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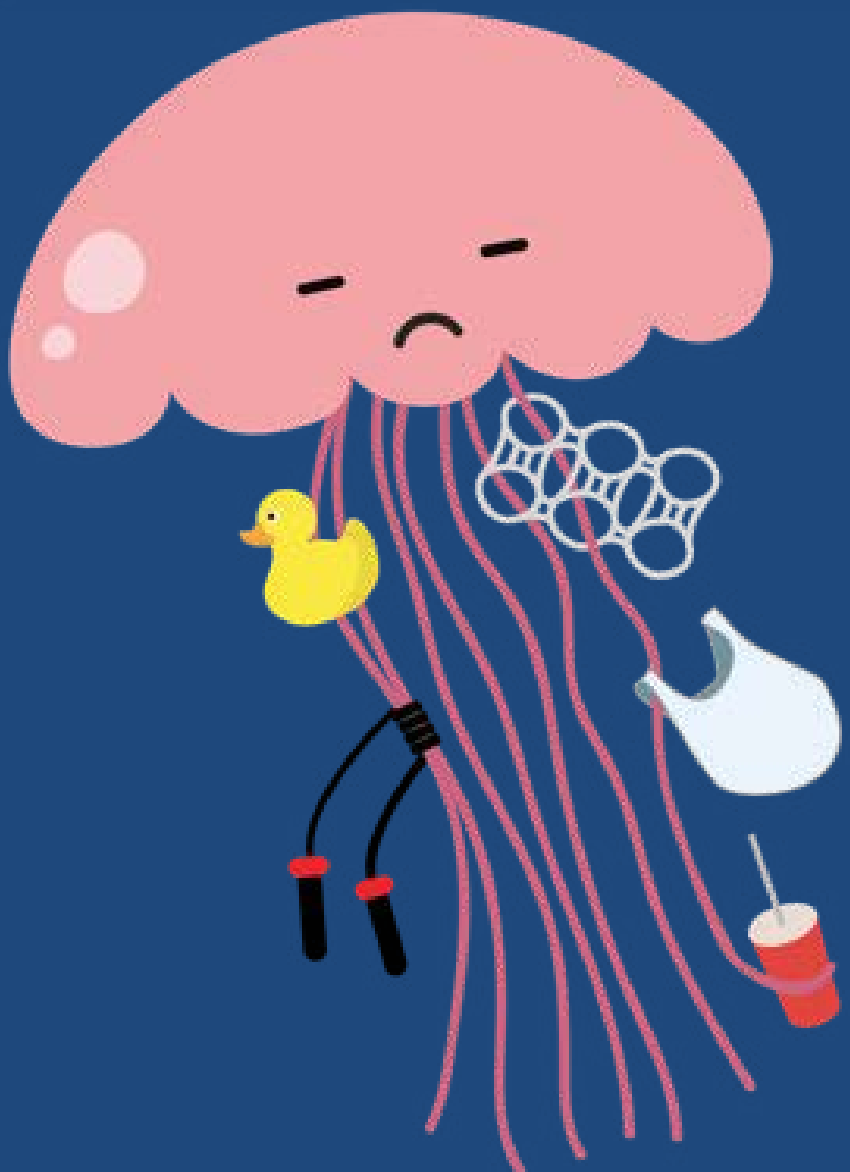
GROUNDWORK



#BreakFreeFromPlastic

In this issue

groundWork is a non-profit environmental justice service and developmental organization working primarily in South Africa, but increasingly in Southern Africa.
groundWork seeks to improve the quality of life of vulnerable people in Southern Africa through assisting civil society to have a greater impact on environmental governanace. groundWork places particular emphasis on assisting vulnerable and previously disadvantaged people who are most affected by environmental injustices.
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***Administrative Assistant**: Bathoko Sibisi*
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***Climate and Energy Justice Campaigner**: Samuel Chademana*
***Community Activist**: Thomas Mnguni*
***Media, Information and Publications Campaign Manager**: Nombulelo Shange*
***Researcher**: David Hallowes*
***Bookkeeper**: Gill Waterworth*

HOW TO CONTACT US:
6 Raven Street
Pietermaritzburg
P O Box 2375, Pietermaritzburg, 3200
Tel: 033-342-5662
Fax: 033-342-5665
e-mail: team@groundWork. org. za
Web: www. groundWork. org. za

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From the Smoke Stack


Credits: groundWork

by groundWork Director, Bobby Peek

It is the end of another busy year for groundWork. We are not known for slow and quiet years. The standing joke in the office is that next year will be less hectic! We ended this year off with an interesting meeting that brought together seventeen Africans from thirteen African countries to work on a strategy to #BreakFreeFromPlastics, and to ensure that, as there is a global push to deal with plastic pollution, Africa is not ignored and that the complicity of corporates in this scourge is brought to the fore. So the theme for this newsletter is plastic. Considering where plastic comes from, the environmental injustices we face can all be linked to this one way or the other.

"We are not there …" was our response to a media query on what the South African government should ask for at the annual climate jamboree, the 23rd Conference of the Parties – aka Cop23 – held in Bonn, Germany. Yes, you read right, the 23rd, and still the temperature is rising. It was a Fiji CoP – held in Germany with all of Europe's paranoid visa processes – so participation by those affected was limited. We were tempted to run a blank page with the phrase "… we were not there", but it might have gone down like a lead balloon. So on this annual depressed note I start this Smoke Stack. But while depressing at an international level, locally in various places around the world, despite the brutality of the extractive fossil fuel industry, people are resisting and stopping the expansion of fossil fuels. Let us doff our hats to those struggles.

The very many proposals by private companies to develop coal-fired power stations are still far from the starting blocks. While I write this, the Minister of Environment, Ms Molewa, has set aside the environmental authorization for the Groothoek mine. This is great, but one has to wonder at the politics behind this when the minster says it is because "the Department of Mineral Resources has requested" that she take this action. So we won this battle but the war is still on.

While there are many hurdles still to cross, the future looks brighter. A mention has to be made of the Meridian Economics report that was released during this period and that clearly concludes that South Africa does not need new coal or nuclear and critically can save R17 billion Rand if Eskom curtails Kusile's construction and decommissions older coal-fired power stations. The study used as a reference and confirmed the outcome of the South African state owned Council for Scientific Research's own findings in response to the Integrated Resource Plan: that South Africa does not need a nuclear, coal or gas power procurement or construction programme.

So, from the communities on the ground, to the legal challenges, to independent research, it is clear that we now have to start working on what *Life After Coal* means. *The groundWork Report 2017: Destruction of the Highveld – Part 2* concludes with this reality: that the discussion on a just transition has to start now and it has to start with the people and workers on the ground – in the "periphery of the periphery", as Dr. Patrick Maesela, member of the Portfolio Committee on Health, calls for.

Critically we must be cautious about false solutions such as the one that Trump tried to push with his team at the undemocratic climate jamboree. As the groundWork report concludes:

> " … we have to be vigilant to maintain and rebuild grass roots democracy, and to see through the active lies and false promises of a dying fossil fuel economy. False solutions to the climate and ecological crisis include the various forms of 'clean coal' – always a

> contradiction in terms – and nuclear power, as well as privatized renewable energies and other 'green economy' solutions take."

These are interesting times politically. We have had the opportunity to be in parliament with community people twice in this period, and on both occasions the response was positive. The chair of the Portfolio Committee on Health, Ms Mary-Ann Dunjwa, has stated that we need to address the speaker of parliament to get all relevant portfolio committees to hear the story of coal and its impacts. This was at a briefing by Dr. Mike Holland and community people in parliament on the 8th of September.

Then on the 8th of November, in a sitting of the Portfolio Committee on Environment, deputy director general of the Department of Environmental Affairs, Judy Beaumont, visibly agreed and, taken by surprise, raised concern as to how Eskom could unilaterally extend the life span of their plants considering that South Africa's commitments toward reducing greenhouse gas emissions work on a fifty-year life span and not sixty years. The Portfolio Committee summoned Eskom to appear in parliament in February 2018.

The fact that parliament and indeed staff within the Department of Environmental Affairs are concerned must be welcomed. The writing is on the wall that with climate change will come "death and destruction". Consider the recent storms that shook Durban. More than ten people died in a storm that dumped more than 100mm of rain in the southern suburbs of Durban. Suburbs, that are home to various fossil fuel industries, which are the drivers of climate change and which were, ironically, awarded an Honorary Climate and Clean Air Award at the climate jamboree. Ironic, because it is the very same Durban that did not have an effective warning system for storms to prevent the deaths of people and that does not have a functional air pollution monitoring system – a system that they have purposefully allowed to decay so that polluters cannot be held accountable.

This period was also a particularly sad period for groundWork and environmental justice. In the Highveld we lost stalwart Patrick Jacobs, who always questioned not only corporate environmental injustices but our practice in how we challenge them. From south Durban, and Wentworth in particular, we lost Peter McKenzie who portrayed the world of south Durban, its pollution, its people and its challenges in a way that allowed people to build rather than despair. As is said of him: "… a fearless artist and photographer who placed people at the centre of his work". I regret not spending more time with him, speaking about my own southern Durban "demons" and getting him to work on environmental justice images.

We also said good-bye to Wally Menne, a hard-assed forest activist who took no prisoners. Wally was moulded in the form of an old-school union organizer. He was uncompromising and held his positions clearly. There was no middle ground that corporates and reformist NGOs could force him into. Wally made sure that in our environmental justice activism we pulled together – and this was what gave rise to Timberwatch, which he ran for years, many of those without financial support.

During this period we were infused with the passion of youth. We have had Zinzi Sibanda of the University of KwaZulu-Natal, Ludovica Serafini of the University of Bologna and Ludwig Sonesson from our partner in Sweden, Afrikagrupperna. They have all brought a *joie de vivre* to groundWork. For these months we have had five people on our team below the age of thirty – YES! We have appreciated their time with us, and hope this was a learning experience for them.

Finally, I have just returned from meeting with fellow NGOs and movements from across Southern Africa, talking about feminism and solidarity. In the midst of this, the Zimbabwean chaos emerged. I do not know what the final outcome will be – it is too early – but we hope that there will be true "transformation and democratisation" as the end result.

In solidarity,

Bobby

Africa is breaking free

by Niven Reddy

Plastic has – quite literally – become an integral part of life. Now it is time to #BreakFreeFromPlastic

As American pop duo *Mary Mary* once said, "Get the shackles off my feet so I can break free from plastic". Wait... it might have been, "so I can dance". I'm pretty sure it was the first one, which I think resonates with the plastic crisis that we currently experience in Africa. We seem to be crippled by the power of industry and unable to release ourselves from their stranglehold. This can be seen by the total disregard for post-consumer responsibility which has left us with a major downstream plastic problem.

#BreakFreeFromPlastic is a global movement that envisions a future free of plastic pollution. Since its launch in September 2016, over 900 non-governmental organizations from across the world have joined the movement to demand massive reductions in single-use plastics and to push for lasting solutions to the plastic pollution crisis. These organizations share the common values of environmental protection and social justice, which guide their work at the community level and represent a unified global vision.

The initial launch of the movement happened in the Philippines and various groups together adopted a strategy known as the Tagaytay Strategy. "We believe in a world where the land, sky, oceans and water are home to an abundance of life, not an abundance of plastic, and where… the principles of environmental justice, social justice, public health and human rights lead government policy, not the demands of elites and corporations… This is a future we are creating together."

There are three key pillars in this movement that form the basis from which we campaign and outline what we ultimately aim to achieve: change the narrative, change corporate behaviour and build zero waste cities. Changing the narrative highlights the problem of single-use plastics that are ending up in our oceans, beaches, roads and waterways. We need to look away from thinking of plastic for convenience and identify single-use plastics as something we can do without. One way to engage companies and corporations is to put a spotlight on the role they play in perpetuating this crisis through their use of single use plastics as well as zero to low-value packaging (like sachets) that typically end up polluting the environment. Ultimately we should be encouraging cities to address the problem by adopting a Zero Waste approach through at-source waste segregation, composting and recycling schemes.

Fossil fuel production effectively subsidizes plastic and petrochemical production. Phasing out fossil fuels in response to climate change will shift major costs to plastic producers as production will become more expensive as fossil fuels are phased out.

The global campaign has three priority regions to addressing plastic pollution: South East Asia, North America and Europe. Work in Latin America and Africa continues to flow to address plastic pollution and, as the movement grows and we gain momentum, these other regions would also have targeted, focused campaigns.

Earlier this year, we attended the annual #BreakFreeFromPlastic workshop in Indonesia and I presented on Africa as an emerging region and what the next steps would be. While the downstream pollution in Africa may not be as devastating as that experienced in South East Asia, we should not wait for that stage to arrive here and must instead be proactive and organize key organizations who are working towards mitigating the impacts of plastic on the environment. This led to us hosting a workshop in Durban which brought together people from thirteen different countries in Africa to develop a medium-term strategy for Africa on how we proceed and campaign collectively.

Africa has already taken some seriously big steps to reducing plastic pollution. There are around

eighteen countries in Africa that have some sort of legislation in place to restrict the use of plastic bags. Some are complete bans while others are imposed levies. As impressive as that may sound, it isn't exactly the case. Despite having numerous bans in Africa, only one country has successfully implemented the plastic bag ban: Rwanda.

We had hoped a colleague of ours from Rwanda would attend the workshop and share her experiences with us but unfortunately, due to some diplomatic complications, she was unable to obtain a visa. However, when you have a techie organizing a meeting, of course there are other ways to include the Rwanda discussion in the programme. We had an hour-long Skype call and it was really interesting to hear how much the country has progressed in maintaining the ban since 2008 but also ensuring enforcement by imposing fines on industries, commercial companies or any person found in possession of prohibited polythene bags without authorization in their stores, manufacturing or using them. You could spend up to twelve months in prison for carrying a plastic bag!

To give our Africa meeting local context, in Durban we recently experienced a major storm that caused a container carrying twenty tonnes of plastic pellets, known as nurdles, to be spilled into the sea. Billions of these nurdles can still be seen a month after the event all over Durban beaches. The extent of the spill goes as far north as Richards Bay, some 140 kilometres away. Durban Partnership against Plastic Pollution also attended the workshop and gave some context to the situation in Durban and the regular initiatives to clean our beaches.

The South African Waste Pickers' Association (SAWPA) was also present for the duration of the meeting and gave our colleagues from Africa an insight into the role that waste pickers play in diverting waste, and in particular plastic, from landfill. SAWPA also expressed their irritation at companies approaching municipalities with their "golden solution" known as waste-to-energy. We have also noticed that this is an emerging trend in Africa. Failed western incineration technologies are being brought into Africa but these directly affect the livelihoods of waste pickers as they burn recyclable materials to meet daily quotas, to say nothing of the pollution hazards that they represent.

While we know that this workshop is just the beginning of our collective resistance to the plastic industry, we are motivated and determined to create a future free of plastics. We need companies to start looking at products in the design phase and not use plastic in products unnecessarily. We cannot only look at the plastic crisis as a waste management issue. There needs to be some intervention to limit the production of plastic and phase out single-use plastics entirely. This is the only way we can break free from plastic.

Participants from 13 African countries and guests from South Africa, Argentina and Sweden at our African strategy meeting to address plastic pollution). Credit: groundWork

Coal makes plastics

by Robby Mokgalaka

An addiction to coal abets an addiction to plastic

Coal has affected our lives in many ways inconceivable in a lay man's mind. Coal is commonly known for generating electricity and for household use in making fire. Very few people have the knowledge and understanding that plastic is one of the by-products of coal.

Sasol, the South African petrochemical company, also makes plastics from its feedstock, which in turn originates from oil, natural gas or coal. Sasol Chemical Industries, located primarily in Sasolburg, uses the same technology as its Secunda coal-to-liquid (CLT) plant. The plant is inarguably polluting and consumes about 41-million tonnes of coal each year. Ideally, Sasol extracts gas from coal, refines what is left and makes plastics at their refinery plants.

In its plastic production process, the Sasol plant uses a carbon capture and storage (CCS) technology to reduce its carbon footprint. Regrettably, the applied technology has not proven effective in reducing emissions. Although Sasol claims success in reducing its emissions, in 2004 Sasol's Secunda plant emitted 52-million tonnes of CO_2, increasing its emission to almost twice what it was. They are one of the biggest manufacturers of plastics from coal in South Africa and also notoriously one of the biggest polluters in the country.

Plastic as one of the by-products of Sasol has in many ways created problems for the government, since plastic is known to be a non-biodegradable waste material. Africa takes the plastic bag problem very seriously. Eighteen countries on the continent have either banned them completely or charge a tax on them. African countries such as Kenya, Eritrea, Morocco and others have already banned plastics, taking into cognizance that they are more of an unsolvable problem than a boost to the economy.

The South African government, through the Department of Environmental Affairs (DEA), is making financial provisions in the form of grants available to people or groups dealing with waste to make living, particularly including work on plastic waste. This is to encourage initiatives to reduce the plastic problem.

The industries, on the other hand, are proposing a problem solving initiative of waste-to-energy: burning plastic to generate energy. The idea behind the proposal is that this will reduce the plastic problem since plastic is not biodegradable and it will also generate energy to be used in the country. The operational process will entail burning plastic in an incinerator to generate energy.

The initiative has dire shortcomings because the burning of plastic will still emit greenhouse gases, contributing to the carbon footprint and ultimately affecting people's health and also leading to an increase in the climate change mishaps.

In the end, coal is a problem, starting from extraction and continuing through to the processing of it and to end products. It causes air pollution, affecting people's health and causing premature deaths. Air pollution also contributes to high levels of greenhouse gases which accelerate climate change calamities affecting people in many ways.

There is also the undebatable reality of the existing linkage between coal and our plastic problem, which is hitting our country very hard causing problems for the government, the people and the environment.

The coal-affected visit parliament

by Robby Mokgalaka

groundWork, through the two campaigns Coal and Environmental Health, decided to make a concerted effort in engaging with the parliamentarians in an attempt to escalate environmental and health impacts of coal to the higher and influential government figures to address concerns more effectively, since the government departments have failed the impacted poor communities dismally.

On the 6th of September 2017, the Coal Campaign gathered and transported the coal-affected communities from Newcastle (KZN), Fuleni (KZN), Highveld (Mpumalanga), Vaal (Gauteng), Somkhele (KZN), Lephalale (Limpopo) and Wakkerstroom (Mpumalanga), to the South African parliament in Cape Town. The objective of the visit was to create a platform for the fenceline communities to share their experiences about the impact of coal on their health and the environment they are living in and also plead for the different portfolio committee members to intervene. The plea was a clear cry for the protection of the environmental right provided by section 24 of our South African Constitution.

Most of these communities are living in the areas inundated by coal mines and coal-fired power stations. Their lives are characterized by various challenges from coal infrastructures causing them to get sick, be forcefully removed, and live without water or with polluted water. Some live in the areas that the Department of Environmental Affairs declared priority areas because of the amount of pollution caused by various industries, mostly coal. Despite the declaration by the department, the government is still giving licenses for more industries to start operating in the areas, instead of implementing measures to reduce the pollution that is already killing people – allowing industries to make profit at the expense of the lives and the health of poor and defenceless people.

After an intensive effort to secure the attendance of at least six portfolio committees – the portfolio committees on Health, Environmental Affairs, Energy, Economic Development, Agriculture and Fisheries, Mineral Resources and Water and Sanitation – we managed to secure the attendance of the portfolio committees on Health and Environmental Affairs.

Unfortunately, this was not a surprise for us as we know how almost impossible it is to get the committees to have a discussion with people on the ground, unless it is at government's own initiative. With the few we had we made sure that we used the opportunity to our advantage to ensure that the message hit home.

We had a whole-day preparation session to prepare our presentations, build confidence in the community reps and support them in sending a meaningful message.

We bolstered our preparations with the presence of Dr. Mike Holland from England, an expert on issues of air pollution and health problems caused by coal.

The presentations by Elana from the Waterberg, Billy from Fuleni, Bongani from Somkele and Felcian from Emalahleni captured the hearts of the portfolio committees and inspired meaningful discussions. They felt that it was very educational and informative and that the situation calls for urgent intervention. They also recognized that the discussion is very relevant to other portfolio committees who were not present in the house.

The committee members suggested that this discussion needed to come to the attention of other portfolio committees and that, in order for us to strategically secure their presence, we need to address our invitation letter to the speaker of the parliament so that she can issue directives for them to attend. The suggestion was in recognition of the fact that it was important that other relevant committees are present so that a collective decision can be taken to help these affected communities.

It was pleasant and rewarding to realize that they did not take the discussion lightly but instead felt the cry of the affected communities. The coming together of the coal-affected communities and being able to speak to the parliamentarians has strengthen solidarity in their struggle.

The rich profit – the poor suffer

by Ludwig Bengtsson Sonesson

"It makes no sense to invest in companies that undermine our future. To serve as custodians of creation is not an empty title; it requires that we act, and with all the urgency this dire situation demands." – Desmond Tutu

Mvuzo Nhombela, member of South Durban Community Environmental Alliance, picketing outside Sasol during groundWork's Climate Learning Group meeting.

Credit: Ludwig Bengtsson Sonesson.

It's an old truth that whenever foreign entities invest in Africa, the profits leave the continent. A 2017 report found that, while $162 billion enters the continent through loans, aid and remittances, $203 billion leaves through corporate tax loopholes, debt interest and illegal resource extraction. That's a net loss of $41 billion Rand. These figures tell a story of neo-colonialism, abusive trade rules, the false promise of sustainable development and a sense of moral superiority which permits developed nations to tout themselves as champions of sustainability while still investing in dirty industries.

My place of birth, Sweden, has a long tradition of funding development work – in fact, groundWork even receives funding from the Swedish government: funding that allows us to, among other things, support communities fighting coal and air pollution. However, in a stroke of true irony, the very same government is heavily invested in some of the worst

polluters in South Africa through its pension funds. In total, they have invested almost 7 billion Rand across Glencore, Exxaro, Sasol, Rio Tinto, South32 and Anglo – all companies listed by the CoalExit database as coal producers in South Africa. They are also invested in Marubeni and KEPCO, the two companies that were set to build Thabametsi power station together with Exxaro – a decision that was challenged by groundWork's partners Earthlife Africa and Centre for Environmental Rights in court for not considering the project's climate impacts. In the coal war, Sweden is funding both sides – and should be held accountable.

The situation has not gone unopposed. A massive civil society campaign forced the minister to put forward legislation that instructs the pension funds to be "responsible investors" and "promote sustainable development". However, this is to be done without impacting the over-arching goal of maximising profits and still does not force the funds to comply with Sweden's international agreements. This goes against article 2.1(c) in the Paris agreement, which binds its signatories to "make its finance flows consistent with a pathway towards low greenhouse gas emissions". But alas, in the current global economic climate, suggesting that profits should be subordinate to human rights and environmental protection is tantamount to treason.

And the sad truth is that the people who benefit from these investments, the Swedes, are out of reach of the direct effects of the coal industry. They will not breathe the polluted air from Medupi, a massive coal-fired power station being built in Limpopo with funding from the World Bank (a decision to which Sweden voted yes in 2010). They will not drink water polluted by acid mine drainage from an Exxaro or Glencore mine. They will not be one of the 2 239 South Africans who die prematurely every year at the hands of dirty coal pollution. Climate change will hit them too, but not before millions, if not billions, of people in the global south are affected. This question is one of justice – why should the people in Sasolburg and Secunda suffer so that Bertil, 68, can buy one extra item at IKEA?

As an intern at groundWork, I participated in a picket at the main gates of Sasol – a South African corporation whose primary business is turning coal into liquid fuel. Sasol's record of polluting our environment and damaging the health of South Africans is discussed in the two latest groundWork reports, but to summarise: it's shit. As I stood there outside of Sasol, I felt ashamed. Ashamed that the place that I call home puts profit before people's health. Ashamed that I, whether I like it or not, will benefit from Sasol. Ashamed that at this very moment, my minister of finance (a member of the Swedish Green Party) is at Cop23, bragging about how Sweden's work on sustainability is number one!

I find solace in that the global divestment movement is alive and breathing. The saying "hit them where it hurts most: their wallet" still holds true and some landmark achievements have been made. The Norwegian Pension Fund divested from all its coal assets in 2015 and the Lutheran World Federation as well as the Council of Churches have rid their assets of fossil fuels entirely. Through 350.org and the Fossil Free Campaign, 808 institutions with a combined capital of $5.57 trillion have pledged to divest. However, it's not all rainbows and unicorns. The reason a lot of institutions are divesting is that fossil fuels are simply too risky as more and more governments work to phase them out. And, while that's great for climate change, the risk is that capital moves to the next industry where externalities are not priced and profits plentiful. Maybe it's palm oil? Or maybe lithium mining? That's why it's essential for activists to work towards mandatory frameworks within which funds can invest.

In closing, let's look back at the 80s. The most successful global divestment campaign to date was the one directed at the apartheid regime. Following massive protests all over the world, sanctions were put on South African companies: between 1985 and 1988, R23,9 billion was withdrawn from the country. Some say that this was one of the things that forced the regime to the negotiating table. What we need now is the same level of global outcry against fossil fuels as against apartheid. We need to make it not financially viable for any company to explore, extract or burn fossil fuels. By divesting, we are investing in a future for our children – the soundest investment there is.

CLG gets new energy!

by Samuel Chademana

The Climate Learning Group (CLG) aims to inform activists and equip them with requisite skills

One of my core tasks as the Climate and Energy Justice campaigner is to work with and learn from community people. The Climate Learning Group (CLG) is a space for learning for myself and the community. This year's CLG meeting was held from the 17th to the 19th of October in the Vaal Triangle's Vanderbijlpark. The three-day learning platform was co-hosted by groundWork and its partner organization, the Vaal Environmental Alliance (VEJA). In essence, the CLG was created to stimulate joint learning, local climate debate and action by fenceline communities by way of regular climate dialogue platforms. The platforms are also aimed at informing and equipping activists with the necessary skills so as to effectively engage with local climate campaigning and politics in the context of understanding the national and international positions.

This year we brought together twenty-six climate change activists from our partner frontline communities and the aim of our meeting was to strengthen the climate action and develop a preliminary draft for collective climate action. As part of the programme, we conducted a solidarity climate change tour of communities affected by flooding and subsistence farmers affected by droughts in the last farming season; we also visited a community renewable energy project and protested outside South Africa's biggest corporate greenhouse gas emitter, Sasol, to show solidarity with the Friends of the Earth International Day of Action to Reclaim Power. The protest was disrupted by the police but had an awesome response from both passersby and Sasol employees.

Till 2018, aluta continua!

CLG participants picket outside Sasol Refinery during the Climate Justice and Energy Global Day of action carried out by Friends of the Earth members all over the world

Credit: Ludwig Bengtsson Sonesson.

An act of dispossession

by Samuel Chademana

The issue of fracking needs to be placed in the context of economic development, social justice, environmental justice and land transformation

In recent years there has been an increasing interest in oil and gas production in South Africa. It is promoted by both corporate and political leaders as a cheaper source of energy when compared to coal and coal-fired power plants. At the centre of this interest in local gas production is the controversial technology known as "hydraulic fracturing" or "fracking" that is used for the extraction of unconventional gas from underground rock formations called the shale layer, and from coal seams.

This technology and its negative impacts are well documented in the US and globally, but unfortunately not everyone knows much about this technology, particularly in South Africa. The term "fracking" has become the catalyst for many heated debates involving environmental justice organizations, farmland owners and agrarian communities comprised of farm dwellers and workers, pitched against prospecting oil and gas companies and state institutions charged with the responsibility of overseeing the development mineral and petroleum resources in the country. What was once a word used to describe a controversial and dirty technology used to extract gas, fracking is now subject to political framing and is imbued with economic opportunism and social animosity towards those against the technology. There has been a deliberate misappropriation of the term, by both state institutions and oil and gas companies, in order to continue to confuse people on the ground about the practical realities of what gas extraction would look like. An information blackout has also been perpetuated in order to minimize opposition from interested and affected parties.

Linked to this are the broad statements made by those with an interest in fracking, proclaiming the employment and financial benefits of fracking/gas extraction as a development plan and trying to hide the fact that it is an extractive plan. These are substantiated by impressive statistics and percentages aimed at currying favour with those desperate for social and economic opportunities. These statistics are inflated for financial gain. A recent study by Professor Michiel de Kock, head of the research team from the University of Johannesburg, clearly indicates that the United States Department of Energy's 2011 published report grossly overestimated the Karoo basin's recoverable reserves at 485 tcf (trillion cubic feet). This report touted South Africa as having the fourth largest shale gas reserves in the world when actually the Karoo's real reserves are thirty times less, at a meagre 13 tcf.

While the above discourse has to be allowed a place in the broader fracking debate, it is something that environmental justice and land rights organizations such as groundWork, Church Land Programme (CLP), Association For Rural Advancement (AFRA), Support Centre for Land Change (SCLC) and FrackFree South Africa cannot accept, because it's mostly misleading: the truth is fracking won't produce the promised jobs. Instead, a few powerful people will benefit at the expense of the majority poor.

According to the Karoo Strategic Environmental Assessment report, commissioned by the Department of Environmental Affairs to assess the viability and feasibility of fracking in the Karoo, there is major uncertainty regarding the nature

and quantities of shale gas resources. Furthermore, the risk potential for water, air and biodiversity contamination, including adverse effects on other sectors, even with effective implementation of mitigation and best practice principles, range from low to moderate for exploration only, and overall moderate to high for the small and big gas extraction scenarios.

Fracking poses a threat to our already scarce water resources and threatens the very continuity of livelihoods such as farming – both traditional and commercial – and tourism. Furthermore, in the context of South Africa's socio-economic history, fracking threatens land restitution and agrarian reforms currently underway in the country. If allowed to proceed, it will destroy the very land meant for the previously disadvantaged communities, thus perpetuating the culture of dispossession – only this time around under the tyranny of oil and gas companies.

Consequently, people will have to be informed of the dangers of fracking, as their constitutional rights demand, and the issue of fracking needs to be placed in the context of economic development, social justice, environmental justice and land transformation. The real truth about fracking will need to be presented to affected communities in a way that gets this complex message across and enables them to make informed decisions in their respective communities and will inform them of the consequences of damaging the land: the same land that people need returned to them.

Since June 2017, and in collaboration with the Church Land Programme (CLP), groundWork has been in consultation with farm-dweller and labour tenant communities in the farmlands of northern KwaZulu-Natal around the towns of Utrecht, Newcastle, Danhausser, Dundee and Vryheid. One emergent issue from these many meetings and discussions is that these communities, comprised of the groupings mentioned above, which include land restitution applicants, have been overlooked, have not been consulted and did not have any prior knowledge of the fracking applications on their doorsteps, let alone what fracking is.

Based on our interaction with these affected communities, it became apparent that the whole EIA process prejudiced them by the fact that they were not effectively consulted and informed on the true nature of this development. In fact, they were not even given an opportunity to register as interested and affected parties (I&APs). The applicants for exploration rights through their appointed EIA practitioners did not take adequate measures to ensure that all I&APs were contacted. While efforts were made to contact the white land owners (farmers), no deliberate effort was made by the applicant to effectively engage with farm dwellers and labour tenants. By virtue of them not being land owners now, the applicant did not see fit to address their concerns and needs effectively. Indeed, the marginalization and exclusion of previously disadvantaged communities continues post-1994.

After a couple of meetings with these communities, we became accustomed to light bulb moments followed by a deep sense of despondence and betrayal directed at the government. Communities could not comprehend how a black government could do this to its own people: sacrificing their dreams and aspirations at the altars of profits and self-enrichment. We were inundated with questions on how this madness could be stopped; whether there was any legal recourse or pushback strategies that they could get involved in.

Some community members were sceptical, and rightfully so, of our campaign and its likelihood of succeeding, bearing in mind that it is the government that is allowing fracking to proceed unabated. In the words of one of the community members: *"I don't think there is anything we can do, as a community, to stop this fracking if this government wants it. They always get what they want."*.

I took these words each time I heard them as a clarion call to battle but at the same time a cry for help from a people disillusioned by years of false promises to the point where they have lost their own self-belief and agency.

Our work is cut out for us, to entrench activism where it still exists and rebuild it where it has been lost, bearing in mind, of course, that this is going to be a long, protracted struggle.

Mayibuye umhlaba wethu!

Plastic is forever

by Greenfly

Never mind diamonds. Flowering plastic blooms in bright greens, yellows, reds and blues on thorn trees and razor wire and brightens the veld with flecks of colour. At the land's edge it makes for a merry sight on the beach. Not just your endless golden sands but a bright array of bags, buckets, tubs, bottles, bottle tops, lids, labels, pipes, wrappers, rings, slops, crocs, crates, chairs, baskets, bracelets, cups, trays and car bumpers. We even have the beach pebbled plastic with brand new nurdles and bright sea-tumbled fragments. Just like the paradise islands of the Pacific garbage patch. And every bit is forever.

And that's not all. You won't see the micro-fibres washed out by the million from fleece jackets and blankets or other synthetic threads. They are too small to be caught in washing machine filters but not too big for filter feeders in rivers and rock pools.

The more plastic blows on the wind and washes down streams, the greener the industry. Recycling is on the front page of every plastics website. Plastics South Africa is on message: Safe. Reusable. Recyclable. The South African Plastic Recycling Organization is ahead of the movement: Join the green revolution. Petco is on trend: #Do1thing. Recycle. Polyco gets practical with humour: Learn how to recycle at home. With SuzelleDIY. The Polystyrene Association plays it straight: passionate about recycling and the environment. And lest the kids get bored, there are competitions and games: Let's do it! Africa. Let's clean up and recycle! Play the game and become a Planet Pal.

Down in Stellenbosch, meanwhile, Plastics South Africa, the Plastics Institute of Southern Africa and their academic "partners" are celebrating plastic at the Annual International Conference and Golf Day. Golf, of course, is a water intensive business. But with the Davos class plastics division flying in, recreational standards are as high as the Western Cape dams are low. And now is always the right time to demonstrate who controls resources.

The conference is on the Davos theme of the 4th industrial revolution. Or, in hip tech guy talk, "Industry 4.0". That's the bots that can act autonomously and will be coming for your job soon. In the smart factory, at the smart shop automatically linked to the smart bank, on the smart farm, in the smart office and driving the smart Uber car. There'll even be smart lawyers. And perhaps, as the smart world requires, smart satirists. All done with algorithms and plastic.

Alongside talk of nanomaterials and 3D printing, comes the question: Plastics Recycling – can it rescue the image of plastics? Presumably a question for the PR people. Sixty odd years ago, at the dawn of the age of plastic, industry bosses saw their future growing on the rubbish dump. So the PR people taught the consumer to throw it away. (The consumer, note, is a strange entity, both singular and plural, individual and social function.) As the plastic piled higher, the PR people pointed at the consumer: "Plastics don't litter, people do." That slogan looks tatty as a torn condom but they can't let it go. So the PR people have added that the industry is leading the consumer to the green revolution.

Growth is still the core value. Plastics South Africa "strives" to influence role-players and make plastics the material of choice. Recycling is much advertised and industry figures show a big increase. But the manufacture of "virgin" plastic has grown even more. So there's still more that goes to landfill. Oddly, industry figures all balance: What's manufactured minus what's recycled equals what goes to the dump. The calamity of plastic on the beach is disappeared.

Recycling, as they tell us, saves lots of carbon emissions. That's because the energy that goes into making a litre plastic bottle is equal to about a quarter litre of oil. So the millions of extra bottles on the dump and in the sea equals lots more carbon emissions that are not saved. The plastics people met in Stellenbosch at the same time as the polluters met to negotiate the climate away at CoP23 in Bonn. Of that, we say nothing.

How did we get to be eating plastic?

By Rico Euripidou

At our recent Africa-wide #BreakFreeFromPlastic gathering we heard from some local scientists who painted a bleak picture of plastics in the Indian Ocean and in particular about how plastics are bio-accumulating in our local food web. The food web is the entirety of interrelated food chains in an ecological community, so this includes the food that we eat! Worryingly, micro plastics are now a ubiquitous pollutant in all the oceans around the world, and pose a serious potential threat to marine ecology. In particular, the facts following were presented, which I thought merited further research to inform our work.

Steve Cohen from the Durban Partnership against Plastic Pollution described a "plastic ocean" around Durban in which 70% of the Mullet fish species surveyed in Durban contained micro-plastics, most worryingly in their brains (UKZN Mace Lab). We also heard that 77% of Maasbankerfish species (mainly horse mackerel) sampled from the Durban Harbour, Vetch's Pier, Isipingo and the uMngeni and Mdloti river mouths contained tiny plastic fibres, fragments and beads in their tissues and organs. The team that undertook this research also found that these fish contained micro plastic fibres, irrespective of their size, at Vetch's Pier and also in Durban (UKZN School of Life Sciences).

So why is this especially significant? Maasbankerfish species are a good indicator fish species to research in order to determine bio-accumulation of plastics in the food web because they appear at the bottom of the food chain in our local ecosystem. Any larger fish species that will rely on these fish as food will therefore bio-accumulate all the impurities and toxins, including plastics, from this species.

So how exactly did plastic get into the food web?

Scientists studying the impact of plastic waste on the marine environment have previously found tiny pieces of plastic inside the guts of zooplankton – the microscopic creatures that many sea species feed on. A scientist has recently even filmed the exact moment a plastic micro fibre is ingested by plankton, illustrating how the material is entering into the marine food chain. Once it enters an organism, it will bio-accumulate as larger species consume smaller ones. Because millions of tonnes of plastic "disappear" from the world's waste stream each year, a large percentage of this plastic pollution will end up in the form of micro-plastics – either found as broken plastic fragments from larger plastic goods or as microscopic objects such as microbeads from cosmetic products (including face wash and shower gel). Scientists have now also demonstrated that zooplankton ingest microbeads.

The United Nations estimates that about 51 trillion particles of micro plastic are in the world's seas and oceans.

Do these plastics pose a significant threat to human health as they are passed up the food chain?

Plastics are synthetic chemicals, primarily made from petro-chemicals. They have, however, been commonly found to contain lead, cadmium and mercury that are toxic to humans and these toxins have already been found in fish in the ocean. Mercury is particularly problematic because in the marine environment it can transform from inorganic mercury to organic methyl-mercury which has long been known to bio-accumulate up the food chain.

Some plastics also contain phthalates added to soften the plastic, which is now known to be a carcinogen. Many other toxins in plastics are also directly linked to cancers, birth defects, immune system problems and childhood developmental issues. Plastics sometimes also act like sponges and soak up other toxins that might be floating in the ocean and carry them through the food chain as well.

Once these micro plastics are in the digestive tracts of the animals that have ingested them, the chemicals present in the micro plastics begin to "leach out" and begin to enter the tissues of these animals. Subsequently they have the potential to contaminate the systems of larger animals that

consume those organisms. In essence, we humans will end up eating our own plastic waste!

Looking at the effects of plastic environmental pollution: here are some striking statistics:

- Over two thirds of the world's fish stocks have plastic in their bodies: www.oceancrusaders.org.
- According to Greenpeace, 80% of sea bird populations have ingested plastic.
- Plastic debris kills 100 000 marine mammals annually, as well as millions of birds and fish (National Oceanographic and Atmospheric Administration).
- More than one in ten species that have fallen victim to plastic marine debris are threatened with extinction (2014 Marine Pollution Bulletin).
- Microbeads, which are microscopic plastic particles that resemble fish eggs, are routinely found in the stomachs of numerous sea creatures, including marine mammals, reptiles, jellyfish, fish and birds (http://plastic-pollution.org/).

Some substances of particular concern

Plastic is invariably made up of different compounds depending on its intended use. For example the chemicals added to plastic flip flops (**Phthalates**) is intended to make the plastic soft and less brittle. These additives have, however, serious unintended and sometimes irreversible negative effects for humans, other organisms and the environment after exposure to them – either individually or combined. These "phthalates" are also commonly used in the manufacture of plastics for a wide range of products, including medical devices such as IV tubes, food packaging, car upholstery… and so the list goes on. The phthalate DEHP is classified as toxic to reproduction and can harm the unborn child. People are exposed to phthalates from the foetal stage and throughout the rest of our lives, via the food we eat, the air we breathe and through direct skin contact.

Polybrominated Diphenyl Ether (PBDE) is added to plastics as a flame retardant. However, it has been shown to counteract the effects of male hormones and also disrupt the normal function of thyroid hormones, which serve to regulate growth and development, and to maintain homeostasis (for healthy overall body function).

Bisphenol A (BPA) is used in the manufacture of clear, hard plastics and is found in a variety of everyday products such as medical devices, dental sealants, compact discs, water bottles and the lining of food cans. However, BPA mimics the female hormone oestrogen, disrupting hormone balance and function in the body. The effects of this disruption interfere with the body's overall development and the development of major body systems like the reproductive system. BPA was common in baby bottles, sippy cups, baby formula cans and other products for babies and young children, until controversy arose regarding its suspected health effects.

Similarly **styrene**, a classified carcinogen, is a common component of polystyrene, widely used to make both plastics and rubber, and is found in packaging materials, drinking cups and fast-food containers, as well as in common electrical wiring and appliances in our homes.

Conclusions

The scientific evidence shows that plastics are everywhere in our oceans and their constituents, even in low concentrations, have the potential to cause adverse health impacts. The combined health effects from exposure to plastic substances over a period of time may have adverse effects such as causing cancer, inducing mutations in organisms or, particularly in the case of "phthalates", causing endocrine disruption resulting in health problems such as diabetes and obesity.

Plastics are made from fossil fuels. As the world pushes back on fossil fuels because of climate change, we have two possibilities regarding plastic. As there is pressure to stop fossil fuels, much of the fossil fuel could end up as plastic. Or alternatively, the coincidental benefit is going to be the squeeze on fossil fuels means a squeeze on plastic. What option are we going to choose?

Dotting the i and crossing the t in intern

By Zinzile Sibanda

An internship in groundWork is an eye-opening experience

My experience at groundwork has been, in a nutshell, eye-opening. One cannot help but become sensitised to the various environmental injustices that plague South African communities on a daily basis. From the Waste Pickers' Association that lobbies for formal recognition and better working conditions, to the communities in the Highveld pushing back against the extraction of coal a stone's throw away from their residential homes, the plight of the South African people rises to the fore and the effects of environmental imbalance become almost instantaneously clear.

Upon beginning my internship with groundwork, I was tasked with conducting several research studies. One of them involved working with the internationally renowned Human Rights Watch, and providing information on the kind of

The groundWork Team during their strategic planning session.

Credit: groundWork

resistance and intimidation that was experienced by environmental human rights activists in the protesting processes, more particularly within the extractive industry. Given the massive amounts of work that have already been done in South Africa regarding the extractive industry, especially coal mining, this aspect of the research was put together with relative ease as it was fairly straight-forward and uncomplicated to access the relevant material. This "i" was dotted, and the "t" crossed.

In contrast to the smooth sailing research on the extractive industry, the second one proved more challenging. It involved the mercury clean up at Guernica Chemicals(previously known as Thor Chemicals), in Cato Ridge, KZN. The reason for the challenge was the amount of time that had passed since the commission of enquiry report on the then Thor Chemicals was made. About twenty years had elapsed and still ex-workers seek justice from government and the company. The waste still remains on site, instead of going back to where it came from, and the site remains a toxic nightmare. Sadly over the years much information has fallen by the wayside. Save for evidence of communication with government departments and twenty-year-old medical reports, there has not been much else on the horizon in support of ex Thor workers and the surrounding community.

Of interest is that, upon conducting further research, it was shown that ex Thor workers who had been found with mercury in their blood streams, and who hadn't received any form of compensation for the damage, and hadn't been able to work since the closing of Thor Chemicals, largely prioritized worker justice issues, alongside those issues relating to unemployment, as well as their health and well being. It is also noteworthy to highlight that, while those workers whose mercury levels were above the threshold received monetary compensation, those whose mercury levels fell below the threshold were not given any form of compensation although the effects of that mercury contamination in their health and well-being could be undeniably identified and linked to mercury exposure. This is shown in some of the old medical reports that were conducted on the workers, including one or two post mortems that made the causal link between the cause of death to mercury contamination and exposure.

Whether Thor will receive some form of environmental justice is uncertain at this point, though it is important to reiterate that the passing of two decades has been instrumental in the failure to reach some kind of resolution for the environmental and worker/ labour situation of Thor to date. These i's and t's have not been dotted or crossed

Looking from a birds eye view, one may be able to draw several inferences from these major assignments:

- Firstly, in the fight for environmental justice, the noisemakers are often critical to the process, and time is a major factor;
- Secondly, the importance of environmental CSOs as intermediary organizations that bridge the gap between communities and state departments, is highlighted. NGOs such as groundWork are often the noisemakers, with the aim of passing the loudspeakers into the hands of the communities; and
- Thirdly, there still exists a jaded mind set among some communities regarding the position of environmental health in their hierarchy of importance.

Given the contrast between both pieces of research, it can safely be assumed that we win some, and with the others, we carry on forging forward. Some of the i's were dotted, and some of the t's were crossed – but more groundwork needs to be done. There still exist some significant gaps that need to be filled until they over flow, and until the narratives change, and the perceptions of the communities are re-shaped to reflect an impeccable regard for environmental health and well being.

Environmental crimes: the real heroes

By Ludovica Serafini

"You are undone if you once forget that the fruits of the earth belong to us all, and the earth itself to nobody"
(Jean-Jacques Rousseau, 1754)

When I applied for a three-month internship with groundWork, I did not know exactly what to expect. I just knew what I was going to do: field research about environmental crimes.

Finishing my Master Degree in criminology at the University of Bologna, in Italy, I had the incredible opportunities to study abroad several times in different universities. Surely awesome experiences that led me to face new challenges, to meet new people, to learn from other cultures, and to achieve excellent results within the academic field.

This, however, was the main problem: I was studying hard to pass every exam brilliantly, but whenever the overseas experience was over, and I had to go back to Italy again, I did not feel completely satisfied with myself. The reason for this was that I was improving myself purely from a theoretical point of view, without really touching and feeling the topics I was studying, without implementing concretely the theories that for several years I just read in the books. This lack of concreteness led me to look for a new adventure that could break the bubble I was used to living in; a new challenge that could tear down the vision of that world shaped and inculcated essentially by the western consumption society. And here I am. On the other side of the equator. In South Africa.

Some of you could be wondering why I chose South Africa. Especially, what could the connection between South Africa and environmental crimes be? Firstly, we need to better understand what the concept of environmental crime means. As Cohen suggested in 1996, environmental crime is

"the most serious crime that humanity is currently committing against itself and its future generation". Hence, it involves the strong relationship between the physical and natural environment, and its inhabitants; a relationship that unfortunately we have forgotten, taking it for granted. Examples of environmental crimes are air pollution, disposal of toxic/hazardous waste, oil spills, acid rain, habitat destruction, and so on. Crimes committed against the natural environment and its population by unregulated power, corporate misconduct, organized crime, and weak governments. Crimes that lead to environmental injustices, affecting poor communities that have to suffer "the effects of environmental damage caused by the greed of others. This includes workers and communities exposed to dangerous chemical pollution, and rural communities without firewood, grazing, and water" (EJFN, 1997).

South Africa is, among other countries, the best example of environmental injustice, especially during the apartheid years, when Black, Indian and Coloured people were forcibly removed from their ancestral land, without any consultation or compensation, to small rural and industrial areas, where overpopulation, poverty and a lack of basic services inevitably led to widespread environmental degradation.

This is still visible in the area I am researching: the south Durban Basin, the largest toxic cancer hotspot of South Africa, wherein powerless residents "are like animals involved in a biological experiment" (Albrecht, 2012) run by polluting industries, sewage plants and numerous toxic waste landfill sites.

This pathetic reality is therefore the key point of my whole university project, which focuses on two elements. The first is to investigate the possibility that air pollution has an adverse effect on people's behaviour, which results in an increase of aggression, impulsiveness and irritability, as well as a decrease of self-control. Several studies have already proved it, showing that not only "air pollution components reach the brain, inducing inflammations and damage" (Block & Calderòn-Garciduenas, 2009), but also environmental stressors, "in addition to poverty, social stress, alcohol or drug abuse, individual character, and other social factors, increase the likelihood that an individual will commit a crime" (Masters, 2007).

The second aim of my research is to analyse the social perceptions and attitudes of those people who live in such a polluted and offensive reality. How do they shape their lives living so close to the factories, and smelling every day "rotten egg and oil-like odours", as they describe it? Unfortunately, the answer that the majority of the South Durban residents I have interviewed give is: "You just have to get used to this".

Thanks to groundWork and SDCEA's support, I am finally feeling part of something. I am finally "in the field", implementing what I've learnt until now.

Being in South Africa is one of the biggest challenges I have ever faced, with its difficulties as well as satisfactions. Being involved in the South Durban community, learning from the residents how they are surviving, smelling the same terrible odour of benzene, feeling dizzy and coming back home with a headache, hearing in person the asthma and the respiratory problems that most of the people have when they talk to me, seeing how children are trapped in that environment even without losing their smiles and their joy in playing around with the chimneys as landscape...

All that I have written above reinforces my determination to improve my research every day. It is already giving very positive results and, more importantly, it is revealing who the real heroes of the environmental injustice are: not the factories, not the governments, not the corporations, but the local people, whose lives are going on, no matter what, or who.

Thanks, heroes.

Ludovica Serafini, student at Studiorum Bologna University, interned with groundWork while she collated information for her Environmental Justice-themed master's thesis.

Plastics in the healthcare industry

By Luqman Yesufu

To phase out plastics in the healthcare industry, or not to phase out plastics in the healthcare industry: that is the question

Plastics have innumerable ways of benefitting society and are very much apparent in medicine and public health. They are known to be cost effective and, most importantly, they can be adaptable to many different functions or activities. Due to this characteristic, the healthcare industry finds them very useful in diverse health applications, such as disposable syringes and intravenous bags, sterile packaging for medical instruments as well as in joint replacements, tissue engineering, and so on. However, not all uses of plastics are smart and sustainable and thus the recent public focus on plastics has centred mostly on human health and environmental concerns, including endocrine-disrupting properties and long-term pollution arising from the large quantities of plastic being disposed of, and depletion of non-renewable petroleum resources as a result of ever increasing mass-production of plastic consumer items. So we are at a cross-roads in society: do we continue with plastics or do we start phasing them out? I am not going to seek to challenge this, but want to start highlighting this dilemma.

In South Africa, our Global Green and Healthy Hospital (GGHH) members are facing the challenge of having to deal with plastic waste without causing enormous harm to the environment and health. The baseline assessment conducted for our GGHH revealed that there has been a steady increase in the plastics used in these hospitals, especially in the hospitals engaged in recycling. With regards to recycling, significant amounts of money have been generated by GGHH member hospitals. For example, Victoria Hospital have generated over R2 000 from recycling projects per month, and an annual saving of about R19 200. However, the majority of this plastic, which is often of a high quality, is still either incinerated due to the legislation or disposed of in landfill along with other municipal waste; and therein lies the problem. The reuse of plastics is not encouraged and rather prevented because of the perception that, since it's coming from a health institution, it must contain germs. This in turn prevents most people from trying to use or re-use it.

According to our healthcare waste regulation in South Africa, incineration of medical waste is still allowed for several categories of streams that often contain plastics, either as part of the material or as a container for the material. The problem, however, is that incineration is not a waste treatment method but rather a waste conversion method, as the waste is only converted to another form – gases and ash – which are very toxic when one is exposed to it. The incineration process produces two types of ash which are *bottom ash*, which comes from the furnace and is mixed with slag, and *fly ash*, which comes from the stack and contains components that are more hazardous. Emissions from incinerators can include heavy metals, dioxins and furans, which are cancerous and harmful to population health. Plastic and metals are the major source of the calorific value of the waste. The combustion of plastics like polyvinyl chloride (PVC) gives rise to these highly toxic pollutants.

The good news is that environmentally friendly waste treatment alternatives are already in the country, which are also cost effective with regards to how plastic waste is managed in the healthcare industry. In South Africa, we currently have two alternative healthcare waste treatment technologies being piloted in the Western Cape and Limpopo.

Both treatment technologies apply the principle of mechanically heating the waste directly from inside by means of the friction generated by material breaks, obtained by a powerful rotary blade. After thirty minutes, the final product is reduced in weight and volume. It is also totally dry and safe, making it suitable for disposal in a domestic landfill site. There are also no emissions as the fumes and condensate are extracted from the treatment cell and filtered. Therefore, there is an urgent need for hospitals, especially in Africa, to shift the status quo of how things are done with regards to healthcare waste management and these health facilities need to be aware of where their waste goes to once it leaves the hospital premises, and what happens to it.

To achieve this, groundWork – Health Care Without Harm's strategic partner in the region – and the Gauteng Directorate of Health Care Waste and Occupational Hygiene Risk Management hosted a two-day waste exchange programme from the 23rd to the 24th of October 2017. Twenty-five delegates from four provinces in the country – Gauteng, Free State, Western Cape and KwaZulu-Natal – attended the event, which was aimed at learning and sharing best available practices with regards to managing health care waste. We visited a Buhle waste treatment plant in Polokwane to observe the alternative method called the "converter" in action. The equipment can be installed on site at a hospital facility and has the ability to process 200 kilograms of waste per hour. The advantages of this treatment process are numerous. I was particularly impressed by the fact that it uses little water, which can anyway be re-used, produces no emissions whatsoever, and the waste product after treatment is reduced in volume and rendered totally harmless. One negative is that the by-products from this waste treatment plant still go to the hazardous waste landfill, because this is dictated by government legislation in South Africa.

Overall, the GGHH waste exchange for 2017 was a huge success, as GGHH champions learned a significant amount on this topic, which they will take back to their various hospitals and colleagues. With the promotion and utilization of this waste treatment technology, the issue around plastic pollution from the healthcare industry might become a thing of the past… who knows?

Quotes from participants

"The general experience of last week's waste exchange program was that it was very informative and eye opening. I especially enjoyed learning about the logistical aspects of Health Care Risk Waste (HCRW) at Steve Biko Academic Hospital, including the storage and record keeping of HCRW consumables: sharps, boxes and. My "aha" moment was at Polokwane, at the Buhle Medical Waste Treatment Plant. I was highly impressed with the Buhle plant in Polokwane. It was great to learn about the evaporation and condensation of water from the waste, which is then treated before being distributed by the municipality, especially given that climate change is having major effects on potable water supply." *Melana de Beer, Chief Food Service manager at Khayelitsha Hospital.*

"I have gained so much knowledge from the GGHH waste exchange. I learned a great deal from colleagues who also participated, particularly in the areas of auditing, recording and monitoring of waste generated in your hospital. I was also fascinated by the bio-digestion presentation and how placentas can be used to generate gas. It showed that nothing can really be categorized as waste just yet. At the Polokwane Treatment plant, it was good to see where all of the waste generated from our facility ends up and that it has been treated in an environmentally friendly manner." *Zama Cele, Environmental Health Practitioner at Bertha Gxowa Hospital.*

"I found the exchange program to be a valuable learning experience. It was inspiring to witness the convertor at the Buhle Waste Plant in Limpopo. I was encouraged to know that we as a country do possess the technology needed to convert and sterilize medical waste. If only this technology would become the standard practice throughout the country, what a significant dent we would make with regards to preventing further harm to our land. I felt inspired and motivated in knowing that Grey's Hospital is not alone in this pursuit for change and there are others in other provinces that are also persevering in this pursuit." *Shireen Arends, Quality Assurance Manager at Greys Hospital in KwaZulu Natal.*

Small ways to #BreakFreeFromPlastic

By Nombulelo Shange

Ten years ago I embarked on a hair journey that saw me significantly reduce the amount of hair products and plastic I use and waste. This journey started with a not-so-well-thought-out decision to cut my very long beautiful, flowing and silky hair. I cut it all off and remained completely bald. I decided to go all natural, embracing all the kinks, knots and chaos that comes with rocking an afro and, later on, dreadlocks.

My afro grew very long very quickly. I had made the big mistake of assuming I could use the same products on my afro as those I used on my relaxed hair. Ask any black woman, their crown (hair) is their most prized possession. It's also the most expensive and most challenging to maintain. I noticed that many hair products I used claimed to have natural ingredients like coconut, olive oil, avocado, egg and lemon extract. I told myself I would try using avocado and all these other ingredients to shampoo, condition and moisturize my massive, untameable mane. I started to blend coconut oil, bananas, avocados, eggs and just about every vegetable in my fridge. My bi-weekly ritual consisted of smearing the concoction on my hair, sitting with it on for half the day and then washing it off with water and apple cider vinegar and then finally moisturizing with cooking oils like olive oil or coconut oil. I quickly realized that I was saving a lot of money, about R200 a month. I'm sure the savings would be much higher today. I also realized that I was buying fewer products packaged in plastic so I was unintentionally saving the environment by using things that are in my kitchen anyway. I later applied this strategy to my other grooming practices, like ditching sanitary towels for the reusable moon cup, and making my own roll on and lotions with ingredients most people have in their kitchen. From this, I save roughly R150 a month.

The point I am making with my hair journey story is that there are solutions to the waste and other environmental crises that we face. Environmental organizations around the world are often criticized for raising the issues but for not offering adequate alternatives. Many people go on believing that there are no solutions, which is a big mistake. When we are critical of Eskom, we don't mean that the lights must go out and we must all do without electricity. We recommend renewable options instead, like biogas, solar and wind energy. When we put pressure on municipalities to reject incineration, we don't mean that they must let the waste issues grow and turn into bigger challenges. Instead, we encourage waste reduction, reuse and recycling, and also prioritize income-generating waste solutions like the formation of the South African Waste Pickers' Association. SAWPA members have managed to create livelihoods for themselves by forming recycling cooperatives. Single father Andile Zondi, who works at New England Landfill site in Pietermaritzburg, supports his two daughters and has ensured through recycling that they will receive quality education.

We all stand to gain financially in the way that I did, and in the way the many waste pickers do, if we find ways to recycle and reduce our plastic use. And what's more, the planet with thank us for it.

Crushed plastic bottles ready to be cycled, image shot at Mooi River Landfill Site.

Credit: groundWork

Wasting jobs

By Musa Chamane

Waste pickers demand that Tshwane Council support and recognize their livelihood

Waste pickers across the country face a number challenges that threaten their livelihoods. One of these challenges is fuelled by a lack of recognition of or support for waste pickers by their local councils, such as the City of Tshwane. This challenge is typical, and not the exception, where government does not live up to its rhetoric on "green jobs".

On Wednesday the 1st of November, more than 500 waste pickers from Tshwane/Pretoria took to the streets, marching against the City of Tshwane Council for failing to deliver jobs that were promised to them in 2011. Tshwane Council is failing to support or recognize waste pickers. Waste recycling projects are being privatized despite the existence of waste pickers in the city. A memorandum was handed over to Mr Michael Mkhari from the Tshwane Council at the end of the protest.

The national movement of waste pickers, the South African Waste Pickers' Association (SAWPA), and groundWork are calling for a country-wide recognition of waste pickers' contribution to the environment. Municipalities in general face a huge challenge in terms of waste management and the existence of the waste pickers contributes positively in terms of waste minimization through recycling. Poor management of waste poses a major health risk, pollutes the environment and fuels the impacts of climate change.

> "We have written a number of letters to the Tshwane council in the past, questioning the newly built GX-owned Material Recovery Facility (MRF)" Msindo Makhanya (Tshwane Waste Picker).

It is believed that the council is aware of the contribution that waste pickers are making for the benefit of the environment. Tshwane had eight dumping sites back in 2007, of which half have subsequently closed down. The closure of these sites has displaced waste pickers who were informed that they must move and work in other sites that are still operational. At one of these closed sites an MRF was erected and 162 waste pickers were promised jobs by the council. When the council is asked about those promised jobs now, they turn around and say it is the right of the private company to choose who to employ and they don't have a role to play as the council, despite the Public Private Partnership that they have signed with New GX (Pty) Ltd.

There are ten waste pickers' cooperatives operating across all four operating dumpsites in Tshwane. None of the cooperatives is recognized by Tshwane Council. There is only one cooperative – Re-kopaneng Recycling Cooperative, of thirty waste pickers working at Onderstepoort dumping site – that has received funding from the cooperatives incentives scheme of the Department of Trade and Industry (DTI). The cooperative has got tools such as scales, a baling machine and a truck, but they have been struggling to obtain an open space from the council so that they could work from the centre rather than at the working surface of the landfill. There have been fatalities and injuries in the past caused by informal recycling activities at various sites in South Africa. Despite the fatalities most municipalities are not prepared to address the issue.

The Department of Environmental Affairs (DEA) and waste pickers, in collaboration with civil society, are drafting municipal guidelines on how to integrate waste pickers into the waste management system. This clearly indicates that the left hand is not aware of what the right hand is up to. Not only the DEA is working with waste pickers, but the likes of DTI and the Department of Cooperative Governance and Traditional Affairs (COGTA) have either recognized or supported waste pickers. It becomes a problem when municipalities deny knowing of the existence of waste pickers in their jurisdiction.

Municipalities have benefitted the most due to the activities of the waste pickers. Less waste is buried

at landfills and is instead diverted for recycling. Recycling does not only take place at landfills but also in streets and communities. The Tshwane waste pickers who are stationed at Ga-Rankuwa, Mamelodi, Onderstepoort and Soshanguve are all calling for the city to support them in pursuing their livelihoods. When handing in a memorandum, waste pickers have vowed that, if there no response or action, they will come back in an even more serious protest when compared to the current protest.

More than 100 dumpsites/landfills in South Africa have been visited by groundWork and it is clear how great the contribution the waste pickers are making is. Third world countries are struggling to manage waste. Plastics have proven to be the main problem for polluting water bodies such as oceans. Plastics, especially in Asia Pacific, are the main ocean pollutants. These pollutants have led to a global campaign with the goal of minimizing plastics usage. The existence of waste pickers has lessened the amount of plastics in the oceans, but the problem still persists. Plastics are not only a problem in oceans but also on the land and on the environment in general. Plastics production is not regulated in most third world countries and as a result more and more plastics are produced.

Industry such as PET recycling company is bragging about recovering more than 50% of every PET product produced. In their bragging they fail to recognize that the high recovery percentage is due to the existence of waste pickers. It is time for the industry to filter the money down to the relevant people. Waste pickers have a hope, battling this out during the drafting of the Industry Waste Management Plan (INDWMP). The plan is being developed and civil society, including waste pickers, will have a say on how to minimize/recycle plastics. Very few countries in Africa have done something about plastics, especially plastic bags. Kenya has just banned plastic bags while South Africa introduced a levy in 1998 but government officials have abused the levy. The levy that is being collected in South Africa should be assisting in making sure that plastic bags are recycled, but is not being.

More and more protests by waste pickers are looming due to dissatisfaction resulting from the lack of political will shown by municipalities. Actually, the protest in this city by waste pickers is taking place for the second time. The first one was against a municipal waste incinerator proposed by Enviroserve waste company in 2014. The incinerator never got the approval by DEA because it was clearly understood by DEA that jobs would be lost should the incinerator get approval. Waste pickers hope that this protest will not be in vain. Hopefully the council will propose a meeting with waste pickers. Cities such as Tshwane have a huge opportunity to create jobs from recycling. Industries that processes the packaging materials are a stone's throw away. The proximity of processing industries provides very fertile ground for recycling in Gauteng.

Finally, we do not have to pollute and clean later: we can just not pollute in the first place. There are various ways that can be used to prevent pollution. The waste hierarchy is a tool that should be used by all governments to make sure that waste is minimized, reused, repaired or recycled. In implementing the hierarchy there are a number of jobs that can be created and zero waste to landfill needs to be prioritized. The hierarchy needs to be supported by implementing recycling projects. An upcycling culture must be instilled in all the citizens of the world, where separation has to be the first prize. This transition must be just, and must place waste pickers at the centre.

Waste PIckers picket outside the Tshwane Council offices.

Credit: groundWork

Obituaries

In memory of Patrick Jacobs

In July 2017, we lost another activist, Patrick Jacobs, through illness. Patrick or Bra Pat, as most of us would call him, lived in Schoongesicht, Emalahleni.

Bra Pat was a member of the Schoongesicht Residents Committee, which promoted and defended human rights in the area. One of their key concerns was around the destruction and ill-health caused by mining activities next to their neighbourhood. Through his persistence, Bra Pat started looking for people and organizations that could help his community and, in 2009, groundwork started interacting with some community members of Schoongesicht. In 2011, he was amongst the people who represented their community at CoP17, which was held in Durban.

Bra Pat and other community members from around the Highveld strongly believed in collective action to achieve the desired outcomes and be able to deal environmental injustices created by industry and mines. In 2015, Bra Pat, representing the Schoongesicht Residents Committee (SRC), and thirteen other Community Based Organizations (CBOs) from the towns of Middelburg, Ermelo, Delmas, Carolina and Emalahleni, formed the Highveld Environmental Justice Network (HEJN), and he was elected a member of the executive committee.

Patrick was persistent, committed and passionate about ensuring the welfare of his community. He served his organizations SRC and HEJN with honesty and integrity, and with that he would go on representing both organizations in different platforms like the Air Quality Forum, namely ITT and MSRG and the Kusile Environmental Forum.

Until his death, Patrick always wanted solutions and was always questioning of all of us in order that we improve people's lives and remain committed to ensuring that our well-being should be prioritized over profits.

In memory of Peter McKenzie

The Market Theatre Foundation is saddened to announce the passing of its Council member, Peter McKenzie who died this morning. He has served on the Council of the Market Theatre Foundation since 2008. His most recent exhibition, Theemeri – walking on a bed of flowers, closed at the Market Theatre last Sunday.

"It has come as a great shock to learn of Peter McKenzie's passing. He played an active participatory role in development and growth of the Market Photo Workshop,' said Lekgetho Makola, Head of the Market Photo Workshop. Peter was a curriculum consultant, teacher and mentor at the Market Photo Workshop.Peter also lectured at the Durban University of Technology, Tshwane University of Technology and at the Institute for the Advancement of Journalism.

"Peter's reputation as a legendary photographer will live on. He will also be celebrated for his passion for education and his activism,' sad Ismail Mahomed, CEO of the Market Theatre Foundation.

Peter was founding member of the Afrapix Collective. He also co-founded the Durban Centre for Photography (DCP) at the KwaZulu-Natal Society for the Arts where he also served as Council President. He was also a member of Durban based multi-disciplinary art collective Dala.

Peter was currently on a research and curriculum development residency at the Market Photo Workshop collaborating on a project to decolonize the history of photography in Africa, "A History of African Photography – HOAP". The Market Photo Workshop will continue this legacy project.

"We remember Peter as a fearless artist and photographer who placed people at the centre of his work. Throughout his association with Market Theatre Foundation as a teacher and as a member of the Council he always displayed a strong sense of social justice, especially in his commitment towards supporting the under-privileged," said Kwanele Gumbi, the Chairman of the Market Theatre Foundation.

(Extracted from a statement by the Market Theatre Foundation on the 13th of October 2017)

Peter McKenzie, "A fearless artist and photographer who placed people at the centre of his work"

In memory of Wally Menne

Wally Menne, 66, who collapsed at his home in Hillcrest and died in hospital on Thursday the 26th of October, was at the centre of the campaign to halt dune mining at Lake St Lucia in the 1980s, ultimately derailing the ambitions of Richards Bay Minerals to extract titanium from the heart of one of Africa's oldest game reserves.

He was also a founding member of the Timberwatch alliance and the Durban Climate Action Group, and was respected nationwide for his knowledge of indigenous plants.

In email and Facebook messages from North America, Latin America, Asia and Europe, fellow campaigners variously described Menne as a "lion among men", a "dauntless eco warrior" and a kind and patient teacher who inspired young and old through his love of indigenous plants and wild spaces.

Working with fellow activists from across the world, he led campaigns against paper giants Sappi and Mondi and other global timber corporations.

During the UN World Forestry Congress in Durban two years ago, he took issue with the title of the congress itself, declaring that it was a misnomer to describe single-species pine or gum tree plantations as forests. "These are not forests. These are fake forests!" he shouted, likening "forestry" to terms such as "separate development" or "mother tongue education" that had been used to put a pretty face on apartheid.

Speaking from Minnesota, USA, Indigenous Environmental Network founder Tom Goldtooth lamented the loss of "a great man with a wealth of knowledge". Andrew St Ledger of The Woodland League in Ireland said Menne was "a kind and gentle person and ferocious defender of our environment".

Dr David Fig, political economist, anti-nuclear activist and chairman of Biowatch South Africa, remembered Menne as a man of great integrity and passion, galvanised by "an outrage against injustice and the alarming expansion of industrial plantations".

Durban environmental justice campaigners Bobby Peek and Desmond D'Sa – both winners of the international Goldman Environmental Prize – also paid tribute to Menne.

"Wally was moulded in the form of an old-school union organizer. He was uncompromising and held his positions clearly," said Peek, "There was no middle ground that corporates and reformist NGOs could force him into."

Di Dold, a senior member of the Wildlife and Environment Society, described him as "one of a kind".

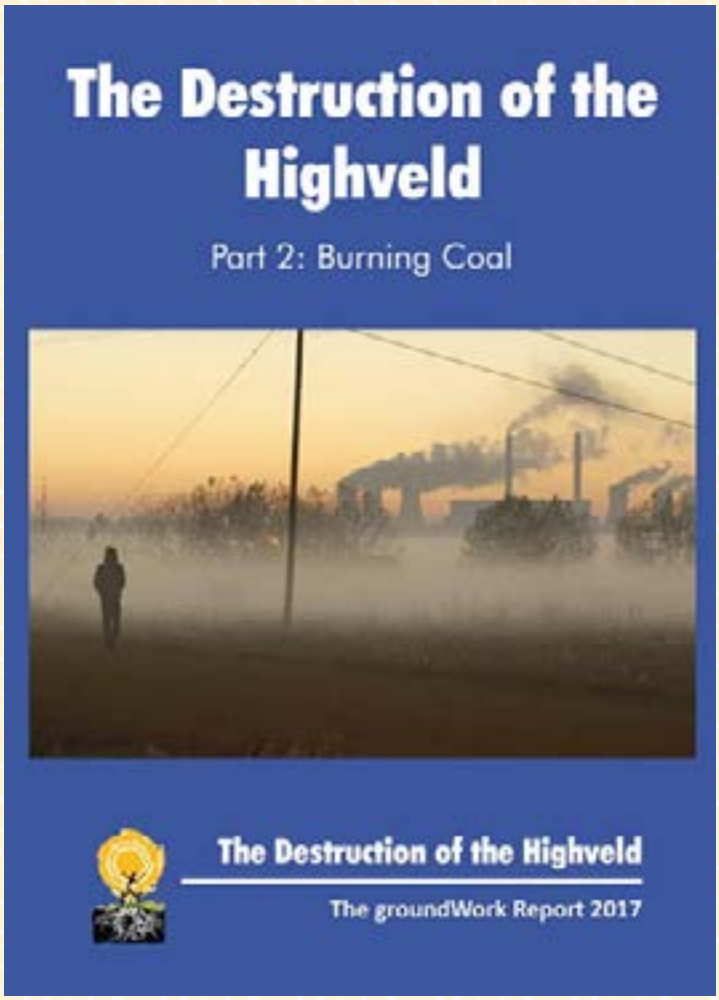
"When he argued his case, he was formidable and he never gave up."

Menne had sacrificed his material comfort and health by working long hours, with most of his work done for no financial gain.

(Extracted from an article by Tony Carnie in the Daily Maverick of the 29th of October 2017)

Wally Menne, "a dauntless eco warrior"

Burning Coal



The violence of production hangs in the air of the Highveld. On the one hand, workers are exposed to a volatile and destabilizing global market and thousands have lost their jobs in the bitter competition created by the glut of coal, steel and other commodities. On the other, air pollution from big industries burning coal kills thousands of people every year. Hundreds of thousands more suffer debilitating illness.

This public health scandal goes unseen. The health system does not register what is happening and these deaths and illnesses are not reported in official records or in the media. It is not just that the bodies cannot be lined up for inspection. The majority of those who die early are poor and live alongside the polluting plants.

The people who work in those plants get a double dose of pollution – at work and at home. In the context of high unemployment, they are glad of an income but expect an early death as the cost of it.

That these deaths remain invisible is convenient to the political and economic elite. The environmental injustice and racism of the apartheid regime was handed on to the new South Africa as if it were natural to development.

The groundWork Reports are produced annually to reflect on the state of environmental injustice. In 2016, *The Destruction of the Highveld Part 1* focused on the politics and impacts of mining coal. This year, Part 2 focuses on burning coal and the dirty politics that accompanies it – in Eskom's power stations, in Sasol's coal-to-liquids petrochemical plants, and in the big metal smelters that dominate the industrial landscape of eMalahleni and Middelburg. These are the industries at the heart of the minerals-energy complex (MEC) that has shaped South Africa's development for the last century.

This report documents the experience of fenceline communities and workers and people's struggles for clean air to breathe. It also reports on the slow and partial responses to this growing environmental health crisis by a reluctant regulator.

The pollution of air and water is immensely destructive. Coal-fired energy and industry is also a primary driver of climate change. And while development in the interests of the minerals-energy complex is justified in the name of jobs, it has impoverished over half the people and left nearly 40% jobless. This report points to the urgency of a just transition to a changed economic and political system shaped by the workers and communities who are marginalized within the present system and free of the pollution produced by fossil fuels.