Exploring the Social Dimensions of Climate Change
A Proposal for a Program of Work

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Executive summary

While some scientific uncertainties remain on the character, magnitude and rates of future climate change, there is now widespread consensus in scientific and policy communities that planetary warming will have significant impacts on sea levels, weather systems, ecosystems, public health and economic development. The program of work outlined here aims to explore aspects of the social and political challenges of climate change in order to help the global policy community to respond.

Climate change and increased frequency of severe climate events will clearly become an ever-stronger pre-occupation of global, national and local institutions over the next decade. There are good grounds to expect that the imperative of organizing a global response to this challenge will drive changes in global governance and systems for supra-national collaboration for the next decade. At the national level the need to promote poverty reduction in a carbon constrained world may lead to fundamental shifts in the way that development is understood. Similarly at the local level, climate change and the increased frequency of severe weather events will drive changes in the management of natural resources, which in turn will have profound impacts on local communities. In addition, climate change will further strain local level coping and risk management institutions, especially as less developed countries and less developed regions within countries will be most severely affected. And, as the recent Security Council debate on climate change demonstrates, increasingly climate change is seen as a potential driver of conflict and insecurity.

Climate change as a social issue
In recognition of the importance and implications of climate change for social development, the Social Development Department of the World Bank, in collaboration with the Environment Department, is taking forward a program of work to look at some of the social dimensions of climate change.

The overall purpose of the work program presented here is to strengthen the international community’s response to climate change by systematically integrating into the World Bank’s approach an understanding of the social dimensions of climate change.
The social agenda in relation to climate change has both analytical and operational dimensions. The **analytical agenda** aims to enhance our understanding of the following phenomena: 1) Social dimensions of vulnerability and adaptation to climate change, with a special emphasis on the impacts on social organization and institutions; 2) the linkages between climate change and human security, conflict and migration. The **operational agenda** will focus on assisting institutions at community and national levels to respond effectively by enhancing the capacity for mitigation and adaptation to climate change.

**The work program**

The work program will include (1) **stock-taking** in the areas where substantial existing bodies of work exist to bring the Bank up to speed on the existing knowledge; (2) **country analytical work** aimed at supporting partner country planning processes. Initially the work program will scope out significant issues and areas of concern related to the social dimensions of climate change, building towards a workshop to be held early in 2008. Beyond the initial six-month scoping phase, the focus will be on developing a program of operational and policy work which will ensure that social dimensions are mainstreamed into global action on climate change mitigation and adaptation. The work program we envisage will address issues of migration and conflict, as well as taking a broad and integrated view of the social impacts of climate change. We will also examine specifically the significance of this agenda for social policy responses. The **major components** are envisaged as follows:

1. **Vulnerability, Social Impacts and Policy Responses**

   Assessing vulnerability at the country level requires a combination of perspectives, including understanding biophysical dimensions (sea-level rise, climate variability, extreme weather events, water stress, changes in rainfall patterns), and mapping these onto social and economic dimensions. Different livelihood and social groups will be affected in different ways. Declining availability of water for domestic use in rural environments, for example, is likely to affect women and girls more immediately than men (by increasing time burdens associated with water supply). The direct dependence of the rural poor on natural resources for livelihoods, and relative lack of alternative livelihood strategies, will frequently mean that the impacts of climate change are more severe for poor people in general (and certain specific categories of poor people) than the non-poor. In urban environments, poor people not only often live in the areas most vulnerable to effects such as flooding and storm damage but also are the least able to avoid the direct and indirect impacts of climate change.

The initial objectives of the work program in the area of social vulnerability and impacts are to synthesize key findings from the literature and consider their operational implications for the World Bank and other development actors. Synthesis work will be conducted for the January 2008 workshop taking the form of commissioned papers on
social dimensions of climate change in relation to urban environments, rural dry-lands and indigenous peoples which will feed into an understanding of social dimensions of vulnerability to climate change, and a review of issues in at least two regions conducted within the World Bank.

In parallel work will be taken forward in collaboration with the Environment Department Climate Change Team (ENV CC Team) and Global Facility for Disaster Risk Reduction (GFDRR) on approaches to assessing vulnerability to climate change at the national level which will integrate biophysical and social dimensions. The intention is to provide tools for national policy makers in developing and implementing national planning frameworks for adaptation to climate change which effectively consider actions across environmental, infrastructural, economic and social dimensions of public policy.

The responses of local institutions to climate change in developing countries will be a key part of the global response in relation to both adaptation and mitigation. Information on how and under which conditions local level institutions can help reduce climate change-related vulnerability, enhance adaptive capacity, and promote sustainable livelihoods through more effective development policies and programs is currently sparse. Understanding how local institutions respond will be critical to producing effective policy responses. For example, the history of responses to prior events of environmental stress can tell policy-makers a lot about which institutions people turn to in times of stress to help with supporting productive systems, and coping with risks. This element of the work program will, therefore, also be supported by a study on the role that rural institutions can play in supporting both adaptation and mitigation activities.

2. Conflict and Human Security

The UN Security Council debated the implications of climate change for global security on the 17th of April 2007, bringing the issue centre stage in global debates in both areas. A considerable amount of work has been done to examine the ways in which processes associated with climate change might act as drivers for civil and inter-state conflict. There is some evidence that renewable resource scarcity can, at least under some conditions, be a driver for internal conflict. There are also conflict risks which could arise from the migration effects of conflict change. Other factors which have been highlighted which could be exacerbated by climate change, and could act as drivers of violent conflict are vulnerable livelihoods, poverty and inequality, and state fragility.

Prior to the January workshop a stocktaking piece will be commissioned which will review available evidence on linkages between climate change and violent conflict, with a focus on civil conflict, and consider the policy implications.
3. **Climate Change and Human Migration**

The decision to migrate for any given individual is rarely attributable to a single factor. Mapping the effects of climate change onto migration patterns is therefore a considerable challenge. However, scenarios which involve a weakening livelihood base for rural populations related to declining rainfall, or threats to environments and habitats from sea-level rise and extreme weather events, will clearly lead to increased temporary or long-term migration for large groups or categories of people. In some extreme cases societies may be no longer viable in their established homelands due to drought or sea-level rise. At this end of the spectrum forced relocation is a more appropriate way of framing the issue that voluntary migration.

Prior to the January workshop a stocktaking piece will be commissioned which will review the existence evidence and analysis on climate change as a driver of large-scale migration and consider the implications for policy and future knowledge development and research activities. The paper will review implications for policy responses, in terms of both policy instruments which can assist people to stay in their present homelands (e.g. infrastructural work, social protection measures, support to agricultural adaptation measures), and those which support migration as a valid and at times necessary adaptation strategy (including support to managing migration flows for ‘receiving’ areas).

Some of the **key areas for operational response** where the work program should make a contribution are as follows:

a) **Support to community-based adaptation through building on the Bank’s experience with Community Driven Development programs (including work on CDD approaches to help communities respond to natural disasters).** In the short term, work is in progress to examine ways in which local institutions can access Carbon Finance mechanisms to participate in mitigation activities. In the longer run, there will be a need to find ways of mobilizing both local governments and communities to play a central role in local level action for mitigating and adapting to the impacts of climate change.

b) **Bringing social policy mechanisms into the picture for adaptation planning in middle income and low income countries.** Social insurance and social transfer mechanisms will play a major part in helping people to adapt to and cope with many of the impacts of climate change. Planning priorities in health, education and livelihood support will increasingly need to take account of the impacts of climate change (e.g. changing healthcare priorities due to changes in disease prevalence and spread, education provision which widens people’s capabilities and choices).
c) **Understanding the political, institutional and governance dimensions of responding to climate change.** The capacity for adaptive response raises a number of issues. Aside from straightforward dimensions of institutional capability (skills, assets, finance) there is the question of how effectively different public institutions can co-operate across institutional boundaries within the public sector – and with private sector and civil society actors. Awareness of the issue among citizens and the development of a public debate will be critical to promoting public action on both adaptation and mitigation. Where states are structurally weak, have low institutional capacity, tend to lack transparency and accountability, and are subject to factional tensions based on dimensions of social identity (ethnicity, religion etc.), the challenge of supporting an effective public response will be particularly important. Under these conditions the risk of climate change leading to deteriorating human security will be greater.

A Working Group has been formed to guide the program of work within the Bank. In due course an external Steering Group will also be convened. The core team in SDV will work closely with colleagues from other policy departments and the Regional structures of the Bank to find opportunities to feed results into operational planning and piloting. To this end we will look for opportunities to support country and regional analytical work in the short and medium term, and we anticipate that some of this will be presented for discussion at the January workshop. We will also feed in as requested to corporate policy processes related to climate change.
I. Introduction

According to the last Inter-governmental Panel on Climate Change (IPCC) assessment report (AR4)\(^1\), the global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005\(^2\). In addition, this atmospheric concentration of carbon dioxide in 2005 exceeds by far the natural range over the last 650,000 years (180 to 300 ppm) as determined from ice cores. This is coincident with the increase in the mean global surface temperature which, according to the report, increased from 1850 – 1899 to 2001 – 2005 an average of 0.76 °C and led to the conclusion that the globally averaged net effect of human activities since the Industrial Revolution has been one of warming. In addition, different studies predict that a doubling of \(CO_2\) concentrations today could raise the global average surface temperatures by a range from 1.5 to 4.5\(^\circ\)C.

Despite the scientific uncertainties regarding the character, magnitude and rates of future climate change, the likelihood of planetary warming is a major cause of concern for scientists and policy-makers given the linear and non-linear effects it can have on sea levels, ecosystems and species preservation, public health and disruption of economic activities as well as economic growth. Figure 1 below illustrates the areas where impacts from climate change are expected in the short and long-term.

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\(^2\) Annual fossil carbon dioxide emissions increased from an average of 6.4 GtC per year in the 1990s, to 7.2 GtC per year in 2000–2005. The primary responsible for the atmospheric concentration of carbon dioxide since the pre-industrial period is fossil fuel use.
Figure 1. Areas of potential climate change impacts.

The IPCC was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) to promote a periodical assessment of the scientific, technical and socio-economic information relevant to understanding the processes associated with climate change, potential impacts and options for adaptation and mitigation. In 1994 the United Nations Framework Convention on Climate Change (UNFCC\textsuperscript{3}) entered into force. Since then, several efforts have been made to devise ways to reduce increasing GHG emissions to the atmosphere, including the 1997 Kyoto Protocol, as well as cope with the already unavoidable global mean surface temperature increases.

\textsuperscript{3} The Convention is nearly universal, having been ratified by 191 countries to date.
On April 17th 2007 the UN Security Council held its first ever debate on climate change and more recently, at the G8 Conference held in Heiligendamn, Germany, on June 8, the richest 8 countries in the world, jointly with the most important emerging economies (Brazil, China, India, Mexico and South Africa) agreed on the need for a new global agreement on climate change under the UNFCC by 2009, which should incorporate mitigation mechanisms such as carbon markets and economic incentives for developing countries.

Climate change and increased frequency of severe climate events will clearly become an ever-stronger pre-occupation of global, national and local institutions over the next decade. There are good grounds to expect that the imperative of organizing a global response to this challenge will drive changes in global governance and systems for supra-national collaboration for the next decade. The need to promote poverty reduction in a carbon constrained world may lead to fundamental shifts in the way that development is understood. Similarly at the local level, climate change and the increased frequency of severe weather events will drive changes in the management of natural resources, which in turn will have profound impacts on local communities. In addition, climate change will further strain local level coping and risk management institutions, especially as less developed countries and less developed regions within countries will be most severely affected. And, as the Security Council debate demonstrates, increasingly climate change is seen as a potential driver of conflict and insecurity.

1. Economic and social dimensions of climate change – emerging concerns in the literature

In the 1995 Second Assessment Report (SAR\(^4\)), IPCC WGII explicitly recognized the relevance of the economic and social issues related to climate change. They further explored the social dimensions of climate change by emphasizing equity considerations, in terms of developing countries effectively participating in climate change decision-making processes internationally as well as building national capacity to make and implement collective decisions in an equitable manner (procedural equity) and incorporating both efficiency and equity concerns in the analysis of mitigation and adaptation measures (consequential equity)\(^5\). In addition, the report made some considerations regarding inter-temporal equity linking it to the debate on the most appropriate discount rate as well as the applicability of the cost-benefit analysis (CBA) in this context.


\(^5\) Since countries have different vulnerability levels, wealth, capacity, resource endowments, it can be expected that adaptation and mitigation costs will be borne inequitably.
From 1995 to present many studies were conducted to improve our understanding of the economic and social dimensions of climate change, including the Stern Report on Climate Change (2006). Despite the focus on measuring the economics costs of climate change and mitigation policies, Stern emphasized the importance of ethics and inter-temporal equity considerations in the debate as well as on the need to focus the analysis on how the individual countries should assess their policy positions. The IPCC TAR\textsuperscript{6} from 2001 started a discussion about the concept of ‘mitigative and adaptation capacity’ and included new information related to the institutional and development context of climate change mitigation and adaptation policies. The main conclusion reached was that the in-country capacity to implement such policies depends not only on man-made and natural capital but also on institutions\textsuperscript{7} and the responses to climate change depend on both capacities and policies and the way they influence each other.

**Box 1. Mitigation and Adaptation**

Action around climate change is commonly understood in terms of the distinction between mitigation and adaptation.

Mitigation covers the range of actions taken to limit the scale of global warming by reducing emission of greenhouse gases. The Stern Review (2006) points to three key areas of future action by the international community: strengthening emissions trading schemes to promote cost-effective reductions in emissions and bring forward action in developing countries: technology cooperation to boost the effectiveness of investments in technical innovation around the world; and action to reduce deforestation, which contributes more to global emissions each year than the global transport sector. Mitigation actions are also the focus of the growing global popular activism around climate change in terms of issues of individual lifestyle, government action, private sector social responsibility and international action.

Adaptation refers to actions taken to help societies cope with the impacts of climate change. As the poorest countries are most vulnerable they need to be the focus of the international community’s efforts. The Stern Review argues that climate change needs to become fully integrated into thinking about development policy, and that international support will be needed. Increasingly international NGOs are arguing that the funding of adaptation costs by richer nations (who are largely responsible for the effects) should be seen outside the framework of official development assistance on the ‘polluter pays’ principle (see for example Oxfam (2007) which puts the global costs of adaptation in poor countries at US$50 bn per annum).


\textsuperscript{7} Concept of institutions which includes markets, information sharing mechanisms, legal frameworks but also formal and informal networks.
The IPCC AR4\(^{8}\) represents a stronger effort to link climate change and sustainable development and clarify the main differences between the mitigation and adaptation agenda. While both of these dimensions are related to sustainable development goals they differ in terms of the benefits. While mitigation policies have global and long-term direct benefits, adaptation policies are more linked to shorter and local benefits (Dang et al: 2003).

Other relevant contributions included in the report are those from Adger (2001) and Burton et al (2002). Adger (2001) emphasized the role of social capital in adaptation, social capital being understood as the group of ‘norms and networks that enable people to act collectively’ (Woolcock and Narayan: 2000). Burton et al (2002), on the other hand, highlighted that research on adaptation needs to focus on evaluating the social and economic determinants of vulnerability\(^{9}\) in a development context.

Finally, the report presents in some detail the alternative approaches to social justice that can be used in any analytical work namely, traditional economic-based approach of welfare economics, rights-based approach and capabilities-based approach linking them with the analysis of inter and intra-generational equity. Obviously, the approach used and ethical position assumed regarding the climate change debate will influence the analytical outcomes and policy recommendations.

The potential linkages between climate change and human security were explored in a major workshop in Norway in 2005.\(^{10}\) A range of papers presented at that workshop explore the differing ways in which climate change might increase the vulnerability of poor rural and urban populations. These include: increased vulnerability of livelihoods through reduced access to and quality of natural resource assets; decreased capacity of states to provide opportunities and services; deteriorating urban environments due to climatic effects; increased vulnerability to vector borne infectious diseases; heightened conflict risks due to resource scarcity and migration effects.\(^{11}\) A survey of these papers indicates that the links between climate change and growing vulnerabilities to a range of threats are an increasing area of research and concern for the academic community. But it also suggests a need for caution in drawing facile conclusions about the potential for climate change to promote some effects such as an increase in violent civil conflicts. Nordas and Gleditsch (2005) conclude that while ‘it has not yet been convincingly demonstrated that climate change is an important factor in conflict’ the fact that climate

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\(^{9}\) The objective should be to assess present and future climate variability and non-linear effects, economic and non-economic impacts and the distribution of these.

\(^{10}\) Organized by the Global Environmental Change and Human Security program in collaboration with CICERO and the Centre for the Study of Civil War at the International Peace Research Institute Oslo.

\(^{11}\) See for example, Barnett and Adger (2005), Meier and Bon (2005), Manuta and Lebel (2005), Tsai and Liu (2005)
change covers most of the aspects covered in an existing literature on resource scarcity and conflict suggests that such causal links are reasonable to expect and probably will in due course be demonstrated.

The extensive nature of activity looking at broadly social dimensions of climate change is further reinforced by the extensive range of recent publications, and ongoing research and knowledge programs (see, for example, [http://www.eldis.org/go/topics/resource-guides/environment/climate-change/adaptation](http://www.eldis.org/go/topics/resource-guides/environment/climate-change/adaptation)).

2. Relevant Policy Frameworks within the World Bank

The social development group in the World Bank has developed a range of approaches for the analysis of social and political dimensions of development operations, ranging from the Social Analysis Sourcebook (2003) which focused on project investments, to the more recent ‘TIPS’ Sourcebook (Tools for Institutional, Political and Social Analysis of Policy Reform, 2007), which emerged from the Banks experience with Poverty and Social Impact Analysis of policy reforms. The Bank-Wide Strategy and Implementation Plan for Social Development “Empowering People by transforming institutions” (World Bank: 2005) focuses on three major themes – support for social inclusion, building cohesive societies, and accountable institutions.

Climate change has clear implications in relation to these themes and concerns. In terms of inclusion and equity it is a dramatic phenomenon, with hugely unequal distributions of both ‘carbon rights’ and energy consumption, and the adverse consequences of climate change. Richer people in richer countries have enjoyed the benefits of high-carbon economies, but poorer people in poorer countries are likely to bear the highest costs. In terms of the human security needed to underpin stable and cohesive societies there are significant impacts on a range of related factors, from livelihoods to migration and conflict. In terms of the accountability of public institutions the greatest challenge of the coming decade will be to respond to the growing global civil society voice demanding effective action with measures to establish the necessary collective action at a global level, encompassing governments, the private sector and actions by ordinary people as consumers and investors.

Regarding the policy frameworks that guide the World Bank’s work on climate change, the most recent is the Clean Energy for Development Investment Framework: The World Bank Group Action Plan (2007) which focuses on three pillars: improving access to energy in Sub-Saharan Africa (SSA); supporting the transition to a low carbon economy and development trajectory; and adapting to the impacts of climate change.
The commitment for the first pillar is to increase the percentage of households connected in SSA, from around 25 percent in 2005 to 35 percent in 2015 and 47 percent by 2030, to be achieved through the pooling of funding from several sources, including the private sector. Insofar as the second pillar is concerned, the overall objective is to support, on demand from the countries, the development and financing of low carbon energy strategies which at the same time support economic growth and poverty alleviation, to be achieved through mainly a process of scaling up analytical, knowledge and investment support. Finally, in the context of the third pillar, the WB aims at expanding the knowledge of climate risk management, applying this knowledge in Bank operations and building a comprehensive set of instruments and guidelines to establish standards of best practice. As the document states ‘mainstreaming adaptation to climate risks into the day-by-day activities of the IBRD Group is the core focus of the work program’ (World Bank: 2007: 19).

The World Bank Policy on Indigenous People (OP 4.10 World Bank: 2005) clearly recognizes indigenous people as belonging to particularly vulnerable and marginalized groups, which are often highly dependent on a fragile natural resource base for their livelihood. The policy highlights their specific characteristics and acknowledges that those characteristics expose them to different types of risks and levels of impacts from development projects. In addition, it is also emphasized that their economic, social and legal status frequently restricts their capacity to defend their interests and rights. Even though the operational policy is intended to defend indigenous people’s rights in the context of World Bank operations, it is also an important framework and policy document to have in mind when discussion impacts of climate change and in particular its social dimensions.

The work program outlined here will serve to stimulate a closer working relationship between the Bank’s social development group and other parts of the Bank that will be centrally engaged in meeting the challenge of climate change, in particular the Environment Group, and some of the infrastructure sectors that will be key to both mitigation and adaptation efforts (notably energy, water and transport).

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12 The World Bank Indigenous People Policy considers indigenous people to be, in a generic way, a distinct, vulnerable, social and cultural group which have the following characteristics: (a) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; (b) collective attachment to geographically distinct habitats or ancestral territories and its natural resources; (c) customary cultural, economic, social, or political institutions which are separate from those of the dominant society and culture; and (d) an indigenous language, often different from the official specific country language.
II. Work Program

1. Main objectives of the work program

The overall purpose of the work program presented here is to strengthen the international community’s response to climate change by systematically integrating into the World Bank’s approach an understanding of the social dimensions. The social agenda in relation to climate change has both analytical and operational dimensions. The analytical agenda aims to enhance our understanding of the following phenomena: 1) Social dimensions of vulnerability and adaptation to climate change, with a special emphasis on the impacts on social organization and institutions; 2) the linkages between climate change and human security, conflict and migration. The operational agenda will focus on assisting institutions at community and national levels to respond effectively by enhancing the capacity for mitigation and adaptation to climate change.

Work has already been done in some of these areas, though not with a clear or specific focus on social analysis. A range of civil society and international organizations have already published analytical work on some of the areas identified and have ongoing work programs. The current proposal was developed after conducting a partial mapping exercise of the work done by the main organizations in order to avoid duplication of efforts and resources. In addition, a mapping exercise of the WB initiatives on climate change was also undertaken jointly with other departments in the Sustainable Development Network to identify potential areas for future collaboration.

2. Structure and outputs of the work program

The work program will include (1) stock-taking in the areas where substantial existing bodies of work exist to bring the Bank up to speed on the existing knowledge; (2) country analytical work aimed at supporting partner country planning processes. Initially the work program will scope out significant issues and areas of concern related to the social dimensions of climate change, building towards a workshop to be held early in 2008. Beyond the initial six-month scoping phase, the focus will be on developing a program of operational and policy work which will ensure that social dimensions are mainstreamed into global action on climate change mitigation and adaptation. The work program we envisage will address issues of migration and conflict, as well as taking a broad and integrated view of the social impacts of climate change. We will also examine specifically the significance of this agenda for social policy responses. The major components are envisaged as follows:
Vulnerability, Social Impacts and Policy Responses

Assessing vulnerability at the country level requires a combination of perspectives, including understanding biophysical dimensions (sea-level rise, climate variability, extreme weather events, water stress, changes in rainfall patterns), and mapping these onto social and economic dimensions. Different livelihood and social groups will be affected in different ways. Declining availability of water for domestic use in rural environments, for example, is likely to affect women and girls more immediately than men (by increasing time burdens associated with water supply). The direct dependence of the rural poor on natural resources for livelihoods, and relative lack of alternative livelihood strategies, will frequently mean that the impacts of climate change are more severe for poor people in general (and certain specific categories of poor people) than the non-poor. In urban environments, poor people not only often live in the areas most vulnerable to effects such as flooding and storm damage but also are the least able to avoid the direct and indirect impacts of climate change.

The initial objectives of the work program in the area of social vulnerability and impacts are to synthesize key findings from the literature and consider their operational implications for the World Bank and other development actors. Synthesis work will be conducted for the January 2008 workshop taking the form of commissioned papers on social dimensions of climate change in relation to urban environments, rural dry-lands and indigenous peoples which will feed into an understanding of social dimensions of vulnerability to climate change, and a review of issues in at least two regions conducted within the World Bank.

In parallel work will be taken forward in collaboration with the Environment Department Climate Change Team (ENV CC Team) and Global Facility for Disaster Risk Reduction (GFDRR) on approaches to assessing vulnerability to climate change at the national level which will integrate biophysical and social dimensions. The intention is to provide tools for national policy makers in developing and implementing national planning frameworks for adaptation to climate change which effectively consider actions across environmental, infrastructural, economic and social dimensions of public policy.

The responses of local institutions to climate change in developing countries will be a key part of the global response in relation to both adaptation and mitigation. Information on how and under which conditions local level institutions can help reduce climate change-related vulnerability, enhance adaptive capacity, and promote sustainable livelihoods through more effective development policies and programs is currently sparse. Understanding how local institutions respond will be critical to producing effective policy responses. For example, the history of responses to prior events of environmental stress can tell policy-makers a lot about which institutions people turn to in times of stress to help with supporting productive systems, and coping
with risks. This element of the work program will, therefore, also be supported by a study on the role that rural institutions can play in supporting both adaptation and mitigation activities. The work will include the collection and analysis of primary data on 5 countries (India, Vietnam, Yemen, Afghanistan and Ethiopia).

**Conflict and Human Security**

The UN Security Council debated the implications of climate change for global security on the 17th of April 2007, bringing the issue centre stage in global debates in both areas. A considerable amount of work has been done to examine the ways in which processes associated with climate change might act as drivers for civil and inter-state conflict. There is some evidence that renewable resource scarcity can, at least under some conditions, be a driver for internal conflict. There are also conflict risks which could arise from the migration effects of conflict change. Other factors which have been highlighted which could be exacerbated by climate change, and could act as drivers of violent conflict are vulnerable livelihoods, poverty and inequality, and state fragility.

Prior to the January workshop a stocktaking piece will be commissioned which will review available evidence on linkages between climate change and violent conflict, with a focus on civil conflict, and consider the policy implications.

**Climate Change and Human Migration**

The decision to migrate for any given individual is rarely attributable to a single factor. Mapping the effects of climate change onto migration patterns is therefore a considerable challenge. However, scenarios which involve a weakening livelihood base for rural populations related to declining rainfall, or threats to environments and habitats from sea-level rise and extreme weather events, will clearly lead to increased temporary or long-term migration for large groups or categories of people. In some extreme cases societies may be no longer viable in their established homelands due to drought or sea-level rise. At this end of the spectrum forced relocation is a more appropriate way of framing the issue that voluntary migration.

Prior to the January workshop a stocktaking piece will be commissioned which will review the existence evidence and analysis on climate change as a driver of large-scale migration and consider the implications for policy and future knowledge development and research activities. The paper will review implications for policy responses, in terms of both policy instruments which can assist people to stay in their present homelands (e.g. infrastructural work, social protection measures, support to agricultural adaptation measures), and those which support migration as a valid and at times necessary adaptation strategy (including support to managing migration flows for ‘receiving’ areas).

Some of the **key areas for operational response** where the work program should make a contribution are as follows:
a) **Support to community-based adaptation through building on the Bank’s experience with Community Driven Development programs (including work on CDD approaches to help communities respond to natural disasters).** In the short term, work is in progress to examine ways in which local institutions can access Carbon Finance mechanisms to participate in mitigation activities. In the longer run, there will be a need to find ways of mobilizing both local governments and communities to play a central role in local level action for mitigating and adapting to the impacts of climate change.

b) **Bringing social policy mechanisms into the picture for adaptation planning in middle income and low income countries.** Social insurance and social transfer mechanisms will play a major part in helping people to adapt to and cope with many of the impacts of climate change. Planning priorities in health, education and livelihood support will increasingly need to take account of the impacts of climate change (e.g. changing healthcare priorities due to changes in disease prevalence and spread, education provision which widens people’s capabilities and choices).

c) **Understanding the political, institutional and governance dimensions of responding to climate change.** The capacity for adaptive response raises a number of issues. Aside from straightforward dimensions of institutional capability (skills, assets, finance) there is the question of how effectively different public institutions can co-operate across institutional boundaries within the public sector – and with private sector and civil society actors. Awareness of the issue among citizens and the development of a public debate will be critical to promoting public action on both adaptation and mitigation. Where states are structurally weak, have low institutional capacity, tend to lack transparency and accountability, and are subject to factional tensions based on dimensions of social identity (ethnicity, religion etc.), the challenge of supporting an effective public response will be particularly important. Under these conditions the risk of climate change leading to deteriorating human security will be greater.

### 3. Process for the implementation of the work program

The work program being proposed entails (a) analytical work undertaken by the WB Social Development Department, in collaboration with the ENV CC Team and other interested networks and units within the Bank, (b) analytical work undertaken by outside organizations under the supervision of the WB, (c) a research process involving a workshop in Washington bringing together the participating institutions and other key stakeholders to identify emerging common themes, major issues and policy implications (d) a program for disseminating the results which will set an agenda for future policy
analysis, action and research for the next five years and serve as an instrument to establish a dialogue between centers of expertise and knowledge.

Within the World Bank, a Working Group has been formed to guide the program of work within the Bank. In due course an external Steering Group will also be convened with representation from leading figures in academia, the donor community, other UN agencies, and international civil society to guide this program of work. The core team in SDV will work closely with colleagues from other policy departments and the Regional structures of the Bank to find opportunities to feed results into operational planning and piloting. To this end we will look for opportunities to support country and regional analytical work in the short and medium term, and we anticipate that some of this will be presented for discussion at the January workshop. We will also feed in as requested to corporate policy processes related to climate change.

It is anticipated that papers will be commissioned externally on several of the areas listed above (specifically on conflict, migration, urban social policy, rural dry-lands, rural institutions and livelihoods for which terms of reference are annexed). Work has already commenced on the role of rural institutions in handling climate change. Those institutions with a track record in the fields concerned, and an interest and intent to pursue the issue on a longer-term basis will be asked to present an initial think-piece in key areas of concern. In due course a program of work on country level analysis will start (in partnership with the Norwegian/Finnish Trust Fund for Environmentally and Socially Sustainable Development) which will build on the work program outlined here.

At least one workshop will be held in January 2008 to bring together the different teams working on the program, and finalize conclusions. During the process of developing the various analytical outputs close communication will be maintained between the various institutions and with the steering committee. A program of dissemination of key findings will be taken forward in early 2008.
Bibliography


Clark, William (2007), Environmentally Induced Migration and Conflict, WBGU (Wissenschaftlicher Beirat Der Bundesregierung Globale Umweltverangerungen), Berlin.


IISD (2003), Sustainable Dry-lands Management: A strategy for securing water resources and adapting to climate change, International Institute for Sustainable Development, Canada.


1. Introduction

The World Bank is undertaking a program of work on the social dimensions of climate change. The overall purpose of the work program is to strengthen the international community’s response to climate change by systematically integrating into the World Bank’s approach an understanding of the social dimensions. A key part of this is assessing the social impacts of climate change in different environments, with a view to developing policy and program responses which are appropriate to the context.

Climate change is expected to bring about social and economic changes that in turn are likely to affect the onset and trajectory of violent conflict in many countries. These changes may be direct or indirect outcomes of climate change and may include factors such as resource scarcity, decreased agricultural productivity, growing inequality, declining state capability, increased unemployment in certain sectors, changed migration patterns, and increased urban population pressure. These, and other factors, may affect different types of conflict in different ways and at different timelines, depending on a range of mediating factors and circumstances. The question we will be concerned with is how the expected outcomes of climate change may affect conflict, and what the implications of this are for development policy and practice.

There is a growing body of work which deals with the potential consequences of climate change for conflict and security. Broadly, this literature examines the ways in which biophysical dimensions of climate change (changes in rainfall patterns, increased frequency of severe weather events, sea-level rise, increasing temperatures, glacier melt) promote a series of social and political impacts, which may in turn create or escalate conflict. These factors can be grouped under the following main headings:

1. **Resource scarcity** (particularly in relation to water) leading to competition, and erosion of livelihoods. Linked with this, high unemployment of young men is a factor potentially increasing the risk of conflict escalation and violence.

2. **Increasing group-based inequality**, resulting from the tendency for the poor to be more affected by climate change impacts and environmental degradation. If this inequality maps onto major social categories (ethnic, religious etc.) where social and political tensions already exist then, arguably, the potential for promoting conflict is greater.

3. The erosion of **state capacity**, due to potential declines in fiscal revenues as productivity is eroded in some areas of the economy, and the stretching of state capabilities potentially caused by having to meet the costs of adaptation, and
respond to increasingly frequent natural disasters. Key dimensions of this are growing political instability and the weakening of political institutions.

4. Migration caused by environmental stress (declining rainfall, temperature rises, sea-level rise, loss of water resources) or, possibly, conflict resulting from environmental stress.

To date, studies that have been trying to explain a possible link or relationship between resource-scarcity\(^\text{13}\) and the occurrence of violent conflicts have provided divergent results. While the case studies tend to support the hypothesis that resource scarcity plays a big role in small-scale conflicts and a negligible one in large-scale civil and international wars, large cross-national comparative studies, using data only on civil and international wars, seem to provide less support to that hypothesis. It seems, however, that the smaller the scale of the conflict, the more important the endowment of renewable resources becomes.

On the link between population, environment and conflict itself there are studies showing completely opposite results, perhaps as a result of a different conceptual understanding of resource scarcity. For example, while Andre & Platteau (1998) found that a decreasing land per person ratio and rising inequalities in resource distribution coupled with reduced off-farm employment opportunities lead to increased violence in north-eastern Rwanda in the period 1988-1995, Tiffen et al (1994) found that in the Machakos District in Kenya from the 1930s to the end of the 1980s population, livestock, output per hectare growth was possible despite its location on semi-arid area, supporting the view of Boserup that population pressure is a way to achieve economic growth through economies of scale, not being, as neo-Malthusians believe, the driver of environmental degradation and conflict. Climate change is expected to constraint further the livelihoods of those living in the most sensitive and fragile ecosystems and lead to higher levels of resource scarcity (e.g. rainfall) in several locations. In this sense, the analysis of the links between the expected impacts of climate change and frequency of armed conflict or collective violence is not a new field separate from the more consolidated analytical field of resource-scarcity and conflict.

It is, nonetheless, important to understand how the impacts of climate change can aggravate existent conflict dynamics or create new ones among the different social groups as well as how it can have an impact on social capital at national and local level and international security concerns. Of particular importance in this context is to look at how the increased probability of migration flows across and inside countries due to climate change would increase the probability and trajectory of different types of conflicts.

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\(^{13}\) Understood as low access to a renewable resource provoked by a decrease in the absolute level of the resource and/or increased demand for it (Theisen and Brandsegg: 2007).
The link between the four possible ‘drivers’ of conflict outlined above and any resulting incidence of violent conflict would be mediated by a range of institutional factors – most importantly the strength of institutions for conflict resolution and handling at the local, national and international level. It has been argued, therefore, that the most serious risks of climate change leading to conflict will arise in fragile institutional environments with weak state structures (Barnett and Adger 2007, forthcoming).

The rationale for undertaking analytical work on the relationship between the expected impacts climate change and conflict linking it to a social analysis framework is, therefore, very strong. The following sections will present the objectives and process for undertaking the work.

2. Main Objectives

The main objective is to analyze existent and emerging evidence regarding the relationship between expected impacts of climate change and violent conflict, with a particular focus on civil conflict. Although the primary focus will be on intra-state conflict, it will be important to consider potential impacts of such conflicts on regional (cross-border) security. The work should also outline the relevance of the main findings for development policy and practice – including priorities for climate change mitigation and adaptation.

3. Scope of Work

The consultants should:

1) Outline a coherent conceptual basis for the study which builds on widely accepted categories and provides a clear rationale for the selection of empirical case material.

2) Review evidence and analysis of the links between climate change and conflict, proposing a framework for analysis which can guide understanding of the channels by which climate change might affect the likelihood of violent civil conflict. This should include consideration of arguments related to resource scarcity, inequality, state fragility and migration. The analysis should include both quantitative, and qualitative analytical tools, and use of appropriate historical examples which can guide understanding of linkages between processes of environmental change and conflict.

3) Review evidence and analysis of the mediating factors which could increase or decrease the likelihood of climate change dynamics contributing to civil conflict and insecurity. A particular focus here will be the factors determining the effectiveness of institutions which act to prevent or mitigate violent conflict.

4) Identify lessons for development policy and practice emerging from the review. For example, if there are conditions under which risks of conflict are
particularly serious (e.g. fragile state environments where conflict change effects will drive increasing inequality between social factions) then this can be factored in as a priority for the international community’s engagement in support to climate change adaptation. Similarly, where migration effects will place fragile livelihood and social environments under stress, engagement with support to receiving communities may be a priority.

5) Identify priorities for a future research agenda in this field.

The section on policy implications should focus on identifying priority practical measures which can be undertaken by different development actors. It should facilitate the process of mainstreaming the social dimensions of climate change in the implementation of programs and projects by both international organizations, like the World Bank, but also national and civil society institutions.

The framework will be validated with country/regional studies which will be undertaken mainly in FY09. Specific TOR’s will be developed for that purpose, which will also include a component for establishing the social costs of the expected climate change related social impacts.

4. Implementation Process and Schedule

The process of implementation of the work should follow the stages presented below:

- Preparation of a concept note.
- Review of existing literature.
- Draft outline of structure of the paper and key content elements for the different sections.
- Consultation with leading thinkers and policy centers: review of work by relevant individuals, think tanks and policy centers to assess their ideas in this area and to identify future sources and partners for World Bank work.
- Preparation of draft paper.
- Online discussions with World Bank staff.
- Online consultation with other stakeholders: dialogue with other stakeholders including the private sector, civil society, communities, ideas networks and public organizations.
- Preparation of final draft prior to January 2008 workshop.

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<td>- discussion of TOR’s and contractual arrangements</td>
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<td>- discussion of preliminary results</td>
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5. Outputs

The outputs expected under this work are a concise and clear analytical working paper at publication standard and the presentation of the major findings and recommendations at a workshop to take place in January 2008.

6. Budget

The total financing requirement for this work is estimated to be US$ 51,700.

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7. Profile of Candidates

The consultants hired to perform the work should have the following qualifications and experience:

- Advanced university degree or proven ability to perform the tasks required for the position. A research and publication record in areas related to the work program would be particularly relevant.
- Experience in preparing policy-related working papers and analytical material in the area covered.
- Proven ability to work successfully and under tied deadlines.
- Excellent command of English with proven writing skills.
- Good presentation skills.

1. Introduction

The World Bank is undertaking a program of work on the social dimensions of climate change. The overall purpose of the work program is to strengthen the international community’s response to climate change by systematically integrating into the World Bank’s approach an understanding of the social dimensions. A key part of this is assessing the potential and actual linkages between climate change and human migration.

The decision to migrate for any given individual is rarely attributable to a single factor. Mapping the effects of climate change onto migration patterns is therefore a considerable challenge. However, scenarios which involve a weakening livelihood base for rural populations related to declining rainfall, or threats to environments and habitats from sea-level rise and extreme weather events, will clearly lead to increased temporary or long-term migration for large groups or categories of people. In some extreme cases societies may be no longer viable in their established homelands due to drought or sea-level rise. At this end of the spectrum forced relocation is a more appropriate way of framing the issue that voluntary migration.

The links between climate change, migration development and poverty reduction are clearly significant. At the ‘sending’ end, if climate change promotes out-migration then this may leave certain categories of people (those unable to migrate because of the lack of human, social or financial capital) even more vulnerable to the effects of environmental degradation as their communities start to lose the human resources that they need to respond. At the receiving end, there is the possibility of social tensions, environmental stress and pressure on economic resources (particularly for local governments). Migration can also be seen as a positive adaptation strategy with potential benefits to both sending and receiving societies, through remittances sent back to the homelands, and the positive contributions made to economic and social life in the receiving areas.

The objective of this consultancy is to take stock of evidence and analysis on climate change as a driver of large-scale migration and consider the implications for policy and future knowledge development and research activities. The paper will review implications for policy responses, in terms of both policy instruments which can assist people to stay in their present homelands (e.g. infrastructural work, social protection measures, support to agricultural adaptation measures), and those which support
migration as a valid and at times necessary adaptation strategy (including support to managing migration flows for ‘receiving’ areas).

Conventionally, human migration is understood as movements by people from one specific location to another, often over long distances and of large groups. These movements can either be voluntary or involuntary and within or across national borders. We can, therefore, have refugees (to neighboring countries or more distant locations) and/or internally displaced persons (IDPs).

Theoretical framework

Regarding the forces promoting migration, standard migration theory distinguishes between push, pull and network forces (Weiner and Teitelbaum: 2001 and Martin and Widgren: 2002)\(^{14}\). The first operate in location A and promote migration from A to B; the second operate in location B and attract migration from A to B while network forces are those which assist in the move.

The literature in the area also discusses economic and sociopolitical forces. In such a framework economic push forces would include high unemployment, low wages, high population density while sociopolitical push forces would include war, persecution, discrimination, expulsion, among others; economic and sociopolitical pull forces would be the reverse (e.g. high wages, attractive jobs and e.g. peace, preferential treatment); and finally, economic network forces would include informational and financial assistance while sociopolitical network forces would include legal and illegal help.

If migration flows are slow and small it is easier for countries to adjust to them smoothly. However, when they occur at a large scale within a short period of time they are more likely to generate stronger social risks and forces. Some of the effects associated with climate change may be relatively rapid and large scale. Direct effects which might promote large scale migration over a short period include the increased frequency of severe weather events and, under some conditions sea-level rise and ground inundation\(^{15}\). Indirect effects of climate change, in particular conflict, are also likely to promote short term, large scale migration (Gleditsch et al 2007)\(^{16}\).


\(^{15}\) Although the process is gradual, it can lead to a decision that a given environment is not viable which could promote the rapid migration of an entire social group (as is anticipated in relation to some Pacific Islands)

Environmental migration can be thought to cause conflict through a range of effects, including the following: 1) acting as a burden for the destination economy and natural resource base, promoting competition for resources (attempts to secure resources by force will be more likely in contexts where property rights institutions are underdeveloped); 2) when migrants and residents are from different ethnic groups with a history of tension; 3) when migration is politicized as an issue by forces which try to exploit the situation (e.g. suspicions that migration is being promoted to upset previous ethnic balances); 4) when migration exacerbates existing tensions (e.g. competition over land, competition over jobs). Obviously, the probability of conflict increases as more of these channels operate simultaneously.

Available data and projections
According to the May 2007 Christian Aid Report *Human Tide: the Real Migration Crisis*, the latest estimate of world-wide ‘internally displaced persons’ (IPD’s), was 155 million people\(^\text{17}\). Countries where the largest conflict displacements took place include Sudan (5 million people), Democratic Republic of Congo (more than 1 million people), Iraq (1.7 million people), Colombia (2 to 3.8 million people) and Ivory Coast (750,000 people).

New forced migration as a result of future impacts of climate change is more than likely to happen and it is not yet envisaged clearly what its dimension will be. According to the IFRC World Disasters Report of 2006, the number of natural disasters more than doubled in the last decade (from 193 in 1996 to 422 in 2005), mostly due to weather related disasters which will certainly increase due to the expected impacts of climate change.

Christian Aid also estimated that between 2007 and 2050 a total of 1 billion people\(^\text{18}\) will be displaced from their homes, of which 250 million will be permanently displaced because of climate change. However, the increase in the number of displaced people due to conflicts, natural disasters and even development projects will also be to some degree and in some cases indirectly linked to climate change.

\(^{17}\) The 155 million would comprise: 25 million people displaced by conflict and extreme human rights abuses, of which around 75 percent are women and children; 25 million people displaced by natural disasters; 105 million people displaced by development projects. The refugees would add another 8.5 million people to that number.

\(^{18}\) The 1 billion people would comprise: 50 million people displaced by conflict assuming a rate of displacement of roughly 1 million people per year; 50 million people displaced by natural disasters using the same average annual estimate; 645 million people displaced by development projects at the current rate of 15 million a year; 250 million people permanently displaced by climate change and 5 million people as refugees.
Methodological issues
Studies on the implications of climate change to migration flows are particularly difficult to undertake given data and methodological limitations. The use of interviews is hampered by the difficulties in finding migrants after some time; databases with detailed information on migration over time and space are also not available and the case study approach while it can provide useful information on one case may not be easily applicable to other cases.

While data, for example, on global net migration rates (see figure 1 below), can provide an idea about major migration flows between countries, it is not sufficient to understand thoroughly migration phenomena, in particular migration flows inside national borders, which account, according to several estimates, to the bulk of the current migrants.

Figure 1. Net migration rates\(^\text{19}\) for 2006: positive (blue) and negative (orange)

Source: [www.wikipedia.com](http://www.wikipedia.com)

Rationale for the study
It is, therefore, very important to contribute to the understanding of how climate change might affect migration flows by providing an updated qualitative and quantitative assessment of such flows but more importantly, by describing the mechanisms linked to climate change which might lead to migration as well as which policy interventions might be effective in preventing or accommodating them. In such an analytical framework it will be easier to understand how different factors leading to migration reinforce each other, in particular the links between migration and conflict or vice-versa.

\(^{19}\) Net migration rate is the difference of immigrants and emigrants of an area in a period of time, divided (usually) per 1,000 inhabitants (considered on midterm population). A positive value represents more people entering the country than leaving it, while a negative value mean more people leaving than entering it. Source: [wikipedia.com](http://www.wikipedia.com).
2. Objectives

The main objective of this analytical work will be to summarize existing evidence regarding the correlation between expected impacts of climate change and migration flows; identify future policy implications as well as a future research agenda in this area.

3. Scope of Work

The consultants should:

1. Undertake a review of relevant literature and develop a typology of the direct and indirect links between climate change impacts and migration flows (considering the conceptual frameworks of migration theory).
2. Propose a framework for analysis of the direct and indirect links between migration flows induced by climatic events and other social phenomena such as conflict.
3. Consider the potential impacts of climate change-induced migration on social capital and the resilience of social and livelihood systems in both receiving and sending areas.
4. Consider the potential impacts of climate change-induced migration on political dynamics and institutions in both receiving and sending areas.
5. Undertake some statistical or econometric analysis of the correlations identified in the literature.
6. Identify policy implications emerging from the challenges of climate change and migration.
7. Propose priorities for a future research agenda in this field.

4. Implementation Process and Schedule

The process of implementation of the work should follow the stages presented below:

- *Preparation of a concept note.*
- *Review of existing literature.*
- *Draft outline of structure of the paper and key content elements for the different sections.*
- *Consultation with leading thinkers and policy centers: review of work by relevant individuals, think tanks and policy centers to assess their ideas in this area and to identify future sources and partners for World Bank work.*
- *Preparation of draft paper.*
- *Online discussions with World Bank staff.*
- *Online consultation with other stakeholders: dialogue with other stakeholders including the private sector, civil society, communities, ideas networks and public organizations.*
- *Preparation of final draft prior to January 2008 workshop.*
5. Outputs

The outputs expected under this work are a concise and clear analytical working paper at publication standard and the presentation of the major findings and recommendations at a workshop to take place in January 2008.

6. Budget

The total financing requirement for this work is estimated to be US$52,500.

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7. Profile of Candidates

The consultants hired to perform the work should have the following qualifications and experience:

- Advanced university degree or proven ability to perform the tasks required for the position. A research and publication record in areas related to the work program would be particularly relevant. The lead researcher(s) on the team should have at least 10 years of relevant experience.
- Experience in preparing policy-related working papers and analytical material in the area covered.
- Proven ability to work successfully and under tied deadlines.
- Excellent command of English with proven writing skills.
- Good presentation skills.

1. Introduction

The World Bank is undertaking a program of work on the social dimensions of climate change. The overall purpose of the work program is to strengthen the international community’s response to climate change by systematically integrating into the World Bank’s approach an understanding of the social dimensions. A key part of this is assessing the social impacts of climate change in different environments, with a view to developing policy and program responses which are appropriate to the context.

Assessing vulnerability at the country level requires a combination of perspectives, including understanding biophysical dimensions (sea-level rise, climate variability, extreme weather events, water stress, changes in rainfall patterns), and mapping these onto social and economic dimensions. Different livelihood and social groups will be affected by the specific biophysical dimensions of climate change in different ways. Declining availability of water for domestic use in rural environments, for example, is likely to affect women and girls more immediately than men (by increasing time burdens associated with water supply). The direct dependence of the rural poor on natural resources for livelihoods, and relative lack of alternative livelihood strategies, will frequently mean that the impacts of climate change are more severe for poor people in general (and certain specific categories of poor people) than the non-poor.

The initial objectives of the work program in the area of social vulnerability and impacts are to synthesize key findings from the literature and consider their operational implications for the World Bank and other development actors.

2. A focus on the urban space

Many of the world’s largest cities are in the floodplains of major rivers in Asia and in cyclone-prone coastal areas. The IPCC has also emphasized the fact that river deltas are among the most heavily populated and vulnerable coastal systems. Climate change presents several risks to cities or large urban centers and not only to those localized in coastal areas. Climate change will increase risk from an increased number and intensity of extreme weather events (e.g. heavy rainstorms, cyclones and hurricanes). In addition, flooding risks are also increased not only through sea level rise but also from glacial lake outburst and rainfall (heavier, reduced or more prolonged rainfall).
Urban areas will be exposed to higher run-off which will put pressure on the provision for storm and surface drainage systems and will experience more heat waves, problems related to air pollutants and in tropical areas higher incidence of tropical diseases. Many urban areas will also suffer impacts on their tourist assets given damages to reefs and loss of beaches.

Those most at risk are, as usual, those least able to avoid the direct and indirect impacts (e.g. with good homes and drainage systems, ability to change jobs and location); those likely to be most affected (e.g. infants and older groups) and those least resilient to illness, premature deaths in the household, loss of income, livelihood and property impacts. On the other hand, urban areas will face increased levels of pollution and greenhouse gas emissions and the pursuit of ecological goals in urban centers is too often anti-poor (examples: poor groups evicted from watersheds, recently created parks or reserves, restricted access to land needed for housing).

The quality of both national and local government institutions influences significantly the extent and degree of exposure to risk by the most vulnerable. The provision of infrastructure, disaster preparedness and disaster response are key areas for government intervention. In addition, national frameworks which ensure that urban governments take into consideration ecological concerns beyond their boundaries will also be required as well as policies and measures which balance economic, social, environmental health and ecological goals.

As a consequence of an historical trend of massive growth in urban population (both as a result of a reduction in both birth and mortality rates but also as a result of large exodus from rural to urban areas), in developing countries the most vulnerable and poor people are not only located in rural but also, and increasingly, in urban areas. Urban poor people have some common characteristics to rural poor regarding their level and type of vulnerability but also elements which are unique or specific.

Analytical work done since the 1980s has contributed significantly to the poverty/vulnerability conceptual debate and tried to explain urban life and urban poor specificities.

The ‘asset vulnerability framework’ of Moser (2000) represents one such important contribution. It is now recognized that urban poor rely on complex asset portfolios comprised of tangible (e.g. labor and human capital), productive (e.g. housing) and intangible assets (e.g. household relations and social capital) to survive and the assets they have, can mobilize as well as the way they manage them have an impact on their poverty and vulnerability levels. In addition, it is also now recognized that talking about poverty is not the same as talking about vulnerability and both levels of poverty, as a static concept, and types of vulnerability, as a more dynamic concept, need to be
analyzed to understand urban poor sensitivity and resilience to external impacts. The specific characteristics of urban life, among which, the commoditization, environmental hazard and social fragmentation make the case for analytical work done specifically on urban poor as a separate category of poor and vulnerable people.

As mentioned before, current and future climate change and variability is expected to constraint further the resilience of urban poor. Temperature and seal level rise as well as changes in rainfall patterns will very likely impact coastal areas, where the main urban centers are located. It is anticipated the erosion of beaches, landfalls from heavier rainfall, flooding of coastal lands, freshwater scarcity, weather-related mortality, infectious and air-quality respiratory diseases among other impacts. Moreover, though with some level of uncertainty, it is expected that the frequency and degree of major natural disasters will increase, which in itself represents a serious constraint to the most vulnerable groups.

While the research related to the impacts of climate change in urban centers/cities has a very recent history, research focusing on the urban poor is much more developed, the challenge being, therefore, to merge the two lines of research. The analysis of the climate change impacts on urban poor should not be considered as a separate field of research and indeed the analysis should consider climate change as an additional pressure and assess how it links with other sources of pressure (climate change will worsen current problems such as water quality after floods and related health consequences, rural-urban migration, etc.).

The rationale for undertaking analytical work on the challenges that climate change can have on the various social dimensions at urban level is, therefore, very strong. The following sections will present the objectives and process for undertaking the work.

3. Main Objectives

The main objective of this analytical work will be to provide a conceptual framework for understanding the specific nature of climate change impacts on urban poor communities and identify potential entry points for policy intervention. The application of the framework should be illustrated through use of case examples. This piece of analytical work will focus on the social organization dimension of climate change and explore to what extent climate change can disrupt local social institutions and social capital.

4. Scope of work

More specifically the analytical work to be carried out should aim at identifying and explaining:

i. The physical, economic and social context specificities of urban poor people and how they will be affected by expected climatic changes.
ii. The range of policy responses available and the implications for urban policy and planning.

iii. How climate change can provide an entry point to address a number of social policy issues in urban areas that have become heightened concerns.

In order to do this, the consultants will:

1. Outline a coherent conceptual basis for the study, providing a solid rationale for the selection of case material.

2. Undertake a literature review (theoretical and empirical) in the field and outline different factors bearing on the extent to which poor and vulnerable groups in urban areas may be affected by the expected impacts of climate change (using scenarios drawn from different available climate models). This is likely to include a typology of urban environments (e.g. coastal mega-cities, intermediate towns with strong urban-rural links, big inland cities); consideration of types of impacts (e.g. floods, landfalls, conflict, migration, water scarcity); consideration of factors determining the resilience of poor urban groups in the face of expected impacts (e.g. asset portfolios, level of political influence and voice); consideration of policy measures which could prevent the erosion of poor people’s assets and ensure due attention to impacts of climate change on poorer urban dwellers. Consideration of impacts should include implications for different social groups or categories (e.g. by gender, age, type of residence etc.).

3. Undertake a literature review (theoretical and empirical) identifying the most relevant policy initiatives and actions which have been implemented in the last 30 years and explain the main reasons why they were or not successful.

4. Building on this, summarize the most important coping and adaptation strategies that those societies (and groups within societies) have been using and to what extent they will be able to use them under the different climate change scenarios.

5. Propose ways in which public policy responses can most appropriately support actions taken at the local level (within urban communities) to adapt to and cope with the likely impacts of climate change.

6. Consider the political economy processes which bear on the delivery of effective support to different populations in urban areas for adaptation to climate change (e.g. existence of state capacity and willingness to help groups with little political voice or influence).

7. Provide recommendations as to how policy-makers in developing countries and international agencies can integrate adaptation measures to help poor urban populations in their policies, programs and projects. This should entail adaptation options across borders and innovative/creative solutions.

8. Provide policy recommendations to be considered under different climate change scenarios.

9. Identify a future research agenda in this field.
The section on policy implications should focus on identifying priority practical measures which can be undertaken by different development actors. It should facilitate the process of mainstreaming the social dimensions of climate change in the implementation of programs and projects by both international organizations, like the WB, but also national and civil society institutions.

The framework will be validated with country/regional studies which will be undertaken mainly in FY09. Specific TOR’s will be developed for that purpose, which will also include a component for establishing the social costs of the expected climate change related social impacts.

5. Implementation Process and Schedule

The process of implementation of the work should follow the stages presented below:

- Preparation of a concept note.
- Review of existing literature and policy proposals.
- Draft outline of structure of the paper and key content elements for the different sections.
- Consultation with leading thinkers and policy centers: review of work by relevant individuals, think tanks and policy centers to assess their ideas in this area and to identify future sources and partners for World Bank work.
- Preparation of draft paper.
- Online discussions with World Bank staff.
- Online consultation with other stakeholders: dialogue with stakeholder groups including the private sector, civil society, communities, ideas networks and public organizations.
- Preparation of final draft prior to January 2008 workshop.

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Implementation Schedule</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Sep</td>
</tr>
<tr>
<td>Output: climate change and urban policy paper</td>
<td></td>
</tr>
<tr>
<td>- discussion of TOR’s and contractual arrangements</td>
<td></td>
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<tr>
<td>- preparation of a concept note</td>
<td></td>
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<tr>
<td>- analytical work and consultations</td>
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<tr>
<td>- first draft report submitted to WB</td>
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</tr>
<tr>
<td>- discussion of preliminary results</td>
<td></td>
</tr>
<tr>
<td>- second draft submitted to WB (output for Jan workshop)</td>
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</table>

6. Outputs

The outputs expected under this work are a concise and clear analytical working paper at publication standard and the presentation of the major findings and recommendations at a workshop to take place in January 2008.
7. Budget

The total financing requirement for this work is estimated to be US$ 51,700.

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<td>Total</td>
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</table>

8. Profile of Candidates

The consultants hired to perform the work should have the following qualifications and experience:

1. Advanced university degree or proven ability to perform the tasks required for the position. A research and publication record in areas related to the work program would be particularly relevant. The senior researcher leading the work should be able to demonstrate at least 10 years of relevant experience.
2. Experience in preparing policy-related working papers and analytical material in the area covered.
3. Proven ability to work successfully and under tight deadlines.
4. Excellent command of English with proven writing skills.
5. Good presentation skills.
Annex 4 - Terms of Reference for the Preparation of a Working Paper on the Implications of Climate Change for Agrarian Societies in Dry-lands

1. Introduction

The World Bank is undertaking a program of work on the social dimensions of climate change. The overall purpose of the work program is to strengthen the international community’s response to climate change by systematically integrating into the World Bank’s approach an understanding of the social dimensions. A key part of this is assessing the social impacts of climate change in different environments, with a view to developing policy and program responses which are appropriate to the context.

Assessing vulnerability at the country level requires a combination of perspectives, including understanding biophysical dimensions (sea-level rise, climate variability, extreme weather events, water stress, changes in rainfall patterns), and mapping these onto social and economic dimensions. Different livelihood and social groups will be affected by the specific biophysical dimensions of climate change in different ways. Declining availability of water for domestic use in rural environments, for example, is likely to affect women and girls more immediately than men (by increasing time burdens associated with water supply). The direct dependence of the rural poor on natural resources for livelihoods, and relative lack of alternative livelihood strategies, will frequently mean that the impacts of climate change are more severe for poor people in general (and certain specific categories of poor people) than the non-poor.

The initial objectives of the work program in the area of social vulnerability and impacts are to synthesize key findings from the literature and consider their operational implications for the World Bank and other development actors.

The responses of local institutions to climate change in developing countries will be a key part of the global response in relation to both adaptation and mitigation. Information on how and under which conditions local level institutions can help reduce climate change-related vulnerability, enhance adaptive capacity, and promote sustainable livelihoods through more effective development policies and programs is currently sparse. Understanding how local institutions respond will be critical to producing effective policy responses. For example, the history of responses to prior events of environmental stress can tell policy-makers a lot about which institutions people turn to in times of stress to help with supporting productive systems, and coping with risks.
2. A focus on dry-lands

As world population doubled to 6 billion people between 1960 and 2000, the demand for ecosystem services grew extraordinarily, namely, food production which increased around two-and-a-half times and water use which doubled. Even though according to the Millennium Ecosystem Assessment (MEA), the value of food production in 2000 was only about 3% of world GDP, the agricultural labor force consisted of approximately 22% of the world’s population, half the world’s total labor force, and 24% of GDP in countries with per capita incomes of less than $765 (the low-income developing countries, as defined by the World Bank). Moreover, statistical records show that in 2001 1.1 billion people survived on less than $1 per day of income, 70% of them in rural areas where they are highly dependent on agriculture, grazing, and hunting for subsistence.

Globally, most water use (70% worldwide) is for agricultural purposes and, according to the MEA, from 5% to possibly 25% of global freshwater use exceeds long-term accessible supplies being currently met through engineered water transfers or overdraft of groundwater supplies. Furthermore, some 15–35% of irrigation withdrawals exceed supply rates, and are therefore already unsustainable.

Dry-land areas are particularly hit by pressure on ecosystems which jeopardize the sustainability of their services provision. Dry-land systems cover about 41% of Earth’s land surface and have more than 2 billion people inhabiting them, more than 90% of whom are in developing countries. And even though they are home to around one third of the human population, they have only 8% of the world’s renewable water supply, they suffer from low and variable rainfall, high temperatures and low soil organic matter (see map below).

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20 Worldwide, approximately 1.7 million people die annually as a result of inadequate water, sanitation, and hygiene.
Map 1. Dry-land systems in the World based on Aridity Index values.

Drylands include all terrestrial regions where the production of crops, forage, wood and other ecosystem services are limited by water. Formally, the definition encompasses all lands where the climate is classified as dry subhumid, semiarid, and or hyper-arid. This classification is based on Aridity Index values.¹

People living in dry-land ecosystems tend to have the lowest levels of human well-being, including the lowest per capita GDP and the highest infant mortality rates. Despite that they have experienced the highest population growth rate in the 1990s while having the lowest GDP per capita of any of the systems examined in the MEA (see figure below).
In summary, not only are dry-lands home to many of the most vulnerable people in the world, but they also rely on rain fed agriculture for subsistence which is extremely vulnerable to climate change impacts anticipated under most models. The MEA established that two of the services of dry land ecosystems, soil formation and water supply, already exceed sustainable levels. In addition, they are particularly vulnerable to desertification and loss of species and genetic diversity which prevent an ecosystem from crossing the threshold which would lead to its transformation into a different structure or modus operandi.

There is a wide literature analyzing the issue of land degradation, focusing on dry-lands, and its implications for sustaining the livelihoods of agrarian societies. These studies are both conceptual and empirical, drawing from case studies and projects implemented all over the world. Development in such regions of developing countries is particularly dependent on actions to avoid the degradation of ecosystems and minimize or reverse degradation where it is occurring. Many of the actions tried in the past have not, however, produced the expected results and often when faced with the option, international and national institutions choose to invest in other ecosystems, considered better investments (the so-called ‘green revolution’ for example, largely by-passed the dry land areas of India).

Climate change is expected to constrain further the livelihoods of those living in the most sensitive and fragile ecosystems, such as dry-lands, and lead to higher levels of resource scarcity. The rationale for undertaking analytical work on the implications of climate change for agrarian societies in dry-lands linking it to a social analysis
framework is, therefore, very strong and relevant. The following sections will present the objectives and process for undertaking the work.

3. **Main Objectives**

The main objective of this analytical work will be to summarize the knowledge base available regarding the correlation between climate change impacts and livelihoods of agrarian societies, with a focus on the most vulnerable groups, located in dry-land areas. The stocktaking or literature review exercise will cover both theoretical frameworks and the 20 to 30 or more years of experience of several organizations implementing projects in dry-lands (e.g. Sahel), including recent positive ones (e.g. regeneration of eco-systems in Niger; watershed restoration in Maharashtra – India or rangeland rehabilitation in Bara province - Sudan\(^{21}\)). Those findings should then be analyzed considering the different climate change models available in order to provide policy recommendations for effective support to adaptation which could be used under different scenarios.

4. **Scope of work**

The consultants should:

1) Outline a coherent conceptual basis for the study which builds on widely accepted categories and provides a clear rationale for the selection of empirical case material.

2) Undertake a literature review (theoretical and empirical) in the field and create a typology of the different factors and mechanisms whereby agrarian societies in dry-land environments will experience risks and erosion of their livelihood security (using different available climate models scenarios). Also consider the extent to which these risks and impacts are likely to be born differently by different social groups and categories. This should include a range of relevant dimensions of social difference (gender, age/generation, livelihood grouping, wealth, ethnicity etc.).

3) Review literature (theoretical and empirical) identifying the most relevant policy initiatives and actions which have been implemented in the last 30 years and explain the main reasons why they were or were not successful.

4) Building on this, summarizing the most important coping and adaptation strategies that those societies (and groups within societies) have been using and to what extent they will be able to use them under the different climate change scenarios.

5) Propose ways in which public policy responses can most appropriately support actions taken at the local level (within rural communities) to adapt to and cope with the likely impacts of climate change.

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\(^{21}\) The Sudan project is called ‘Community-Based Rangeland Rehabilitation for Carbon Sequestration’ and is funded by the Global Environmental Facility.
6) Consider the political economy processes which bear on the delivery of effective support to different populations in dry-lands for adaptation to climate change (e.g. existence of state capacity and willingness to help groups which may live in marginal areas with little political voice or influence).

7) Provide recommendations as to how policy-makers in developing countries and international agencies can integrate adaptation measures to help dry-land populations in their policies, programs and annual projects. This should entail adaptation options across borders and innovative/creative solutions.

8) Provide policy recommendations to be considered under different climate change scenarios.

9) Identify a future research agenda in this field.

Points 2 to 4 above should be undertaken with the objective of informing specific objectives 5 to 7.

The section on policy implications should focus on identifying priority practical measures which can be undertaken by different development actors. It should facilitate the process of mainstreaming the social dimensions of climate change in the implementation of programs and projects by both international organizations, like the WB, but also national and civil society institutions.

The framework will be validated with country/regional studies which will be undertaken mainly in FY09. Specific TOR’s will be developed for that purpose, which will also include a component for establishing the social costs of the expected climate change related social impacts.

5. Implementation Process and Schedule

The process of implementation of the work should follow the stages presented below:

- Preparation of a concept note.
- Review of existing literature.
- Draft outline of structure of the paper and key content elements for the different sections.
- Consultation with leading thinkers and policy centers: review of work by relevant individuals, think tanks and policy centers to assess their ideas in this area and to identify future sources and partners for World Bank work.
- Preparation of draft paper.
- Online discussions with World Bank staff.
- Online consultation with other stakeholders: dialogue with other stakeholders including the private sector, civil society, communities, ideas networks and public organizations.
- Preparation of final draft prior to January 2008 workshop.
6. Outputs

The outputs expected under this work are a concise and clear analytical working paper at publication standard and the presentation of the major findings and recommendations at a workshop to take place in January 2008.

7. Budget

The total financing requirement for this work is estimated to be US$58,000.

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<td><strong>Total</strong></td>
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</table>

8. Profile of Candidates

The consultants hired to perform the work should have the following qualifications and experience:

- Advanced university degree or proven ability to perform the tasks required for the position. A research and publication record in areas related to the work program would be particularly relevant.
- Experience in preparing policy-related working papers and analytical material in the area covered.
- Proven ability to work successfully and under tied deadlines.
- Excellent command of English with proven writing skills.
- Good presentation skills.
Annex 5 - Terms of Reference for the Preparation of a Working Paper on the Implications of Climate Change for Rural Institutions and Livelihoods

1. Introduction

Awareness of climate change and its risks has now made it firmly onto the international agenda. Climate change is expected to constrain and affect adversely the livelihoods of those relying on natural resources for their livelihoods. Often, these are the very same people who live in the most sensitive and fragile ecosystems. Climate change will result in higher levels of volatility in access to resources upon which rural livelihoods depend, and further exacerbate resource scarcity.

The rural poor are often at a competitive disadvantage in developing economies because of several factors resulting from persistent market and state failures. For example, smallholders often face difficulties in realizing scale economies in selling their small surpluses, while high transactions costs incurred in the transportation and marketing of these surpluses add additional costs to their production. They also face difficulties in accessing both public and private services necessary to sustaining their livelihoods—services such as input supply, output marketing, credit and financing, participation in decision-making over resource allocations, conflict mediation and resolution, and so on. Thus, their ability to cope is constrained to begin with.

In the face of widespread market and state failures the World Bank, and ESSD in particular, has increasingly recognized the pivotal role played by social capital, collective action, and Rural Institutions (RIs) in addressing the competitive disadvantages faced by the rural poor. Different types of rural organizations, associations, and groups formed at the local level serve as a means to improve rural competitiveness while also contribute to better rural governance. Such RIs can also play a vital role in reducing the vulnerability of rural poor and marginal groups in the face of climate change, enhancing their adaptive capacity in relation to drastic as well as long term shocks to daily subsistence, and improving the prospects for sustainable livelihoods.

Information on how and under which conditions improved governance through RIs can help reduce climate change-related vulnerability, enhance adaptive capacity, and promote sustainable livelihoods through more effective rural development policies and programs continues however to be sparse, unsystematic, and ill formulated. A systematic and broad-based analysis of these factors, with examples drawn from different parts of the developing world, would provide information about how RIs can address specific development concerns and priorities, and inform policy makers about which kinds of institutions, institutional linkages, and policy strategies should be...
supported to improve the ability of rural poor to adapt to and develop in the context of ongoing climate change risks.

2. Main Objectives

The main objectives of this analytical work are:

- To gain a better understanding of the key issues and challenges facing the rural poor and marginal groups in the context of climate change and how rural institutions can help improve their capacity to adapt to climate change without compromising their ability to develop in a sustainable manner.
- To provide an effective framework for development practitioners and policy makers on how to engage RI’s in delivering/implementing mitigation, adaptation programs/activities as well as mobilizing and promoting awareness at community level regarding climate change.

3. Scope of work

This study will focus on the clients of Rural Institutions – how climate change will affect them, their coping strategies and livelihoods, how RIs can help alleviate the adverse impacts of climate change, and how government policy interventions and Bank efforts can strengthen the capacity of rural institutions and their clients to adapt to and cope with climate change impacts.

Specifically, the study will survey and describe:

4. the mechanisms through which climatic change can disrupt the livelihoods of poor and marginal rural populations in different ecological contexts (including the possibility of adverse effects on social cohesion and social capital) and the strategies through which rural peoples can adapt to climate change, and cope with associated risks, with a special focus on the role of rural institutions.

5. how expected and unpredictable climate change risks can prevent rural populations from using traditional adaptation and coping strategies, with specific reference to different forms of livelihoods and institutions in different ecological contexts.

6. how current policies may hinder the effectiveness of coping mechanisms and adaptive actions used by rural populations and embedded in rural institutions.

7. the role of rural institutions in mitigation and adaptation agendas both in relation to policy dialog and implementation, and in terms of needed areas of research and capacity building.

8. the applicability and suitability of different adaptation approaches, including sustainable livelihoods, adaptive capacity enhancement, regional adaptation, and support for autonomous vs. planned adaptation, for World Bank programs.

9. ways to strengthen those dimensions of rural institutions that can reduce vulnerability, enhance adaptive capacity, and help improve livelihoods of rural populations in different ecological contexts.
The study will be based upon 1) a comprehensive review of scientific, development and policy-oriented literature (international scientific journals, studies by other donors and/or international agencies, think tanks and research institutions, etc), 2) experiences of 5 case studies on rural institutions in Vietnam, India, Afghanistan, Yemen and Ethiopia and their history and effectiveness in helping cope with sudden and long term shocks to rural livelihoods in different ecological contexts, 3) Opinions and views gathered from operational staff and practitioners working with rural institutions on rural livelihood and NRM in different regions.

4. Implementation Process and Schedule

The main activities under the proposal include the following:

1. **Brief review of the core impacts** associated with climate change for the rural poor and the rural institutions serving them at the local level in developing countries (mainly IPCC based, including climatic extremes), and **of the key adaptation and disaster risk management options**, including implementation challenges (both from the scientific literature and published reports on practical experience of specific countries or development agencies).

2. **Assessment of key organizations’ operational experience** to date with adaptation to climate change and links with disaster risk preparedness in agriculture and NRM involving rural institutions (including a selected WB and non WB projects22 analysis and assessment of adaptation actions that are taken / not taken in operations, and lessons learned / principles of good practice in these sectors that can be identified from analytical & technical work as well as operations).

3. **Consultation with leading thinkers & research centers and online consultation with other stakeholders** to review the work by relevant individuals, think tanks and research centers, to assess their ideas in the role and impact of Rural Institutions & climate change and to identify future sources and partners for World Bank work. This will be done through a dialogue with other stakeholders including the private sector, civil society, communities, ideas networks and public organizations.

4. **Refinement of the main lessons learned** (as identified in 2 and 3) and **identification of institutional bottlenecks** for local rural institutions and communities that may delay or impede effective adaptation, with examples from specific countries (through interviews with selected practitioners and sector specialists).

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22 The countries where on going rural institutions studies are on going will be given priority. This part will be done in coordination with other initiatives on climate change done by different World Bank units.
5. Assessment of **capacity needs** for Rural institutions (through interviews of a representative sample of leaders of rural institutions?) and a few selected client countries’ institutions at different levels, and proposal of adequate **capacity building** programs that can be sustained in the long term (**capacity maintenance**).

6. **Development of an operationally-oriented set of findings and lessons** that would be incorporated in a possible guidance booklet for operations in agriculture and NRM. The range of tools would include, for example, **sector specific recommendations** on adaptation strategies, practices and investments.

7. **Dissemination of the study and the related recommendations for operations through special events** (SDN week), a BBL series for Bank TTLs, specific dissemination events to be held in client countries, distribution of the material in the most suitable formats (printed, CD, or web-based publication such as through the e-learning platform).

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Implementation Schedule</th>
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<tbody>
<tr>
<td>Literature Review</td>
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<tr>
<td>Review of operations and analytical and technical work</td>
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<tr>
<td>Lessons learned and institutional bottlenecks</td>
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<td>Capacity needs assessment</td>
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<tr>
<td>Report preparation</td>
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<tr>
<td>Sector notes</td>
<td></td>
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<td>Dissemination</td>
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<th>Tasks</th>
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<tbody>
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<td>Sector notes</td>
<td></td>
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<tr>
<td>Dissemination</td>
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</table>

**Audience**

This study and the associated activities are directed primarily to client country decision-makers and World Bank Task Team Leaders who are responsible for rural livelihood projects and are working with rural communities and rural institutions. The audience is not restricted to a particular region, but the relevance of the work will be greatest for those people who are engaged in regions most likely to suffer from the effects of climate change.

**5. Outputs**

The main outputs will include the following:

<table>
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<tr>
<th>Date</th>
<th>Output</th>
<th>Description</th>
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<tbody>
<tr>
<td>August 24, 2007</td>
<td><em>Inception report</em> (2-5 pages)</td>
<td>Will describe the scope of work, methodology and workplan for the study.</td>
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<tr>
<td>October 01, 2007</td>
<td><em>Framework for Rural Institutions and Climate Change</em> (2-5 pages)</td>
<td>This note will propose a framework to analyze the relation between climate change and rural institutions and will be based on the initial literature review and ongoing dialogue with practitioners.</td>
</tr>
<tr>
<td>November 01, 2007</td>
<td>Note on 4-5 comparative assessment zones for Climate Change (2-5)</td>
<td>This note, based on the initial reviews, dialogue with practitioners and findings from the RIs case studies will propose 4-5 comparative geographical</td>
</tr>
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</table>
### Dissemination

The final report and sector recommendations notes will be distributed by SDV. It will be available on the relevant websites (SDV, IFRI, etc).

The findings of the study will be disseminated through special events (SDN week / Rural Institutions workshop), a BBL series addressed to the Bank TTLs and distribution of the material in the most suitable formats (printed format, CD, or web-based publication such as through the e-learning platform).

6. **Budget**

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7. **Profile of Candidates**

The consultants hired to perform the work should have the following qualifications and experience:

- Advanced university degree or proven ability to perform the tasks required for the position. A research and publication record in areas related to the work program would be particularly relevant.

²³ Travel includes 1-2 trips to Washington and 1 supervision trip to some selected rural institutions countries.
• Experience in preparing policy-related working papers and analytical material in the area covered.
• Proven ability to work successfully and under tied deadlines.
• Excellent command of English with proven writing skills.
• Good presentation skills.
Annex 6 – List of Anticipated Outputs for FY08

Stock-taking/analytical:
1. Working paper which analyses the likely and potential impacts of climate change and variability on migration flows and provides policy recommendations;
2. Working paper which analyses the likely and potential impacts of climate change and variability on intra-state conflicts as well as regional security implications and provides policy recommendations;
3. Working paper providing a conceptual framework for analyzing the impacts of climate change on the urban poor (focus on changes to asset portfolios) and recommendations for social policy and urban planning;
4. Working paper providing a conceptual framework for analyzing the impacts of climate change on the rural poor of dry-lands and recommendations for social policy;
5. Working paper related to the role that rural institutions can play in mitigation and adaptation activities to climate change as well as citizen awareness and mobilization. This will include the collection and analysis of primary data on 5 countries (India, Vietnam, Yemen, Afghanistan and Ethiopia);
6. Working paper providing a conceptual framework for analyzing the impacts of climate change on the indigenous people and providing policy recommendations.

Operational:
7. Together with the ENV CC Team and GFDRR Team, develop a framework for carrying out national vulnerability assessments which takes into account both bio-physical as well as socio-economic dimensions of expected climate change impacts. The main objective is to contribute to the development and implementation of national level planning for adaptation to climate change;
8. Guidance notes for World Bank Task Teams identifying tools and options to integrate climate change mitigation and adaptation initiatives into their operations at the community level. This work will include means for assisting communities to access Carbon Finance funding mechanisms;
9. Two regional case studies to test tools and methods developed