

https://dspace.org/

The white labour forest settlement programme in South Africa, 1917-1938

Roach, Thomas R.

2011-09-30
http://hdl.handle.net/10539/10472

Downloaded from a DSpace repository. https://dspace.org/

the intensive kind of forestry that is practiced is adapted to certain kinds of trees. These are generally fast growing, easily established species which are suitable for land where there is not too much conflict with agriculture. Most of the species are cone bearing softwoods, particularly pines. In the northern hemisphere, the paper making industry has become adapted to using these species to manufacture its products. The combination of fast growing trees with an industry little concerned with fibre quality is ideal for plantation forestry.

With South Africa's increasing reliance on plantations to supply it with wood products, there has come some minor changes in the meaning of the terminology associated with the activity. Forestry is allied closely to the concept of "conservation" which currently has come to have a meaning closest to the phrase "wise use." In technical terms, however, most foresters would consider that the term "sustained yield" best described the objectives of their profession with regard to the growing and use of trees. Sustained yield meaning that the resource should not be exploited at a rate greater than its capability to regenerate itself. Now, in South Africa most of the forest is planted and the literal definition of the term has become modified. Afforestation is an expensive process and South African foresters find themselves greatly concerned with costs. They are really akin to farmers in their desire that the soil yield an economic return for their efforts. Plantation forestry therefore is like long term farming even though the forester's concern to sustain the yield of forest products from his forests might lead one to think otherwise.

The Agrarian Myth and the Back to the Land Movement

Most of the land afforested by the South African Department of Forestry in the 1920s and 1930s was planted by the inhabitants of white labour colonies. The labour colony idea is also an importation from the Northern Hemisphere, adapted to South African conditions. The idea has two sources. The first is the settlements and hamlets found in the heavily forested interior of Germany. Many of these settlements were created by monasteries during the Middle Ages. Inhabitants made their living by farming and working in the surrounding forests. During the eighteenth and nineteenth centuries, this lifestyle became romanticized as part of the rise of the "agrarian myth." The myth is the more recent and influential source of ideas for the suitability of labour colonies for solving social problems.

According to Richard Hofstadter the agrarian myth can be traced to sources in pre-industrial Europe.[27] During the eighteenth century, it was a phenomenon of the upper classes who

---

27. Richard Hofstadter, The Age Of Reform, From Bryan to F.D.R. (New York: Vintage Books, 1955), 23-26. Note, for example, the following lines from Dryden's translation of Horace quoted by Richard Hofstadter in his discussion of the agrarian myth:

> How happy in his low degree,
> How rich in humble poverty, is he,
> Who leads a quiet country life,
> Discharged of business, void of strife,
> And from the griping scrivener free?
> Thus, ere the seeds of vice were sown,
> Lived men in better ages born,
> Who plough'd with oxen of their own,
> Their small paternal field of corn.

romanticized their agricultural origins. By the nineteenth and into the twentieth centuries, the agrarian myth had migrated to North America and become a "mass creed."[28] This attitude was so pervading that politicians, whatever their backgrounds and real attitude towards agriculturalists, felt bound to make an appropriate obeisance. Noting that the myth was a complex idea which defied exact definition, Hofstadter considered that its component parts formed a "clear pattern." The farmer was seen as being an "incarnation of the simple, honest, independent, healthy, happy human being." Because he lived close to nature, his life was "believed to have a wholesomeness and integrity impossible for the depraved populations of the cities."[29]

The agrarian myth has been remarkably long-lived and has spawned associated ideas and movements. One such is the "back to the land movement." This movement was an urban response to the increasingly negative social conditions found in the cities of North America during the late nineteenth century. It has had a history of being an almost universal panacea to urban social ills such as overcrowding, unemployment and increasing crime. Its origins can be found in the suburbanization movement which was a reaction to overcrowding in cities and the growth of the social gospel idea.[30] In its most romantic form, the movement predicted that those suffering from the stresses, strains and disappointments of city life would enjoy good health and a

---

28. Ibid, 28.

29. Ibid, 24.

30. Scott Donaldson, "City and Country Marriage Proposals," in Richard M. Abrams and Lawrence W. Levine (eds), The Shaping of Twentieth Century America (Boston: Little, Brown and Company, 1971), 49-67.

satisfying life if they returned to the country and lived essentially as subsistence farmers.[31]

Practically, the back to the land movement was seen by members of the urbanized upper classes, as being a particularly suitable solution to chronic urban unemployment. Apart from the example discussed in this dissertation, other governments have supported those wishing to return to subsistence farming. During the 1930s, for instance, the government of the Canadian province of Manitoba subsidized members of the urban unemployed wishing to move to rural areas. Interestingly, an estimated eighty percent who made the move had a farm background. Most came from the lower classes and had lived in municipalities which did not pay a high enough rate of relief to cover their cost of living. Further, these families preferred to resettle in the parkland belt of the northern prairie rather than the more fertile open prairie. This was because the mixture of woodland and open areas promised to be more suitable for subsistence living which included hunting and fur trapping. Despite the fact they came from a class generally lacking in education, those taking part in this return to the land adhered to some of the tenents of the romantic side of the movement. These back to the landers generally saw themselves as returning to the original stable economic unit of the country, the family farm, and rejecting the modern notions of stock companies and intensive urban living.[32]

These ideas, which originated in Europe were certainly

---

31. Ibid, 56-58.

32. Robert England, The Colonization of Western Canada (London: P.S. King and Son, 1936), 116-35.

attractive to North Americans who made comparisons with their own conditions.[33] This was done to the extent that it can be argued that both the agrarian myth and the back to the land movement reached their full degree of development in North America. Both the myth and the movement emphasized the role of hard open-air work as a cure for social ills such as slothfulness and lack of entrepreneurship. What is of interest to this study is that these same European sources and the same types of comparison were being made in South Africa by South Africans and had been since before the First World War. These comparisons were made specifically with reference to the various work colony ideas being tried out in the Union.

Labour Colonies

In South Africa, moving the poor white back to the land in organized colonies, farming high yielding, irrigated land was advocated as a cure for the "spirit of slothfulness" that had "come over the poor white [whose] object in life was more to exist than to live." The problem with South Africa, according to this commentator, was that it was a country where "the satisfying of the purely animal cravings and necessities of life, is easier to maintain than in almost any other country and consequently the

---

33. See, Richard T. Ely, "Conservation and Economic Theory," in Richard T. Ely, Ralph H. Hess, Charles K. Leith and Thomas Nixon Carver (eds), The Foundations of National Prosperity (New York: The Macmillan Company, 1918), 64-9.

initiative to labour is at a minimum."[34] This quotation is from an address by F.E. Kanthack, the Director of Irrigation for the Cape Colony, to the First South African Irrigation Congress held in Cape Town in 1909. The Congress was a direct copy of the first United States Irrigation Congress, held some years earlier, the report of which Kanthack had read and which had inspired him to approach the Prime Minister of the Cape, J.X. Merriman, with the idea of organizing a similar meeting.

The first, most successful, and longest lasting agricultural labour colony in South Africa was founded by the Dutch Reformed Church at Kakamas on the banks of the Orange River, west of Upington in the northern Cape. This colony, started in 1894, was based directly on the ideas of Pastor von Bodelschwingh of Wilhelmsdorf in Germany.[35] This settlement was considered to be a success by the public and politicians of the day because it appeared to be able to place poor whites on smallholdings and train them to work without the help of African labour. Kakamas was considered successful in breaking its poor white participants of a number of other bad habits. These included, trekking, herding, relying upon casual day-labour for income and the withholding of children (especially girls) from school. Kakamas was promoted by the Dutch Reformed Church, which organized and ran the operation up to the Second World War, as a shining example of

---

34. Cape of Good Hope, Proceedings of the First South African Irrigation Congress (Cape Town: Government Printer, 1909), 26, 32-34.

35. B.P. Marchand, "Labour Colony Irrigation Settlements," in Cape of Good Hope, Irrigation Congress, 41-46.

how to solve the problems of the poor white.[36] Because of this, it had a strong influence upon the White Labour Forestry Settlement programme.

Like afforestation, labour colonies are a European idea which was transplanted to South Africa. The notion of combining a settlement or colony with a specific task can be traced back to a similar idea, that of settlement colonies, dating from the Middle Ages, specifically the eighth century. At this time, the region lying between the modern towns of Darmstadt and Heidelberg in what is now West Germany, was heavily forested and lightly inhabited. In 781, the Benedictine Monastery at Lorsch was granted this area, known as the Odenwald.[37] During the next three and a half centuries, the Monastery established approximately one hundred planned settlements in the Odenwald. The intention of the programme was to increase the value of the Monastery's holdings, confirm its ownership of the area, exploit the indigenous forest and areas of fertile land within it, and provide an outlet for the surplus population of villages the Monastery already owned. The settlements were laid out before clearing took place with the intention that each settler would know, on arrival, where to locate his home and be assured of a fair share of the available potentially arable land. Part of the success of the settlement

---

36. For example, see the praise given to the settlement by the Cape's ex-premier, John X. Merriman, in the House of Assembly debate on the report of the Select Committee on Conditions of European Employment as reported in South Africa, House of Assembly, Debates of the Third Session of the First Parliament (Cape Town: Cape Times, 1913), 3096. Also, "Farming and Optimism," Star (10 July, 1914): 8.

37. Hans-Jurgen Nitz, "The Church as Colonist: the Benedictine Abbey of Lorsch and Planned Waldhufen Colonization in the Odenwald," Journal of Historical Geography 9, 2(1983): 105-26.

scheme was due to the fact that the Monastery already owned a large number of wealthy, densely populated villages. These villages not only provided the programme with settlers but their income assured the Monastery had surplus capital for investment.[38]

The settlers of the Odenwald, like many other inhabitants of areas characterized by a mixture of forest and agricultural land, earned a living from their farms and from their forests. As already noted, by the nineteenth and early twentieth century, this relationship between farm and forest was typical of much of southern Germany, especially in the Black Forest. With the advent of organized forestry in the nineteenth century, the combination of forestry and agriculture in this way was considered to be particularly beneficial to the forester as it eased his problem of finding suitable employees.[39]

While the forestry settlement scheme of the Monastery was designed to improve its physical and financial stability, the idea that an organized settlement could improve the lot of its inhabitants had other roots. This type of settlement was more usually termed a Labour Colony and is associated with the agrarian myth and the back to the land movement. Basically, labour colonies are direct expressions of the myth grafted onto the settlement colony idea. The expectation of the advocates of the colonies was that they would help solve the growing sociological problems of the lower classes living in cities. Great emphasis

---

38. Ibid.

39. William Schlich, "Forestry in the Black Forest," Quarterly Journal of Forestry (January, 1913): 1-10; Carl Alwin Schenck, Logging and Lumbering or Forest Utilization (Darmstadt: p.p., 1912), 2-4.

was placed on the healing effect that disciplined open air work would have upon indolence, alcoholism, and a host of social ills including crime. The idea seems to have first appeared in Germany during the nineteenth century where one of its early disciples was the aforementioned Pastor von Bodelschwingh.[40]

At about the same time as the labour colony idea was being developed in Northern Germany, Denmark was developing an intensive social welfare programme. Although it was largely state run, the churches had their own programmes. Of interest is the "Peoples High School" programme developed by Bishop Grundlvig. This programme aimed at increasing the cultural awareness of the Danish rural working class, (roughly comparable as a social group to the South African poor whites) thus making them more resistant to imported ideas.[41] Modern writers, such as David Levine, consider that the Danish social service system was essentially based on an existing traditional structure of institutions. These included savings and sickness benefit societies and co-operatives. Levine considers that, by basing their social legislation upon these structures, government successfully carried out a social revolution without altering the basic relationships between the classes within Danish society. It was, in other words, an attempt to adapt tradition to a changing society influenced by outside, socialist, influences.[42] The high school idea can therefore, be seen as part of the general objective of

---

40. Marchand, "Labour Colony Settlements": 41.

41. J.I. Marais, Bishop Grundlvig and the People's High School in Denmark (Pretoria: Government Printer, 1911).

42. David Levine, "Conservatism and Tradition in Danish Social Welfare Legislation, 1890-1933: A Comparative View," Comparative Studies in Society and History 20(1978): 54-69.

maintaining the existing social organization of Denmark while introducing some changes considered suitable but not too controversial by the ruling classes.

The labour colony idea arrived in the Afrikaans speaking community of South Africa directly through the Dutch Reformed Church. This happened in the years immediately before the start of the Anglo-Boer War when the Church carried out research on how best to provide for increasing numbers of white farm families forced to abandon their farms as a result of drought and rinderpest epidemics amongst their stock. The research culminated in the establishment of the aforementioned agricultural labour colony at Kakamas. The ideas were also spread within the English speaking community. Here the medium of transmission was more indirect. Denmark's social service programme became so well known in Europe that it attracted the attention of the British writer, H. Rider Haggard, who is discussed next. Many aspects of the Danish programme were also copied by the American branch of the Salvation Army Church and this too became a channel through which the ideas reached South Africa.

Rider Haggard was born in England in 1856 and lived for eight years in South Africa, serving in the first British administration of the Orange Free State. Following on from the financial success of his adventure novels set in Africa, Rider Haggard became interested in the plight of the rural poor in England. In 1901-1902, he toured England at his own expense and used the material he had gathered to write a criticism of the

situation in rural areas entitled Rural England.[43] The book was a success and the author was asked by Britain's Colonial Secretary, Alfred Lyttelton, to undertake a Commission to the United States to investigate the rural labour colonies established by the Salvation Army. The Commission resulted in a British Government Blue Book and a popular work entitled The Poor and the Land.[44] Once again, the book was a success although the reaction of the British Government to the official report was "cool."[45] Haggard was then appointed to the British Royal Commission on Coastal Erosion and Afforestation, a body which was a precursor to the Forestry Commission. At the same time, he produced, at the request of the British Salvation Army, a report on their social work in the United Kingdom and, at his own expense, visited Denmark. This later visit was recorded in the book Rural Denmark and its Lessons which emphasized Denmark's systems of agricultural co-operatives, smallholdings and the People's High Schools.[46]

Rider Haggard came to South Africa during the period this series of books was being published. The visit occurred during 1913-1914 when he was a member of the Dominions Royal Commission on Natural Resources. He also returned to South Africa in early 1916 on behalf of the Empire Land Settlement Committee of

---

43. H. Rider Haggard, Rural England (London: Longman's Green, 1903); Peter B. Ellis, H. Rider Haggard: A Voice from the Infinite (London: Routledge and Kegan Paul, 1978), 160-62; Morton Cohen, Rider Haggard: His Life and Works (London: Hutchinson of London, 1960), 170-73.

44. H. Rider Haggard, The Poor and the Land (London: Longman's Green and Co., 1905); Ellis, Rider Haggard, 169-72.

45. Beresford, Rider Haggard, 173-75.

46. H. Rider Haggard, Rural Denmark and its Lessons (London: Longman's Green And Co., 1913); Cohen, Rider Haggard, 246-50, 259-62; Ellis, Rider Haggard, 189, 192-95.

the Royal Colonial Institute.[47] In these visits, he did not hesitate to promote his ideas on the utility of labour colonies as a means of solving poverty.[48] Rider Haggard's books on the subject were well known to leading South African politicians of the day and were cited by John X. Merriman and Thomas Smartt in debates in the House of Assembly.[49]

In the debates of the House of Assembly, it was made plain that labour colonies included possible forestry settlements. At the same time, the type of person who might benefit from a stay in a labour colony expanded. Originally seen as being suitable for poor whites with rural backgrounds languishing in the cities, now both forestry and agriculture were considered to be ideal occupations for young men who needed to be taught the value of hard work. Young white men in South Africa, have been "taught to look upon the manual worker as belonging to a class beneath him," wrote H.E. King, the Secretary to the South African National Union. Often they were undisciplined, lazy, lacked initiative and unconsciously realized it was possible to exist in South Africa on very little. They desired "to live as and have the status of professionals without having the hard

---

47. Ellis, Rider Haggard, 192-97, 221-23.

48. See, "Poor Relief," Star (4 April, 1914): 6; "Poor Relief, Town Council's Opinion," Star (29 May, 1914): 14; "East Rand Germiston Council," Star (9 June, 1914): 4.

49. South Africa, House of Assembly, Debates of the Third Session of the First Parliament (Cape Town: Cape Times, 1913), 3093-94; _____, Debates, Fourth Session, First Parliament, 2339; South Africa, State Library, Debates of the House of Assembly of the Union of South Africa as Reported in the Cape Times (Pretoria, State Library, 1966), vol. 1(1916), 62, 76, 102-6. See also, "Land Settlement in the Union: Future of the Returned Soldier," South African Journal of Industries 1, 5(January, 1918): 414-24.

work," he continued.[50] These criticisms were supported by the Federated Chamber of Industries which, taking into account the wood shortages experienced during the First World War, advocated the expansion of forestry schemes carried out by returning soldiers who lacked any other skills.[51]

By 1923, the idea of forestry as an occupation for the poor and unskilled had taken on both nationalist and romantic overtones. The Rand Daily Mail opined that:

> White Labour in forestry has an aspect which in this country should never be overlooked. It is that of its value to a white race endeavouring to root themselves in a national soil which black men hitherto have scratched rather than cultivated but on which their cheapness tends to give them a monopoly...that until whites have a stake in labour on the land, the land will never truly be theirs.[52]

Forestry, the paper continued in an expansive tone, could actually give the poor white a career as a labourer with the kind of hopes and aspirations normally enjoyed by those in executive offices:

> He can go on the Government relief works and take on a navvy's job, and it will be his own fault if it does not make him more of a man as well as a navvy...That apprenticeship served he can be passed to the forestry plantations.

From there, the labourer could become a:

> permanent forester with a comfortable house, large garden, fair living wage, healthy occupation...community advantages of schooling,

---

50. H.E. King, "Careers for the Rising Generation," South African Journal of Industry 4, 11(December, 1921): 890-93.

51. "South African Federated Chamber of Industries: Annual Convention, Durban, 16th-18th June, 1919," South African Journal of Industries 2, 8(August, 1919): 784-95. See also, "Land Settlement in the Union."

52. "White Labour Succeeds," The Rand Daily Mail (9 October, 1923): 7.

doctoring, recreation and social intercourse.[53]

Thus both the agrarian myth and the back to the land movement played a role in the adoption and development of the white labour settlement colonies of the Department of Forestry. Both assisted in identifying the sociological problems of the poor white, identifying people who would be suitable participants in the programme and in identifying forestry as a suitable vehicle for the programme.

Conclusions

The objective of this chapter has been to examine the ideas behind forestry in South Africa, and the ideas behind the labour colony concept. Viable forestry in South Africa is effectively restricted to managed plantations. It shares its methods and objectives with a number of other nations in what used to be the British Empire. These methods originated in Europe, particularly France, and were further developed in British India before being introduced to South Africa. The careers of three foresters were examined to illustrate the process. It is considered that this process as it relates to South Africa is a prime example of voluntary ecological imperialism.

The area of South Africa's plantations would not have expanded as rapidly as they did during the 1920s and 1930s if it were not for the acceptance by the government that labour colonies

---

53. Ibid.

could help solve the problems of the poor whites. This chapter has discussed two sources for the idea that labour colonies were a means of solving sociological problems, the agrarian myth and its offshoot, the back to the land movement. The labour colony idea arrived in South Africa through two routes. The first was via the Dutch Reformed Church which adopted the ideas of Pastor von Bodelschwingh in the early 1890s and applied them to its labour colony farm at Kakamas. The second route was via H. Rider Haggard who wrote extensively about the rural social services of Denmark and the labour colonies run by the Salvation Army in the United States. In both instances, these European ideas were "simplified" and relevant points adopted for what was perceived as being a problem unique to South Africa.

Chapter Two

The Physical Environment of Forestry in South Africa

Introduction

This chapter investigates the forest environment of South Africa which had profound effects upon the White Labour Forestry Settlements. First, the forestry situation in the Union is reviewed. The objective is to show that the afforestation carried out by the settlers was a logical solution to the small area and low productivity of the indigenous forests. During the First World War, the nation's reliance upon wood imports was dramatically brought to the attention of the public, business and the government. As happened in the United Kingdom, the removal of needed imports caused by enemy action was one of the factors that resulted in a large-scale State-sponsored tree planting programme. Then the evolution of South Africa's Department of forestry is reviewed. This shows that the major influences upon the Department were European forestry methods, especially those originating from France, and British experience with applying these methods in India. Lastly, the chapter looks at the limitations to forestry in South Africa created by the natural environment.

Introduction to the Forests

Not by any stretch of the imagination can South Africa be considered a naturally forested land. Barely 0,2 per cent of the land is covered with treed areas where the predominant vegetation is ten to thirty-five metres tall with the crowns of individual plants overlapping and interlocking.[1] Most of the indigenous forest and about one-third of the area of plantations are managed by foresters employed by the South African government. Currently, the Directorate of Forestry is a division within the Department of Environment Affairs. Responsible for the management and exploitation of a portion of the nation's indigenous and planted forests, the Directorate co-ordinates its efforts with the National Parks Board, other national and provincial bodies concerned with outdoor recreation and conservation, and wood using industries.[2]

---

1. C.J. Geldenhuys, "Distribution and Classification of the Indigenous Evergreen Forest and Deciduous Woodland in South Africa," in: Klaus von Gadow (ed), Forestry Handbook (Pretoria: Southern African Institute of Forestry, 1987), 443-53; Douglas Hey, "The History and Status of Nature Conservation in South Africa," in: A.C. Brown (ed), A History of Scientific Endeavour in South Africa (Cape Town: Royal Society of South Africa, 1977), 132-63. All production and area statistics include the values from the three quasi-independent areas in South Africa which have commercially viable forests, Venda, Transkei and Ciskei.

2. Hey, "History of Nature Conservation;" H.J.E. Uys, "Nasionale Bosbeleid en Boswetgewing in Siud-Afrika," in: S.A.I.F., Handbook, 10-23. Confidential sources within the Directorate have informed the author that two political initiatives may change this situation in the near future. These are the possible privatization of the plantations, a policy which is opposed by industry, and the possible transfer of the Directorate to the provinces.

The Indigenous Forest

It is estimated that the present total area of South Africa's indigenous forest is some 300 000 hectares of which 84 000 hectares are privately owned. This forested area is restricted to a comparatively narrow strip along the southern and eastern coasts and to areas of high rainfall in the northeastern Transvaal, southern Natal and the western Cape. Nowhere does the indigenous forest form a large discrete area. Rather, it is made up of a number of large "islands" which might be termed individual forests, and smaller areas more in the character of "woods." There are also many small groups of indigenous forest trees to be found in isolated "clumps" which are technically termed stands.[3] These stands are found in places where the microenvironment has allowed them to survive against external influences. The scattered nature of the indigenous forests gives the casual observer the erroneous impression that at some time they may have formed part of a much

---

3. These areas have only recently been identified on publicly available maps. See D.W. van der Zel, A Forest Map of Southern Africa with the Aid of LANSAT Imagery (Pretoria: Government Printer, 1988), especially sheet number 3322, "Oudtshoorn" and I.A.W. Macdonald and R.J.M. Crawford, Long Term Data Series Relating to Southern Africa's Renewable Resources (Pretoria: C.S.I.R., 1988), 237-49.

larger continuously forested area.[4] In the past, both man-made and natural fires have acted to restrict the size of the wooded areas and their extent.[5] For most South Africans, the most typical and well known "natural" forest is that surrounding the holiday and resort area of Knysna although much of the forested land here is actually planted.[6] The productivity of the indigenous forest is very low. From 1876 to 1940, about three million cubic metres of wood were extracted of which a third was cut in the years 1909 to 1918. Since 1940, about 5,5 thousand cubic metres has been removed each year. This annual yield is not expected to increase over the next half century.[7]

The Forest Industry

In spite of its small area of natural forest, South

---

4. This has been a contentious issue in the past. Some workers such as J.P.H. Acocks in his "Veld Types of South Africa," Memoirs of the Botanical Survey of South Africa 40(1975), contend that this was the case and that a shrinkage to the current size has occurred which is evidence of environmental degradation in post European contact times. More recently, analysis of pollen from organic samples collected in the Winterberg Mountains of the Cape refutes Acocks' hypothesis. This evidence suggests that the forests were never larger than they are today. See, M.E. Meadows and K.F. Meadows, "Late Quaternary Vegetation History of the Winterberg Mountains, Eastern Cape, South Africa" South African Journal of Science 84(April, 1988): 253-59.

5. South Africa, Department of Environment Affairs, Directorate of Forestry, "Forestry Guide Plan for South Africa" (Department of Environment Affairs, Pretoria, mimeograph, 1982), 2.

6. See, Eve Palmer, A Field Guide to the Trees of Southern Africa (London: Collins, 1983), 18.

7. Directorate of Forestry, "Forestry Guide Plan," 2.

Africa has a forest based industry which supplies the nation with practically all the wood products it needs. This industry is based upon plantations (see figure 2-1). Although not completely self sufficient in the production of raw wood, South Africa has reached a high level of sufficiency to the extent that surpluses of sawn timber, pulpwood, sawlogs and charcoal have all been exported in recent years [8] As an industry, forestry is fully integrated and practically all possible products are produced. At present, major imports include exotic hardwoods not grown in South Africa, art quality paper with a high rag content, high quality printing papers (generally wood based with high gloss created with kaolin fill) and kraft paper.[9] Currently, a total of 1 181 608 hectares are under cultivation of which 780 650 hectares are privately owned. This area produced some 12 662 882 cubic metres of roundwood (logs) during 1983/84 which was utilized as shown in table 2-1.[10]

Plantation Forestry

Plantation forestry is highly labour intensive and therefore labour costs are high compared to the cost of extracting

---

8. Ibid, 19-30.

9. Source: Confidential sources within the Canadian Embassy. It is anticipated that Anglo American will shortly open a kraft mill which will eliminate the necessity of imports. At present, South Africa has not developed its kaolin resources to their full potential.

10. S.A.I.F., Handbook, 2-3.

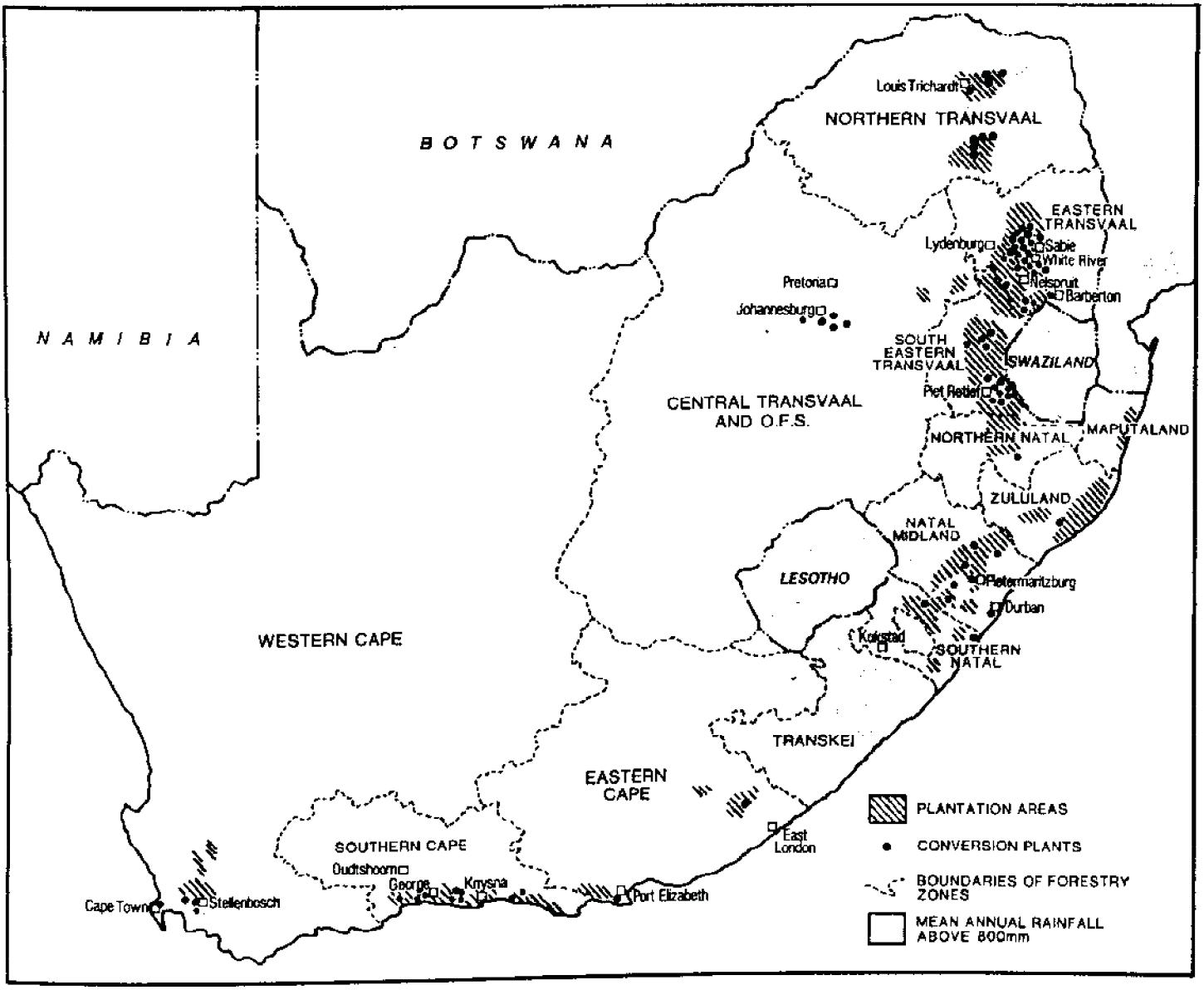


Fig. 2-1: Map of Contemporary Forest Industry in South Africa

Table 2-1. Volume of logs sold by product from plantations in 1983/84.

Product	Volume (m^3)
Sawlogs and veneer logs	4 617 428
Poles and droppers	422 803
Mining timbers	2 717 102
Pulpwood	4 261 998
Matchwood	28 375
Firewood*	444 096
Charcoal logs	170 807

*Total firewood consumption is about 20 times the volume sold.

wood from natural forests. The difference in cost has to be offset by lower costs in other areas. Typical offsetting factors are higher productivity from plantations, their inherent stability and the predictability of the product. Compared with operating in a natural forest, costs are also easier to control when relying on afforestation. It is therefore indicative of the suitability of South Africa for plantation forestry that sixty-six percent of the afforested area is privately owned. It is also significant that this high level of private ownership results from lessons learnt by industry from the performance of public forestry during the Second World War. During this conflict, South Africa was able to supply itself with much of the wood products it needed after overseas sources had been cut-off. The groundwork for this performance was lain during the preceding decades when large-scale planting programmes were undertaken by the Department of Forestry.

With imports readily available at the present time, the

question can be raised as to the economic viability of continued afforestation as compared to increased imports of wood products in order to meet increases in demand projected for the future. According to the 1982 Forestry Guide Plan for South Africa, for example, the nation needed to afforest an additional 193 000 hectares between 1981 and 1985 in order to provide for an increase in demand anticipated to occur during the period 1985 to 2015. This is assuming that existing afforested areas cut during this period were restocked.[11] If this additional area were not planted, then the shortfall would have to be made up by imports. From the point of view of industry and the private landowner, the decision as to whether or not to plant is an economic one. From the point of view of government, however, economic considerations are offset by political factors. It is precisely for this reason that the Directorate of Forestry expects to continue to be involved in afforestation. It anticipates a continued requirement to fill the shortfall between the forecasted required increase in afforested area and the area actually planted by private individuals and industry.[12] This then is one role for the Directorate that has not changed since the First World War.

Evolution of the Department of Forestry

---

11. Directorate of Forestry, "Guide Plan for Forestry," 106-15. See also H. Scharfetter, "Timber Resources and Needs in Southern Africa," South African Journal of Science 83, 5(May, 1987): 256-59.

12. Ibid, 116-28.

The first attempt in southern Africa at a comprehensive forest law was the 1859 Forest and Herbage Act of the Cape Colony. Largely ineffective because it failed to prescribe a means whereby the forest could be regulated, it nonetheless remained in force until 1888. In 1879, the Cape Parliament passed a resolution calling for the appointment of professional forest officers to establish a forestry administration. The first appointee was the Comte de Vasselot de Regne who accepted a ten year contract as "Superintendent of Woods and Forests." The French pattern of administration was quickly adopted and the Colony divided into three areas. Each was given the British term "Conservancy." These areas were the Western Conservancy, with its Head Office in Cape Town; Midland Conservancy with its office in George; and the Eastern Conservancy based in King Williams Town. With the annexation of the Transkei, a fourth conservancy was added, Transkei, with its head office at Umtata. Each Conservancy was headed by a professional forester with the title of "Conservator," and was divided into districts in charge of a District Forester.[13]

This pattern of administration was placed into law by the Cape's Forest Act of 1888 which gave the Conservators their powers including those of arrest and prosecution.[14] All in all, Conservators had a remarkably wide range of responsibilities with one of their primary duties being to train their own staff including foresters. The autonomy of the individual Conservators was strengthened after the departure of the Comte in 1891. From 1891 to 1906, each Conservator was directly responsible to the

---

13. King, "Historical Sketch," 6-10; Hutchins, "Forestry in South Africa," 399-400.

14. Ibid.

Commissioner of Crown Lands and Public Works who had D.E. Hutchins, Conservator for the Western Conservancy, detailed to advise him on forestry matters.[15] In 1906, a "Forestry Department" was established in the Cape Colony and a Chief Conservator appointed. The man chosen to fill this role was the longest serving forestry officer in the Cape, Joseph Storr Lister. This choice was not universally acclaimed as two officers, David Hutchins and C.E. Lane-Poole, immediately resigned their positions.[16]

During the period of colonial rule that followed the Anglo-Boer War, the organization of the Cape Forestry Department was copied by Natal and the former Boer republics, now British colonies. In order to provide the necessary staff for the new departments, several Conservators and District Forest Officers were transferred from the Cape to posts in the new colonies. These included C.E. Legat who became Chief Forester for Transvaal, G.A. Carlson to the Orange River Colony and A.W. Heyword who became the Chief Forester for Natal. With the advent of Union in 1910, the Cape's system of organization was confirmed over the whole country when Storr Lister became the Chief Conservator for South Africa, based in Pretoria, and the Department of Forestry was founded and made a responsibility of the Minister of Agriculture.[17] Since these officers had all been Conservators in

---

15. Keet, "Historical Review," 52; King, "Historical Sketch,"9-10.

16. Ibid; Margaret H. Lister, "Joseph Storr Lister, The First Chief Conservator of the South African Department of Forestry," Journal of the South African Forestry Association 29(May, 1957): 10-19.

17. King, "Historical Sketch," 10; Lister, "Joseph Storr Lister," 18.

the Cape prior to the creation of its own Forestry Department, they carried with them the tradition of a decentralized administration which was to be a feature of the Union's Department of Forestry until 1932.

Storr Lister was Chief Conservator of Forests for South Africa from 1910 to 1913. During that time, a Bill was presented to the Union government which became the Union Forest Act of 1913. This Act, which relied heavily upon the Cape Act of 1888, confirmed the hegemony of the Cape, and by inference, of French and European style forestry upon South Africa. Moreover, the Act restricted the number of registered woodcutters allowed to work in the indigenous forests. This reduction increased the level of poverty in the communities around Knysna and contributed to the pressure on the Government of General Botha to do something about the poor white problem. C.E. Legat, as Chief Conservator, was thereupon requested to prepare a proposal that resulted in 1917 in the founding of the first two settlements, French Hoek and Jonkersberg.

Environmental and Human Restrictions on Afforestation

Forestry in South Africa operates under quite stringent environmental limitations. Part of the story of the Department of Forestry's settlement colonies is that it reveals the practical understanding the foresters of the period had of their country. Their knowledge was excellent given the lack of data available to them and the resulting unscientific methods they had to employ.

Modern concepts employed by South African foresters include the necessity of ensuring the trees are planted on the best available land, site classes one and two, and that the area has a minimum of eight hundred and seventy-five millimetres of rain annually. Nowadays the trees come from superior genetic stock which is a known performer in the given environment and the seedlings are treated in the nursery and during transportation to the planting site such that this potential has not been destroyed.[18]

Human geographical factors also have an influence on the industry. The most suitable forest areas in South Africa lie at right angles to existing routes of transportation. These routes give access for the industrial and agricultural production of the interior to the sea at such ports as Durban, Port Elizabeth and Cape Town. This is especially true of the most productive forest area in the country, that of northeastern Transvaal. Ideally, the forest should lie parallel to its closest transportation route. The existing routing of major roads and railways requires industry to construct networks of forest access roads. This also creates problems in the siting of conversion plants.[19]

Currently, the major limitation on the economic success of afforestation in South Africa is rainfall while the second most important factor is the quality of land and the third, increasingly less important, is access to existing transportation

---

18. Directorate of Forestry, "Guide Plan for Forestry," 125-28.

19. For examples in a historical context, see: Graeme Wynn, Timber Colony: A Historical Geography of Early Nineteenth Century New Brunswick (Toronto: University of Toronto Press, 1981), 54-69, 97-102; Thomas R. Roach, "The Pulpwood Trade and the Settlers of New Ontario, 1919-1938," Journal of Canadian Studies 22, 3(Fall, 1987): 78-88. For a recent commentary, see: Albert C. Worrell, Economics of American Forestry (New York: John Wiley and Sons, 1959), 157-60.

routes. During the period covered by this study, however, foresters tended to take a broad based approach to the problem posed them by their nation's generally sparse and variable rainfall. Their preconception was that the rainfall pattern of South Africa was a continuum from semi-arid to moist-tropical and that a number of different species of trees could be matched across this continuum (taking into account if the species originated in a winter or summer rainfall area).[20] Foresters of the 1920s and 1930s therefore saw the tree growing potential of South Africa as quite large. There were, from their point of view, tree species available which were already adapted to many of the rainfall regimes found in the country.

This attitude was supported by the method employed to calculate the economic viability of a prospective plantation. The method assumed a sixty year rotation and over-emphasized the cost of establishment by incrementing the cost at a rate of four percent, compounded annually, and projecting it forward to the end of the rotation period.[21] The corollary of this emphasis on establishment costs was that the projected annual increment of the plantation was de-emphasized and planting on marginal sites condoned. In addition, it was assumed that, as in Europe, there would be a ready market for the thinnings from the plantations even from a young age. This expectation itself encouraged the area be planted at a much higher density than was necessary for

---

20. South Africa, Department of Forestry, Annual Report, 1931 (Pretoria: Government Printer, 1932), 31.

21. South Africa, Department of Forestry, Annual Report, 1920 (Pretoria: Government Printer, 1921), 2-3.

good growth form or was good for increment.[22] Despite drawbacks, this method of calculating costs and projecting yield, was a considerable advance from the methods employed in the Transvaal during the nineteenth century. With the growth of mining and the demand for mine timbers, large-scale planting of the highveld was advocated. In this instance the ability of the area to support a viable forest was highly over-rated because the estimate was based upon the growth rates of individual trees planted in gardens and alongside avenues.[23]

Thus, between 1917 and 1938, foresters were making decisions based on incomplete data. But, before they are criticized for their decisions, it must be remembered that the only way in which plantation timber was expected to be utilized was as mine timbers or, in the case of Black wattle, as a producer of tannin. These are low quality products which do not require high quality trees unlike sawn timbers. Although small sawmills did exist in South Africa at this time, their owners restricted them to converting imported material or producing lumber from indigenous hardwoods. Another potential use for the planted trees was in the production of wood pulp and paper products. But, although the first paper mill in South Africa was built in 1920, it utilized waste rags and paper. The first pulp and paper mill in the country to utilize locally produced logs did not commence operating until 1938, the same year in which the government's

---

22. Ibid. This policy was reversed following research by Craib. See: I.J. Craib, "The Place of Thinnings in Wattle Silviculture and its Bearing on the Management of Exotic Conifers," Zeitschrift fur Weltforstwirtschaft 1(1934): 77-108.

23. D.E. Hutchins, "Forestry in South Africa," in W. Flint and J.D.F. Gilchrist (eds), Science in South Africa (Cape Town: T. Maskew Miller, 1905), 408.

sawmill commenced to convert logs cut from mature plantations.[24]

Despite the limitation of not knowing for certain the ultimate use for their products, the foresters of the 1920s and 1930s chose well in terms of the species planted and the locations chosen for the plantations. By 1931, a usable rainfall map had been prepared from data collected at the various forest stations across the country. From this data, "sylvicultural zones" had been delineated and suitable species of trees identified for each zone.[25] Within each zone there was also a clear understanding of the general climatic requirements of each species. These requirements were; first, whether the species was adapted to winter or summer rainfall and the minimum amount of rain it required for growth; second the frost hardiness of the species; third, its soil-type requirements and then other factors such as wind firmness, the ability to withstand salt spray or to grow in high altitudes. Foresters were also impressed by the ability of certain species to grow fast and definitely tended to search out locations where such species could be planted.

The availability of this data implies an active research division within the Department. In fact, although there was a research officer appointed to head office in Pretoria, the actual amount of research carried out was small as the officer often found himself acting as a stand-in for his compatriots who were on leave. The data was actually collected by the field officers some

---

24. J.H. van Wyk, "Forest Policy in South Africa," Empire Forestry Review 17, 1(July, 1938): 44-50. South Africa, Department of Agriculture and Forestry, Division of Forestry, Annual Report for the Year Ending 31st March, 1938 (Pretoria: Government Printer, 1938), 9-10.

25. Department of Forestry, Annual Report, 1931, 34-35.