

“The world is green and delightful and God has made you a custodian over it (the world) and is observing carefully how you deal with it”

— Hadith from collection of Tirmidhi

## Air pollution

There can be intensive air pollution from drilling and flaring and from gases that leak from fracked wells after they are closed. Large numbers of trucks are needed to build and service the wells and to remove the gas, create dust, air and noise pollution in previously peaceful rural areas.

## Health

There is growing evidence that fracking can be hazardous to human and animal health. Apart from methane in the atmosphere, ground and surface water can be contaminated with methane, arsenic, radio-active minerals, a variety of metals, fracking chemicals and salty brine. Some fracking chemicals are carcinogenic (cancer causing). Local incidences of blurred vision, headaches, sore throats, dizziness and fainting have been blamed on fracking. On site, workers must be protected from silica dust, which causes silicosis, an incurable and fatal lung disease.

“May there be rains at the right season, May there be a plentiful harvest.  
May the people be happy, May the rulers govern with righteousness”

*Theravada Buddhism*

## Our constitutional rights

We have a constitutional right to clean water, clean air and a healthy environment. Fracking is neither clean nor green, it is a human rights issue.

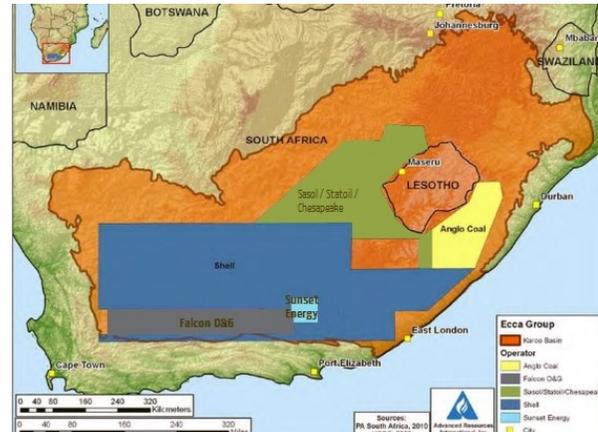
We call on decision makers to be ethical. When making choices about energy, they must consider the wellbeing of people, the planet and future generations rather than short-term financial

gains. In spite of the promise of economic growth and job opportunities, the human rights and environmental violations of multinational oil companies are well documented.

SA has been promised a low carbon economy and green jobs. This must mean an energy future free from dependence on fossil

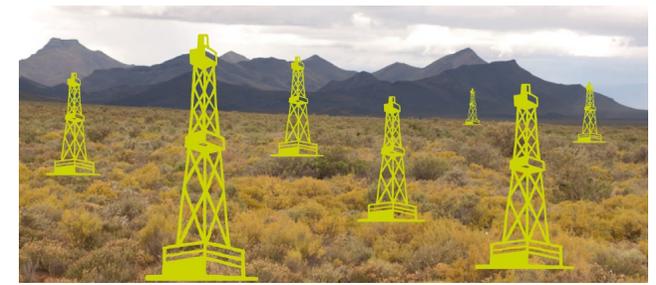
## WHO WILL FRACKING AFFECT?

This map shows the current distribution of fracking applications covering about 20% of the land surface of South Africa



## HOW CAN I RESPOND?

- Keep myself informed.
- Share information with my faith leaders & community.
- Tell our government that we don't want our country fracked. There are safer less costly options, including sourcing God's daily energy from sun, wind and waters.
- Reduce demand: become more energy efficient!
- Apply the 'precautionary principle' which requires certainty about the impact of new technologies on human and environmental wellbeing before acting.
- For more info visit [www.frackingsa.org](http://www.frackingsa.org)



## FAITH & FRACKING

Why should I as a person of faith be concerned?

“I brought you into a fertile land to eat its fruit and rich produce. But you came and defiled my land and you made my inheritance detestable.”

— Jeremiah 2:7, Bible



## WHAT IS FRACKING?

Hydraulic fracturing is the process of forcing natural gas or oil from layers of shale rock deep below the earth's surface.



Wells are drilled to a depth of up to 5km and then turned horizontally for 2 to 3km. Millions of litres of water, mixed with sand and chemicals, are injected into the wells at high pressure.

The shale is cracked open and sand and liquid are forced into the tiny cracks. Natural gas, trapped in the rock, is released and returns to the surface with the fracking fluids.

## HOW WILL FRACKING AFFECT US?

### The rural Karoo environment

This will be changed forever. Each well requires about 2500 trucks to transport water, chemicals, sand and waste products. This will cause road degradation and air, dust and noise pollution.

### Employment and livelihoods

The promise of local jobs that fracking will create has been grossly exaggerated. While improved infrastructure will be needed, actual fracking jobs will be short term, and mostly done by external specialists.

“As for you, my flock... Is it not enough for you to feed on good pasture? Must you also trample the rest of your pasture with your feet? Is it not enough for you to drink clear water? Must you also muddy the rest with your feet?”

— Ezekiel 34:17-18, Bible

### Water

South Africa is a water scarce country. Fracking is likely to have a serious impact on the water catchments in all the areas where it takes place. The 10 000 or more fracking wells in South Africa, will each use 20 million litres of water.

Water used in the fracking process is mixed with a cocktail of chemicals which fracking companies are reluctant to name because some are highly poisonous. Some like benzene are known to cause cancer, others disrupt hormones, affect reproduction and cause genetic mutations. Some are known to persist in the environment, accumulating in food chains posing risks to human health and ecosystems.

Pollution and contamination of water will have wide ranging impacts on agriculture and human livelihoods that are dependent on the land.

### Climate change—fracking is not the solution

Most shale gas is methane which burns ‘cleaner’ than coal. In spite of this, fracking is not a solution to climate change because methane is a fossil fuel. It is a greenhouse gas which traps heat in the atmosphere 20 times more effectively than carbon dioxide (CO<sub>2</sub>). It also emits CO<sub>2</sub> when it is burnt. This CO<sub>2</sub> in turn absorbs more atmospheric heat. During the fracking process it is estimated that 8% of the shale gas is lost in the atmosphere.

### Upward migration of fracking fluids

In the Karoo there are already springs that bring hot salty water

to the surface. This takes place through dolerite dykes which create pathways for liquids under pressure to flow. Scientists warn that over 50 to 100 years, polluted underground water that is contaminated with fracking chemicals and dissolved minerals and gas is likely to find its way to the surface. This will contaminate underground and surface fresh water resources on which Karoo livelihoods depend.

### Toxic, radioactive waste

During the fracking process, the fracking fluids mix with salts and minerals, deep down in the earth's crust. Between 20% and 80% of the water returns to the surface as waste water, bringing with it shale gas and dissolved salts and minerals, like radioactive uranium. This water must be treated and disposed of. Storing water in settling ponds in a region subjected to droughts, high evaporation rates and floods is not safe. South Africa does not have the technical capacity to deal with large volumes of highly toxic water over long periods of time.

“In the midst of the Waters is moving the Lord, surveying men's truth and men's lies. How sweet are the Waters, crystal clear and cleansing! Now may these great divine Waters quicken me!”

Satapatha Brahmanas VII, 49

### Leakages and spillages

Contamination of the land surface can result from:

- Spillage during transfer, mixing, drilling and the handling of flow back liquid
- Leakage from wastewater storage ponds and evaporation pits
- Pipeline & cement casing cracking and breakage

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