INDUSTRY, POLLUTION AND THE APARTHEID STATE IN SOUTH AFRICA

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In the era of decolonization that prevailed in much of the colonial world after World War Two, white South Africans strengthened existing segregationist legislation in an attempt to ensure the continuation of white rule over the country. White support for racist policies found its clearest expression in electoral support for Dr D.F. Malan's National Party (NP) who contested the 1948 elections on the basis of their apartheid policy. This policy, which was a radical intensification of existing segregation laws, aimed to protect the control of white South Africans over the whole country, while at the same time removing the limited rights of the coloured South Africans[1] and ensuring that black South Africans were given no political, economic and social rights on par with that of white people. The position of Indian South Africans, on the other hand, remained essentially the same as it had been since the arrival of Indian indentured labourers in the country 1860: they were still regarded as unwelcome outsiders, who were not given official recognition and citizenship and who were encouraged as far as possible to emigrate back to India.[2] The National Party won the 1948 elections mainly because their apartheid policy was perceived by the voters to be a better policy than that offered by the ruling United Party to address what white people believed to be "the native problem". They remained in power for 46 years – 46 long years in which the majority of the country's population were denied their basic rights in order to ensure the domination of the country by the white minority.

[1] In South Africa the term coloured people refer to people who are the offspring of mixed marriages and relationships. The coloured community constitutes a separate group in South African politics and are historically very close to the Afrikaner community in language, culture, religion and customs. During the apartheid era they were considered too black for the white people, and consequently the National Party attempted to remove those concessions that gave coloured people a higher status than black people. This included their removal from the Common Voters' Roll in 1956.

[2] Only in 1960 did the South African government finally acknowledge that the Indian community in South Africa was settled there permanently and were they afforded citizenship.

The history of apartheid South Africa is well covered in numerous publications that address a plethora of issues such as the abuses of the apartheid government,[3] the anti-apartheid struggle,[4] sanctions and boycotts against the country,[5] the role of the church both in supporting apartheid and the struggle,[6] and the fall of the apartheid state.[7] A generally neglected topic within apartheid historiography is the environmental impact of apartheid on both the human and natural environments.[8] Admittedly, South African environmental history is still a growing field and it is envisioned that the apartheid-era will become increasing popular with environmental historians once they move away from their current preoccupation with the history of nature conservation, forestry and soil conservation in particular.

This article aims to make a contribution to the field of apartheid environmental history and concerns itself with the way in which the apartheid state regulated resources to the

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[3] See for example A. Krog, *Country of my skull: guilt, sorrow, and the limits of forgiveness in the new South Africa* (New York, 2000); D. O'Meara, *Forty lost years: the apartheid state and the politics of the National Party, 1948-1994* (Randburg, 1996); M. Coleman (ed.), *A crime against humanity: analysing the repression of the Apartheid State* (Johannesburg, c1998).

[4] See for example P. Walshe, *The rise of African nationalism in South Africa: the African National Congress, 1912-1952* (London, 1970); F. Meli, *A history of the ANC: South Africa belongs to us* (London, 1989); T. Lodge and B. Nasson, *All, here, and now: black politics in South Africa in the 1980s* (New York, 1991).

[5] See for example M. Lipton, *Capitalism and apartheid: South Africa, 1910-84* (Aldershot, 1985); J. Hanlon and R. Omond (eds), *The sanctions handbook* (Harmondsworth, 1987); P.I. Levy, "Sanctions on South Africa: what did they do?", *The American Economic Review*, 89, 2, Papers and Proceedings of the One Hundred Eleventh Annual Meeting of the American Economic Association (May, 1999), pp. 415-420; S.J. Evenett, "The impact of economic sanctions on South African exports", *Scottish Journal of Political Economy* 49, 5 (Dec 2002), pp. 557-573.

[6] See for example P. Randall (ed.), *Apartheid and the Church: report* (Publication of the Church Commission of the Study Project on Christianity in Apartheid Society, Johannesburg, 1972); R. Elphick and R. Davenport (eds), *Christianity in South Africa: a political, social and cultural history* (Oxford, 1997); R. Tingle, *Revolution or reconciliation? The struggle in the church in South Africa* (London, 1992).

[7] See for example R. Harvey, *The fall of apartheid: the inside story from Smuts to Mbeki* (Basingstoke, 2001); A. Guelke, *Rethinking the rise and fall of apartheid: South Africa and world politics* (Basingstoke, 2005); R.M. Price, *The apartheid state in crisis: political transformation in South Africa, 1975-1990* (New York, 1991).

[8] Works with a stong historical basis include D.A. McDonald (ed.), *Environmental justice in South Africa* (Cape Town, 2002); L. Bethlehem and M. Goldblatt (eds), *The bottom line: industry and the environment in South Africa* (Cape Town, 1997); J. Cock and P. McKenzie (eds), *From defence to development: redirecting military resources in South Africa* (Cape Town, 1998). Historical works include F. Khan, "Soil wars: the role of the African National Soil Conservation Association in South Africa, 1953-1959", *Environmental History*, 2,4 (1997), pp. 439-459; P. Steyn and A. Wessels, "The emergence of new environmentalism in South Africa, 1972-1992", *South African Historical Journal*, 42 (May 2000), pp. 210-231; P. Steyn, "Popular environmental struggles in South Africa, 1972-1992", *Historia*, 47, 1 (May 2002), pp. 125-158.

advantage of industry, and failed to regulate pollution control measures which created an environment in which wide-scale industrial pollution became a normal and acceptable occurrence. Industry took its lead from a government that paid lip-service to the new environmental concerns that gripped the post-1945 world, while doing little to address real environmental concerns beyond their outdated conservation agenda. The extent to which this government strategy failed to adequately deal with the country's pressing environmental problems by 1990 was exemplified by the founding of the Industrial Environmental Forum (IEF) in 1990. This body originated from the cooperation between the country's major industries and was an attempt by industry to start regulating their own actions and practices to ensure a safer human and natural environment in South Africa.

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The environment was not a concern for the apartheid government.[9] When the NP came to power in 1948 they inherited an environmental agenda that in many ways can be categorised as typical colonial, within the African context, and first-generation in the international context, in that it focused predominantly on the conservation of natural resources, most notably soil conservation, and of fauna and flora species. Little attention was paid to the environment in the NP's first two decades in power, with the consolidation of the apartheid state through the implementation of discriminatory legislation and suppression of the anti-apartheid movement, and industrialisation and economic development topping the list of governmental priorities. Ironically, the promotion of economic and industrial development forced the government to pay attention to environmental issues, in particular to water issues in the 1950s with the passing of the Water Act no 54 of 1956 and pollution in the 1960s with the passing of the Atmospheric Pollution Act no 45 of 1965. While important pieces of legislation, their function were not environmental protection, but rather, in terms of the Water Act, the regulation of water use and competition between the various water use sectors, and

[9] For a more comprehensive overview of governmental environmental management between 1972 and 1992, see P. Steyn, "Environmental management in South Africa: twenty years of governmental response to the global challenge, 1972-1992", *Historia*, 46, 1 (May 2001), pp. 25-53.

controlling some of the most obvious air pollution caused by industrialisation in terms of the Atmospheric Pollution Act.

International opposition to the apartheid government and the country's increased isolation from the 1960s onwards further hampered the development of environmental concerns on a governmental level. Though the country did participate in the important 1972 United Nations Conference on the Human Environment (held in Stockholm), which placed the environment on international and national political agendas, the South African government was slow to adopt an environmental agenda that focused on the so-called second generation environmental issues such as industrial pollution. It also took its time to institutionalise environmental management within governmental structures. An independent Department of Environment Affairs, for example, was only created in 1984 but its minister and all its legislation were made subordinate to all other cabinet positions and legislations enforced by other departments. The government was slow to sign up to sustainable development (promoted by the 1987 Brundtland report, *Our Common Future*) preferring instead in 1988 to adopt the World Conservation Strategy of 1980. International isolation further ensured that the country was not invited to send an official delegation to the 1992 United Nations Conference on Environment and Development (also known as the Earth Summit, held in Rio de Janeiro) which in turn meant that sustainable development remained an elusive concept within both the governmental and non-governmental sectors of the South African environmental movement in the dying years of the apartheid era.

Within governmental circles there was the belief that there were more pressing matters than the environment to attend to, in particular the country's economic survival in the face of widespread sanctions and boycotts. The recession that set in in 1973 was intensified by these sanctions and boycotts and this in turn meant that the government had to pursue a policy of uncontrolled development in an attempt to survive economically. Uncontrolled economic development left little room for environmental considerations, and the consequences of this policy are ultimately to be found in the widespread industrial pollution problems that made headline in the 1980s and 1990s. Despite the

obvious inadequacies of the government's environmental management, the apartheid state was slow to acknowledge the failures of its system and quick to lash out against those who criticised it. In the government's view, South Africa had a proud and long history of conservation (notwithstanding the few scandals such as the illegal smuggling of ivory by the army in the 1970s and 1980s) for which the government had to be congratulated. This sole emphasis on conservation, however, proved insufficient in dealing with the many environmental challenges prevalent in an industrialized society, as the next section will show.

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Lack of governmental regard for proper environmental management during the apartheid era found expression in many environmental abuses, of which the lack of regulation of the industrial sector was but one. The promotion of economic development was an important component of NP policy from the outset. When they came to power in 1948 the country had finally entered the important industrialisation phase spurred on in no small part by industrial developments during and after the Second World War and the development of the Free State Gold fields from 1948 onwards. These industrial and mining activities soon transformed the South African economy from one based upon agriculture to one based primarily on the industrial and mining sectors. Industrialisation in SA did not only translate into massive governmental support for industries that saw the development of Sasol[10] and the expansion of Iscor[11] into their current Vanderbijlpark site in the 1950s, but importantly also required changes in governmental resources management.

The reorganisation and centralisation of water management became the first important step for the government to ensure the continued industrialisation in the country by ensuring that industrial areas secure a major portion of water resources. Consequently a

[10] Sasol was set up in 1950 to develop oil-from-coal technology in order to make the country less dependent on oil imports. South Africa has no known oil deposits and limited gas deposits located off-shore along the south-eastern coastline (close to Mussel Bay).
[11] The state-owned iron and steel company that was set up in 1927 during the country's short first phase of industrialization.

major component of the 1956 Water Act (no 54) of 1956 was the nationalisation of some catchments areas, which were called subterranean government control areas, where the abstraction, use, supply or distribution of a specific water resource was to be controlled by government.[12] The recognised purpose of water was also changed and the government acknowledged three main purposes of South African fresh water supplies, namely for agriculture, urban use and industry.[13] Stricter pollution control measures were introduced with the implementation of uniform effluent standards, and industrial effluent and other forms of discharged water (e.g seepage and storm-water run off, and water that arises as a by-product from industrial and mining activities) were made subject to pollution control measures. These measures were increased by later amendments to the Act, notably the Water Amendment Act, No 96 of 1984.[14] In terms of the Act and its amendments, all effluent had to be purified to prescribed standards laid down by the Minister of Water Affairs. These standards were arrived at after consultation with the South African Bureau of Standards. It was further stipulated that treated effluent be returned to the source of origin of the water at the point of abstraction.[15]

Despite good intentions, the Water Act of 1956, which remained on the law books until 1999, aimed at regulating the distribution and utilisation of water resources with a priority placed on making water resources available to any kind of industrial development practically anywhere in the country. If this meant alienating some of the NP supporters, so be it. The Oberholzer District in the Carletonville area (in the former Transvaal) is a good case in point. Despite the fact that there existed a historically close association between the NP government and the white farming community, which not only constituted a very important support base for the NP but also served as a remarkably good source for its politicians, the NP in the 1960s saw no problem in giving preference

[12] Water Act, No 54 of 1956, Section 28.
[13] M. Uys, *A structural analysis of the water allocation mechanism of the Water Act 54 of 1956 in the light of requirements of competing water use sectors* 1 (Pretoria, Water Research Council Report No 406/1/96, 1996), pp. 286-287.
[14] W. van der Merwe and D.C. Grobler, "Water quality management in the RSA: preparing for the future", *Water SA*, 16, 1 (Jan 1990), p. 49; W. Pulles, "Water pollution: its management and control in the South African gold mining industry", *Journal of the Mine Ventilation Society of South Africa*, 45, 2 (Feb 1992), p. 27.
[15] W. van der Merwe and D.C. Grobler, "Development of water pollution control in South Africa", *The Civil Engineer in South Africa*, 31, 10 (Oct 1989), p. 357.

to the water needs of the mining and industrial sectors when their interests came in direct competition with those of the white farming community. Ample ground water resources in the Oberholzer district facilitated the development of commercial agriculture in this area prior to the twentieth century. The establishment of the Oberholzer Irrigation Council in 1926 structured irrigation farming in this area and made the ground water from the Wonderfontein Eye and the Eye of Wonderfontein available to a large network of irrigation farmers through a system of lined canals. The establishment of the gold industry in this area in 1937 (along the West-Wits Line) initially had a limited impact on irrigation farming.

However, during the 1950s the goldmines started with a process in which they deliberately pumped millions of litres of water per day out of the aquifers to prevent the flooding of mineshafts and tunnels. This in turn lowered the water-table which impacted negatively on irrigated agriculture and created sinkholes. Despite wide-spread resistance from the farming community in the area, an interdepartmental government commission concluded in 1960 that the dewatering of ground water compartments should be made compulsory since the gold mining industry was a national priority. The abstraction of ground water resources by the mines resulted not only in the lowering of the water-table, but more importantly resulted in surface subsidence and in the drying out of bore holes. This forced the majority of irrigation farmers to sell their land, most of which was bought up by the gold mines. The gold mines were also accused of polluting the ground water, but irrigation farmers were never able to prove this.[16]

The Water Act was followed in the 1960s by the Atmospheric Pollution Prevention Act (no 45 of 1965) in which air polluters had to prove that they had adopted the best practical means to control their pollution. In terms of the act, the "best practical means" were seen as measures that were technically feasible and economically viable. The government retained the "best practical means" criterion into the 1990s, ignoring the shift towards the "polluter pays" concept that had been in force in most industrialised countries

[16] E. van Eeden, “Waterkwessies, met spesifieke verwysing na die uitwerking van waterontrekking op die landboubedryf in die Oberholzerdistrik (Carltonville-Gebied), 1959-1972”, *New Contree*, 39 (Aug 1996), pp. 78-91.

since the 1970s.[17] This law along with a few other pieces of legislation such as the Forest Act (no 72 of 1968) and the Physical Planning and Utilisation of Resources Act (no 88 of 1967) was South Africa's response, in the absence of a better word, to the environmental crisis and corresponding environmental revolution of the 1960s.

In the absence of television to bring the environmental crisis into people's homes, the environmental revolution passed by largely unnoticed by the general public and in turn ensured that there was very limited pressure on the government to act on what already constituted pressing environmental problems. As with so many other pressing issues in SA society throughout the apartheid era, the NP was not willing to acknowledge that environmental problems existed in the country on a wide scale and reacted with typical heavy-handedness whenever they were confronted with scientific evidence that pointed in, in their view, in the wrong direction. Ironically, it was the Cleaner Air, Rivers and Environment (CARE) campaign launched by *The Star* on 10 March 1971 that changed the nature of environmental reporting in South Africa and played an important role in educating the general public in South Africa on environmental problems. Headed by James Clarke, CARE set out to expose pollution, indifference towards the country's conservation needs, poor town planning and all abuses of the South African environment.[18]

CARE was instrumental in exposing the real state of the South African environment. Of particular concern to the campaign was the high pollution levels in the country, and they informed their readers that the air in Johannesburg and Pretoria in 1971 was so polluted that to inhale it equalled smoking 15 cigarettes a day. Many state and parastatal industries such as Iscor and Escom[19] were identified as major air polluters in the country, while particular attention was paid to the South African Railways (SAR) whose 2,473 steam locomotives caused serious air pollution throughout the country. With the SAR being the

[17] See M.A. Rabie, *South African environmental legislation* (Pretoria, 1976), pp. 93-108 for air pollution control in South Africa prior to 1976.
[18] *The Star*, 10.3.1971, p.1; J. Clarke, *Our fragile land: South Africa's environmental crisis* (Johannesburg, 1974), pp. 11-16; Interview: James Clarke, Johannesburg, 5.3.1998.
[19] The state-owned electricity company that is the sole provider of electricity in South Africa. Escom was created in 1923, and produced between 80 and 90 per cent of the country’s electricity from coal during the apartheid era.

only organisation allowed to cause smoke in smokeless zones, no pollution expert or state department was willing to speak out against the railways industry.[20]

The reason why the country had so much pollution-related problems by the early 1970s was not because of a lack of environmental legislation. Indeed, by 1972 South Africa already had an impressive list of acts that directly or indirectly related to the environment. The existing and new acts covered the whole environmental spectrum ranging from soil protection, nature and built-environment conservation, to the combating of atmospheric, marine, radiation, solid waste, noise, litter, and water pollution.[21] However, the main problem with environmental laws was the fact that the government failed in its attempt to enforce these laws. Soil conservation legislation, for example, was introduced for the first time in 1941; despite educational campaigns by the government and the National Veld Trust among the farming community, soil erosion in South Africa gradually increased.[22] In 1952 the average annual silt run-off in the country's rivers were estimated to be 400 million tons. By 1972 silt sampling in the Orange River, above the Hendrik Verwoerd Dam (now the Gariep Dam), indicated that the surrounding area alone was losing that amount of top soil annually. This in practice meant that the equivalent of 15 cm of the top layer of soil on 137,000 ha was lost annually.[23]

Enforcing environmental control measures was also difficult due to the government's direct involvement in the South African economy. Through Escom, Iscor and the South African Railways, the government was one of the major polluters in the country and its industries contributed to the rapid depletion of natural resources.[24] Within South African environmental legislation, the near "untouchable" status of the state, and thus also state-owned industries, in turn meant that the state was free to act as it wished where the

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[20] *The Star*, 10-31.3.1971.
[87] *Ibid.*
[21] See *Report of the Planning Committee of the President's Council on priorities between conservation and development* (PC 5/1984, Cape Town, 1984), pp. 16-18 for a list of environmental laws and the departments responsible for their enforcement.
[22] R.F. Fuggle, "An overview of lessons that can be learned from efforts to protect the South African environment" in *National Veld Trust jubilee conference, Pretoria, 2 to 4 November 1993* (Pretoria, 1993), pp. 49-50.
[23] Rabie, *South African environmental legislation*, p. 16.
[24] *Ibid.*, pp. 7-8.

environment was concerned. Air pollution control measures, for example, did not fully apply to the state. In terms of legislation the state was exempt from implementing measures to combat the control of smoke, and had little responsibility other than to inform the public if complaints were lodged against state-owned industries. In short, there was no mechanism in place that could ensure that the state prescribed to the standards laid down by law.[25]

According to Rabie and Erasmus one of the fundamental problems of South African environmental law is that "the underlying basis of the state's power to control pollution and conserve natural resources is that these powers be used in public interest. There is, however, no legal sanction in terms of which the state can be called to account in this respect".[26] Public objections to administrative decisions by the government, for example if the state decided to build a highway in an ecologically sensitive area, were limited in terms of the administrative laws of South Africa. An applicant seeking a review of the administrative decision, was not allowed access to the court if the person did not establish *locus standi* (i.e. a direct personal interest in the outcome of the decision). Even if *locus standi* was established, the courts showed themselves unwilling to get involved in such questions, and almost never ruled against a project on the grounds that it was environmentally unsound.[27]

As mentioned earlier, the South African government's commitment to its domestic policy of apartheid and its corresponding isolation in the international community from the 1960s, also resulted in the implementation of economic and technological sanctions. Sanctions dated back to the 1962 United Nations General Assembly calls for economic and diplomatic sanctions against South Africa, but remained largely ineffective until the 1973 Oil Crisis created an economic recession which lingers on into the present. The recession was intensified by industrial actions, fall in commodity prices on the world market and the intensification of economic sanctions, especially after the Soweto

[25] F.R. Fuggle and M.A. Rabie, "Air pollution" in R.F Fuggle and M.A. Rabie (eds). *Environmental concerns in South Africa: technical and legal perspectives* (Johannesburg, 1983), pp. 296-298.
[26] M.A. Rabie and M.G. Erasmus, "Environmental law" in R.F Fuggle and M.A. Rabie (eds). *Environmental concerns in South Africa: technical and legal perspectives* (Johannesburg, 1983), pp. 48-49.
[27] *Ibid.*, pp. 47-49.

Uprisings of 1976. Combined, these factors had a detrimental impact of the country's economy and forced the government to pursue an economic policy that excluded any consideration for the environment and limitations thereof.[28]

Uncontrolled economic development poses many dangers to both the human and natural environments such as the overexploitation of resources, slack enforcement of environmental laws and wide-spread pollution. In South Africa, numerous environmental problems associated with the country's unchecked economic development have been recorded. These include the siting of industries close to communities (e.g. black townships next to industries), governmental approval to mine in ecological sensitive areas (e.g. St Lucia), lack of adequate governmental action when wide-spread pollution is caused by industries (e.g. Sappi's Ngodwana Paper Mill spill and Thor Chemicals), the reluctance of the government to ban pesticides and insecticides that are harmful to both humans and the environment (e.g. the Tala Valley case), dodgy governmental positions on toxic and hazardous waste disposal, and the failure of the government to sponsor research into alternative and safe energy sources for the country. Sappi’s Ngodwana Paper Mill spill and the mercury poisoning by Thor Chemicals serves as good examples of the extent to which the government accommodated industry and neglected to protect the SA environment.

Sappi's Ngodwana Paper Mill spill is probably the best example of industrial environmental neglect and the weak reaction of the government to industrial pollution, and became one of the most publicised cases of pollution in the country. A large spill of soap skimming, which contained smaller amounts of toxic sulphates, occurred at the Ngodwana mill in September 1989. This spill devastated the ecosystems of the Elands and Crocodile Rivers, and killed more than 22 fish species and other forms of animal life in a stretch of river downstream from the mill. The Lowveld Environment Action Foundation, formed by landowners in the area in response to the spill, and the Wildlife

[28] M.S. Steyn, “Environmentalism in South Africa, 1972-1992: an historical perspective” (MA thesis, University of the Free State, Bloemfontein, South Africa, 1998), pp. 109-111.

Society, took up the issue, and demanded an independent inquiry into the causes of the accident. Sappi was fined only R600 for the spill and the resulting damage.[29]

The Ngodwana spill was part of a general increase in water pollution due to industrial discharges that occurred from 1988 onwards. Other spills included the dumping of toxins in the Vaal River by the SASOL I plant at Sasolburg in 1988, the leaking of poisonous chemicals into the Selati River (which runs through the Kruger National Park) by a phosphate company in 1988, the regular polluting of the Olifants and Crocodile Rivers by toxic heavy metals, phosphate and nitrogen, and the caustic soda spill of the Atomic Energy Corporation into the Moganwe Spruit close to the Hartbeespoort Dam in 1991.[30] In their report on the situation of waste management and pollution control in South Africa, the Council for Scientific and Industrial Research found that 59.2 per cent of all the hazardous waste in the country was discharged into water. Major stumbling blocks in the proper treatment of effluent before discharging it, were identified as a lack of technology and lack of proper enforcement of legislation.[31]

A campaign against toxic waste disposal was launched in April 1990 when it became known that workers at a mercury recycling plant in Cato Ridge had suffered chronic mercury poisoning. The company involved, the British-owned Thor Chemicals (Pty.) Ltd which came into existence in 1963, was initially involved only in the manufacturing of mercury (used in the paint, textile and chemical industries) and non-mercurial compounds. In 1976 the company expanded its operations to include the recovery of mercury from spent catalyst. In the 1980s Thor Chemicals extended their operations and obtained contracts to recycle mercury for seven companies from the United States of

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[29] *The Weekly Mail*, 29.9.1989-5.10.1989, p. 5; E. Koch, D. Cooper and H. Coetzee. *Water, waste and wildlife: the politics of ecology in South Africa* (Johannesburg, 1990), p. 10.

[30] *The Weekly Mail*, 29.9.1989-5.10.1989, p. 5; "Pollution critical in SA as perennial rivers run dry", *Chamber of Mines Journal*, 33, 4 (April 1991), pp. 5, 11; *Business Day*, 21.11.1991, p. 5; M. van Eeden, "Besoedelde rivier wek kommer", *Prisma*, 6, 3 (April 1991), p. 36; H. Coetzee and D. Cooper, "Wasting water: squandering a precious resource" in J. Cock and E. Koch (eds), *Going green: people, politics and the environment in South Africa* (Cape Town, 1991), pp. 134-136.

[31] Council for Scientific and Industrial Research, *The situation of waste management and pollution control in South Africa: executive summary* (Pretoria, 1991), pp. 3, 6-9, 12; Environmental Monitoring Group, *Clean production: a preliminary assessment of the need and potential for the introduction of clean technology in some industrial sectors in South Africa* (Cape Town, 1993), pp. 16-18, 25-26.

America (USA), the United Kingdom, Italy, Brazil and the Middle East.[32] The first foreign mercury shipments arrived at its site in Cato Ridge in 1986.[33]

Problems at the Cato Ridge site were first discovered by government inspectors in 1988 and late in 1989 it became known that large quantities of mercury were leaking from the plant into the Umgeni River, which flows into the Inanda Dam, Durban's main water source. In February 1990 water and soil samples were taken from the surrounding area, and the tests conducted showed high levels of mercury poisoning, with one sample being over 100 times the recommended limit. Furthermore the mercury had an organic content of over 30%. In the USA recycling plants refuse to handle mercury with an organic content of over 3%, while the processing of wastes with an organic content of over 4% is illegal in terms of the regulations of the US Environmental Protection Agency.[34]

The event that triggered the campaign against Thor Chemicals was a report that two workers had "gone mad", because they were saying and doing strange things and were shaking a lot (typical symptoms of mercury poisoning). The issue was taken up locally by Earthlife Africa, the Chemical Workers Industrial Union (CWIU), the residents of Fredville (the affected area) and farmers from the Tala Valley, while Greenpeace mobilised support against Thor Chemicals in the USA. In April 1990 the company and its activities were brought to the attention of a wider audience when demonstrations were held at its site in Cato Ridge and in the USA at American Cyanamid plants. These demonstrations were important because it was the first time that NGOs and trade unions in the country had united in an environmental campaign, and it was the first time that South African environmental interest groups combined forces with NGOs and trade unions in another country (USA) to fight for a common goal.[35]

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[32] Borden Chemical and Plastics (USA), Calgon Carbon Corporation (USA), American Cynamid (USA), Margate (UK), Ausimont (Italy), Solvay do Brasil (Brazil), and Red Sea and Gulf (Middle East).
[33] Commission of Inquiry into Thor Chemicals, *Report of the first phase* (Cape Town, 1997), pp. 3-5.
[34] Earthlife Africa, "Thor Chemicals: chronology of the campaign against Thor Chemicals", <http://www.earthlife.org.za/campaigns/toxic/thor.htm>, 1997; M. Colvin, "Occupational hazards", *Indicator South Africa*, 9, 1 (Summer 1991), pp. 82-83; G. Coleman, "The campaign against Thor Chemicals: trade unions and the environment", *Critical Health*, 33 (Nov 1990), pp. 69-70; Koch, Cooper and Coetzee. *Water, waste and wildlife*, p. 46.
[35] R. Crompton and A. Erwin, "Reds and greens: labour and the environment" in Cock and Koch (eds), *Going green*, pp. 82-83; Coleman, “The campaign against Thor Chemicals”, pp. 71-74.

Amidst the public outcry that followed the campaign, the Department of Water Affairs ordered Thor Chemicals in April 1990 to suspend its operations for four weeks because of heavy rains. The company continued with its activities after the temporary suspension was lifted and even applied for the expansion of its operations, which application was granted by the government in February 1991. In March 1994, after four years of campaigns directed against their activities, Thor Chemicals announced that it would cease to import toxic waste and applied for a permit to incinerate 2,500 tons of stockpiled waste without recovering mercury. Their application was challenged by the Environmental Justice Networking Forum (EJNF) and the CWIU, which led directly to the appointment of a commission of inquiry by the government in 1995. The commission dismissed the demands of the EJNF and the CWIU that the wastes be returned to their senders, and recommended that the company be allowed to incinerate its mercury stockpile.[36]

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By 1994 South Africa had a long history of industry-related environmental problems with industrial initiatives based mainly on an economic ethic that excluded any considerations for the natural and human environments in which they operated. Even though the government had gradually reduced their direct participation in the economy through the partial privatization of some state industries in the late 1980s, industries on the main knew that they could count on the full support of the government when faced with angry environmental and local protesters against specific pollution problems. This economic ethic is one of the enduring legacies of the apartheid era in the so-called New South Africa. But, while the apartheid government pursued an economic policy of uncontrolled economic development in the name of economic survival, the African National Congress government has done so since 1994 in the name of poverty reduction.[37] In this process

[36] Crompton and Erwin, “Reds and greens”, p. 83; Commission of Inquiry into Thor Chemicals, pp. 9-26; Earthlife Africa, "Thor Chemicals..."; *Vrye Weekblad*, 14.2.1992, p. 4; *Vrye Weekblad*, 3.4.1992, p. 16; *The Daily News*, 21.2.1992, p. 3; *Beeld*, 15.6.1994, p. 2.

[37] For more details on the continuing impact of apartheid’s environmental problems beyond 1994, see P. Steyn, “The lingering environmental legacy of repressive governance: the environmental legacy of the

industries have continued with their business as usual, while employing large numbers of lawyers from the country's top law firms to oppose any accusations of environmental neglect. On a whole, industrialisation has brought many advantages to the South African economy, but at the cost of polluting the natural and human environments in their immediate vicinities. Until such time as this state of affairs is rectified, the people living next to these industrial areas will continue to be denied their basic right "to an environment that is not harmful to their health or wellbeing" as guaranteed in the South African Bill of Rights.[38]

apartheid era for the New South Africa" in J. Oosthoek and B.K. Gills (eds), *The globalization of environmental Crisis* (London, 2008), pp. 109-120.

[38] *The Constitution of the Republic of South Africa*, 1996, Section 24 (a) and (b).