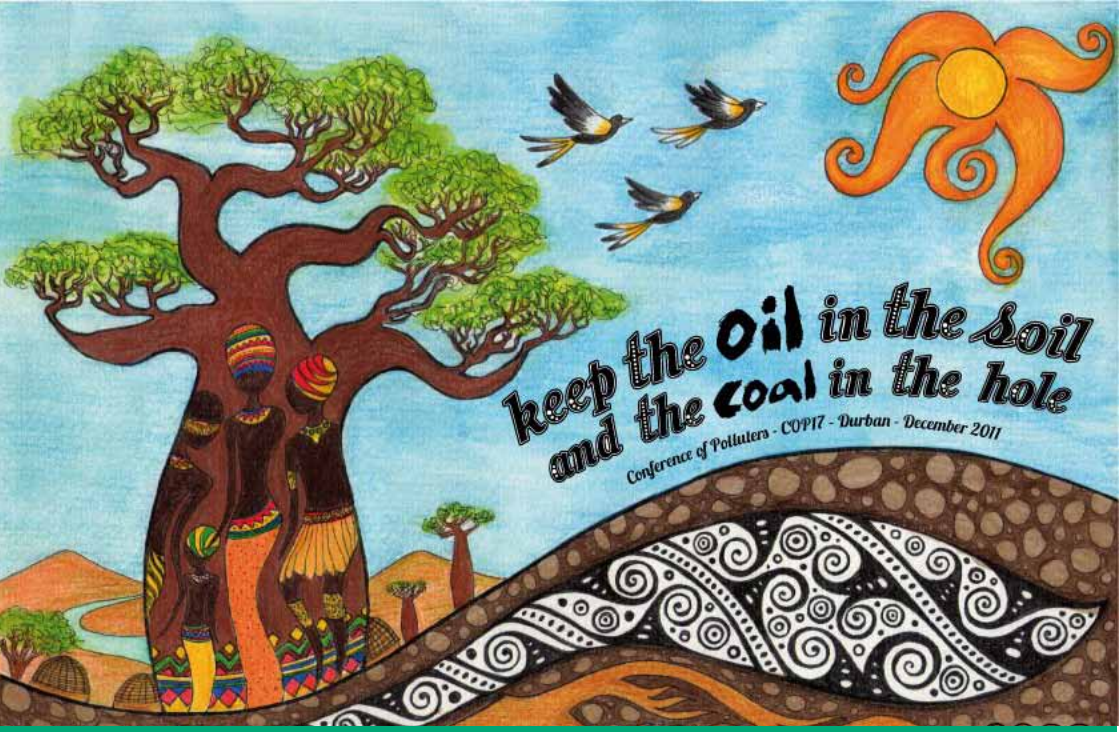


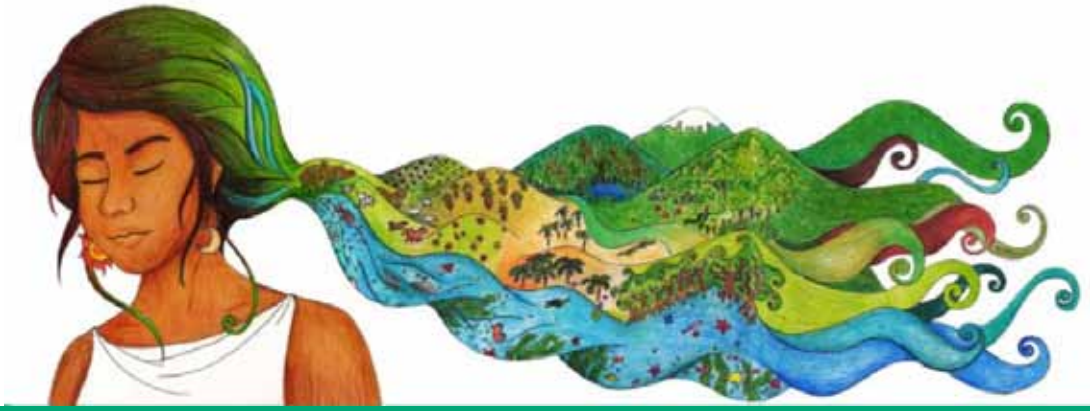
Environment and Education:

Rights and Responsibilities

education rights project

Education Rights for Learners, Parents and Educators

book 17



Environment and Education: Rights and Responsibilities

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We have attempted to ensure that the information in this booklet is accurate up to the time of publication, November 2010. Policies, laws and regulations change. Please contact the CERT or PPEN for regular updates. Find their contact details on the back inside cover.

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Centre for Education Rights
and Transformation

The struggle for quality public education continues!

Reading the word and the world
Changing the text and the context

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Environment and Education: Rights and Responsibilitiies

This booklet draws inspiration from the environmental movement's martyrs Chico Mendes and Ken Saro-Wiwa, the late Wangari Maathai and the warriors Tim DeChristopher and Vandana Shiva. Their various efforts and sacrifices in the name of creating a just and liveable world are briefly described on pages 30-32.

This booklet is also dedicated to the countless people throughout South Africa and elsewhere, who struggle daily for environmental justice in their communities and a sustainable future for us all – the vast majority of whom will never know a fraction of the recognition and gratitude they deserve.

It is the example of courage and selfless struggle set by people such as these that keeps alive the hope in our hearts, reminding us even in moments of doubt and despair that another world is possible.

ROSA LUXEMBURG STIFTUNG

Contents

Introduction

Imagine a world in which the weather has become much less predictable: where storms and flooding, droughts and famine happen more frequently. A world in which many people are forced to leave their homes, even their countries, in search of a place where they can simply survive, or where they can escape fighting over scarce resources.

The International Organization for Migration (IOM) predicts that 200 million people around the world may be forced to move in the near future as **climate change**[1] increases the problems they already face. In South Africa, higher temperatures and less predictable rainfall will cause shortages of water for use in homes or agriculture. Some experts predict that South Africa will run out of water reserves by 2025.[2] Production of maize (mealies) will also drop because of changes in temperature, which will cause even higher prices for food that many people rely upon.

Rising temperatures will mean that malaria will spread further into Limpopo province, affecting more and more people who do not have natural resistance to it. Many people forced to leave their homes in other African countries will come to South Africa.

This is the situation many people already face. All of these problems will only become much worse, unless we make some big changes to the way our societies function.

In many countries around the world, scientists have already found much evidence of changes in weather, in how plants grow, where animals live and where diseases occur. They are clearly due to the major changes currently happening on our planet that we call climate change.

South Africa is one of the major contributors to climate change in the world, mainly because of the ways in which it produces energy. South Africa's energy production releases huge amounts of **carbon dioxide** into the atmosphere – one of the main causes of global warming and climate change.

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[1] Some words in bold are explained in the word list towards the end of this booklet.

[2] http://www.ipsnews.net/news.asp?idnews=48259

South Africa's national electricity producer, Eskom, is one of the largest polluters in South Africa. Eskom also currently has plans for a major expansion of its coal-burning operations to produce electricity – precisely at a time when we need urgently to be reducing the use of coal and other **fossil fuels**.

Eskom is the country's largest emitter of carbon dioxide by far and is building the third and fourth largest coal-fired plants in the world for which it got the World Bank's largest ever project loan last year. Eskom also charges the two biggest mining/metals houses – Anglo and BHP BIlliton - the world's cheapest electricity rates ($0.02/kWh) while it insists on a 27% price increase on poor people for electricity year after year.

In nature's economy the currency is not money, it is life.

- Vandana Shiva, Earth Democracy: Justice, Sustainability and Peace

South Africa also suffers from serious pollution problems due to waste from the mining industry, production of aluminium, and other industrial processes. Many of South Africa's mining operations have released dangerous heavy metals into streams and lakes. Production of aluminium has led to large amounts of toxic waste being released into surrounding communities, causing many health problems.

Individually, there is very little that most of us can do to remove the major causes of climate change and dangerous pollution. But when we come together and organise to seek change – changes in how our communities and societies are governed, and in how the major sources of environmental and social problems are managed, then we can begin to make a real difference.

This booklet aims to empower learners, parents, educators and others with information they can use to help assert their rights and defend the Earth, in line with the following principles and aims as stated in the National Curriculum Statement:

- Based on principles of human rights, inclusivity, environmental and social justice: infusing the principles and practices of social and environmental justice and human rights as defined in the Constitution of the Republic of South Africa.

- Aiming to produce learners who are able to use science and technology effectively and critically showing responsibility towards the environment and the health of others.

This booklet explains what environmental rights are, why they matter, and what learners, educators and others can do if they feel their environmental rights, or the environmental rights of others, are not being respected or fulfilled.

Our rights are only effective when we understand them, and take steps to make sure they are realised. When we stand up for our own rights and for the rights of others, we improve the situation of everyone. This helps create the kind of society in which people's rights are real not only 'on paper'. This is something we must do together, collectively and in an organised way.

What are environmental rights and why are they important?

Environmental rights are the rights that people have to the natural resources they need for survival and a decent life. At the most basic level, this includes the right to have access to land, shelter, food, water and air, and for these to be **unspoiled and free of pollution**. This means, for instance, that you have a right to have access to land that has not been stripped of its minerals, plants and animals through irresponsible mining or construction, to food that is not covered in dangerous pesticides, to water that has not been poisoned with toxic chemicals from mining or industrial waste, that the air has not been filled with exhaust gases from automobiles, taxis and buses, and so on. At another level – and more simply – it means **you have the right to live in a world in which the environment and everything in it are respected and protected.**

Many people around the world are working to stop the damage that is being done to our planet through out-of-control development in the name of profit, and to create a world in which all people's needs are met, and in which the Earth itself and all of its inhabitants are treated with respect. It is important to understand some of the historical background of how we got to where we are today, as well as some of the major environmental issues that are facing us. The next two sections will look at those.

Nature shrinks as capital grows. The growth of the market cannot solve the very crisis it creates.

- Vandana Shiva, Soil not Oil: Environment in an Age of Climate Crisis

Where do environmental problems come from?

Human societies and human daily life in many places on Earth has changed greatly during the past 200 years or so. During this period, new technologies were developed that led to dramatic changes in industry, transportation, energy, agriculture and other areas. Many of these developments came out of the search for profit and economic growth, under the system that we call **capitalism**.

Basically, capitalism is a system of rules and practices that encourages greed and individualism as the basis for organising the ways in which we produce things and live. Karl Marx wrote about capitalism as a very dynamic system that leads to the creation of many new technologies and products, but one that ultimately would lead to great suffering and danger.

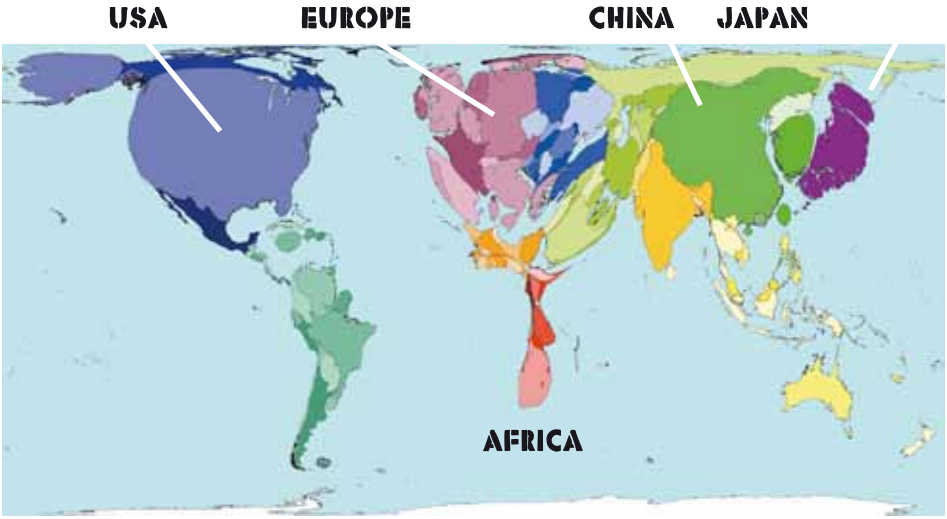
The changes that occurred under capitalist industrialisation had both positive and negative consequences for people. For example:

- Developments in industry and technology made it possible for some people to **travel and communicate** more easily. The invention of the steam engine resulted in the creation of boats and trains that could travel much more quickly and further than before. This allowed some people to visit new places and new people. Unfortunately it also often led to major exploitation through colonialism, rather than spreading knowledge, cooperation and understanding.
- The creation of new **medical techniques** allowed better diagnosis or treatment of certain diseases that had caused great suffering for much of human history. For example, new techniques for working with metal and glass allowed the creation of more powerful lenses for microscopes to help identify diseases, and smaller needles for giving injections without causing injury or pain. The invention of the X-ray allowed detection of certain kinds of internal injuries or diseases such as cancerous tumours. Perhaps most importantly, the development of modern sewerage systems in cities prevented the spread of many diseases that had previously caused terrible epidemics, such as influenza and cholera.
- New machines for spreading seeds or for harvesting led to increases in **agricultural productivity**, allowing greater quantities of food to be raised on a given piece of land. In principle, this could have ensured that everyone would always have enough to eat. In practice, this did not necessarily occur because the people who had taken control of the land and who controlled the machines would only make food available to those who could afford to pay for it. Often, the people who could not afford to pay were the original inhabitants of the land that had been taken from them, and where they had previously grown their own food.

The benefits of these changes were often felt by a very small number of people, usually in other parts of the world, and especially wealthier people. These changes created many problems for other people – especially poor people: either unfair working conditions, or living with the pollution and waste caused by mining operations and industry. Unfortunately, most of the future negative consequences of environmental damage caused by industrial development are going to be felt by people who were not responsible for the environmental damage.

Many different factors contributed to the changes that came about during this period, but one of the most important was the invention of new ways to use **fossil fuels** such as coal, oil and natural gas to power machines, cars, trucks and trains, as well as the discovery of large deposits of these fuels in various parts of the world.

Most of the damage to the atmosphere has been caused by events and processes occurring in relatively wealthy countries with highly industrialised economies. Those countries are often called 'developed countries', although some people question whether that way of talking about 'development' really makes sense. This is because 'developed ' countries have caused serious damage to the planet, and to many communities and societies around the world, even while it has raised living standards for the people in those countries responsible for the damage. As a way of trying to find a better way to talk about development, many people have begun speaking about **sustainable development.** This generally means a process of development within a community or society that does not cause harm to the surrounding environment, or to other communities or societies.



The World Map in proportion to the amount of greenhouse gas coming from the land depicted. Source: www.worldmapper.org

Weather vs. Climate – What's the Difference?

Weather refers to a specific set of conditions or a specific event that happens in a given place over a period of hours or days. For example, a thunderstorm, a cold front, and today's temperature are all examples of weather. Specific changes in weather are very difficult to predict.

Climate refers to the average weather conditions in a certain place over many years. For example, the climate in Johannesburg is generally dry, mild and sunny, sometimes cold during the winter, and usually with afternoon thunderstorms during the summer. By contrast, the climate in Durban is warmer and wetter, with very warm, rainy summers and mild winters. Both places experience changes in weather, but their respective climates are also different from one another.

One way to think of this difference is as follows: We decide which clothes to buy or make based on the climate of the place where we live, but we decide which clothes to wear each day based on the weather we expect for that day.[3]

[3] Adapted from http://www.epa.gov/climatechange/kids/basics/concepts.html

Some Important Environmental Issues to Understand

a) The Air We Breathe

Many of us don't even think of air as an environmental issue, because we simply take for granted the air we breathe. But **air** is the single most important thing for us to stay alive and be healthy. Without air, we can only live a few minutes.

In order to remain healthy throughout your life, it's important that the air you breathe is clean and free of pollution. On average, each person takes a breath more than **20,000 times every day** and in that time will inhale **more than 7,000 litres** of air. That means in one month, a person will inhale an amount of air the size of a room 6 metres on each side and 6 metres high.

Because our lungs act as a filter for all of that air, it's important for that air to be as clean as possible. In many cities, this is a problem because the exhaust fumes from cars, buses and trucks release many unhealthy chemicals in the air. Many factories, energy plants and other industrial buildings also release additional chemicals into the air that can cause harm to living things.

b) Clean, Safe Drinking Water

After the air that we breathe, the most important physical need for human beings is **water**. In order to live healthy and satisfying lives, it's essential that people have reliable access to clean, safe drinking water.

Every cell in your body requires water in order to function – in fact, your body is more than 60% water. Your blood is made up of 92% water, your brain and muscles are 75% water, and even your bones are about 22% water. People have been known to survive for a month or more without eating, but we can only live for a few days without drinking water.

You might think that it's no problem, because there is so much water in the world: after all, three-quarters of the Earth's surface is covered with water. But 98% of that water is salt water, so we cannot use it directly for drinking. In fact, less than one percent of all the water on Earth is fresh water.

South Africa is a dry country, and so faces special challenges with water. Some people who have studied the situation believe that South Africa is already using almost all of the water that is available. In fact, according to the Department of Water Affairs and Forestry, half of South Africa's water is already used just for watering farms.[4] **So there is a lot of pressure to find additional ways to save water – not only for individuals at home, but also especially for big industries like agriculture and mining.**

[4] http://www.dwaf.gov.za/WaterConservation/Programs_Arc.htm

Water as a Human Right: The Battle Over Privatisation

The Bill of Rights to South Africa's Constitution states that, "everyone has the right to have access to sufficient water." But as with other rights, people must organise and struggle in order to ensure their rights on paper are realised in the world. In South Africa, activists have struggled against plans to "privatise" people's water supplies, in order to ensure that water is available as a human right, rather than as something to which people are only entitled if they can afford to pay:

> *Not long after the French water multinational, Suez took over Johannesburg's water supply, an outbreak of cholera in the township of Alexandra affected thousands of poor families. In both cases, it was only after the national government was forced to step in as a result of community mobilisation and struggle that the cholera outbreaks were brought under control…. There has been an increase in environmental pollution and degradation arising from uncontrolled effluent [sewage] discharges and scarcity of water for food production. And, the human dignity of entire communities has been ripped apart, as the right to the most basic of human needs, water, has been turned into a restricted privilege available only to those who can afford it.*
>
> *In response to these water privatisation measures, poor communities in large urban areas such as Johannesburg, Durban, Cape Town and many other smaller towns and peri-urban areas across South Africa have responded with active resistance and forming social movements.*
>
> *Across the world, people have begun to unite in defence of their human right to water. Whether in Cochabamba, Bolivia, or Accra, Ghana or Atlanta, Georgia, or Buenos Aires, Argentina, or Manila in the Philippines, or Johannesburg, the ongoing anti-privatisation campaigns for water access are linking with struggles in other places.*[5]

[5] http://www.sarpn.org/documents/d0000584/index.php

Coalition Against Water Privatisation members marched on the mayor of Johannesburg to demonstrate against water privatisation and particularly the installation of prepaid water meters, 12 November 2009.

The High Environmental Costs of Golf Courses

South Africa has many golf courses, including some very famous ones, and golf is seen as a major part of the country's tourism industry. Along with countries like China and Spain, South Africa has also built many new golf courses over the past few years, and currently has more than 500. But in addition to being available only to small numbers of mostly wealthy people, these golf courses carry significant costs to the environment. For example:

- **Water**: The amount of water required in order to maintain a golf course depends on where it is located. In dry countries, such as South Africa, these requirements can be extremely high: a single golf course can use enough water to meet the basic needs of 1,000 or even 1,500 people. And because many people in South Africa still do not have sufficient access to water, this use of water for golf courses can be seen to be extremely unfair.

- **Pollution**: In addition to their very great water requirements, golf courses also damage the environment in other ways. One way is through the use of pesticides to kill weeds and insects on the golf course – which also kill many useful plants and insects in the surrounding areas, and leave toxic residues that may be harmful to people and other animals. They can also disrupt the natural ecosystems by introducing species that are not indigenous to the area, or by disturbing the natural breeding grounds of animals.

Golf courses are artificial environments. To make fairways green, water is sapped from local reservoirs to the detriment of the surrounding area as arid hills surrounding the pictured golf course in George shows.

c) Food Security and Food Sovereignty

After air and water, our most basic physical need is for **safe and nutritious food**. Food provides the nutrients our bodies need to produce energy, to grow, and to repair any damage that may occur through illness or injury.

Food security refers to how easily a person can get the food they need in order to remain healthy. In other words, people have food security not only when they have enough to eat today, but when they also feel confident that they will have enough to eat tomorrow and into the future. But food security doesn't necessarily mean that people have control over their own food supply: it might just mean that they feel fairly certain that there will be food available, from somewhere.

Food sovereignty is different; it means *the right of people to choose how they will organise their food supply*. In other words, it means not only knowing that you will have enough to eat, but also having some control over its quality, availability, and so on. This term was first used in 1996 by an international movement of mainly poor and rural people from around the world who came together, through the organisations they had built, under the name *Via Campesina* (which means "Peasants' Way"). In using the term "food sovereignty," they were claiming the right to determine how their needs for food will be met, rather than having their food supply determined by big businesses or government officials on the basis of making a profit without regard for human need, and without their participation or choice.

d) Pollution and Waste

Once our immediate physical needs are met, another important thing we have to think about is the **pollution and waste** around us – both the waste that we produce, and the pollution that ends up around us due to mining, construction, transportation or other industrial activities.

We all have a responsibility to ensure that we take care of the waste that we produce: we must put rubbish in proper rubbish bins; we must recycle the plastic containers, tins, glass bottles and paper that we use; we must not litter, and so on. But we also have the right to live in an environment that is clean and safe. What this means is that if there is pollution affecting you or your school or community, you can take steps to hold the person or company causing it responsible. They can be forced to clean it up, to prevent more pollution in the future, and to pay for the harm their actions have caused to people and the environment.

The blaze at the Engen oil refinery that sparked angry calls from nearby residents in Merebank for its closure, 10 October 2011. See the newspaper clipping opposite.

From an article in the Daily News on 12/10/2011: 'Merebank to march against refinery'
By Mpume Madlala

Angry Merebank residents are planning a major protest march against the Engen Refinery in the area and intend to shut it down.

This emerged during a public meeting at the Settlers Primary School on Tuesday after a fire at the refinery on Monday. More than 100 primary school pupils and about 10 teachers from the school were taken to hospital, some battling to breath. Some had itchy skin and eyes after being splattered by airborne droplets of crude oil.

Community activist Desmond D'sa said that because the community was always affected by fires at the refinery, they all had to work together to shut it down.

"We must take a stand. We cannot let Engen get away with this. We must fight them."

D'sa said the community would mobilise on Saturday, October, 23, to block Engen's gates to show their dissatisfaction about the constant health issues people faced.

He said they would also demand a 24-hour asthma clinic because many people suffered from chronic illnesses such as asthma as result of the pollution caused by the refinery.

"We have been silent for too long; we have suffered enough," he said.

e) Mining Waste and Acid Mine Drainage

One specific kind of pollution or waste that is a specific problem in South Africa is waste from mining operations, especially from the mining of gold, platinum, coal and other materials. This is often referred to as "**acid mine drainage**" – or just "AMD" for short.

Mining operations generally require a great deal of water while they are operating. They also produce many potentially dangerous chemicals that can end up back in the water supply afterwards. So it's important that their operations are monitored, and that steps are taken to minimise waste, and treat or recycle any waste that is still produced so that it becomes useful again, or is made harmless.

Even after a mine stops operating, however, there can still be very serious issues that must be addressed. Basically, when water inside the leftover mine flows over certain kinds of rocks that contain minerals called **sulphides**, a chemical reaction takes place that creates **sulphuric acid**. This makes the water more acidic, and this acidic water then dissolves toxic metals out of the rock. This process happens naturally in some places, very slowly. But after mining operations, there are huge open spaces left in the ground, so these chemical reactions begin to take place much faster. The result is often **many more dangerous chemicals in the water** than would naturally be there.

Acid mine drainage: (left) near Meadowlands (Photo: Kieron Crawley)and (overleaf) Donaldson Dam on the West Rand of Johannesburg (Photo: Henk Coetzee)

Acid Mine Drainage

Around Johannesburg, there are several places where acidic water and toxic chemicals from underground mines is already coming to the surface. For example:

- In the West Rand, the Tweelopiespruit River and Robinson Lake, near Randfontein, have been polluted for several years by toxic water from old mines in the area: water that contains various dangerous metals, including uranium. This has even led to pollution of some boreholes, as well as of soil in the area, which has prevented people from growing vegetables. This has already caused problems in the nature reserve, and in early 2011, water from the stream began showing up in the Cradle of Humankind. Experts predict that toxic mine water will even begin to flood Gold Reef City by the middle of 2012 if nothing is done very quickly.

- At Grootvlei Mine, near Springs, east of Johannesburg, a problem with the pumps that are supposed to pump acidic water out of the mine so that it can be cleaned has left the mine being flooded with polluted water.[6]

- More urgently, it was reported in the Sunday Times in November 2011 that **acid water from an old Rand Uranium mine near Krugersdorp is rising by half a metre a day underneath Johannesburg**. While the South African government insists they have a plan to tackle the crisis, environmental activists are extremely concerned about the many delays and problems in addressing the issue.

[6] http://www.earthlife.org.za/?p=1471

f) Global Warming and Climate Change

Many people have at least heard the terms “global warming” and “climate change” by now, even if they do not really understand what these terms mean. Beginning around two centuries ago, people began to understand how to use coal, oil and gas – which are called fossil fuels – to power many different machines and processes: coal to produce electricity, power trains, run machines and factories, petrol to power cars and tractors, and so on. Using these new technologies, working people were able to bring many changes to much of the world, and created enormous amounts of new wealth (which mostly went into the hands of small numbers of people who controlled the land or the machines).

Unfortunately, burning all of these fuels releases large amounts of carbon dioxide and some other chemicals into the air. During the past , these processes have released billions of tons of these gases into the atmosphere. When these chemicals in the air becomes too high, it begins to affect how much of the heat from the sun remains close to the Earth, rather than bouncing back into space, which much of it would normally do.

Melbourne, Australia, hosted a 5,000-strong ‘human sign rally’, 19 May 2009, to demonstrate support for action against climate change.

Eventually, the additional heat that has been trapped begins to cause the average temperature of the planet to rise.

> As the average temperature rises, it begins to have many different effects, like how much rain there is in different places, how strong the storms are, which plants grow well in which locations, and so on. Some places become hotter, some become cooler, some get a lot more rain, some a lot less. When we think about them all together, these overall changes are called climate change.

The best way to understand the importance of climate change is if we think about its potential impacts on people's daily lives. People who live in a specific place have become accustomed to living there: they know how to grow food there, how to dress so they can remain warm (if they live in a cold place) or cool (if they live in a hot place), how to find water, and so on. When the climate in their location begins to change, it becomes more difficult for them to know how to live there comfortably, or even at all: they are no longer sure how to raise the food they need, where they can find the water they require. Eventually, as it becomes more and more difficult to live as they are accustomed to living, they must either adapt to the new conditions, or try to move to a new place where conditions are better. But either scenario – adaptation or relocation – means very significant disruptions to their lives, and in some cases great danger if they must move to a place where they are seen as an outsider.

Rural Women's Assembly at the COP17, in Durban, 2 December 2012, a conference on climate change,

Renewable Energy: The Key to a just and sustainable future

In order to stop climate change, most countries, including South Africa, need to move rapidly away from the burning of fossil fuels (coal, oil and gas) and toward renewable and sustainable sources of energy to meet their needs. South Africa has great potential for both solar and wind power, but continues to rely on fossil fuels or nuclear energy for most of South Africans' energy needs – mainly because these are forms of energy where the profits can be more easily controlled by a small number of people.

- **Solar power** involves converting sunlight into electricity. This can be done in two different ways: either by concentrating light from the sun across a large area onto a small area in order to create steam that drives a turbine steam engine, or by using **photovoltaic** solar panels that convert the sunlight directly into electrical energy.

- **Wind power** makes use of various technologies to harness the power of the wind: windmills for mechanical power, wind turbines to generate electricity, wind pumps for moving water from one place to another, and so on. The total amount of energy available from wind is more than the total amount of energy people use, but we currently use only a tiny amount of this.

- **Other kinds of renewable and sustainable energy**: There are also several other forms of renewable and sustainable energy that harnesses energy from the movement of ocean currents or tides sometimes called wave energy, or from heat below the surface of the earth, and other natural processes.

Wind Farm off the Shetland coast of Scotland.

What laws and regulations define our environmental rights and responsibilities?

In South Africa, there are at least four different kinds of law that define people's rights and responsibilities in relation to the environment:

- The Constitution, which lays out the basic framework of rights and responsibilities protecting our right to enjoy and have access to the environment.
- Common law, which regulates how people interact with each other in the context of the environment.
- National, provincial and municipal laws and regulations, which usually regulate some specific issue around the environment, such as water, fish, plants, trees, minerals, and so on.
- International law, such as international agreements and treaties, which define the responsibilities between South Africa and other countries when it comes to the environment.

One of the main challenges in South Africa is that even though many of the laws are very good, in practice they are not always followed or respected. It is also important to understand that these different kinds of law work together: they create an overlapping set of tools that you can use to protect and realise your environmental rights or those of your community.[7] So, for example, if a community is experiencing problems with smoke pollution, there might be protections they can use from the Constitution, the common law and legislation all at the same time.[8]

The following section discusses a few specific elements of these laws in South Africa that are especially important.

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[7] This section is drawn from http://www.environment.gov.za/enviro-info/env/rights.htm

[8] http://www.paralegaladvice.org.za/docs/chap11/01.html

Fortunately our constitution provides much better protections for people than the constitutions of many other countries in the world. One area where it is especially good is in having specific protections of people's environmental rights.

Section 24 of the constitution says that everyone has the right to an environment that is not harmful to their health or well being, and the right for the environment to be protected. This means that the government must pass laws that:

- prevent pollution and damage to our natural resources;
- promote conservation; and,
- make sure that natural resources are developed while also promoting the economic and social development of people.

What this means is that government must make sure that reasonable steps are taken to protect the environment against any harm that may result from social and economic development, even if such development is needed.

Section 27 of the constitution guarantees all South Africans the right to have enough food and water, as well as access to health care and social security. This means that the government must pass laws and put policies in place to make sure that people have these basic things. The same section also says the government must take whatever steps it can afford to take to fulfil these rights for everyone. This means the government is only required by the constitution to provide what it can afford, but it also means the government must improve these services over time.

National, provincial and municipal laws

There are several pieces of national law in South Africa that are relevant to protection of the environment and your environmental rights, as well as many specific laws, regulations and policies at provincial and local levels. At national level, these include the National Water Act, the National Forest Act, the Marine Living Resources Act, and the National Environmental Management Act. Some of these apply broadly across all aspects of the environment, and so act as a kind of framework for many different kinds of issues. Others apply only to specific aspects of the environment, such as water, fish, plants, trees or minerals.

The National Environmental Management Act

The National Environmental Management Act of 1998 (NEMA) gives more detail concerning the rights described in the constitution, including:

1. We all have a right to sustainable development; therefore all important environmental factors must be considered before development decisions are taken. The environmental factors that must be taken into account include:
    - not disturbing ecosystems and cultural assets,
    - not polluting and wasting resources, and
    - being responsible and cautious when using resources where uncertainty exist about the effects of such use.
2. **All stakeholders have the right to be consulted on impact assessments (section 2 and Chapter 5).** This means the social, economic and environmental impacts of activities must be considered and the people affected must be consulted before decisions are made.
3. **Everyone has the right to participate in dispute resolution (Chapter 4)**. If a dispute relating to environmental matters arises, any person may ask the decision-maker to appoint an independent person to investigate the matter and to chair meetings where all arguments and facts can be heard.

4. **Everyone has the right to refuse to do hazardous work (section 29)**
   A worker may not be held liable or be disciplined for refusing to do work that he/she honestly believes will pose an immediate or serious threat to the environment or themselves.
5. **Everyone has the right to report risks (section 31)**
   A person may not be held liable or be disciplined for reporting what is honestly believed to be an environmental risk.
6. **Everyone has the right to information (section 31)**
   The State may obtain information that is necessary to fulfill its environmental responsibility and any member of the public may obtain such information from the State as long as it is in the public interest to be informed.
   This means that all persons responsible for threats to the environment, emissions into the soil, water or air or the handling of hazardous waste, is under obligation to report thereon.
7. **Everyone has the right to demand that the environment be taken care of (section 28)**
   We all have a duty to take care of the environment. Any person who harms the environment must take reasonable measures to avoid or minimise such harm, even if it was authorised by law. A responsible environmental officer may order any person who harms the environment to take remedial measures, and if a responsible officer does not do so, any member of the public may make a court application to enforce the duty of care.
8. **Everyone has the right to legal standing to enforce environmental laws (sections 32 and 33)**. This means that each person has the right to pursue the recognition of their environmental rights – no one can be denied this.

The UN Convention on the Rights of the Child

At the international level, the UN Convention on the Rights of Child of 1989 addresses many important rights of children. Regarding environmental rights specifically, it emphasizes four principles[9]:

- **Article 2**: All children, irrespective of age, gender, ethnic and social background, disabilities, and irrespective of where they live, have the right to a healthy and supportive physical environment.
- **Article 3**: All actions and decisions concerning the physical environment shall be made and assessed with the best interests of the child and generations to come.
- **Article 6**: All children have the right to adequate environmental conditions for good health and social, intellectual and emotional development. This focuses on the fact that a general understanding of environmental preconditions are necessary for realizing children's rights, and knowledge about and respect for the natural environment is an integral part of the development of every child.
- **Article 12**: All children have the right to express their views on all issues that affect them. This means that children's views on their dwelling, their school and their near environment must be respected.

[9] http://www.earthprotect.com/component/community/groups/viewgroup/15-promoting-childrens-environmental-health-rights-among-children-and-youth.html

What you can do to secure and protect your rights

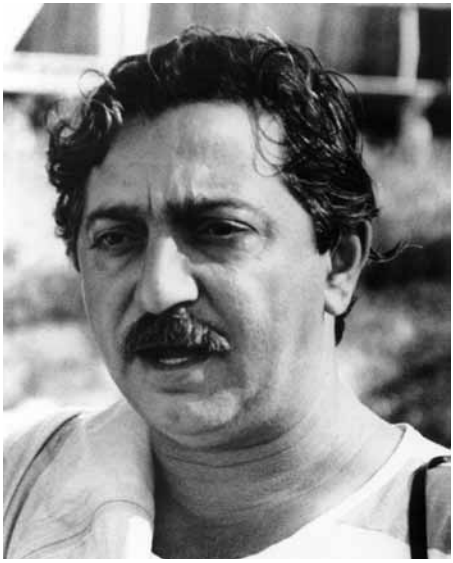
Most of us know by now that there are many things we should do to improve the environment around us: picking up litter, making sure that you deposit rubbish where it should go, recycling and family or community gardening. Some of these we can do on our own, and we can also form groups with our friends and other community members to tackle some of these problems collectively.

But in order to deal with the very large challenges we face, it is essential that we work together: that we join forces with others, recruit new members and educate them, and that we organise and plan. Eventually, we then need to engage with government structures. Depending on the nature of the problem we are trying to solve, this can occur through meetings at the local community level, through organised demonstrations, through letter-writing, petitions, or other mobilisation actions, or even through the courts or other similar mechanisms provided under the constitution for people to pursue their rights.

Environmental Heroines and Heroes

Here are just a few examples of people who are engaged in the struggle for a just and liveable world. You may notice that all of them have pursued their work through organisations and movements of people. This is how real change happens: when people who desire a better world work together, organise and mobilise.

Chico Mendes was a Brazilian trade unionist and environmental activist who struggled to protect the Amazon rainforest and the rights of the poor in Brazil. Mendes had this to say: "At first I thought I was fighting to save rubber trees, then I thought I was fighting to save the Amazon rainforest. Now I realise I am fighting for humanity." Mendes was assassinated in 1988 by a rancher who disapproved of his efforts to defend the rights of the poor.



Vandana Shiva is an environmental and social justice activist. She has been especially active in defending traditional forms of knowledge, and in resisting the spread of genetically modified organisms, which threaten to undermine food sovereignty for many people around the world. Through her involvement with the International Forum on Globalization and other social movements, she emphasises that traditional and ecological farming methods help promote peace, justice, and sustainability.

Ken Saro-Wiwa was a Nigerian author, television producer and environmental activist who struggled on behalf of the Ogoni people of the Niger Delta. People in this area have suffered extreme environmental damage for decades from the extraction of petroleum by foreign companies, and extensive dumping of the waste products. As leader of the Movement for the Survival of the Ogoni People (MOSOP), Ken led a nonviolent campaign against these devastating operations – work for which he and MOSOP received the Right Livelihood Award in 1994. The following year, Saro-Wiwa, together with Saturday Dobee, Nordu Eawo, Daniel Gbooko, Paul Levera, Felix Nuate, Baribor Bera, Barinem Kiobel, and John Kpuine, was executed by the ruling military regime of General Sani Abacha.

Tim DeChristopher is a young American environmental activist and co-founder of the environmental group Peaceful Uprising. In late 2008, Tim was arrested for disrupting an auction of leases (permissions) for oil and gas drilling by private companies on public land. Tim decided that he needed to take action in order to prevent the reckless exploitation of unspoiled land and the continuing extraction of oil and gas, which would only add to the problem of global warming and climate change. On July 26, 2011, he was sentenced to two years in prison.

Wangari Maathai was a Kenyan environmental and political activist, a parliamentarian, and founder of the Greenbelt Movement. Wangari is most well-known for her work with preserving the Karura Forest in Nairobi, and for promoting the planting of trees in Kenya and Globally to help address local environmental problems and climate change. She was awarded the Right Livelihood Award in 1984, and then in 2004 became the first African woman to receive the Nobel Peace Prize, which was awarded for her "contribution to sustainable development, democracy and peace."

Universal Declaration on the Rights of Mother Earth

In April 2010, approximately 30,000 people from more than 100 countries gathered outside the city of Cochabamba, Bolivia, to find a new way forward after the unsuccessful "COP15" climate change negotiations in Copenhagen. The meeting in Bolivia led to the adoption of a "Universal Declaration on the Rights of Mother Earth," as the basis for a new approach to cooperation and responsibility. Here are a few excerpts from the declaration:

> *Today, our Mother Earth is wounded and the future of humanity is in danger.*
>
> *The capitalist system has imposed on us a logic of competition, progress and limitless growth. This regime of production and consumption seeks profit without limits, separating human beings from nature and imposing a logic of domination upon nature, transforming everything into commodities: water, earth, the human genome, ancestral cultures, biodiversity, justice, ethics, the rights of peoples, and life itself.*
>
> *Under capitalism, Mother Earth is converted into a source of raw materials, and human beings into consumers and a means of production, into people that are seen as valuable only for what they own, and not for what they are.*
>
> *Capitalism requires a powerful military industry for its processes of accumulation and imposition of control over territories and natural resources, suppressing the resistance of the peoples. It is an imperialist system of colonization of the planet.*
>
> *Humanity confronts a great dilemma: to continue on the path of capitalism, depredation, and death, or to choose the path of harmony with nature and respect for life.*

Resources for Educators

Films

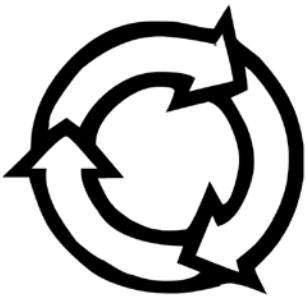
The Story of Cap and Trade looks at the leading climate solution being discussed to address the issue of climate change.
http://www.youtube.com/watch?v=pA6FSy6EKrM

Sweet Crude is a film about the struggles of the people of the Niger Delta, Ogoniland, Nigeria against oil companies and corrupt politicians.
http://www.kcts9.org/reel-nw/sweet-crude

Narmada: A Valley Rises is an inspiring film documenting the struggle of thousands of Indian villagers and their struggles against powerful interests such as the World Bank and local big business who construct a dam with all its environmental and human rights consequences.
http://www.namada.org/resources/links.html

Before There Were Parks explores modern indigenous perspectives on the great wilderness areas of the Rocky Mountain region known today as Yellowstone and Glacier National Parks, and explores the cultural divide that separates modern times from the not-so-distant past.
http://watch.montanapbs.org/video/1486974255/

The World According to Monsanto: An expose of the role of major U.S. corporation Monsanto in pushing genetically modified crops.
http://video.google.com/videoplay?docid=6262083407501596844



Books

To Cook a Continent: Destructive Extraction and the Climate Crisis in Africa by Nnimmo Bassey, 2011, Pambazuka Press. Exploiting Africa's resources has delivered huge profits to the North and huge damage to Africa. Overcoming the environment and climate change crises means also addressing corporate profiteering and resource extraction. To read a full review of this book go to: http://www.pambazukapress.org

Anti-Capitalism – The New Generation of Emancipatory Movements, by Ezequiel Adamovsky: an illustrated primer on core concepts of political economy and various movements that have struggled against capitalist exploitation and environmental degradation.
http://www.scribd.com/doc/56838617/Ezequiel-Adamovsky-Anti-Capitalism-EXCERPT

Organizing Cools the Planet: Tools and Reflections to Navigating the Climate Crisis by Hilary Moore and Joshua Kahn Russell. This booklet weaves together stories, analysis, organizing tools, and provocative questions, to offer a snapshot of the Climate Justice Movement. The authors share hard lessons learned, reflect on strategy, and grapple with the challenges. You can download a free copy here:
http://www.mediafire.com/?celqaap1g6spwzj

The Enemy of Nature – The End of Capitalism or the End of the World? by Joel Kovel: A look at how capitalism and its by-products of imperialism, war, neoliberal globalization, racism, poverty and the destruction of community, are together destroying the Earth and our chances for survival.
http://www.scribd.com/doc/31198329/The-Enemy-of-Nature-The-End-of-Capitalism-or-the-End-of-the-World-by-Joel-Kovel

Websites

Paralegal Advice Website: Provides advice on various legal issues, especially in relation to the SA constitution.
http://www.paralegaladvice.org.za/

On-line guide to the National Environment Management Act (NEMA): Provides detailed guidance on how to use NEMA to protect your environmental rights.
http://www.ngo.grida.no/soesa/nsoer/resource/nema/howto.htm

Global Climate Change Research Explorer: At this Web site, you can explore scientific data relating to the atmosphere, the oceans, the areas covered by ice and snow, and the living organisms in all these domains.
http://www.exploratorium.edu/climate/index.html

Contacts and Organisations

African Biodiversity Network (ABN) works to ignite and nurture a growing African network of individuals and organisations to resist harmful developments and to influence and implement policies and practices that promote recognition and respect for people and nature.
http://www.africanbiodiversity.org

African Centre for Biosafety (ACB) provides authoritative, credible, relevant and current information, research and policy analysis in issues pertaining to genetic engineering, biosafety and biopiracy in Africa.
http://www.biosafetyafrica.org.za

Centre for Environmental Rights (CER) provides legal and related support to environmental civil society organisations and communities.
http://cer.org.za

Climate Justice Now! A network of organisations and movements from across the globe committed to the fight for social, ecological and gender justice.
http://www.climate-justice-now.org/

Department of Environmental Affairs and Tourism (DEAT) is the department of the South African government tasked with protecting, conserving and enhancing the environment, natural and heritage assets and resources. http://www.environment.gov.za

Earthlife Africa (ELA) is a non-profit organisation, founded in Johannesburg in 1988. ELA seeks a better life for all, without exploitation of people or degrading of the environment. http://www.earthlife.org.za

Federation for a Sustainable Environment (FSE) works to protect and promote environmental health for future generations, and to promote sustainable and just social development. http://www.fse.org.za

Greenpeace is an independent global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace through a range of campaigns. http://www.greenpeace.org

groundWork seeks to improve the quality of life of vulnerable people in South Africa through assisting civil society to have a greater impact on environmental governance. http://www.groundwork.org.za/

Lawyers for Human Rights (LHR) is an independent human rights organisation that provides free legal services to vulnerable, marginalised and indigent individuals and communities who are victims of unlawful infringements of their Constitutional rights. http://www.lhr.org.za

South Durban Community Environmental Alliance (SDCEA) is an environmental justice organisation that contributes to the struggle against environmental racism and for environmental justice and health. http://www.sdcea.co.za

Via Campesina is an international movement bringing together millions of peasants, small and medium-size farmers, landless people, women farmers, indigenous people, migrants and agricultural workers from around the world. http://viacampesina.org

Word List

Acid mine drainage (AMD) refers to the leakage of acidic water, especially from underground mines, but also sometimes from locations on the surface that have been disturbed by mining or construction activities. Acid mine water is formed when certain minerals in the rock are exposed to water and air. The result can contain dangerous metals, and if not controlled appropriately can contaminate water supplies under ground or on the surface.

Carbon dioxide (CO2) is a colourless, odourless, non-poisonous gas that is a normal component of the air we breathe. CO2 is a major product from the burning of **fossil fuels,** and is a major **greenhouse gas**.

Climate change Since climate refers to the average weather conditions for a specific location over a long period, climate change means changes in the typical weather patterns for that location. Some climate variation occurs naturally, but the world is currently facing dangerous climate change due to human industrial activity.

Environmental justice means "the fair treatment and involvement of all people regardless of race, colour, sex, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies."[10]

Environmental rights are the rights to have access to all of the natural resources necessary for survival and happiness – including land, shelter, food, water and air.

Food security refers to how easily a person can get the food they need in order to survive and thrive. In other words, people have food security when they not only have enough to eat, but also feel confident that they will have enough to eat tomorrow, and into the future.

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[10] Miller, Jr., G. Tyler (2003). Environmental Science: Working With the Earth (9th ed.). Pacific Grove, California: Brooks/Cole. p. G5. ISBN 0534-42039-7; cited at http://en.wikipedia.org/wiki/Environmental_justice

Food sovereignty means the right of people to choose how they will organise their food supply.

Fossil fuels are fuels formed through very slow natural processes, over millions of years, from dead plant material that became buried in the Earth. Fossil fuels include coal, petroleum and natural gas. These have been important in the rise of modern economies, but they are now also leading to global warming and climate change.

Global warming refers to the warming of the Earth's atmosphere near the surface, through the gradual build up of radiation from the Sun. Certain gases in the atmosphere, called greenhouse gases, allow solar radiation to come to Earth as light; those rays of light warm up the Earth, and some of it then moves back out, toward space – but those same greenhouse gases don't allow it to escape in its new form as heat. As a result, the planet warms.

Greenhouse gases form a layer around the Earth and hold heat inside, just as the glass in a greenhouse does. When they are present in the atmosphere in higher concentrations, they cause the planet to heat up, which is called global warming. The most common greenhouse gases are carbon dioxide and methane, which are released by many modern industrial, agricultural and other processes.

Industrial revolution: The Industrial Revolution was an important historical period from the end of the 18th century to the middle of the 19th century. During this time, various new technologies were developed that brought about dramatic changes in industry, transportation, energy, agriculture and other areas. The Industrial Revolution began in the United Kingdom then spread to the rest of the world, bringing major changes to many people's living and working conditions.

Methane (CH4) is an important greenhouse gas. Methane is produced through anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and oil, coal production, and incomplete fossil fuel combustion.

Solar radiation: Energy received from the sun is solar radiation. The energy comes in many forms, including visible light (that which we can see with our eyes). Other forms of radiation within the electromagnetic spectrum include radio waves, heat (infrared), ultraviolet waves, and x-rays.

Sustainable development refers to development that doesn't permanently harm the environment. It must take into account not only economic factors but also social and environmental ones, and must look to the future. So, for example, if we want to cut down trees to build houses or furniture, we must also leave some trees to continue to grow, and we must also plant new trees to replace the ones that we have taken.