countries. To this end, South Africa for example has its own environmental health scope of practice for EHPs (Republic of South Africa, 2009) and the same is true in other parts of the world (Burke et al., 2002, Republic of South Africa, 2004a).

The scope of the practice defines the areas that EHPs are expected to cover in carrying out their responsibilities as stipulated in guidelines that define their work. Consequently, the practice of environmental health is not typical but specific to the country policy directives and local conditions being addressed. South Africa has its own scope of environmental health practice, gazetted in 2009 that has 14 core functions of EHPs (Republic of South Africa, 2009). The operation of this scope falls into two categories:

The first nine core functions constitute the municipal health services as defined in the definitions schedule of the National Health Act, no. 61 of 2003. Section 32 (1) of the same Act read with Section 156 (4) of the Republic of South Africa Constitution Act, no. 108 of 1996 mandate metropolitan and district municipalities to provide such services in their areas of jurisdiction (Republic of South Africa, 2004a, Republic of South Africa, 1996c) . The functions include two categories:

Category 1 - Functions: Municipal Health Services: Constituting 64% of the total EHPs functions:- (i) water quality monitoring; (ii) food control; (iii) waste management; (iv) health surveillance of premises; (v) surveillance and prevention of communicable diseases (excluding immunisations); (vi) vector control; (vii) environmental pollution control; (viii) disposal of the dead; and (ix) chemical safety.

Category 2 - Functions: National and Provincial Health: (x) Noise control; (xi) Malaria control; (xii) Control and monitoring of hazardous substances; (xiii) Radiation (Ionising and non-ionising – monitoring and control and; (xiv) Port Health.

Fundamental Factors Shaping Theory and Practice of Environmental Health

Environmental health is preventative in nature: - The primary concern of environmental health services is three-fold: *First*, it focuses on addressing issues and conditions in the

environment that can potentially harm human health and wellbeing (Lancaster, 1992, p295). *Second*, it is about ensuring the safety of air, water supply, food consumption, dwellings and workplaces, all of which have an impact on the quality of life (Murphy and Neistadt, 2009, p3). *Third*, environmental health practice is concerned with the development and implementation of programmes for improving the quality of people's health and the environment. Key to environmental health is the preventative role which has the primary, secondary and tertiary prevention levels that were adopted from Leavell and Clark's 1958 model (Clark and Leavell, 1958) as a framework in the public health sector and are particularly relevant to environmental health (Goldman, 2010, p966).

In drawing from Goldman, the three levels of prevention entail: *primary prevention* - this level covers the designing and implementing of interventions such as health promotion that involve carrying out rigorous health education among communities to create awareness about conditions that are likely to cause ill-health. This measure aims at empowering communities to be responsible for their health and take steps towards promoting safe lifestyles. Communities are also educated about the dangers of chemical exposure. *Secondary prevention* – In this case, measures are put in place for early detection of health problems and steps are taken to prevent people from being exposed to dangers from the environment and thus prevent ill-health. *Tertiary prevention* – This third stage entails taking of steps to identify and recommend treatment of people who have contracted a disease or who suffer from any adverse condition resulting from a particular practice. This stage is a remedial state aimed at addressing existing health problems.

Environmental health promotes local context:- The United Nations (UN) has pointed out that the designing of human development programmes should consider local contexts, so as to promote active participation and addressing of local needs (United Nations Development Programme (UNDP), 2015, p.23). This stance is important in environmental health practice as EHPs' work involves engaging with people on the ground who are consumers of the services they render. Proper training is required to acquire skills for delivering quality services and to optimally prepare workers (EHPs) to effectively respond to service demands. Therefore, an "environment conductive for ensuring addressing of people's collective needs and interests" needs to be created, for lasting local solutions (United Nations Development Programme (UNDP), 1990, p.1). Environmental health practice should ideally, as per the principles set out in the United Nations' Agenda 21 programme, encourage engagement with relevant stakeholders in finding solutions to local environment problems. The UN Agenda 21 programme explicitly appeal to governments to prioritise environmental health in their areas so

as to mitigate the negative effects of pollution with full involvement of all local affected stakeholders, particularly the communities and the business sectors (United Nations Division for Sustainable Development, 1992). Such a responsibility requires EHPs to have the ability to work in multidisciplinary settings; hence they are employed in both public and private sectors (Jameton, 2010).

Trends in South Africa and the United Kingdom however, indicate that EHPs are primarily employed by local governments and the environmental health services are located at municipalities (Burke et al., 2002, Republic of South Africa, 2004b). The central role of EHPs in solving environmental health challenges, requires supportive environments with both technical and financial resources for developing local solutions. In this regard, the nature of support given influences the professionals' attitudes to their responsibilities whilst competencies determine the quality of services being provided (Hortal Alonso, 1996). Therefore, local research on environmental health practice is important (i) to inform the development of policy directives, and (ii) to determine the relevance, and effectiveness of implemented programmes to the needs on the ground (The Swedish Foundation for Strategic Environmental Research (Swedish Foundation for Strategic Environmental Research (MISTRA), 2014).

Environmental health is complex and its practice evolves and embraces unity in diversity:- As early as the 18th century, EHPs were amongst public health professionals who dealt with sanitation problems during the outbreak of diseases like cholera and yellow fever (Waller, 1935). The focus during that time was on fumigation, inspection of premises and sanitary conditions involving water pollution and poor sewerage drainage. Subsequent changes in people's lifestyles and the nature of the spread of diseases in contemporary times necessitated scientific approaches to control communicable diseases. Thus the scope of environmental health training, competencies and practice changed accordingly, from a data collection focus towards contributing to policy development (Ashton, 1991). This responsibility is best captured by the description given by the National Institute of Health (NIH) which regards environmental health as "both a scientific field of study that attempts to understand the complex relationship between environmental risk factors and human biology within affected individuals and populations and as an applied discipline that uses this knowledge to prevent illness, reduce disease, and promote health" (National Health Sciences, 2006, p.5 in Resnik, 2012, p.9).

Changes in environmental health practice were accompanied by changes in the naming of EHPs and professional associations in different parts of the world to embrace the new focus;

nonetheless, the central role of protecting public's health remained. Some environmental heath bodies changed their names to encourage the diversification of membership as was the case in Ireland which changed from mere Environmental Health Officers Association (EHOA) to Environmental Health Association of Ireland (EHAI), thus accommodating other related professionals (Ryan, 2013, p.45). Environmental health professionals and/or professional associations' names that are used in the environmental health profession ranged from sanitary inspectors, public health inspectors, health inspectors (HIs), health officers (HOs), environmental health officers (EHOs), and environmental health practitioners (EHPs) which is the case in South Africa, but all are part of the environmental health professionals' family.

The diverse role of EHPs is captured in the sanitarian description found in the Public Health encyclopaedia. This definition captures the essence of the EHP's role from a Public Health perspective, namely:

"A sanitarian[79] refers to a person trained in sanitary sciences, biology, geology, chemistry, physics and math (mathematics), and operates as an inspector or health official in the public sector or private industry, reviewing programmes and enforcing laws to protect the public's health. They are public health professionals whose responsibility involves sanitation and safety; air, water and environmental protection; inspection of water and waste disposal systems; pest control; epidemiology and disease control; nuisance control as well as housing, occupational and institutional safety. In addition, they are required to register with relevant professional bodies, maintain such registration and continue with their professional development" (Manson, 2002, no page number).

The professional registration and continual development covered in this definition are vital elements of professional practice to keep pace of developments and ensure that professionals remain at the cutting edge of their professional practice (Bond, 2015) *[See more details under professionalism in Chapter Five]*. The European based National Environmental Health Association (NEHA) provided an improved practical definition of an environmental health professional which focuses more on the current role of EHPs; however, it does not cover professional development that has been included in Manson's definition.

"An environmental health professional or specialist is a practitioner with appropriate academic education and training and registration or certification to: investigate, sample, measure, and assess hazardous environmental health agents in various environmental media

[79] EHPs were initially classified under sanitarian inspectors with a focus on sanitation. Reference to sanitarian was broader than mere EHP as it is known today but the functions and educational requirements have similarities.

and settings; recommend and apply protective interventions that control hazards to health; develop, promote, and enforce guidelines, policies, laws, and regulations; develop and promote health communications and educational materials; manage and lead environmental health units within organisations; perform systems analysis; engage community members to understand, address and resolve problems; review construction and land use plans and make recommendations; interpret research utilizing science and evidence to understand the relationship between health and environment; and interpret data and prepare technical summaries and reports" (National Environmental Health Association, 2013, p.72).

The two definitions comprehensively cover the role of an EHP. Manson's perspective is more of a sanitarian in the context of Public Health, which is beyond the role of EHPs but accommodates an EHP. The NEHA specifically captures the functional role of an EHP. Environmental health theory and practice therefore need to factor in changing environments to allow room for different emphases in keeping with local dictates.

The complex nature of environmental health practice is exacerbated by the effect of globalisation which resulted in increased movements of people between countries for trade and travels as well as exchange of skills. All these factors are likely to demand and require paradigm shifts in the rendering of environmental health services. Globalisation promotes the "interconnectedness of people and the environment, the interdependence of countries, making it hard for countries to think only for themselves, especially when it comes to the effect of health problem issues" on people's livelihood across the globe, which have no respect for man-made boundaries (World Health Organisation, 2015e). Modern EHPs must thus broaden their understanding of environmental health practice by factoring in international practices. This approach makes the universal understanding of environmental health vital in promoting a common focus and worldwide knowledge amongst different practitioners. The World Health Organisation (WHO) as a body that the United Nations mandated to "drive and coordinate international health" provides a universal definition that offers a frame of reference for a common meaning of environmental health (World Health Organisation, 2015b).

The wide scope and diversity of environmental health resembles the characteristics of communal practices in MacIntyre theory (Hicks and Stapleford, 2016, p.7), in that it promotes collaboration as the main form of delivery of services over encouraging individual activities. In addition, EHPs share the same interpretation of environmental health norms worldwide, for example those by the World Health Organisation which specify roles and responsibilities in rendering environmental health (Adams et al., 2008, p.19). Cognisance is taken of diversity;

hence, there are differences in application in different local settings. EHPs' unity in diversity is best addressed by the existence of professional bodies and being identified as a profession with a clear mandate of safeguarding the health of the public as well as minimising and eliminating risks factors in the environment that have a potential to harm human health. It then makes sense to say that environmental health practice is profession specific. Thus, it is performed to fulfil the welfare of the public and under the guidance of the environmental health professional bodies. The HPCSA is presented in Chapter Five as an example of a professional body for environmental health in South Africa.

The activities of EHPs are institutionalized to ensure accountability for actions and that they are carried out in a manner acceptable to the profession. Thus, EHPs are a highly distinguished group of specially trained individuals with a social status that carries with it an expectation of performing at a high standard as they have acquired competencies that an ordinary person does not have (Panza and Potthast, 2010, Bond, 2015). EHPs' professional "theoretical knowledge and practical skills" are designed to enable them to operate within the set parameters and established norms and standards (Hortal Alonso, 1996); hence, the need to observe professional guidelines. Belonging to a profession requires the carrying out of professional practices with technical competencies and adherence to the professional guidelines. Such a requirement has ethical implications as failure to meet the expectations could be construed as performing below the standard or subjecting others to harm.

Environmental health therefore, ideally complements medical science whose focus is curative in nature. The role of environmental health is vital in addressing non-personal issues where medical science interventions have fallen short in solving the related health problems. These include conditions that resulted in environmental degradation due to, *inter alia*, air or land pollution and excessive exposure to hazardous chemicals associated with rapid industrial developments and technological innovation (Lafronza, 2003, no page number). The increased demands on the services of environmental health require continual re-training of environmental health professionals to gain technical skills for implementing scientific knowledge in the control of communicable diseases. Such training could help in "systematically changing behaviour" and instil among EHPs a spirit of focusing on achieving the desired goals (Chelechele, 2009, p.47). Furthermore, retraining is an important step in empowering EHPs to effectively respond to complaints, and in performing other responsibilities like collecting, processing, analysing and implementing scientific information as well as contributing to policy development in the environmental health profession instead of being mere data collectors which was the previous focus of EHPs (Waller, 1935, pp.323-327).

A Critical Evaluation of Environmental Health Practice

As already mentioned, the nature of environmental health practice is linked to the regional settings that are influenced by prevailing socio-economic conditions. Drew et al. (2000, p.35) advised that, "environmental health services should include engaging with the public regarding their concerns and handling their complaints in line with the policy provisions as conditions dictate". This position I believe is likely to present a challenge in environmental health practice as in some instances EHPs lack the support they need to fulfil their duties. This can either be in the form of absence or inadequate resources or at times EHPs do not get the necessary cooperation from the public they serve to carry out their responsibilities. Support is vital as pointed out in the previous discussion earlier in this chapter. Supportive environments for environmental health practice would enable alignment of practices to policy focus so as to ensure that it addresses the priority areas at a given time. MISTRA, a Swedish based research foundation dedicated to providing strategic inputs on research driven solutions, recommends that one of the measures that could provide environmental health services is carrying out interdisciplinary research aimed at assisting the development of policies that support effective programmes (Swedish Foundation for Strategic Environmental Research (MISTRA), 2014).

There is a need to understand the actual experiences of EHPs when carrying out their work, which involves enforcing policies and legislative guidelines. This goal can best be achieved by research that looks at the actual practices and engages with the EHPs on the ground. This approach is often lacking. The WHO Director General, Dr Margaret Chan, has reiterated the importance of local research when introducing the WHO's "Research for universal health coverage" strategy aimed at promoting community-based research interventions that would be relevant and acceptable to the people being serviced (World Health Organisation, 1998, p.iv). Furthermore, the WHO Office for Africa (WHO-AFRO) has established an African Health Monitor magazine to capture community-based research that showcases actual practices and suggests strategies to address the African health problems. According to Dr Moeti, the WHO-AFRO Regional Director, the success of universal health coverage depends on understanding the country's "challenges and constraints, skills shortages and capacity-building needs as well as lessons from own experiences".

ANNEXURE 11: GRANTING OF PERMISSION TO USE MAPS

Gmail TT Poswa <ttposwa@gmail.com>

RE: Website contact from: Tobius T Poswa

1 message

Deon Muller <deon@yesmedia.co.za> Mon, May 30, 2016 at 9:53 AM
To: ttposwa@gmail.com

Dear Tobius

You are welcome to use the maps. Please just credit us as the source: either www.municipalities.co.za or *The Local Government Handbook: South Africa*.

Please note that various changes to municipal demarcation in KZN will take effect on 3 August. The details are contained in the description of each affected municipality.

Regards

Deon Muller

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