Throwing Stones at a Giant:

an account of the Steel Valley struggle against pollution from the Vanderbijlpark Steel Works

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Report for the Centre for Civil Society, University of Kwazulu Natal, March 2006

Acknowledgements:

We would like to thanks everyone who gave their time and shared their knowledge and experiences with us. Our special thanks go to advocate Margie Victor, Dr. Stefan Cramer for his inputs into sections 2 and 3, to Dinga Sikwebu for section 7 and to the VEJA research team. During the conduct of this research we have been inspired by the moral courage, commitment and tenacity of many of the residents of the greater Steel Valley. This report is a tribute to them.

Section 1: A TURNING POINT IN ENVIRONMENTAL JUSTICE STRUGGLES IN SA

A steel works in the industrial heartland of South Africa is the site of a protracted struggle. It is a David and Goliath type struggle because in mobilising against Mittal Steel the local community is challenging one of the giants of corporate globalisation. Its outcome could be a turning point in the history of environmental justice in South Africa. Two of the main actors are Indian millionaire Lakshmi Mittal and South African pensioner Strike Matsepo. The one is the owner of the polluting steel works, the other a victim of its pollution. Together they illustrate extreme differences in access to power and resources.

The key actors

Lakshmi Mittal is the chairperson of Mittal Steel, the largest steel producer in the world which took over ISCOR in June 2004. He is estimated to be the third richest man in the world (*International Herald Tribune* 4.2.2006). He recently bought a house in London for over R840 million in what was described as "the most expensive residential property deal recorded in England."

This Indian steel magnate, named for the Hindu goddess of wealth, was born in Sadulpur in Rajasthan in June 1950. He started in his father's business in Calcutta at the age of 16. After completing a bachelor of commerce degree in 1969, he joined his father's steel export business and the company acquired plants in Indonesia, Trinidad, Mexico, Turkey Kazakhstan, Germany, Ireland, Romania, Algeria, Bosnia, the Czech Republic, Poland, and Macedonia among others. At the time of writing, Mittal was involved in a hostile bid for Arcelor, Europe's largest steel company. Photographs of the steel magnate, such as that of the cover of a recent issue of *The Financial Mail*, suggest that he is a satisfied man.

Strike Matsepo in sharp contrast, is sad and angry. Now aged 74, a practicing priest and sangoma, (traditional healer) he worked as a mechanic at the Coco Cola factory in Vanderbilpark and cashed in his pension to buy a smallholding near Vanderbjlpark for R65,000 in 1990. "This was at the time of Mandela when people could buy where they liked," he says. He brought his children, stepchildren, sister, brother and grandchildren to live with him in his new home and states proudly: "a big sack of mealie meal was finished in two weeks." His plot adjoins the ISCOR slag heap which dominates the sky. He says: "it used to be a good place". But in the past 15 years several of his animals were born with birth defects and many have died. "In all 30 cows, 9 calves, 5 sheep, 6 goats, 3 tortoises, 7 dogs, 2 cats, 1 pig and 20 chickens have died. One pig was born here with a penis in his anus." Matsepo presently suffers from blood in his urine, tiredness and lack of concentration. He recently spent 6 weeks in hospital with kidney failure. His sister Alinah came to live with him but she died in July 2004 of kidney failure and cancer. Strike comments with some bitterness: "My sister would be alive now without ISCOR.Now they supply us with piped water, but it's too late for her". Other family members are also sick, and report that they stay inside the house because the dust and air pollution is so bad. Recently having suffered a stroke, and then facing the threat of the sheriff of the court impounding all his possessions to pay legal costs from a failed court challenge, he states: "My body is full of pain", but he is prepared to die fighting ISCOR. "I am trapped here," says Strike. "I can't move and buy a new place with the little money they are offering me for this plot" (Interview, Vanderbilpark, 22.6.2005).

While Strike feels trapped in his property next to the steelworks, lacking the resources to move and forced to absorb what this report will show to be the externalities of environmentally careless steel making, Lakshmi Mittal is very mobile. This mobility is one of the characteristics of contemporary globalization.

Globalisation from 'above' and from 'below'

These two individuals illustrate the two-faced nature of the process of globalisation. Mittal illustrates the growth and consolidation of corporate power sometimes termed 'globalisation from above'. The Vanderbijlpark steel mill is now part of the largest steel producing company in the world, operating in 14 different countries, and employing 220 000 people with revenues worth billions of dollars. Mittal recently said of his Arcelor bid: "This is a great opportunity for us to take the steel industry to the next level. Our customers are becoming global, our suppliers are becoming global, everyone is looking for a stronger global player." One banker close to the Arcelor bid said: "This is globalisation in action." (*The Observer* 5.2.2006).

Strike Matsepo is part of a localized struggle against ISCOR's pollution of the groundwater in Steel Valley, intent on claiming the constitutional right to a clean and healthy environment. It is a struggle which is testing the limits of the state's capacity to fulfil the promise of this right. It is making connections with other environmental justice groupings around the world.

This resistance is locally embedded but globally connected and, in this sense, is part of a process of 'globalisation from below', sometimes termed 'grassroots globalisation'. The Arcelor bid has generated linkages between environmental justice groups in different parts of the world. Some writers have argued that in this sense globalisation has emancipatory possibilities in terms of 'deepening democracy' and facilitating 'cross-border activism' through transnational advocacy networks or TANs. According to Appadurai these networks provide "new horizontal modes for articulating the deep democratic politics of the locality" (Appadurai, 2002:25). He refers to the new series of social forms that have emerged to "create forms of knowledge transfer and social mobilization that proceed independently of the actions of corporate capital and the nation state system...These social forms rely on strategies, visions and horizons for globalisation on behalf of the poor that can be characterised as 'grassroots globalisation' or 'globalisation from below'". (Appadurai, 2002:272)

This report questions Appadurai's somewhat triumphalist account of grassroots globalisation. It will show that the linkages between this localised resistance to the pollution of the steel mill and the global environmental justice movement involves networks that are embryonic, fragile and tentative. But the report argues that this struggle could be a catalyst to the development of a broad based, open, and inclusive environmental justice movement in South Africa, analogous to the catalyst provided by the Love Canal struggle in the USA in the 1970's.

A potential turning point

The famous Love Canal struggle in the 1970s in the United States, where a whole community was poisoned and then fought back, provides an example of how a working class community with few resources can defeat the power of a multi-billion international corporation and an unresponsive government. The activist leader Louis Gibbs maintains that, "Love Canal taught us that government will protect you from poisoning only when you force it to". This is a sentiment that is shared by many people interviewed for this report.

There are many similarities between the Love Canal and Steel Valley struggles. Both involved local people confronting corporate giants, in both cases people experienced fear, anxiety and many felt trapped; both struggles had to contend with indifferent state officials; both involved tremendous resources of courage and energy from residents; both involved similar hidden, undramatic, insidious processes of contamination which developed over decades. As Levine writes of Love Canal: "there were no walls of water, no bolts of lightning, no reports of multiple deaths and brave rescues. In short, the Love Canal situation was neither cataclysmic nor dramatic" (Levine, 1982:179). In Steel Valley, as at Love Canal, "there was no moment of impact when physical surroundings changed suddenly. Just as responsible agencies followed the pattern of ignoring, denying and minimizing, and just as private

sources did not rally around an almost invisible event, so the nature of the occurrence affected the reactions of the residents themselves. The chemicals had been present for some thirty years by the time the Love Canal was declared a health hazard. For community members, the mental process of moving from a condition of ignorance about the chemicals, to belief in the possibility of personal danger from them, to sharing the beliefs of others and joining in activities... with organized residents was rather slow and uneven overall." (Levine, 1982: 193)

The report will argue that the Steel Valley struggleⁱ is a potential turning point, in the sense of a decisive break with the past history of environmental justice in South Africa for a number of reasons:

- It is located in a part of the country which has a tradition of militancy which was dramatically expressed in the 1984 Vaal uprisingⁱⁱ. This militant tradition of opposition to the practices and agents of the apartheid regime was claimed by several informants. They represent some continuity of leadership between those past and present struggles for justice. This continuity is illustrated in the leadership of the Vaal Working Class Crisis Co-ordination Committee, Phineas Malapela who participated in the 1984 Vaal Uprising.
- Many Vaal activists claim the post-apartheid constitution as a foundational document, as a source of moral authority, the basis of claims to rights, such as the right to live in a clean and healthy environment.
- The focus of the struggle against the steel mill is on health and livelihoods. It thus avoids all the negative meanings associated with apartheid-era conservation which focused on the conservation of threatened plants, animals and wilderness areas to the neglect of social needs. This struggle reveals the holistic nature of social and environmental justice.
- The social base of the struggle is solidly working class but incorporates other classes in an alliance that includes peasant smallholders, unemployed youth, and a small number of professionals. This diversity is characteristic of the 'new' social movements emerging in contemporary South Africa which operate outside the traditional political organisations of the working class, the trade unions and political parties. This is clearly a 'new' and unprecedented moment which is marked by new global forces, new configurations of power, new networks and new forms and strategies of organising.

A 'new' moment

Mobilisation around survivalist issues, such as access to clean water, in post-apartheid South Africa has increased in the context of increasing deprivation and environmental degradation. The locus of these struggles is the broad South African working class or what Desai (2002) has termed 'the poors'. The emphasis on 'rights' in the post apartheid dispensation is in tension with vast areas of unsatisfied social needs which provides the main impetus to these localised struggles. In addition the ANC's neo-liberal policies which involve deregulation, increasing unemployment, poverty, social inequality, an increase in the privatization of basic services and the use of cost-recovery mechanisms such as water and electricity cut offs and the installation of pre-paid meters (a form of self disconnection have hit the working class hard). There is a deepening disillusionment with the failure of neo-liberal policies to attract investment and provide jobs. At the same time, the re-ordering of political opportunity structures have created space for previously excluded groups to contribute to policy formulation, and to make claims through the courts. There are new opportunities for collective action, particularly in the Vaal triangle, the industrial heartland of South Africa.

The Vaal Triangle is the site of substantial petrochemical industries (Sasolburg), mining and smelting

(Vereeniging and Samancor) and steel making (Vanderbjlpark). It is the site of some of the worst air and groundwater pollution in the country and was declared by the minister of Environmental Affairs in October 2005 a 'pollution hotspot', a 'priority area for focussed air quality management attention' in terms of Section 18 (1) of the National Environmental Management: Air Quality Act 2004.

'New' forms of social mobilisation

The failure of the post apartheid state to achieve social and environmental justice is the main determinant of the growth of the so-called 'new' social movements, of popular organisations, such as those involved in the struggle against ISCOR, which operate outside the established framework of political representation. However there are serious questions whether these patterns of grassroots mobilisation are largely ephemeral and local, incapable of extending their reach or of establishing a sustained, durable presence. Can they move beyond the confines of 'militant particularisms' to use Raymond William's phrase, and generate a broader, transformative politics which provides a challenge to neo-liberalism and the deepening of democracy that Appadurai claims?

Central to this research report is whether the Steel Valley struggle constitutes a social movement. Social movements are best defined as "forms of collective action with a high degree of popular participation, which use non-institutional channels, and which formulate their demands while simultaneously finding forms of action to express them, thus establishing themselves as collective subjects, that is as a group or social category" (Jelin quoted in Escobar and Alvarez, 1992: 15). The actors involved in the Steel Valley struggle do not constitute a cohesive group with shared beliefs and a collective identity, but they are largely from excluded or marginalised constituencies confronting a shared issue. Their struggle represents an embryonic alliance across class and race divisions, a remarkable achievement for this divided society. This report focuses on the social base and strategies employed in the Steel Valley struggle. It emphasizes the capacity (actual or potential) for mass mobilisation as the most important criterion of a social movement.

While the notion of a social movement is grounded in the capacity for mass mobilisation, grassroots demands have to be articulated and processed through organisations. The inchoate environmental movement in South Africa generally and in the Vaal Triangle specifically, contains a multiplicity of organisational forms ranging from coalitions, caucuses, NGOs, and loose networks to formal, membership based structures. The concluding section points to lessons from the Steel Valley struggle for the development of an environmental justice movement in South Africa.ⁱⁱⁱ

Section 2: A CORPORATE GIANT: FROM ISCOR TO MITTAL STEEL

The people of Steel Valley and Vanderbijlpark – as well as the Department of Water Affairs – faced an extraordinarily strong opponent when they, after 1961, started to object to its pollution. For 44 years since then, their efforts to stop the pollution and obtain remediation and compensation came to naught. Where did ISCOR's strength come from?

Steel is central to any industrial economy (Fine and Rustomjee, 1996). So closely is it linked to the industrial life of a country that its cycle of boom and bust mirrors those of the economy as a whole. And within the South African steel industry, ISCOR (or now Mittal Steel) is a giant, controlling more than 80% of the local steel market, with direct influence on important downstream sectors such as automobile manufacture, industrial tools and machinery, construction and mining and upstream control of iron ore and coal mines.

ISCOR has played a crucial role in the country's industrial development. Historically, ISCOR has responded to the strategic needs of crucial, large scale industries like the mines and the railways. It has enabled the growth of a large metal engineering sector and was the basis of the successful SA automotive industry. It was crucial to the development of an arms industry since World War 2, which was later deployed to defend apartheid. Shortly before the Second World War, and increasingly after that, ISCOR established its strategic position in the economy. As such, it became a power unto itself. Finally, the privatisation and globalisation of ISCOR – in becoming part of the world's biggest steel empire, Mittal Steel – has brought an entirely new dimension to its power and its response to the attempts of its neighbours to bring it to book.

Construction on the Vanderbijl plant – the company's fourth steel mill after the Pretoria, Vereeniging and Newcastle mills - started in 1948. The new plant was a modern continuous strip mill, where all of the country's requirements for flat rolled products – plates, sheets, tube strip and tinplate – could be made.

Privatisation & the Mittal take-over

As the apartheid state lurched to its demise in the 1980s, ISCOR's troubles also grew. By the 1980s, South African markets had failed to expand sufficiently to ensure local sales for ISCOR. ISCOR by then depended on exports for the marketing of nearly 40% of its output. When iron and steel was included in the US embargo on South Africa 1989, ISCOR lost an important market. It also experienced recurrent labour problems (Clark, 1994:167). In 1988 then state president PW Botha announced a general privatization strategy. Despite ANC opposition, in 1989 ISCOR was privatized for a total of R3 billion in shares. By June 1996, the biggest shareholders were Standard Bank Nominees (26%), the IDC (15%) and Mutual Life (10%). However, the international steel industry was going through one of its worst downturns in history.

By 2001 losses led to the Industrial Development Corporation (IDC) decision to unbundle ISCOR. The coal mining division of ISCOR was unbundled as Kumba resources. In 2001 LNM bought 34.8% of the issued shares in ISCOR on the JSE and entered into a three-year Business Assistance Agreement (BAA) with LNM. By October 2004, LNM was holding 47.23%, and applied to the South African competition tribunal to become the majority shareholder holding at 50%. The merger was opposed by two trade unions active at ISCOR – NUMSA and Solidarity. NUMSA argued that ISCOR had reduced its work force from 44 000 in 1980 to 12 200 in 2004 and feared further job loss. Solidarity argued that Mittal had a reputation for laying off workers as part of his "turn-around strategy" for newly acquired steel mills. However, it went ahead, and ISCOR Vanderbijlpark, along with the plants in Vereeniging, Newcastle and Saldanha, is now globalised as part of the biggest steel empire in the world.

There is concern that a key strategic industry should be controlled by a foreign company. The South African government and industry is already dealing with the fall-out of the Mittal approach. The Department of Trade and Industry has had talks with Mittal on "developmental pricing" (making steel cheaper and more available for South African users and manufacturers) as opposed to the ISCOR practice of Import Parity Pricing which means that Mittal steel is sold in South Africa for the same price as imported steel, even though its production costs here are lower. South African gold mining companies Harmony and DRD Gold have lodged formal complaints about Mittal's pricing policy and a Competition Tribunal hearing is under way at the time of writing (Bain, 19.6.2005). They argued that SA prices were about 40% higher than in South Korea, Taiwan and China (Business Report, 7.3.2005). Mittal steel minority shareholders have been disappointed about at a lower than expected dividend pay-out, and the non-transparent style of the new majority owners. The company has also been accused of tax evasion. In June 2005 SARS sent an official notice demanding payment of about R400 million in taxes. (Clark and Craze, 2005)

In 2005, steel prices rose sharply,more than 70% from the previous year (Business Report, 25 Feb 2005), because of strong demand in China. Mittal Steel currently shows the highest profits as a percentage of sales (21%) in the world, followed by South Korea's Posco (16%), compared to after-tax profits of between 4% and 8% of turnover for most of the steel producers in the Fortune 500. (Davie, K. Mail & Guardian, Oct 14-20, 2005).

Who is Lakshmi Mittal?

The Mittal steel fortune started from a small steel mill in Calcutta that Lakshmi Mittal's father bought and Mittal inherited. In 1976 Mittal bought a struggling company in Indonesia that made rod and wire and had a cheap workforce that made it profitable. Ispat bought up the Caribbean steel industry in 1989, and the Mexican steel industry in 1992. In 1994 Ispat moved into Canada, in 1995 bought a large number of German steel mills, and in 1996 Irish steel (with a power station and 15 coal mines). 1997 saw further Ispat expansion into Mexico, Trinidad, Canada, Germany and Ireland. In 1998, Ispat took over Inland Steel, a big US firm. 1999 saw more take-overs in France and the United Kingdom. In 2001, Ispat made acquisitions in Algeria, Romania and other parts of Eastern Europe. In 2002, steel mills in South Africa, the Czech Republic and Poland were added to the list. In 2004, Mittal bought out the remaining US steel industry to become the biggest steel producer in the world. In 2005, Mittal was looking to acquire Turkey's largest steelmaking plant, Erdemir, as part of a Turkish privatisation drive. In January 2005 Mittal Steel announced the purchase of a 37 percent share of China's Hunan Valin Steel Group, Mittal Steel, which was formed when Lakshmi Mittal merged his company LNM with US group, International Steel, now operates in 14 countries on 4 continents, with around 165,000 employees. The Mittal Family hold around 88% of the shares (Milner, 26.10.2004). So despite this phenomenal growth, Mittal Steel remains a family business, with its dealings not transparent to the public or even minority shareholders, which has led to bitter complaints from South African minority shareholders.

This short history shows ultra-rapid growth while, world-wide, the steel industry is shrinking. Mittal has very shrewdly used international financial instruments (and along the way became embroiled in some controversy with International Financial Institutions). He made strategic use of the deindustrialisation of the West, and the rapid restructuring in Eastern Europe after the collapse of the Comecon. His style is characterised by aggressive labour relations, new marketing practices and creating an upstream and downstream monopoly.

Mittal's business model is to

- buy derelict or ailing industries at minimal cost
- to squeeze substantial donor funding out of multilateral institutions like the IMF and the World

Bank

- engineer quick turn-arounds through global knowledge-sharing, retrenchment, and the dissolution of legacy costs
- use market monopoly for an aggressive pricing structure
- and if the turn-around fails, to dispose of the assets quickly and neatly.

Mittal Steel globally has a reputation for environmental degradation and including politicians, like British Prime Minister Tony Blair, in his business deals (Reutter, 2005). Mittal also stands accused of unfair labour practices in Ireland, Mexico, as well as South Africa, including unfair dismissals in Romania and Poland. The one place where labour resisted successfully was Ireland. The plant there was shut down in 2001, causing anger and bitterness among workers. In this case, the Irish Green Party became involved in the issue of a radio-active waste dump in the Harbour of Cork.

In early 1996, Mittal made a hostile bid to take over Arcelor, the world's second largest steel maker. The bid has faced strong resistance from Belgian and French workers and governments. Communities affected by Mittal Steel's polluting plants in Ohio USA, Jharkand in India, and Khazakstan as well as the South African Vaal Environmental Justice Alliance, joined forces in February 2006 to object to the take-over on the basis of Mittal's lack of environmental and social responsibility to his neighbours.

Conclusion: steel giant in the neighbourhood

ISCOR (or now Mittal Steel) remains a major contributor, estimated at 65%, to the GDP of the Vanderbijl area. It provides inputs to a host of other industries around it. The Vanderbijlpark Steel works has profoundly shaped Vanderbijlpark as a company town It continues to play a central role in South Africa's industrial heartland, after been joined by another parastatal, SASOL, in 1951, to provide oil-from-coal and other petro-chemical products. ISCOR is a gigantic, dominant institution, impervious to the wellbeing of its neighbours.

Section 3: STEELMAKING AND POLLUTION

The Vanderbijlpark Steel Works looms like a dark, dangerous presence over the landscape. It is never still. Its large black slag heaps are continually built by huge trains offloading slag. Effluent water rushes down unlined canals past a number of smallholdings and townships, to the Vaal River. By day, the work's smoke and vapour plumes mark the sky. By night its lights, noise, flares and smells remind its neighbours of its presence. They are also reminded of their powerful neighbour by a series of devastating changes that have befallen their bodies, their animals and plants, their land and their dreams for the future.

Steel is a metal alloy of iron and carbon. Iron, found primarily as an oxide in the Earth's crust, is heated with large amounts of coal, which separates the oxygen from iron, and absorbs carbon into the resulting alloy, which is left to cool under carefully controlled conditions to fix the amount of carbon it will contain. Other materials are often added to the iron-carbon mixture to give the steel special properties. Nickel and tungsten add strength and chemical stability, chromium increases the hardness, and vanadium reduces the effects of metal fatigue. Lead makes steel more pliable. If large amounts of chromium and nickel are added, a hard oxide forms on the metal surface, known as stainless steel.

Why does steelmaking pollute the environment?

The raw materials of iron ore and coal used in steel making contain substantial impurities, which are removed and discarded as gas through smokestacks, in liquid form or as solid wastes. Vast amounts of coal are used, and their impurities constitute the largest amount of waste materials. Polycyclic Aromatic Hydrocarbons (PAHs) and other Volatile Organic Chemicals (VOCs) are of major concern, as many of them are known or suspected carcinogens. Some examples are benzene and toluene. The conversion of raw coal to furnace coke is prone to emission of many different organic compounds know to persist in the environment. The iron ore, and increasingly the scrap metal used in steel making, contain many impurities: iron ore contains manganese, traces of heavy metal (like cadmium, lead, zinc, mercury, and others) and sulphur, while scrap is contaminated with tin, lead and copper, but also with plastics. Sulphur, nitrogen, and phosphorus make steel brittle and have to be removed during processing.

A toxic brew of more than 100 chemicals is known to be emitted by steel mills. Recent research in Canada^{iv} has shown that this cocktail not only affects all life forms around the mills, but goes down to the genetic level with hereditary DNA damage reported around a particularly polluting mill in Hamilton Harbour. Emissions of sulphur dioxide and dust from some integrated works can have a significant negative impact on local air quality. Waste can also escape from the works as effluent in storm water run-off during heavy rain, and through water and wind from open slag heaps. The following table summarises the main pollutants arising from the steel making process^v.

| Steel making process | Most significant potential releases of pollutants during stages in the process of steel making |
|---|--|
| Sinter plants (which produce pellets of iron) | Release particulates, heavy metals, sulphur dioxide, nitrogen oxides, carbon dioxide and polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDD/F), which are carcinogenic. |

| Coking plants (where coal is made into coke) | Release particulates, sulphur dioxide, nitrogen oxides, raw Coke Oven Gas, benzene and PAHs to air; oils and wastewaters containing phenols, cyanides and ammonia. |
|--|--|
| Blast furnace iron making | Releases iron fumes (particularly if no cast house fume abatement), carbon monoxide, sulphur dioxide and carbon dioxide to air; and waste water containing iron and heavy metals. Bleeder openings can be noisy and release carbon monoxide and particulate. |
| Basic oxygen steel making. | Releases iron fumes, heavy metals and carbon monoxide if they escape collection; and carbon dioxide |
| Electric arc steel making. | Releases iron fumes, other metals, PCDD/F and carbon monoxide into air; waste water; fume dust to landfill; and noise |
| Reheat furnaces and on- site power plants | Release sulphur dioxide and nitrogen oxides, particularly when burning fuel oil and large amounts of ash in the case of coal-fired power plants. |

ISCOR's pollution history

The Vanderbijlpark Steel Works, which opened in 1952, was built before the first, weak South African pollution legislation was created in 1956. The effluent dams were unlined, and remain so to this day. The canals, discharging effluent in water from the works, are also unlined.

The steelworks were deliberately positioned on a slight elevation above the rest of the landscape to allow for waste water to drain away effortlessly... It currently uses 6.6 megaliter per day^{vi}. This is equivalent to the daily use of an urban population of around 250 000 people^{vii}

Much of this water escapes through the bottom of the unlined effluent dams into the groundwater. Groundwater pollution can be traced up to seven kilometres from the steel works, polluting the groundwater feeding boreholes on the farms in adjacent communities like Steel Valley to the West, their only source of water. The main drainage canal goes past smallholdings in Linkholm until it empties into the Rietspruit, which in turn enters the Vaal River at Loch Vaal.

In papers of the court case brought against ISCOR by 16 applicants who sought to stop the pollution and gain compensation for damage from ISCOR^{viii} a detailed picture of ISCOR's pollution history emerges^{ix}.

In 1961 the then Department of Water Affairs (DWA) warned ISCOR that it was polluting the groundwater. By 1974, ISCOR knew that the underlying rock was permeable and held large amounts of (polluted) water. In March 1979, an official of the Soil and Irrigation Research Institute found a soft tarry deposit "with a strong phenolic smell" on the bottom of the dam.

In April 1983, Steffen, Robertson & Kirsten (SRK) identified the Evaporation and Maturation Ponds – huge dams in which effluent from the work are held – as potential pollution sources, found groundwater pollution from seepage and predicted that the level of pollution would rise with the passage of time. In August 1984 DWA complained in a letter that several smallholdings at Steel Valley had become polluted to the extent that the groundwater was "neither suitable for domestic use nor garden irrigation". In August 1985, a parliamentarian reported that local inhabitants were "up in arms" about ISCOR's

pollution.

In September 1994 a major spill occurred which, according to ISCOR, involved a tank full of chromium. By May 1996, plot owners were forced to dig furrows to protect their lands from effluent laden with ammonia and sulphate. A report on the organic groundwater pollution at ISCOR Vanderbijl Works from April 1996 to July 1997 reported the existence of a Dense Non-Aqueous Phase Liquid (DNAPL) pollution plume in the groundwater. DNAPL contains suspected as well as known carcinogens including coal tars. (Nolte report, cited in case no 00420/01).

Throughout this period, ISCOR made numerous promises to phase out pollution sources, rehabilitate the slagheaps and more sophisticated treatment of its effluent before release.

It is this history of false promises, that has made observers cynical about its latest promises to achieve a Zero Effluent Facility by the end of 2005 "will help reduce the plant's water usage by 30%" and reduction of emissions from the Coke Ovens, at a cost of R310 million and target completion date of October 2006 (Mittal, news release 27.9.2005). Although the press release referred to states that these expenditures form part of the Master Plan "to spend nearly R1 billion over the coming years cleaning up the environmental impact of its operations", the expenditure refers only to reducing pollution emissions in future. There is no mention of any remedial work to the polluted environment around the steelworks.

Yet remediation technology is available. A geologist points out that there are at least three possible solutions, building on technology that is already in use in South African mines (Stefan Cramer, VEJA workshop Bophelong, 5.11.2005). First, a containment for the steelworks can be built to isolate it from the rest of the environment. That would make it a zero effluent facility. Secondly, an underground vertical wall, extending below the level of the pollution plume, can be built to prevent the pollution from spreading via the groundwater. The third, optimal solution is to extract the polluted water via boreholes, ahead of the pollution plume, and purify it in a treatment plant (Stefan Cramer, VEJA pollution workshop, Bophelong, 5.11.2005).

ISCOR's denial of responsibility for pollution is characteristic of corporate practices in more developed societies. Corporate 'deceit and denial' has been documented in the USA for instance (Markowitz and Rosen, 2004; Davis, 2003; Levine, 1982). This factor, linked to an unresponsive state, means that 'insiders' with expert knowledge of corporate environment practices can provide very valuable information to those concerned with truth and social justice. Independent consultant Dr Pieter van Eeden performed this role as a 'whistleblower' drawing on his employment with ISCOR as a senior scientist.

A whistleblower's perspective

According to ecologist Dr Pieter van Eeden, ISCOR is "cynical, arrogant" and "not serious about environmental issues. (Interview, Kempton Park, 18.5.2005). I told them 'we are not only making steel, we are killing people as well." Van Eeden worked at ISCOR Vanderbijlpark from April 2000 to October 2001. His departure was sped up by his unhappiness over the testing methods of ISCOR and pressure from ISCOR after he blew the whistle on their environmental practices and made public some pollution reports.

Although ISCOR had an environmental management system, its focus was limited to complying with existing, weakly enforced environmental legislation. It had no interest in finding the real effect of its operations on the environment. Van Eeden argued within ISCOR that they should test the overall toxicity of their effluent and its effect on water systems around them. It is the combination of substances that makes the water dangerous. But the law only required ISCOR to test the levels of individual chemicals. "This system was very weak", says Van Eeden, "since industries, all industry, not only ISCOR, knew when DWAF inspections would happen. And even if caught exceeding such chemical

limits, there were no consequences."

"From a purely chemical level, ISCOR's effluent was more or less acceptable. But from a toxicological viewpoint, it was not. Not that ISCOR management now thought that their effluent was a danger to their neighbours, or that they were the cause of their neighbours' illnesses. Why would they worry about people complaining about cancer when those same people smoked like hell and had unhealthy lifestyles?"

At first, Van Eeden had high expectations of a "master plan" that was being developed, and of a fellow toxicologist, dr. Ockie Fourie, who was involved in developing the plan. "It was a very comprehensive plan; I thought a good plan. It proposed to do many things. Its main aim was to clean up production processes, to minimize existing pollution and prevent new pollution, and start with remediation processes. It aspired to cleaner production principles. ISCOR did a complete overhaul of all the information. They also did a proper baseline of existing pollution and current pollution."

However, the master plan team was not interested in Van Eeden's toxicology findings. "As I got to know the team better and could see the bigger picture, I worked out 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." ISCOR is not serious about pollution, and does not use the data at its disposal to stop pollution," says Van Eeden.

Van Eeden was upset at the arrogance and irritation which ISCOR management displayed towards its neighbours in Steel Valley. "Eventually I started visiting the plot owners (in Steel Valley) myself. They told me that they were being treated as second class citizens, as maplotters (derogatory Afrikaans slang for smallholders), that they were not respected as human beings at all. ISCOR dismiss them, often saying: "ag ja, another complaint from these maplotters".

ISCOR was cynical, contemptuous and arrogant in this whole process. "That's the culture of the white males, with their Broederbond connections. People tend to work for ISCOR for their whole lives, and you step into a culture of how people do things... Another reason was DWAF's enforcement policy. They are good with the command but not good with the control bit... DWAF has taken on small industries, but they don't take on ISCOR. Why not? Because of money. ISCOR can happily 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... the carrot rather than the stick approach."

Conclusion

The ISCOR steel works has been the source of dangerous pollution, by groundwater, surface water and through the air, which has impacted catastrophically on its neighbours. There is a history of scientific investigation, of concerns, inquiries and instructions from the Department of Water Affairs, as well as direct experience and observation of pollution by its neighbours. They all point to ongoing and serious pollution of people and the environment.

Section 4: SOCIAL, HEALTH AND ECONOMIC IMPACTS

The outcome of the pollution chain described above is that the area of greater Steel Valley has been reduced to a wasteland. People and animals have been poisoned, crops have failed and lives have been devastated.

A case study: the Cock family

The impacts of the water pollution are dramatically illustrated by the case of Lulu Geldenhuys (nee Cock). A talented and deeply religious woman, she has created a home filled with her own beautiful needlework and religious icons. Lulu used to work for ISCOR as a crane driver. She smiles a lot, but weeps when she speaks of her inability to have children. She has had two miscarriages, and both foetuses had genetic defects (Interviews February, 2004; August, 2005). She has been diagnosed with three types of cancer as well as epilepsy, and relates these to the canal water she played in as a child. "Many doctors have told me the cancer has something to do with ISCOR." According to her mother, "Scientists have found that the canal water contains heavy metals such as benzene, cadmium and the substance mothballs are made out of, naphthalene. This is an extremely toxic substance — it is known to cause cancer, and cadmium causes kidney damage". She says, "The ISCOR water has made all my children and grandchildren sick" (Mrs Cock interview, February, 2004).

A vibrant community which collapsed.

The Steel Valley area used to be a vibrant, productive community of over 500 smallholdings. The area included shops, a filling station, a church, mobile clinic and school. According to Jaap van Rensburg, "We had an excellent infrastructure in the community. We had a stable church community, a very good school, general dealer, dairy, an ambulance service with paramedics, a fire brigade, a butchery, diesel pump, bottle store, post office, municipal office and a garage." (Letter from J.D. van Rensburg to the MEC Social Services and Population Development. 26.5.2003)

Like Joey Cock and Strike Matsepo, many of the families now remaining in Steel Valley also spoke of it as a 'good place.' The availability of land attracted a number of people – both black and white – to the area where they established smallholdings. There were rumours of pollution but many black people tended to dismissed them as a scare tactic on the part of white racists to keep them out of the area. Many people living in greater Steel Valley (including Lamontpark, Linkholm, Louisrus and Rietkuil) grew a variety of vegetables for their own consumption. This included pumpkins, tomatoes, spinach, onions, cabbage, beans and maize. Some sold vegetables in nearby towns such as Sebokeng and Vanderbjlpark, earning as much as R800 a week. People also kept livestock including chickens, cows, pigs and, in some cases, turkeys and ducks.

The residents of the greater Steel Valley area did not constitute a cohesive community. Not only were there differences of class, race, political affiliation and ideology but there were different understandings and responses to the pollution issue. The community included people of very different income levels from smallholders to unskilled labourers and domestic workers. Wages were extremely low in the area with one farm labourer earning R30 a month plus 25 kg of mealie meal. On the whole the community was poorly educated. Many had no education at all, and none of 100 informants surveyed had any tertiary level qualifications.

Despite these differences, on the whole the greater Steel Valley area was an extremely stable community. Out of a sample of 100 informants, some had lived in the area for as long as 42 years, and

the majority of 73% had lived there for more than 10 years. Almost half (47% of these) had lived in the area for between 10 and 20 years and 26% for over 20 years. Many of those who had lived there for less than 10 years were children. We came across several tenants who had been born in the area.

Water was crucial to the health and livelihoods of the members of this vibrant, economically productive community. All 500 people who responded to a request for information said they were reliant on borehole water which they used for washing their bodies and clothes, cooking, drinking, watering their crops and their animals. Most residents came to believe that over a period of four decades their water had become progressively contaminated. It was a slow and painful realisation for this largely working class and poorly educated community. They noticed a number of changes. "When you made tea with the borehole water and added milk, the milk turned sour," one informant said. Another commented: "the water started boiling when you put it in the fridge". They began sharing these experiences with neighbours, and the belief slowly spread that the problem was the borehole water and residents began to claim that ISCOR was poisoning them. "But it's a complicated issue, and we didn't have a clear understanding. I realised our problems were caused by ISCOR when in 2000 ISCOR agreed to remove people from the area" (Elizabeth Nkosi interview, Vanderbijlpark, 2004).

While the wider society struggled through the transition from apartheid to democracy, what was once a vibrant and productive community around Vanderbijlpark collapsed. Now schools have closed, bus services halted, shops boarded up, houses bulldozed by ISCOR and churches have emptied. Only a handful of houses out of 500 remain in this poisoned landscape.

Impacts on people's bodies and livelihoods

The question of impacts is controversial. Analysts have criticized a reductionist type of science which attempts to link specific toxic substances to specific diseases (Markowitz and Rosner, 2004). Dr Phillip Lloyd, a professor of chemical engineering stresses that "you cannot say that that chemical causes that disease". Instead he claims that it is a 'cocktail' of toxic substances that damages health. While toxicology cannot pinpoint a specific cause, an epidemiological approach can recognize patterns of unnecessary death and disease, above the average for a population without pollution (Davis, 2003).

In the Vaal Triangle, people suffer from serious air as well as water pollution. The Vanderbijlpark steelworks is one of the top four air polluters in the Vaal Triangle – the others are Mittal Vereeniging, Sasol and Lethabo Eskom power station. The Yvonne Scorgie report on air pollution in the Vaal Triangle (Scorgie, 2004) estimated the direct health costs associated only with three specific air pollutants: sulphur dioxide, nitrogen oxides and PM10 particulates (particulates small enough to inhale) at around R289 million per year. This does not count indirect costs or cases difficult to identify, e.g. leukaemia from exposure to benzene.

Scorgie calculated that

- 1. around 11 600 people in the Vaal would be admitted to hospital with respiratory problems (problems serious enough for hospital admissions).
- 2. The pollution would lead to cardiovascular (heart problems) of 90 per year,
- 3. premature deaths of 25 people per year,
- 4. chronic bronchitis of 24 000 per year and
- 5. restricted activity days of around 78 750 (9 days per year per economically active person).

For the people living around Vanderbjlpark, the combination of air and water pollution has devastating impacts on their health.

Health effects of pollution from ISCOR

In the Steel Valley court case in 2001 medical evidence came from 3 sources:

- > Symptoms of illnesses as revealed in 500 questionnaires obtained from local people, pointed clearly to heavy metal poisoning, for example kidney diseases and various types of cancer.
- > Tests of 26 people showed higher cadmium than the South African reference levels (the standard or average amount of cadmium in South Africans' bodies)
- ➤ The 26 people tested showed DNA breakages 30% higher than the SA reference level, and 50% higher than the international reference level. The only common factor linking the 26 was that they all lived in Steel Valley and must have been exposed to a cadmium pollution incident or subjected to permanent ambient exposure.

Many of the 500 informants reported how a lack of energy and strength had led to unemployment and negatively affected their lives. A number of younger people reported that they could no longer walk any distance, or play soccer or ride a bicycle. In such a dispersed area as greater Steel Valley and with the lack of public transport, this often means social isolation.

Jaap van Rensburg, who was a resident of the area for 31 years, has constructed a map showing how many local people came to suffer from bladder and kidney problems, gallstones, and serious ailments like heart problems and cancers. Most people moved out but "a lot of the people who were left behind, are of old age and belong in old age homes. They made all the necessary arrangements but can't move now because they can't get their properties sold. Financial institutions and estate agents aren't interested in the area" (Letter from van Rensburg to the MEC. 26.5.2003). According to Mavis Cosmo, "Its very heartbroken. Now everything is just going under. You have to loose everything" (Carte Blanche programme, 18 August, 2002.).

The advocate's "heads of argument" for the 16 applicants who applied to the courts in 2001 to seek relief from ISCOR indicates considerable levels of economic and health damage. One applicant purchased his property in 1989 and intended to farm in poultry, fruit and vegetables and establish a small manufacturing plant, manufacturing bricks, blocks and kerbing. All 400 fruit trees planted by him failed. Of 4000 chickens only a handful survived. At about this time he and his wife, the third applicant himself and his children started presenting with blood in the urine, tiredness, lack of concentration, muscle pain, swelling of hands and feet, memory loss, fatigue, anxiety and nervousness and his children were observed to be stunted in their growth.

But despite these devastating impacts on their health and livelihoods, the people of Steel Valley were not passive victims. Instead many residents demonstrated impressive qualities of courage, initiative and tenacity against a gigantic and contemptuous opponent. They engaged in many forms of non-violent struggle to try and obtain justice, including the litigation described above, mass action and participating in consultative processes and forums. But they were never a strong, cohesive community. They were always geographically scattered and lacked the necessary financial resources to arrange meetings. Nor was this contaminated community able to overcome the social divisions of class, race and ideology necessary to present a strong united front to challenge ISCOR's power. To date the pollution has not been stopped. Strike Matsepo was part of a 2002 protest, but now he has lost heart. "The people who organised the protests are no longer here. There is no money for travel in buses. We are waiting for the people to unite again. We are now ruined and hopeless." This is how Strike Matsepo described his experience in an 2003 interview. But since then resistance has taken new forms with significant potential.

Introduction

For over forty years the people in Steel Valley have tried a variety of strategies to stop ISCOR's pollution of the groundwater.

The strategies have included appeals to ISCOR, which employed many of the residents. Appeals were made to the Department of Water Affairs (DWAF) which carries responsibility for protecting water users against water pollution, under both the apartheid and post-apartheid governments. Residents and their organisations have participated in a variety of forums, most notably the ISCOR Environmental Forum, but also the Rietspruit Catchment Management Forum. They have engaged with experts from the Water Institute of South Africa (WISA). They have attempted to use the capacity of local government after 1995 to find solutions. Three private legal actions to stop pollution and win compensation were initiated, one of which is in process at the time of writing. The Constitutional Court has been approached with the complaint that resident's rights to an environment that does not threaten their health, have been violated. Faxes have been sent to both Presidents Mandela and Mbeki. The Steel Valley pollution has been the topic of in depth television shows. Journalists, like Elize Tempelhof from Beeld, has published "more than 500 articles" on the topic.

During the 2002 World Summit on Sustainable Development (WSSD) international environmental activists were taken on a "toxic tour" of the area, with wide spread media coverage, and the ISCOR steel mill was picketed. More recently, appeals for administrative justice have been made such as meeting with the Deputy Director for Environmental Quality and Protection, a letter was sent to the Johannesburg Stock Exchange protesting against their inclusion of Mittal Steel on their Social Responsibility Index in 2004, appeals were made to the International Federation of Metalworkers, appeals to the Minister of Water Affairs as well as grassroots organising through community workshops.

These strategies have so far failed to stop the pollution.

Different phases in the genealogy of resistance

There were three key organisational forms – the ISCOR Environmental Forum, the Steel Valley Crisis Committee and the Vaal Environmental Justice Alliance. For analytical purposes six phases can be distinguished, showing different strategies and tactics that were employed. A summary of these phases indicates a pattern of change and continuity leading up to the formation of the Vaal Environmental Justice Alliance.

- ➤ Phase 1: White smallholders negotiate in the ISCOR Environmental Forum. This starts off (in the 1970s) as a struggle of white smallholders who directed their appeals to their own white minority government. Many of them were also ISCOR employees or contractors. Those who participated in the forum expressed their disappointment, and their growing distrust of ISCOR and DWAF officials. A number of people from this phase are still fighting for justice.
- Phase 2: Expectations from a new political dispensation. This phase, beginning in 1994, was informed by an optimistic vision, articulated by Neville Felix and other councillors in the new local government, which involved both a fair relocation of people and decontamination of the area. His optimism was rooted in his political faith in the new ANC government, to which he was well connected.
- ➤ Phase 3: Litigation for compensation. In 1996, a local resident, Johnny Horne as leader of an

all white group, brought a court case against ISCOR for damages, asking for an interdict to shut down ISCOR. Their action undermined the process in the forum, according to Neville Felix, who accuses them of "taking the information presented by us to the ISCOR Forum for their own personal aim of getting compensation and then leaving the area." They succeeded in obtaining millions in damages from ISCOR in an out-of-court settlement.

- ➤ Phase 4 **Litigation for compensation and to stop pollution.** Following the Johnny Horne group's success, a multi-racial group of 16 applicants emerged. The applicants also wanted ISCOR to be interdicted to stop the pollution. This time, ISCOR reacted differently. It disowned its own technical consultants' reports, failed to admit liability and imposed a gagging order on the 16 litigants. In response, some of the children of the 16 applicants formed the Steel Valley Crisis Committee (SVCC), chaired by Samson Mokoena.
- ▶ Phase 5 Community organization in a globalised moment. During the WSSD, the SVCC organized mass protests outside the steel works which became a stopping point on a WSSD toxic tour for international activists and environmentalists. SVCC leaders addressed the parliamentary portfolio committee on water. The Friends of Steel Valley was formed to support the SVCC in 2003.
- ➤ Phase 6 The Vaal Environmental Justice Alliance (VEJA) was formed in January 2004. This brought together 15 different organizations. It attempts to widen the struggle against ISCOR's pollution and build on the tradition of militancy in the Vaal Triangle during the anti-apartheid struggle which culminated in the 1984 Vaal Uprising,

Phase 1: resistance since the 1970s.

This report focuses on the last ten years, because of our argument that this constitutes a new political moment. However, the presence and active participation of the *Louisrus Belange Groep* at VEJA's formal launch in October 2005, points to the continuity of the past into the present.

Parts of the community organised itself, for example the Louisrus Interest Group, led by Danie Lingenfelder. There were dedicated efforts, and long hours, invested in efforts to participate in and influence the ISCOR Forum, and many direct confrontations with ISCOR. Networking included meeting with a range of scientific and legal experts. The *Louisrus Belange Groep* was part of efforts dating from the 1970s onwards by white smallholders in Steel Valley to negotiate a solution to the pollution problem. The ISCOR Forum emerged from this and involved an investment of high levels of effort and energy. "Things became heated in forum discussions", recalls Danie Lingenfelder, chairperson of the Louisrus Interest Group: "The reeds were shaking during all night sessions. We often talked through the night, but we achieved absolutely nothing. The ISCOR people in the forum never had a mandate to help us. In 2000 Mary Metcalfe closed it down and said the government would fix it. That was five years ago and nothing has happened" (interview, Oct 2005).

Others remember warnings that ISCOR was a national key point, protected by the Key Points Act, which meant that "we should not try to attack ISCOR. We should not even walk along the fence, take photographs or look at it", recalls Johan Dewing, a neighbour of Strike Matsepo's in Steel Valley and one of the original 16 applicants.

Informal networking in this phase included gathering knowledge about neighbours and friends health details, like Jaap van Rensburg's "cancer map", an example of popular epidemiology. Mrs Joey Cock and her family searched out various water experts, including a "neutraliser", who told her that there could be no hope for her and her family if they did not move from their house on the edge of the canal.

Johan de Kock, an ex-policeman with some knowledge of the law, embarked on a one man search for administrative justice which has taken him to accuse the ministers of water affairs and health, together with their officials, of failing to protect him and his neighbours from the pollution. In October 2005 he made an application to the constitutional court, which ruled that the issue was "of considerable public interest" and that he should return with legal assistance. VEJA undertook to support him in future actions.

These efforts failed to stop the pollution, and led to a deep and growing distrust in government institutions, both in the old National Party and the new ANC government among participants in this phase.

Phase 2: Expectations from a new political dispensation.

After democracy in 1994, formal channels were followed through local government structures. A number of prominent activists became councillors, and accessed resources including the laboratory of Western District Council. The fight against pollution led previously widely separate people to show solidarity in working across ideological and racial lines with Neville Felix and appealing to his connections within the ANC, right up to the level of two successive water ministers in the ANC, and working with Felix in local government.

Felix participated in the ISCOR Forum where he promoted his vision for decontamination, land reform and a fair relocation to an alternative site, Mooi Waters. He used his resources as a councilor in the West Rand District Council, as well as his political connections which included the ANC, SACP and the RDP office and access to the first Minister of Water Affairs Kader Asmal. But this vision came to nothing. Even such a seasoned and energetic activist as Felix could not make a difference to ISCOR – despite his own personal connections.

Profile: Neville Felix's story

Neville Felix is a colourful character, proud of his mixed ancestry including slaves, 1820 settlers, Chinese and French forebears. Conservative residents of Steel Valley thought an "Arab" had moved into their community when he moved into the area. An ANC activist and underground operative he anticipated the new South Africa by buying, in 1989, a smallholding through an elaborate company arrangement, because only whites were legally allowed to purchase property (Felix interview, Vereeniging, 14.4.2005; 21.4.2005).

Felix had been born in District Six, in Cape Town, and had lived through one of the bitterest apartheid removals of people, then in inner Cape Town, where he came in contact with political activism influenced both by the church and banned pamphlets on Marx and Lenin. He was a member of the ANC and South African Communist Party (SACP). Felix and his wife threw themselves into local activism to stop the injustices they saw on the smallholdings around them, by organizing farm workers politically. This provoked savage resistance from rightwing neighbours which included killing their dogs by slicing off their heads.

It was somewhere in 1991 that the Felix family noticed something odd in their water. The taste changed, it smelled odd and it looked a bit oily. The fruit trees were not growing or producing fruit. But the pollution issue was completely swept aside by the dramatic developments of the political transition after 1990, building up to the country's first democratic election in 1994. Around 1994, Felix discovered that four families in the Steel Valley area were receiving piped water from ISCOR. He wondered why. There also seemed to be an unnaturally high number of sick people. In December 1995, a meeting took place in

which people were told about the pollution suspicions. Some of the black property owners said it was part of a plot to keep black people out of Steel Valley.

Felix and his wife became part of local government structures. Felix presented the Vaal River area in the West Rand district council. In 1996, this council confronted ISCOR about the pollution problem. This was not easy, says Felix, as ISCOR was powerful. Its activities represented 65% of the GDP of the area. In February 1996, the district council's legal department set up a discussion with ISCOR which later became the ISCOR Environmental Forum. Until September 1996, the forum had regular weekly meetings. "Then, ISCOR was speaking to us. They said they were sorry to hear there was a problem, and they would like to be part of the solution."

In the Forum, the district council team, driven by Felix and other councillors from Steel Valley including Strike Matsepo, Johnny Horne and Danie Lingenfelder, had to argue their case technically. "The Council's scientists did tests of the soil and the water, and found it to be contaminated with salts and heavy metals," says Felix. To access more expertise, the district council met with WISA (the Water Institute of South Africa, an organisation of the country's water professionals) and the Water Research Commission. WISA set up the Vaal River Catchment Association. "We pulled ISCOR and other industries into it, as well as DWAF. Gauteng's Department of Agriculture, Conservation, Environment and Land was brought on board." Through the catchment association, they met advocate Duard Barnard, who was contracted by the council as legal representative, but later got involved in the Johnny Horne case.

In September 1996, the district council walked out of the ISCOR Forum, recalls Felix. "We saw that ISCOR was a protected species. We had just gotten a new constitution. We had been part of the process of writing the environmental clause in that constitution. We had been proactive in getting the National Environmental Management Act (NEMA). But it didn't apply to ISCOR."

The district council then met with minister Kader Asmal. They no longer trusted the DWAF officials, but saw hope in a political intervention on the highest level. The minister told them to go back to the Forum, which they did.

Felix and his team presented a strategy to the ISCOR Forum to:

- have Steel Valley declared a disaster area,
- facilitate a process that would result in the relocation of the whole Steel Valley on a nearby piece of land, at cheap cost because the council could use its own expertise for land development,
- settle, under the land reform programme, the farm workers (and *bywoners* or sharecroppers) that would lose their land in the move,
- establish a health trust with insurance for pollution victims, and a research arm specializing in the health effects of industrial pollution, as well as
- clean up Steel Valley once the people are gone. This, it was carefully calculated, would have cost about R100 million, compared to the R66 million per day running costs of ISCOR Vanderbijlpark.

The proposal was taken to the ISCOR Forum in 1997/1998. "ISCOR's refusal to entertain this proposal made the Forum break down," says Felix. "We said to them: 'we are the new South Africa, and we have the backing of the new government'... We never wanted to close ISCOR down, or undermine them as an institution, or undermine the jobs of the people there. Two days' production costs (of R66 million per day) would be more than we needed for this plan. We would have had a brilliant story to tell at the WSSD in 2002."

Then Water Affairs Minister Kader Asmal ordered that a cost-benefit analysis should be done through the Forum, for which ISCOR should pay. "The analysis fully supported the concept of removing people as a community and agreed with the medical trust idea too," says Felix. "But in 1999, ISCOR declared that it refused to accept these outcomes."

Minister Kasrils instructed Gauteng MEC of environment at the time, Mary Metcalfe, to close down the Forum, recalls Felix. "Metcalfe said that the minister would manage the issue with ISCOR directly. The minister called us to the airport to a hasty meeting, where he told us that he had instructed his department to manage the process. We were heading to the next (2000 local government) election." The closure of the ISCOR Forum gave ISCOR a free hand to negotiate with individuals, says Felix. The area was now redlined. Individuals then just decided: "Let me take what I can get out of the process and get away."

Felix remains deeply disappointed by the outcome. "The ANC was elected to set in place a government for the people. We have a constitution. We have the National Environmental Management Act, which allow for exactly such actions. This was a perfect opportunity for such a government to act. But it did not work, because of arrogance and lack of vision of serious players. They were all short-sighted. We missed a brilliant opportunity for the new South Africa to reinvent itself."

Phase 3: The Johnny Horne Case

In the third phase of resistance, marked by the Johnny Horne case, the focus was on compensation and leaving the area. It was a very individualist struggle involving 168 people, but they succeed in scaring ISCOR into paying Johnny Horne R1 million and the other litigants an average of R130,000 each for their properties (the figures were not made public, but widely discussed at the time). Health damages were not taken into account. According to a key informant, "The Johnny Horne case was the springboard for ISCOR to tighten their defences. ISCOR got a fright. Judge Cloete said he would have no trouble closing ISCOR down."

According to Neville Felix the individualism was clear in that Johnny Horne (also an elected local government representative) broke away from the ISCOR forum process, and proceeded to go to court with his legal case. He says, "Johnny grabbed all the results of the investigations of the District Council, and used them in his own interest. Advocate Duard Barnard (one of the few environmental legal practitioners in the country) was hijacked by Johnny Horne and his group. Johnny Horne's court case was a serious obstacle for us," says Felix. "When Johnny Horne started his court case, we saw a change in the attitude of ISCOR. They said everything was now *sub judice*. How can we negotiate with you in the Forum when some of you are taking us to court?"

Phase 4: Litigation by the Steel Valley Crisis Committee (SVCC)

Following the limited success of the Johnny Horne case, a racially mixed but mainly black group of litigants in 2001, decided to also challenge ISCOR to obtain compensation, as well as a legal order to stop the pollution. They had confidence because they discovered a whole archive of DWAF complaints about ISCOR's pollution, letters from ISCOR that seemed to acknowledge this pollution, and reports from consultants hired by ISCOR that clearly acknowledged the pollution problem (see section 3 above).

Residents met regularly in a disused garage in Steel Valley to prepare for and follow the progress of the court case. Slowly, black and white victims of pollution were learning to work together in what appeared to be an embodiment of the 'rainbow nation'. The court case was an important focal point, but social solidarity extended to mutual support in difficult times, and a great deal of formal and informal networking.

This legal strategy was led by Advocate Margie Victor. Passionate about social and environmental justice, she had previously done legal work with Sebokeng residents on access to water and electricity and was asked by her cousin, Johan Dewing, to consult with local people.

Sixteen people from the area (12 black) brought 21 interdicts against ISCOR to stop the pollution. The applicants were all owners or residents of smallholdings in the areas of Steel Valley and Linkholm, next to ISCOR. The action received limited support from other organisations, including funding for research and litigation from the Legal Aid Board and the Human Rights Foundation.

The case was dismissed in 2003. All but 2 litigants have withdrawn from the interdict proceedings and been paid compensation by ISCOR...ISCOR argued that if all these interdicts were granted they would have to close down. "We want ISCOR to clean up without closing down. We don't want to see our brothers and sisters out of jobs" (Maggie Victor, interview, Vanderbijl Park, 28.2.2004). ISCOR employed some 9,000 people at the time.

"There were rifts within the community as to the desired outcome of the court case. Half the community wanted ISCOR to pay them out for their properties so that they could move to a new area while the other half wants to stay in the area and wants ISCOR to upgrade its plants and piping in order to prevent further ground water contamination" (Margie Victor interview 2003).

The two remaining litigants will be heard in a damages case in 2006 which could be a building block for a subsequent class action of some the thousands of people from the area who have experienced health problems or loss of their livelihoods. This could be significant. Class actions have been described as "promising access to justice to millions of South Africans who would otherwise be denied this, and if developed by our courts could become an effective mechanism for the transformation of society" (Taitz, 2005).

Overall, the litigation by the 16 applicants was a 'thin' intervention, which failed to penetrate deeply into the community. It demonstrates the limited role that lawyers and litigation can play in a strategy for social change. It failed to build capacity in the community and in this sense was not empowering. It furthered a dependence on experts. According to a member of the legal team: "The community got divided when the judge dismissed the case. Some settled and some didn't. People were very angry. The lawyers were fighting among themselves. The lawyers gave people different advice on whether to accept the settlement or not. X advised us to settle with ISCOR. She said, 'if you don't take the money, ISCOR will maybe sue you to pay the legal costs.'

Compensation became the focus of the SVCC. ISCOR's pollution of both the air and water was not framed as an environmental justice issue. "It was not seen as a political issue or with extending environmental awareness, only concerned with compensation." (Maggie Victor interview, 28.2.2004). According to one informant, "ISCOR's offer to pay compensation was a very divisive strategy which eroded community cohesion. For example, Tandiwe's family came to the area to work for a farmer. Her father died from a bad stomach." Her mother got compensation of R115,000 for their smallholding. They had to sign a contract that they would withdraw from the interdict. People accepted compensation from ISCOR because they were told their properties would be confiscated to pay the legal bills.

Instead of being a social space in which the liberal-democratic vision of a non-racial post-apartheid society was acted out, there was a deep dependence on white lawyers which reproduced relations of dependence and passivity. The legal bureaucracy was very complex and largely opaque to members. The litigation process was complicated and protracted. The court record is 6,000 pages long! Many community members chose to sit in during the court proceedings, but were not able to follow the legal complexities and relied on the legal experts for translation. This supports Ruiters' (2003) arguments that

litigation can actually be disempowering and confusing for members of a community. It can also be extremely divisive as the earlier attempt at litigation illustrates. Community members were acutely aware of the lack of cohesion in the legal team. According to the ex-chairperson of the SVCC "it fell apart because of conflict among the lawyers" (Samson Mokoena interview, Vanderbijl Park 22.6.2005).

The SVCC and the ISCOR gagging order

The SVCC, as an organisation, was formed as a direct result of a court order obtained by ISCOR during the case, gagging all of the 16 court applicants. The children of the applicants, on advice of the lawyers, formed a committee to be able to speak on behalf of the applicants. Support came from a Johannesburg NGO: "The community was supported in its efforts to resist the gag by the Freedom of Expression Institute, (FXI), which planned to challenge the gag in the constitutional court as a violation of the freedom of expression contained in the Bill of Rights. Literally on the eve of the FXI's proposed constitutional court challenge and in the days before the WSSD, ISCOR changed its mind and asked for the press gag to be withdrawn" (Member of the legal team interview, 2003).

Until the WSSD, the SVCC focused on the legal case only. According to one informant, "SVCC brought everyone together on Saturdays, about fifty to eighty people each time. But there were no workshops or community education. We the lawyers were too active in the process. We should have transferred skills. We should have got Groundwork and Bobby Peek in to do community training... There was marvellous co-operation between black and white. But the process was directed by outsiders, not the community itself. SVCC people still interact, for example they fetch water from each other. But the community has disintegrated ... one reason for the failure of the SVCC is the social impacts of displacement and losing their livelihoods. It used to be a strong community, with churches and shops. But then animals died and miscarried when they drank the borehole water. The Steel Valley area is dependent on the groundwater. It's a poor area with high levels of poverty and unemployment which means a lack of resources for community mobilisation, resources were channelled through the legal team. There was a need for resources for transport and phone calls." (Maggie Victor interview, Vanderbijl Park, 2004)

As one informant expressed it, "....people lost heart. There was a split in the community. It wasn't racial, they stood together and provided a fine example of protest around the WSSD. Also there was a split in the legal team, between the attorney (young and inexperienced) and the advocate. Everyone wanted to capitulate. Samson was elected chairperson of the SVCC, now he's studying. The splits are deep. Samson's father, Isaac Mokoena is one of those who settled. Samson and a whole lot of youngsters once came to break up a meeting. I brought in someone to facilitate media and community work. The community was not strong. The community was weak, fractured and geographically dispersed. The case had started in January 2001, and people expected it to be over in 2 -3 years. People lost hope... "The clients became exhausted. In April 2003, conflict started, people were tired, some went with another attorney. They had suffered a loss of jobs, amenities, livelihoods and health. By the end of 2003 all the remaining clients except three said they were tired and wanted out. Matsepo, Cooks and Dewey were left. The situation needs huge community based action. It's a sad story, so much energy, so much hardship... "(Maggie Victor interview, 2004)

Phase 5: Community organization in a globalised moment

After the court case, the character of the SVCC's involvement changed, as the WSSD brought a multitude of environmental activists to South Africa, 10 years after the path breaking United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, which agreed on Agenda 21.

The 2002 World Summit on Sustainable Development (WSSD) in Johannesburg presented an opportunity for community mobilization in a globalised moment. WSSD delegates including members of

parliament from Europe and Australia supported the community by participating in an 'unsustainable' bus tour to ISCOR which had a deep impact on the overseas visitors. This strategy involved mass mobilisation which seemed promising at the time, but with hindsight was ephemeral. Mass mobilization included a protest march in July 2001 to ISCOR and the handing over a memorandum of demands. Protestors demands included that ISCOR should stop polluting, provide clean safe water to residents still forced to drink the poisoned borehole water and buy out polluted properties at replacement cost.

The SVCC sent delegates to the WSSD and members attended the pre-summit conference on corporate accountability (organised by Groundwork) and the corporate accountability protest in Johannesburg on 22 August 2002. However, once the Summit was over, the momentum of collective action dwindled. While the WSSD process demonstrated the existence of what Bauman (2001) has termed 'carnival ties', there were no strong, sustainable associational ties built on horizontal norms of trust, co-operation, mutual assistance and reciprocity, and no enduring sense of solidarity.

Conclusion: explaining the failure of resistance up to 2004.

The failure of resistance was due to five main factors:

1) The power of ISCOR

ISCOR's response to these various attempts at resistance was a contradictory pattern of acknowledgement and denial. For example, the corporation paid millions to the 168 litigants in the Johnny Horn case and then R70 million in buying some 200 properties to defuse the 2003 case. In this case they denied any evidence of pollution yet supplied piped water to several properties adjacent to the steel mill. There is a clear pattern of hiding and disowning information, and a tradition of making false promises. ISCOR argued in court papers in 2003 that if it is forced to stop or clean up its pollution, it will have to close down, with the loss of thousands of jobs. This was a serious threat as ISCOR employed some 9,000 people at this time.

2) The weakness of the Department of Water Affairs.

ISCOR has ignored requests from the Department of Water Affairs (DWAF) to stop the pollution. DWAF continues to issue ISCOR with permits to pollute the environment. As one informant said: "The DWAF has failed to regulate in the interests of the people... The pollution plume is moving east, it is already in Boipatong and will soon be in Sharpeville". "ISCOR continues to pollute our water, land and air – and does so with a licence from the government." Another community activist said: "We physically were part of the people who took water samples at four different points in the canal, but when we told DWAF about the result, they sent us from pillar to post. We then roped in G-DACE (Gauteng Department of Agriculture, Conservation and Environment), and they took soil samples and made a recommendation that the soil is not good for commercial agriculture."

Government representatives were part of the ISCOR Environmental Forum, but this did not lead to government. According to one informant, when MEC Mary Metcalfe closed down the Forum, she promised that "government would take over the process and deal with it. But nothing happened". According to Barbie Schreiner in a television interview: "ISCOR is one of the most difficult industries we have had to negotiate with... We do not have any evidence that the water pollution is causing deaths... There is pollution that is attributable to ISCOR but there's also bacterial pollution".

Several informants believe that the Department of Trade and Industry's interests in steel exports overshadowed any commitment to justice for the community.

3) The weakness of the local state.

Many informants expressed their disappointment in their interactions with the local state. It was often

seen as an uncaring and inefficient bureaucracy. For example several informants commented: "The municipality is dragging its feet"; "We know that government makes promises just for election campaigns and then they do nothing for us." "Nothing has been done by the community, we are waiting for our local government to take action." "No action has been taken by the community but the ANC government promises to help but till today nothing has been done."

4) The lack of involvement of the trade unions

Despite its history of militancy in the anti-apartheid struggle and the exposure of its own members in the workplace, NUMSA has not been active in the struggle against ISCOR. This is explored in section 7 below.

5) A lack of support from environmental justice organisations.

The embryonic environmental justice movement in South Africa has limited resources. Some of these resources were invested in the Vaal Triangle, but with limited impact on the Steel Valley struggle. In this period Groundwork actively supported struggles in the Vaal Triangle, but focused on air quality issues and corporate accountability, whereas the Steel Valley struggle is focused on water quality. The EJNF (a national network) made sporadic contact with the SVCC, but was itself under strain. Khanya College (a radical adult education group) supported ex-workers of Samancor, whose health had been damaged in the work place. This also did not extend to Steel Valley.

6) The challenge of organizing the community impacted by the pollution.

The Greater Steel Valley area never formed a strong, cohesive community. There were social, racial and ideological divisions as well as the fact that the community was geographically scattered. But even in more homogenous societies:

"Organizing a community contaminated by toxic wastes is extremely difficult and full of contradictions. The victims and their families, already suffering physical and emotional pain, must relive painful memories as they delve into the causes of their trouble. Indeed, the more ammunition they find for their case, the more reasons they have to be angry and afraid. To become activists, citizens must overcome an ingrained reluctance to challenge authority: they must shed their preconceptions about the role and function of government and about democratic participation. They must also develop a new outlook on the nature of scientific enquiry and the participation of the public in scientific controversy. Activists must learn how to mobilize and organize the public to challenge government successfully. Most of all, as the affected families and other activists in Woburn (where toxic waste had poisoned a community's underground water supply – authors' comment) discovered, enormous patience and energy are required, because the struggle can continue for more than a decade." (Brown and Mikkelsen, 1992: 43)

In South Africa these difficulties are compounded.

To conclude, the social impact of toxic contamination has created profound fears, anxieties and a deep sense of uncertainty, symbolised by the rubble which is all that is left of a thriving community. Polluted communities, as Glazer and Glazer (1998) found in their US study, "when faced with a serious environmental hazard and a bureaucracy that seems indifferent or incapable of addressing community needs... often develop a profound sense of betrayal. They realise that they can no longer rely one experts or bureaucrats to protect them (Glazer and Glazer, 1998:xv). They report that in response to this sense of betrayal, activists "transfer their trust to their own groups and resolve to be part of the resolution of their community's problems. In this process they develop a culture of solidarity, which is accompanied by an increasing confidence in their own personal potential and in their collective ability to forge strategies to demand responsiveness from recalcitrant officials" (Glazer and Glazer, 1998:xv). However, no strong culture of solidarity has emerged in Steel Valley. This personal confidence and culture of solidarity has

still to be built. However a new organization, the Vaal Environmental Justice Network is an embryonic carrier of such solidarity.

Section 6: RESISTANCE INTENSIFIES: THE VAAL ENVIRONMENTAL JUSTICE ALLIANCE

The Vaal Environmental Justice Alliance (VEJA), which marks the sixth phase of our genealogy of resistance, had its origins in an initiative of the Friends of Steel Valley (FOSV). In February 2004 this group was formed to give assistance to the struggle of the local residents for environmental justice. The FOSV organised two community workshops, which were attended by over 30 people from Louisrus, Rosahof, Lamontpark and Steel Valley. They included representatives from NUMSA, the Rainbow Environmental Youth Organisation, the Sebokeng Environmental Group, the Vaal Working Class Crisis Committee (VWCCC), the Christian Knowledge Independent Churches Federation of South Africa, the African Genesis Heritage Environmental Club, the Sasolburg Air quality Monitoring Group and the Boipatong Environmental Committee. Together it was decided to broaden the struggle against ISCOR to include other corporations in the Vaal Triangle who are concerned with "profit at the expense of environmental and social justice", particularly Sasol's pollution of the air and Samancor's poisoning of some of its workers.

These organisations are the 13 affiliates that presently constitute VEJA are marked by a diversity, ranging from small faith-based groups to the large, Vaal Working Class Crisis Co-ordinating Committee. All organisations share a sense of injustice about what is going on in the Vaal Triangle. A frequent theme is the difficulty of challenging the power of corporations like Samancor and ISCOR (Mittal Steel).

Phineas Malapela, a VEJA leader

The chairperson of VEJA, Phineas Malapela, illustrates some of the convictions and energy that drive VEJA (Malapela interview, Vanderbijlpark, 2.8.2005). Now aged 48, he is an activist in the Anti-Privatisation Forum and married to a teacher. He has a B. Jurisprudence as well as a UNISA diploma in Labour law, and has been involved in activism since 1982. His political involvement started when he was a student at the University of Zululand. He participated in the 1984 Vaal uprising, and has been detained several times. Malapela has no regular income, but says: "Its not that expensive to live. I keep the fire burning.."

He has strong, independent political views. "We understood the ANC would fall short of the aspirations of the people because they followed a neo-liberal policy. This was not surprising. The Freedom Charter was smuggled into the ANC by the Congress of Democrats, and we knew that the ANC would abandon it. There were other important documents, such as the Azanian Manifesto drawn up by Steve Biko and others..." argues Malapela. He describes himself as a socialist, because: "Socialism is the only way we can alleviate the situation of the poor people".

Malapela was a founder member of the VWCCC, in 1998, which is organized in several areas of activity. "In 2003/4 we started focusing on the question of ISCOR. Many of our supporters were ex-ISCOR workers who had occupational diseases like cancers, ulcers and asthma. Some got compensation after we took them to the Department of Occupational health. We pushed to get access to the records of the medical centre inside ISCOR." At that stage, says Phineas, "we didn't work with the SVCC because we didn't know about them".

Phineas and other informants expressed a strong antagonism towards ISCOR/Mittal. There is a suspicion that ISCOR security personnel were involved in the 1992 Boipatong massacre when 50 residents were killed, through supplying arms to IFP supporters. VWCCC has been involved in three cases against ISCOR: "The first is against the security department. ISCOR dismissed the security personnel and outsourced the function. The company collapsed, but ISCOR failed to recall the 670 retrenched workers within 2 years as agreed, so we took them to the labour court. Secondly we exposed corruption within

ISCOR... Whites were being rehired by sub-contractors and there was bribery involved. Carstens (general manager of ISCOR) got R50 million in bribes, we exposed him and ISCOR investigated, he was suspended and then dismissed. The third case concerns evictions from an ISCOR hostel in Sebokeng... After retrenchments ISCOR wanted to sell the hostel to the municipality of Vanderbjlpark. Three councillors founded an investment corporation and took over the hostel for R5 million, even through it was worth R19 million. About 6,000 people rented rooms, but did not pay for services. In 2003 the councillors ordered evictions, and called the Red Ants. The community attacked them and unfortunately 4 people lost their lives. They tried to sell the hostel to the council for R15 million. It was agreed to make sectional title divisions and SANCO and the South African Council of Churches formed a forum. The case is now before the Supreme Court and the company has been liquidated," explains Malapela.

It is significant that VEJA was formally launched on 19 October 2005. The date was chosen to commemorate 'Black Sunday' when 17 black political organizations were banned in 1977. The choice of date signals that the struggle for environmental justice is as important as the struggle against apartheid.

VEJA's approach

VEJA's expressed demands are:

- The end of pollution in the Vaal Triangle
- The repair of pollution damage to the environment
- Compensation for pollution damage to people's health & livelihoods

Social characteristics of VEJA

The social base of VEJA is black, working class, poor, largely unemployed people (VEJA organisational survey, October 2005). Their meetings are mainly attended by "poor people, who walk to meetings, and don't have the money for cell phones or taxis. We communicate through loud hailers or pamphlets which small children distribute" (Malapela interview, Vanderbijlpark, 2.8.2005). This social base is in contrast to the Love Canal Homeowners Association which was limited to property owners, and was subject to criticism by poorer residents renting property in the area.

While most VEJA affiliate members have low formal education there are high levels of linguistic competence. While affiliate organisations are not rich, they have all made use of local resources and members' spirit of voluntarism. As in the Love Canal Homeowners Association there is an emphasis on self-education: "There are no experts, we are all learning." The style of organising is very open and inclusive. It does not seem to be formalised in membership based structures. There is very little bureaucracy, and few have written foundational documents such as constitutions. The VWCCC is quite different from most of the other affiliates, in that it is big, more structured, and has a track record of engagement in struggles against ISCOR. The other big organisation is the Christian Knowledge Independent Churches Forum of SA (CKICFSA), which has organised thousands of its members to march against injustices in service delivery. There is a strong sense among CKICFSA members that local government "lacks the capacity to address our grievances."

Both VWCCC and CKICFSA are focused on several issues and overall there was no clear, shared understanding of environmental justice. The concept was often defined very broadly, for example one informant maintained that: "Environmental justice means the creation of jobs, the total eradication of poverty, the equal distribution of wealth, ceasing discrimination due to illnesses and health protection." Another informant said: "Environmental justice to us means the natural resources need to be used in a way that will preserve them for us and generations to come. The environment must provide the resources to live. You can't tell a hungry person not to kill an animal or a cold person not to cut a tree and make a

fire to warm himself. We must not destroy the environment, which is our source of life" (Malapela interview, Vanderbijlpark, 2.8.2005).

Another affiliate organisation with a history of struggles against ISCOR is the Steel Valley Crisis Committee described above. The Samancor Retrenched Workers Coordinating Committee (SRWCC) has been engaged in a compensation struggle against Samancor, and it seems the outcome is that between 500 and 1000 ex-workers may receive compensation without company admission of liability. The Sasolburg Air Quality Monitoring Group (SAQMG) has been monitoring and protesting pollution from Sasol. Unlike the Love Canal Homeowners Association where the majority of activists were women, there are equal numbers of men and women who are active in the affiliate organisations.

The residents of Steel Valley have much to learn from other contaminated communities such as the Love Canal struggle. The Love Canal Homeowners Association was "a true grassroots organization. It arose in a working-class community in a time of crisis, when citizens joined together because they felt that their needs were not going to be met properly by their government. The organisation became a strong countervailing force in opposition to corporate and government interests..." (Levine, 1982: 208). But while relations between those residents and government officials were also marked by suspicion and distrust, the local and federal state were an important source of resources. For example New York State provided an office for the Love Canal Homeowners Association for more than two years, paying electricity, telephone and copying expenses. As Levine writes, "This support was critical. The office became a focus for the organisation, a place to be, the center of work, the haven for many troubled people and the place where information was available and where people could share their most pressing concerns" (Levine, 1982: 187). VEJA is in the process of establishing an office to perform these functions, significantly without the state support which was crucial to the success of the Love Canal struggle.

VEJA strategies

VEJA has declared itself prepared to "negotiate and fight for environmental justice in the Vaal" (VEJA pamphlet, October 2005). Strategies include an engagement with both the local and the national state, to achieve administrative justice. An example is a briefing to the Deputy Director: Environmental Quality and Protection, Joanne Yawitch, drawing her attention to suspected dumping of unregulated wastes into the slag heaps at Vanderbjlpark in September, 2005. There is a plan to demand that the Minister of Water Affairs, through DWAF, must justify its action in granting ISCOR a 10 year permit to continue to pollute the environment. There is a commitment to using the new political spaces that democratization have opened up. Engagement with different state structures in addition to DWAF, such as DEAT's planned process to implement the new National Environmental Management Air Quality Act in the Vaal Triangle. VEJA also plans to engage with local government. There is also talk of a dramatic mass action such as a "die-in" of thousands of people surrounding the ISCOR plant.

Overall, VEJA has the capacity to reach up into the decision making levels of the local state and down into grassroots communities, as well as to forge linkages with other environmental justice groups at national, regional, continental and global levels. This geographical, social and political reach has considerable potential.

VEJA and government

A prominent question for VEJA, which emerged as an immediate priority at its 5 November 2005 workshop on pollution, is: "who is responsible for protecting the people of the Vaal against pollution, and how can these people be contacted? Which municipal, district, provincial and central govt dept is supposed to do what, and how can they be held accountable?" This signals a clear intention to establish

and enforce the accountability function of government.

Other questions centre on what the solutions are for pollution. In other words, how can demands for zero pollution and repairing pollution damage be formulated? What is the content and mechanisms for possible solutions: remediation and clean-up, compensation, medical assistance. This echoes the mobilisation and engagement of the Love Canal residents where a strong local knowledge of all these aspects was developed, and used in interactions with authorities (Brown and Mikkelsen, 1992).

VEJA members have expressed a strong demand for getting up-to-date, detailed information on industry emissions. How are these kept, where, and how can they be accessed? Plans are to train community representatives in understanding scientific language of these results. There is also a strong demand for community monitoring of pollution. VEJA affiliates are determined to push the public debate about pollution in the Vaal triangle, sharing information, making people aware and holding those that should be responsible, accountable for what is happening. VEJA is poised to participate in air pollution control programmes. As its pamphlet says: "We will negotiate and fight for clean air, clean water and a clean environment".

Many comments from VEJA informants indicated a strong determination to fight on, either to obtain compensation or to stop the pollution. But to do so requires knowledge and confidence. VEJA activists maintain there is a strong need to overcome a sense of powerlessness expressed by some people in the community, who commented: "We are powerless. Our rights are thwarted," and: "There is nothing we can do. We are only a bunch of old, illiterate farmers, who do not even know their rights as livestock farmers."

There is a priority focus on a series of community education workshops intended to build capacity on the nature of the pollution problem. A common theme was that "we need more education about these issues." While many local people have direct, experiential knowledge of water and air pollution, they are unclear about the scientific basis. VEJA plans to link scientific and experiential knowledge to strengthen their capacity to participate in local government generally and policy for specifically. In this sense, VEJA should strengthen local capacity to mobilise for socio-economic rights and amplify social citizenship.

Another priority is to learn from other struggles for environmental justice, both in South Africa and internationally, and to build 'grassroots globalisation'

Globalisation from below

The Steel Valley Struggle illustrates the two-faced nature of the process of globalisation. The regional, national and global linkages that activists in the Steel Valley struggle have made with other organizations committed to environmental justice potentially represents a countervailing force to Mittal's globalised steel empire.

There are five significant national organizations supporting VEJA: Groundwork, the Group for Environmental Monitoring, Khanya College, Earthlife Africa and the EJNF. Khanya College has organized the Samancor Retrenched Workers, who are in the process of winning compensation. GEM was formed in 1991 to provide support to grassroots environmental organizations and has contributed to the redefinition of environmentalism in South Africa. GEM is providing administrative and organisational support to VEJA in its formative stages. Earthlife Africa (ELA) is a loose, nationwide alliance of volunteer activists, grouped into local branches. With its background in fighting toxic waste, its members provide specialist support to struggles on the ground. The EJNF functions as a national network of environmental justice organisations.

Groundwork illustrates the importance of direct support and the possibilities of linking the greater Steel Valley struggle into international networks resisting corporate abuse of people and their environments. Groundwork is a non-profit environmental justice service and development organisation, founded in 1999 to improve the quality of life of vulnerable people in Southern Africa, focusing on 'brown' environmental issues, namely issues largely associated with the degrading effects of industrial pollution, oil refineries, health care waste and toxic chemicals on peoples and their environment.

Groundwork's work on corporate accountability is especially relevant to the Steel Valley struggle. According to Bobby Peek, "The corporate accountability campaign will direct our energy and resources against the real enemy, the corporations." (Peek interview Johannesburg, 2004) ISCOR was nominated for their 2005 "Corpse Awards" which publicised corporate environmental abuse. ISCOR "won" the sustainable catastrophe award. On this occasion Naomi Klein said: "We know corporates are not just satisfied with leeching your communities and poisoning your bodies. They want to be loved which is why government invented corporate social responsibility. For them there is no problem that is so big that it can't be solved with fantastic public relations" (*The Sunday Times* 12. 6.2005).

The Corpse Award nomination was incorporated into the Ohio Citizen Action communication to the European Commission in February to support their objection to Mittal's bid for Arcelor. (See above). This organisation, with 100,000 members, mobilises against cancer causing air pollution from Mittal Steel's Cleveland Works. The objection drew the attention of the Commission to poor safety problems at Mittal's Kazakh coal unit, and Mittal's planned displacement of people in Jharkhand, India. The message of solidarity send by VEJA to the Ohio Citizen Action illustrates the potential of local groups to challenge Mittal's globalised steel empire.

Conspicuous by its absence from initiatives aimed at compelling ISCOR to take responsibility for environmental degradation that the giant steel mill has caused in the Vaal Triangle, are local branches of the trade union movement, particularly the National Union of Metalworkers of South Africa (Numsa). This absence of union support for environmental campaigns in the area stands in sharp contrast with the role that the labour movement played in the struggle to win workers' rights and against apartheid. In the 1980s, unions like NUMSA were in the forefront of the struggle to win rights for ISCOR's black workers. They also played an important role in the struggle against apartheid in the Vaal Triangle. But it is not only the contrast between unions' prominence in anti-apartheid struggles and invisibility in environmental justice campaigns that is puzzling. The union seems to ignore the fact that union members are the first victims of ISCOR's pollution of their working environment.

Working conditions at ISCOR's Vanderbjlpark plant

The steel mill is a dangerous place to work in. When asked to identify the most dangerous parts in the production process at ISCOR Vanderbijlpark, Peter Makgware of the United Association of S.A. (UASA) pointed to coke ovens. Steel at ISCOR is produced from recycled steel products and raw materials: coke, iron ore and limestone. Coke is produced by burning coal in ovens for at least 12 hours. During this process, volatile chemicals are emitted. A February 2005 International labour Organisation (ILO) Code of Practice on Safety and Health in the Iron and Steel Industry noted that besides exposing workers to coal dust... "Coke oven emissions contain cancer-causing polynuclear aromatic hydrocarbons, along with toxic gases and vapours such as benzene, hydrogen sulphide, carbon monoxide and ammonia" (ILO, 2005: 45).

Because of the heat needed to produce coke, workers employed in this part of steel-making production process are exposed to the risk of heat stress. Workers can suffer burns from hot coke and ovens. Numsa's regional secretary Simon Tladi remembers how in the years that he was a union organiser at ISCOR, workers who worked in the coke ovens complained about levels of heat. They alleged that the heat led to impotence. The union in its wage negotiations demanded a "heat allowance" but the company did not agree to this.

But Philip Nyama, a Numsa leader in the Vanderbijlpark plant, does not believe that the coke ovens are the only dangerous area. He says: "Different parts of steel-making pose their own hazards". The ILO Code that employers, labour and government endorsed earlier this year, notes how the glare that comes out as a result of activity around a furnace or foundry can injure eyes of employees. Furnace workers are exposed to burns from spills, spatters, during tapping and in the transportation of hot metal. There is also the possibility of fires and explosions that often occur when water comes into contact with molten metal or when volatile materials and fuels are ignited. Steel mill workers are exposed to other hazards during surface preparation, rolling and coating. Workers who burn away impurities from steel are exposed to fumes, noise and burns. The solvents that are used in surface preparation may be very toxic and acids used can lead to acid burns. Workers can also be trapped between rolls. Shearing, cropping, trimming and guillotine machine pose severe threats to workers safety. So are the oils and other materials applied during spraying and coating.

According to the Mittal annual report for 2004, total injury frequency rate increased in two regions of the company that operates in 14 countries. The increase was in South Africa and North America. The injury rate increase in South Africa was 26% when the North American increase was 8%.

A number of ISCOR workers now linked to VEJA reported serious health problems. Examples

mentioned were painful feet, high blood pressure, kidney problems, headaches, swelling feet, eye problems, ulcers, body swellings. Most informants related their health problems to what they termed "poisoned water." A number of informants complained of dust in the workplace and extreme temperatures. Some had been dismissed when they experienced ill health. One reported that he used to work near the coke ovens "where iron ore is coked and the fire is very hot. I was dismissed for taking home the drinks provided (to act as relief for dehydration). Acid is used and it entered my eye, destroying one. The stuff used to cool the product is as well full of acid and other chemicals and we are exposed to it."

Another said: "I was working near the blast furnace, and experienced ...hot feet, chest problems and heart pains". Another blast furnace worker said his "...ear drums are partially destroyed, the left ear partially, but the right ear totally from working next to a noisy furnace machine". This ex-ISCOR worker also suffers from arthritis caused by "poisoned water, which we used when cleaning after furnace products". Several workers were aware that they came into contact with polluted water in the workplace. One said: "Water is poisoned by chemicals, but there is no formal safety education about how to handle such water." Another commented: "Water is used in the pipes where the products are prepared, to prevent damage to the pipes. And after use the water is used to clean products which are prepared with chemicals."

The workers lacked access to proper health care. For example: "I went to the doctor for medication but it didn't help. The only organization we all joined to fight against ISCOR is VWCCC, when ISCOR retrenched us without compensation." Another commented: "ISCOR sent me to hospital inside ISCOR, and they referred me to Sebokeng hospital. The chest problem was followed by swelling of body and legs, especially of the joints. It is now difficult even to stand every morning. I have a rash all over the body, especially at the back and semi-paralysis at the shoulder."

Another worker reported that there are pools of "poisoned water" that stand for a long time because there is no drainage. An ex-worker said he was suffering from cold feet, headache and TB. He said he had been exposed to dust in the workplace and cold "as we transport raw materials and products". "I reported this problem to Numsa, who said there is nothing they can do. We then formed our VWCCC to campaign for compensation from ISCOR." Another worker said: "Numsa was informed about the problem but they did nothing."

The response of trade unions in the Vanderbijlpark

NUMSA is the biggest of three unions who organize the 5 500 people who work at the Vanderbijlpark plant of ISCOR: the National Union of Metalworkers of South Africa (Numsa) with 2000 members, Solidarity with 1 700 members and the United Association of S.A. (UASA) with 1 200 members.

Clearly links with the labour movement are crucial to developing an alternative network of power to challenge ISCOR specifically and corporate globalisation generally. But no union has made a significant impact on working conditions inside the steel plant. The Numsa case is the most interesting, because of its tradition of militance. However, it has not been very active in fighting pollution and defending the health of its members in ISCOR. This is despite the fact that "...the ISCOR workers were the backbone of the 1984 Vaal uprising... the NUMSA shopstewards were the catalysts" (Dinga Sikwebu interview 21.9.2005). Having won recognition in the mid-1980s as MAWU, the union fought many battles against ISCOR management. The biggest of these struggles is the living wage of the late 1980s and the campaign against the privatization of ISCOR.

Numsa's regional secretary Simon Tladi recalls serving in an environment sub-committee of the Vaal Economic Transformation Forum (VETF) in the early 1990's.

"I represented Cosatu in VETF. We involved all the companies that pollute air in the Vaal Triangle – companies such as ISCOR and Sasol. We made sure that all these big companies were involved. We even established a fund so that we can move around and do things like conducting studies. Unfortunately I got pulled out of the forum and I believe that the forum collapsed. But I still receive correspondence on environmental issues as a person who once served on that sub-committee".

Both in the Steel Valley court case and the ISCOR Environmental Forum, unions that organise ISCOR workers were not involved, confirmed Danie Lingenfelder of the Louisrus Interest Group, whose involvement in the struggles against ISCOR goes back to mid-1990s. Steel Valley Crisis Committee's Samson Mokoena commented: "Trade unions at ISCOR do not participate in such forums. They don't show interest and we don't know what is the reason behind that". Mokoena listed a number of approaches that they have made to Numsa as the main union that organises workers at ISCOR. The SVCC had with Numsa's national organiser Osborne Galeni at the time of the WSSD in 2002. Another meeting was held with Numsa's regional education officer, Bafana Nkosi. A Numsa official came to Steel Valley together with a Cosatu representative when Germany's labour minister visited the area. Steel Valley Crisis Committee representatives gate crashed a Numsa regional congress where they found the issue of suits against ISCOR being discussed. No concrete support came out of these initiatives.

"There is a perception that environmental activists want to shut down ISCOR, which is not true. When ISCOR applied for a gag order against Steel Valley residents, there was talk about how the community wanted to shut down the company. Given what the impact of ISCOR's closure would be on the economy of the Vaal Triangle, such statements must surely make Numsa not want to participate fully in this thing," says Mokoena. There is also a perception that the environmental groups are against government and the ANC. Mokoena was vehement that this was not true either.

Why NUMSA is not involved

Trade unionist, researcher and ex-Numsa organiser Dinga Sikwebyu argues that there are a series of reasons why Numsa did not get involved, and what their implications are:

1) Health & safety issues: an important bridge to environmental justice consciousness

ISCOR management appreciates how potent health and safety issues can be in providing a bridge towards environmental consciousness. It is because of this recognition that the company has refused to accede to union demands for democratically-elected health and safety representatives. It is for the same reason that the company has kept issues of the environment out of its discussions with labour.

2) Health and Safety: Not a Priority?

From the 1980s on, a view seemed to have developed within the labour movement that health and safety issues were not a priority in building organisation. It is not clear what basis of this assertion was. In cases like ISCOR where health and safety is a life and death situation, it is not too clear why a campaign on dangerous work cannot have resonance. It looks as if having gone for "soft targets" like wages, the unions built a theory that health and safety was not a priority. Maller (1983) is more correct that management stuck to a unitarist approach on health & safety while moving to a more pluralistic paradigm on other aspects of industrial relations. Another important point to note about health and safety at work, is that the law that governs occupational accidents and disease does not form part of the "post-1994 labour law package" that the new government introduced.

The Occupational Health and Safety Act (OHSA) is part of the laws that "late apartheid" introduced in 1993. Since then, there has not been significant reform of the legislation that governs occupational health and safety. This may explain the absence amongst unions of an enthusiasm around health and safety issues. It may also explain why Numsa and other unions at ISCOR have not fought to the finish for democratically-elected health and safety representatives.

3) An institutionalist approach to organising around health & safety issues

From interviews with current Numsa organisers, it would seem that labour is pinning its hopes on winning the demand for full-time health and safety representatives. This emphasis is not different from the general approach that Numsa has adopted on how to organise on health and safety. The emphasis has been to set up health and safety committees at workplace and regional levels. This approach has meant that there has been little campaigning and overemphasis on setting up structures. At the time of the interviews, a workshop was being held in the Vaal triangle with the aim of setting up a Numsa regional health and safety structure.

4) A choice between jobs and the environment

Although only the UASA shopsteward mentioned it, it looks as if the potential of job losses is something that workers consider when environmental issues are discussed. UASA's Hlomuka mentioned that workers always ask him about what is different between now and the time that they fathers worked at ISCOR. "Workers always say to me: our fathers worked here and nothing happened? These workshops that you attend and the ideas that you get there, will lead to job losses here at ISCOR". Given the position of ISCOR in the region's economy, closure of ISCOR must be something that workers refuse to contemplate. Retrenchment over last 20-years must clearly reinforce this fear.

5) Shopstewards: Still the revolutionary bedrock of the labour movement?

The view that shop stewards are the revolutionary bedrock of the union movement needs interrogation. So does the view that sees shop stewards as activists at work and in the community. Numsa's shop steward Graham Bityase mentioned how despite the union having 65 shopstewards, he is now and again called to departments to do what is basically a departmental shop steward's job. "Most of our shop stewards do not attend meetings. Some of them are just section shop stewards. They don't attend meetings. They only come when there is something that suits them". If shop stewards do not attend meetings at work, a question arises: how active are they in the community? At ISCOR, shop stewardship has served as a stepping-stone into management.

6) Increasing fragmentation of the working class

Although no survey has established how many union members take part in social and community movements, recent UKZN Centre for Civil Society (CCS) studies reveal that many of the movements that have emerged since 2000 have the unemployed as their main social base. It will be important to establish how many of union members at ISCOR take part in social movements that are active in the Vaal Triangle. Secondly, it will be important to establish what their attitude is to these movements. While this is something for the future, one thing cannot be assumed: that the social base of new social movements and union membership form one constituency with no fissures and fractures.

7) Weaknesses of labour

Throughout the year, union density has hovered around 50%. This must somehow explain some of the difficulties of winning demands at ISCOR. Also important is the question of how the biggest union at

ISCOR has recovered from the fractious split of the early 1990s. Numsa's secretariat report to the union's national congress last year, hints at some organisational problems at ISCOR.

"Comrades will recall that we took over ISCOR coordination when our union was in dispute with the company around payment of R50 000 to each employee for taking on additional tasks since the beginning of ISCOR's restructuring process. While everything was done up to a strike, some comrades could not appreciate the effort and the money that was spent by head office in support of their struggle. We accepted that issues during the strike were clouded with other matters that had nothing to do with the strike". (p.87)

This section of the report, which is very much coded, ends with a conclusion that the union's national leadership has "managed to bring stability to ISCOR and the organisation has been handed over to Numsa members where it belongs". (p.87)

8) Centralisation within the labour movement

Explanations from Numsa leaders in the Vaal Triangle that action against ISCOR (for example the lawsuits) were dealt with at national level raises an important issue about centralisation within the labour movement. This is particularly critical for a union like Numsa. Collective bargaining with the union is centralised, with negotiations taking place at a central level and through bargaining councils or non-statutory national fora. System of education, legal service, communication and finances are also centralised. This centralisation raises questions about the space for shop stewards at plant level to take up campaigns and link up with non-workplace movements. Since 2003, Numsa's Vaal region has been involved in running battles with national office on where power lies in the union: is it in the region or at head office. This struggle is captured in the union secretariat report, albeit in coded manner.

9) Fear of social movements

Although none of the interviewees expressed problems with the organisations that are leading struggles against ISCOR, the suspicions that exist within Cosatu for social movement cannot be ignored. This fear was reflected in the debate at the federation's national congress in 2003. After a long debate, a resolution on new social movements was adopted. It laid clear conditions for cooperation between Cosatu union and other movements. The conditions include the following – a track record of mass struggle, internal democracy and a mass base. The resolution closes any prospects of cooperation with movements that are critical of the federation's alliance with the ANC.

What could be done?

Sikwebu, a rare combination of trade union and environmental activist, makes the following recommendations to get unions involved in environmental justice struggles in the Vaal Triangle:

1) Build the capacity of shop stewards to deal with health & safety issues within the plant.

It is clear that unions have not prioritised the issue of health and safety within the plant. It is therefore not surprising that there is no deep appreciation within unions about environmental hazards that ISCOR brings to the area of the Vaal Triangle. A carefully considered programme to increase the capacity of unions and particularly shop stewards in dealing with health and safety issues within ISCOR may be the first step in bringing about awareness about environmental issues in the Vaal Triangle. Such a programme will have to combine training as well as targeted campaigns to ensure that ISCOR complies with laws such OHSA and the new ILO guidelines on health and safety. Support from environmental groups for these small and modest campaigns may be important for building relations and trust.

2) Get shop stewards to monitor Mittal's promises to deal with pollution.

In its 2004 annual report, Mittal announced a number of initiatives aimed at demonstrating how the company viewed environmental sustainability as "a core business imperative". The first project is the upgrading of the effluent treatment plant to achieve zero discharge. According to the annual report the project commenced in 2004 and is due for completion in December 2005. Another major project announced by Mittal is a coke plant gas-cleaning project that aims to halve emissions of coke plant byproducts when it is completed in October 2006. In the next two years, Mittal hopes to rebuild coke ovens and reduce emissions from the main stack through a new sinter plant off-gas system.

Although these may be part of ISCOR's greenwashing campaign, it is important to monitor implementation because the projects in themselves raise questions about why the company is doing this. Also crucial is to monitor the impact of the new projects on workers' conditions of employment and job security. In this regard it will important to look at what happened to the agreement that ISCOR concluded with Solidarity at the time of the WSSD.

3) Break ISCOR's policy where environmental issues are a "no-go area" for trade unions

Not much will be achieved until ISCOR's policy to exclude union from discussions on environmental issues is broken. The two suggestions above may the best way to begin this.

4) Build a better understanding among environmental activists on how unions operate

While it is not convincing that the lack of understanding of how unions operate is the main stumbling block in forging an alliance between labour and environmental movements, a greater understanding of how unions function and how they have evolved will go along way in cementing relations between the two groups. "A workshop on unions at ISCOR and in the Vaal Triangle may help with little things such as sensitising environmental activists on when to hold meetings if you want workers to participate in, how to get workers to participate in local campaigns etc" (Sikwebu, 2005).

While the above may not open the floodgates of cooperation tomorrow, they may be important steps to take to build an environmental justice movement that brings together community groups and unions" (Sikwebu, 2005). It is extremely significant that NUMSA is one of VEJA's 15 affiliate organizations. This alliance is the potential carrier of Sikwebu's recommendations.

Section 8: THE WAY FORWARD: ENVIRONMENTAL JUSTICE STRUGGLES IN CONTEMPORARY SOUTH AFRICA

The Steel Valley struggle is part of significant new patterns of grassroots mobilisation that are emerging in post-apartheid South Africa. These new struggles involve a mix of 'red' (social justice), as well as 'brown' (urban) and 'green' (conservation) issues. Environmental and social justice issues are indivisible, as the corporations which are driving the process of globalization increase environmental degradation and social inequalities throughout the world illustrate in their own activities.

The asymmetrical struggle this report has described could be especially significant. As suggested above it could provide a turning point in the development of an environmental justice movement in South Africa, playing the role of a catalyst as the Love Canal struggle did for the movement in the USA. The environmental justice struggle in the Vaal could build on a tradition of working class militancy, which is at present expressed in the "new" social movements. It illustrates the convergence of health and environmental issues with a clear class pertinence but with the potential to build cross-class alliances. Activists can use the new political opportunity structure in the post-apartheid state to mobilise. Also the discourse of environmental rights with its strong emphasis on justice, participation and transformation has great mobilizing potential. There are models for this in our history, such as the current struggle of the South Durban Community Environmental Alliance against oil refineries in the Durban basin, the historic struggles of the Mafefe community against asbestos mining, the Chloorkop campaign against the siting of a toxic waste site in Midrand and the case of Thor Chemicals in Pietermaritzburg.

An alternative network of power

As an attempt to create what Glazer and Glazer (1998) term 'an alternative network of power' to confront the power of corporations, the Steel Valley struggle can learn from these historical models. As Vandana Shiva writes, "If globalisation is the corporate-driven agenda for corporate control, localisation is the countervailing citizen's agenda for protecting the environment and people's survival and people's livelihood. Localisation involves subjecting the logic of globalisation to the test of sustainability, democracy and justice" (Shiva, 2003:13).

This struggle in the industrial heartland of South Africa has a ready cross-class constituency in the residents of the Vaal Triangle who are exposed to both air and water pollution. They could create an active citizenship demanding environmental justice. The Steel Valley struggle could also be a way of strengthening our fragile, new democracy in South Africa. As Louise Gibbs wrote: "Organising to stop dioxin exposure is fundamentally organising to rebuild democracy. Our campaigns must not be only about the danger of dioxin, but also about the dangers of a society where money buys power. To create the equality and justice of a true democracy, our organising must restore the people's inalienable right to govern and protect themselves" (Cited by Glazer and Glazer, 1998:xvi).

A new political context

The Steel Valley struggle is taking place in a new political context. After many decades of inaction, and frustration with the new post-apartheid government reaction, there are signs of hope. An amendment to the National Environmental Management Act in 2003 gave environmental management inspectors powers of search and seizure. Nicknamed the "Green Scorpions" (the Scorpions are an elite corruption-busting unit in the Department of Justice with wide powers) they have been setting up networks and collaborating with other provincial and national government bodies. Former "Green Scorpions" chief, Peter Lukey, now head of air quality management in the department of Environmental Affairs, has

announced that the DEAT will identify and rank 50 industries that produce the largest and most poisonous volumes of air pollution. In a meeting he admitted that pollution by ISCOR is "a dramatic problem, a huge mess, a legacy issue... But we are starting to eat this elephant bite by bite" (Peter Lukey Pretoria. 12.8.2005). According to the deputy director Joanne Yawitch, in the past the state had "no coherent strategy to deal with ISCOR. We haven't had the legislation or the teeth to deal with ISCOR" (Pretoria. 12.8,2005).

This report has analysed the main civil society groupings involved in this resistance since 1983, the Steel Valley Crisis Committee, the ISCOR Environmental Forum and the Vaal Environmental Justice Alliance. These and many of the organisations which constitute a nascent environmental justice movement do not have a conventional, formal structure.

The obstacles are formidable even in the established liberal democracies in which activists like Louise Gibbs were operating. Davis (2002) has demonstrated the extent to which powerful corporations bent on increasing profit have attempted to undermine the scientific research needed to establish sound policy and protect human health. Furthermore the reductionist approach of many scientists themselves to environmental health issues makes it difficult to establish the chain of causation and achieve justice for the victims of pollution (Markowitz and Rosner, 2002).

In South Africa we need progressive scientists to ally themselves with struggles for environmental health. We need a vibrant civil society to help create a caring and responsive post-apartheid state. "Citizen involvement in maintaining public activity and concern for the common good is one of the hallmarks of modern democracy" (Glazer and Glazer, 1998:.4). We need a state with the capacity to implement and protect the socio-economic rights enshrined in our constitution.

Environmental justice and the discourse of rights as organising tools

The core of the concept of environmental justice is this emphasis on rights, collective rights as opposed to individual rights which often focus on competition and freedom from interference. The struggle against ISCOR is about survival. The struggle has a class dimension in the character of its participants – workers and smallholders – ranged against a powerful corporation, but has the potential for cross-class alliances. In this context the concept of environmental justice potentially provides an organising tool for mobilising multiple, diverse communities into political action. The environmental justice movement could potentially be creating powerful new identities as bearers of rights.

In South Africa some rights have a constitutional grounding. The Bill of Rights, in section 24, states that "everyone has the right to an environment that is not harmful to their health or well being" and the right to fight for it. This means that the post-apartheid constitution provides the framework for a rights-based approach to social mobilisation. Other forms of post apartheid environmental legislation also promote this notion of rights. For example, the 1998 National Environmental Management Act (NEMA) is a powerful piece of legislation which promises equitable treatment: "adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any persons, particularly vulnerable and disadvantaged persons". Indeed the notion of rights is central to post-apartheid reconstruction.

Through the notion of rights, environmental issues are thus sometimes linked to local struggles around social citizenship. A key aspect of the right to a 'clean and healthy environment' implies access to adequate sanitation, water, refuse removal and electricity which many South Africans lack. The core of the notion of environmental justice as a powerful mobilising force lies in this notion of rights: rights of access to natural resources and to decision making. The notion of rights is used to legitimise demands and claims. The counter-hegemonic potential lies in the challenge to power relations that this notion of

rights implies.

During the apartheid regime environmentalism operated effectively as conservation strategy that neglected social needs. The notion of environmental justice represents an important shift away from this traditional authoritarian concept of environmentalism which was mainly concerned with the conservation of threatened plants, animals and wilderness areas, to include urban, health, labour and development issues. It is linked to social justice as "an all-encompassing notion that affirms the use value of life, all forms of life, against the interests of wealth, power and technology" (Castells, 1997:132). It follows that "...the environmental justice movement is an inclusive one in that environmental concerns are not treated as separate and apart from health, employment, housing and education issues" (Camacho, 1998:12).

The concept of environmental justice as a mobilizing force emerged in the US in the last forty years, as a response to environmental racism. Environmental racism is defined as "any policy, practice or directive that differentially affects or disadvantages (whether intentionally or unintentionally) individuals, groups or communities based on race or colour (Bullard, 2002:16). "The core claim is that a variety of environmental burdens (for example, toxic waste sites, polluted air and water, dirty jobs, underenforcement of environmental laws) have fallen disproportionately on low-income persons and communities of colour. A related claim is that health risks associated with pollution have likewise been borne disproportionately by such persons and communities" (Foreman, 1998:2).

The concept has both historical and contemporary relevance to South Africa. Apartheid involved environmental racism on a large scale, and remains largely intact. As Ruiters writes: "the black majority are still trapped in these townships and still suffer inferior environments, poor services, widespread water and electricity cut-offs by ANC-run municipalities and health hazards" (Ruiters, 2001:98). But in post-apartheid South Africa the concept of environmental justice is linked to transformation. The Steel Valley struggle is an environmental justice struggle which is framed in terms of health and economic issues. The discourse is that of health and livelihood impacts.

It has been argued that incoherence is characteristic of a new kind of social movement (Castells.1997). But we would argue that the embryonic, environmental justice movement which is emerging in contemporary South Africa, puts the needs and rights of the poor, the excluded and the marginalised at the centre of its concerns. It is located at the confluence of three of our greatest challenges: the struggle against racism, the struggle against poverty and inequality and the struggle to protect the environment, as the natural resource base on which all economic activity depends. The vitality of this movement flows from the bottom up; the driving dynamic springs from the interaction of diverse grassroots roots, from the infusion of new activist leaders and from new coalitions, alliances and most importantly, networks.

These loose networks are the key to understanding the impact of the broader environmental movement, of which the environmental justice movement is a part. Castells understands environmental networks as constituting social movements that have impact, but "... their impact on society rarely stems from a concerted strategy, masterminded by a center. Their most successful campaigns, their most striking initiatives, often result from 'turbulences' in the interactive network of multilayered communication. It is in these back alleys of society, whether in alternative electronic networks or in grassrooted networks of communal resistance that I have sensed the embryos of a new society" (Castells, 1997:362). The Steel Valley struggle could be the womb of such a development.

The Vaal Environmental Justice Alliance has the potential to mobilise the energy and commitment of the mass-based anti-apartheid struggle which brought about democratisation in South Africa against odds which often appeared overwhelming. Beginning in the 'back alleys' of a small town in the Vaal triangle, an alternative network of power may be forming with the strength and determination to defeat the

globalised steel empire of Mittal.

Key Informants

- 1.Dr Pieter Van Eeden Kempton Park 18.5.2005
- 2. Advocate Margie Victor Vanderbijlpark 28.2.2004, Johannesburg 12.3.2005
- 3. Neville Felix Vereeniging 14. 4.2005 and 21.4.2005
- 4. Lulu Geldenhuys Vereeniging 21.8.2005
- 5. Joey Cock and family Vereeniging 2003,2004 and 21.8.2005
- 6. Samson Mokoena Vanderbijlpark 22.6.2005
- 7.Dr Murray Coomb Pretoria, 2005
- 9. Peter Lukey, Pretoria, 12.8.2005
- 10. Stefan Cramer, Johannesburg and Vanderbijlpark, 2004 and 2005
- 11 Strike Matsepo, Vanderbijlpark 28.2.2004, 22.6.2005
- 12. Phineas Malepela Vanderbijlpark 2.8.2005
- 13. Johan de Kock Vanderbijlpark 2004 and 2005
- 14. Willie Cook Vanderbijlpark 28.2.2004.
- 15. Chakufamann Qhokoyi Vanderbijlpark 2.8.2005
- 16. Dinga Sibekwa Johannesburg 21.9.2005
- 17. Joanne Yawich, Pretoria, 12.8.2005
- 18. Erika Hauff-Cramer Johannesburg and Vanderbijlpark, 2004 and 2005
- 19. David Fig, Johannesburg and Vanderbijlpark, 2004 and 2005
- 20. Danie Lingenfelder, Vanderbijlpark, 2004 and 2005
- 21. Johan Dewing, Johannesburg, October 2005
- 22. Bobby Peek, Johannesburg, 2004

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ENDNOTES

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¹ In this report we refer to the neighbours of ISCOR (Mittal's) Vanderbijlpark plant as The Greater Steel Valley area. This includes Steel Valley, Drakeville, Louisrus, Linkholm, Rosashof, Bophelong, Vanderbijlpark, Boipatong, Sharpeville and Sebokeng.

ⁱⁱ The Vaal was the first area to rebel about imposed and unaccountable apartheid local authorities. It was also the first to follow the call by the United Democratic Front to make the country ungovernable and residents killed some councilors and burned their properties in frustration. When President Thabo Mbeki

visited the Vaal region in October 2005 he was warned that the area is in a state of collapse with a crisis in service delivery, a high turnover of mayors and municipal managers and corruption charges. Residents are threatening a repeat of the 1984 Vaal uprising.

At a community meeting on 1st August 2004 this research was explained by Jacklyn Cock (with translations into Afrikaans and Sotho) to a meeting of some 150 people from the area and their approval and support was obtained.

This report has involved the following research strategies:

- In depth interviews with 22 key informants selected for their expertise, both technical and experiential, of the issue. (See list in Appendix 2)
- Analysis of questionnaires from a survey of 500 individuals from the greater Steel Valley area.
- Three focus groups with key actors from the area
- Participant observation at numerous events including monthly meetings of the Friends of Steel Valley, De Kock's constitutional court hearing, 3 community workshops and the launch of VEJA on October 19 2005
- A literature review of primary and secondary sources in particular analysis of the ISCOR master plan and 600 pages of court documents.
- Two workshops to train 5 local VEJA researchers to conduct participatory research
- 50 questionaires by VEJA Research Group
- A commissioned briefing paper on the role of the labour movement in the struggle against ISCOR by Dinga Sikwebu.
- Numerous site visits
- iv www.planetark.com
- ^v Based on information from www.wikipedia.org/Steel mill.
- vi ISCOR/Mittal Steel, Enviornmental Impact Assessment for waste disposal.
- vii Based on Ethekwini Metro figures of around 780 megaliter per day for a population of just over 3 million people.
- viii High Court of South Africa, case 00420/01; Heads of Argument (Vol 3)
- ix This detailed history is included in a full length report available at www.ukzn.ac.za/ccs