

How Climate Change is Dividing the Global Environmental Community

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For decades, environmentalists have successfully claimed the moral high ground. From Rachel Carson's seminal work 'Silent Spring' which exposed the dramatic impacts of the indiscriminate use of pesticides on the environment in the early 1960s, to the anti-nuclear movement in Germany in the 1970s and 80s and the Amazon rainforest conservation campaigns of the 1990s, environmentalists always appeared to fight for the right cause – preserving the integrity of our planet for the benefit of future generations. Courageously, they often stood up against powerful corporate and political interests.

Yet the emergence of climate change as one of the most dramatic global environmental challenges has complicated things substantially. In the 21st century, environmentalists find themselves entangled in a number of ethical dilemmas and wicked problems where solutions to one part of the problem may risk unravelling other problems. Should we promote nuclear energy to reduce greenhouse gas (GHG) emissions, while risking contamination of waterways and food supplies in case of a major nuclear accident? Should we encourage the expansion of biofuels for climate change mitigation, even when it may enhance deforestation and compromise food security in the Global South? Should we promote international carbon trade, when this runs the risk of turning ecosystem services into tradable commodities? These are only some of the questions where such ethical dilemmas in the climate-environment nexus become increasingly obvious. While ethical considerations can help to reflect on such dilemmas, they cannot provide definitive answers on what is morally justified, because there are competing ethical frameworks and varying societal priorities that underpin alternative choices.

In Japan, the expansion of nuclear power was promoted as part of a national strategy to reduce GHG emissions and meet the country's ambitious CO₂ reduction target under the Kyoto Protocol. Yet the Fukushima nuclear disaster – which more than three years on remains far from being fixed – has seriously dampened Japanese environmentalists' vision of a zero-emission society on the basis of nuclear energy. Meanwhile, in Germany, where in the immediate aftermath of the Fukushima accident the decision was made to phase out nuclear energy as a source of electricity by 2022, emission-intensive lignite (brown coal) has been promoted as a crucial 'bridging' energy source until renewable sources for generating electricity have reached their full capacity. Thereby, Germany risks eclipsing its impressive record of developing renewable energy sources, compromising its ambitious emissions reduction targets for 2020 and losing its status as a global role model for decarbonizing the economy.

Claiming international leadership in green technologies, Germany is also the largest biodiesel producer and consumer within the European Union. Yet a large share of the biodiesel feedstock is imported palm oil from intensive plantations in Indonesia and Malaysia that have replaced vast areas of forest and peatland, thus creating enormous carbon debts that will need several decades to repay through the production of 'clean energy' (Fargione *et al.* 2013). Oil palm plantations have been associated with the destruction of habitats for some of the world's critically endangered primates, not only in the rainforests of Borneo, but also in

parts of West and Central Africa, where plantations are rapidly expanding (Wich *et al.*, in press). Recent research has also shown that biofuels have a water footprint that is at least 70 times larger on average than that of fossil fuels, casting further doubts on the environmental benefits of biofuels (Gerbens-Leenes *et al.* 2009). These environmental concerns add to earlier ‘food vs. fuel’ debates (cf. Naylor *et al.* 2007) and to criticism about the prominent role of biofuels in global land and resource grabbing (cf. Matende *et al.* 2011; Neef 2014).

Emerging international carbon markets are another arena where different environmental camps become increasingly divided. In Tanzania, a Norwegian afforestation company has established monoculture eucalyptus and pine plantations for carbon sequestration and industrial charcoal production by replacing biodiversity-rich montane grasslands under previous management by adjacent communities. Despite protests by civil society, the company was awarded the prestigious Climate, Community & Biodiversity Alliance (CCBA) standard by a German certification agency, enabling it to sell its carbon certificates in the international voluntary carbon market. What is hailed by some environmental groups as a successful example of an emerging green economy in rural Africa is dismissed by others as a case of environmentally destructive carbon imperialism and green-washing (Neef 2014).

The shale revolution in the United States and Canada has been particularly effective in causing a rift within the environmental community. In the process of horizontal drilling and hydraulic fracturing – more popularly known as ‘fracking’ – a cocktail of sand, water and chemicals is injected into underground shale rock formations to unlock ‘unconventional’ oil and natural gas reserves. Some environmentalists have argued that the combustion of natural gas released from shale rock generates a net benefit for the environment, particularly when compared to coal-fired power plants which are deemed to produce more hazardous air pollutants (Krupp 2014). Yet unlocking natural gas from shale often goes along with leakage of methane (CH₄) into the atmosphere, a greenhouse gas that is about 25 times more potent with respect to global warming than CO₂. Many environmentalists are even more worried about the *local* ecological impacts of shale gas and oil extraction, as the process can pollute surface and groundwater sources, particularly when inadequately regulated and poorly executed (RFF 2013). There are also growing concerns that the expected drop in natural gas and oil prices may increase the competitiveness of fossil fuels as compared to renewable, zero-carbon energy sources and thereby “crowd out investments in solar and wind power” (Krupp 2014: 16) and reduce efforts to promote energy efficiency.

These examples show that there is an urgent need to further expand the emerging field of climate ethics. To date, climate ethicists have been preoccupied with the divide between climate change believers, skeptics and deniers, with debates about whether we should prioritize climate change adaptation over mitigation, with issues of intergenerational justice and with the question of how to share responsibilities for addressing climate change between the Global North and the Global South (Gardiner and Hartzell-Nichols 2012). While these remain important issues, it is equally crucial to have ethically well-informed political and societal debates about the possible ecological side-effects of certain strategies towards combating climate change. What may initially be promoted as a panacea in the fight against climate change could eventually turn out to be a Pandora’s Box.

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