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Climate change Adaptation and Mitigation: Implications for Land Acquisition and Population Relocation

In response to the challenge of climate change developing country governments are evolving adaptation and mitigation programmes for which they are seeking international financing. This article 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 currentgovernance arrangements to manage that resettlement. It is argued that the UNFCCC process presents opportunities for improving the national and international management of land acquisition and resettlement particularly in LDCs and Small Island States but cautions that at present the financing arrangements do not prioritise the legal protection of affected populations.

Key words: climate change, adaptation, displacement, involuntary resettlement

1. Introduction

This article reviews national action plans submitted by less developed and developing countries as part of the UN 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 impact with a particular emphasis on implications for land-use change requiring land acquisition and population resettlement. It is argued that the types of projects proposed envisage mainly infrastructure and biodiversity protection involving what is defined by the author as ‘proactive relocation’ (where the purpose is to relocate exposed populations from environments at risk to safer locations), ‘responsive relocation’ (of populations from environments that are deemed no longer habitable) and ‘planned population resettlement’ (where communities are displaced and resettled as a result of the construction of adaptation infrastructure and resource protection projects). Having reviewed the types of interventions outlined in countries’ programmes of action the article locates such land acquisition and resettlement in the wider context of involuntary resettlement arising out of development

investments, and further considers the strengths and weaknesses of the current governance of development-created resettlement at the national and international levels. The article concurs with Adger et al.,(2009) and de Sherebinin et al. (2011) that the proposed adaptation and mitigation plans and programmes of action, in addition to increasing the number of people relocated from areas at risk (Barnett and O'Neill, 2012), will require large scale land-use conversions resulting in population resettlement that has the potential to add considerably to the estimated 15 million people displaced annually in the developing world by infrastructure projects. However, insufficient information has yet been provided by governments on the location and likely scale of 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 national laws and policies to manage resettlement, or the necessary preparations to ensure that resettlement conforms with the best available international standards. It further considers opportunities that are presented by the new arrangements for climate change funding for reinvigorating stalled initiatives (by multilateral development banks, the United Nations, the African Union, and non-state actors) to improve the managment of land acquisition and resettlement and enhance the protection of those displaced. Steps towards improvement would include greater transparency in the land acquisition and involuntary resettlement process, and the strengthening of the legal rights of individuals and communities who lose land and other assets in the development process, including the securing of the consent of affected populations to their resettlement. New legal instruments ideally would seek to better protect traditional land tenure systems, avoid arbitrary displacement, guarantee citizens rights to replacement land, and ensure the payment of full and fair compensation based on realistic asset valuation, with fullconsultation taking place throughout the land acquisition and resettlement process.

2. Financing Adaptation and Mitigation

The following analysis of the resettlement outcomes of countries' adaptation and mitigation investments is based on a review of key planning and strategy documents produced by governments from within the UNFCCC and specifically Copenhagen Accord processes. The programmes were subsequently tabled at the COP16 at Cancun, and are now being considered as part of the negotiations' track activities on climate financing agreed at the COP17 at Durban . The aim of this review is to gather evidence on the implications of countries' plans in terms of land-use change/conversion, population relocation and

resettlement, to quantify those impacts, and to 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][1] and mitigation plans prepared by developing country governments.

The World Bank (2009) estimates that hundreds of billions of dollars will be required each year for several years to enable states to mitigate against and adapt to global climate change. There is a complex and ever evolving web of financial support mechanisms to assist developing and transition countries in their adaptation and mitigation activities principally under the umbrella of the Framework Convention, and including climate specific funds made available by international agencies, and numerous bi- and multilateral assistance channels for public sector flows, as well as philanthropic undertakings and a multitude of additional private sector financial and investment sources. The most significant of these funding mechanisms, working both alongside and in partnership with the Global Environment Facility (GEF) and the Climate Investment Fund (CIF) is the Adaptation Fund (AF) which was established under the Kyoto Protocol to finance concrete adaptation projects and programmes in vulnerable developing countries. Other mechanisms include those agreed as part of the Cancun Agreement (and further endorsed at Durban) such as the Green Climate Fund (GCF), the Least Developed Countries Fund (LDCF), the Special Climate Change Fund (SCCF) [2][2], and the ongoing Fast Start financing provisions.[3][3] This range of financial support presents major challenges for coherence and monitoring (Corfee-Merlot et al 2009), and also in guaranteeing the implementation of the Copenhagen Accord and subsequent decisions and agreements (such as the Bali Action Plan) on adaptation.. At the COP17 in Durban the new negotiating track (the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP)) was added to the UNFCCC process. The ADP is expected to develop by 2015 a new legal instrument on emissions 'with legal force'[4][4] and taking effect from 2020, to secure agreement on the operationalising of the GCF, and to manage a work programme to bring coherence to the diverse financing arrangements outlined above.

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[1][1] Adaptation refers to planned adaptations that may be either reactive or anticipatory, over various timescales, and which are generally undertaken by governments on behalf of society to reduce the vulnerability of society to changes in the climate system (Huq et al, 2003:19) .

[2][2] Both the SCCF and the LCDF which was used to fund the preparation of the NAMAs and NAPAs, are administered through the GEF.

[3][3] See www.faststartfinance.org; although India and China are recipients of climate they have confirmed that they will not access Fast Start financing.

[4][4] Whether 'agreed outcome with legal force' is the same as legally binding on all states remains moot.

As the IIED (Parry et al 2009) has pointed out, progress on climate financing has been slow from the outset of the Convention, and it took seven years from the launch of the Adaptation Fund in Marrakech in 2001 for an acceptable legal framework for Fund disbursement to be agreed. It was during the period of the establishment of the Fund, and in the two years immediately before and following the COP15 in Copenhagen, that developing and transition states identified in a general, and sometimes in more concrete terms, projects that addressed adaptation and mitigation needs within their borders[5[5]] .

It is these plans that give some guidance on the likely direct and indirect societal impacts of adaptation and mitigation programmes particularly in relation to the concerns of this article – land-use change and the subsequent involuntary resettlement or relocation of populations as a result of policies pursued under the umbrella of adaptation and mitigation.

2.1 National Adaptation Programmes of Action (NAPAs)

The clearest public presentation of countries' climate change adaptation planning can be found in the National Adaptation Programmes (or Plans) of Action (NAPAs) which were produced by more than forty Least Developed Countries (LDCs)[6[6]] between 2005 and 2009. It is relevant to note that the NAPA process was designed to assist governments in the development of strategies to enable adaptation projects to be funded and launched. As such there was a dual focus among the LDC Expert Group advising governments both on capacity building within states, as well as on urgent and immediate adaptation needs, reflecting 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 alongside improved National Communications (NatComs)[7[7]] on governments' Convention activities.

[5[5]] Transborder thinking on adaptation has been largely at the margins of climate change response planning.

[6[6]] Least Developed Countries (LDCs) are a group of 49 countries considered to be

theworld's poorest countries with a per capita Gross Domestic Product (GDP) under

$900 and with very low levels of capital, human and technological development.

[7[7]] NatComs are periodiod reports to the Conference of Parties (COP) on progress achieved, or activities undertaken by governments, in implementing the Framework Convention.

In the preparation of the national adaptation plans governments were unclear about the mechanisms for financing, and how any new arrangements may have an impact on existing international development finance, including for ongoing projects. It is therefore unsurprising that the projects outlined in the NAPAs are generally modest in scale, underdeveloped in policy terms, and cautious in the sense that rather than setting a radical new agenda they seek build on pre-existing programmes of necessary modernisation and renovation – for example the protection 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. The plans contain also frequent references to the extension of insurance cover improved management and governance of key sectors, disaster response mechanisms, and also propose projects that address the need for improved early warning systems. 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, and for whom large-scale displacement and resettlement has been widely discussed in the media, did not prioritise the large-scale relocation of populations as an adaptation response. For example, neither Bhola Island (in the case of Bangladesh which is popularly regarded as the first large-scale example of climate change displacement[8][8]) nor international resettlement (in the case of The Maldives[9][9]) were identified as priorities in the respective NAPA submissions (or indeed in the case of The Maldives in follow on national strategies).

Countries Contemplating Land-Use Changes

Forty NAPAs[10][10] were surveyed and it was found that they contained statements of intent rather than detailed project proposals and as such it is difficult to assess with accuracy the

[8][8] See Al Jazeera English, 'Bangladeshis flee disappearing islands', 17 December 2009. http://www.youtube.com/watch?v=KF6gEBzJeF8. Accessed on 4 October 2012

[9][9] See Sydney Morning Herald, 'Climate change castaways consider move to Australia', 4 October 2012. http://www.smh.com.au/environment/climate-change/climate-change-castaways-consider-move-to-australia-20120106-1pobf.html. Accessed 4 October 2012

[10][10] NAPAs surveyed for this article were produced by the governments of Bangladesh, 2005; Benin, 2005; Bhutan, 2004; Burkhina Faso, 2006; Burundi, 2007; Cambodia, 2006; Cape Verde, 2007; Central African Republic, 2007; Comoros, 2006; DR Congo, 2007; Eritrea, 2007; Ethiopia, 2007; Gambia, 2007; Guinea, 2007; Guinea-Bissau, 2006; Haiti, 2007; Kiribati, 2007; Lao PDR, 2009; Lesotho, 2007; Liberia, 2008; Madagascar, 2008; Malawi, 2006; The Maldives, 2006; Mali, 2007; Mauritania, 2004; Mozambique, 2007; Nepal, 2007; Niger, 2006; Rwanda, 2006; Samoa, 2005; Sao Tome and Principe, 2006; Senegal, 2007; Sierra Leone, 2006;

location, scale and societal implications of adaptation plans in terms of land-use change. There are however some exceptions. The Government of Eritrea stated its intention to build a multi-purpose large-scale water development project in Genale-Dawa Basin, while neighbouring Ethiopia proposed a series of named hydropower projects as did Sao Taome and Principal with the construction of hydro-power stations in Claudino Faro and Bernardo Faro. The minority of NAPAs (18 out of 40) however, as Table 1 below shows, declared an unspecified commitment to adaptation projects that involved land-use change with only minimal information provided on the area of land or the numbers of people who may be affected by such 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, Sao Taome and Principal
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 sought adaptation solutions that allowedpopulations to remain *in situ* wherever possible. Environmental projects that predated the NAPAs and which involved some elements of resettlement, for example, the policy of 'economic reintstallation' against desertification in Mongolia including pastoral sedentarisation, and the shifting of populations

Solomon Islands, 2006; Sudan, 2007; Tanzania, 2007; Tuvalu, 2007; Uganda, 2007; Vanuatu, 2005; Zambia, 2007.

away from the banks of the Mekong river in Vietnam (Warner et al., 2009), were absent from those countries NAPAs. The plans suggest that states analysed their 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; and concluded that solutions would require a comprehensive plan of action within which adaptation could 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, Sao Tome and Principe, 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 the above Table some low lying islands, sub-Sarahan African states and Bhutan identified the likely need to resettle populations as part of the adaptation solutions either in extremis where land can no longer sustain a population, in response to identified risks of flooding and salination, and as a consequence of adaptation projects such as natural resource protection and the establishment of wildlife corridors[11[11]].

[11[11]] A strategy that Geisler and de Sousa (2000) refer to as 'protected area greenlining' which involves the exclusion of people from conservation areas.

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, were not provided. One exception was Bhutan which proposed moving the town of Chamkhar to Dekiling, and the Comoros Government which estimated that 10 per cent of its population (approximately 60,000 people) would require moving as a result of saline intrusion into the groundwater and land. Kiribati recognised that some relocation may take place spontaneously in the event of sudden erosion, and The Gambia cited 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 detail for example on legal requirements and policy procedures guiding land acquisition or voluntary/involuntary resettlement. Across the 40 NAPAs reviewed there were only two references to the process of resettlement. The Government of Burundi warned that resistance to relocation should be expected, and 'strong legislation (would be) required'. While the Government of The Gambia stated that "resettlement and compensation will have to be considered". The Government of Rwanda linked future adaptation actions to its *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 stated a committed to this form of concentrated villagisation 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 was not given to the land acquisition and the resettlement challenge, and associated human rights issues, 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.

2.2 Nationally Appropriate Mitigation Actions (NAMAs)

A further dataset 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) submitted by Non-Annex 1 Parties to the UNFCCC as called for following the Copenhagen Accord. It is generally viewed that the process at Copenhagen failed to precisely define what NAMAs should prioritise or how they should be included in the international financial architecture for climate change. Similar to NAPAs, the NAMAs were mostly generalised and did not set out concrete implementation plans, and mitigation was broadly defined. For the purposes of this analysis, however, the NAMAs are an important resource because they provide some indication of non-LDC states' thinking and forwardplanning 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 signalled a policy of carbon sequestration and Benin a programme of carbon storage through new plantations. The governments of Ethiopia and Brazil included 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).

2.3 BASIC Climate Change Programmes

In parallel with the UNFCCC NAPA and NAMA process, fast industrialising states (Brazil, South Africa, India and China (referred to using the acronym BASIC)) published national climate change strategies in 2007 and 2008 which included plans of action, partially cited in earlier NAMAs, which also identify and in some cases attempted to quantify new priority projects and strategic commitments. As Fransen et al (2009) conclude, these plans articulated the potential effects of climate change impacts on livelihood economies, and natural systems, but stopped 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.

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 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.

In climate negotiations, India and China have consistently stressed 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 11th Five Year Plan in which it sets out a twin strategy to balance *conservation with exploitation*, and *development with low-carbon growth*. China's adaptation and mitigation measures, as set out in the plan, have the potential to create resettlement on a considerable scale. Most notably in the Priority Programmes for Ecological Conservation (Chapter 6, Five Year Plan, April 2010) which 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

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

The UN REDD/REDD+ adaptation involves projects that are part of a range of programmes in the broad category of Payment for Ecosystem Services (PES)[12[12]],providing finance to mainly forest basin countries to develop low-carbon growth and to help those countries access financial and technical support to address deforestation and forest degradation. They include also 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 detrimentally upon the rights and livelihoods of Indigenous Peoples or other forest dependent communities. For example, , the REDD+ Vietnam Benefit Distribution Study includes resettlement as a possible operation linked to an 'interventions that might address drivers of forest change' (UN REDD, 2010:156). In recognition of the likelihood of resettlement, the UNDP (2009) has produced Guidance providing background and context on the inclusion of Indigenous Peoples in UN programmes and activities, identifying guiding principles inorder to respect and support the rights of Indigenous Peoples and other forest dependent communities, and outlining 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

[12[12]] The United Nations Food and Agriculture Organisation has developed a database of PES schemes related to agriculture available at: http://www.fao.org/es/esa/PESAL/scheme.html

guidelines, it is however likely that interventions and activities implemented to avoid deforestation and/or 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.

3. Displacement, Involuntary Resettlement and Impoverishment

The preceding overview of countries' climate change adaptation and mitigation plans and their participation in other internationally publically funded, nongovernmental or private climate change response initiatives, presents evidence that in the coming decades as a result 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 through 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 not directly related to climate change adaptation and mitigation. Such movements will occur 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. Additional land acquisition and displacement will arise as a result of the rapid increase in commercial international land acquisitions for food and/or energy production, particularly in Africa (see for example HRW, 2012). Furthermore, such involuntary displacement and resettlement will unfold in societies where migration, both internally and internationally, and in particular rural to urban migration 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[13][13].

Resettlement that is likely to take place as a consequence of climate change responses outlined in adapation and mitigation plans will be managed within the existing normative and national and international policy and legal frameworks that shape 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 take the form of large-scale development infrastructure projects and it is therefore instructive, as Ferris (2012) has noted, to look again at the literature and research evidence on development-created population displacement and resettlement to consider the strengths and weaknesses of current governance and resettlement policies, and to further consider whether new climate change legislation and the gradual evolution of an international climate change regime, presents an opportunity to improve land acquisition andresettlement governance and practice.

3.1 Resettlement in the context of fractured governance

The development-created 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, involuntary resettlement, and the impoverishment and political marginalisation of those affected both immediately and over generations (Colson, 1971; Scudder, 1991, 1993; McDowell, 1996; Cernea, 2000; Kälin, 2005; Ferris, 2008, 2012; McDowell and Morrell, 2010; McDowell and Bennett, 2012; Xi, J. et al 2012) . In studies that have compared the outcomes of displacement and resettlement across and between the displacement domains (where the proximate cause of displacement was either conflict, natural disaster, development, or the result of state-mandated relocation schemes) the creation of new forms of impoverishment or the deepening of existing impoverishment, and the distancing of displaced and resettled people from full participation in society, was a marked feature of resettlement undertakings (Ferris, 2008; McDowell and Cernea, 2000). 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 forty years.

[13][13] It is estimated that by 2030 there will be 68 Indian cities with populations above 1 million – 18 more than in 2010 (McKinsey 2010).

It has been estimated that 280-300[14][14] million people over the past twenty years (15 million people annually[15][15]) have been displaced and involuntarily resettled as a result of the construction of both public and private sector infrastructure development projects (Cernea, 2008:20). The majority of such displacement and resettlement has taken place in the fast industrialising countries of China and India, principally as a result of infrastructure projects in the hydropower and transport sector (ADB, 2007).. 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 inthe South accelerate steeply, population numbers climb, urbanisation increases and larger projects consume greater areas of land for power, transport, water, commercial agriculture, urban upgrading and industrial zones.

Over recent decades, 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 (Cernea, 1996, 2008). 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, and important sources of nutrition and subsistence not only disappear but the costs of substituting such losses in non-monetised or subsistence economies can become prohibitive (Scudder, 2006). Such losses typically affect several thousand people more than are initially displaced by a reservoir's construction. 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 title to their land, they receive little or no legal protection in the resettlement and compensation process (Pearce, 1999).

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[14][14] Due to under-reporting and hidden displacement this number is likely to be a significant under-estimation.

[15][15] Marking an increase of 5 million people displaced each year when compared to World Bank estimates produced in the mid-1990s.

While economic losses are significant in resettlement, community disarticulation is arguably the most complex impoverishment risk in 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 (2000) 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; McDowell and Bennett, 2012). While these components of impoverishment were identified in relation to involuntary resettlement induced by planned development processes, 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 proposed in the NAPAs and NAMAs.

The UN Guiding Principles on Internal Displacement call for 'large-scale' development-induced displacement only to be undertaken if there is a 'compelling' and overriding public interest, when all other options have been exhausted, and where those affected have given their consent to acquisition and resettlement. However, as governments are faced with limited public funds to meet the demands of infrastructure development the line between public interest and 'for profit' private development is increasingly blurred. Purchase by the private sector is risky to land based rural farmers who, once divested of their land-based livelihoods, have few skills with which to turn cash compensation into sustainable livelihoods. The extent of private engagement in adaptation and mitigationis not yet clear, but states are likely to follow the dominant development financing model to include large-scale public-private arrangements with market mechanisms.[16][16]

New forms of particularly pernicious impoverishment occurring as a result of involuntary resettlement 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 leading to social unrest (McDowell and Bennett, 2012). Pieke has described how 'land acquisition is the most important source of discontent and exploitation in rural China (personal correspondence) (see also Amnesty

[16][16] Such mechanisms have been widely discussed by the UN Secretary General's Advisory Group on Climate Finance but without clear consensus.

International, 2012).[17][17] In India, increasing social unrest or the fear of unrest prompted the Government of India to approve for the first time a Resettlement and Rehabilitation Policy in 2007, focusing on both public and private sector investments. The adoption of the policy was an indication of the importance of this issue to one of the world's major economies. Given such unrest, governments undertaking additional land acquisition involving population resettlement as part of their adaptation response 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, and historically such populations have been at greater risk of summary eviction in the development process (McDowell and Bennett, 2012). 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. A challenge currently exacerbated by five main drivers:

- inadequate available unoccupied public land for development purposes;
- increased forced acquisition of both private lands and public lands occupied by the landless;
- the non-availability of alternative land for replacement to ensure those who lose their lands todevelopment are able to regain sustainable livelihoods;
- increasing private sector investments with minimal regulatory oversight by the state;
- and finally, a rise in public private investments with state involvement in expropriation but where investments are profit-oriented rather than in the public interest.

The protection afforded to those who are most vulnerable to such pressures on development remain weak, in large part because the land tenure rights of individuals and communities are

[17][17] 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 developments including golf courses, property development and special economic zones.

themselves far weaker than eminent domain laws. Important efforts have been made at the international level, led by the UN Declaration on the Rights of Indigenous Peoples to respect and strengthen land tenure systems, and these have been further endorsed by the UNDP Initiative on Legal Empowerment of the Poor (LEAP), and noted in successive World Development Reports. In addition the World Bank has increased its investments in land-tenure related projects, and NGOs have published numerous policy statements urging the strengthening of land tenure. However, as pressure on land grows, the rules, norms and institutions that govern access to and control over traditional lands are being placed under immense strain, not least when eminent domain rights are employed to expropriate land.

Further policy developments over the past decade have sought to improve the response to development-forced displacement and to provide more effective safeguards for those most negatively affected. In addition to the Government of India, other countries such as Vietnam China, Sri Lanka, Lao PDR have adopted national resettlement policies and laws since 2005, and in 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), governments more so today than in the past are prepared to accept that development and economic progress cannot easily 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 counter development 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 development banks and lender governments on new policy and legislative frameworks within which land acquisition and involuntary resettlement would be conducted.[18][18] There was encouragement also that the banks' oversight role was being strengthened.[19][19] However, in recent years, and reflecting a weakening of the development

[18][18] 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.

[19][19] 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

banks' safeguards regime generally, the development banks would appear to have backtracked from this commitment to international standard setting and the momentum gained towards improving legislative frameworks for resettlement has been lost. However, accountability mechanisms, such as the World Bank's Inspection Panel, continue to play an important scrutiny role in response to complaints from ordinary citizens who feel they have been adversely affected by development bank investments in projects that generate resettlement.

Soft law instruments such as the UN Guiding Principles on Internal Displacement in recognising arbitrary displacement in the development process as a potential source of human rights violations, set out the responsibilities of states in avoiding displacement where 'large-scale' projects could not be shown to be in the national interest, and in providing assistance and protection to displaced people eventually enabling their return. While the Principles will not be accepted as new binding international law, elements of the Principles have been incorporated into the domestic legislation of some developing countries, and they influenced the drafting and adoption of the Africa Union Convention on the Protection and Assistance of Internally Displaced People in Africa (Kampala Convention) in October 2009, which also seeks the enhanced protection of development-displacees on the African continent.

Despite these normative and legal gains, and additional technical improvements in calculating and making reparations for assets lost as a result of land acquisition, 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, in the construction of dams for power generation;
- with *conflict related internal displacement* on the increase (see IDMC 2011 Global Report) it is more commonly the case that development-forced displacement is inter-meshing with conflict population displacement - this dynamic has clear protection implications;

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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.

- similarly, *disaster-related displacement* is on the rise (ICRC World Disasters Report 2011) and again there is a dangerous intersection of types of displacement thatraise complex response and protection challenges;
- and the ris*e of new investors, such as C*hina in Africa and the Mekong Region, raises potential social risks that are only now being documented (HRW, 2012).

Development displacees in unstable and particularly undemocratic countries in conflict are particularly susceptible to human rights violations and multiple displacement in this new development context.

4 Resettlement performance and convention reporting

Complex negotiations in an attempt to secure political agreement on the continuation of the Kyoto Protocol (so called KP II)[20[20]], on Monitoring, Reporting and Verification (MRV) requirements, and towards resolving disagreements on the issue of a globally binding rather than domestically binding targets on C02 emissions are currently underway in the transition period between COP17 in Durban and 2020 (by when the new regime including a binding agreement to reduce emissions is scheduled to be in place). While significant funding pledges have previously been made to support NAPA and NAMA projects, it is unclear how many of the projects identified by governments are likely to go ahead while negotiations continue and while political will for an agreement remains weak. However, Fast Start concessional loans and grants distributed through multilateral channels such as the GEF under the Trusteeship of the World Bank, and the CIF managed by a group of multilateral development banks, remain the most immediate and accessible source of financing for NAMA and NAPA projects. While initial pledges of $30 billion between 2010-2012 have not been realised[21[21]], and there is limited transparency on the commitment and disbursement of monies from many donors, Europe, the US and Japan continue to push for financing through this mechanism to enable LDC and Small Island States (SIS) to begin work on their NAMA and NAPA projects.

Fast Start financing is important to certain western governments as a means of rebuilding confidence and trust between developed and developing countries in the continuing absence

[20[20]] Following Canada's decision to withdraw from the Kyoto Protocol in 2012 it is likely that a second commitment period for the Kyoto Protocol will include only EU member states.
[21[21]] Barely half of this amount is likely to be committed (see Nakhooda et.al. 2011).

of any clear consensus on a more general framework for climate financing. Despite the flagging momentum behind Fast Start it 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. Fast Start financing, by its nature, carries the risk that projects may proceed without the full and necessary scrutiny of legal and policy measures to fully protect against land acquisition and resettlement that is poorly managed, underfunded or purely speculative. The channelling of Fast Start funds through the World Bank administered GEF provides both a risk and an opportunity. On the one hand, there is concern that the World Bank's Country Systems Approach, in which the implementation of bank-financed projects increasingly relies on borrower governments' institutions, laws and policies rather than on the Bank's own environmental and social safeguard policies to ensure that people and the environment are not harmed in the development process , marks a further retreat on the part of the Bank towards setting and upholding international standards on resettlement and protecting the most vulnerable. Balasundaram and Dobinger 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' (2006:12). On the other hand, 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 and UN agencies (including UNHCR and UNDP) 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 stand alone but are rather fully integrated into national development planning and international cooperation.

It was agreed at Cancun that Parties would report annually on the delivery of their commitments to Fast Start and formal reporting to the UNFCC therefore is continuing through National Communications (NatComs) with states establishing new institutions for this purpose. The main objective of reporting is to track progress made by governments on carbon emission reductions, to provide international recognition of progress, to introduce

transparency in the use of funds, and ultimately to add credibility to the UNFCC process itself. Overall the reporting regime is not particularly strong. NatComs are sporadic, not subject to expert review, and their quality varies greatly depending on the sufficiency of data and the resources and capacity within governments to undertake complex evaluations. However, it is argued here that within NatComs, and eventually through domestic MRV, there are opportunities to build in the requirement that states in receipt of international financing for projects that involve land acquisition and resettlement provide full and comprehensive reporting on resettlement's legal basis, detailing the policies that guide consultation and compensation, and provide evidence of how any resettlement is to be undertaken and its predicted impact on those affected made clear.

5. Conclusion

This article has argued that in any analysis of green adaptation and mitigation that involves land-use change and resettlement it is important to understand such processes within the international and national complex of population movements including historical internal displacement and resettlement. Climate change related resettlement will not occur in a vacuum but rather will be shaped by other types of conflict and non-conflict related movement within a country and across borders. The complexity of such movements of people 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 demands population relocation.

It has been further argued that such resettlement will take place against the backdrop of what has been described above as the fractured governance of population displacement and resettlement, and poor performance in the public and private development process. Information advanced by governments on their national actions plans to tackle climate change, as we have seen, 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. Little evidence has been advanced 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 conforms with the best available international standards.

The past three decade has seen what Weiss and Korn (2006) have described as ‘bottom up’, soft law and normative attempts (i.e. World Bank’s safeguard policies, UN Guiding Principles, voluntary business codes on social protection) at formulating a regime that strengthens the legal and policy frameworks within which land acquisition and involuntary resettlement take place. The UN’s humanitarian reform process which began in 2005 and was designed to identify and fill gaps in humanitarian protection, involved serious discussions among UN agencies and NGOs about the status of development displaced persons as potentially a ‘people in need’ of humanitarian protection and warranting a humanitarian response. While the UNHCR has stretched its mandate to include the responsibility to protect not only international refugees but also those who have not crossed a border but who nonetheless are in a refugee like situation, the refugee agency along with other humanitarian actors has repeatedly balked at expanding the definition of displacement to include those people who lose their homes and their assets in the development process. Martin (2004, 2010) believes there are arguments in favour of formalising this process and that development-induced population displacement can be considered a form of forced migration and as such could arguably fall under the remit of a newly constituted UN agency (a High Commission for Forced Migration) charged with enforcing a new binding convention on the rights of all displaced persons (internal and international, conflict and non-conflict) to include those displaced and relocated as a consequence of climate change. To date, however, it would seem that land acquisition and involuntary resettlement, unless those displaced people find themselves mixed with more traditional refugees fleeing conflict and whose rights are clearly being violated, will not be considered as warrantinghumanitarian protection.

This position is understandable because the humanitarian world faces a significant challenge dealing with the world’s conflict and natural disaster displaced, often struggling to finance their operations and with an ever present concern that states in both the developed and developing world are questioning the relevance of the 1951 Refugee Convention and may seek revisions which would reduce their legal obligations to protection and asylum. There is a danger that the sheer number of development displacees would eclipse the number of cross-border refugees and IDPs in situations of conflict and divert resources, and the inclusion of those displaced as a result of climate change adaptation and mitigation projects, in the count

of the globally displaced would further broaden the definition of displacement, confuse public understanding and ultimately reduce public sympathy for conflict refugees.

It is therefore unlikely that the humanitarian agencies, headed by the UNHCR, will, as Martin has urged, take a leading protection role in displacement where climate change and climate variability are the most immediate causes. However, the attention drawn to the human consequences of climate change, including displacement and resettlement that is either planned or spontaneous, through the arguments and case studies presented by UNHCR (see Ferris, 2012), discussed at high level humanitarian fora, and argued in civil society advocacy campaigns, has ensured that protection is an issue of concern to the international politics of climate change, and this is raising the potential for persuasion to change perceptions and behaviour among governments who are responsible for managing adaptation.

As Betts (2009) has argued, for persuasion of this kind to work, there needs to be a structural and institutional basis and context within which ideas and evidence can inform behaviour. The negotiations track established at Durban, alongside Fast Start financing discussions, and further detailed negotiations on MRVs and the form of reporting required from NatComs involves a dense array of meetings among the Convention parties that presents opportunities for governments, international organisations or nonstate actors to influence policy decisions. Persuasion, as Betts notes, is more likely to be successful in achieving its objectives where there is an interconnection between issue areas allowing for cross-issue persuasion (2009:188-189) and where decisions taken can be seen to advance the interests of developing states. This article tentatively suggests that Convention negotiations have the potential to influence states understanding of resettlement, specifically in arguing that well-managed resettlement that respects human rights and involves proper investments in livelihood rebuilding has the potential to reduce the likelihood of opposition and unrest to large projects, which in turn could limit future irregular migration, and buttress public support for climate change policies. Outcomes that would be favourable to all Parties.

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