

# Ecocide and the ‘polluter pays’ principle: the case of fracking

**Karen Hulme** and **Damien Short** assess the effectiveness of economic instruments for the prevention of environmental damage.



▲ Farndon, Chester. Dart Energy drilling CBM well in March 2014. (© Extreme Energy Initiative)

It seems as though the environment is subjected to attacks on its integrity and its viability on a daily basis. In the 1970s the term ‘ecocide’ was coined to describe attacks from military sources, such as the use of chemical defoliants in Vietnam. Today, similar levels of harm are more routinely caused in the name of development and the search for cheap energy sources, one example being the scramble for new oil and gas resources. The 1970s notion of ecocide has recently been revived with suggestions of elevating large-scale environmental destruction to the level of an international crime. But how does this notion of holding an individual

or company accountable for an environmental crime relate to other mechanisms for holding the polluter to account, such as the economic notion of accountability inherent in the ‘polluter pays’ principle? According to legal scholar and environmental activist, Polly Higgins, ‘ecocide’ refers to:

*“the extensive destruction, damage to or loss of ecosystem(s) of a given territory, whether by human agency or by other causes, to such an extent that peaceful enjoyment by the inhabitants of that territory has been severely diminished.”* (Higgins, 2010, p63)<sup>1</sup>

Higgins views ecocide as a potential fifth international crime, after genocide, the crime of aggression, crimes against humanity and grave war crimes. Her notion is intended-as was the original proposal which dates back to the 1970s-to cover times of both conflict and peace, and today she has in mind the environmental destruction that accompanies such extreme energy processes (often called unconventional sources). This includes oil production from tar sands<sup>2</sup>, mountain-top removal, deep-water drilling and, potentially, the family of extraction processes involved in the production of shale gas, coal-bed methane (CBM), tight oil and synthetic gas (syngas) known colloquially as ‘fracking’ (hydraulic fracturing). Could fracking potentially produce ecocides and what is the benefit of criminalising such harm versus the traditional economic method of holding the polluter to account?

## ‘EXTREME’ ENERGY TODAY

Today the depletion of conventional oil and gas reserves<sup>3</sup> is leading to increasing pressure to exploit more unconventional sources. Michael Klare<sup>4</sup> coined the term

‘extreme energy’ to describe a range of new higher-risk unconventional resource extraction processes, which are increasingly being used as the more easily accessible supplies dwindle. Conventional oil and gas reserves are the reservoirs from which the oil and gas emerge under their own pressure once the reservoir has been drilled into. Fracking techniques for shale gas and CBM require greater effort than conventional well drilling, because the gases have to be flushed out of them using directional drilling, high-volume fracking fluid (including toxic chemicals<sup>5</sup>), slick water, multi-well pads and cluster drilling. These have all been used separately in the past, but the practice of using them all together has only developed since 2007<sup>6</sup>.

While first used in the USA, where over 45,000 shale gas wells and 55,000 CBM wells have been drilled in the last decade (and the industry is proposing to add a million more), fracking has also been undertaken on a large scale in Canada and Australia, and is expanding across Europe. The effects on the environment and human population from fracking processes are not yet fully known, but numerous reports warn of the possibility of very serious human and environmental impacts, including the potential for causing earthquakes as well as the contamination of water resources<sup>7</sup> and soils due to the creation of millions of litres of waste polluted with heavy metals<sup>5</sup>. The impacts of fracking may, therefore, fit within the definition of ecocide depending upon the scale of harm.

#### TAX INCENTIVES

While fracking in the UK is still in the exploration stage, the Government recently announced tax incentives for exploration licenses for approximately two-thirds of the UK's land that will be available for fracking licenses<sup>8</sup>. And it is not just shale gas fracking that is proposed. The UK Coal Authority has issued 24 exploration licenses that could permit large-scale production of syngas via underground coal gasification (UCG, a process for exploiting coal that cannot be mined because the seams are too deep, thin or fractured). UCG is considered part of the ‘fracking family’ as it uses similar drilling technology to get air or water into the coal seam before it is set on fire underground and partially burned to bring gas to the surface. UCG has only been undertaken on a small scale worldwide (usually for testing purposes) and has been beset with considerable waste management and environmental problems. For example, a major test site in Kingaroy, Queensland, Australia, was closed down following benzene groundwater contamination at the site<sup>9</sup>. Even so, the UK Government is proposing an unprecedented level of syngas production at sites near major UK cities. Thus, using fracking as an example, what does it reveal about the crime versus economic approach?

#### ECOCIDE IN LAW

Although heavily debated in the post-Vietnam War period of the 1970s<sup>10</sup>, the notion of ecocide was shelved

in the 90s, and thus no crime of ecocide made it into the 1998 Rome Statute of the International Criminal Court. In fact, no notion of company liability or state responsibility was included in the ICC Statute, which refers only to individual criminal responsibility. As for the notion of criminalising environmental harm at the state level, acceptance of the 1998 Council of Europe Convention on the Protection of the Environment through Criminal Law<sup>11</sup> has been extremely poor (only three state ratifications to date) and, thus, at the international level, political will is probably not in favour of such mechanisms.

Uptake in the European Union (EU) has been slightly better, but here the goal is the harmonisation of the environmental regulation of all member states to ensure economic parity across the EU<sup>12</sup>. Environmental crimes at the EU level are largely concerned with the safe transport and disposal of waste and the nuclear industry, but, more relevant to fracking activities, are crimes related to environmental damage caused by the operation of a dangerous activity and significant deterioration of a habitat within a protected site. Far more dominant, however, is the EU's core economic approach to environmental regulation in its adoption of the ‘polluter pays’ principle<sup>13</sup>, which is supposed to be at the centre of any environmental regulation. There are, of course, also the sociological and philosophical perspectives to consider of whether apparently lawful activities, such as resource extraction, are best regulated by the criminal law. Yet, does the prospect of fracking comply with the EU's adopted ‘polluter pays’ principle?

## “What is pivotal to protection of the environment is proper governance”

#### POLLUTER PAYS

The origins of the ‘polluter pays’ principle date back as far as the 1920s, but the principle really came into modern parlance when it was included in the 1992 Rio Declaration on Environment and Development as Principle 16<sup>14</sup>. It was viewed as a core tenet of the sustainable development movement, in promoting equity and fairness in the allocation of environmental risks. The principle centres on the economic notion that the full costs of the use of nature and environmental resources should be borne by the person, company, or even the state that uses those resources. In this way the principle has two core dimensions: first, that the polluter will pay the full cost for the use of, or harm to, such resources and will therefore seek instead to more efficiently internalise those costs through more



environmentally sensitive practices, and second, that the polluter will be held liable when environmental damage is caused<sup>15</sup>.

While there are many mechanisms for the second dimension, of compensation or liability for environmental damage, even including the criminalisation of environmental harm, the real point of environmental protection is surely for the prevention of harm in the first place. And it is here that the economic roots of the polluter pays' principle reveal that principle's main limitation, notably, that if the polluter can afford to pay – and pay huge sums in compensation (or even heavy criminal law fines) – then there is really little impetus for such polluters to internalise the costs of harm to the environment and therefore to change their environmentally unsound ways. Stark examples of this reality are provided foremost by the oil and gas industry, with Shell's pollution of the Niger Delta over decades of exploitation, and Chevron's pollution of the Ecuadorian Amazon basin. States, too, are often complicit in such environmental destruction, as shown by the Nigerian example of Shell, and by Canada's approval of the exploitation of tar sands.

#### ENERGY VERSUS CLIMATE CHANGE

Part of the rhetoric, of course, is the peak oil debate and the ever-increasing urgency for states to ensure their

own energy security. But this debate, incredibly, often ignores or at least sidelines the major debate of the 21st century, which is the mitigation of climate change and the consequent reduction of fossil fuel emissions. Here too economic instruments and principles were used by the main user states to protect their own industries and largely to carry on with business as usual. The adoption of the carbon market mechanism in the climate change regime was heralded as 'polluter pays' compliant in that the main polluters would be incentivised to reduce their greenhouse gas emissions. Yet, it is highly questionable whether the carbon market is actually reducing the level of global emissions<sup>16</sup>.

Ultimately then, while the notion of ecocide appears to embody the 'polluter pays' principle in aspiring to require polluters to be criminally prosecuted, possibly before a national or international court, would such actions even impact the energy industry, which we have globally come to be so dependent upon? Sharife and Bond, writing on the notion of 'green' economy, doubt that heavy fines or even the imprisonment of CEOs is going to achieve real environmental protection without also requiring proper environmental management<sup>17</sup>.

What is instead pivotal to protection of the environment is proper governance, namely robust environmental planning and the prior investigation of potential



▲ An OPTI oil sands refinery in Alberta, Canada. (©David Dodge, CPAWS via [www.pembina.org](http://www.pembina.org))

environmental harm, notably a rigorous, and independent, environmental impact assessment process. It was this aspect, namely the prospect of the EU imposing the requirement of a full environmental impact assessment on shale gas fracking, that caused vociferous opposition from EU member states, such as the UK<sup>18</sup>. Arguably, the lack of value of economic mechanisms, such as the 'polluter pays' principle, have been shown over the past 40 years, and therefore maybe a new approach such as acceptance of a criminal law of ecocide should perhaps be encouraged. At present, it is unclear, however, if fracking would qualify as ecocide, and that is often one problem with environmental damage, and particularly criminal law approaches to environmental damage: it is often only after the damage has occurred, or when such damage is clearly

a foreseeable consequence, that the threshold of harm will be sufficiently evidenced. ES

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