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WP3: Climate change adaptation and mitigation: implications for land acquisition and population relocation

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Abstract

In response to the challenge of climate change, governments of developing countries are evolving adaptation and mitigation programmes for which they are seeking international financing. This paper presents the findings of a review of national action programmes and other interventions to assess their likely societal impacts with an emphasis on land-use change, future land acquisitions, population displacement and resettlement. Evidence presented suggests there is likely to be additional and large-scale resettlement related to adaptation and mitigation investments in the coming decades. It describes such climate change-related projects as infrastructure development projects and the population displacement they may generate as a form of development-created involuntary resettlement. The article considers the policy and development challenges such involuntary resettlement will pose and assesses the robustness of current governance arrangements to manage that resettlement. It is argued that the United Nations Framework Convention on Climate Change process presents opportunities for improving the national and international management of land acquisition and resettlement, particularly in least developed countries and small island states, but cautions that, at present, the financing arrangements do not prioritise the legal protection of affected populations.

Introduction

This paper reviews national action plans submitted by less developed and developing countries as part of the United Nations Framework Convention on Climate Change (UNFCCC) process to secure financing for adaptation and mitigation projects. The aim of the review is to assess the likely societal impacts of those action plans with a particular emphasis on their implications for land-use change requiring land acquisition and population resettlement. It is argued that the types of projects proposed mainly envisage new infrastructure and biodiversity protection involving what is described as proactive, responsive and planned population resettlement. Having reviewed the types of intervention outlined in states' programmes of action, the paper locates such land acquisition and resettlement in the wider context of involuntary resettlement arising out of development investments and considers the strengths and weaknesses of the current governance of development-created resettlement at the national and international levels. It is a finding that adaptation and mitigation plans and programmes of action have the potential for relatively large-scale land-use conversions and resettlement. However, insufficient information is provided on the location and likely scale of these societal impacts. There is little evidence available to suggest that states have considered the magnitude of the additional resettlement challenge that such actions will entail, the sufficiency of government laws and policies to manage resettlement, or necessary preparation to ensure that resettlement is democratic, fair and effective. It further considers opportunities that are presented by the new arrangements for climate change funding for building on recent initiatives that have the potential to improve the governance of land acquisition and resettlement globally.

Adaptation and mitigation planning

National Adaptation Programmes of Action (NAPAs)

The following analysis of probable resettlement outcomes of states' adaptation and mitigation investments is based on a review of key planning and strategy documents produced by states from within the UNFCCC and, specifically, Copenhagen Accord processes (transforming the Accord into an operational document) and in preparation for COP16 at Cancun. The aim of the review is to gather evidence on the implications of governments' plans in terms of land-use change/conversion, population settlement and resettlement, quantify those impacts, and assess the policy and legal contexts within which such actions will be undertaken in the near future. The review is principally concerned with official adaptation[1] and mitigation plans prepared by developing countries.

The World Bank (2009) estimates that hundreds of billions of dollars will be required each year for several years to mitigate and adapt to global climate change. There is a complex and evolving web of financial support mechanisms to assist developing and transition countries in their adaptation and mitigation activities including funds under the UNFCCC, climate specific funds under other international agencies, numerous bi- and multilateral assistance channels for public-sector flows, philanthropic undertakings and a multitude of private sector financial and investment flows. This range of support presents major challenges for coherence, monitoring and guaranteeing the implementation of the Copenhagen Accord and subsequent decisions and agreements on adaptation currently being made through UNFCCC negotiations. The different funding mechanisms require varying degrees of planning comprehensiveness, and frequencies of reporting and review (Corfee-Merlot *et al*., 2009). Potentially, the most significant of these funding mechanisms are the Adaptation Fund (AF), which was established under the Kyoto Protocol of the UNFCCC to finance concrete adaptation projects and programmes in vulnerable developing countries that are party to the protocol, the evolving Green Fund and the more immediate US$30 billion Fast Start financing provisions for the 2010–12 period (see www.faststartfinance.org).

As the International Institute for Environment and Development (IIED) (Parry *et al.*, 2009) points out, it took 7 years from the launch of the Adaptation Fund in Marrakech in 2001 to finally establish an acceptable legal framework for the disbursement of monies. It was during the period of the establishment of the Fund, and in the 2 years immediately before and following COP15 in Copenhagen, that developing and transition states began to identify in a general, and sometimes more concrete, manner projects that addressed adaptation and mitigation needs within their borders – transborder thinking on adaptation has been largely at the margins of climate change response planning. It is these plans that give some guidance on the likely direct and indirect societal impacts of adaptation and mitigation particularly in relation to the concerns of this paper – land-use change, settlement and the resettlement or relocation of populations as a result of policies pursued under the umbrella of adaptation.

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[1] In its broadest sense, adaptation to climate change includes all adjustments in behaviour or economic structure that reduce the vulnerability of society to changes in the climate system (Huq *et al.*, 2003: 19). Such a definition would include autonomous or spontaneous adaptations which occur as a reactive response to climatic stimuli, without the intervention of a public agency. This paper, however, is principally concerned with planned adaptations that may be either reactive or anticipatory, over various timescales, and which are generally undertaken by governments on behalf of society.

While significant funding will be available for actions articulated at Copenhagen, and many of the projects identified by governments are likely to go ahead, there remain considerable uncertainties about the operationalising of Fast Start and long-term finance, and monitoring, reporting and verification (MRV) requirements and processes as the UNFCCC negotiations continue. In the absence of a political agreement on particularly sticky issues such as Kyoto II agreements, MRVs and the sovereignty question, continuing ALBA[2] opposition to the Copenhagen Accord and market-based mechanisms, BASIC[3] countries' lukewarm endorsement of the process, and disagreements on the issue of globally binding rather than domestically binding targets on carbon dioxide emissions, it is unlikely that substantive agreements on governance will be reached.

The clearest public presentation of states' climate change adaptation planning can be found in the National Adaptation Programmes (or Plans) of Action (NAPAs), which were produced by more than 40 least developed countries (LDCs)[4] between 2006 and 2009 in direct response to the Marrakech Report, and the Least Developed Countries Fund (LDCF) established to support a work programme to assist governments to carry out the preparation and implementation of their NAPAs. It is relevant to note that the NAPA process was designed to assist states in the development of strategies that would enable adaptation projects to be funded and launched, and as such there was a dual focus among the LDC Expert Group on capacity building within states as well as on urgent and immediate adaptation needs. This reflected concerns that adaptation to climate change had not yet become a major policy issue or priority within developing countries and the 'mainstreaming' of adaptation into development planning needed to take place as a first step alongside improved national communications on the challenges that lay ahead.

Given these limitations on the NAPA process, and in particular the focus on immediate and urgent needs, it is unsurprising that the programmes of action are generally modest in scale, undeveloped in policy terms, and cautious in the sense that rather than setting a radical new agenda they tend to build on pre-existing programmes of necessary modernisation and renovation – for example of coasts, through the development of new agricultural systems (to adapt to salination or water shortage), and restoration and rehabilitation through the replanting of coastal forests, mangroves and estuarine marsh, or the preservation of sand dunes. In addition, there are frequent references to the extension of insurance cover, improved management and governance of key sectors, improved disaster response mechanisms and the need for improved early-warning systems. It is also noteworthy that the NAPAs were more conservative than the general press coverage on risks and threats. For example, the governments of those countries deemed most at risk of flooding as a result of sea-level rises (Bangladesh, The Maldives) and for whom large-scale displacement and resettlement has been widely discussed in the media did not prioritise relocation of populations as an adaptation

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[2] ALBA refers to the Bolivarian Alliance for the Peoples of Our America (Spanish: *Alianza Bolivariana para los Pueblos de Neustra América*, or ALBA), an international cooperation organisation based on the idea of social, political and economic integration between the countries of Latin America and the Caribbean.

[3] The BASIC countries (also Basic countries, or G4) are a bloc of four large developing countries – Brazil, South Africa, India and China – formed by an agreement on 28 November 2009.

[4] The least developed countries (LDCs) are a group of 49 countries. They are considered to be the world's poorest countries as they have a per capita gross domestic product (GDP) of under US$900 and very low levels of capital and human and technological development. These 49 countries have a combined population of 614 million, which is equivalent to just over 10% of the world's population, but their share of the world's GDP is less than 1%.

response – indeed neither Bhola Island (in the case of Bangladesh and popularly regarded as the first example of climate change displacement) nor international resettlement (in the case of The Maldives) were mentioned in these countries' NAPA submissions (or, indeed, in the case of The Maldives, in follow-on national strategies).

For the purposes of this article, the author surveyed 40 NAPAs with the aim of identifying the key climate change challenges, the main priorities and project proposals and of drawing out and analysing examples of land-use change, settlement and resettlement as a consequence of either climatic stimuli or as an outcome of proposed adaptation strategies.

Countries contemplating land-use changes

It is generally the case that NAPAs contain statements of intent rather than specific project proposals, which mean it is difficult to assess with accuracy the location, scale and societal implications of adaptation plans in terms of land-use change. There are, however, some exceptions. The government of Eritrea has stated its intention to build a multipurpose large-scale water development project in Genale–Dawa Basin, while neighbouring Ethiopia is proposing a series of named hydropower projects, as is Säo Tomé and Príncipe with the construction of hydropower stations in Claudino Faro and Bernardo Faro. The majority of NAPAs, however, as Table 1 shows, prefer to state an unspecified commitment to adaptation projects that involve land-use change, and only minimal information is provided on the area of land or the number of people who may be affected by these projects.

Table 1: NAPA projects involving land-use change

Project type	Countries
Coastal reforestation	Bangladesh, Cambodia
Flood protection (sea, lake and dykes)	Bhutan, Burundi, Cambodia, Ethiopia, Kiribati, The Maldives, Tanzania
Dams and hydropower	Eritrea, Burundi, Lao PDR, Rwanda, Säo Tomé and Príncipe
Inland reforestation	Eritrea, Guinea Bissau, Malawi
Land reclamation	Lesotho

Source: NAPAs.

Countries contemplating resettlement

Evidence gathered from NAPAs broadly suggest that LDCs, when faced with environmental and climate change, are in general seeking adaptation solutions that allow populations to remain *in situ* wherever possible. The documents suggest that states have analysed their current and immediate situation in terms of numerous interconnected problems: population growth, lack of development, poor infrastructure, vulnerability to natural disasters and the damage they cause, poverty, overcrowding and loss of natural resources and biodiversity. It

has been concluded that these require a comprehensive plan of action within which adaptation can be integrated.

Table 2: Proactive, responsive and planned relocation

Resettlement/ relocation type	Purpose	Countries
Proactive	Relocate vulnerable populations (towns, villages and communities) from environments at risk to safer location	Bhutan, Mozambique, Samoa, Säo Tomé and Príncipe , Tanzania, Uganda, Vanuatu
Responsive	Relocate populations from environments that are no longer habitable	Kiribati, Comoros, Tuvalu
Planned resettlement	Resettlement of populations displaced by adaptation infrastructure and resource protection projects	Burundi, Tanzania, The Gambia

Source: NAPAs.

As can be seen from Table 2, some low-lying islands, sub-Saharan African states and Bhutan were identified as most likely to resettle populations as part of the adaptation solutions either in extremis, if land can no longer sustain a population, or in response to identified risks of flooding and salination or as a consequence of adaptation projects such as natural resource protection and the establishment of wildlife corridors.

In most national plans specific details about the precise locations from which people are likely to be relocated, to where they may be moved, or the numbers of people involved are not provided. One exception is Bhutan, which proposes moving the town of Chamkhar to Dekiling, and the Comoros government, which estimates that 10% of its population (approximately 60,000 people) will require moving as a result of saline intrusion into the groundwater and land. Kiribati recognises that some relocation may be spontaneous in the event of sudden erosion, and The Gambia cites the planned upgrading of the Kotu Stream as requiring land acquisition resulting in resettlement.

Resettlement planning and policy

As noted above, the guidelines for the preparation of the NAPAs did not require LDCs to provide information on the policy and legal frameworks within which adaptation projects would be undertaken. There is no detai,l for example, on legal requirements and policy procedures guiding land acquisition or voluntary/involuntary resettlement. Across the 40 NAPAs reviewed for this paper there are only two references to the process of resettlement. The government of Burundi warns that resistance to relocation should be expected, and ‘strong legislation [would be] required’. Whereas the government of The Gambia states that ‘resettlement and compensation will have to be considered’, the government of Rwanda linked future adaptation actions to its recent *Imidigudu* national human settlement policy for returned displaced people

following the violent conflicts in the 1990s. Against the backdrop of concerns voiced about coercion, lack of popular participation, poor design and small plot size, the government of Rwanda is committed to this form of concentrated villagisation and it may provide the model for future environmental resettlement.

The lack of detail and policy consideration in those sections of the NAPAs raising the likelihood of relocation and resettlement suggests that proper consideration has not yet been given to the land acquisition and resettlement challenge that will arise were governments to pursue resettlement either in a proactive manner (to remove people from areas of risk), in a reactive manner (following an emergency or disaster), or as a result of land-use changes or the construction of physical infrastructure to aid adaptation. The impoverishment risks, vulnerability and human rights issues associated with resettlement have not yet been addressed.

Nationally Appropriate Mitigation Actions (NAMAs)

A further dataset that is useful in assessing the likelihood of population relocation and resettlement in states' responses to climate change and in their formulation of funding requests are the Nationally Appropriate Mitigation Actions (NAMAs), recently submitted by non-Annex 1 parties to the UNFCCC following the Copenhagen Accord. It is generally viewed that the process at Copenhagen failed to precisely define what NAMAs should prioritise or how they will be included in the emerging international financial architecture for climate change. Similar to NAPAs, the NAMAs are mostly generalised and do not set out concrete implementation plans. Mitigation is variously understood by the submitting parties and includes projects that were previously included in states' NAPAs or in separate national strategies for climate change adaptation and national development.

For the purposes of this analysis, however, the NAMAs are an important resource because they provide some indication of non-LDC states' thinking and forward planning on future actions that have implications for land use, resettlement and migration. Perhaps most significant is the commitment to large-scale afforestation (creating new forests) and reafforestation (replanting depleted forests).

Table 3: Afforestation and reafforestation (non-Annex 1 parties, UNFCCC)

Country	Commitment
Togo	Increase forest cover from present 7% to 30% by 2050
Mauritania	Increase forest cover from present 3.2% to 9% by 2050
China	Increase forest production by 40 million hectares and forest stock by 1.3 billion cubic metres by 2020 from 2005 levels

Source: NAMAs.

Armenia, Botswana and Jordan each gave a general commitment to reafforestation, while Indonesia has signalled a policy of carbon sequestration and Benin a programme of carbon storage through new plantations.

The governments of Ethiopia and Brazil include biofuel development and the increased use of biofuels as key mitigation strategies in their 2010 NAMAs with a focus on liquid biofuels

(ethanol and biodiesel). According to a UNESCO–UNEP (2009) study, global production of liquid biofuels has grown exponentially in recent years, and 2007 production was threefold greater than that in 2000, requiring 5–6% of the global harvest of all grains (corn, wheat, rice and others), 8% of vegetable oil and 28% of the sugar cane harvest. Production targets for biofuels vary by country, but many governments have already adopted goals to replace 10% or more of transportation demand for liquid fossil fuels with biofuels within 10–20 years. Meeting these goals, the UN report argues, would require a combination of a large increase in the area devoted to biofuel crops and an unprecedented increase in the yield of biofuel crops per unit of land, water and fertilisers.

The spread of biofuels has raised concerns in many developing countries about the environmental, social and economic impact of biofuel plantations. Sulle and Nelson (2009) found in Tanzania that increased biofuel production could involve not only water scarcity, deforestation and a distortion of the price of local crops, but also, and most importantly, the potential loss of local land rights, land access and the alienation from the land of poor farmers in a legal–political context where laws are insufficient to protect villagers and smallholders against expropriation. Similar concerns have been expressed in a number of Latin American and other African countries.

BASIC climate change programmes

Outside of, but also in parallel with, the UNFCCC NAPA and NAMA and Copenhagen Accord process, fast-industrialising states (Brazil, South Africa, India and China) have recently published national climate change strategies that include plans of action partially cited in NAMAs but which also identify, and in some cases attempt to quantify, new priority projects and strategic commitments. As Fransen *et al.* (2009) conclude, these plans articulate the potential effects of climate change impacts on livelihood, economies and natural systems, but stop short of providing concrete procedures and strategies for meeting adaptation needs. The proposals reflect preliminary adaptation planning efforts, but nonetheless provide additional important information on likely land conversion, land acquisition and resettlement outcomes with important implications.

Table 4: BASIC proposed adaptation and mitigation interventions with likely resettlement impacts

Country	Strategic priorities
India	Improve coastal protection through infrastructure and forest/mangrove restoration Exploit hydropower potential (large, medium, micro) Expand forest cover to one-third of country's area/additional afforestation
Brazil	Increase rail and water transport/mass transit Doubling area of forest plantation to 11 million hectares by 2020
China	Promote large-scale, water-saving irrigation Expand forest areas and develop biocorridors

Country	Strategic priorities
	Increase 24 million hectares of grassland Speed up water infrastructure including north to south water Diversion project

Source: India (July 2008) National Action Plan on Climate Change; Brazil (December 2008) National Plan on Climate Change; China (June 2007) National Climate Change Programme.

India and China in the UNFCCC negotiations consistently stress the need to avoid compromising national economic growth or state sovereignty in addressing the challenge of climate change. This is evident in the Chinese government's Outline 11th Five Year Plan, in which it outlines its plans to pursue a twin strategy to balance *conservation with exploitation* and *development with low-carbon growth*. China's proposed adaptation and mitigation measures, as set out in the draft plan, have the potential to create resettlement on a considerable scale. Most notably, the Priority Programmes for Ecological Conservation (Chapter 6, Draft Five Year Plan, April 2010) include:

- the conversion of cultivated land back to grassland or forest;
- the conversion of grazing land back to grassland;
- wetland restoration; and
- the construction of wildlife and natural reserves.

It should be noted that any resettlement resulting from ecological conservation would be in addition to the resettlement being created by development and construction:

> According to the China Land Survey and Planning Institute (CLSPI) from 1993 to 2003 the total amount of cultivated land acquired for construction amounted to 1.67 million hectares and the number of farmers affected by land acquisition over the same period numbered 36.4 million with an average of 3.31 million farmers affected annually. The estimate for the amount of land required for the period 2001 to 2010 is 1.23 million hectares, affecting approximately 26.5 million farmers.
>
> (McDowell and Morrell, 2010)

UN Reducing Emissions from Deforestation and Forest Degradation (REDD+) programme

The UN REDD/REDD+ adaptation offers finance to mainly forest basin countries to develop low-carbon growth, helps countries access financial and technical support to address deforestation and forest degradation, and includes methods and tools for measuring and monitoring greenhouse gas emissions and forest carbon flows. The UN recognises that REDD and REDD+ Programme activities may impact upon the rights and livelihoods of indigenous peoples or other forest-dependent communities.

Indeed, the REDD+ Vietnam Benefit Distribution Study includes resettlement as a possible operation linked to 'interventions that might address drivers of forest change' (UN-REDD, 2010: 156). In recognition of the likelihood of resettlement, the UNDP (2009a) has produced guidance

that provides background and context on the inclusion of indigenous peoples in UN programmes and activities, identifies the guiding principles in order to respect and support the rights of indigenous peoples and other forest-dependent communities, and outlines the operational guidelines for the design and implementation of UN-REDD programme activities at the global and national scale. While there is no direct reference to resettlement or denial of access to forest land in these guidelines, it is likely that interventions and activities are implemented to avoid deforestation and forest degradation may include the resettlement of communities from those forests, or the denial of access to such resources. It is further recognised that the guidelines are insufficient to manage land acquisition and resettlement with the expectation that national laws and policies will apply.

Displacement, involuntary resettlement and impoverishment

This review of states' climate change adaptation and mitigation plans and their participation in other internationally publically funded, non-governmental or private climate change response initiatives, presents evidence in the coming decades of:

- significant new infrastructure projects (in pursuit of hydropower and water diversion and storage, the construction of sea and river defences);
- biodiversity enlargement and protection (the creation of new forests, grassland and wildlife reserves);
- increased biofuel production; and
- the proactive and responsive relocation of communities from land under threat of flooding or salination.

There is likely to be additional large-scale displacement and resettlement of populations in the developing world taking place alongside other types of state-managed, spontaneous and emergency population movements occurring as a result of natural disasters, conflict, state-planned resettlement as part of natural resource management or land-use change programmes, and resulting from compulsory land acquisition for infrastructure development projects, industrialisation and economic growth. Furthermore, such involuntary displacement and resettlement will unfold in societies where migration, both internally and internationally, and in particular rural–urban, will continue to be a significant feature of economic, social and political transformations, both spontaneous and state directed, influenced by patterns of national and international investment[5].

Such resettlement that will arise as a result of climate change responses will be managed within the existing national and international policy and legal frameworks that currently determine land acquisition and resettlement policy and practice in both the public and the private spheres. Adaptation and mitigation interventions, as the review has shown, are likely to be large-scale infrastructure projects. It is therefore instructive to look again at the literature and research evidence on development-created population displacement and resettlement to consider the strengths and weaknesses of current approaches.

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[5] It is estimated that by 2030 there will be 68 Indian cities with populations above 1 million – 18 more than at present (McKinsey Global Institute, 2010).

The displacement and involuntary resettlement literature, supported by operational evaluations of emergency and longer-term responses by states, international organisations and NGOs, points to a strong correlation between the processes of land and resource alienation, displacement and resettlement, and the impoverishment and political marginalisation of those affected both immediately and over generations (Colson, 1971; Scudder, 1991, 1993; McDowell, 1996; Cernea and McDowell, 2000; Kälin, 2005; Ferris, 2008; McDowell and Morrell, 2010). In studies that have compared the outcomes of displacement and resettlement across and between the displacement domains (where the proximate cause of displacement was conflict, a natural disaster, development or a state-mandated relocation scheme) the creation of new forms of impoverishment or the deepening of existing forms of impoverishment, and the distancing of displaced and resettled people from full participation in society, was a marked feature of the displacement–impoverishment nexus (Cernea and McDowell, 2000; Ferris, 2008). The largest and most comprehensive body of evidence of this relationship has emerged out of studies on development-created forced displacement and resettlement over the past 40 years.

Cernea estimates that more than 15 million people annually in the developing world lose their assets and are likely to be involuntarily resettled as a result of land acquisition for infrastructure projects in both the public and private spheres. This marks an increase of 5 million people displaced each year when compared with World Bank estimates produced in the mid-1990s. A large body of research suggests that the majority of those displaced and resettled remain impoverished for at least 7–10 years. Without the additional land-use conversions generated by climate change responses, the numbers of people displaced by infrastructure development projects is set to grow in the coming decades as rates of industrialisation in the south accelerate steeply, population numbers climb, urbanisation increases and ever-larger projects consume greater areas of land for power, transport, water, commercial agriculture, urban upgrading and commercial zones.

Over the past decade, academic researchers, civil society organisations representing the interests of those affected by development, and indeed the development banks who lend money for projects that generate development gains – but in so doing create displacement – acknowledge the negative impacts of land acquisition, asset loss and involuntary resettlement. Specifically, research across Asia, Africa and Latin America has catalogued the multiple impoverishment risks generated by failures in involuntary resettlement and the weaknesses in the legal and policy frameworks to protect affected populations against both legal and illegal displacement and resettlement. Loss of livelihoods and access to lands strip rural populations of a secure means of subsistence, affecting family well-being and social cohesion. When dams impact on downstream river habitats, millions suffer the loss of access to aquatic resources, specifically protein. What was once an important source of nutrition and subsistence not only disappears but the costs of replacing such losses in non-monetised or subsistence economies become prohibitive. Such losses typically affect several thousand people more than were initially displaced by a reservoir’s construction (Scudder, 2006). Strip developments, such as new or upgraded highways, displace often the poorest people living on marginal lands, denying them access to market and customers, and with uncertain titles to their land will receive little or no legal protection in the resettlement and compensation process.

While economic losses are significant in resettlement, community disarticulation is arguably the most complex part of the displacement and reconstruction process. The term is used to refer to the tearing apart of social structures, interpersonal ties, and the enveloping social fabric as a result of forced resettlement. Cernea and McDowell have described the main elements of community disarticulation as the scattering of kinship groups and informal networks of mutual help. The unravelling of spatially and culturally based patterns of self-organisation, social

interaction and reciprocity represents loss of valuable social capital that compounds the loss of both natural and man-made capital (Downing, 1996; Cernea and McDowell, 2000). While these components of impoverishment were identified in relation to involuntary resettlement induced by planned development processes, evidence suggests that the same risks – though in different combinations and with different intensities – will be critical in other domains of forced displacement including the infrastructure and biodiversity protection projects prioritised in the NAPAs and NAMAs.

The UN guidelines on internally displaced persons calls for such development displacement only to be undertaken for 'compelling' public purpose development. However, the line between public and private development is increasingly blurred as governments are faced with limited public funds to meet the demands of infrastructure development. The establishment of special economic zones in India and China has led to continuing conflict as people protest against the acquisition of large swathes of land. Even purchase by the private sector is considered risky to land-based rural farmers who, once divested of their land-based livelihoods, are left with few skills with which to turn cash into sustainable livelihoods. The extent of private engagement in adaptation and mitigation is not yet clear, but states are likely to follow the dominant development financing model, which is likely to include large-scale public–private arrangements including market mechanisms (such mechanisms have been widely discussed by the UN Secretary General's Advisory Group on Climate Finance, but without clear consensus).

New forms of particularly pernicious impoverishment have been identified where political disempowerment coupled with marginalisation – both within displaced communities and between the displaced and the wider society and the state – is creating new vulnerabilities and social unrest. Pieke recently described land acquisition as 'the most important source of discontent and exploitation in rural China at the moment' (personal communication)[6]. In India, increasing social unrest or the fear of unrest has prompted the government to approve for the first time a resettlement and rehabilitation policy, focusing on both public- and private-sector investments. The adoption of the policy is a clear indication of the importance of this issue to one of the world's major economies. Governments undertaking additional land acquisition involving population resettlement face a considerable challenge in persuading populations that the proposed actions and the societal and political costs they entail are justified by the threat of climate change; without public support, the risks of unrest will multiply.

Evidence shows that tribal and indigenous populations, and those urban dwellers unable to prove ownership of the lands they occupy or depend upon for subsistence, are particularly vulnerable to marginalisation and impoverishment in land and resource alienation. These populations have been historically at greater risk of summary eviction in the development process. In October 2007, for example, thousands of landless peasants marched to New Delhi to protest against the threat posed to their livelihoods by industrial development, special economic zones and supermarkets.

[6] The absence of a land market in China coupled with the absence of legal provision to limit expropriation for public purpose development has resulted in farmers losing their land to unscrupulous local governments and private developers who work in tandem investing in golf courses, property development and special economic zones to name a few. Protests by farmers increase daily as they find their lands being taken away for development.

Adaptation and mitigation projects will add to the growing and immediate challenge of managing the development process while protecting the rights of citizens in situations of displacement and land acquisition. This is a challenge currently exacerbated by five main drivers:

- inadequate available unoccupied public land for development purposes;
- increased forced acquisition of both private and public lands occupied by the landless;
- the non-availability of alternative land for replacement to ensure that those who lose their lands to development are able to regain sustainable livelihoods;
- increasing private-sector investments with no regulatory oversight by the state; and
- a rise in public–private investments with state involvement in expropriation, but where investments are profit oriented rather than in the public interest.

It should be acknowledged that there has been a number of important policy developments over the past decade to improve the response to development-forced displacement and provide more effective safeguards for those most negatively affected[7]. States, in adopting national and regional resettlement policies and laws (e.g. Vietnam, China, India, Sri Lanka, Lao PDR), and acknowledging past damage (as the Chinese have recently done in paying reparations to some of the 23 million people displaced by dams in that country since 1949), are gradually accepting their responsibilities and understand that development and economic progress cannot be achieved by disenfranchising and leaving behind populations who, by happenstance, live in the path of progress.

Within the main lenders, most notably the World Bank and the Asian Development Bank (ADB), there were strong pressures from staff within those institutions, and also from NGOs on the outside, to strengthen their safeguard policies to ensure that development funded in part or whole by bank loans did not have the perverse counterdevelopment impacts of increased impoverishment, marginalisation of indigenous population and women, and accelerated damage to the environment. Consequently, throughout the 1990s there was encouraging dialogue between the international financing institutions and lender governments on new legislative frameworks within which land acquisition and involuntary resettlement would be conducted[8]. There was encouragement, also, that the banks' oversight role was being strengthened[9].

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[7] Professor John Ruggie, the UN Special Representative for Human Rights, Transnational Corporations and other Business Enterprises, has recently commissioned a report on human rights, which is being prepared with the International Finance Corporation (IFC).

[8] The ADB in particular used its resources to fund technical assistance programmes designed to bring polices and laws in line with the best international standards.

[9] For example, the Mumbai Urban Transportation Project (MUTP), funded by the World Bank and which displaced some 12,000 people, failed to plan for commercial opportunities for displaced small businesses and was finally suspended after the Bank's board approved the inspection panel's critical report. The suspension was lifted after the approval of a remedial action plan.

However, in recent years the development banks would appear to have backtracked from this commitment, and initial momentum in improving legislative frameworks has been lost. Despite operational improvements in calculating and making reparations for assets lost as a result of land acquisition, the record remains bleak and impoverishment remains the dominant outcome for the majority displaced from their lands and communities as a result of development investments. There are a range of new uncertainties in the coming decades that present even greater challenges for policy makers, civil society, academic researchers and the affected populations. These include:

- the fast-evolving *shift towards commercial development*, for example in highways and energy development, the construction of dams for power generation (for example, the Nam Theun 2 hydropower project in Laos), and the potential development of the Mekong river for serving the energy needs of the region;

- with *conflict-related internal displacement* on the increase (see IDMC, 2009 Global Report) it is more commonly the case that development-forced displacement is intermeshing with conflict population displacement – this dynamic has clear protection implications;

- similarly, *disaster-related displacement* is on the rise (ICRC World Disasters Report, 2009) and again there is a dangerous intersection of types of displacement that raise complex response and protection challenges; Bangladesh in particular faces an enormous challenge in finding sufficient land for re-establishing displaced people from disaster and development projects; and

- the rise of new investors, such as China in Africa and the Mekong Region, raises potential social risks that have not been documented.

Research continues to show that development displacees in unstable and undemocratic countries in conflict are particularly susceptible to human rights violations and multiple displacement.

Conclusion

It is against this backdrop of the fractured governance of population displacement and resettlement and poor performance in the public and private development process that additional resettlement resulting from adaptation and mitigation projects will take place. Information advanced by states on their national action plans to tackle climate change provide insufficient information on the location and likely scale of these societal impacts. Many states do not have land acquisition or resettlement legislation that is adequate to guarantee the protection of the displaced or to ensure their rehabilitation in a new location. There is little evidence to suggest that either donors or the recipient states of climate financing have considered the magnitude of the additional resettlement challenge or the sufficiency of international and national laws, operational guidelines and policies to manage resettlement in a manner that ensures it is lawful, democratic, fair and effective.

However, despite the disappointment of the Copenhagen Accord and the lack of political will to achieve a global binding agreement on climate change through the UNFCC process, there is political momentum driven by some states in Europe, the USA and Japan to deliver what is called Fast Start financing for adaptation, in the region of US$30 billion initially (possibly rising to US$100 billion over the next decade), to further develop and bring into reality developing

states' NAMAs and NAPAs. While there is some debate as to whether Fast Start is additional money or has been diverted from existing official development assistance, Fast Start concessional loans and grants will most likely be distributed through multilateral channels such as the Global Environment Facility (GEF), under the trusteeship of the World Bank, and the Climate Investment Fund (CIF), managed by the multilateral development banks, and aimed at small island states and least developed countries in Africa.

Fast Start financing is seen by certain Western states as an important means of rebuilding confidence and trust between developed and developing countries in the absence of any clear consensus on a more general framework for climate financing. The momentum behind Fast Start presents both opportunities and risks for any ambition to use climate change adaptation and mitigation processes as leverage to tackle the weaknesses in national and international frameworks for managing land acquisition and population resettlement in the development context. The main risk is that the evident urgency to deliver financing will mean that projects proceed without the full and necessary scrutiny of legal and policy safeguards to protect against poor land acquisition and resettlement. The channelling of Fast Start funds through the GEF provides both a risk and an opportunity. It has already been noted that the World Bank, in part through its country systems approach in which the implementation of bank-financed projects rely on borrower governments institutions, laws and policies rather than on the bank's own environmental and social safeguard policies – specifically those on involuntary resettlement – signal a retreat on the Bank's commitment to setting and upholding international standards on resettlement and protecting the most vulnerable. Balasundaram and Dobinger (2006: 12) acknowledge that the adoption of country systems by the institutional members of the GEF has important implications for the projects it funds and ultimately 'might affect the effectiveness of such safeguards'. The high-level ministerial engagement in the Fast Start and GEF, which includes the UN Secretary General's Advisory Group on Climate Finance and numerous bilateral talks, represents an opportunity to position the social impacts of any decisions taken on climate financing to be at the centre of those discussions. For some years, Western governments have shown a reluctance to engage with developing country governments at any senior political level on involuntary resettlement; however, the current political momentum and the broad nature of the discussions around energy policy, urbanisation and biodiversity protection offer an opportunity for such engagement to take place on a constructive basis where adaptation and mitigation projects are not standalone but, rather, are fully integrated into national development planning and international cooperation.

In a more practical way, systems of reporting for Fast Start funding have not yet been agreed but discussions are taking place within the wider and more difficult negotiations about the domestic measurement, reporting and verification (DMRV) of climate change-related actions by both developing and developed countries. While the DMRV regime is still being evolved, formal reporting to the UNFCC will more than likely continue to take place through National Communications (NatComs) with states establishing new institutions for this purpose. The main purpose of DMRV is to track progress made by states on carbon emissions reduction and other actions, to provide international recognition of that progress and, ultimately, to introduce transparency in the use of funds and add credibility to the UNFCC process itself. Beyond immediate verification, DMRV is also designed as a mechanism to improve policy and practice in all areas of mitigation and adaptation. Overall, the regime is not particularly strong, NatComs are sporadic, they are not subject to expert review, and their quality varies greatly depending in part on the sufficiency of data and the resources and the capacity within developing states to undertake complex evaluations. However, it is argued here that within DMRV there is an opportunity to build in the requirement that states in receipt of international funding for projects that involve land acquisition and resettlement should provide full and comprehensive reporting on resettlement's legal basis, detail the policies that guide consultation and compensation, and

provide evidence of how the resettlement was undertaken and its impact on those affected. It might be necessary to draw up new guidelines for international consultation and analysis of mitigation and adaptation actions taken that result in displacement and resettlement.

Finally, in any analysis of green adaptation and mitigation that involve land-use change and resettlement it is important to understand those processes within the international and national complex of population movements, including historical internal displacement and resettlement. Climate change-related displacement and resettlement will not occur in a vacuum but rather will be shaped by other types of movement within a country and across borders including conflict displacement, migration and return, economic migration, and disaster-related, politically motivated and development-induced movements. The complexity of such movements of people within states and across borders presents protection challenges of equal complexity that will need to be addressed by states and their funders contemplating any new land acquisitions or land-use change that will demand population relocation.

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