

Ethics

CLIMATE
CHANGE
ADAPTATION
AND ETHICS

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RESPONSIBILITY FOR THE GLOBAL CLIMATE
CRISIS

All life forms on the planet depend on one common resource that respects no boundaries: the atmosphere. Changes to the composition of the atmosphere affect us all. The release of fossil carbon dioxide (and other “greenhouse gasses”) into the atmosphere since the start of the industrial age has resulted in changes in the climate that affect all. Most of this has been caused by burning coal, oil and gas to provide energy for the mines, factories and lifestyles of modern people.

Wherever in the world greenhouse gasses are released, their impact is felt globally. The so-called developed countries began to burn fossil fuels with the industrial revolution in the 1800s. The rapid industrialisation and accumulation of wealth in these countries would not have been possible without this relatively cheap and concentrated source of energy.

Increasingly we are witnessing humanitarian crises that are created or exacerbated by rapid changes in the climate, which has been driven by the release of greenhouse gasses: sea level rise, flooding, heat waves and severe droughts. Many of these crisis in turn contribute to mass migration and even wars. The costs are enormous, and many communities and governments are not able to pay them. Who should shoulder the responsibility?

In the modern world, people virtually everywhere consume energy produced by burning fossil fuels, thus contributing to global warming. However, in determining who is responsible, and to what extent, one needs to look at cumulative historical emissions, not just what countries are emitting now.

The biggest culprit countries in terms of cumulative historical emissions (dating back to 1850), are predictably, the USA, China and a number of European countries, although the top twenty also includes some so-called developing countries (India, South Africa, Mexico and Iran). But obviously large countries will generate more



While Climate Change is a global problem, local responses should include all types of knowledge: Women tractor driver in Ethiopia. (Photo: B Koelle)

emissions, so a more accurate picture emerges when one looks at per-capita emissions (i.e. emission per person). Topping the list is Luxembourg and the top twenty is made up almost entirely of North American and European countries. China, because of its large population, drops down to number 80 on the list.

Industrialised countries could argue that they didn't know of the global warming effect that fossil fuels would have. But the reality is that scientist began raising the alarm, and governments began listening as far back as 1979. The situation was serious enough in 1988 for the World Meteorological Organisation to establish the International Panel on Climate Change (IPCC). And in 1992 at the Rio Earth Summit, over 100 countries signed the United Nations Framework Convention on Climate Change (UNFCCC). But despite this, carbon emission from developed countries has continued apace, with some even increasing their carbon emissions.

On this basis, there is some justification for arguing that rich countries are largely to blame for the looming crisis and so must take more responsibility for its solution. But in real-politik, it is money and power that counts. Moral arguments rarely hold sway.

WHO IS MOST AT RISK?

The significant primary impacts of global warming are changes in rainfall patterns, temperatures, and sea-level. With respect to sea-level rise, it is obvious that small-island states and low-lying countries are most at risk, especially those that are less wealthy and cannot afford to construct expensive sea walls. With respect to changes in rainfall patterns, broadly speaking, wet regions are likely to get wetter, while dry regions will become drier (IPCC 2014).

Extreme precipitation events will likely become more intense and more frequent (IPCC 2014). With respect to surface temperatures, the greatest warming is predicted for tropical zones and for the Northern Hemisphere sub-tropical regions (IPCC 2014). For southern Africa, models project the average temperatures as being at least 2 degrees higher than the global average, and inland regions will experience greater temperature increases than at the coast, where the sea has a moderating influence (DEA, 2013).

Whatever the specific changes may be in different parts of the world, actual impact will depend largely on the area's economy base, their ability to adapt, and their resources to do so. Countries with an economy heavily reliant on agriculture will obviously be hard hit, particularly where there is also relatively poor infrastructure, extension support, and research and development capacity.

WHAT NEEDS TO BE DONE?

International climate change negotiations at the United Nations Framework Convention on Climate Change (UNFCCC) make a distinction between mitigation and adaptation in discussing what needs to be done, who needs to do it, and how it will be funded. In terms of mitigation, the demand is simple. Current levels of greenhouse gas emissions must be drastically reduced. The size of this reduction and which countries will make the necessary cuts, is invariably where negotiations fail.

Most countries' economies are so intimately dependent on cheap fossil fuels that it is very hard for any government to significantly reduce greenhouse gas emissions without hurting their economy – and any political leader who advocates inflicting damage on their own economy will have a very short career! This is despite a range of commitments that various countries have made over the more than 20 years since climate negotiations began.

Perhaps the most significant commitments are contained in the Kyoto Protocol, which entered into force in 2005. The Kyoto Protocol recognised that developed industrialised countries had to be first to make cuts in carbon emissions. It defined who these countries were, and what cuts they agreed to make against a defined baseline. Significantly, the USA (the biggest carbon emitter) never signed Kyoto, and some like Canada and Australia have since pulled out. It now seems that most other signatories will simply ignore their pledges.

Carbon trading was set up as a more attractive mechanism to reduce emissions. On paper it is a simple mechanism where entities which find it too difficult or too expensive to reduce their own emissions simply pay for emissions cuts elsewhere where it may be easier or cheaper, and then take the credit. In practice, the system is fraught with difficulty and open to abuse, and whether it has led to any appreciable overall cuts in carbon emissions is debatable.

Adaptation discussions at the UNFCCC have tended to be much less politically charged because they do not demand that rich countries make radical changes to their economies. Here, the issue is largely around the question of finances. It is broadly accepted that poor countries face the biggest impact



Climate Change Adaptation must focus on the most vulnerable and should also focus on integrating younger generations (Photo B Koelle)

yet carry the least blame for the problem, and so rich countries should finance their adaptation efforts. The UNFCCC's Adaptation Fund was officially launched in 2007 to fund adaptation efforts. The big difficulty is in reaching agreement about how much each contributing country will provide, and who gets to control the Fund.

WHAT IS ADAPTATION?

The term "adaptation to climate change" is a broad catch-all that covers activities to prevent or lessen the negative potential impacts to society of changes to the climate. These could include, for example:

- Infrastructure – flood-proof bridges, harbours that accommodate sea-level rises, dykes and levees to prevent flooding, more robust communication systems, rapid disaster response units, etc.
- Policy and legislation – land-use planning regulations that prevent settlements in flood-prone area, drought relief measures for farmers, urban water restrictions, etc.
- Research and development – drought-resistant crops, water-efficient industrial processes, etc.
- Changes in the ways people live and use resources – insulation of houses, planting of shade trees, utilising drought- and heat-resistant varieties of crops, migration away from areas severely affected by climate change.

This paper focuses on just one element of adaptation, namely, Community-Based Adaptation. By this we mean a set of processes by which a group of people who live in proximity to one another and have some form of common identity and commitment work together in a participatory way to effect changes (internally or externally) which will lessen the negative impacts (or take advantage of positive impacts) of a change in their local climatic conditions.



Adaptation approaches must consider complexity of the social and natural landscape. (Photo: B Koelle)

It is worth at this point to provide some reasons why this is important. Firstly, we can assume that government, mandated to create and maintain the conditions for a functioning economy, will continue to do so in the face of a changing climate. Certainly, influential sectors of society will put pressure on government to maintain the economic status quo. If already large sections of society marginalised from the mainstream economy, it would be naïve to think that government will be in a position to effectively “come to their rescue” in the future.

A large proportion of resources for adaptation will go first to the more powerful and influential. Existing social and economic fault-lines will simply be exacerbated by unexpected and unpredictable changes to the climate. But more to the point, we need to work towards a society where marginal communities become more self-sufficient and resilient in the

face of change, and become less dependent on government support. Even if a climate change adaptation programme does not fundamentally change the economic position of a community, it can go a long way towards building that community’s sense of self, confidence, self-reliance and problem-solving capacity – and ultimately, their ability to continue to thrive despite changes to the climate.

Community-based climate change adaptation is often used together with related terms like “community resilience”, “risk-management” and “vulnerability”. All of these terms have a specific meaning, sometimes contested in the literature, and may have a different shade of meaning depending on the context they are used.

Community-based adaptation is very closely linked to good development and community-building practice. Many of



Including local knowledge and working in partnership are important building blocks for effective adaptation (Photo: B Koelle)



principles and practices are shared and the outcomes may be the same. The fundamental distinction is one of focus and departure point. For example, one outcome of a climate change adaptation process may be plans to send members on a training course on how to use computers. On the face of it, this seems to have little to do with adapting to climate change. On the other hand, it is easy to see, from the community-members' point of view, how computer-literacy will help them get better access to information, keep records, communicate, find employment, etc. All of these capacities put them in a better position to grow and prosper despite future changes.

Processes that encourage the community to "own" their own development process are likely to be more sustainable. One consequence is that the facilitator or provider of resources cannot control the decision that the community group take.

Another consequence is that decisions and action-plans will tend to focus on the community's immediate challenges – rather than ones which are reflected in scientific predictions and which may or may not be noticed in the next 50 or 100 years. Mostly these are too vague to plan actions around, particularly when those actions require an investment of effort or resources.

An ideal adaptation process will identify current challenges that, if addressed, will build the capacity of the community to prosper in an increasingly uncertain future.



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Adaptation and beyond is published by Indigo development & change as a contribution towards effective and participatory adaptation to climate change. The contributions are varied and demonstrate the multitude of adaptation options we can draw on.

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