

Michael J. Starks
University of California, Santa Barbara
Master of Arts in Global and International Studies
GLOBL 221 Political Econ & Sustainability
Fall 2010
Instructor: Prof. Raymond Clemencon

Social Justice in Climate Change: Moving From Vulnerable Countries to Vulnerable Communities, Challenges of Identification and Adaptation

Executive Summary

Social justice is a key concept in climate change mitigation and adaptation. There is a broad consensus that developed countries need to shoulder more of the financial burden of climate change mitigation and adaptation as they have reaped the benefits of climate change processes (mainly consumption of fossil fuels). Meanwhile, developing countries are more at risk to climate change effects because they lack adaptive capacity. Although country specific vulnerability is well understood, determining the communities, households and individuals within countries who will be most vulnerable to climate change effects remains a key challenge. This is important as the implementation of adaptation is ultimately done at the community, household and individual level where inequalities of wealth and power shape decisions and actions. Using the pastoralist tribes of northern Kenya as a guide, questions about vulnerable communities—how they are defined, who defines them, their ability to adapt—must be attempted to be answered. Finally, do United Nations Framework Convention on Climate Change (UNFCCC) National Communications assist countries in this process?

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I. Introduction

Pastoralist communities are at risk, a confluence of factors which call into question the very existence of the pastoralist way of life. Pastoralists often live in some of the most harsh and unproductive environments where they have survived for thousands of years. What will be the impact of climate change on pastoralist communities, who have strong adaptive capacities? Are they more at risk because of climate change? Indeed within the broader pastoralist category some communities will likely gain, while others lose; so does speaking of ‘pastoralists at risk’ a gross over-simplification of the problem? And, most importantly, what is pastoralist’s vulnerability to climate change in relation to all other communities? It is this idea: that the communities are at risk, not the countries themselves, which should be driving adaptation to climate change. Being able to answer these questions will help place the concept of community vulnerability firmly in the social justice discussion.

II. Background on Social Justice in Climate Change

Let us first begin by asking—why social justice in climate change? Questions of social justice in climate change are, in essence, moral and ethical questions. Indeed when trying to address questions of social justice in climate change from an economic perspective by, for example, placing economic value on human life or biodiversity, it is the moral and ethical questions which bring into focus the often perverse effects.

Mathew Wapner gives an example of the moral questioning when describing a memorandum written by Lawrence Summers while chief economist at the World Bank. Summers questioned whether the World Bank should encourage migration of wastes to the Less Developed Countries (LDCs). It makes economic sense, he claimed, for LDC citizens to face the problems and risks associated with toxic substances, as life expectancy is shorter than in developed countries (Wapner, 2009 p. 210). If the economics can be substantiated, clearly the moral and ethical prerogatives cannot.

Such an example highlights one of the main concerns of social justice advocates—that the rich and powerful redirect environmental problems instead of resolving them (Wapner, 2009 p. 2). Wapner argues that they do so by displacing environmental problems across both space (using geographies of power) and time (discounting future generations). As Amy Sinden argues, it is the very nature of the unequal distribution of wealth and power—determinates that economic theory cannot address with its focus on efficiencies, but remain questions of justice— which lead corporations and nations to displace environmental problems to poorer and weaker communities, to place the burden on those who can least afford to solve them (Sinden, 2010 p. 107).

Another concern of social justice is equality of opportunity; an ability for countries to develop. Industrialized countries have contributed the most to climate change through consumption of fossil fuels while also benefitting the most from these processes. For industrializing and non-industrialized countries, will climate change lead to a decline in development or reduce their opportunity to develop, even though they have not been major contributors to climate change in the past? The United States continues to point to emerging economies such as China and India in a bid to displace responsibility onto other countries, though many developing countries point out that their emissions are connected to meeting basic needs, not luxury emissions such as those in the developed world (Wapner, 2009 p. 213).

In the United States the political discussions on climate change are strongly influenced by economic discourse. Economic theory, however, inevitably leads us astray when trying to provide equity. The basic economic analysis of climate change claims equity by placing the blame for climate change and the responsibility for the solution on everyone. But it's a false equity. The rich and powerful are not required to provide more than the poor and weak, though they are more capable of providing, a result of benefitting the most from climate change processes.

As Sinden points out, this economic analysis also excludes the powerful role of corporations and their ability to disrupt and influence outcomes. It is not only a market failure, she argues, but a political failure that arises from corporation's ability to distort public policy outcomes. Exxon-Mobile's funding of the Competitive Enterprise Institute, to the tune of 6.8 million in 2005 alone, to discredit climate change science is a classic example of this problem (Sinden, 2010 p. 110). A political solution to climate change, therefore, must embrace social justice and rise above both the economic problem of inequality of wealth distribution inherent in Kaldor-Hicks efficiency and the real wealth and influence of corporations whose short-term interests lie in continuing to reap the cost benefits of practices which contribute to climate change (Sinden, 2010 p. 111).

It is well understood that for justice and equity to be achieved in climate change, political solutions must involve the rich and the developed countries shouldering more of the burden and finding ways to fairly redistribute the wealth which climate change processes have provided, for both mitigation and adaptation. The UNFCCC has begun to address these issues; however, large gaps of contention remain. Although vulnerability is well understood in a country specific context, the communities, households and individuals who must adapt within these countries remain unidentified. The question thus remains, to whom do we redistribute the wealth?

III. Key Questions

Using the pastoralist tribes of northern Kenya as a guide, questions about vulnerable communities—how they are defined, who defines them, their ability to adapt—must be attempted to be answered. Also, the UNFCCC requires countries to submit National Communications, including impact and vulnerability assessments and adaptation options. Using the example of Kenya, does the National Communication help countries identify vulnerable communities and offer adaptations which are appropriate?

IV. Challenges of Identifying Vulnerable Populations

Nomadic pastoralists in northern Kenya provide an extremely useful example of the complexity of attempting to identify vulnerable communities. There is disagreement over whether nomadic pastoralists will become “the first climate refugees”, or whether they are adapters who, with enabling policies, will successfully adapt to climate change. (Morton, 2010 p. 2). In northern Kenya, nomadic community's livelihood depends on adjusting to changing environmental factors, a lifestyle that is embodied in their cultural practices. These natural adaptations include constant moving to green areas, loaning of livestock to restore herds and cattle raids on other pastoralist tribes. Yet in recent years, increases in drought, floods and animal diseases have severely reduced livestock herds while grazing lands have been reduced due to encroachment of agriculture and the designation of National Parks which restrict grazing in key water resource

areas. This has forced growing numbers of pastoralist people into sedentary lifestyles in towns. The traditional adaptations have begun to collapse in the face of multiple impacts.

Climate change presents a threat to places, ecosystems and people. However, the effects of climate change will likely be variable; for example, some northern countries may see benefits from warming while the tropics see increased incidences of extreme weather events (Adger et al., 2006 p. 4-5). Understanding the connection between places, ecosystems and people allows for agreement on certain broad communities who will be vulnerable to climate change. They include people who live on arid or semi-arid plains, in low-lying coastal regions, and in water-limited or flood-prone areas (see table 1 below). Sinden points to those displaced in New Orleans by Hurricane Katrina as indicative of the types of populations which will be affected most by climate change. “[T]hose displaced by Katrina—the people crowded in the Superdome, stuck out on the streets, and huddled on rooftops— were disproportionately African-American, poor, and unemployed” (Sinden, 2010 p. 113). Even within developed countries the poor will be the ones who suffer most from climate change. Yet Sinden makes it clear that it will be developing countries that bear the brunt of climate change. “A number of the most severe and disruptive impacts of climate change, including drought, sea level rise, and the spread of disease, are projected to be particularly harsh in the developing world” (Sinden, 2010 p. 113). As Article 4.8 of the UN convention states, even developing countries whose economies are highly dependent on producing oil are at risk, as mitigation may impact their sources of revenue (see Table 1). This highlights one of the most challenging aspects to understanding climate change; how will climate change impact developing countries who are already struggling to cope with economic, political and environmental instabilities? As Table 1 makes clear, all developing countries will be affected. Does identifying vulnerable countries, however, do enough to provide social justice to the most marginalized communities, households and individuals?

Table 1 – At-risk Developing Countries. Article 4.8 of the convention

- (a) Small island countries;
- (b) Countries with low-lying coastal areas;
- (c) Countries with arid and semi-arid areas, forested areas and areas liable to forest decay;
- (d) Countries with areas prone to natural disasters;
- (e) Countries with areas liable to drought and desertification;
- (f) Countries with areas of high urban atmospheric pollution;
- (g) Countries with areas with fragile ecosystems, including mountainous ecosystems;
- (h) Countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy intensive products; and
- (i) Land-locked and transit countries

http://unfccc.int/essential_background/convention/background/items/1362.php

V. Identification and Adaptation of Vulnerable Communities

Vulnerability, as Table 1 shows, is well understood in a broad, country specific context. Developing countries lack adaptive capacity compared to developed countries; as stated above, vulnerability is often a question of unequal wealth and power. Adger argues that, “policy recommendations on enhancing resilience and alleviating vulnerability can be targeted more carefully at particular groups and sectors, rather than simply stating that one country or region is relatively more vulnerable than others” (Adger, 2001 p. 926). For social justice to be achieved, the communities, households and individuals most affected by climate change must be determined within individual countries. It is clear that the most vulnerable to escalating trends and shifts will be the communities, households and individuals which lack adaptive capacity (Adger et al. 2006). Households and communities involved in agriculture or who derive subsistence from other natural resources (such as charcoal making or fishing) are easily susceptible to economic losses. Within marginalized communities and households it will be women, children and the elderly who will bear the brunt, in practice, of climate change adaptation. The vulnerable not only lack adaptive capacity due to economic reasons, however, but for myriad reasons including cultural practices, lack of political engagement and accessible social services (Adger, 2001 p. 927).

For vulnerable households and communities, adaptation strategies can be implemented without mutual coordination, however low resource levels and high individual costs reduce their adaptation choices (Adgers et al., 2006). These adaptations may include changing seed varieties or diversifying livestock. As temperatures increase pastoralists modify their livestock ratio, decreasing the number of dairy cows and increasing beef cattle, or shifting from sheep to goats which can consume a wider variety of palatable foods (Kabubo-Mariara, 2008 p. 131).

Table 2 – Adaptation Strategies for Nomadic Pastoralists in Northern Kenya

Adapting food production to changing climate	Making insurance available	Public and private investment in infrastructure and technology	Behaviorial changes in agricultural practices
Diversifying livestock holdings and modifying herd ratio (dairy to beef cattle/ sheep to goats, increased use of camels), utilizing grain feed during droughts	Purchasing insurance for extreme weather events (droughts, floods, animal disease epidemics) reduces need for livestock raids and inter-tribal violence	Roads to markets, GIS mapping of graze lands, water capture and storage, flood protection, building of sand dams, increased veterinary services	Changes in power structure (limiting herd sizes to sustainable levels), increasing land-use cooperation between pastoralist tribes and between pastoralists and agriculturalists, proactive approach to adaptation instead of reaction or inaction

(Strategies for adaptation taken from Adger, Paavola and Huq 6)

Collective action in adaptation to climate change allows for a higher resource level and provides more adaptation choices. In Table 2, most of the adaptation strategies proposed by Adger, Paavola and Huq require collective action at the individual, local, national and international level (Adger et al., 2006 p. 6). The implementation of adaptation, however, is ultimately done at the individual level where inequalities of wealth and power shape decisions and actions. This can be seen as poverty contributes to unsustainable use of resources, such as overgrazing and reliance on wood for energy, which leads to environmental degradation.

John Morton clearly highlights the complexity of trying to understand the impacts of climate change on the pastoralist communities:

“Climate impacts [on pastoralists] will be of various sorts and at various scales...The analysis must include both the impacts of changing mean temperature and rainfall, and the impacts of extreme events - not only droughts, but also the risk of floods and cold-waves must be factored in. As well as these direct impacts, there may also be indirect impacts of climate change...There may also be impacts on pastoralists of others’ attempts to adapt to or mitigate climate change...All these impacts will be felt in the context of other trends and shifts, demographic, economic and political, many of them disadvantageous to pastoralists: rising populations, encroachment on rangelands, political marginalisation, continued conflict” (Morton, 2010 p. 2-3).

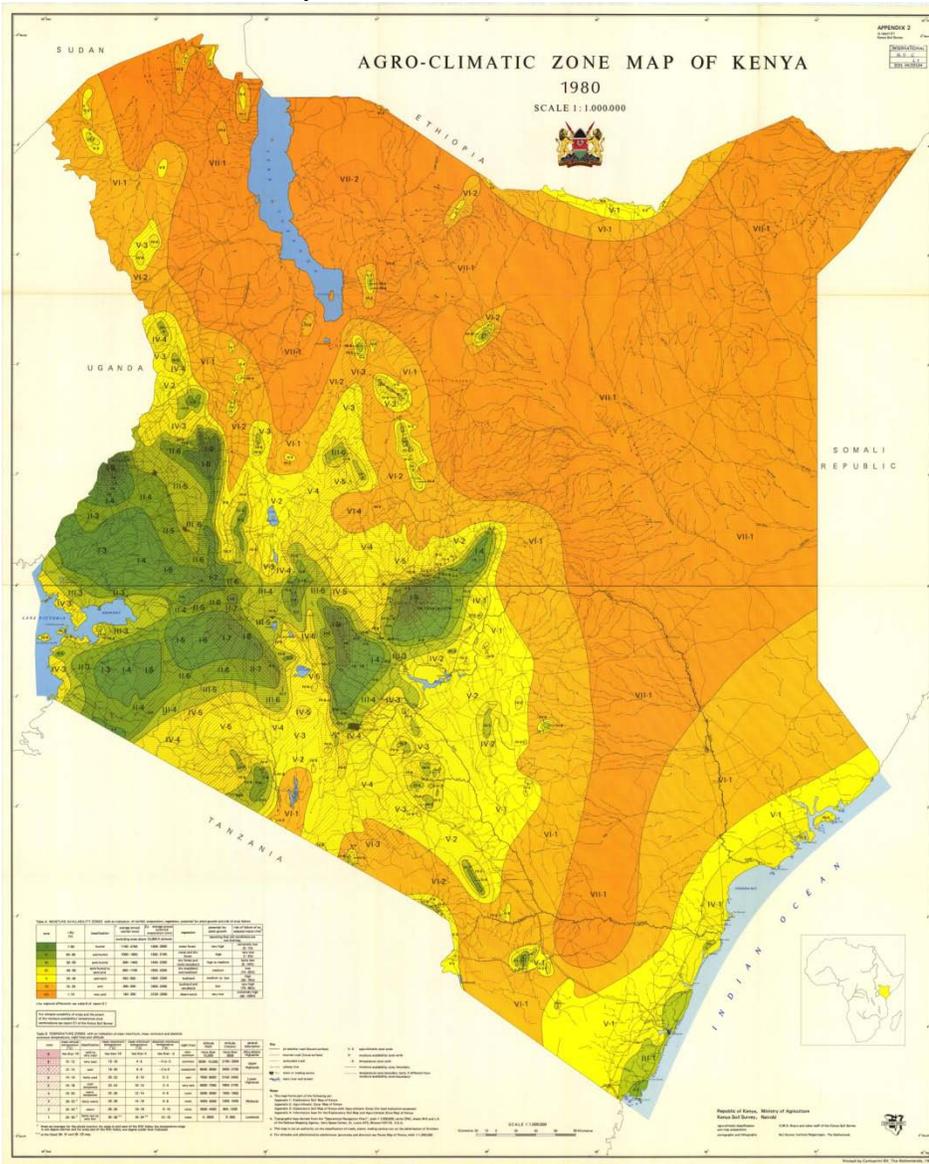
Morton further argues that for nomadic pastoralists of northern Kenya, adaptation to climate change must be a nuanced, local effort (Morton, 2010). Indeed Little, McPeak, Barrett and Kristjanson argue that the effects of disasters do not uniformly impact all herders in the same manner and that some are doing relatively well while others are suffering (Little et al., 2008). This can be seen in the contrast between the Borana and Turkana tribes, where the Turkana now often act as herders for the Borana cattle herds. It is extremely difficult to predict the impacts on specific communities without accurate local climate change models, a deep understanding of current problems, and political engagement. If local context is important, how do we move away from the broad categories of vulnerable communities, such as speaking broadly about pastoralists, to a more specific identification of communities? Indeed, who should be involved in identifying vulnerable populations?

VI. UNFCCC National Communications for Identifying Vulnerable Communities

The UNFCCC requires countries to submit National Communications to help identify adaptation strategies for each country. Kenya’s 2002 National Communication provides impacts, vulnerability assessment and adaptation options for the following sectors: Agriculture, Water Resources, Aquatic and Coastal Resources, Human Health, Terrestrial Ecosystems, Human Settlements and Energy. The impact assessment determines that the Arid and Semi-arid Lands (ASAL) are the most vulnerable to climate change. However adaptation strategies are extremely limited for livestock farmers, with the focus on crop producers. Adaptation for livestock include only two specific strategies: selling herds before the onset of drought and flood control measures. This sectoral approach is ineffective in identifying vulnerable communities or helping them adapt to climate change. This is all the more inexcusable as ASAL lands make up nearly 83% of

Kenya's land area (see Table 3), though they only support 20% of the population. Within the ASAL 18% of the land can support some form of agriculture, 32% is just adequate for livestock raising and the remaining 50% is suitable only for nomadic pastoralism. Clearly the National Communication discounts the impact of climate change on marginalized communities in the ASAL. Unfortunately the UNFCCC fails to fully address the issue of identifying the most vulnerable within countries.

Table 3 – ASAL in Kenya



VII. Conclusion

Climate change will have significant impacts on vulnerable communities. There is a moral and ethical imperative for identifying the most vulnerable communities and working to reduce the effects of climate change to ensure both the communities survival and wellbeing. However these communities need to be understood and discussed in a nuanced way, without assuming communities vulnerability or its ability to adapt. Even within seemingly homogenous communities there will likely be winners and losers. There is broad consensus on vulnerable environments, yet within these environments vulnerable communities need to be determined. The UNFCCC should create a framework for identifying vulnerable communities and work with countries to identify the most vulnerable communities within their borders. A specific fund should be created to address the adaptation needs of these communities, along with the climate change adaptation fund to address sector specific adaptations.

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