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Public Relations, Propaganda and Poison: A Case Study of South African Press Coverage of the Vanderbijlpark Water Pollution Crisis and Mittal Steel

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A dissertation submitted to the Faculty of Humanities, in full fulfillment of the requirements for the degree of Master of Arts at the University of the Witwatersrand, Johannesburg

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Declaration

I declare that this dissertation is my own, unaided work. It is being submitted for the degree of Master of Arts (Media Studies) in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university.

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Signature of Candidate

Abstract

This study provides an account of the media coverage from *The Star* and *The Citizen* that dealt with the topic of water pollution in the Vanderbijlpark area. The first research question of this study asked how much coverage this issue had received in the two newspapers analysed. The second research question asked what this coverage of the issue looked like. The quantitative findings revealed that very few articles dealt with this topic from either publication, especially in relation to the corporation responsible for this pollution, namely Mittal Steel (previously Iscor). The qualitative findings involved thematic content analysis revealing themes such as legal conflict, sourcing, greenwashing and environmental reporting. A particular concern raised by this study was the use of sources and attribution in the articles. The local community was provided with very few opportunities to express their own concerns about the water pollution problem. It was found that most articles made extensive use of 'official sources' and representatives from the corporation and various government departments. A very limited number of articles provided the local community with public representation and described the situation in detail. This study concluded that these two publications had in fact failed in their responsibilities as the 'fourth estate' by providing very little coverage of the issue and by relying on official sources and public relations personnel.

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Chapter 1

Introduction

This study is an analysis of how a small community, severely affected by groundwater pollution emanating from a large multinational steel refinery, has been represented and has had their concerns addressed by the mainstream South African print media. The particular community focused on in this study is that of the residents of Vanderbijlpark in Geuteng South Africa. A number of these residents have been significantly affected by a severe case of groundwater poisoning originating from the unlined 'slime dams' belonging to the nearby steel refinery. Primary researchers such as Cock and Munnik (2006) and Munnik and Peek (2008) have indicated that this groundwater poisoning is a direct result of the steel refinery's lack of adherence to current environmental regulations. Cock and Munnik (2006) provide detailed information in the form of scientific evidence and in the form of interviews conducted with affected residents of this community.

These authors note that this environmental crisis dates back to 1956 as the then state-run Iron and Steel Corporation of South Africa (ISCOR) built a steel refinery on permeable land above a sensitive water table which supplied water to the surrounding community. This refinery was constructed before significant environmental legislation and considerations came into existence. As a result the effluent dams or 'slime dams' were constructed without any lining and this allowed for extremely toxic and carcinogenic substances to pass into the water table below these dams. This contaminated waste water was also pumped into the nearby river system exacerbating the water pollution problem. The contaminated water continues to be used by the Vanderbijlpark community, particularly those people living to the west of the steel refinery's boundary.

The effects of this contaminated water have been described as ranging from reproductive failures to multiple forms of cancer and illness in individuals who have had prolonged exposure to this water system. Other effects of this polluted groundwater have been listed as dire crop failures for subsistence farmers in the area, including the reproductive failure and deaths of livestock (Cock and Munnik, 2006).

This study looks at how this severely affected community and this significant environmental problem has been reported by the mainstream South African print media. The two newspapers analysed in this study are *The Star* and the *Citizen* and the key time period for this analysis runs from 1998 to 2008.

Aim

This study seeks to analyse and explore the representations and attribution provided to local communities dealing with environmental damage, such as groundwater poisoning. This study aims to address the public platform for information and debate around this issue, as potentially provided by the two newspapers *The Star* and *The Citizen*. This research paper will attempt to demonstrate that the print media in South Africa have little interest in the representation of small communities affected by environmental pollution, yet they retain an interest in promoting generally positive impressions of large and powerful corporations. The media's role in protecting these communities, promoting democratic principles and exposing socially important information may be unfulfilled as beneficial representations of large industries are favoured in the name of 'development' and privatisation.

This research attempts to analyse the framing and representation of environmental damage in the South African press around this specific water pollution issue in the affected areas of Vanderbijlpark. These areas are located in the Vaal Triangle of Geuteng and the specific areas of concern are known as Linkholm, Drakerville, Steel Valley and Louisrus.

A case study of the groundwater pollution in Vanderbijlpark has been used to generate a sample group of the coverage on this issue from the two newspapers *The Star* and *The Citizen*. These two newspapers have been selected as they are considered to be good examples of widely distributed and mainstream newspapers in South Africa.

Rationale

This research is of significant importance in that it raises vital concerns not only about the media's ability to accurately represent a vulnerable or damaged community, but also in illustrating how these representations are vulnerable to political-economic influences.

The critical role of the media to function as a 'watchdog' and to report on social problems and concerns is addressed as the impact of industrial development is considered against its cost to human and environmental health. This study seeks to demonstrate how the severely problematic human and environmental consequences of the operations of multinational corporations such as Mittal Steel are often downplayed or under-reported by media organisations.

This research is also important as it raises concerns about how the media, as a social institution, may be failing to acknowledge and inform the public about critical threats to human existence posed by certain forms of 'development' and industrialisation. The specific case study of the groundwater pollution in Vanderbijlpark is useful in demonstrating the representation of the affected community and of the corporation responsible for the pollution.

This study builds on research that I conducted in 2008 concerning this particular case and the amount of media coverage available on this issue. This study is also of value as it is a relatively unexplored area with reference to the specific context of environmental damage, its effects on local communities and how these stories are portrayed in the mass media. Another important aspect of this study is that it attempts to understand a marginalised or misrepresented local community affected by severe water pollution in the face of a powerful multi-national corporation.

The historical context of how the steel refinery came to be owned by ArcelorMittal provides insight into how the pollution crisis was dealt with and how discoveries around this crisis were (and are) framed by interested powerful parties such as corporate and government officials.

Research Questions

To what extent is the Vanderbijlpark water pollution problem reported in *The Star* and *The Citizen* newspapers from 1998 to 2008?

How is the coverage of this issue represented and framed in these two newspapers?

The first of these questions involves the use of quantitative methods of data collection and quantitative analysis in order to establish the extent of coverage of this issue in the two newspapers. The second question requires a qualitative approach, as the particular representation and attribution involved in the newspaper articles is examined in detail.

Background to the study

The Vanderbijlpark steel refinery was constructed by 1952 and given the weak environmental protection laws adopted at that time, the refinery's effluent dams and drainage canals were not lined against the leakage of toxins and heavy metals into the groundwater (Cock and Munnik, 2006; Munnik and Peek, 2008). The refinery was initially constructed by Iscor, a government owned industry and was later privatised in 2004, as Mittal Steel bought a majority of shares through the governments' privatisation policies.

This privatisation of state resources can be seen as government complicity in the water pollution problem in Vanderbijlpark. The faltering and corroding steel refinery was simply offloaded to a multinational corporation rather than being rectified and made to be environmentally sound.

The privatisation of the Vanderbijlpark steel refinery, through neo-liberal governmental policies, raises significant questions about the governments' lack of social responsibility to the residents of Vanderbijlpark and to the residents of Geuteng that are reliant on the Vaal water system. Rather than taking responsibility for the economic and environmental failures of the refinery the steel plant was sold to a multinational corporation who continued to cause major environmental damage whilst rescuing the plant from economic collapse. In this way it is clear to see that the issue of economic resuscitation was far more important to the government than the health and welfare of the residents of Vanderbijlpark living near the steel refinery.

The unlined dams and channels meant that effluent water containing heavy metals and other carcinogens and toxins would leak into the groundwater. This polluted water would eventually reach the surrounding water systems and all life dependent on that water. In this way, it is possible to argue that this particular water pollution case may constitute one of the longest running environmental crises in South African history, having continued to poison plants, animals and humans for 58 years.

Munnik and Peek (2008) note that Lakshmi Mittal took over Iscor (Iron and Steel Corporation of South Africa) between 2001 and 2004 and that "rather than paying for the company he was just about paid to take it over" (Munnik and Peek in Aitken (Ed), 2008:24). These authors mention how Iscor was a severely troubled parastatal organisation that had economic, social and environmental problems hampering its production and sustainability.

Munnik and Peek (2008: 24) note that:

> "For achieving cost savings agreed under a management contract since 2001, he [Lakshmi Mittal] was awarded with R1.3 billion, and in 2004 got a dividend payout of R3 billion that more than covered his buying ISCOR shares for R2 billion in 2001. Mittal took a majority shareholding at the end of 2004".

As a result the steel company was virtually 'given' to Mittal with its existing major malfunctions. The significance of privatisation and the policies of neo-liberalism are identified here as having negative impacts on local communities and how they are shown to a wider, unaffected audience as the state owned refinery (Iscor) became the property of the powerful multinational corporation ArcelorMittal.

This was made possible as Iscor was in fact privatised under the 1988 Botha government. As Cock and Munnik point out, "in 1989 Iscor was privatised for a total of R3 billion in shares….With no single shareholder having majority control" (Cock and Munnik, 2006: 8). This privatisation resulted directly in the change in ownership from a state run facility to a corporately owned and run refinery.

It is argued that this act of privatisation feeds directly into Mittal's corporate policy as these authors detail Mittal's strategy of buying derelict or unprofitable industries, to generate funding from the IMF (International Monetary Fund) and the World Bank, and use market monopoly and global knowledge sharing to engineer a quick turnaround and finally liquidate and dispose of all assets if profit turnaround is not achieved (Munnik and Peek, 2008). This raises questions about conscience or social responsibility for the local community in Mittal's corporate policy. This modus operandi employed by Mittal explains how the pollution crisis created by Iscor was passed to Mittal (ArcelorMittal) and was effectively ignored for as long as 58 years, as environmental regulations and health disasters are not considered as economically significant under Mittal's corporate policy.

The involvement of a multinational corporation in the causation of this environmental problem raises the importance of addressing the issue of environmental damages and pollution from a globalist perspective. Whilst Mittal inherited a number of the structural problems of its Vanderbijlpark refinery from Iscor it is still important to note that the greatest of these problems have remained unresolved. These include important features such as the unlined 'slime' or evaporation dams that store wastewater and the effluent channels which discharge this wastewater from the refinery.

Due to the global nature of the corporation and its global modus operandi (Munnik and Peek, 2008) it is necessary to consider the involvement of a transnational corporation in relation to the welfare of a community located in a 'developing' nation such as South Africa. Munnik and Peek (2008) have noted that in other 'developing' nations such as India, parts of Eastern Europe and South America foreign corporations such as Mittal have practiced environmental policies and employed industrial behaviours that jeopardise the health and safety of local communities near their refineries.

In these 'developing' countries environmental laws are very weak and the ability for the governments to enforce these laws is further curtailed by the economic importance of the multinational corporations. In this way it is possible to observe how the environmental regulation in South Africa is placed under great pressure as the ability to enforce weak environmental legislation is further derailed by the economic interests of a 'developing' country dependent on foreign investment and multinational corporations such as ArcelorMittal.

Hypothesis

This study begins with the assumption that there is limited coverage in the South African print media of the Vanderbijlpark water pollution crisis and its effects on the local community. Public relations personnel and government officials dominate the few stories that do exist and they are almost entirely relied upon for details and developments about this water pollution crisis.

Conclusion

This chapter has provided an introduction to the specific water pollution issue that is to be closely analysed in this study. A general background to the area of Vanderbijlpark and the role of the nearby steel refinery in this pollution crisis has been described. A brief history of the steel refinery has been recounted, illustrating how the previous state facility Iscor was privatised through shareholdings, ending up in the possession of the multinational steel company ArcelorMittal. The involvement of a multinational corporation in a 'developing' country was discussed in relation to its economic importance and the weak environmental enforcement in a 'developing' country. This chapter also served to identify the central aims of this research. The importance of analysing this data set with a qualitative approach is justified by paying particular attention to the representation of issues such as legal conflict, the use of sources, 'greenwashing' and environmental reporting.

Chapter 2

Literature Review

This chapter provides an account of the key research in environmental damages and challenges to local communities and how these communities have been affected by the environmental practices of large corporations. It provides a detailed account of research done in Vanderbijlpark and the effect that this refinery has had on the local community. This chapter also provides a theoretical framework which is employed in this study to understand the amount and type of media coverage that the water pollution problem in Vanderbijlpark has received.

Environmental Pollution Studies in South Africa

There is limited literature relating to environmental journalism in a South African context. It is of significance to note that most of the literature that exists on this subject does not identify the role or function of the media as being of particular importance to environmental management. This research therefore draws upon theories of representation in order to expose the importance of the amount and type of coverage in influencing how environmental stories are portrayed by print media in South Africa. This study makes particular use of theories relating to the sociology of news production in analysing the type and amount of coverage relating to this particular case study. The particular case study is that of the water pollution crisis in Vanderbijlpark and the coverage that this issue has received in two prominent South African newspapers, namely *The Star* and the *Citizen*.

Bell's (1998) "Environmental Problems and Society" addresses the actual physical threat to the environment posited by human society. This work illustrates how our environment is under threat due to our species collective social action. Bell's notion of 'social inequality' as being at the root of environmental crisis is of significant importance to this study.

This is because social inequality in terms of information access and social positioning is a direct contribution to values, beliefs and practices surrounding environmental damage and the impact that pollution has on humans. Bell also refers to ‘ideological blindness’ which can be defined as a lack of sociological imagination on behalf of the individual, which leaves them less inclined to see a larger social issue or question common information. This is of use to the study as it relates to Gramsci’s (1935) notion of hegemonic power where individuals are influenced by the production of ‘consent’ through their consumption of media products.

Bell (1998) provides research that comes from an environmental sociologist’s perspective and illustrates how this form of sociology contributes to an understanding of society in the greatest possible sense. In this work he provides accounts of global warming and the ozone problems and constantly likens issues of pollution and environmental degradation to concepts of development and social inequality. Bell's work has a bearing on the marginalised community of Vanderbijlpark in the context of globalisation as he observes that international conventions do not necessarily stop foreign companies from relocating their most hazardous production practices to developing countries desperate for employment (Bell, 1998:21). In this way the globalisation of trade and development have profoundly negative impacts on poorer communities, particularly in 'third world' or ‘developing’ countries such as South Africa.

This is exemplified by Mittal’s acquisition of the Vanderbijlpark steelworks and the resulting ‘hazardous practices’ which have meant a polluted environment for a marginalised South African community. Significantly, in relation to the government and the Department of Water Affairs’ (DWAF) lack of response and intervention in this area, it is of interest to note that “the inequality often increases because of lax environmental regulation in poorer countries” (Bell, 1998: 21). This situation is evident in Vanderbijlpark where the DWAF is cautious about going up against the formidable legal team of ArcelorMittal.

The research conducted by McDonald (2002) is also of significant importance as it raises the question of ‘environmental justice’ within a South African context. McDonald examines how social inequality has led to a state where poorer communities are marginalised and have little access to important basic needs such as clean water, air and land in South Africa.

McDonald is particularly interested in examining the link between privatisation, consumerism and 'social justice' as he argues that due to privatisation policies and practices the poor and rural communities in South Africa have been significantly disadvantaged. McDonald notes how "as many as 90% of the water delivery schemes provided by government since 1994 are no longer operational" (McDonald, 2002: 293). In this way, the privatisation of water delivery in South Africa is examined and found to fail the poor and rural communities whilst benefiting and serving the urban centres.

This is an example of the themes of 'social inequality' and 'environmental justice' as poor and marginal communities were and are ignored or disadvantaged as privatisation and deregulation give preference to multinational corporations at the expense of local communities. This has particular relevance to the Vanderbijlpark water pollution issue as Iscor was taken over by Mittal (now ArcelorMittal) one of the largest steel producers in the world, with refineries across the planet. McDonald (2002) would argue that this practice has severe negative effects on the environment and the health of the local community as a multinational industry cares little for a South African rural or poor community and has sway over the government and the Department of Water Affairs (DWAF).

Bond's (2002) work helps to illustrate the relationship between commercialization, privatisation and commodification on environmental developments, attitudes and beliefs. This particular work details, with recent empirical evidence, the negative impact of commodification directly on the environment, on less powerful social groups and on the values and beliefs of individuals about the environment and their place within it. Bond draws attention to the fact that human society has become separated from nature as we have seemingly subjugated or controlled nature, which is now viewed as 'other', detached from human society.

This is of use in the study as it relates to how the media or other socialising structures function to re-enforce this idea of nature as other and as existing for our (human) benefit and use. This assists in understanding the different values and ideological standpoints that readers may have in relation to the principal topic.

Bond also identifies how corporatisation or the commodification of natural resources (such as water) can mean that those in positions of social inequalities or disadvantage are excluded from the benefits and endure the negative consequences such as pollution or lack of access. This issue is of interest to the case study as these disadvantaged individuals may have greater experiences of environmental impacts whilst they are not reflected in the media. Similarly, marginalised groups or societies (the 'developing' world) may have to endure the consequences of environmental damage and pollution (drought or floods in Africa) and may be largely unaware of its causes and/or unable to react. This study attempts to provide a case study example of how this has occurred in South Africa and how it has affected the residents of areas in Vanderbijlpark as they have been marginalised and silenced in their attempts to gain public awareness and support for their cause through petitions and other means. This study examines this marginalisation from the perspective of journalists favoring 'official' and public relations sources whilst providing limited coverage for the resident's complaints.

Bond's (2002) research details how the privatisation of water in Gauteng has disadvantaged 'working class' people as they are generally forced to pay for the advantages enjoyed by wealthier individuals. Bond's idea of 'eco-social justice for working class communities' is helpful in understanding the effect of groundwater pollution on poor communities, as they are unable to afford alternatives in an economy that has privatised water resources. Bond details how the corporation owning this contract is in a significantly questionable position as "Suez' business plan calls for (after tax) profits to increase from R3.5 million in 2000-2001 to R419 million in 2008-2009, which will require excessively high water tariffs to be paid by low income people" (Bond, 2002: 219). This author notes how in addition to this restraint on the available water resource available to poor communities, the water that is available, in the form of surface of borehole water, may be polluted. Bond (2002) further notes how groundwater is a significantly valuable natural resource and is five times more cost effective than surface water. He states that "the damages from groundwater pollution to ecosystems are often long term, and often lead to the abandonment of aquifers" (Bond, 2002: 30). This is of particular relevance to the issue of the groundwater pollution in Vanderbijlpark as Steel Valley is virtually evacuated and the ecosystem has been significantly damaged due to pollutants in the water emanating from the Mittal steel refinery.

George Monbiot's (2004) speech to the Enviromedia conference in Johannesburg helps to inform this study of how the media has dealt with environmental concerns, such as global warming. Monbiot has produced a great deal of work relating to the function or agency of the individual media worker within the media organisation. In this article he details how corporations or rich individuals own almost all the large well-funded media organisations. Interestingly Monbiot suggests that due to the influence of these multi-millionaires, their interests are exerted and are at odds or in contrast to the views of their readers. According to Monbiot the multi-millionaire desires to create and sustain a world that is better for people like him/herself, yet this relies on vast levels of inequality. This relates to this study as it demonstrates the re-emergence of a dominant hegemonic ideology as illustrated by Gramsci (1934) and relates to Bells' (1998) notion of social inequality and its effect on the individuals experience and use of their environment.

Monbiot contends that rich individuals and corporations have built media companies up to the point of monopolising public opinion. In this way media owners exert pressure on media workers (editors and journalists) in relation to content about environmental issues such as pollution, carbon dioxide emissions and global warming. The dominant ideologies supporting capitalist enterprise, free market trade and deregulation are, for Monbiot, examples of the influence of media owners. Monbiot points out another important issue, which is that media workers are often located within an economically stable social sphere and as such are likely to be amongst the last social groups to feel the effects of climate change, pollution and the depletion of resources. Due to this they are not personally affected by global warming and environmental issues and are not inclined to report on them and if they are reported, this privileged position of social distance from the problem prevents any real engagement with the serious problems and causes of environmental destruction and pollution. This thinking has been pioneered by political economy of the media scholars such as McChesney, Herman and Chomsky, among several others. Herman and Chomsky's propaganda model, for instance captures this quite well.

Another significantly interesting point raised by Monbiot is that if or when climate change is covered in the media the journalist will often write 'three quarters of the story' and fail to make any recommendations on change, 'the need for more research' may be used to end the article. Monbiot argues that this perpetuates a dominant hegemonic idea that personnel and corporate changes are not necessary in relation to the threat of climate change and environmental pollution. This idea of hegemonic dominance of certain ideologies is supported by Hardt (1992) as he argues that the media tend to favour established systems of control or structure especially in times of social stress or 'crisis'.

Tomlinson's (1999) work on 'globalised culture' in the media is of use to this study as it illustrates the presence of dominant hegemonic ideologies in contemporary media organisations and how global culture is in fact a representation of Western culture. This echoes both Monbiot's ideas and those of Gramsci. Tomlinson demonstrates how this 'global culture' spreads and facilitates the interests of those in possession and control of media organisations. Tomlinson warns that the process of creating a global culture involves the homogenisation of current and varying cultural forms that may be replaced with essentially Western values and practices. A major function of this global culture is the spread of democracy and neo-liberal economies involving policies such as deregulation and free market trade. These issues have negative consequences for environmental concerns and perpetuate current consumption patterns.

In this way Tomlinson's study illustrates how a dominant (Western) culture can be transferred through the mass media and why this communication is largely silent about issues around global warming due to the interest of the media proprietors. Tomlinson argues that the Western media corporations assist in promoting worldviews that favour and establish Western capitalist social systems. This explains why media corporations are generally silent about environmental concerns as this may undermine or conflict with the dominant ideology of capitalism and free enterprise.

The work *Rhetoric and Resources in Public Relations Strategies* by Ihlen (2004) is also of significant importance to this study as it illustrates how public relations practices involve the use of particular rhetoric and are positioned, by large corporations, to propagate a 'favourable' or 'positive' perception of that company. Ihlen utilises two case studies of energy plants that were proposed to be built in Norway. The first plant, a hydroelectric plant, was created despite opposition whilst the second one, a gas plant, was still not constructed at the conclusion of the study. What is of particular use is how Ihlen identifies significant rhetorical devices and techniques employed by public relations personnel functioning in the field of environmental representation.

Ihlen's (2004) study is in many ways similar to this study in the sense that it examines the role and use of public relations strategies in representing a powerful and wealthy corporation or organisation. In Ihlen's (2004) study, the first organisation was the Norwegian Water Resources and Energy Directorate (NVE), a public authority with large financial reserves. The second organisation was *Naturkraft*, a private corporation with strong social capital in Norway and with very friendly state relations, as noted by Ihlen (2004). What is of interest is how both organisations are heavily influenced by the state, yet operate in the guise of private enterprise. *Naturkraft* in Norway operated in a similar context to ArcelorMittal in South Africa, which benefited from a friendly relationship with the state and national authorities.

Specific Research on Vanderbijlpark pollution

Cock and Munnik (2006) and Munnik and Peek (2008) provide detailed and timely research on the Vanderbijlpark water pollution crisis. Cock and Munnik (2006) provide an extensive analysis and a vital historical background and context to the pollution issues in Vanderbijlpark. This work provides significant evidence not only for the existence of the pollution issues but how these pollutants are directly linked to Mittal Steel's (formerly Iscor) behaviour, policies and actions toward the local community.

This report details how Iscor in Vanderbijlpark opened in 1956 and "the effluent dams were unlined, and remain so to this day. The canals discharging effluent water from the works, are also unlined" (Cock and Munnik, 2006: 12). This is significant as the effluent water from steelworks and refineries carry multiple forms of carcinogenic and toxic chemicals in wastewater. This wastewater is then either contained in unlined concrete dams on Mittal Steel's premises or drains away along canals "deliberately positioned on a slight elevation above the rest of the landscape to allow for waste water to drain away effortlessly" (Cock and Munnik, 2006: 12). The wastewater from Mittal Steel is contained in two particularly important dams as "dams 4 and 10, receiving millions of toxic waste water from the steelworks had, and still have no lining" (Cock and Munnik, 2006: 13).

Importantly this study notes the harsh criticism of a 'whistleblower' as he comments on the 'cosy relationship' between the Department of Water Affairs and Forestry (DWAF) and (Iscor) Mittal Steel. Dr. Van Eeden observes that this Mittal Steel plant knew when inspections would occur and had pre-arranged excuses and scenarios for the DWAF. He also argues that whilst the DWAF has been able to apply legislative pressure to small industries in order for them to comply with pollution laws, the DWAF has been entirely lame in their case towards Mittal Steel.

A particular useful aspect of this research on (Iscor) Mittal Steel in Vanderbijlpark is the use of individual interviews with affected families and residents from the area. For the purpose of this research it illustrates how many residents in the local area were not initially aware of the cause of their ill health and its connection to the local water. The question of communication and of local information availability on the pollution – health link meant that more families moved into the area after others had sold and moved out. It also illustrated that there was an initial lack of co-ordination by the local community affected by this water pollution.

Another significant study undertaken by Munnik and Peek (2008) indicates how the presence of the steel plant under the ownership of Mittal (now ArcelorMittal), formerly Iscor, had a negative impact on the local community of Vanderbijlpark. These authors point out that by 2004 Mittal had taken ownership of Iscor and had effectively enjoyed a large economic profit through this 'purchase' as negotiations involved saving the state costs under Iscor.

Munnik and Peek (2008) point out how the local communities around ArcelorMittal refineries carry the high costs of the profits that the corporation enjoys. They note how "Mittal has, so far, succeeded in avoiding any liability for the pollution that made his acquisition so cheap, and neither has he undertaken any rehabilitation of the polluted area" (Munnik and Peek, 2008: 24).

This research confirms many of the criticisms made by Cock and Munnik (2006) and is particularly useful as it is an updated research work that demonstrates the continued pollution by the Mittal Steel plant of the groundwater in Vanderbijlpark. Munnik and Peek (2008) note how many out of court settlements involve a non-disclosure clause and how by 2006 the last two of the original sixteen complainants were still fighting Mittal in court. It is significant to note that "the steel mills neighbours have almost all moved away, but remain bitter" (Munnik and Peek, 2008: 25). This desertion of the most severely and immediately affected areas demonstrates the ability of large corporations to 'buy-out' or pressure local communities into compliance, silence and evacuation of significantly polluted areas in Vanderbijlpark.

Another aspect relating to the silencing of the information on Vanderbijlpark is how in 2000 Iscor began buying out residents of the area "creating a buffer zone to the east where the community once lived … removing evidence contained in this polluted area from the public eye" (Munnik and Peek, 2008). These authors note how Mittal has taken over from where Iscor left off by virtually buying the entire Steel Valley area and fencing off the area. They note how "the approximately 1000 families have almost all been bought out, but no one has been compensated for their losses" (Munnik and Peek, 2008: 25).

Munnik and Peek (2008) note how the 'Master Plan' created by the (Iscor) ArcelorMittal refinery is a secret and how it is "a document of 9000 pages, describing in great detail how Iscor – and eventually Mittal – will fix the pollution that it claims does not exist" (Munnik and Peek, 2008: 24). What is of great interest is how a highly pollutant refinery like the Vanderbijlpark plant is able to negotiate with governmental agencies such as the Department of Water Affairs. It is of interest to include the criticisms of the insider or 'whistle blower' Dr. van Eeden as he stated that the 'Master Plan' was nothing more than a farce or a guise at appearing to comply with the pollution prevention and clean up suggestions of the DWAF (Cock and Munnik, 2006).

This confirms the criticisms made by Cock and Munnik (2006) as they observed the tremendous pressures placed on the local community affected by pollution from the steel plant. In this way this research indicates how an extremely powerful corporation, such as ArcelorMittal, is capable of forming significant relations with state departments and is able to avoid legal implications and can easily buy-out financially vulnerable and ill families. These 'buy-outs' can take the form of out of court settlements or 'compensation payments' to affected families (Cock and Munnik, 2006) or can take the form of waiting for an individual or family to become so financially and physically weak that they cannot afford to fight against Mittal (Munnik and Peek, 2008).

These research papers detailed above are of significant use in this study as they underpin and provide details and contextual information about the water pollution issue in Vanderbijlpark. The work by Cock, Munnik and Peek is particularly useful in providing detailed evidence of the specific pollution problem and the causes and results of this pollution. As these works are recent they are relied upon to provide timely analysis of the issue discussed in this study. This study intends to build on these studies by looking at the amount of public exposure that this issue has had through the medium of newspapers. This groundwater pollution problem in Vanderbijlpark is noted to be of great concern and should receive a good deal of attention in the 'public sphere'. This research paper intends to explore the amount and type of coverage concerning this issue.

Theoretical Framework

News Management, Agenda Setting and Public Relations

Manning (2001) illustrates how environmental groups are exposed to many difficulties in relation to news organisations, their structures, agendas and owners or finances. What is of great interest is his identification of 'greenwashing strategies' used by multinational energy companies in order to promote their company's image. Manning's work is of use to this study as it links the economic and structural or institutional pressures on the media with the intentions and disadvantages of environmental groups. This resource provides a theory of structural pressures on production and may explain absent content in the media and how, if coverage of the affected residents of Vanderbijlpark is present, there are questions about adequate and accurate representation of their interests.

It is of interest to note how this presence or absence of content relates to questions of agenda setting and 'news management'. This is referred to as "the media's capability, through repeated news coverage, of raising the importance of an issue in the public's mind" (Severin and Tankard, 2001: 219). This is of particular relevance to the issue of water pollution from the steel refinery in Vanderbijlpark and how or when this issue is represented in the two particular newspapers to be analysed. Severin and Tankard (2001) describe how 'agenda setting' and 'agenda building' rely on developing issues of importance in the public arena of information and that this is done over a time period or related to significant and timely developments. An example of this is the legal actions and court cases that bring the issue into public focus and how stories about the effected community are related to recent coverage of these legal battles. 'Agenda setting' is explained by Severin and Tankard as the development of an area of interest, created over time, by the functioning of policy within the media organisation. The policy of a media organisation influences their perspective on events and thus their coverage or avoidance of certain events or stories. Severin and Tankard note how Breed (1955) describes policy as the orientation shown by a newspaper in its editorials, news columns, and headlines regarding certain issues and events. In this way 'agenda setting' can be seen as the result of a news organisation following its policy on issues such as politics, labour and business.

Lesley's Public Relations Handbook (1978) is useful in providing a holistic and theoretical definition of public relations and how it is designed to function. In article fifty-two by Charles Prout it is noted that "public relations often has to take on two different postures: defensive in the face of attack, positive in the effort to enhance good will" (Prout, in Peak, 1978: 568).

Prout continues to state how this 'good will' practiced by public relations personnel must 'simultaneously' account for the public interest and corporate performance. Essentially he is projecting the optimistic position of public relations individuals. This is again clear when looking at the 'defensive' position put up by public relations in the face of an 'attack'. For the purpose of this study *Lesley's Public Relations Handbook* provides a very detailed guide of public relations strategies and approaches to understanding technically how public relations personnel function to represent their corporate client in a positive manner.

This handbook is a theoretical and technical guide to public relations activities and approaches and as such provides this study with significant background information on the field of public relations from an inside-industry perspective. This inside-industry perspective can then be critically examined in relation to the focus of this study. In this way the function of the public relations personnel is critiqued against their role to provide only positive coverage and reports for a specific organisation or corporation. A criticism of organisational definitions of public relations is provided by Ihlen (2004:13) as "the definitions refer to *publics* rather than *the public* in habermasian sense (Habermas, 1989). In fact the existence of the latter is explicitly rejected". This demonstrates how industry or organisational definitions of public relations do not consider *the public* to be a significant stakeholder in their considerations.

Political Economy of the Media

The political-economic focus of media studies is useful in addressing the homogenisation of media content and a lack of plurality in choice. This is notable as "media firms pursuing similar business strategies reduce the level of product diversity" (Croteau and Hoynes, 2001: 153). This is achieved as these firms seek to attract a certain audience and to sell this audience to advertisers. This raises the important question of ownership and financial support as having a political or ulterior motive for either running a story in the media or withholding it from production, through gatekeepers such as editors. The funding model of a media institution is of primary significance in the potential outcome of content from that media corporation or organisation (Golding and Murdoch, 2000; Barwise and Gordon, 2002; Doyle, 2002).

This is a key issue raised by political economy media theorists (Herman and Chomsky, 2002; Bennet, 2003; McCheseney, 2004) and it identifies the influence of economic and politically motivated subversions and manipulations of the media. This includes attempts to promote democracy and liberalism whilst entrenching systems favouring those in elevated positions of power and wealth (Hardt, 1992; Manning, 2001; Street, 2001; McCheseney, 2004). These individuals are located within the realms of economics and politics and they exercise this influence over the media to their own advantage.

In relation to this criticism it is possible to observe that certain critical political-economic theorists of media go even further by saying "a number of commentators identify the media as bearing primary responsibility for the decline of active citizenship and the decay of democratic trust" (Barnett, 2004: 58). This indicates that it is the commercial interests of media corporations that have resulted in their political sensitivity to manipulation and influence. As a result the media have in fact had a negative influence on the actual functioning of democracy and social diversity, whilst maintaining the impression of adequate, accurate and representative political and cultural content.

It is of initial importance to recognise that neo-liberal media theory proposes that in a modern capitalist world the best means of securing an open and democratic country is largely concerned with the functioning of that country's media, independent of the government and even as a 'watchdog' observing and commenting on government policy and behaviour. It is possible to note that "the free market was deployed with great effect … to justify broadcasting deregulation", (Curran, 2000: 121) as this idea of the 'watchdog media' would be strengthened by privatisation and commercial media ownership. Critical media theorists are often more reserved about this idealistic appraisal as they contend that "the interplay between economic organisations and political, social and cultural life", is the real threat posed by media concentration in ownership as economic interests supersede or circumnavigate the social and cultural interests of an audience (Golding & Murdock, 2000: 74).

The Propaganda Model

The ‘Propaganda Model’ defined by Herman and Chomsky (2002) is of use in this study for the reason that the mechanics of the media system are explained as providing and selecting certain forms of information for publication and purposefully neglecting others. This helps to understand how and why media coverage on the water pollution problem in Vanderbijlpark lacks significant coverage as the entire media system may be operating to suppress certain forms of public information in order to protect capital interests.

The ‘Propaganda Model’ is defined by five filters; the first filter is that of the ownership of the mass media. Herman and Chomsky (2002: 4) illustrate how “the first filter the limitation on ownership of media… was applicable a century or more ago”. This filter is otherwise described by sociology of news production theories as the actual ownership of media giants as they influence what information is made publically available. For this study it is significant to note how “The control of media giants are also brought into close relationships with the mainstream of the corporate community” (Herman and Chomsky, 2002: 8). In this way news media organisations may be influenced in their selection of information due to the relationship between the owner, the editor and other financial elites and business powers.

Lovaas (2008: 16) states that in South Africa media ownership has become concentrated in a similar manner to global media concentration as "in 2002-2003 three corporations account for 17 of the 19 main daily newspapers in South Africa (89% of the market) and 12 of the 13 weekly newspapers (92% of the market)". This indicates that despite a move away from state controlled and regulated media in South Africa, the recently democratic free market system in South Africa operates to serve the interests of an extremely limited 'elite' as proposed by Herman and Chomsky's first filter in their propaganda model.

The second filter is that of advertising and its ability to financially control the operations of media publications. It is noted how “with advertising, the free market does not yield a neutral system in which final buyer choice decides. The *advertisers’* choices influence media prosperity and survival.” (Herman and Chomsky, 2002: 14).

In this way the second filter of advertising influences the content that is selected for publication as the advertisers interests are of paramount importance to media owners.

Relating to ‘filter one’ the business community or network may together influence the media to adopt a more corporate or business-friendly perspective. Herman and Chomsky (2002:17) explain this by suggesting that “Advertisers will want, more generally, to avoid programmes [or content] with serious complexities and disturbing controversies that interfere with the “buying mood”.

Lovaas (2008: 16) notes in relation to this second filter that "there is a built-in tension between editorial content that reflects the interests and desires of the advertisers and those of the general public". In this particular case study of the water pollution crisis in Vanderbijlpark and the amount and type of media coverage that it has received, this tension between advertisers and the public interest relates to an attempt by the two newspaper organisations under analysis, *The Star* and *The Citizen*, to promote a business-friendly view at the expense of a marginalised community. Lovaas (2008: 16) notes that "the reality is that the media will censor itself through pressures from advertisers", in this case study it may be an indirect pressure as ArcelorMittal may not be an advertiser in the two newspapers examined but this corporation does posses significant economic power and influence in South Africa.

The ‘third filter’ of this propaganda model is described as the ‘sourcing of mass-media news’. In this filter Herman and Chomsky (2002: 19) argue that “Another reason for the heavy weight given to official sources is that the mass media claim to be “objective” dispensers of the news”. Here it is noted that the reliance of the media on ‘official sources’ such as government or corporate spokes personnel creates a situation favourable to maintaining and servicing the previous two filters, if any ‘unwanted’ information is publically engaged with the ‘official sources’ are provided with the platform to manage or manipulate this information.

This filter of sourcing plays a significant role in this case study as demonstrated by Lovaas (2008: 17) that "reporters rely on elite sources, including government officials, professional experts and corporate representatives".

This illustrates how the sociological process of 'news gathering' is successfully explained as 'manufacture' by Herman and Chomsky (2002) as market pressures such as time and cost also factor into news organisations selection of news sources and that this influences the news content dramatically. If 'elite' sources are relied upon to supply news commentary or even to supply the 'facts' or details of a particular story then these 'elites' are able to frame and present the news in a manner that is most beneficial to their personal or corporate interests. This is certainly evident in this particular case study as public relations personnel and government spokespeople are virtually entirely relied upon for information and commentary on the Vanderbijlpark water pollution problem and the involvement of the nearby steel refinery.

The 'fourth filter' is described as being 'flak and the enforces'. In this filtering process an organisation or company offended by a media product may engage in negative practices actively attacking the media corporation or its published viewpoint. Herman and Chomsky (2002: 26) note how "serious flak has increased in close parallel with business's growing resentment of media criticism". In this way the fourth filter includes the use of 'spin doctors' and public relations personnel that actively 'manage' any negative public image of their employers and attempt to discredit and dissolve any such negative publicity. One form of 'flak' employed by Mittal Steel in the coverage of this issue of water pollution in Vanderbijlpark was the use of 'gagging orders' to prevent certain individuals from making public statements and publications about this issue.

The threat of legal action pointed at the media in the form of sedition and libel for any public defacement of the Mittal Steel Corporation, may result in the media company being sued extensively. The fourth filter of 'flak' is useful in this study in the sense that newspapers and the affected community have been (and still are) frightened into silence through legal and financial threats. Mitchell and Schoeffel (2002) argue that fears are created with a dual purpose, in part to get rid of people that corporations dislike but also to frighten the rest into compliance or silence. Mitchell and Schoeffel argue that if people are frightened that they will accept authority. In this case the 'authority' takes the form of governmental officials and of Mittals' corporate representatives and public relations personal.

The ‘fifth’ and final filter mentioned in the ‘propaganda model’ of media production is that of ‘anti-communism as a control mechanism’. At the time of these authors’ writing this ideological filter was indeed at play as the communist threat was used to silence and marginalise dissident or oppositional views and voices. The authors note how the use of an ideological filters, such as the fear of communism by capitalist, creates the division of ‘us’ and ‘them’ in which the media must clearly state its position or side by clearly broadcasting favour for business and capitalist interests and opinions.

This filter still applies today, yet the ideology of ‘anti-communist’ is more aptly replaced with ‘pro-capitalist’ or even ‘neo-liberalism’. As the ideology of ‘pro-capital’ and the ‘free-market’ exist unchallenged and is integrated in social institutions, the media are argued to perpetuate a capitalist interest and reflection of the world. Due to this ideological position inherent in media corporations, despite their role as the fourth estate, they may be less inclined to actively investigate and publicise negative stories relating to very large corporations (such as Mittal) which are of economic importance to the state.

Criticisms of the Propaganda Model

There are a number of criticisms that debate the relevance or accuracy of Herman and Chomsky's propaganda model. One such criticism is raised by Robert Entman (2002) and he contends that the propaganda model "comes close to endorsing a conspiracy theory" as he argues that Herman and Chomsky's "hypothesis is too narrow to support the broad thrust of their model". Entman argues that more case studies and specific examples need to be provided in order to substantiate the validity and contemporary functioning of the propaganda model. This has been achieved in a South African context by Lovaas (2008) as his study of the South African print media revealed examples ranging from forestry to economic development programmes, such as the New Partnership for Africa's Development (Nepad).

This study of the water pollution problem in Vanderbijlpark intends to add to these South African examples by providing a case study of environmental groundwater pollution, an affected community and the media coverage and representation that this issue has received in two South African mainstream newspapers.

Another criticism is raised by Schlesinger (1989) who contends that the propaganda model is 'deterministic' as the model does not consider challenges to the structuralist argument that it provides. Schlesinger also criticises the model as to the generalisability of the model to other industrialised nations outside of the United States. In response to this criticism the work of Lovaas (2008) and the case studies supplied in his work indicate that the propaganda model certainly does apply to contexts outside of the United States, as it can apply to South Africa in this new era of neo-liberalism.

A third criticism of the propaganda model as noted by Lovaas (2008) is that gatekeeping is a regular function of editorial staff within a media organisation. This perspective argues that it is the editorial selection of content and not the structuralist effect, of ownership or employee hierarchy, that influences how or what news is selected or omitted for publication. Lovaas (2008: 19) contends that "economic neo-liberalism is a value that the majority of journalists and editors in South Africa embrace and that as a result evaluation of media performance will reflect this value". In this way the economic influences of South African neo-liberalism effect the news selection process and it is not simply a matter of gatekeeping that takes place but rather the first and fifth filters of Herman and Chomsky's (2002) propaganda model that are in effect. These filters are the filter of ownership and the fifth filter of pro capitalism or pro neo-liberalism.

News Sources and Media Production

News sources play a vital role in shaping and validating the content reported in the news, this ranges from political spokesmen withholding damaging information to eyewitness accounts provided by average citizens. Each type of news source provides a particular function for the news story as the eyewitness may provide sensationalism but 'official sources' as "sources close to the government being regarded as more credible" (Manning, 2001: 71) provide authoritative validation of other sources. This also occurs when 'professionals' or 'experts' are quoted or attributed to when providing 'facts' to the audience.

It is of interest to note how "the continuing marginalisation of environmental groups are [is] important for the politics of news sources" (Manning, 2001: 187) as these sources are often "disadvantaged in their dealings with special correspondents and journalists" (Manning, 2001: 187) and are portrayed in a negative or anti-social light.

An example of this would be greater focus on the actions of environmental activists rather than the cause or reason for their behavior. It is however becoming "harder for sections of the news media to demonize direct action of environmental protestors" (Manning, 2001: 187) as various gatekeepers within the organisation become aware of public support for such groups. This demonstrates a form of a news source that is composed of features hidden to public knowledge, such as the 'softening' of environmental threats due to advertising pressures and how the media organisations interact with these sources to produce news content.

In *Mass Media, Politics and Democracy* Street (2001) identifies the powerful role that conglomerates and 'media moguls' play in the process of news production and their influence on wider social concerns. Whilst Street (2001) writes about the significant political influence that certain 'moguls' such as Murdoch and Burlesconi may have, he also identifies how media empires such as News Corporation and Time Warner-America Online provide a threat to the functioning of a truly democratic press.

This is of use in this study as arguments about the power-play provided by particularly influential commercial interests' effect the news production process and ultimately affect the level or amount of representation offered to the public. In this way the case study of Mittal Steel and the residents of Vanderbijlpark reflect this debate between public (democratic) representation and the role of the media to support and feed the interests of 'big business', such as a multinational corporation providing a significant contribution to Gross Domestic Profit (GDP) of a certain region of South Africa.

Street (2001) notes the valuable criticism that media conglomerates are not only concerned or constrained by their pursuit of profits but that "they are also bureaucracies with their own internal political orders. How they are organized, how power is distributed within the organization, will have profound effects for the kind of product they make." (Street, 2001: 126). In this way Street emphasises the major role of the sociology of news production and how the hierarchical functioning of power is a top-down effect as journalists and 'lower level' employees strive to please their superiors, who in turn attempt to satisfy the interests and agendas of the media owners or 'moguls'.

In reference to the particular case study of Mittal Steel and the residents of Vanderbijlpark a lack of representation and debate may be understood through an appreciation of how journalists and editors are unwilling to publish or even to collect stories that threaten a powerful multinational corporation, such as ArcelorMittal. When this sociology of news production is read against Street's (2001) criticism of the role of advertising and function of the media, a particularly grim picture is painted for democratic representation. This is particularly significant when the interests of a 'minority group', such as the residents of Vanderbijlpark, are measured against the interests of media corporations that wish to retain or build beneficial relations with powerful multinational corporations, such as ArcelorMittal. Even though the two newspapers under examination, *The Star* and the *Citizen*, may not deal directly with ArcelorMittal they do promote a capitalistic and business-friendly worldview and do not wish to threaten their relations with the other powerful corporations that they do rely upon.

Another useful contribution relating to media economics is by Dennis (1992: 29) as he argues that "the audience numbers that generate advertising revenues drive news organisations and, in a circular fashion, cause them to court audiences to whom their advertisers can sell their products and services". In this way the 'dual market' economy pressures on media corporations effect the content that they produce as a particular audience 'profile' is defined through advertising research and satisfied through media organisation routines and practices.

What is particularly significant and pertinent to the study of the Vanderbijlpark topic in the press is that "the media have organised themselves to court upscale audiences, paying little or no attention to the underclass and other unattractive and – by market definition – dispossessed communities" (Dennis, 1992: 29). In this way Dennis notes how the development of technology and market monitoring or audience research, together with tabloidisation, have resulted in a particularly advertising dominated mainstream media agenda – where minority or economically 'dispossessed communities' struggle to achieve any recognition, either as news or as consumers. As a result marginalised communities, such as the affected residents of Vanderbijlpark, are not considered economically viable as subjects or consumers of mainstream media producers.

In this way the story, issue or concern of these 'dispossessed communities' is marginalised or does not make the agenda, due to the media's courting of the 'upscale audience'. It can be argued that due to this courting of an 'upscale audience' the 'minority' or 'pressure group's' interests are represented by an interlocutor or translator in the form of public relations officials, government departmental spokesmen or possibly a spokesperson from an affected social group, such as *Earthlife Africa*. This occurs in order to serve the 'upscale audience' with style, language, content and format that they expect as paying consumers of a commodity that retains certain conventions of satisfying audience expectations and demands. In this way the 'official sources' and 'primary definers' provide credibility for news products as economically viable, as they provide the illusion of 'truth' and authority that the paying customer or media consumer requires and that the news organisation promises to deliver.

Conclusion

This chapter has provided a review of the literature that deals with environmental damages and the challenges faced by marginalised communities affected by the environmental practices of large corporations and the effects of privatisation. A comprehensive description of the specific case study has been provided by the key research conducted on the Mittal Steel refinery in Vanderbijlpark. This chapter has also provided a theoretical framework which locates many of the concerns of this study within the field of the sociology of news production. Important considerations raised in this framework relate to news management, agenda setting and public relations and include aspects of the 'propaganda model' together with theories from the political economy of news production. The sociology of news production is also of key importance as the sourcing and attribution of news is vital in analysing the news articles dealing with the water pollution in Vanderbijlpark.

Chapter 3

Methodology

This chapter describes the methods and methodology employed in this study and provides theoretical definitions for the specific methods that have been selected for both the data capture and the data analysis used in this study.

Research Design

Both quantitative and qualitative research methods have been used in this study. The quantitative element of this study produces a numerical representation of the amount of coverage that the issue of water pollution in Vanderbijlpark has received in the two newspapers under examination. Qualitative analysis in this study looks at the content of this media coverage in *The Star* and in *The Citizen* that deals with the water pollution crisis. In this way the manner, technique, rhetoric and source attribution is examined in a detailed manner. The sample group includes all the articles obtained from these two newspapers mentioning the issue under study, namely Mittal Steel and the water pollution crisis in Vanderbijlpark. A qualitative analysis of the limited results, identified through quantitative techniques, enables a holistic or tri-angulated approach to media coverage of the issue under examination. It is of use to analyse in detail the few articles that do cover the specific issue under examination as this provides specific examples about the type of coverage, the times of coverage and the actors or sources involved.

The use of a quantitative research method addresses the question: "To what extent is the Vanderbijlpark water pollution problem reported in *The Star* and *The Citizen* newspapers between 1998 to 2008?". This is accomplished as a numerical data set of results is provided by identifying how often and how many media articles in these two newspapers mention the topic under examination in this study. As a result it is of key importance to this study to employ a quantitative approach initially in order to answer the first question posed by this study and in order to supply a foundation for further analysis into this issue.

The use of a qualitative research method is necessary in answering the second question in this study: "How is the coverage of this issue represented and framed in these two newspapers?". This is achieved as a close content analysis of the results obtained from answering the first question is used to provide the study with detailed findings about the type of coverage that exists in relation to the water pollution crisis in Vanderbijlpark. These types of coverage are thematised according to their major characteristics such as legal conflict, sourcing, 'greenwashing' and environmental reporting. In this way the qualitative method provides important information for this study about what the coverage of this topic looks like in the two newspapers, who and what is referred to in these stories and what this coverage means for the community of Vanderbijlpark and the wider South African public.

A definition for quantitative analysis is that it is "a research strategy that emphasises quantification in the collection and analysis of data" (Bryman, 2004:19) in this way quantitative methods involve the counting, numbering, coding and analysis of characteristics of an event or issue in terms of numerical and statistical methods and representations. A simple and very useful distinction between quantitative and qualitative research methods is that quantitative research involves measurement (numerical) whilst qualitative research does not (Bryman, 2004). This research paper employs measurement techniques in data capturing and analysis as the amount of coverage in the two specific newspapers, on the particular research question, is explored through numerical and statistical representations.

Qualitative methods of data analysis are also of use as a potentially low number of results may allow for a comprehensive content analysis of the few articles useful for this study. Qualitative research methods are defined as "social research that is based upon the need to understand human action and social interaction from the perspectives of insiders and participants" (Greenstein, 1991: 49). Greenstein details how qualitative research is primarily concerned with description and explanation of data rather than measurement of the data as observed by quantitative research techniques. Williams (2003: 33) notes how in qualitative research "the evaluation of theory tends to be accomplished through debate and discussion between proponents of contrasting or opposing theoretical positions".

This is of use as in the close analysis of content in the low number of articles on the specific research topic, it is necessary to consider the opposing views in relation to the issue of pollution, the steel refinery and the affected residents of Vanderbijlpark.

Case Study Method

The use of a case study is of significant importance to this study. The specific case of groundwater pollution in Vanderbijlpark demonstrates how powerful multinational corporations, such as Mittal, may have significant influence on how an environmental crisis receives minimal media coverage or attention. This case study is of use in analysing how multinational corporations accused of massive water pollution use public relations personnel to project a positive image of themselves to the public. In this way, the role of the media and its relationship with corporate representatives, such as public relations personnel, is important in addressing how marginalised and negatively affected communities may be sidelined or ignored in major print media in this case study.

This research paper makes extensive use of the 'case study' approach as one particular 'case' or situation is examined in detail. This particular case study is an examination of the groundwater pollution problem in Vanderbijlpark and the manner and amount of newspaper media coverage that this case has received. When talking of this particular research interest it is useful to note that it is considered as a 'case study' as it represents a case of environmental damage, industrial neglect and a major health cost paid by the local community. This research paper focuses on one case study and the specific case study approach offers the possibility of "Other things being equal, the fewer cases investigated, the more information can be collected about each of them" (Stake, R in Gromm, et al, 2000 :2). In this way the use of a single case study approach is useful when attempting to holistically detail this particular research, as "usually, 'case study' refers to research that investigates a few cases, often just one, in considerable depth" (Stake, R in Gomm, et al, 2000 :3).

According to Yin (2003:13) "A case study is an empirical inquiry that [a] investigates a contemporary phenomenon within its real-life context, especially when [b] the boundaries between phenomenon and context are not clearly evident". Stated differently a case study would be used when specific localised conditions of that case are believed by the researcher to be of great value to the research. In the case of this research paper the 'contemporary phenomenon' is that of a multinational corporation running a highly pollutant refinery at the cost of the local community's health. The 'boundaries between phenomenon and context [that] are not clearly evident' are considered to be aspects relating to how this issue is not dealt with as a public or national concern but rather as a localised remote municipal problem. The arena for this public interest and debate is the national print media so an aspect not initially considered to be a contextual part of the case problem – the lack of media coverage (or media used exclusively by public relations personnel and 'official sources') – becomes a valuable focal point of inquiry for this case study.

Yin (2003) states how a case study will have one (or more) of the following applications. The most important aspect is considered by Yin to be an exploration of causal links in real-life that are too complicated for most other research methods to capture or identify. He notes that description illustration and exploration are other applications or purposes that a case study approach may possess. This research paper will make use of the single case study research approach in order to offer a description of print media coverage of the particular issue and in order to illustrate the interaction that the local community has with the media so that explanations for causal links (minor media interest or attention) might be provided.

Yin (2003: 41) describes how a single case study approach is suitable when one of four reasons are satisfied. The first is that the case represents "a *critical case* in testing a well formulated theory", the second case is of a *unique* or *extreme* case of research value. Thirdly, a *representative* or *typical* case is a depiction or study of everyday or common circumstances and/or conditions of interest to researchers. The fourth rationale for a single case study approach is that it is a *revelatory* case making available information that was previously withheld or "inaccessible to scientific investigation". This research paper makes use of the single case study as it attempts to offer more detail of a particular contextual issue under close examination.

The particular issue under investigation may well qualify as an *extreme* case as it is one of South Africa's longest running environmental crises to date. It may unfortunately not necessarily be unique as Mittal Steel has similar global operating concerns throughout much of the 'third world'. It is however unique to South Africa as a multi-national corporation was virtually paid to take over Iscor (Iron and Steel Corporation of South Africa) inheriting a large state refinery with major safety and health concerns many of which remain to this day. The unique situation is that the South African government was bailed out by Mittal's purchase of Iscor and now depends on this pollutant refinery for a significant contribution to the Gross Domestic Product. Hence as a result of their unique relationship, the government, in the form of the Department of Water Affairs and forestry, has been hesitant to legally press the multi-national steel giant for adherence to industrial waste management regulations.

As this research is interested in the extreme details of a particular case study, especially details relating to print media coverage, the generalisability of this study is not the main concern of the researcher. Stake (2000: 5) notes how some theorists argue that "case studies need not make any claims about the generalisability of their findings, that what is crucial is the use others make of them". In addition to this the research makes use of the case study approach as "case study research is advocated on the basis that it can capture the unique character of a person, situation, group, and so on" (Stake, 2000: 6).

Though this research may not be able to provide for greater 'generalisability' it is advocated as a single case study due to the social and environmental significance that the detailed findings attempt to record. These detailed findings relate to how the particular issue was covered by the national print media, in the form of two major English newspapers.

In this way the study may yet be able to generalise as the results and conclusions about media coverage (source attribution, rhetoric and amount of coverage) may provide a template for comparison with other major newspapers coverage, of not only this issue, but of environmental journalism in a more nationally generalised manner. It is also possible that the genaralisability of this research may apply to ArcelorMittal's operations in other 'developing' nations such as India and South American countries.

It may be found that media coverage about ArcelorMittals' environmental practices in other 'developing' nations is indeed very similar to the media coverage of the issue in South Africa as economic concerns are favoured over social responsibility.

The use of the single case study approach and the minimised interest in generalised findings is supported as:

> "some case study researchers suggest that the goal of their work is not the product of general conclusions and that this does not detract from its value. In this spirit Stake (1994) argues for what he calls 'intrinsic case study', which involves the investigation of cases for their own sake." (Gomm, Hammersley and Foster, 2000: 99).

The 'intrinsic' value of this particular research is that it analyses the media coverage of a major pollution and health problem and how this coverage appeared in two major national newspapers. This is further supported as "case study research that is not evaluative can also have intrinsic interest. This is true where cases are significant enough, or large enough, to be of widespread national or international relevance." (Gomm, et al, 2000: 99).

The particular issue under investigation certainly qualifies under these criteria. The analysis of media coverage (both numerical and qualitative) around the Mittal refinery in Vanderbijlpark, groundwater pollution and local health problems is of particular importance as it has a long running history in South Africa. The way that this extensive and significant pollution problem has been presented and reported by the national print media is of national significance. The involvement of a multinational corporation has the added significance of 'international relevance'.

Methods of Data Collection

The publications selected for analysis in this study are *The Star* and *The Citizen* as these newspapers have a well-established history in South Africa and are considered to be good examples of mainstream South African daily English newspapers. *The Star* has a readership of 840 000 and a circulation of 168 264 (*The Star*, Readership, 2008). *The Citizen* has a readership of 673 000 (AMPS Survey, 2008). As a result these daily English newspapers are of use in illustrating the amount of coverage in the South African print media covering the issue of Vanderbijlpark and the groundwater pollution from the nearby Steel refinery. These publications provide a sample of mainstream newspaper coverage about water pollution in relation to Mittal Steel and Vanderbijlpark. The type and theme of stories that mention Mittal in relation to the water pollution crisis is interesting when looked at from the perspective of the affected local community of Vanderbijlpark and Steel Valley.

The data used in this research is drawn from SABINET. SABINET is an online repository that stores media archives from major print media publications and newspapers. This research tool enables the user to run an extensive and specific search for particular issues in media coverage as SABINET is an exhaustive online collection of South African media products available for research purposes. The database used for these searches is that of the South African Print Media. This research tool enables the user to run extensive searches for specific topics and issues in relation to particular South African newspaper publications.

This study has generated a sample of the print media coverage of the water pollution problem in Vanderbijlpark and the extent to which Mittal Steel is mentioned in relation to this issue. Furthermore interviews with individuals intricately involved in this topic were used to provide a holistic context of the issue. These interviews are provided by the pivotal research conducted by Cock and Munnik (2006).

When these interviews from the affected communities are read against the lack of coverage in the selected newspapers the dynamics involved in generating and sustaining media coverage of this particular issue become clear. The presence of public relations personnel and government officials dominate the few articles that do detail the specific issue under examination.

The sample for this research was drawn from 1 January 1998 to the 9 September 2008. Due to the particularly low availability of articles on the specific issue of Vanderbijlpark and the groundwater pollution, searches without timeframe limitations were conducted. Interestingly this revealed identical results, suggesting that a significantly limited number of articles existed in the South African print media that cover, report or mention the topic under examination. It was found that the search for the term 'Mittal' revealed fewer results than that of 'Iscor'.

Due to the significance of the steel refinery's name change and change of ownership, it was necessary to include search results for Iscor and Mittal in relation to newspaper articles from the *Citizen* and *The Star*. The change of ownership from Iscor as a state owned industry to Mittal occurred over the four-year period from 2001 to 2004 as noted by Munnik and Peek (2008). Significantly this search revealed that a number of older articles (pre-2000) and even some recent articles (2002) refer to the steel refinery as 'Iscor'. Despite this difference in naming of the plant it was found that a very low ratio of coverage existed in terms of the Vanderbijlpark water pollution problem and its link to the steel refinery and effect on the local community.

In this study useful quantitative methods have included gathering a sample set according to specific key words entered on the SABINET database. This database then searched all available articles by the two publications analysed in this paper, *The Star* and *The Citizen*. Specific key words used in these searches included the terms: 'Mittal', 'Mittal and Vanderbijlpark', 'Mittal and pollution' and 'Mittal and water'. It was also of use to include the term 'Iscor' in place of Mittal in order to gain a sample data set of articles published before the steel refinery changed its name and ownership.

Methods of Data Analysis

Quantitative analysis is the primary approach in addressing the first question posed this study. It is understood as a research technique that aims to detail observable information in order to represent a certain issue, concern or fact that exists in the data analysed. Terre Blanche et al (2006) describe how quantitative research deals with quantifying data in terms of numerical representations. This data can go through a number of refining processes in order to present conclusions including quantitative techniques involving statistical and mathematical representations of the information. This is of use in this study in order to generate a numerical representation of the South African print media coverage about the particular pollution crisis under examination. Thereafter the limited useful results were qualitatively analysed in order to identify repeating patterns or variables in the media coverage of this particular issue.

It is useful to note that "the purpose of content analysis is to quantify salient and manifest features of a large number of texts" (Deacon, 1999: 116). In this way content analysis is of use in highlighting or identifying the dominant characteristics of the content evident in the data samples used in this research paper. This research paper employed both the qualitative and quantitative methods of analysis. It was of initial importance to explore the available resources and amount of media coverage in *The Star* and *The Citizen* on the Vanderbijlpark groundwater pollution issue and the nearby steel refinery in terms of the number of articles that existed on the SABINET database. It was necessary to employ quantitative methods in order to provide an exploratory and descriptive study of the existing available media on this topic in terms of ratios and percentages of all articles on Mittal and Iscor by these two newspapers.

Another useful definition provided by Deacon (1999) for content analysis is that it may be understood in at least two different ways. Deacon notes that content analysis can be described "any method that involves analysing content" but a more useful definition is as "a specific analytical approach" (Deacon, 1999: 115). Here it is important to note how content analysis is the methodical analysis of data.

It is interesting to note that Berelson (1952) as cited in Deacon (1999) observes that content analysis is a "research technique for the objective, systematic and quantitative description of the manifest content of communication" (Berelson, 1952: 147). In this way content analysis is the use of a specific research design and system employed to quantify 'observable' data with an aim of describing the scenario 'objectively'.

Thematic content analysis is used to separate the findings in this study and to interpret the type of coverage evident in each story dealing with the issue under examination. It is of use to note that "when qualitative coding is applied to the content of various media such as magazines, newspapers, radio programmes, or similar materials, it is called content analysis" (Goode and Hatt, 1952: 315). In this way themes are used as codes to categorise the findings present in the data set and thus form part of a content analysis method. In this study qualitative coding is used to analyse the data and this form of coding is understood as "all the techniques for classifying reliably those social data on which very little order has been previously imposed by the researcher" (Goode and Hatt, 1952: 320).

The themes of major interest that have been identified in the data are: legal conflict, 'greenwashing', sourcing and environmental reporting. These themes are utilised as the characteristics of each story reveal a tendency to cover the issue from a particular perspective. In the legal conflict theme the articles deal almost exclusively with the legal details and court battles between the affected community and Mittal Steel. The 'greenwashing' themed articles deal with stories that have characteristics of 'spin' or effective public relations practices that result in a dismissal of guilt for pollution and promote a positive image of Mittal even in the face of allegations of pollution.

The theme of sourcing deals with articles that rely extensively on official or governmental sources for the majority of information revealed in each article. These articles rely on official sources to the point that they exclude the voice of the local community and the historical context of the pollution problem in Vanderbijlpark.

The theme of environmental reporting is utilised to group all articles that deal with the environmental impacts of the pollution problem and/or are written by reporters functioning in the specific beat of environmental news coverage. These articles include 'feature articles' that provide for longer and more in-depth reporting and often include the voice of the local community rather than relying on a government or corporate spokesperson. The thematic content analysis employed in this study enables an overview of the dominant types of coverage that deal with groundwater pollution in Vanderbijlpark. In analysing each theme it is possible to deduce the perspective of the producer of the article and whether each article provides for the interests of the local community or the interest of the Mittal Steel corporation.

In addition to quantitative methods, qualitative methods are to be applied to the limited results revealed by the data collection. This study makes use of semiotic content analysis as the specific language choices are looked at, as the manner in which the story is written has significant influence on how the information is interpreted by the reader. In this way the use of semiotic and discourse analysis, with reference to specific details in newspaper articles, is used in order to examine the rhetoric, attribution and language used in such articles. The limited results revealed by the search are to be closely analysed and according to thematic content analysis these results will be examined in a qualitative manner. Attention to the details of the articles reveals: who speaks and who is silent (source attribution); the language choices and uses of the journalist; and whether the Mittal refinery is specifically mentioned as the cause of groundwater pollution in Vanderbijlpark.

The aspects of attribution, referencing and language choices within the news articles that do mention the specific issue under examination are considered to reveal the ideological standpoint of the journalists and/or the ideological position of the newspaper organisation or institution. This is seen as "Real people are made to fit character roles in order to protect ideological homogeneity...just as characters are stereotyped, so are actions" (Cormack, 1992: 29). The specific details of the limited useful results are vital in addressing the key interests of this research, namely how the community is positioned in relation to public relations personnel, and how the use of attribution and language have a profound effect on how the issue is represented in the public domain.

Conclusion

This chapter has supplied the methods of data capture used in this study and how the data was then analysed. It has explained how both quantitative and qualitative methods were employed in order to create a tri-angulated research approach that enabled the answering of both key research questions raised by this study. The case study method was described and it was argued that this method was useful for this study as it analysed one situation in great detail. The media coverage of the Mittal Steel refinery in Vanderbijlpark provided 'intrinsic value' due to the nature of the pollution problem, its effects on the local community and its implications for the wider South African public. This chapter has described how the data set was acquired through searches of the Sabinet database and how these searches were carried out. It has also explained the thematisation of this data and how themes such as legal conflict, official sources, greenwashing and environmental reporting help to present the content of the articles found in this study.

Chapter 4

Findings and Analysis

This chapter consists of two parts that answer the research questions raised in this study separately. The first section deals with the quantitative findings of this study and looks at the amount of coverage that the issue received from the two newspapers under examination. The second part of this chapter looks at how the issue was represented and framed in the articles that were found dealing with the topic. This was accomplished as the articles were qualitatively analysed under themes such as legal conflict, official sources, greenwashing and environmental reporting.

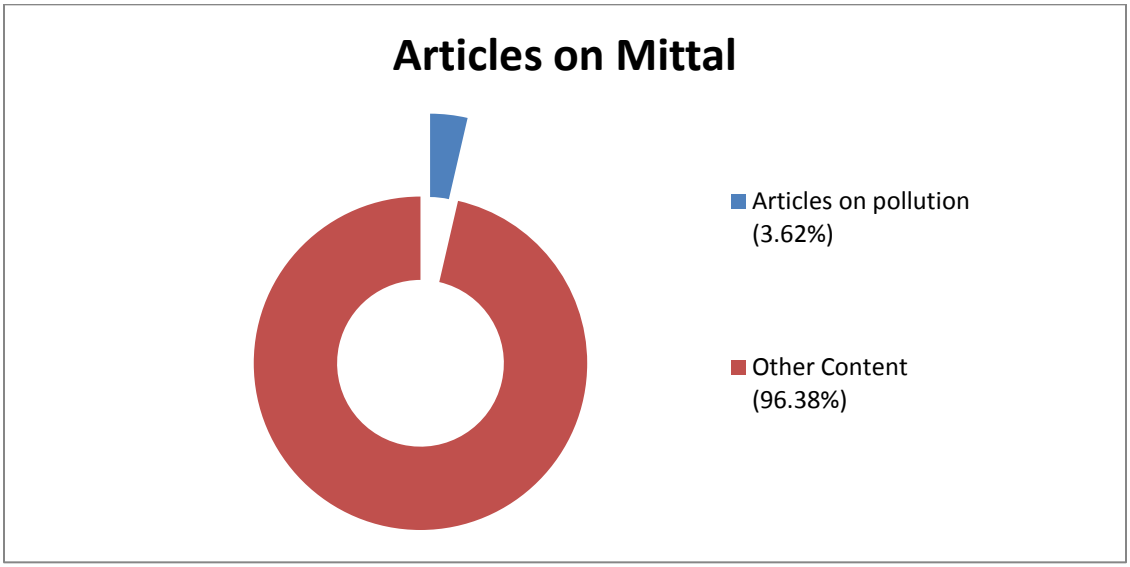
Quantitative Findings

The Extent of Coverage in *The Star* and *The Citizen*

A timeframe for this search was used initially and ran from 01/01/1998 to 09/09/2008. It was found that due to the particularly low availability of resources and articles, on the specific issue of Vanderbijlpark and the groundwater pollution from the nearby steel refinery, searches without timeframe limitations revealed identical results. This indicated that a significantly limited number of articles existed in the South African print media that cover, report or mention the topic under examination. The results of these findings from the two newspapers are provided individually as the point of the study was not to compare the coverage of the issue by *The Star* and *The Citizen* but rather to provide a detailed account of the amount of coverage that the issue received from each newspaper.

General search results in the Media

A general context of media coverage by all South African media searched through Sabinet (with unspecified dates) indicated that 'Mittal' appeared in 553 search results. This data represents a significant amount of coverage in mainstream South African newspapers and print media coverage in relation to Mittal. When this search was refined to include the key search words 'Mittal' and 'pollution' it was found that 20 articles mention these terms together. Six of these articles were found to be from *The Star* and one was found to be from *The Citizen*.



The search terms 'Mittal' and 'Vanderbijlpark' yielded seventeen results of the 553 articles on 'Mittal' that appear on the Sabinet database. Of these seventeen results three articles were from *The Star*, only two of which dealt with the pollution issue in the area. One article was from *The Citizen* and related to the loss of 800 jobs at the steel refinery. Four articles from economic news sources also appeared, two of which dealt with the water pollution related problem in Vanderbijlpark.

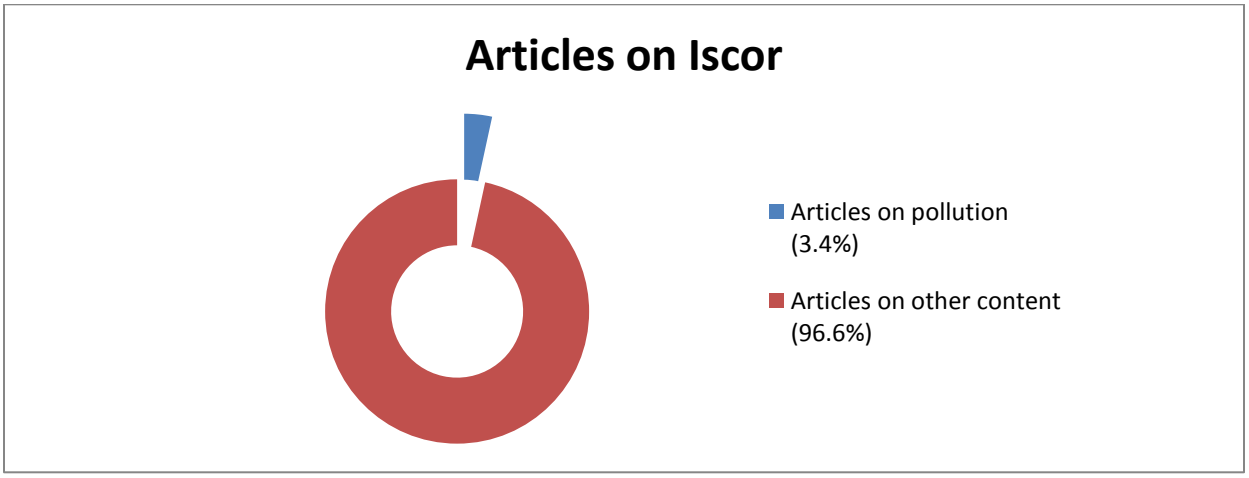
The data mentioning Mittal and the issue of water, pollution and the residents of Vanderbijlpark illustrates how despite a number of articles on 'Mittal' (553) very few articles had any content dealing with the environmental and health problems of the area. It was found that of the 553 articles only 20 mentioned pollution in relation to Mittal. This represents 3.62% of articles written about Mittal which make direct mention of pollution – to the air or to the water. The results from Mittal and Vanderbijlpark searches indicate that only 3.1% of the articles by South African newspapers (on the Sabinet database) touched on the name Vanderbijlpark, and only a fraction of these articles link the area and Mittal to the pollution and health concerns.

In the search of 'Mittal' and 'water' only 1.1% of the 553 articles on Mittal contained any mention of water and water-related issues or concerns. The majority (four) of these articles focused on pollution concerns. In this way it can be seen that in total only four articles (out of 553) link the terms 'Mittal' and 'water and pollution' and these articles are the same ones that appear in many searches relating to ground water poisoning in Vanderbijlpark by Mittal.

It was found that an overwhelming majority of these newspaper articles dealt with economic news or economically relevant factors and issues. When Mittal was mentioned it was often in relation to steel pricing, the value of the company's stocks or plans that the corporation has for expansion. They also receive some unfavourable coverage around Mittal and 'price fixing' in South Africa as the gold mine Harmony has taken Mittal to court over the high prices that they charged for locally manufactured steel.

In all South African newspaper articles on the Sabinet database 184 articles mention 'Iscor and pollution', yet 5406 dealt with 'Iscor' as a central theme or topic. This reflects that 3.4% of the 5406 articles on Iscor deal with pollution as a component to a story on the steel refinery. Of the 184 articles that do mention 'pollution and Iscor' it was found that 28 of these articles were from *The Star* and of these 28, only eleven of these results dealt with the issue of pollution in Vanderbijlpark.

It was also found that *The Star* made up 15.2% of this coverage of 'Iscor and pollution' *The Citizen* contributed twelve articles or 6.5% of South African newspaper coverage. Only six of these articles from *The Citizen* mention the water pollution problem in Vanderbijlpark in relation to Iscor.

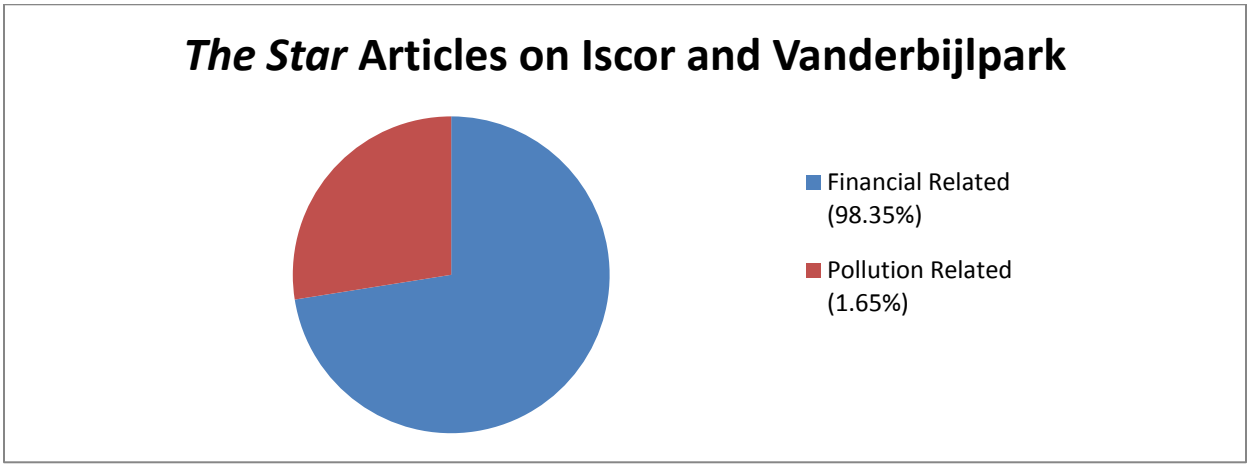


Specific search results in *The Star*

A number of searches were run focusing only on *The Star* and utilised specific key words to search through the 553 articles on 'Mittal' on the Sabinet database. These searches had initially made use of the same time frame used in the general publication search (2002/01/01-2008/09/09) but this was found to be superfluous due to the limited number of articles that dealt with the issue of pollution. An initial search for all articles published by *The Star* mentioning the key word 'Mittal' revealed that 150 results existed on the Sabinet database of newspaper clippings. This represents 27.1% of all the articles mentioning Mittal on this database. Of this 27.1% only 6 articles made any mention of pollution in relation to the Vanderbijlpark issue. The vast majority of the 150 articles published by *The Star* on 'Mittal' mentioned economic or financial news related content, stories and details.

It was clear to see that only a very small number (six) of articles link Mittal to the issue under examination by this research, whilst the vast majority of news coverage of Mittal relates to economic and financial indicators and interests. These six articles include in chronological order: 'Iron resolve of three Steel Valley families'(21/07/2005), 'Court blocks case brought by pollution victim' (27/09/2005), 'Determined to prove their mettle to Mittal' (24/05/2007), 'Green Scorpions to probe for pollution at Mittal Steel plant' (30/05/2007), 'Inspection spotlight on Mittal' (31/05/2007) and 'Steel giant could face sanctions over pollution' (20/07/2007). When the search was refined to focus on 'Mittal and pollution' in articles published by *The Star* it was found that the same six articles, mentioned earlier, reappear as the only results. These search results also reflect how a minor 1.1% of the 553 articles on 'Mittal', found on the Sabinet database, contain any mention of the water pollution problem in Vanderbijlpark and its link to the nearby Mittal steel refinery.

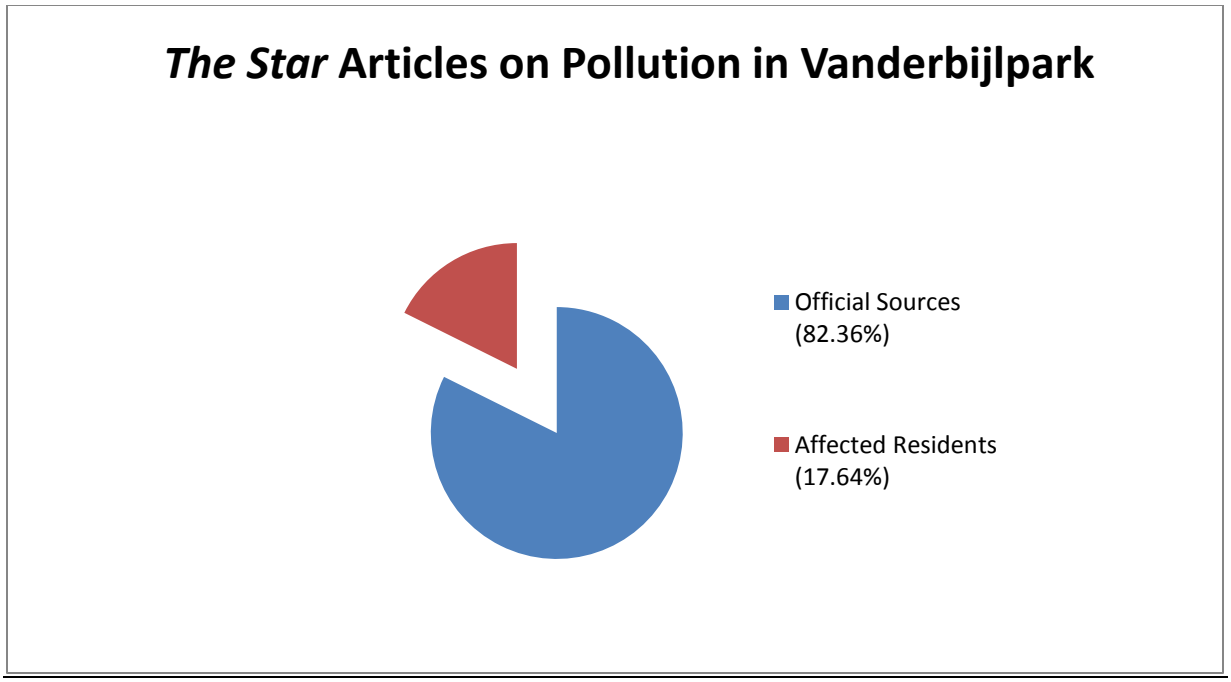
The search term 'Iscor' revealed 665 results on the Sabinet database that contained articles by *The Star* dealing with the steel refinery under its state-owned name. Many of these articles dated between 1998 and 2002 and contained reports relating to economic interests and details together with labour and financial news. When this search was refined to focus on 'Iscor and Vanderbijlpark' 40 results were uncovered and only eleven of these mentioned water pollution in the area and Iscor. The majority of these 40 results again related to labour concerns and financial news. This illustrates how 1.65% of the 665 articles published by *The Star* mention water pollution problems in Vanderbijlpark and the presence of the nearby (Iscor) steel refinery.



In relation to the role played by official sources in articles that mention Iscor and water pollution in Vanderbijlpark, it was found that of the eleven total articles, ten of these make predominant or exclusive use of 'official sources' such as government spokes personnel, legal representatives and public relations officials. It was found that of that eleven total results relevant to Iscor, four of these articles offered prominent coverage of public relations personal from Iscor defining and defending accusations of pollution and links to heath conditions in the area. It was found that eight of the eleven total results revolved around legal developments and court cases. In these eight articles the role of 'experts' and 'primary definers', such as legal councils and representatives, were seen to dominate the coverage as they functioned to detail the developments and translate them to the public through the media.

Significantly only one article mentioning Iscor and the water pollution issue was found to quote and to rely on local residents and the affected community in order to detail the problem in areas of Vanderbijlpark. In the article 'Iscor fails to stop farmers fighting pollution' (22/07/2002) it is noted that Gift Makume and Sampson Mokoena are used as sources in covering this issue and defining the concerns of the community. It is also noted that in this article the legal action of a High Court 'gagging order' is the pivotal point of the coverage as residents continue their legal battles with the steel refinery.

The data collected around *The Star* coverage of Mittal and the water pollution issue revealed that of the six total results, two of these articles covered legal developments and used legal representatives and court findings as primary or exclusive sources for these stories. It was found that of these six total articles, four of them relied on official sources such as government departments (DWAF) and official investigations such as the actions of the 'green scorpions'. It was found that two articles provide platforms or instances for public relations officials to defend Mittal and two articles provide accounts from affected local residents. These two articles use local residents as the 'primary definers' or principle sources on this issue, yet it was found that this coverage was again mentioned in relation to legal developments and court cases in some way. Of the total seventeen articles by *The Star* that covered this issue it was found that only three relied on local residents rather than 'official sources'.



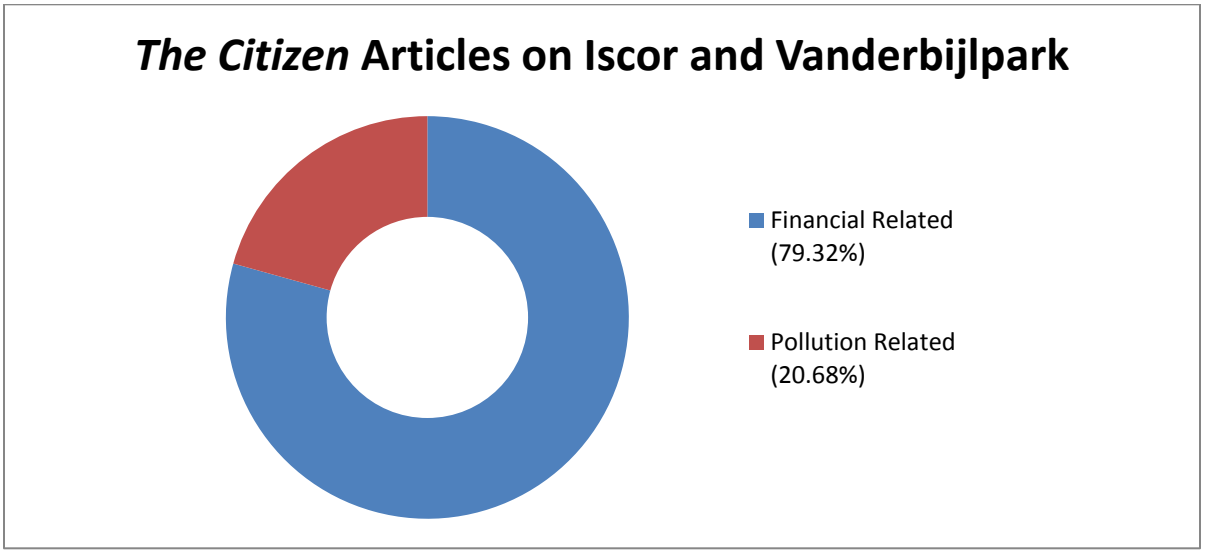
Specific search results in *The Citizen*

In searching the key word 'Mittal' in a search focused on publications by *The Citizen* it was found that eighteen results existed. Seventeen of these news articles that mentioned 'Mittal' dealt with economic and financial news and issues. Recurrent themes in these seventeen articles included the pricing of steel, the 'price fixing' accusations, Harmony Gold versus Mittal in court over steel price, Mittal's monopoly over the South African market and the state versus Mittal over its local steel prices.

It was found that one article amongst these eighteen of 553 Mittal articles, on the Sabinet database, mentioned pollution in relation to Mittal. The article 'Mittal to be monitored' (20/07/2007) is the only match found when searching through *The Citizen* newspaper clippings that mentions Mittal and pollution together. This constitutes 0.2% of the 553 articles on Mittal by the South African press.

It was also found that one of these eighteen articles by *The Citizen* mentions Vanderbijlpark but this article details a financial-labour related issue as Mittal cut 800 jobs at the Vanderbijlpark refinery through volunteer severance packages. There were no search matches for any article by *The Citizen* mentioning 'Mittal and water' together. There were again no search results for any article published by *The Citizen* dealing with 'Mittal and Steel Valley'.

It was found that by searching for the term 'Iscor' instead of 'Mittal', 393 results were found in comparison to the eighteen in relation to 'Mittal' on *The Citizen* database. This search did not involve any time frame limitations and an overwhelming number of these 393 'Iscor' articles dealt with economic and financial data, most of which related to industrial practices and labour issues. It was found that by searching for 'Iscor and Vanderbijlpark' 29 results were uncovered. Of these 29 results, numbers 10 to 29 all dealt with labour issues that the refinery (Iscor) was facing in the area of Vanderbijlpark. Many of these articles detailed severance and dismissal issues whilst others focused on wage concerns and union matters. Of these 29 results only six articles dealt with the pollution issue in Vanderbijlpark in relation to the (Iscor) steel refinery.



Of the six articles that mentioned Iscor and the water pollution issue in Vanderbijlpark it was found that three of these articles covered legal battles and court decisions. It was found that in these three articles the exclusive sources are lawyers and judges, in these articles the affected communities are not quoted at all.

Two of the total six articles dealt with investigations and reports conducted by government departments and relied extensively on 'official sources' to provide information and validate the story. Whilst these articles represent the concerns of the affected residents and support their claims with 'scientific' or 'expert proof' – these articles do not present the voices and opinions of the community. The resident's claims are reported through 'official' and 'expert' sources that either validate or dismiss them. One article was found to represent a reliance on public relations personnel as "Iscor moves to aid plot dwellers' (09/05/1997) makes use of Iscor as the exclusive source for this story.

It was found that a particularly favourable impression of the steel refinery is created as an un-attributed 'Iscor said …' represents the indirect functioning of public relations strategies. It also represents a significant reliance on Iscor in covering this topic. There were no articles found mentioning Iscor and the water pollution problem that made use of the affected local community or mentioned them as a source.

The one article from *The Citizen* that mentioned Mittal in relation to the water pollution problem in Vanderbijlpark was exclusively reliant on an 'official source'. In 'Mittal to be monitored' (20/06/07) it is noted that the only source is the Department of Environmental Affairs and Tourism's spokesperson. The article notes certain contraventions in environmental law as, detailed by the one source, yet the article does not mention the local residents or the health problems experienced in the area as a result of this pollution. In this way only 3.05% of all articles by *The Citizen* mentioned pollution at all in relation to Iscor and only 1.5% of all *Citizen* articles related ground water pollution to the (Iscor) steel refinery in Vanderbijlpark.

The articles published by *The Star* that mention Iscor and water pollution in Vanderbijlpark amount to eleven newspaper reports that are of use in this study; these articles are dated from 1998 to 2002. Six articles by *The Star* were found on the Sabinet database that mentioned Mittal in relation to the water pollution in Vanderbijlpark. Of these six articles, three dealt with the topic or theme of investigations by government departments and the other three articles mentioned the legal battle between affected local people and the Mittal steel refinery in court actions. Six articles from the *Citizen* were found from 1997 to 2002 that mention Iscor and pollution and the only article found on this issue in relation to Mittal and pollution is 'Mittal to be monitored on enviro front' (Helfrich, 2007). In this brief article the primary (only) source is Department of Environmental Affairs and Tourism minister Joanne Yawitch. The majority of these articles detail legal battles between residents and the nearby steel refinery.

Coverage of the Vanderbijlpark water pollution

The data collected through quantitative methods of measuring the amount of coverage about the Vanderbijlpark water pollution problem in *The Star* and *The Citizen* revealed low numbers of articles concerning the specific topic considered in this study. It was found that despite the presence of a number of articles on 'Mittal' and on 'Iscor' very few of these articles mentioned pollution and fewer mentioned the water pollution in Vanderbijlpark. Qualitative analysis was applied to the limited results that did report on this issue and these results had several negative implications for how and when the media have reported this significant environmental and social problem.

This low ratio of 'water pollution' coverage in relation to the large number of articles on 'Iscor' and 'Mittal' reveals how Croteau and Hoynes (2001) argument about economic pressures and market forces in capitalist society tend to shape or influence the content of media reports. In this instance it is possible to note that the prevalence of news stories mentioning the steel refinery in relation to economic developments, share prices and labour costs is relative to the important economic function of a major industry.

This also relates to Doyles' (2002) criticism of the economic pressures on media corporations as they aim to satisfy their customers with a type or theme of coverage that guarantees sales. For this study it is of use to note that 'dispossessed' and marginalised communities (Bell, 1998; Bond, 2002) are not considered as important additions to this audience and are not considered of value to the 'audience profile' (Dennis, 1992) targeted by the two newspapers analysed.

It can be seen how from a total of 553 results on 'Mittal' and 5406 articles on 'Iscor' only eighteen of these combined search entries revealed useful content about pollution in Vanderbijlpark. This significantly low ratio of coverage can be attributed to the economic influences of large corporations and a generally 'business friendly world view' (Croteau & Hoynes, 2002) that favours capitalist enterprises over marginalised communities (McChesney, 2004).

It is interesting to note how the vast majority of articles found in the various searches related to economic news. In this way Bennett's (1982) argument about super-structures of social influence playing a major role in media production is noted as capitalism and interests about wealth and monetary details outweigh the coverage of the affected local communities.

The very low number of texts found that dealt with the specific issue represents how either this story was not considered very newsworthy, had negative implications for the publishers or was replaced with content that the publishers thought would please their target audience (Dennis, 1992) such as financially related news.

Due to the low number of articles covering the topic of water pollution and the steel refinery it is possible to apply Curran's (2000) criticisms of the media's 'free-market' organisation and operating procedures. In this way it is argued that the 'watchdog role' or the 'fourth estate' fails to function in this specific issue of reporting on abuses by the powerful at the cost of the less powerful. In this case the steel refinery is presented as a significant social force as very little coverage of its pollutant behaviour exists in the data set in comparison to the high number of articles mentioning the steel refinery.

It is possible from this low amount of coverage and particularly from the significantly small number of 'investigative reports' (four) to conclude that the function of the media to report on important social events (Curran, 2000) and to raise the issues of communities affected by water pollution (Bond, 2002; Bell, 1998; McDonald, 2002) has not been met by *The Star* nor by *The Citizen*. It is possible that the amount of media coverage on the steel refinery constituted a significantly non-proportional ratio of stories that mentioned the water pollution problem in Vanderbijlpark and its effects on the local community and its 'possible' cause from the steel refinery.

A few articles did function in the role of the 'fourth estate' but the limited number of these articles was discovered as a major shortfall in media coverage. These in-depth articles that dealt with the issue were generally from journalists that wrote repeatedly on the issue or were involved in a 'journalistic beat' such as health or the environment, such as Green (2005) and Feris (1998) from *The Star* and Chikanga (2000) from the *Citizen*. These articles represented how an individual journalist may take on a specific topic in order to uncover 'secret' or 'hidden' information (Belsey, 1998). In this way these journalists represent the functioning of 'moral' or 'ethical' reporting (Belsey, 1998) as they describe, from the perspective of the local community, how the steel refinery and pollution have affected the health and living conditions of residents. This is a representation of the media functioning in a 'fourth estate' role (Curran, 2000) by providing a platform to marginalised communities that are generally disadvantaged in their interactions with the mainstream media and journalists (Manning, 2001; Bond, 2002).

It is of interest to note how the very limited number of 'investigative' or in-depth articles on this topic do mention scenarios, causes and details supported by Cock and Munnik (2006) and by Munnik and Peek (2008). The accounts by residents mentioned in the press are validated and scientifically supported by the finding of Cock, Munnik and Peek. These articles reflected on the health concerns and problems of the affected local population of Linkholm, Drakerville, Steel Valley and Louisrus. Significantly these particular areas are often mentioned in the few media reports found in the data set and they correlate to the areas identified by Cock and Munnik (2006) as they lie west of the steel refineries boundary and are particularly susceptible to influences and changes in the groundwater.

Qualitative Analysis

The Framing and Representation of the Water Pollution Problem

A qualitative analysis was undertaken to answer the second question posed by this study which asked how the coverage of this issue was represented and framed in the two newspapers analysed. These findings have been thematically arranged as certain characteristics dominated each particular news report. These themes are legal conflict, official sources, greenwashing and environmental reporting.

Legal Conflict: Residents versus the Corporation

A major theme in the articles that do mention the steel refinery, water pollution and the residents of Vanderbijlpark was that of legal action and court cases that the refinery and residents were involved in. This demonstrates how a vast majority of the articles found focused on instances and times when the steel refinery was in court or being 'investigated' by government bodies such as the 'green scorpions' and the Department of Water Affairs. This relates to the news value of 'conflict' as represented by the legal battles between the residents and the corporation over the issue of groundwater pollution and responsibility. An example of this is how from the combined twenty-four articles by *The Star* and the *Citizen*, eleven of these articles covered legal developments and court cases between the affected residents and the steel refinery.

It is also of interest to note how certain legal actions, reported in one article, act as 'gagging orders' for the local community – preventing them from legally talking to the media about this issue. This may explain a reliance on 'official sources' (Manning, 2001) such as the public relations officers of the steel refinery and on government spokespersons, as the residents in the affected areas may have been unavailable or legally prevented from appearing in the South African print media as sources.

Seven of the eleven articles that mention Iscor in relation to pollution appeared between July 2002 and October 2002. All of these articles mention the court proceedings against Iscor and describe the legal battle as Vanderbijlpark residents have attempted to take Iscor to the High Court demanding compensation for health damages and demanding a cleanup of the affected areas.

The first three articles are dated from the twenty second of July 2002 to the twenty seventh of August 2002. This concentrated coverage of an issue that has been receiving little media attention illustrates how the agenda-building and agenda-setting (Sevrin and Tankard, 2001) functions of the media lead to a narrow focus on the topic at times, as events such as legal action and court cases brought against Iscor generate media coverage. The first of these articles 'Iscor fails to stop farmers fighting pollution' (22/07/02) is of interest as it details how a resident, Gift Makune, has been personally affected by describing his polluted property and health. This article then mentions how the Steel Valley Crisis Committee is taking Iscor to the High Court and how Iscor obtained a "gagging order barring sixteen members of the committee from speaking to the media" (Kgosana, 2002). This is of interest as this 'gagging order' means that the affected residents engaged in legal action cannot voice their case or concerns to the media. As a result of limited access to information the media then rely on 'official sources' (Manning, 2001) such as government departmental spokespersons, Iscor public relations officials and even the attorneys and lawyers that represent the two opposing parties.

The two articles that follow closely on the theme of Iscor in legal battles with the local community of Vanderbijlpark, detail how the court case has been developing. Interestingly in the article 'Farmers case could cost Iscor R400 million' (27/08/02) it is noted that Lloyd, a professor in mechanical engineering, is used as a primary source for the residents' argument yet the residents do not speak for themselves. In contrast to Lloyd's argument the other source in this article that is given a platform to speak is Louis van Niekerk, the chief executive at Iscor, and he defends Iscor's position saying "We want to meet international standards not just local standards" (Bridge, 2002).

This statement implies that Iscor has met local standards yet Cock (2006), Munnik (2006, 2008) and Peek (2008) argue with detailed evidence that the steel refinery in Vanderbijlpark has not met local standards for wastewater discharge and general waste management.

The four articles that occur in the narrow time span from the fourth of September 2002 to the fourth of October 2002 make up the remainder of all articles mentioning Iscor and water pollution published by *The Star*. These articles all mention the legal battle between Iscor and local residents affected by water pollution and health problems, these articles are generally brief and give details about legal developments in court cases between Iscor and Vanderbijlpark residents.

One article that was particularly interesting was "Lid shut on Iscor's foul water document" (01/10/02). In this article the author notes how "A report allegedly proving that Iscor has polluted drinking water cannot be made public" (Ndaba, 2002). The author notes how without providing reasons the High Court judge ruled against this research being used in court. This study conducted by Hattingh "was leaked by a 'whistle blower' last year" (Ndaba, 2002). It is possible that this 'whistle blower' is related to the 'whistle blower', Dr. van Eeden, as noted by Cock and Munnik (2006). What is significant is that the function of insiders and 'whistle blowers' is pivotal to providing evidence and support for the residents claims of pollution yet the research is not allowed in court as Iscor's lawyer argued that it was a 'draft document', contained a number of faults and as a result was inadmissible as evidence in court. As this work by Hattingh was conducted for Iscor, it essentially belonged to Iscor as the report was argued to be for Hattingh's senior manager and not for the press or the public's perusal. This is an important development as the silencing of these whistle blowers relates to the silencing of the sixteen members of the Steel Valley Crisis Committee with a 'gagging order'. This silencing of the affected community means that they are unable to legally voice their concerns over the pollution issue as linked to the wastewater discharges by Iscor and the related health and pollution problems.

In this way the power of big industries and the High Court represents how economics and social life are inter-related and affect how these issues are detailed in the media (Golding and Murdock, 2000). This thematic coverage of the issue in relation to court cases represents the reliance of the media on 'primary definers' (Hall, 1980) and on 'official sources' (Manning, 2001) to supply or validate information. Significantly this represents how when official bodies, organisations or people were involved, the issue held a higher chance of gaining public attention and being published.

It also represents how marginalised and dispossessed communities are often left out of mainstream media debates whilst 'officials' and prominent public figures are referred to, interviewed and quoted at the expense of the affected local community (Bond, 2002; Bell, 1998). This is supported by the data as of the total useful twenty-four articles, sixteen of these articles relied extensively or exclusively on government officials and departments. Several of these articles also mentioned court proceedings and legal sources.

This major theme of legal action in the relevant articles examined by this study indicate how timing, 'agenda-building' and 'agenda-setting' (Severin and Tankard, 2001) is present in this coverage. The close proximity, in terms of the date published, that many of these articles have to one another illustrates how an 'agenda' has been developed and how the issue of water pollution is cycled through the attention span of the general public. The data revealed that at times of legal action there was greater coverage of the specific issue but that this coverage generally dealt with legal developments, possible settlement figures or costs and seldom involved recounting details from the actual people affected by the pollution problem.

This illustrates the major role occupied in these articles by 'official sources' (Manning, 2001) and how the journalists responsible for this 'legal action coverage' may be reliant on sources that do not reflect the local community and as a result fail to function as the 'fourth estate' (Curran, 2000), even as they detail the water pollution problem and the steel refinery in the 'public sphere' (Harbermas, 1989).

An article published by *The Star* in 2005 that can be categorised under the legal theme is "Court blocks case brought by pollution victim" (27/09/05). This article details the failed attempts by Mr. De Kock (mentioned in other news articles referred to) to take Mittal to court over pollution and health problems from their Vanderbijlpark steel refinery. In this article (Sukhraj, 2005) the theme of legal concerns in media coverage about Mittal Steel and the water pollution problem in Vanderbijlpark is clear to see. In this article the case of Johann de Kock's attempts to present his argument to the highest court in South Africa are described. The opening paragraph of this article states that he has "been denied direct access to the highest court in the land". The article continues to mention how Johann de Kock is a resident severely affected by pollution concerns but interestingly the article stops short of stating what these particular pollution concerns are or how these concerns are attributable to Mittal Steel's Vanderbijlpark refinery.

The third paragraph of this article describes how Johann de Kock has served papers on "President Thabo Mbeki as well as the ministers of water affairs and forestry and of environment affairs", it goes on to list that the National Directorate of Public Prosecutions, the Human Rights Commission and the manager of the Emfuleni Local Council were also served with papers.

The article then states that "He [Johann de Kock] believes they [the government departments] are responsible for allowing grave environmental contraventions by Iscor, now known as Mittal Steel". In this way the journalist and newspapers cannot be held accountable for public accusations against Mittal as they refer to the opinion of the individual concerned in this legal matter. In this way it can be seen how "journalists in democratic countries work within laws which seek to define and limit their rights and responsibilities" (McNair, 1998:95).

Laws such as libel prevent the public defamation of character of not only individuals but also of corporations. As a result the journalist responsible for this article has to be careful to avoid direct accusations against the Mittal Steel Vanderbijlpark refinery over issues such as violations of environmental legislation and as a cause of severe water pollution in Vanderbijlpark. The article notes how "the Bench was not convinced that de Kock's application for direct access, without legal representation, should be considered".

This is of interest as the opinion of the Bench about blocking de Kock's access is not based on the merits of his case but rather it is based on the fact that he appears without legal representation. A member of the bench is quoted in this article as saying "the issues are not set out clearly or succinctly" and again as "the saving of time and costs, the importance of the issue … do not justify this court being a court of first and last instance".

From the opinions provided by the justices on the Bench it is possible to conclude that with legal representation de Kock's case may have received greater consideration. In light of this the article does represent how de Kock attempted to generate this representation as he "tried to get assistance from everyone but nobody seems to be conversant with environmental laws. But the law states clearly what the contraventions are". Here the inability of an individual to afford legal representation has seemingly resulted in the dismissal of his application to present his case against various government departments to the highest legal court in South Africa. It is possible to see how a "marginalised community, represented by de Kock, is effectively barred from legal access to the high court due to his economic position in society". Here Bond's (2002) observations that the 'working class', such as the community of Vanderbijlpark, are unable to defend their own interests in the face of a multinational corporation, are instructive.

It is also of use to note how the 'environmental justice' described by McDonald (2002) is unavailable to poorer communities as they face 'social inequality' and lack sufficient resources to mobilise an adequate defence against the privatisation and commodification of natural resources. This is demonstrated as de Kock's case was described by the justices on the Bench as "the court recognises that he had raised issues of public interest but stated that without legal assistance he would struggle to bring the case properly".

As de Kock was unable to afford legal representation and did not receive assistance from any government department or legal aid he was unable to gain access to legal representation and thus unable to have access to the court. This article functions in the manner of the 'fourth estate' as detailed by Curran (2000) as it acts in the form of a watchdog against the activities of the state in a legal matter brought against government departments by an individual.

The article provides the complainant, an affected member of the Vanderbijlpark community, with an opportunity to publically present his concerns about pollution in his area. It is, however, a concern that the fact that his case was dismissed by the high court could have created the impression that his case was without merit or substance. This impression may be created as the high court operates with significant credibility and absolute legal authority in South Africa.

Their dismissal of his case, regardless of the reasons, may create an impression in the minds of the public that the case against Mittal Steel for pollution and environmental legislation violations is unfounded. The fact that this failed court action is depicted in a mainstream newspaper, such as *The Star*, and that it is one of the very few articles that deal with Mittal Steel and the pollution problem in Vanderbijlpark, represents how this issue is misrepresented to the wider South African public. This article, much like a majority of the articles analysed in this study, fails to represent or reflect on the contextual and historical case of ground and surface water pollution in Vanderbijlpark as a result of the practices employed by the Mittal Steel refinery. In this way these articles provide only a brief 'snapshot' of the pollution problem without providing important information about the issue or those directly affected by it.

Whilst this article does provide for Mr. De Kock to speak for himself, to define his position and concerns, it also relies on the act of legal prosecution in order to gain credibility or value as a news item. This is another example of 'super structures' (Bennett, 1982) and the reliance on authoritative sources for news content, as the court and important government departments are referred to in order to define the issue as important or significantly worthy of public attention.

Three articles published by *The Citizen* that deal with the water pollution issue in Vanderbijlpark are of interest as they occur within close proximity of each other and detail a concurrent theme, that of legal prosecution by local communities of Iscor for the pollution in the area. These three articles occur between the twenty third of May 200 and the twenty seventh of May 2000. The author of these three articles is Kenneth Chikanya and this demonstrates how news corporations may come to rely on routine procedures and practices (Williams, 2003) that involve specific journalists, who are familiar with a story and are expected to cover all stories in relation to that issue or topic.

In this case it is found that the central theme within these three articles is the threat of legal action, actual legal action and the consequences of this legal action over a narrow period of time in May 2000.

In the first of these three articles by Chikanya "Govt to blame for pollution says DP man" (23/05/2002) it can be noted that a political figure Professor Mbadi, the United Democratic Party environmental affairs minister, is quoted as stating that Iscor's pollution of Vanderbijlpark is criminal and that they should be prosecuted. His article notes how "Iscor had operated as a state utility for the greater part of its existence" (Chikanya, *The Citizen*, 2000), at the time this article was published Iscor was in the transformative state of privatisation, to be sold to Mittal at the start of a four year period of transition from 2001 (Munnik and Peek, 2008). What is of interest in this first article is the prominent role of experts, professionals and legal sources or references whilst the affected community do not speak for themselves.

This is another example of a reliance on 'primary definers' (Hall, 1980) and 'experts' (Manning, 2001) at the expense of marginalised communities affected by water pollution (Bond, 2002; Bell, 1998; McDonald, 2002) and environmental problems. In this article it is significant to point out that Professor Mbadi is quoted as saying "the implications of how the matter is handled by the courts, and the government should not be underestimated" (Chikanya, 2000).

This is of interest as the next two articles detail how the issue was handled but not what these 'implications' were. It also represents Bennett's (1982) argument about the primary function of societal super-structures such as the government and courts in deciding and representing important issues in the public area.

The article "Iscor in pollution suit" (Chikanya, 2002) is a simple account of the opening arguments against Iscor in a court case brought against them by local residents. In this article the attorneys major points are summarised as residents wished to close the steel plant due to pollution concerns. What is significant is that the third article "Iscor settles owner claims of out of court" is an example of Professor Mbadi's warnings about the legal process, the government and Iscor and the 'implications' that these results have.

The opening paragraph of this article details that "Iscor steelworks in Vanderbijlpark has agreed to buy all properties of residents who took them to court" (Chikanya, 2002).

In this article it is again clear to see that the two sources or actors in this article are the attorney, Mr. Van Aswegen, representing the residents, and the Iscor spokesperson, Mr. Kalam. It is important to mention that the attorney declines to mention what the out of court settlement amounted to and the journalist, Chikanya, speculates it to be in the millions. It is also interesting to note how the Iscor spokesperson is attributed to and again provided a significant platform to defend the steelworks as he details that "the agreement does not pronounce on who is responsible for the environmental problem …" (Kalam in Chikanya, 2002).

This is an example of 'green washing' (Manning, 2001) and of corporate or big business power in influencing who is represented as responsible for environmental damages and pollution. The final paragraph of this article details how Iscor intends buying up land "enabling it to exercise continued long term environmental care" (Chikanya, 2000). This 'environmental care' is disputed authors such as Cock (2006), Munnik (2006, 2008) and Peek (2008) as they note how this polluted land is simply bought by (Iscor) the steel refinery, at a very low price, and fenced off – preventing any access to or monitoring of the area due to private property and legal clauses.

In the article "Iscor faces court bid on 'poisoned' water" (Mabasa, 03/09/2002) it is again immediately clear that legal action and the involvement of court proceedings against the (Iscor) steel refinery is the central theme or topic of the article. In this article Mabasa (2002) details how the Legal Aid Board has accepted to fund and represent 16 families from Vanderbijlpark that claim compensation from Iscor and demand that the plant be closed down. This article focuses on legal representatives and the merits of the case from a legal perspective. Again the affected individuals do not speak for themselves and their grievances are validated by court actions against Iscor. Significantly this is the only article from *The Citizen* that details the legal action by 16 families from Steel Valley, only two of which remain in a legal battle with the steel refinery to this day (Cock and Munnik, 2006).

Official Sources in Articles

Three articles published by *The Star* that mention the water pollution problem in Vanderbijlpark make extensive use of one source, Melisa Fourie, the spokesperson for Department of Environmental Affairs and Tourism. These three articles are closely related to the story titled "Determined to prove their mettle to Mittal" as they are all dated from 24 May to 20 July 2007. These three articles all rely on one 'primary definer' (Hall, 1980) and official source (Manning, 2001) namely the Department of Water Affairs and Forestry spokesperson who relates the investigations by the 'green scorpions' into the environmental pollution in Vanderbijlpark due to the behaviour of the steel refinery.

The article "Steel giant could face sanctions over pollution" (20/07/2007) was written by Ufrieda Ho. This article is an interesting mix of sources as government, corporate and community spokespersons are provided with a platform to comment on the issue. The article represents an improvement on the majority of media coverage in relation to this issue, as it does make mention of the specific water pollution problems in Vanderbijlpark and does relate these problems directly to the nearby steel refinery.

This article mentions a government report created by the 'Green Scorpions' and the possible legal implications that this report may have for the steel corporation. An example of this is "Scorpions highlighted the main contraventions of legislation...These included activities such as...significant pollution of surface and groundwater with phenols, iron, oil, fluoride and other hazardous substances" (Ufrieda Ho, 2007). This pollution of the surface and groundwater is specifically what the Cock and Munnik (2006) research described in great detail with exhaustive data and scientific analysis; it is also supported by the research of Munnik and Peek (2008) as they describe the situation as a major environmental crisis and a long-standing health hazard in the Vanderbijlpark water system.

It is of interest to note how the sociological production of news is of value in explaining this limited amount of critical media coverage as the author (Ho, 2007) was responsible for a previous article "Determined to prove their mettle to Mittal".

This article was found to exemplify how the 'fourth estate' (Curran, 2000) may function to reveal and protect the interests of an affected community as *The Star* in this case detailed the specifics of the water pollution crisis in Vanderbijlpark and linked it directly to the nearby steel refinery's environmental practices. The fact that this author, Ho (2007), has been responsible for two of the four articles that detail the water pollution crisis in Vanderbijlpark, as it relates to Mittal Steel's involvement, may reveal that this particular journalist occupies a more senior role in the news organisation. This more senior position or hierarchical ranking (Street, 2001) may enable this journalist to negotiate around or through the gatekeeping function of her editors. Another explanation for the appearance and re-appearance of this critical type of reporting may be due to the appearance of 'balance' in the sourcing and attribution of the articles.

In "Steel giant could face sanctions over pollution" it can be seen that sources are used to support and detail the issue of water pollution from the steel refinery. The first source is that of Melissa Fourie the director of enforcement of the Department of Environmental Affairs and Tourism. This government source functions as an 'official source' (Manning, 2001) by providing credibility and authenticity to the details of the article. This 'official source' is given one paragraph to describe how Mittal would be given "a reasonable amount of time to fix the problems" and that "they [Mittal] had been repeatedly warned by various authorities to cease these activities". This source functions to detail to the public that the government is aware of the issue, has been aware of the issue for some time and is attempting to place pressure on Mittal to rectify the problems. What is of particular concern is that this government spokesperson states that 'various authorities' have attempted to bring Mittal to task over their environmental policies and actions, yet the Vanderbijlpark steel refinery continues to defy these complaints, requests and demands.

The second source that appears in this article is given more space and a greater platform to defend the steel refinery and the interests of ArcelorMittal. This source, Rick Reato, continues to defend ArcelorMittal SA by employing 'flak', as per the 'propaganda model' (Herman and Chomsky, 2002). This source is quoted in the article as "he also blamed many of the companies' problems on a legacy of poor environmental approaches, rather than the companies' current environmental practices" (Ho, 2007).

In this way a public relations practitioner is able to be "defensive in the face of attack, positive in the effort to enhance good will" (Prout in Lesley, 1978: 568). As a result the attribution provided to the ArceloMittal SA CEO may work against the intentions of the journalist as this platform enables a corporate representative to make use of manipulative rhetoric devices in order to create a 'favourable' or 'positive' image of the corporation (Ihlen, 2004).

It is noted that the local community in the form of Samuel Mokoena of the Steel Valley Crisis Committee is given the last two small paragraphs to relate the communities' concerns to the legal actions by the 'Green Scorpions'. He states that the report by the scorpions is a 'moral victory' for the residents and they hope the corporation will be taken to court for 'operating illegally'. Mokoena is not quoted as to the details of how the community has suffered as a result of these illegal operations and the environmental impact that the steel refinery has had on Vanderbijlpark.

In this way it was found that the majority of newspaper articles from *The Star* that mention water pollution and Mittal did so in relation to legal actions and court cases. It has been demonstrated how a very small number, four to be exact, of these few articles gave the local community a platform to personally present their complaints and concerns about Mittal and the water pollution in Vanderbijlpark.

In the article "Green Scorpions to probe for pollution of Mittal Steel plant" (30/05/07) it is evident that a significant reliance on 'official sources' (Manning, 2001) exists in relation to media coverage of this issue. In this article attributed to South African Press Association (Sapa) and not to a single journalist, it is clear that one source is made use of in order to provide information about a scheduled inspection to take place at Mittal Steel's Vanderbijlpark refinery. Melissa Fourie, the spokesperson for the department of Environmental Affairs and Tourism is solely relied upon in order to furnish the media with the details of this inspection and the reasons for it occurring. The article mentions how "environmental management inspectors (nicknamed the "Green Scorpions") as well as officials from the Water Affairs and Forestry Department and Sedibeng Municipality" (Sapa, 2007:10) would be conducting this inspection.

These ‘official sources’ (Manning, 2001) are presented as attempting to check up on whether Mittal Steel is complying with environmental law at the Vanderbijlpark refinery. The article also mentions that this inspection is not localised to Mittal or to the Vaal triangle but rather that “the Green Scorpions will inspect about 40 sites in Gauteng, Mpumalanga, North West KwaZulu-Natal and the Western Cape”. It is possible that the reference to the wider inspections carried out by the “Green Scorpions” creates the impression that Mittal is not necessarily guilty of any pollution and that the ‘probe’ is merely a formality to be carried out by government officials who are conducting general inspections throughout the country.

In this way the article has the interesting implication of creating the impression that the government, in the form of the “Green Scorpions” and the Department of Water Affairs and Forestry, is attempting to do something about the pollution yet this article avoids directly implicating the Mittal refinery in a negative light. This is achieved as no reference is made to the water pollution problem, no comment on the actions of Mittal Steel is made and there is no mention of the long-standing ground water pollution problem in Vanderbijlpark.

Significantly there is no link between this government ‘probe’ and the health concerns and pollution problems that have affected the local community near the steel refinery. In this way there is a significant over-reliance on ‘official sources’ and no reference to the affected community as they are side-lined and ignored despite their protestations and vocalisations about this matter. It is clear from this over-reliance on ‘official sources’ and on avoidance of direct blame or apportioning of guilt, that the impression of ‘objectivity’ may be constructed despite a total absence in actual balancing of sources and attribution in this article.

This article functions to provide a platform not for the defence of Mittal Steel as supported by public relations personnel. Rather it provides government spokes personnel, in the form of ‘official’ and therefore trusted sources (Manning, 2001), with an opportunity to speak to a wider audience and to promote the appearance of a government that cares about environmental impacts and that is attempting to curtail and monitor pollution problems.

This can be seen clearly as "ensuring environmental compliance in this sector has been prioritised by government, as industrial processes contribute significantly to pollution if not managed properly" (Sapa, 2007:10).

From this quote it can be seen that "environment compliance" is referred to as a 'priority' of the government, yet the specific groundwater pollution problem in Vanderbijlpark caused by Mittal Steel's unlined slime dams and discharge channels (Cock and Munnik, 2006), has not been adequately addressed nor resolved as this particular pollution problem has existed since 1956 and continues to plague the area into the present time. In this was the 'prioritisation' by the government seems to be false or if it exists it then seems to be that the government, if willing, is unable to force Mittal Steel to comply with existing environmental legislation and health codes.

Significantly this article creates the impression that the government is attempting to force compliance and that it does in fact have the ability to influence large multinational corporations, like ArcelorMittal, to comply with national environmental legislation in relation to water pollution and waste management. Another criticism of this article relates to the brevity of the story. Whilst space may be a concern the article is very short only 5-6 paragraphs. This article relies on one primary source that being an 'official source' from the government department and it makes no mention of the history or context of the water pollution in the Vaal Triangle as exemplified by the ground water pollution in Vanderbijlpark by the Mittal Steel refinery. The article carefully avoids implicating or directly blaming or accusing the Mittal refinery of environmental pollution and any illegal operation yet the only reason that this article has made it into publication is due to the fact that Mittal, a major corporation, is being investigated by the "Green Scorpions".

This is an interesting example of how 'news values' conflict with Herman and Chomsky's (2002) final filter of pro-capitalism or neo-liberalism. As due to interest in a multinational corporation involved in an investigation at the hands of a government department the story holds a good deal of value as news for an interested public.

Yet due to the involvement of ArcelorMittal, as an important economic contributor in South Africa (Cock and Munnik, 2006), and a favourable atmosphere of neo-liberalism (Lovass, 2008), the article does not go so far as to directly blame or mention the illegal operations of the refinery as a cause of groundwater pollution in the Vaal Triangle.

The article "Inspection spotlight on Mittal Steel" (31/05/07) follows a day after the article titled "Green Scorpions to probe for pollution at Mittal Steel plant". The fact that this article exists as a publication may be attributable to two factors or characteristics of 'news values'. The first of these values is a repeated characteristic of the previous article as the fact that a multinational corporation, ArcelorMittal, is involved in an investigation carried out by the South African government that aims to ascertain levels of industrial pollution and intends to force compliance with environmental regulations. Due to the fact that this multinational corporation is well known the news about its involvement in a pollution investigation becomes 'newsworthy'. The second characteristic of this article that functions as a 'news value' is that it is recent as it relates to an article published the previous day, the 30th May 2007, which deals with the same topic.

This article "Inspection spotlight on Mittal Steel" functions as a follow up article to that of "Green Scorpions to probe for pollution at Mittal Steel plant" yet it provides very little new information, rather repeating information from the previous article and does not provide a context of historical background to the pollution in Vanderbijlpark or the Vaal Triangle.

The article "Inspection spotlight on Mittal Steel" describes how the pollution investigation is known as 'Operation Ferro' and is designed as a "compliance inspection focusing on the steel, ferro-alloy and chemical industries in the country". This article is, in the same way as the previous article "Green Scorpions to probe for pollution at Mittal Steel plant", reliant on one primary source for the information about the investigation and quotes only Melissa Fourie, the spokesperson for Enforcement at the Department of Environment and Tourism.

A major criticism of this follow-up article about "Operation Ferro' is that no background or context of the pollution in Vanderbijlpark is provided. The local community is entirely silenced or marginalised as one "official source' (Manning, 2001) or 'primary definition' is used to create authenticity and to generate credibility for the facts provided by the article. Due to this absence in attribution of the local community there is again no direct blame or indictment levelled at Mittal steel's Vanderbijlpark refinery despite the fact that they were being investigated by the "Green Scorpions" for their role in water pollution in the Vaal Triangle and Vanderbijlpark.

Another criticism of this article is that there is a great deal of repetition in this article as a large portion of this article "Inspection spotlight on Mittal Steel" is a repeat of the previous day's article "Green Scorpions to probe for pollution at Mittal Steel plant". Significantly the longest paragraph in the article "Inspection spotlight on Mittal Steel" is an exact repetition of the previous day's story. This repetition takes up about 33% of the total article's length without raising any new information or providing any real follow-up coverage of the story in question. In this way the pollution investigation is not reported in any detail but is simply repeated as being an attempt by government authorities to deal with pollution and to force industrial compliance with environmental legislation.

As a result of this repetition it is possible to conclude that this article continues to create the impression for the public that the government is serious about environmental concerns and is attempting to deal industries that do not comply with environmental legislation. This is seen the article "Inspection spotlight on Mittal Steel" as the article states that "the campaign is meant to show that the department does indeed have teeth and that it can enforce the country's numerous environmental acts".

In this way the attribution provided to the government spokesperson seems to reveal how this article again functions as a platform for governmental public relations as it is aimed as pacifying the public with the belief that 'something' is being done about pollution problems and that multinational corporations, like ArcelorMittal, are not being allowed to get away with environmental non-compliance.

The reality of this is hover, in serious debate as authors such as Cock and Munnik (2006) argue the government bodies, such as the Department of Water Affairs and Forestry, are virtually entirely incapable of influencing the behaviour or actions of Mittal Steel (formerly ISCOR) as "ISCOR has ignored requests from the Department of Water Affairs (DWAF) to stop pollution. DWAF continues to issue ISCOR [and Mittal] with permits to pollute the environment. As one informant said: The DWAF has failed to regulate in the interests of the people … ISCOR [and Mittal] continues to pollute our water, land and air – and does so with a licence from the government", (Cock and Munnik, 2006: 33). In this way the work of these two researchers, supported by interviews from the affected community and scientists involved in soil and water analysis, directly refutes the governments 'social responsibility' and whilst many references are made to Iscor, the previous version of Mittal Steel Vanderbijlpark, virtually all the major environmental problems still exist at the current steel refinery.

The authors Cock and Munnik (2006: 16) note how Dr. Pieter van Eeden, a 'whistleblower' on ISCOR's environmental impacts, states that a reason for the extensive ground water pollution in Vanderbijlpark "was DWAF's enforcement policy. They are good with the commands but not good with the control bit … DWAF has taken on small industries, but they don't take on ISCOR [now Mittal]. Why not? Because of money. ISCOR [and even more so ArcelorMittal] can put down a couple of million rand for legal fees, and drag out legal proceedings. As a result DWAF's approach is rather to walk with them hand in hand, rather than wield the law at them".

In the light of this important inside information it is possible to conclude that government departments, such as the DWAF, wish to appear as though they 'have teeth' by conducting these 'inspections' and 'probes', yet in reality they may be complicit in the lack of industrial compliance with environmental legislation. When it comes to large multinational corporations such as ArcelorMittal the legal defence presented by such a corporation, together with the GDP contribution supplied by such a large industry, provides an economic incentive to refrain from legal action against a polluting corporation. Similarly the legal and economic power of ArcelorMittal may explain the absence of direct blame or accusations of pollution by *The Star*.

The newspaper may fear legal action being taken against them if the Mittal Steel refinery in Vanderbijlpark is publically accused of ground water pollution and non-compliance with environmental legislation.

In the article "Inspection spotlight on Mittal Steel" Melissa Fourie an 'official source' is quoted as stating that "Depending on our findings and assessments in the next few weeks we will insist on corrective action to be taken". This statement in some way refutes the intention of showing that the department 'has teeth' as 'insistence' is very different from enforcement. This supports the criticism of Dr. van Eeden (Cock and Munnik, 2006) as he contends that the Department of Water Affairs and Forestry is intimidated by the steel corporation and avoids 'wielding the law' against them. What is significant is that this article may create a positive impression of the government departments involved in the pollution investigation as in this article, and the previous article, they are presented in a favourable light. This is accomplished as sole attribution is provided to an 'official source' and the departments are represented as pro-active and un-intimidated in the face of corporations such as Mittal Steel. This is misleading representation as very little legal action has been taken against Mittal Steel as a result of 'Operation Ferro'.

The only article found published by *The Citizen* that mentions Mittal in relation to the water pollution problem caused by the corporations steel refineries is "Mittal to be monitored on enviro front" (20/07/07) by Kim Helfrich. This journalist begins the article in strong criticism of the steel refinery as she states "Mittal is not particularly environmentally responsible at its Vereeninging plant". Whilst this article does not refer to the Mittal Vanderbijlpark refinery it does however provide the only example, from *The Citizen*, of coverage of water pollution in relation to the corporations steel refineries. It is of interest as it provides an example of how the multinational steel corporation is covered by South African newspapers, despite the fact that it details Mittal's Vereeniging plant and not their Vanderbijlpark refinery.

This article also represents how the various Iscor plants in South Africa were privatised and sold to one powerful multinational steel corporation. This is supported by Cock and Munnik (2006: 8, 9) as they note how "Iscor Vanderbijlpark, along with the plants in Vereeniging, Newcastle and Saldanha, is [are] now globalised as part of the biggest steel empire in the world".

This aspect of Iscor being privatised and falling under control of foreign ownership relates to the manner in which this multinational corporation has been represented in major South African newspapers. Lovass (2008) has noted how Herman and Chomsky's (2002) 'fifth filter' of the 'propaganda model' is that of pro-capitalism/neo-liberalism and how this functions in affecting media coverage in South Africa as media owners, editors and journalist have a generally positive view of privatisation and neo-liberalism. As a result these media personnel would portray privatised and multinational corporations in a positive light and would further reinforce the dominant social structures (Bennett, 1982) of neo-liberalism in South Africa.

It can be seen from Helfrichs' (2007) article that despite the article being about a different refinery, the Mittal Vereeniging plant, it is more significantly about the same corporation. As a result the manner or type of coverage evident in this article is very similar to the coverage of the issue at Mittal's Vanderbijlpark refinery. The manner of coverage that is so similar to the other articles analysed in this study is that a few (or one) 'official sources' are referred to, no contextual or background information to the water pollution problem is provided and the government department involved is represented in a generally positive manner.

In this brief article the primary and only source is Department of Environmental Affairs and Tourism minister Joanne Yawitch. She is quoted as stating that the area of the Vaal triangle is of environmental significance as it has noticeable affects on the surrounding areas. Yawitch is referred to by the author as noting that Mittal is in contravention of multiple environmental infractions including the pollution of surface and ground water. In this article it is again noted that an 'official source' (Manning, 2001) is relied upon in order to provide credibility for the story, ensuring its satisfaction of customer expectations (Doyle, 2002; Dennis, 1992) and a profit for the news corporation.

What is evident in this article is that Mittal is accused of environmental infractions, yet these infractions are not linked to the ongoing court battles and health issues of the local community of Vanderbijlpark. Instead the 'official source', Joanne Yawitch, is quoted as saying that the Department of Environmental Affairs and Tourism will "carefully monitor the situation at Mittal" (Helfrich, 2007).

Here the government department is represented in a similar manner to other articles as it is represented as attempting to deal with the pollution concerns of the affected community, whilst it is in fact merely 'monitoring' the situation rather than having any real influence over Mittal's environmental practices. Another criticism of this article, in relation to sources, is that it does not provide for the local affected community to speak for themselves. In this way it is arguable that this article does not represent the functioning of the 'fourth estate' and does not provide a marginalised and disenfranchised community with a public platform to voice their own concerns about pollution. By providing for and relying on an 'official' or 'trusted source' (Manning, 2001), such as the government official, the government department is presented in a favourable light rather than it being criticised for its inability to get Mittal to comply with environmental legislation since 1956 (Cock and Munnik, 2006).

From the articles that have been examined it is evident that when the Vanderbijlpark steel refinery is mentioned in relation to pollution – that this coverage only occurs when the issue is investigated or 'tried' by an authoritative source such as the Department of Environmental Affairs or the courts. This illustrates how 'official sources' are automatically positioned to speak in place of affected communities and due to this 'official action' the issue has been reported by the media and brought into the public domain. This has been demonstrated in the data where sixteen of the total twenty-four articles on this specific issue make use of official sources, such as the Department of Water Affairs and the Department of Environmental Affairs and Tourism. In this way the reliance on certain 'primary definers' (Hall, 1980) and 'official sources' (Manning, 2001) represents a failure of the 'fourth estate' (Curran, 2000) to publicly address a significantly important issue that has an extensive history as detailed by Cock and Munnik (2006).

Greenwashing in Articles

Another major theme in the coverage of the water pollution in Vanderbijlpark and the nearby steel refinery was the aspect of 'greenwashing' (Manning, 2001). Manning (2001) details how this aspect of greenwashing is employed by industries in an attempt to spin, camouflage or distort the 'truth' about an environmental event or situation. This was demonstrated in a number of articles analysed as spokespersons and the public relations officials from the steel refinery (both as 'Iscor' and as 'Mittal') are provided with a large amount of space to defend the refinery and to refute the allegations by the local residents. This is seen in the data as whilst only three articles use affected residents as sources, a total of seven articles refer to public relations personnel from the steel refinery as sources.

It may be possible to argue that this represents how the media may be providing a balanced, fair or objective account but this would only be possible if the local community was/is provided with equal space to make their complaints. This was not found to be the case in the data collected in this research, as only three articles of the twenty-four 'useful' articles found detail the concerns and problems of the local residents from their perspective.

As mentioned earlier the over-reliance on 'official sources' (Manning, 2001) and the use of spokespersons and public relations officers rather than local residents illustrates the shortfall of *The Star* and *The Citizen* to function as the 'fourth estate' (Curran, 2000) and to protect the interests of the marginalized community affected by ground water pollution from the steel refinery. Some techniques employed in this 'greenwashing' include the use of 'counter-experts' to refute the findings of experts ruling in favour of the local community.

The legal battles detailed by *The Star* and *The Citizen* illustrated how 'experts' were called upon by the steel refinery to absolve them of responsibility for the health problems suffered by affected residents. The arguments and points made in many of these 'greenwashing' incidents are directly refuted by the sound scientific work conducted by Cock and Munnik (2006) and by Munnik and Peek (2008).

In general most articles that mentioned the issue of pollution and negative health effects on local residents conveyed the impression of confusion and 'in-substantial' evidence to prove that the steel plant's water pollution caused the health problems. An example of this occurs in the article from *The Star* "Court blocks case brought by pollution victim" (27/09/2005) as a judge is quoted as saying "the issues are not set out clearly or succinctly". Another example from *The Citizen* article "Iscor Moves to aid plot dwellers" (09/05/1997) is that "no health related issues had been reported that could positively be linked to the pollution in the area". This 'confusion' and 'insubstantial proof' may be attributed to the 'greenwashing' practised by some 'official sources' who are frequently cited in these articles.

Another technique employed in 'greenwashing' is the representation of the steel refinery as an environmentally conscious plant, which has plans and procedures in place to reduce and rectify environmental damages. An example of this occurs in the article from *The Star* "Iscor aspires to balance" (29/09/1999) as Phaldie Kalam, general manager for Iscor corporate affairs, is quoted as saying "We are more than willing to assist in rehabilitation" and "We do not believe that this is a problem that is entirely Iscor's". This article mentions how Iscor had to produce an environmental management programme that balances financial interests against environmental impacts. In this way the impression that may be created in the data analysed may be that the steel plant is not responsible for the pollution and the negative health conditions of the nearby local population. In this article it is noted how a generally positive image of the steel refinery is represented. This article is not attributed to a particular author and it makes use of primary definers (Hall, 1980) and 'official sources' (Manning, 2001) such as Kalam, the group general manager for corporate affairs at Iscor, and Pieter Pretorius, the manager of environmental management services for Iscor Mining. This article makes use of lengthy quotations by these two sources and they argue that Iscor is willing to assist with the pollution problem in the area but that they (Iscor) are not solely responsible.

Pretorius provides a defence for Iscor's behaviour and policies by stating the 'strict process of control' involved in creating any new projects at Iscor, which means that they are environmentally conscious and have to provide the department of minerals and energy with plans for environmental management.

This article demonstrates how *The Star* is able to publish an article on the Iscor water pollution issue that depicts Iscor in a generally positive manner and provides Iscor with an opportunity and platform to generate public support and an opportunity for public relations personnel to do 'damage control' for the corporation's public image.

In "Steel giant could face sanctions over pollution" (20/07/2007) the second source that appears in this article is given more space and a greater platform to defend the steel refinery and the interests of ArcelorMittal. This source is Rick Reato, the CEO of ArcelorMittal South Africa, and he is given three lengthy paragraphs (approximately one third of the articles length) to provide a defence for his corporation's position. Rick Reato states that the company has spent approximately 460 million rand on 'various environmental projects' between 2005 and 2007 and that they were positioned to spend a further 1 billion rand over the next four years for 'green projects'. This is an example of how the media platform offered to corporate representatives allows them to employ elements of the propaganda model (Herman and Chomsky, 2002) and to make use of successful rhetoric devices that position their corporation in a favourable light.

Here the aspect of 'greenwashing' (Manning, 2001) is visible as a corporation quite clearly guilty of massive and multiple environmental destruction and legislative violations defends itself by talking of monetary expenditures on 'environmental projects' and 'green projects'. These projects are not detailed, described or even named and create the impression that the company is attempting to rectify environmental problems and destruction and that ArcelorMittal is an environmentally conscious organisation.

The capital that is said to have been spent and reserved for 'green projects' is not reflective of clean-up operations and may be used or may have been used to buy up cheap and poisoned land from the affected local community around the refinery as detailed by Cock and Munnik (2006).

An article published by *The Citizen* that relates 'greenwashing' is 'Iscor moves to aid plot dwellers' dated 09/05/1997. In this newspaper article it is found that the residents in the areas of Steel Valley, Linkholm and Drakeville "on the western border of the steel works" (*The Citizen*, 09-05-1997) were complaining to Iscor as far back as 1997 that their water was becoming polluted and that they experienced severe health problems as a result of this water pollution from Iscor steel refinery.

It is of interest to note how this area of Vanderbijlpark, particularly Steel Valley, positioned on the western boundary of the refinery is identified by Cock and Munnik (2006) and by Munnik and Peek (2008) to have been contaminated as early as the 1960's. These authors have also noted how the geographical gradient in the area and the positioning of the steel plant on a raised hill, enables effluent waste water to drain away into the ground water and in a westerly direction (Cock and Munnik, 2006).

It is of great interest to note how this article raises the health concerns of residents near the steel refinery and in this way the local media appears to be functioning in Curran's (2000) ideal role of the fourth estate or 'watchdog role'. This element of the fourth estate is, however, severely diminished as the article provides a platform for Iscor to detail what these pollution concerns are and how Iscor is not responsible for the high water table in the area. It is noted that "it said [Iscor] the water table had increased due to the high rainfall during the last two seasons and that the problem could not be blamed on the steel works" (*The Citizen*, 09/05/1997). This is an example of how sources in positions of economic power (McChesney, 2004; Manning, 2008) are able to gain significant representation in newspaper articles by functioning as 'primary definers' (Hall, 1980).

As 'primary definers' in this article, the unnamed voice of Iscor, is provided with the opportunity to defend the steel corporation from accusations of pollution despite the scientific evidence for the community's case. The remainder of this article deals with an 'independent survey' that was unable to link pollution in the area and the health problems of local residents, it was even argued that due to lack of developed sewerage systems the farmers were responsible for the polluted borehole water.

This article is written by the South African Press Association (Sapa) and supplied to *The Citizen* and represents how a collusion between government (Iscor) and big business (media corporations) can lead to the misrepresentation of local pollution problems (Bell, 1998; Bond, 2002) and a lack of opportunity for the local community to represent their concerns and issues.

In another technique of legally silencing the local community and side-lining any evidence or proof that could link the steel refinery, water pollution and the negative health effects on the community it is of interest to note how one article from *The Star* (01/10/2002) mentions a 'foul-water' document by Hattingh. This report commissioned by the steel refinery (then Iscor) was disallowed from appearing in court as Iscor representatives had succeeded in convincing the judge that the research was 'flawed' and 'incomplete'. This is an example of how 'official sources', powerful social institutions (Belsey, 1998) and 'super-structures' such as legal boards and courts can act together to create a 'silence' in news coverage and the impression of innocence on behalf of the steel refinery for the pollution and health problems in Vanderbijlpark.

Environmental Reporting in Articles

The earliest article from *The Star* found in the data set of this study is "Iscor blamed for water pollution on small holdings" (02/08/98). It was found under the search parameters including 'Iscor and water pollution', as by 1998 the parastatal had not yet been handed over to Mittal Steel.

This article is of significance as it represents how the steel refinery was represented in the public domain prior to its privatisation as "between 2001 and 2004, Lashmi Mittal took over Iscor (Iron and Steel Corporation), the troubled steel parastatal in South Africa" (Munnik and Peek, 2008: 24). It is of interest to note that this article and the one that follows it chronologically were both written by Melanie-Ann Feris, the Environmental Reporter, for *The Star* in 1998.

These articles both fall under the theme of environmental reporting as they are in depth and investigative articles that provide detailed accounts and some historical context to the issue. In this way the comments of Street (2001) and of Manning (2000) relating to 'environmental beats' and journalistic expectations help to explain the unusual, in-depth and sympathetic reporting produced by this journalist.

The journalist Feris (1998) describes how the particular areas of Linkholm, Drakerville, Steel Valley and Louisrus have experienced water pollution concerns. These areas are repeatedly mentioned in the other articles from *The Star* that deal with this topic and these particular areas have been referred to by Cock and Munnik (2006) and by Munnik and Peele (2008) as being especially polluted and being in close proximity to the Iscor (Mittal) steel refinery.

This article also mentions how Rick Reato of Iscor states that they will look at "the costs and benefits of buying out the properties instead of installing services in the communities". In this way this article evidence from 1998 undermines and contradicts the claims made by Tami Didza, the Mittal general manager of corporate affairs, as she claims in 2005 that it is the fault of the community for insisting on being bought out rather than wanting the provision of services (Green, 2005).

Feris (1998) notes in her article how "bacterial and chemical pollution of ground water over a number of years… have been the cause of many problems including illnesses such as diarrhoea, stomach cramps, skin irritations and blood in the urine of small children". This effect of pollution on small children as blood in their urine has been remarked upon by Cock and Munnik (2006). These authors note how liver failure caused by heavy metal pollution can result in blood in the urine. They also note how small children may have been more directly exposed to major water pollution prior to 2000 as they would play and immerse their bodies in untreated water that flowed out from the Vanderbijlpark steel refinery.

This article provides the earliest form of historically contextual reporting about the ground water pollution in Vanderbijlpark. Feris (1998) notes how "studies done as early as the 1980's have shown that there is definite evidence of ground water pollution" this provides the earliest reference of the history of the water pollution problem in the areas near the steel refinery. The historically contextual reporting conducted by this journalist is attributable to her function as an Environmental Reporter for *The Star*.

In this way her 'hierarchical position' (Street, 2001) at the company not only enables her to report on this matter in this way, but it expects her to report in this manner. Feris's role as an Environmental Reporter also enables *The Star,* in this case, to function in a 'watchdog' role and as the 'fourth estate' (Curran, 2000) as it provides a platform for criticism of a major government organisation. Feris (1998) continues to describe how "a three year report started in 1993 found that Iscor's sludge dams and slag dump were major sources of ground water pollution", she also notes how "the report prompted the Directorate of Emergency and Disaster Management to declare 80% of boreholes unfit for human consumption". This indication of the 'sludge dams' and 'slag heap' as major sources of ground water pollution has also been noted by the detailed finding provided by Cock and Munnik (2006). Here it is also possible to observe the news value of 'scale' as the size or magnitude of the pollution is referred to in this investigative article. In this instance the journalist does seem to practice advocacy on behalf of the community as she attempts to communicate to the wider public the severity and scale of the water pollution problem in Vanderbijlpark.

This article by Feris does not accuse Iscor directly and therefore it does protect *The Star* for legal action against it by Iscor. The article does, however, level serious claims against Iscor and does indirectly accuse the refinery of being a major contributor to the groundwater pollution problem in Vanderbijlpark.

This is achieved as the article relies on 'expert sources' that provide credibility for a newspaper functioning in a critical capacity (Manning, 2000). These 'expert sources' take the form of the scientific reports mentioned in the article by the journalist.

It is of interest to note that the affected community is not provided with an opportunity to speak for themselves, yet Rick Reato (later employed by Mittal), is provided with an opportunity to defend Iscor. It is arguable that the journalist, Feris, wishes to protect herself and her employer *The Star* and wishes to generate credibility and authenticity for her article by relying on 'expert sources'. It is still a concern, however, that one of the very few examples of critical and investigative reporting in *The Star* on this topic, by an Environmental Reporter lacks any attribution from the affected local community. This may also be due to reluctance on behalf of the community to speak to the media, as Iscor was still in a process of attempting to settle out of court and to buy up many of the resident's polluted properties prior to 2004.

The article "Pollution payout for communities likely" (01/12/98) is a follow-up article to the previous article by Melanie-Ann Feris. Due to the article's function as a follow-up story and due to the role of Feris as an 'Environmental Reporter' this article is an example of investigative reporting. This article reports on the developments of "a cost benefit analysis (CBA) done recently to determine a solution to the community's problems". The CBA was initially raised in the previous article by Feris (02/10/98) and the developments of this study conducted by Mittal are revealed in this article.

The first paragraph in the story titled "Pollution payout for communities likely" mentions that "communities around the Iscor works in Vanderbijlpark will have to be compensated millions of rands for continuous pollution". The article mentions how this compensation could amount to R90 million. Feris (1998) states that "Iscor has made no decision on whether to buy out the land from the communities". Feris (1998) goes on to note how whether or not Iscor chose to rehabilitate the land or to buy the properties out, that "rehabilitation of the ground water, soil and ecology needs to be done". In this way Feris is taking a stand for the community and even for the ecology of the affected areas around the steel refinery.

It is arguable that in this way Feris (1998) represents the 'moral' functioning of a journalist (Belsey, 1998) and the ability of newspapers, such as *The Star*, to function as the 'fourth estate' and even to provide 'environmental justice' (McDonald, 2002) to a community and to an ecosystem.

This is of particular concern as this 'fourth estate' function or 'watchdog role' (Curran, 2000) is only ever applied to humans affected by the steel plants pollution and not to the environment or ecosystem affected by the pollution. In this article Feris (1998) represents how Monbiot's (2004) concerns about environmental damage and focus on human interests can supersede and distract from focusing on the importance of ecological interests. By reporting how ecological rehabilitation has to take place, despite the decisions made by Iscor, Feris (1998) represents how the 'fourth estate' can provide a voice for an entirely marginalised and silenced party – that of a poisoned ecosystem.

In this way Feris (1998) may represent the real function of a newspaper's ability to provide a platform debating 'environmental justice'. As 'environmental justice' in this instance is not simply a payout from a corporation to an affected community. It is the rehabilitation of a poisoned ecosystem and as such is a real form of environmental justice rather than simply punishing the polluter financially. This can be seen in the article as "Studies done in the area, have shown that almost the entire area has been polluted (ground water and soil)" (Feris, 1998). These areas are referred to as "Drakerville, Steel Valley, Louisrus, Rietkuil and Linkholm" and this is confirmed by the detailed study by Cock and Munnik (2006) who report on the pollution in these areas as a result of the environmental practices and legislative violations by the steel refinery.

The only source referred to in this article is Carol Ferguson, the Division Manager for Iscor's public relations office. She is quoted as saying that "they were still studying the report but indications were that the costs of buying out the land and the cost of implementing remedial actions …. would be almost the same". It is interesting to note that Ferguson does not attempt to avoid blame or to undermine the findings of the CBA study, but rather that she chooses to focus on the costs of providing solutions to the pollution problems. This is a common theme or technique employed by public relations personnel from both Iscor and Mittal. When they are unable to refute claims or accusations they instead attempt to shift the focus of the problem on to the costs or monetary amounts that the steel refinery is involved in employing to address the pollution concerns.

The attribution provided to this source from Iscor does provide Feris's article with some credibility as an Iscor representative confirms the corporations responsibility to either buy out the polluted land or to introduce remedial measures to clean up the polluted areas. In this way the use of this source does not provide Iscor with a means of defending its position but rather Feris uses this source to confirm Iscor's responsibility for the ground water pollution in Vanderbijlpark. This is a very interesting and unusual use of an 'official source' as this attribution serves to implicate the steel refinery rather than position it in a positive light, as is the function of public relations personnel.

Here it can be noted that this article and the previous article by Feris provide examples of Belsey's (1998) theory of 'moral' journalistic practice, as these articles attempt to make public an issue that the steel refinery would have preferred to keep quiet or out of the public domain. These articles also demonstrate how 'agenda-setting', 'priming' and 'agenda building' (Severin and Tankard, 2001) function to inform the audience of a particular issue by developing coverage of this topic and creating an awareness of the groundwater pollution in areas of Vanderbijlpark due to the actions and policies of the steel refinery.

The article "Iron resolve of three Steel Valley families" (27/07/05) is a fairly lengthy article and is written by Green, *The Star's* 'Health and Science Reporter'. Interestingly this extensive and detailed article relates to that of Kgosana (2002) and Feris (1998) as these journalists 'beats' are relevant in the type of coverage and contents of their stories on Mittal and the pollution issue. Instead of relating legal developments Green (2005) details the accounts of a number of affected individuals, providing them with a much needed platform to express their concerns. This article is a good example of how *The Star* might have covered the long-running pollution crisis in Vanderbijlpark. It also demonstrates the shortcomings of many of the other articles examined in this study, as by contrast, it reflects the functioning of the 'fourth estate' in a watchdog role. This article provides a contextual explanation for the water pollution problem in Vanderbijlpark and it even provides a brief history of the situation, as it relates to the three families mentioned in the article.

Due to the journalists' role in the newspaper organisation as a reporter dealing with both science and health interests her report of this problem is explained by the sociological production of news content, relative to the role of a journalist or employee of a media organisation. This is supported by Street (2001) as he explains how a journalist may report on a story in a particular way due to their expected function within that media company. As Green's role is as a health and science reporter, the content and details of this story both interest her and suit her particular responsibilities to *The Star.*

This article provides a public platform for three families that have been significantly affected by the water pollution in Vanderbijlpark from the nearby Mittal Steel refinery. These three families are listed as "the Matsepos, Dewings and Ramodibes", two of these families are mentioned in another article published in *The Star* in 2007. The Matsepos and the Ramodibes are mentioned in an article by Ufriedo Ho in the article "Determined to prove their mettle to Mittal". The plight of these families, particularly the Matsepos, is supported by the work of Cock and Munnik (2006) as they conducted in-depth interviews with individuals in the areas of Vanderbijlpark affected by ground and surface water pollution.

The article notes how the three families mentioned above "are the only residents of the area, near Vanderbijlpark, who have not sold their properties to the steel manufacturer" (Green, 2005). This reflects how many of the polluted properties near the steel refinery have been bought, at a vastly reduced price, from the affected community and now belongs to Mittal Steel. This strategy of buying up polluted and fouled land is noted by Cock and Munnik (2006) as Mittal is accused of attempting to create a 'buffer zone' or 'no-man's land'. This land constitutes private property of the corporation and as private property it is protected from analysis and monitoring of pollution concerns by interested parties, such as local residents, activist groups and social scientists.

This article by Green (2005) provides some historical context to the water pollution problem at the Mittal Steel Vanderbijlpark refinery. An example of this is how the Ramodibe family history in the area is explained, as twelve years ago they bought a smallholding in Steel Valley.

The article describes how "shortly after we arrived the grass turned a sickly yellow colour. The vegetable seeds that I planted did not sprout, Rachel Ramodibe continues to state how "people started to get sick. I got sick. My kidneys started giving me trouble". The water supply used by this family was a borehole on their property. Rachel is quoted as saying "each time I drank the water, I became ill. I am afraid to drink the water". These are particularly grave concerns about a severe water pollution problem. Cock and Munnik (2006) have described how the extremely porous and vulnerable water table around the steel refinery means that people who rely on and use boreholes are tapping into a contaminated source of groundwater.

The article notes how papers presented to the high court in 2001 were dismissed due to 'disputes of fact'. The documents claimed that "dams containing highly toxic substances which were allowed to seep into and pollute the ground water". This is not in dispute as Cock and Munnik (2006) have provided evidence of this and have even produced a 'whistleblower', Dr. van Eeden, who confirms the seepage of toxins from Mittal's unlined slimes dams, into the groundwater of Vanderbijlpark. This article provides a space for these 'disputed facts' to at least be raised in the public sphere and provides a much needed platform for information such as this to come to public attention.

Strike Matsepo is quoted in this article in reference to his attempts to continue cattle farming. He states that "Before they (the cattle) could drink water from the streams and borehole sprouts, now we have to provide them with fresh water". Matsepo's history is also briefly referred to in the story, where he is said to have "lived in Steel Valley since 1993 and has seen his cows, sheep, pigs and poultry perish, and his own health deteriorate". This is another example of how this article (2005) serves to provide a marginalised and resource impoverished community with a public platform to voice their concerns and complaints about the water pollution in Vanderbijlpark. In this way the article represents how the 'fourth estate' can function to protect and cater for the interests of 'marginalised communities' (Bond, 2002) and can attempt to secure 'environmental justice' (McDonald, 2002) for individuals by raising their concerns in the 'public sphere'. Despite the fact that legal measures have failed this community, their representation in the 'public sphere' helps to draw attention to their cause and may place pressure on the offending corporation to comply with environmental legislation.

This article is of further significance as it describes the health problems experienced by residents that have, or still do, live near the Vanderbijlpark steel refinery. Matsepo is said to have "blood in his urine" and to suffer from "tiredness, lack of concentration, muscle pain, swelling of the hands and feet, memory loss, fatigue, anxiety and nervousness". Many of these symptoms are reported in the exhaustive case study and interviews conducted by Cock and Munnik (2006) and all of the complainants link their health problems to the consumption of local water, particularly groundwater, from borehole systems. This water pollution is then liked to the environmental practices employed by the nearby steel refinery, Mittal Steel, as illustrated by Cock and Munnik (2006), Munnik and Peek (2008) and by 'whistleblowers' such as the ecologist Dr. van Eeden.

This newspaper article describes how papers served on the high court in 2001, by individuals such as Matsepo, indicate that "blood and urine samples showed high levels of cadmium, creatinene and polycyclic aromatic hydrocarbons, all toxic substances known to arise in steel manufacturing processes" (Green, 2005).

This claim by the community is supported by "Symptoms of illness as revealed in 500 questionnaires obtained from local people, pointed clearly to heavy metal poisoning, for example, kidney disease" and that:

> "Tests of 26 people showed higher cadmium than the South African reference level (the standard or average amount of cadmium in South African's bodies). The 26 people tested showed DNA breakages of 30% higher than the South African reference level, and 50% higher than the international reference level. The only common factor linking the 26 was that they lived in Steel Valley" (Cock and Munnik, 2006:21).

These authors, Cock and Munnik, also note how the Matsepo family has been severely affected by the groundwater pollution. Matsepo's brother, Jacob, is said to have lived in constant physical pain and "Laboratory tests established abnormally high levels of lead in his system". His deceased sister Alinah is reported to have "had high levels of cadmium in her blood" (Cock and Munnik, 2006: 22).

Green (2005) further notes how an application to the High Courts in 2001 failed, "despite the court being presented with evidence from experts on the presence of cadmium, lead and other carcinogenic substances in the ground water". In this way the newspaper article by Green (2005) functions in the role of the 'fourth estate' as whilst the affected community around the steel refinery has been disappointed and ignored by other 'estates', such as the courts, it has been represented in a detailed manner in this particular newspaper article.

What is of consideration to this study is that this significant water pollution problem and the severity of its effects on the residents around the steel refinery are under-reported by the limited and haphazard coverage of this issue. The article by Green (2005) demonstrates how *The Star* could have covered the issue, yet it also demonstrates the significantly limited amount of investigative or in-depth reporting available on this particular issue.

The local community as sources

The use of sources in this article by Green (2005) is also of interest as the majority of attribution is provided to the affected local community for them to speak for themselves. There is also space provided to Tami Didiza, the general manager for corporate affairs at Mittal Steel SA, as she is mentioned in two lengthy paragraphs which defend Mittal Steel's position on the matter. In this way the journalist seemingly maintains a level of objectivity as she has enabled both 'sides' to explain and describe their positions on the matter of groundwater pollution in Vanderbijlpark. Tami Didiza functions in the role of a public relations officer as she attempts to reduce the negative impacts of certain accusations against Mittal, whilst at the same time; she attempts to portray Mittal in a positive or beneficial light. This is exactly the function that public relations personnel are supposed to provide for a corporation as explained by Peak (1978) and Ihlen (2004).

The first paragraph provided to Didiza relates to Mittal's purchase of land around their refinery from affected residents that wished to sell their properties and leave the area. Didiza is quoted as stating that a cost benefit analysis was undertaken "to determine the most effective solution: namely buy out the properties or establish proper infrastructure.

The community was not interested in the provision of services or infrastructure, but insisted on being bought out". This rhetoric technique is typical of public relations personnel as the blame or 'guilt' is shifted from the accused corporation to the affected community, whilst at the same time the corporation is described as having done everything possible to rectify the situation.

The buying up of poisoned and useless land by Mittal has been referred to by Cock and Munnik (2006) as an attempt to create a no-go buffer zone around the refinery, while destitute residents are paid insignificant sums for their devalued properties. Jaap van Rensburg, a resident of the Steel Valley area for 31 years, commented that "the worst of all is that the value of our properties has dropped considerably. When ISCOR [Mittal] bought out the area, they closed some of the roads and put up electric fences" (cited in Cock and Munnik, 2006: 22).

In the second paragraph provided to Tami Didiza she states that Mittal has conducted its own research on the groundwater pollution in the area and claims that their research does not confirm the claims of the residents but that it "suggests otherwise". Didiza does, however, state that a 'master plan' for the area has been created and that "the value of the plan is estimated at R1.3 billion and will take approximately 15 years to implement fully". Didiza contends that "Mittal Steel SA has always been prepared to address problems if they can be related to the operations at its plants".

In this way Didiza both refutes Mittal's responsibility whilst simultaneously claiming that they are providing solutions to the groundwater problem in Vanderbijlpark. In this way Didiza's responses to the ground water pollution and the responsibility of Mittal Steel represent the 'fourth filter' of Herman and Chomsky's (2000) propaganda model: the use of flak by powerful instituitions. This occurs as Didiza utilises 'flak' in the form of Mittal's own research findings to refute the claims made by the affected residents of Vanderbijlpark.

Coupled to this use of 'flak' is the use of large numbers, some R1.3 billion, to give the impression of the organisations commitment to address the pollution problem. Didiza's reference to these large numbers is a repeated strategy by all of Mittal Steel's public relations representatives as they attempt to convince the public of their social responsibility by their claims of financial dedications to a vague 'master plan'. It is of interest to note how the insider and 'whistleblower' Dr. van Eeden states that this 'master plan' (formerly composed by ISCOR) seemed to be a good plan but as he got to know the team better he realised that "they were there to give ISCOR what ISCOR wanted. They did not say there were no problems, but that there were no big problems. ISCOR liked hearing that" (Cock and Munnik, 2006: 16). In this way this article is one of the very few that provide a contextual and detailed account of the pollution and health problems in the area of Vanderbijlpark. It is an example of both the function of the 'fourth estate' (Curran, 2000) and of journalism that seeks to expose 'secret' or hidden information (Belsey, 1998). It also demonstrates how Manning's (2001) argument about increasing concern over environmental news leads to editors and journalists increasing their coverage of related issues and concerns.

The article "Determined to prove their mettle to Mittal" (24/05/07) is perhaps the best example of how a newspaper such as *The Star* is able to address and provide a public platform for marginalised and impoverished communities. In this article the function of the 'fourth estate' (Curran, 2000) as a watchdog of the public is clear to see. There is a significant representation of the local community of Vanderbijlpark that has been affected by groundwater pollution and in this article the community is given one of the very few opportunities to publicly express its grievances. This article exemplifies how the fourth estate may provide a much needed platform in the public sphere for a marginalised community. The particularly harsh depiction of the Mittal Steel refinery and the corporation itself is somewhat offset by the journalist's provision for spokes personnel from the corporation towards the end of the article. This creates the impression of balance and objectivity or neutrality on behalf of the journalist. The overall effect of the article is, however, very critical of the Mittal corporation and of the Vanderbijlpark refinery. This is achieved as the affected local community is allowed to express their own opinion and to tell their own story rather than reliance by the journalist on 'official' or 'primary definers'.

The author of this article, Ufrieda Ho, is provided with a great deal of leeway in this article as Mittal Steel is directly accused by the attribution provided to the local community in the form of three affected individuals. This may be made possible as the journalist may occupy a senior position at the news agency and as a result is given greater trust due to the hierarchy of organisational employment (Street, 2001). It may also be possible that due to the appearance of utilising different sources and allowing Mittal to defend its position through spokespersons that the article is perceived as balanced or fair. Another explanation is that the publication *The Star* cannot be held legally accountable for accusations against Mittal Steel as it is the residents that accuse Mittal through the attribution and quotations that are used in this article. The three primary sources in this article are Strike Matsepo, Rachel Ramodibe and Johannes Mkwanaze.

The article notes how "Matsepo's family is now one of four who remain in this area. They have nowhere to go and no money to start over". The other two sources that are referred to "are currently under threat of eviction and have court cases pending. Both say Mittal has used underhanded means to try to obtain their properties". This is supported by the field work conducted by Cock and Munnik (2006) as they note how ISCOR and Mittal have attempted to obtain land, through various means, in order to create a buffer zone. Strike Matsepo is quoted in this article as saying "They [the government] must stop Mittal from poisoning us and killing my cattle' and "They put the poison here then they want to kick us off our land and don't want to pay for making us sick".

This form of attribution is a direct accusation of Mittal and their lack of social responsibility to the affected community that has suffered extensively from groundwater pollution in Vanderbijlpark. This use of sourcing creates the impression of authenticity as Matsepo is referred to as a 77 year old man who has lived in the area for 14 years and has been in a constant battle with the steel refinery to clean up their pollution and to pay damages to the affected community.

The other source, Ramodibe, is quoted as stating "Mittal goes behind my back to buy my house, but the banks never told me that there was a problem with the title deed". This quotation reveals how an impoverished and marginalised community is at a significant disadvantage when dealing with institutions as they are sidelined and not considered as first rate citizens of the country (Bond, 2002). Here it is clear to see how these residents are indeed paying the price of the commodification and corporatisation of natural resources (Bond, 2002) as they are severely negatively affected by the actions of a foreign company in an area desperate for employment with an economic reliance on the steel refinery (Bell, 1998).

The theme of environmental justice is also present in this article as the journalist provides references and details of environmental activist groups that are attempting to defend the interests of this community. One such group is the Vaal Environmental Justice Alliance (VEJA) a group that mobilised residents to take legal action against ISCOR in the mid 1990's. These residents received an out-of-court settlement, took the payments and left the area. This is of interest as this case is documented by Cock and Munnik (2006) and reveals how wealthy corporations are able to buy off affected residents that are capable of mobilisation or alternatively the corporation bullies less organised residents into surrendering their properties to the corporation.

A representative of VEJA is quoted as saying "Its time environmental justice comes to the people of the Vaal". This aspect of environmental justice is not reflected in the form of out-of-court settlements, as this is simply a payout that avoids guilt or blame being placed on the corporation at fault, creates non-disclosure agreements, and enables the responsible corporation to continue its pollutant activities. McDonald (2002) notes how poor and rural communities are significantly disadvantaged in relation to environmental justice as privatisation has favoured large corporations, such as ArcelorMittal, and that these disadvantaged communities are forced to carry the burden of marginalisation and environmental destruction.

The appearance of 'balance' or 'objectivity' is created in this article as the last third of the article provides Mittal spokes personnel to defend their corporation in light of the accusations levelled at them by the affected community quoted in this story.

The first of these public relations personnel is Tami Didiza, general manager of corporate affairs at Mittal as she is quoted to believe that Mittal has not treated the residents unfairly and that they (Mittal) do openly engage with the residents. She is also referred to as saying that in the past five years the company "has spent R1 billion on four major measures to treat water and reduce air pollution".

This is a common response technique employed by Mittal Steel's public relations personnel as they often quote large amounts of money that they have spent on 'green projects' or on 'environmental management' yet the specifics of these projects are never divulged. The mere mention of large numbers such as R1 billion over 5 years is an attempt to convince the public that they are serious about curtailing pollution at their Vanderbijlpark refinery. In a similar way the article quotes Hennie Vermeulen, head of investor relations at Mittal, as saying "the spending shows that they are serious about their responsibility to the environment and that more millions are being budgeted for future projects". This is another example of 'greenwashing' (Manning, 2001) as public relations personnel attempt to demonstrate 'good will' (Lesley, 1978) in order to create a positive impression in the public sphere of their corporations activities.

The final two paragraphs of this article relate to presenting a very sympathetic view of the affected residents as "Mbele's vexed gaze follows the run-off to where it will find its way onto the land of the Steel Valley residents and eventually into the mighty Vaal river itself". This last sentence implies that the wider Gauteng community is also affected by this wastewater run-off from the Mittal steel Vanderbijlpark refinery as it contaminates the Vaal and reaches the wider as yet unaffected or unaware public. The article ends with a very cynical comment by the journalist as "the only thing headed their way for sure is the steady stream of dubious ooze".

In this way it is possible to conclude that the journalist is highly sympathetic to the cause of these affected residents. Due to her personal interest and social hierarchy at the news corporation she has produced an article that is highly critical of Mittal Steel and their Vanderbijlpark refinery. She has also provided a much needed platform for this marginalised community to publicly express their concerns and grievances about the water pollution from the steel refinery and about the behaviour of the corporation responsible for this pollution.

The article "Iscor pollution claims confirmed" (07/11/1998) is of interest as it relates to an article published over a year earlier and it builds on the initial argument presented, which claimed that health problems could not be linked to the pollution from Iscor. In this article it is noted that the pollution on smallholdings surrounding the Iscor steel refinery were found to be "confirmed by a scientific study" (Hagen, *The Citizen*, 07/11/1998). In this article published over a year later, in relation to *The Citizen's* article on "Iscor and pollution", it is interesting to see how it contradicts some of the arguments and observations of sources in the previous article by confirming the case of pollution from to the steel refinery.

This article may represent how Belsey's (1998) argument about journalism ethics and the act of exposing 'secret' information is enacted as the journalist Hagen (1998) actively dismisses earlier findings published by *The Citizen* and in so doing does fulfil the function of the fourth estate or 'watchdog' role (Curran, 2000) as he publicly exposes the scientific findings of an investigation ordered by the Department of Water Affairs and Forestry.

It is however important to note that in this article by Hagen (1998) the role of 'experts' is relied upon to provide authenticity and credibility for the 'scientific report' linking water pollution issues to the steel refinery. In this way the role of 'primary definers' as experts in authoritative positions, in this case 'scientists', are noted to play a prominent position in coverage. In this article the Department of Water Affairs and Forestry minister Kader Asmal is also named as having ordered the study. In this way it is clear to see how 'official sources' (Manning, 2001) and experts play a central role as news sources by providing the impression of credibility. This can also be related to the need for media corporations to satisfy certain expectations on behalf of the audience (Doyle, 2002) in order to sell their product and to guarantee market demand from upscale' audiences (Dennis, 1992). This article by Hagen (1998) illustrates how whilst the story of pollution in Vanderbijlpark is represented, it is detailed from the positions of 'outsiders' as experts and government sources are referred to and the affected community is not given a chance to speak nor are their views referred to, aside from 'having their suspicions confirmed' by a scientist. It is interesting that only after experts have validated concerns by the local population that *The Citizen* begins to report on the link between Iscor, groundwater pollution and health problems in Vanderbijlpark.

Conclusion

This chapter has provided an account of the amount of coverage that the water pollution problem in Vanderbijlpark has received by the two newspapers under investigation. This has been supplied by the quantitative findings from *The Star* and *The Citizen*. The findings obtained from this quantitative work have then been qualitatively analysed under themes such as legal conflict, official sources, greenwashing and environmental reporting. This chapter has provided a numerical representation of the degree to which the two newspapers have covered the story and in doing so has answered the first research question. The second research question has been answered by closely examining the articles found from the two newspapers and by arranging them under themes according to their most dominant characteristics.

Chapter 5

Conclusion

This study has found that a significantly limited number of articles available on the SABINET database mention Mittal or Iscor in relation to water pollution. It was found that despite 553 available articles on Mittal only 20 (3.61%) of these articles made any mention of water pollution. It was also noted that using the search phrase "Mittal and water" revealed even less results as only 1.1% of the 553 articles about Mittal had any relation to the water pollution problem from their steel refineries. These search results support the proposed hypothesis of this study that presumed that very few articles existed in the South African print media dealing with water pollution in relation to Mittal Steel. It was found that when Mittal was mentioned in the South African print media that stories about economic interests or economically relevant factors dominated news coverage about this corporation.

The data gathered about Iscor revealed similar results to that of Mittal. It was found on the SABINET database that coverage of Iscor, by the South African print media, amounted to 5406 articles. Of these 5406 articles only 184 mentioned pollution in relation to Iscor and only 11 of these 28 articles in *The Star* deal with Vanderbijlpark and the water pollution problem. In a similar manner only six articles were found published by *The Citizen* that mentioned Iscor in relation to the water pollution in Vanderbijlpark. These results describing Iscor and water pollution also confirm the initial hypothesis of this study as despite an extensive history, since 1956, an extremely limited number of articles from *the Star* and *The Citizen* describe and cover the water pollution problem in Vanderbijlpark. The data acquired by this study, from the SABINET database, represents how a vast number of articles about Mittal and about Iscor have been written by the South African print media.

These findings indicate how despite significant coverage of Iscor and Mittal, very little coverage exists about water pollution in relation to these corporations. It was found that very few articles described the water pollution problem in Vanderbijlpark.

It may be possible to conclude that the specific water pollution problem in Vanderbijlpark and its effects on the local population lack significant 'newsworthy' values as interpreted by media owners and editors. As this water pollution issue is fairly complex and is disputed by the steel refinery owners, both Iscor and Mittal, the issue has received very little media coverage. In contrast when 'price fixing', job losses or profit margins are mentioned then Mittal/Iscor has received significant publicity in the South African print media. As a result the 'marginalised' community of Vanderbijlpark may not be regarded as significant by the owners and editors of *The Star* and *The Citizen.* It was however found that the news value of conflict was present as is evident in the amount of articles that dealt with a legal conflict theme. The news value of scale was also represented as the magnitude of the issue is referred to in the environmental reporting articles.

The quantitative findings of this study also support the initial hypothesis, as only 11 articles by *The Star* mention Iscor and water pollution in Vanderbijlpark. These 11 articles are taken from a larger dataset of 665 articles, by *The Star*, that mention Iscor. In this way only 1.65% of the articles by *The Star* that mention Iscor deal with the water pollution problem in Vanderbijlpark. Of these 11 articles it was found that 10 articles make prominent or exclusive use of 'official sources' such as government spokes personnel, legal authorities or public relations consultants. This also confirms the initial hypothesis of this study that when the water pollution issue in Vanderbijlpark is mentioned by *The Star*, in relation to Iscor, only 'primary definers' and authoritative sources are referred to. The hypothesis of this study supposed that if coverage of the issue did exist then the 'actors' or sources used in the story would not include the affected local community but would favour or rely on 'official sources'.

In relation to the quantitative findings from *The Star* that mention the water pollution in Vanderbijlpark and Mittal it was found that only six articles cover this topic. In this way it can be seen how of the 553 articles that mention Mittal, *The Star* has published a very minor percentage (1.08%) that describe the water pollution problem in Vanderbijlpark and link it to the Mittal corporation. The fact that only six articles exist published by *The Star*, mentioning Mittal in relation to water pollution and Vanderbijlpark, indicates how this newspaper has in fact failed to adequately report on a significant environmental pollution problem in South Africa.

This failure by *The Star* represents how this publication has not fulfilled its role as the fourth estate as regardless of the content of these few articles, their extremely low frequency is in itself a severe shortcoming of social responsibility as a public watchdog.

The fact that such a minor dataset has been captured by this study reveals how limited the coverage of this specific topic has been. *The Star* is an example of how a major national English newspaper has been unable or unwilling to cover the topic of water pollution, Mittal and Vanderbijlpark in a numerically representative manner. Cock and Munnik (2006) and Munnik and Peek (2008) have described the severity of this water pollution problem yet the South African print media, as exemplified by both *The Star* and *The Citizen*, have not taken the issue seriously or have not considered it to be sufficiently newsworthy. As a result only a very limited number of articles exist that even briefly deal with the issue and even fewer articles were found that mention the responsibility or 'cause' of water pollution as Iscor or Mittal's environmental practices.

From the quantitative findings presented in this study from both *The Star* and *The Citizen*, it can be seen that the very low quantity and infrequent coverage of the Vanderbijlpark water pollution problem does not do justice to the severity of the pollutions effect on the local residents. Furthermore, this extremely limited amount of coverage does not serve the interests of the wider South African public.

The potential health effects that this water pollution may have on the Gauteng population is supported by Cock and Munnik (2006) as they note that the ground and surface water pollution from the steel refinery soon ends up in the Vaal River and can therefore affect all people relying on this water system. As a result the seemingly unaffected wider public in Gauteng, relying on the Vaal River water system, are put at a major health risk by contaminants and carcinogenic compounds being leaked into the water from the Vanderbijlpark steel refinery. The South African print media, such as *The Star* and *The Citizen* have therefore failed not only the local Vanderbijlpark community but have also failed to represent the potential health impacts on the wider community of Gauteng.

These publications have failed the wider South African public as they have not satisfied a socially responsible expectation of the print media, to expose and make public information about a corporation practicing extremely dangerous environmental behaviours. This relates to the expectations of the South African public that large print media organisations, such as *The Star* and *The Citizen*, have sufficient financial and moral reserves to expose corporate greed and social irresponsibility. From the qualitative analysis of data presented in this study it can be seen that neither organisation has considered the topic as important enough to the wider public to publish and investigate the issue in more detail and with greater regularity. This demonstrates the failure of the 'fourth estate' to protect the interests of both a marginalised community and the interests of the wider South African public in relation to the water pollution problem in Vanderbijlpark.

Whilst it may be argued that this topic holds less interest for the public than high profile political issues, it cannot be disputed that this topic has significant social value for the South African public. This is true as the role of the 'fourth estate' to monitor and report on corporate and political malpractice would surely include reporting on severe environmental damage by a corporation and its effects on the nearby local community. This malpractice has been demonstrated as Mittal's reluctance to accept blame or responsibility for the chemical ground and surface water pollution in Vanderbijlpark and the corporation's reluctance to rehabilitate the ecosystem of this area. Another under-reported form of corporate malpractice is the buying out of the affected local community as their polluted land is purchased by Mittal for a fraction of its original price and fenced off as private property belonging to the steel corporation.

The fact that none of the articles in the data set represented media coverage of a court finding against the steel plant, appears to create the impression that the steel plant has not been found 'guilty', the pollution-health cause has not been 'proven' and that the refinery is in fact doing its best to assist these residents despite their 'allegations'. The work of Cock and Munnik (2006) provides extensive accounts and interviews, with prominent experts and affected families, of how the steel plant is responsible both for the pollution and the severe health problems in the area.

This image of responsibility and 'cause' for the water pollution problem in Vanderbijlpark is not clearly presented by the newspaper articles collected and analysed by this study, and this indicates how these newspapers have failed to provide important information and coverage of this issue. Both for the general public's concern and interest and particularly for a disadvantaged and dis-enfranchised population group as demonstrated in other instances by Bond (2002), Bell (1998) and McDonald (2002). What was clear to see was that although the issue was raised, the decisive representation of responsibility was avoided, either through omission or through the skilful manipulation of information and a media platform successfully used by public relations personnel.

It is of particular significance to note how in all the twenty-four articles analysed that mentioned the steel refinery in Vanderbijlpark, the water pollution and the effects on the local population only two articles made specific reference to the definitive cause of this pollution. This definitive cause has been identified and analysed in great detail by Cock and Munnik (2006) and by Munnik and Peek (2008). The cause of the groundwater pollution has been identified and supported by Dr. van Eeden, a 'whistleblower' and by the silenced Hattingh report of 2001, commissioned by Iscor.

The specific cause of the groundwater pollution is argued to be the presence of unlined 'sludge dams' containing wastewater from the refinery which then leaks heavy metals and extremely toxic and carcinogenic substances into the groundwater. This together with the effluent discharged through the channels and into river systems is argued by the previously mentioned authors to be the major cause of health problems in the areas around the Mittal steel refinery in Vanderbijlpark. It is important for the questions asked by this study to note that this specific cause and its long-standing existence, since the 1960's, represent the failure of the media to place pressure on the steel refinery for corrective procedures and actions. In this way the 'fourth estate' function of the two newspapers analysed has not been in effect and it has not had significant influence in persuading the steel refinery to comply with environmental regulations.

This is argued as authors such as Cock and Munnik (2006) and Munnik and Peek (2008) together with scientific data from 'insiders' have presented a very strong case for the unlined 'sludge dams' as the cause of severe health problems in the areas of Vanderbijlpark near the refinery. These dams that are used to contain the most toxic wastewater from the refinery have remained unlined since the refinery was created. Arguably this is one of the longest running environmental crisis in South Africa and as this study has demonstrated it has received minimal and insufficient media coverage considering its significant importance to the wider, as yet, unaffected public.

A limitation for the external reliability of this research paper is recognised as the limited number of articles in existence detailing this specific issue on the Sabinet database. It is argued that this obstacle to generalisation is overcome as extensive searches were carried out revealing only a small ratio of useful articles in relation to the numerous articles on 'Mittal' and on 'Iscor'.

In addition to this quantitative research these results, twenty-four articles, were then analysed using qualitative techniques in order to ascertain what this diminished amount of coverage represented. This triangulation of research methods has revealed that there is very little coverage of the water pollution issue and the steel refinery in Vanderbijlpark and a particularly low ratio of articles that provide a platform for the affected local community to voice their concerns and criticisms. When this infrequent coverage of the issue does occur it is very seldom that these affected residents are utilised as sources to define and detail their problems and grievances.

The theme of legal conflict was a reoccurring characteristic of many of the articles that dealt with the water pollution problem in Vanderbijlpark. It was found that a significant reliance was placed on official institutions such as the courts, as they were used to provide an official account of the events and either validated of nullified the claims made by the affected local community. It was clear from the qualitative analysis applied to these articles that institutions such as the courts were positioned in place of the local community. This may have been done in order to provide the appearance of validity and credibility for the news report yet it had the effect of silencing the local community and providing legal representatives with the opportunity to speak on behalf of the steel corporation. The number of articles that dealt with legal developments may also be attributed to the news value of conflict.

The articles analysed under the theme of official sources revealed how experts, public relations personnel and government officials were provided with a public platform to represent their government department or organisation. This came at a cost to the affected local community who remained largely unrepresented in these articles as they were not provided with an opportunity to speak for themselves. In these articles officials and public relations personnel attempted to depict their organisation in the best possible light whilst downplaying any failures or responsibilities to the local community affected by the groundwater pollution from the steel refinery. These articles represented an injustice to the affected community as they were not provided with an opportunity to raise their own concerns or to voice their grievances from a public platform.

The theme of 'greenwashing' represented a number of articles that enabled corporate employees and public relations personnel to utilise a public platform to defend the steel corporation from the pollution claims made by the affected community that live around the steel refinery. These articles were characterised by a reliance on these corporate spokespersons and how they attempted to divert or reduce the impression of guilt on behalf of the steel corporation. In a number of these articles the public relations personnel would employ the tactic of 'flak' detracting attention from the corporation's environmental practices and levelling blame on the local community. Another technique employed by public relations personnel was their use of stating how much money was being spent on 'green projects' without explain what these projects were or how they addressed the issue under examination. These articles represented a great social and environmental injustice as the issue was represented from a perspective that attempted to discount the claims made by the local community of Vanderbijlpark.

The articles categorised under the theme of 'environmental reporting' represent how the two newspapers *The Star* and *The Citizen* could have covered the issue of water pollution in Vanderbijlpark. These articles illustrate the functioning of the fourth estate and how the media may report on issues that concern marginalised communities that have not had their needs addressed by other estates such as the courts. A number of these environmental reporting articles cover the issue in a more detailed manner than other forms of coverage and provide a historical context as a background to the pollution problem.

In a number of these articles it is possible to see how advocacy journalism is carried out as the journalist sympathises with the local community and attempts to represent their concerns. There is however an extremely limited number of these environmental reporting articles, particularly when compared to the significant media coverage of the steel corporation in relation to other issues such as financial news.

Notably, the steel refinery has escaped responsibility for the pollution and continues to avoid rehabilitation and cleanup of the area. The data and research presented in this paper suggests that the print media have failed to function as the 'fourth estate' in this instance, as neither the governments failures to prosecute the refinery, nor the refinery's failures to improve its wastewater disposal have been represented in the media – both in terms of quantity and in the actual content of the newspaper articles analysed. The extensive history of this environmental disaster and it's still untreated cause is of particular concern. The Mittal sludge dams and effluent discharge problems represent not only the failure of the media to cover the issue and mobilise public debate and outcry. It also represents how governmental bodies such as the Department of Water Affairs and the Department of Environmental Affairs have failed, over many years, to bring the steel refinery to task over pollution clean-up operations and the improvement of wastewater management. Significantly this study has demonstrated how there was no media coverage of this failure on behalf of the government and on behalf of the courts to hold the steel refinery responsible. This again demonstrates the failure of the 'fourth estate' (Curran, 2000) and may illustrate how arguments about the political-economic influence (McChesney, 2004; Croteau and Hoynes, 2001) may result in 'no-go areas' of coverage (Curran, 2000) and as a result minorities and marginalised communities are silenced or ignored (Bell, 1998; Bond, 2002).

Bibliography

Barnnet, C. 2004. 'Neither poison nor cure: space scale and public life in media theory' in *MediaSpace*. Couldry and McCarthy (Eds.). London and New York: Routledge.

Barwise and Gordon,D. 2002. 'Economics: The Economics of the Media' in *The Media: An Introduction*. Briggs and Cobley (Eds.). London: Longman.

Bennet, W. 2003. *News: Politics of Illusion*. NewYork: Longman.

Bell, M. 1998. *An Invitation to Environmental Sociology*. Iowa: Pine Forge Press.

Belsey, A. 1998. 'Journalism and Ethics: can they co-exist?' in *Media Ethics* Kieran, M (Ed.). London and New York: Routledge.

Bryman. A. 2004. 'Social Research Strategies' in *Social Research Methods* 2nd Ed. Oxford: Oxford University Press.

Bond, P. 2002. *Unsustainable South Africa: Environment, Development and Social Protest*. University of Natal: Pietermaritzburg Press. London: Merlin Press.

Croteau, D and Hoynes, W. 2001. *The Business of Media: Corporate Media and the Public Interest.* California: Pine Forge Press.

Cock, J and Munnik, V. 2006. Throwing Stones at a Giant: *an account of the Steel Valley struggle against pollution from the Vanderbijlpark Steel Works.* Centre for Civil Society: University of KwaZulu Natal.

Curran, J. 2000. 'Rethinking Media and Democracy' in Curran and Gurevitch (Eds). *Mass Media and Society*. 3rd Ed. London: Arnold.

Dennis, E. 1992. *Of Media and People*. New York and London: Sage.

Deacon, D. 1999. *Researching Communications*. London: Arnold Hodder.

Doyle, G. 2002. *Understanding Media Economics*. London: Sage.

Entman, R. 2002. "News as Propaganda" in *Journal of Communication*. 40.

Golding, P and Murdoch, G. 2000. "Culture, Communications and Political Economy" in *Mass Media and Society*. Curran and Gurevitch (Eds.). 2000. London: Arnold.

Goode, W and Hatt, P. 1952. *Methods in Social Research*. London and Tokyo: McGraw-Hill Kogakusha.

Greenstein, R. 1991. *Research Methods Manual*. Incomplete Reference.
Habermas, . 1989. 'The Structural Transformation of the Public Sphere' in *Understanding Media Theory* Williams , K. 2003. London: Arnold.

Hardt, H. 1992. 'On Introducing Ideology. Critical Theory and the critique of culture' in *Critical Communication Studies. Communication, History and Theory in America.* London : Routledge.

Herman, E and Chomsky, N. 2002. *Manufacturing Consent: The Political Enemy of the Mass Media*. New York: Pantheon.

Ihlen, O. 2004. *Rhetoric and Resources in Public Relations Strategies*. Oslo: Unipub AS.

Kieran, M. 1998. *Media Ethics*. London and New York: Routledge.

Lovass, S. 2008. *Manufacturing Consent in Democratic South Africa: Application of the propaganda model*. University of the Witwatersrand.

Manning, P. 2001. *News and News Sources*. London: Sage.

McChesney, W. 2004. 'The political economy of International Communications' in *Who Owns The Media?: Global trends and local resistance* Thomas and Nain (Eds.) . London and New York: Zed Books.

McDonald, D. 2002. *Environmental Justice in South Africa*. UCT Press: Cape Town.

Mitchell, P and Schoeffel, J. 2002. *Understanding Power: The Indispensable Chomsky*. New York: The New Press.

Monbiot, G. 2004. *Speech to Enviro Media Conference.* Johannesburg. October: 2004.

Munnik, V and Peek, B. 2008. 'ArcelorMittal in Vanderbijlpark, South Africa' in *In the wake of ArcelorMittal: The global steel giant's local impacts* Aitken, G (Ed.). CEE Bankwatch Network - Ecological Society Green Salvation, Kazakhstan - Friends of the Earth Europe - Friends of the Earth International - GARDE programme of the Environmental Law Service, Czech Republic - groundWork, Friends of the Earth, South Africa - groundWork, USA - Karaganda Ecological Museum, Kazakhstan - Mouvement Ecologique, Friends of the Earth, Luxembourg - National Ecological Center of Ukraine, Ukraine - Ohio Citizen Action, USA - Vaal Environmental Justice Alliance, South Africa.

Peak W. J. 1978. "Community Relations" *Handbook of Public Relations,* Philip Lesley (Ed.) New Jersey: Prentice-Hall.

Sevrin, W and Tankard, J. 2001. *Communication Theories: Origins, Methods and Uses in Mass Media*. New York: Longman.

Schlessinger, P. 1989. "From Production to Propaganda ?" in *Media, Culture and Society*. London: Sage.

Street, J. 2001. *Mass Media, Politics and Democracy*. New York: Palgrave.

TerreBlanche, M et al. 2006. *Research in Practice* 2nd Ed. Cape Town: UCT Press.

Tomlinson, J. 1999. 'Globalised Culture: The Triumph of the West?' In T. Skelton & T. Allen (Eds.) *Culture and Global Change.* London: Routledge.

Williams, K. 2003. *Understanding Media Theory*. London: Arnold.

The Star. 2008. 'Readership'. Taken from http://www.thestar.co.za/index.php?fSectionId=2498 accessed on 17/12/2009.

AMPS. 2008. 'Press Release 17 September'. Taken from http://74.125.95.132/search?q=cache:swi97f6WzTUJ:mars.bizcommunity.com/f/0809/AMPS%25202008%2520%2520Press%2520Release%2520%252017%2520Sept.doc+amps+2008+survey+citizen+circulation+figures&cd=5&hl=en&ct=clnk&gl=za accessed on 17/12/2009.

Newspaper Articles

Bridge, S. 2002. "Farmers' case could cost Iscor R400m" in *The Star* (27/08/2002).

Chikanga, K. 2000. "Govt to blame for pollution, says DP man" in *The Citizen* (23/05/2000).

Chikanga, K. 2000. "Iscor in pollution suit" in *The Citizen* (24/05/2000).

Chikanga, K. 2000. "Iscor settles owner claims out of court" in *The Citizen* (27/05/2000).

Feris, M. 1998. "Iscor blamed for pollution on smallholdings" in *The Star* (02/10/1998).

Feris, M. 1998. "Pollution payout for communities likely" in *The Star* (1/12/1998).

Green, J. 2005. “Iron resolve of three Steel Valley families” in *The Star* (27/07/2005).

Hagen, H. 1998. “Iscor pollution claims confirmed” in *The Citizen* (07/11/1998).

Helfrich, K. 2007. “Mittal to be monitored on enviro front” in *The Citizen* (20/07/2007).

Ho, U. 2007. “Determined to prove their mettle to Mittal” in *The Star* (24/05/2007).

Ho, U. 2007. “Steel giant could face sanctions over pollution” in *The Star* (20/07/2007).

Kgosana, C. 2002. “Iscor fails to stop farmers fighting pollution” in *The Star* (22/07/2002).

Mabasa, T. 2002. “Iscor faces court bid on ‘poisoned’ water” in *The Citizen* (03/09/2002).

Ndaba, B. 2002. “Lid shut on Iscor’s foul-water document” in *The Star* (01/10/2002).

Ndaba, B. 2002. “Iscor accused of polluting groundwater” in *The Star* (02/10/2002).

Sapa. 2007. “Green Scorpions to probe for pollution at Mittal Steel plant” in *The Star* (30/05/2007).

Sapa. 1997. “Iscor moves to aid plot dwellers” in *The Citizen* (09/05/1997).

Star Staff. “Iscor aspires to balance” in *The Star* (29/04/1999).

Star Staff. “Steel maker serious about cleaning up its act” in *The Star* (23/08/2002).

Star Staff. 2007. “Inspection spotlight on Mittal Steel” in *The Star* (31/05/2007).

Sukhraj, P. 2005. “Court blocks case brought by pollution victim” in *The Star* (27/09/2005).

Appendices

Appendix 1.1

SA Media - The University of the Free State

Page: 1

Source: STAR

Date: 22-Jul-2002

Topic: 19

Ref No: 3169

1

ID: 02843289-01 | Source Page: 6

Iscor fails to stop farmers fighting pollution

By Caiphus Kgosana

Gift Makume, a small-scale farmer, thought his dreams had come true when he bought a plot in Steel Valley, Vanderbijlpark, for a bargain in 1995.

Here he could settle with his family and raise his herd of 16 cows on fertile ground.

To his detriment, Makume overlooked a small but significant fact – the plot is close to steel giant Iscor's plant, and next to a slag dump, where waste material from the plant is dumped.

Scarely a year later, his "promised land" turned into a nightmare. His cows started dying and his children developed strange ailments.

Makume's property is now worth nothing, and he can't drink water drawn there because it is contaminated by the pollution from the slag dump.

He has sent his children to live with relatives while he figures out what do about the problem.

"My borehole is contaminated and out of use. We have to boil water before we can use it," Makume said.

He is not alone in this struggle.

He has joined hands with his neighbours to form the Steel Valley Crisis Committee, which has taken Iscor to the High Court to demand that the company implement realistic measures to protect them from the pollution.

Iscor, in turn, obtained a High Court gagging order barring 16 members of the crisis committee from speaking to the media. But this has not stopped the people from raising their voices in protest.

Last week they intensified their struggle when they marched to Iscor's offices and handed over a memorandum demanding that concrete steps be taken to protect them from the pollution.

Samson Mokoena, chairperson of the crisis committee, said residents had struck an agreement with Iscor in which the company would provide them with free water. But he said that only three people in the area were now receiving the free water.

The community have been joined in their struggle by the Freedom of Expression Institute, which has called on the state to intervene, to enforce the right of the community to clean water, clean air and a healthy and sustainable environment.

Iscor, which was not available for comment, has been given seven days to respond to the memorandum.

Appendix1.2

Source: STAR **Date: 27-Aug-2002**

Topic: 19 **Ref No: 4406**

1

ID: 02

Farmers' case could cost Iscor R400m

SHERILEE BRIDGE

Johannesburg – Steel producer Iscor may have to cough up more than R400 million in damages if the Vanderbijlpark community wins a ground-breaking environmental court case against the steel maker.

Philip Lloyd, the professor of mechanical engineering at the University of Cape Town, who is giving critical evidence in favour of the residents, said yesterday further health claims were a distinct possibility.

The court case, scheduled for September 2, will hear a group of about 20 residents, who are claiming damages as a result of pollution from Iscor's 100-year-old Vanderbijlpark works near Vereeniging, south of Johannesburg.

Lloyd said the claimants hoped to secure R40 million from a first court victory. This would be used for research into the consequences of the pollution on the health of the residents and their longevity.

"We have set up a separate clinic in the area and so far 80 people who lived in that area are exhibiting clear signs of pollution in their bodies," Lloyd said.

This case, which follows one in May 2000 in which 48 Vanderbijlpark residents took Iscor to court on pollution charges, was launched by a group of subsistence farmers with the aim of preventing further pollution by Iscor.

The farmers claimed they had suffered deteriorating health and either the loss of livestock or the failure of their small-scale farming activities.

Lloyd estimated that it would cost Iscor R5 million to remedy the problem. He said Iscor had instead spent R75 million buying up properties in the area over the past few years.

Iscor is contesting the claims.

The company has budgeted R520 million for a "holistic environmental masterplan" for the upgrading of its Vanderbijlpark works.

Louis van Niekerk, the chief executive of Iscor, said at the company's annual results presentation late last week that R215 million would be spent this year.

"In the past environmental management was ad hoc, but the laws have changed. We want to meet international standards not just local standards," Van Niekerk said.

A Johannesburg steel analyst said environmental standards had become important only in the past 10 years and Iscor could not be expected to make the changes overnight.

He believed Iscor was moving in the right direction, albeit step by step.

On the JSE Securities Exchange yesterday Iscor closed 30c up at R24.

Appendix 1.3

Source: STAR **Date: 01-Oct-2002**

Topic: 19 **Ref No: 5799**

1

ID: C

Lid shut on Iscor's foul-water document

BY BALDWIN NDABA

A report allegedly proving that Iscor has polluted drinking water cannot be made public.

Without giving reasons, the Johannesburg High Court yesterday ruled against an application by 16 Vanderbijlpark residents to subpoena the report's author.

In their interlocutory application, Steel Valley residents asked the court to interdict Iscor against "poisoning" them, their livestock, trees and crops.

Their counsel, Margaret Victor, asked the court to subpoena Iscor employee Cornelius Johannes Hattingh – author of the report, *Groundwater Quality at the Works*. The document, reportedly written in October last year, allegedly supports the residents' claim that Iscor's toxic waste has polluted their drinking water.

Victor argued that Hattingh should explain the content of his report because Iscor had refused her clients access to it.

She said Hattingh conducted a study on the extent of pollution of groundwater and his report was leaked to the press by a "whistleblower" last year.

Iscor did not deny the existence of the Hattingh report. Its lawyer, Piet Meyer, said the report was a draft document which was supposed to be commissioned for the sole perusal of Hattingh's senior manager.

He said the "draft document" contained a lot of faults.

Meyer said the people who leaked it to the press were not supposed to have access to it.

"The move by the applicants is just a fishing expedition; it would be inappropriate to subpoena Hattingh on the grounds of the applicants' submission this morning," Meyer said.

Acting Judge Michael Hellens agreed with Iscor's argument, but said he would give his reasons after the completion of the entire matter.

The case continues.

Appendix 1.4

Source: STAR
Date: 27-Sep-2005
Topic: 19
Ref No: 6666
2
ID: 03264306-01 | Source Page:

Court blocks case brought by pollution victim

BY PENNY SUKHRAJ

A concerned citizen fed up with living in the middle of pollution has been denied direct access to the highest court in the land.

Johann de Kock, of Linkholm, south of Johannesburg, had attempted to take various government departments to court over environmental contraventions, but the Constitutional Court dismissed his application yesterday.

De Kock had served papers on President Thabo Mbeki as well as the ministers of water affairs and forestry, and of environmental affairs; the National Directorate of Public Prosecutions; the Human Rights Commission; and the manager of the Emfuleni Local Council.

He believes they are responsible for allowing grave environmental contraventions by Iscor, now known as Mittal Steel.

The Bench was not convinced that De Kock's application for direct access, without legal representation, should be considered.

"Although Mr De Kock appears to allege the infringement of various rights, including his environmental rights and his property rights, based on the dangers to health caused by pollution as a result of Iscor's factory activities in Vanderbijlpark, the issues are not set out clearly or succinctly.

"The saving of time and costs, the importance of the issue ... do not justify this court being a court of first and last instance," the justices said, dismissing the application.

De Kock said his requests for legal assistance from various government departments and for legal aid had been turned down.

"I have tried to get assistance from everyone but nobody seems to be conversant with environmental laws. But the law states clearly what the contraventions are. In the meantime I'm the affected person and I have to live in that pollution," said a disappointed De Kock.

However, the court recognised that he had raised issues of public interest but stated that without legal assistance, he would struggle to bring the case properly.

The case was referred to the registrar, who was told to bring the matter to the attention of the Law Society of the Northern Provinces to consider assisting De Kock.

"This is not the end for me. This is just the beginning of the battle. I'm going to take this to the United Nations Human Rights Council as well," De Kock vowed.

Appendix 1.5

THE CITIZEN Jr..... Nr.....

Govt to blame for pollution, says DP man

By Kenneth Chikanga

THE government should be held responsible for the extensive air and water pollution around Iscor's Vanderbijlpark steelworks plant, United Democratic Party environmental affairs and tourism spokesman Professor Mtutuzeli Mbadi said yesterday.

Iscor had operated as a state utility for the greater part of its existence.

Residents were to bring an interdict against Iscor in Johannesburg High Court today.

Iscor management should be held criminally liable for allowing toxic waste to flow into the Vaal River for the past 25 years, said Prof Mbadi, adding that polluted groundwater and other environmental damage could have affected more than a million people.

"While the community have a right to institute civil action, government has a responsibility to the communities and their living environment to act swiftly.

"The implications of how the matter is handled by the courts, and the government should not be underestimated.

International trade treaties depended on the ability of South African industries to comply with pollution criteria. Iscor, as an exporter and international trader, should be aware of the criteria.

Scientific research over the past months had confirmed suspicions and claims over the past number of years that Iscor was partly guilty of extensive air and water pollution in areas around its Vanderbijlpatk steelworks.

Appendix 1.6

THE CITIZEN Jr..... Nr..... P.4..... D

Iscor in pollution suit

By Kenneth Chikanga

ISCOR Vanderbijlpark steelworks plant management had knowingly continued industrial activities which caused horrific pollution to more than 2 500 hectares of land, Johannesburg High Court's Mr Justice Tom Cloete heard.

In opening arguments of an interdict application brought by residents to close several Iscor plants because of water, air and environmental pollution over 25 years, their counsel, Mr Andre Gautschie, submitted that Iscor be found guilty of contravening the National Water Act.

"We have residents who have had problems with vegetation in their gardens dying because of the pollution.

"The properties have lost value and banks are not willing to finance the properties for other developments because of the activities of Iscor," he said.

Appendix 1.7

Source: CITIZEN **Date: 03-Sep-2002**
Topic: 19 **Ref No: 4810**
1
ID: 02859394-01 So

Iscor faces court bid on 'poisoned' water

By THOMAS MABASA

THE Legal Aid Board (LAB) has instituted two court actions in a bid to force the closure of Iscor's plant in Vanderbijlpark.

One of the actions emanates from the alleged contamination of water of plot-dwellers close to Iscor's plant in Vanderbijlpark.

The other case is a continuing civil claim for compensation relating to damages incurred by the alleged contamination.

LAB legal analyst Odette Geldenhuys said the move came after the board received applications from private law practitioners for financial assistance to represent the affected families.

After doing a means test, which they passed, and looking at the merits of the case, the LAB decided to financially support the actions.

"We believe they have a very good case to argue the causal links between the damages they suffered and the source of the alleged contamination," she said.

Last week LAB submitted a court application for the interdict, to be heard in the Johannesburg High Court at a date yet to be announced. According to court submissions, Iscor used lethal chemicals in their processes, especially cadmium, which seeped into the underground water.

The plot-dwellers relied entirely on their boreholes, but now they had been forced to fetch water in town for daily use, said Ms Geldenhuys.

"There are also allegations that prolonged exposure to the contaminated water can cause cancer.

"It's the policy of the LAB to support civil claims in cases like land claims, where environmental issues are at stake, or when the livelihood and even the lives of people are threatened."

In this case, she revealed, one of the claimants had already died. Sixteen families were involved in the application.

Iscor's legal representative, r Harold Watkin, denying the contamination and death claims, told *The Citizen* yesterday he would not repond now, but wait and be guided by a court decision.

"They (LAB) have their own contentions to defend, and we have ours too ..."

Appendix 1.8

Source: STAR
Topic: 19
Date: 20-Jul-2007
Ref No: 4284
ID: 03493173-01

Steel giant could face sanctions over pollution

BY UFRIEDA HO

The government has released a damning report detailing environmental legislation contraventions and non-compliance at ArcelorMittal's Vereeniging plant.

The report comes after environmental management inspectors – also known as the Green Scorpions – assessed the steel giant's plant at the end of May as part of their investigation into the environmental legislation compliance by the iron, steel and ferroalloy industries.

In the report, the Green Scorpions highlighted the main contraventions of legislation and permit stipulations by the company.

These included activities carried out without the required environmental authorisations; dumping of hazardous waste on a prohibited site; and significant pollution of surface and groundwater with phenols, iron, oil, fluoride and other hazardous substances.

Melissa Fourie, director of enforcement at the Department of Environmental Affairs and Tourism, said steps would now be taken against ArcelorMittal.

She said criminal prosecution had not been ruled out.

"ArcelorMittal will be given a reasonable time to fix the problems they have created but there will be criminal investigations where the illegal dumping is concerned, as they had been repeatedly warned by various authorities to cease these activities," said Fourie.

ArcelorMittal SA representatives said they had still not received a copy of the Green Scorpions' inspection report, but the company's CEO, Rick Reato, said they would cooperate with authorities, and added that between 2005 and last year, the company spent around R460-million on various environmental projects and had committed a further R1-billion over the next four years on green projects.

"This is a challenge that we at ArcelorMittal SA are not going to shy away from. We have a responsibility to contribute towards the achievement of environmental sustainability," Reato said.

However, he also blamed many of the company's problems on a legacy of poor environmental approaches, rather than on the company's current environmental practices.

But environmental action groups disagree.

Samson Mokoena, organiser for a local environmental group, the Steel Valley Crisis Committee, said ArcelorMittal had not changed its practices and continued to operate with impunity and without respect for people or the environment.

"The report is a morale booster for those of us who have been fighting for so long and are still fighting against this company.

"We hope that the company will be taken to court for operating illegally. It's what we've been saying for years," Mokoena explained.

Appendix 1.9

Source: STAR **Date: 30-May-2007**

Topic: 19 **Ref No: 3078**

1

ID:

ENVIRONMENT BRIEFS

'Green Scorpions' to probe for pollution at Mittal Steel plant

The "Green Scorpions" are scheduled to inspect Mittal Steel's Vereeniging plant.

Department of Environmental Affairs and Tourism spokesperson Melissa Fourie said the inspection, to start yesterday, would be undertaken by environmental management inspectors (nicknamed the "Green Scorpions"); as well as officials from the Water Affairs and Forestry Department and the Sedibeng municipality.

They are to check whether the steel company is complying with environmental law at its Vaal Triangle plant.

The inspection, to last several days, marked the launch of a national environmental compliance campaign in the iron, steel and ferroalloy industries, Fourie said.

During the campaign, the Green Scorpions will inspect about 40 sites in Gauteng, Mpumalanga, Northwest, KwaZulu Natal and the Western Cape.

Ensuring environmental compliance in this sector has been prioritised by government, as industrial processes contribute significantly to pollution if not managed appropriately.

The results of the Mittal inspection would be finalised in a few weeks, Fourie said. – Sapa

Appendix 1.10

Source: STAR
Date: 31-May-2007
Topic: 19
Ref No: 3199
1
ID: 03475597

Inspection spotlight on Mittal Steel

Mittal has been the focus of a three-day inspection by the Department of Environment Affairs and Tourism's so-called Green Scorpions that started on Tuesday.

The inspection of the Vanderbijlpark operations is part of the Department's Operation Ferro, which is a compliance inspection focusing on the steel, ferro-alloy and chemicals industries in the country. The campaign is meant to show that the department does indeed have teeth and that it can enforce the country's numerous environmental acts.

Melissa Fourie, in the directorate: Enforcement at the Department of Environment and Tourism Operation, says that the inspection, which also involves officials from Dwaf (Department of Water Affairs and Forestry) as well as the local Sedibeng municipality, is to ensure that Mittal meets its responsibility to the environment and to public health.

"The inspection covers everything from water, air and waste and compliance to Environmental Impact Assessment procedures.

"Depending on our finding and assessments in the next few weeks we will insist on corrective action to be taken," she says.

This action can take the form of clean-ups at the cost of the polluter, revocation of permits and fines.

Operation Ferro will be extended to other companies across the country in the next couple of months.

Appendix 1.11

Source: CITIZEN
Topic: 19
1

Date: 20-Jul-2007
Ref No: 4314

ID:

Mittal to be monitored on enviro front

KIM HELFRICH

STEEL giant Mittal is not particularly environmentally responsible at its Vereeniging plant, and it will be "carefully monitored" in future.

This follows a number of contraventions noted at the plant by provincial environmental management inspectors.

Due to position in the Vaal Triangle air shed priority area, the contraventions were being taken seriously, the Department of Environmental Affairs and Tourism's Joanne Yawitch said.

Contraventions include dumping hazardous waste, particulate emissions that cause significant and serious pollution and pollution of surface and groundwater with phenols, iron, oil, fluoride and other hazardous substances.

Yawitch said the firm had made some effort at complying in implementing its environmental plan.

"(But) it is still in significant non-compliance with many environmental requirements. The department and its provincial counterpart will carefully monitor the situation at Mittal," Yawitch said.

Appendix 1.12

The Star Jr..... Nr..... P..11.... Dat..29 APR 1999

Iscor aspires to balance

An organisation that has come under the spotlight with the new water legislation, is Iscor.

Iscor Steel and Iscor Mining, by the nature of their production, have the potential for hugely negative environmental impact and the Vanderbijlpark works – Iscor's largest steel plant — is under scrutiny and the issue is being debated in court.

Phaldie Kalam, group general manager for corporate affairs at Iscor, put the problem at Vanderbijlpark into perspective: "Before 1989, all parastatals, like Iscor, came under enormous protection from government. This, combined with lax environmental legislation, meant that pollution standards were generally low.

"We are more than willing to assist in rehabilitation. We have informed both the local community and government that we are prepared to do our part," said Kalam. "But we also wish to see that the causes of the current situation be apportioned correctly, and everyone involved in possible environmental problems around Vanderbijlpark accept their part of the responsibility. We do not believe that this is a problem that is entirely Iscor's."

Iscor Mining is also aware of environmental impact and goes to great lengths to ensure as little negative impact on the environment as possible.

"For Iscor Mining to begin any new project, they have to adhere to a strict process of control. It starts with obtaining authorisation the department of minerals and energy. To get the go-ahead, the company has to produce an environmental management programme report to show how they propose to manage environmental issues throughout the project," said Pieter Pretorius, manager of environmental management services for Iscor Mining.

Part of this environmental study is a water management programme. For the report to be a good balance between the fiscal goals of the project and the projected environmental impact, all stakeholders are considered in the formulation of the report. Furthermore, outside facilitators and specialists are consulted to ensure objectivity.

As with all mining operations, Iscor Mining has to adhere to industry regulations. The Chamber of Mines has an environmental policy committee that discusses all environmental issues and general policy relating to that arena. It is this committee, in conjunction with the authorities, which created the guideline (called the Aide-mémoire) for the reports that Iscor follows.

While Iscor makes full use of environmental reports in its processes, it is also striving to achieve ISO 14001 status in the next couple of years. This would require the implementation of internationally accepted environmental systems that would take Iscor to new levels of environmental responsibility.

Appendix 1.13

THE CITIZEN Jg..... Nr..... P..11..... Dat..10.9. 5. 1997

Iscor moves to aid plot dwellers

ISCOR yesterday announced measures aimed at alleviating the plight of residents on three smallholdings near the company's Vanderbijlpark works who complained that the factory was polluting their environment.

The smallholdings are Steelvalley, Linkholm and Drakeville on the western border of the steel works.

The company launched investigations following complaints that the water table was high as a result of Iscor's evaporation dams and that residents were experiencing health problems.

Iscor announced it was monitoring the water quality of the boreholes in the area to establish the sources of the pollution. But it said the water table had increased due to the high rainfall during the last two seasons and that the problem could not be blamed on its steel works.

An independent survey concluded that no health-related issues had been reported that could positively be linked to the pollution in the area.

At the same time, it was noted that the smallholdings did not have sewerage services and piped water, but had septic tanks and drains which could be influencing the quality of borehole water.

Iscor said following a survey on the needs of the community, it had started to tank potable water to the smallholdings free of charge late last month. – Sapa.

Appendix 1.14

The Star Jg..... Nr..... P.....7..... Dat..... 2- OCT 1998

Iscor blamed for water pollution on smallholdings

But the company denies being the sole cause and says residents are also to blame

By Melanie-Ann Feris
Environment Reporter

New studies to determine the impact of air, water and soil pollution on the smallholdings adjacent to the Iscor works in Vanderbijlpark are in the offing.

A cost benefit analysis (CBA) has been commissioned to find solutions to ongoing problems related to pollution in the communities of Linkholm, Drakeville, Steel Valley and Louisrus. According to Rick Reato of Iscor, the CBA will look at various issues, including the costs and benefits of buying out the properties instead of installing services in the communities.

Bacterial and chemical pollution of groundwater over a number of years by Iscor and the residents themselves, have been the cause of many problems including illnesses such as diarrhoea, stomach cramps, skin irritations and blood in the urine of small children.

It has also contributed to the underground water being declared unfit for human consumption. While Iscor has denied being the sole polluter, a residents suitability study completed in November last year placed most blame on the company.

Appendix 1.14 (continued)

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The report, however, admitted that the extent of the study was limited and it was thus not possible to "unequivocally" identify the source of pollution.

However, there are strong pointers to Iscor as the major pollutant. But Reato said as long as the company was seen as the main polluter, many pollution issues would not be addressed.

"We may be a part of the problem and where we are, we will not shirk our responsibility," he said.

Studies done as early as the 1980s have shown that there is definite evidence of groundwater pollution in the area, where most of the residents rely on borehole water.

A three-year report started in 1993 found that Iscor's sludge dams and slag dump were major sources of groundwater pollution, resulting in high concentrations of calcium, magnesium, sodium, potassium, chloride, sulphate, ammonia and nitrate in the water. The report prompted the directorate of emergency and disaster management to declare 80% of boreholes unfit for human consumption.

Last year's report indicated that the severity of water pollution in the area seemed to be increasing.

Apart from chemical pollution in the form of increased iron concentrations, sulphates and chlorides, there was also evidence of degraded oil in the water, which could be attributed to residents or a nearby garage.

High counts of faecal pollution – as a result of seepage from communal septic tanks – has also sparked fear of an increase in the transmission of infectious diseases.

The latest CBA is expected to be completed by mid-November and will be based on the residential suitability study done last year.

A toll free hotline– 0800 002 293 – has been set up for people with queries about the CBA.

Further details can also be obtained by contacting Solly Manyaka or Vassie Maharaj at Manyaka, Greyling and Meyer on (012) 3260848.

Appendix 1.15

The Star Jg..... Nr..... P.7..... Dat.1 - DEC 1998

Pollution payout for communities likely

Iscor faces choice of buying out properties or rehabilitating the affected areas where residents have endured health problems and loss of property values

By Melanie-Ann Feris
Environment Reporter

Communities around the Iscor works in Vanderbijlpark will have to be compensated millions of rands for continuous pollution that has caused serious health problems and residents' property values to drop.

The total cost of compensating the communities is expected to amount to some R90-million.

Iscor has made no decision on whether to buy out the land from the communities. The company has been blamed by several sources as one of the polluters.

A cost benefit analysis (CBA) done recently to determine a solution to the communities' problems, suggests that regardless of whether the buy-out option or a remedial option is chosen, rehabilitation of the groundwater, soil and ecology needs to be done.

Residents would also have to be compensated for past damages: the health problems and agricultural losses due to pollution.

The communities of Drakeville, Steel Valley, Louisrus, Rietkuil and Linkholm have for years been complaining that ongoing pollution has affected their health, has caused their land to become less productive and their property values to drop.

Studies done in the area,

Studies show both ground water, soil affected

have shown that almost the entire area has been polluted (groundwater and soil), and that without the necessary remedial steps the area would

Appendix 1.15 (continued)

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remain unsuitable for human habitation.

The CBA has been done to determine the costs of buying out the land or whether it would be cheaper to provide much needed services like sewerage and water.

Carol Ferguson, division manager for Iscor's public relations office, said they were still studying the report but indications were that the costs of buying out the land and the cost of implementing remedial actions including the introduction of services such as sewerage and water, would be almost the same.

According to the CBA the overall cost for buying out the almost 300 properties in the area would amount to R55-million, while the cost for rehabilitation could amount to R63-million.

Although the CBA was not done to determine who caused the pollution problems, it does show that there are different kinds of pollution in the communities.

This includes pollution of ground water through seepage from the Iscor works including seepage from the company's unlined effluent canal.

Bacterial pollution has also been caused by the residents' french drains and septic tanks.

Appendix 1.16

Source: STAR
Date: 27-Jul-2005
Topic: 19
Ref No: 4761
1
ID: 03241340-01

Iron resolve of three Steel Valley families

A David-and-Goliath battle is brewing between residents of the once-vibrant Steel Valley and Mittal Steel SA, formerly Iscor. In October, residents of the desolate farming community will take the steel-producing giant to court to get the company to clean up the area that they say it contaminated

By Jillian Green
Health and Science Reporter

It should be a thriving farming community. Instead, all that remains of Steel Valley are flagstones and rubble where homes once stood.

It is a virtual ghost-town save for the three die-hard families – the Matsepos, Dewings and Ramodibes – who continue their anti-pollution fight with steel giant Mittal Steel South Africa, formerly Iscor.

The three are the only residents of the area, near Vanderbijl Park, who have not sold their properties to the steel manufacturer.

Twelve years ago, Rachel Ramodibe bought a smallholding in Steel Valley. "I was so happy. It was a dream come true," she said.

Ramodibe and her late husband intended making a living selling vegetables and chickens which they would grow and rear themselves.

But their plans did not come to fruition.

"Shortly after we arrived the grass turned a sickly yellow colour. The vegetable seeds that I planted didn't sprout," Ramodibe said.

"People started to get sick. I got sick. My kidneys started giving me trouble," she said.

Ramodibe believed the cause of her woes was her water supply: a borehole in the area.

"Each time I drank the water, I became ill. I am afraid to drink the water," she said.

Papers from a failed court application in the Johannesburg High Court 2001 validate Ramodibe's fears. The judge dismissed the application on the basis that there were too many "disputes of fact".

The documents claim that Iscor, among other things, created "dams containing highly toxic substances which were allowed to seep into and pollute the groundwater."

The papers also claim that the pollution caused by Iscor contained "hazardous/carcinogenic substances which affected whole areas and that as a consequence of this generalised threat Mittal Steel SA, in order to avert legal action, spent over R75-million buying out affected properties in the area".

Once the company owned the properties, the houses were demolished and the areas cordoned off with electric fencing.

However, general manager for corporate affairs at Mittal Steel SA, Tami Didiza, says there was nothing sinister about the company buying properties.

"In 1997, the former minister of water affairs and forestry, Professor Kader Asmal, requested a cost-benefit analysis be undertaken to determine the most effective solution: namely buy out the properties or establish proper infrastructure. The community was not interested in the provision of services or infrastructure, but insisted on being bought out," he said.

But Strike Matsepo was not willing to sell his property. He had plans for his land.

He was going to raise cattle and poultry. But again, all these plans came to naught.

"Before, my cattle could roam freely. Now the few that I have left have to walk more than 2km before they are able to graze. Their path is further disrupted by the electric fencing. Before, they could drink water from the streams and borehole sprouts, now we have to provide them with fresh water," he said.

Matsepo has lived in Steel Valley since 1993 and has seen his cows, calves, sheep, pigs and poultry perish, and his own health deteriorate.

"It's this toilet water. Why else would my animals die when they were once fit?" he asks.

Matsepo's health complaints range from blood in his urine to tiredness, lack of concentration, muscle pain, swelling of

Appendix 1.16 (continued)

Source: STAR **Date: 27-Jul-2005**
Topic: 19 **Ref No: 4761**
1
ID: 03241340-0

"It's this toilet water. Why else would my animals die when they were once fit? Why do I have all these health complaints?

– Strike Matsepo

the hands and feet, memory loss, fatigue, anxiety and nervousness.

According to the 2001 court papers, with applicants like Matsepo, "blood and urine samples showed high levels of cadmium, creatinene and Polycyclic Aromatic Hydrocarbons, all toxic substances known to arise in steel manufacturing processes.

The substances are known to cause a variety of illnesses including kidney problems.

If any of the residents should have been alert to the problems in Steel Valley, it should have been Johannes Dewing.

Sixteen years ago, Dewing bought his smallholding from a woman whose two children had cancer. "Perhaps I should have thought about that. We have had terrible problems here," Dewing said.

Like his neighbours, Dewing planned to use his piece of land to earn a living. He planned to farm and establish a small plant manufacturing bricks, blocks and kerbing.

He planted 400 fruit trees – they failed. Of about 4 000 chickens only a handful survived. He had to give up his brick and paving business as the cement would not set.

At the same time, Dewing, his wife and their children began to notice blood in their urine, tiredness, lack of concentration, muscle pain, swelling of the hands and feet, memory loss, fatigue, anxiety and nervousness – the same symptoms as Matsepo.

Coincidence? Not according to Steel Valley residents.

"This place used to be a vibrant community. There was a church, a shop and a garage. Now there is nothing. If we want petrol for our cars we have to leave here with a full tank," Dewing quips. "It is very sad and we need answers."

But the answers have been slow in coming.

Litigation against the steel giant first began in 2001.

An application to the Johannesburg High Court in 2001 failed despite the court being presented with evidence from experts on the presence of cadmium, lead and other carcinogenic substances in the groundwater.

But the fight against Mittal Steel was far from over.

Matsepo and Dewing filed a damages claim against the company and that case is going to be heard in October.

Mittal Steel SA plans to oppose the claim.

Didiza said the company would not comment on scientific evidence (of pollution) that is material to the case, save to say that "Mittal Steel SA has conducted its own research that suggests otherwise".

Didiza said there was a "master plan" in place which focused on an integrated environmental management plan.

"The value of the plan is estimated at R1,3-billion and will take approximately 15 years to implement fully," he said.

"Mittal Steel SA has always been prepared to address problems if they can be related to the operations at its plants," Didiza said.

But this has not been the experience of Dewing, Matsepo and Ramodibe.

"All they ever wanted to do is buy us out," Dewing said.

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Appendix 1.17

Source: STAR
Date: 24-May-2007
Topic: 04
Ref No: 848
1
ID: 03471684-01 | Source Page: 14

They say they have been poisoned by an industrial giant, which now wants to move them, but these residents of Steel Valley are …

Determined to prove their mettle to Mittal

"It was a bad deal, but we had to settle and try to start again"

BY UFRIEDA HO

Another day and another plea falls on the ears of men who still look like saviours to those who have forgotten what hope looks like.

Today it's a plea from Strike Matsepo, a Vanderbijl Park resident, who says he is being choked off his land in the Steel Valley area, where he has lived for the past 14 years.

"I want Mandela and De Klerk to help me. They must stop Mittal from poisoning us and killing my cattle," says Matsepo, as he shoos away a scrawny chicken in his yard and looks across the way to a slagheap belonging to his neighbour, the giant multinational steel company, Mittal.

"They put the poison here, then they want to kick us off our land and don't want to pay for making us sick," says the 77-year old.

He bought his plot as the dawn of a democratic transition made it possible for him, as a black man, to buy land. It was a moment of personal liberation and the realisation of a dream to farm, to raise livestock and to live out his old age peacefully. He says he never knew he was buying land where the underground water would drown his seedlings in what he is convinced is a noxious cocktail of heavy metals and industrial toxins. Even those residents who were told apparently ignored the warnings, thinking these were just racist plots to keep them off the land.

Air pollution here turns a blue day instantly into a brewing Highveld storm; only with this storm the rain doesn't come.

Matsepo's family is now only one of four who remain in this area. They have nowhere to go and no money to start over. They want Mittal to take responsibility, to stop its polluting operations and to stop its bullying tactics in trying to get rid of the families who won't agree to sell.

Two other remaining locals are Rachel Ramodibe and Johannes Mkwanazi. They are currently under threat of eviction and have court cases pending. Both say Mittal has used underhanded means to try to obtain their properties; has exploited irregularities in the transfer of title deeds they say they've owned since the mid-'90s. Lawyers working *pro bono* for the families had to bring an urgent interdict against Mittal just before Easter to stop Ramodibe's eviction. The High Court decision in this matter is expected next month.

The pair believe it's just part of the never-ending cycle of intimidation from Mittal. Mkwanazi says his cattle were impounded by Mittal on the charge that the animals had trespassed onto Mittal's land. He had to pay R35 000 to have the cattle returned.

"Mittal goes behind my back to buy my house, but the banks never told me there was a problem with the title deed. Then Mittal brings their man here to tell me I must move and he says Mittal owns my house, but I bought this house 14 years ago," says an exasperated Ramodibe.

Appendix 1.17 (continued)

Source: STAR **Date: 24-May-2007**

Topic: 04 **Ref No: 848**

1

ID: 03471684-02

The legal wrangling has been grindingly protracted, stretching back to when Mittal was still the parastatal Iscor.

Samson Mbele, a former Steel Valley resident and an environmental activist with the Vaal Environmental Justice Alliance (Veja), explains that, back in the mid-'90s, local residents mobilised to take legal action against Iscor, which led to out-of-court settlements in 1998. They took the Iscor payouts and left. But a second group of 16 residents who sought similar restitution in 2002 were not successful in court and most opted to sell their properties to Iscor.

Mbele's family was one of these. He says: "It was a bad deal but we had to settle, and try to start again."

Mbele still lives in the Vaal area and says that even though people have moved away the battle continues.

"It's time environmental justice comes to the people of the Vaal," he says.

This highly polluted region is recognised by government as a priority pollution zone.

"We will mobilise the people and use the law and the constitution ... to fight Mittal," he says.

This week, activists and past and present Steel Valley residents gathered in Steel Valley to step up their campaign.

The International Mittal Watch is being established as a global network of activists monitoring the actions of the multi-national around the world.

Veja is also updating its database of past residents as Mbele says their health will have to be monitored in the next few years. In this regard they want a trust to be formed for those who will need medical attention or compensation as a result of exposure to the high pollution levels in the area.

Also, they say Mittal must foot the bill for a thorough clean-up of the area and that there has to be full disclosure about the extent of the grime.

Mbele says Mittal is being singled out from the rest of the industrial heavyweights in the area because it has been arrogant and intimidating. He warns, though, that the other Goliaths are not off the hook.

"We stopped going to Mittal meetings because they turn things around and we could just not discuss things with them openly. They are obstructive and unco-operative, whereas if we ask some of the other companies for their environmental reports they are at least forthcoming and prepared to talk to us," says Caroline Ntaopane, also a Veja activist.

But Tami Didiza, general manager of corporate affairs at Mittal, believes they have not treated residents in an unfair or underhand manner and says they do engage openly with residents and NGOs.

In the past five years, the company says it has spent R1-billion on four major measures to treat water and to reduce air pollution.

Hennie Vermeulen, head of investor relations at Mittal, says the spending shows that they are serious about their responsibility to the environment and that more millions are being budgeted for future projects.

"Some NGOs mislead the people and they also don't take part in the forums or meetings that we set up, which we think are the right platforms through which to engage," says Didiza.

He adds that their complete environmental reports are available to the public and denies that Mittal has been hostile with the residents.

In the case of Ramodibe, he says: "It's unfortunate that she was misled when she bought her house from someone she thought was the legal owner. Our consultant was visiting her to give her notice to move, she was not being threatened."

Didiza also refutes that they reported Mkwanazi to authorities or to the impounders to have his cattle removed.

However, Didiza tells of Mittal's loss of cattle on their land, which now totals around 2 000ha. They have previously placed game and then cattle on the land but electric fences have been broken and the livestock stolen.

Mittal's plans are to continue using the land as a buffer zone and to raise cattle for the beef market. This, Didiza says, is further proof that the land is not so polluted that healthy cattle cannot be reared there.

But Mbele disagrees. In the shadow of Mittal's billowing smokestacks, he points out drainage channels where effluent and other waste water leaves Mittal. The stream that trickles past is pernicious, he insists, saying independent testing has repeatedly shown unacceptably high levels of heavy metals and other toxic substances present in this water.

Mbele's vexed gaze follows the route of the run-off to where it will find its way onto the land of the Steel Valley residents and eventually into the mighty Vaal River itself.

Clearly the fight is not over and for Matsepo, Ramodibe and Mkwanazi, there's no end to their woes just yet.

The great salvation they're after remains elusive and the only thing headed their way for sure is the steady stream of dubious ooze.

Appendix 1.18

THE CITIZEN Jg..... Nr.....

Iscor pollution claims confirmed

By Hugo Hagen

SUSPICIONS and claims about extensive air and water pollution by residents and owners of smallholdings surrounding Iscor's Vanderbijlpark steelworks have been confirmed by a scientific study.

The first results of an extensive 10-week cost-benefit analyses (CBA) of smallholdings in the area, ordered by Minister of Water Affairs and Forestry Kader Asmal, have been presented to residents and proved most complaints to be correct.

The CBA report said preliminary results still had to be confirmed but so far indicated that water on almost all the plots had been polluted in one way or another.

The pollution was found on properties in Steel Valley, Linkholm, Drakeville and 21 plots in Louisville.

Groundwater specialist Mr Andre Staskowski reported that the closer a plot was to Iscor Works, the higher the pollution. Groundwater close to the effluent canal running through Louisrust and those irrigating from the canal were also polluted.

Areas close to the Iscor Works contained organic pollution as a result of oils, tars and phenols, while those further away complained of foul smelling water.

People had been warned that all borehole water had to be treated before drinking it. Inefficient french drains have been polluting groundwater, especially closer to the surface on most plots where polluted water closer to the surface seep into boreholes.