

Understanding the Policy Contexts for Mainstreaming Climate Change in Bhutan and Nepal: A Synthesis

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Contents

List of figures	<i>i</i>
List of tables	<i>i</i>
Preface	<i>ii</i>
Introduction	1
Methodology	2
Policy context defined by relations amongst policy actors	2
Policy context defined in terms of inputs	3
Enabling conditions for policy implementation	4
Country overviews	5
Policies reviewed	6
4.1 Forests, water and climate change adaptation in Nepal	7
<i>Forest resource management</i>	7
<i>Water resource management</i>	8
<i>Climate-specific policies: Nepal's NAPA and Climate Change Policy 2011</i>	9
4.2 Forest and climate policies in Bhutan	10
<i>Forest protection and community forestry</i>	10
<i>Bhutan's NAPA</i>	11
Key insights from the policy review	12
5.1 Policy objectives	12
5.2 Institutional arrangements and implementation	14
5.3 Enabling conditions	15
<i>Finance and markets</i>	15
<i>Governance and institutions</i>	16
<i>Information, knowledge and public awareness</i>	16
Policy recommendations	17
References	18

List of figures

Figure 1: Linkages between climate change and key development issues	9
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List of tables

Table 1: Policies discussed in the two reports	6
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Preface

Over the last three years, the Regional Climate Change Adaptation Knowledge Platform (AKP) has worked to build bridges between existing knowledge on climate change adaptation and the governments, agencies and communities that need this knowledge to inform their adaptation to the impacts of climate change, while working for poverty reduction and environmental sustainability. AKP's work has been carried out following three key objectives:

1. Promoting dialogue and improving the exchange of knowledge, information and methods within and between countries on climate change adaptation, and linking existing and emerging networks and initiatives.
2. Generating new climate change adaptation knowledge, promoting understanding and providing guidance relevant to the development and implementation of national and regional climate change adaptation policy, plans and processes focused on reducing vulnerability and strengthening the resilience of the poor and women: the most vulnerable segments of society in most Asian countries.
3. Synthesizing existing and new climate change adaptation knowledge and facilitating its application in sustainable development and poverty reduction practices at the local, national and regional levels.

This publication is a result of these objectives. AKP supported thirteen countries in the Asian region to strengthen their capabilities to introduce effective adaptation measures. This includes undertaking activities at the national, sub-national and local levels to create enabling policy, regulatory, planning and budgeting environments. In each country, the platform facilitated adaptation action and strengthened adaptive capacity.

AKP is implemented by the Stockholm Environment Institute (SEI), AIT's Regional Resource Centre for Asia and the Pacific (AIT RRCAP), and the United Nations Environment Programme Regional Office for Asia and the Pacific (UNEP ROAP) with funding provided by the Swedish Government through the Royal Swedish Embassy in Bangkok and the Swedish International Development Agency (Sida). The former Swedish Environmental Secretariat for Asia (SENSA) was also instrumental in setting up and supporting AKP.

Nepal and Bhutan are two of the thirteen countries supported by AKP, and this publication highlights the insights gained from the implementation of activities in these countries.

AKP's publications provide insights on adaptation in the region. A consolidated initiative, known as the *Asia Pacific Adaptation Network (APAN)*, has been established and has been fully implemented starting 2013. Its ultimate objective is to assist the region to build the climate resilience of human systems, ecosystems and economies through the mobilization of knowledge and best practices, enhanced institutional capacity, informed decision making processes, and facilitated access to finance and technologies.

The outcomes of AKP have been made possible by the active participation of partners and various stakeholders. SEI acknowledges the editorial assistance provided by Marion Davis, Joshua Rigg and Pin Pravalprukskul. SEI also expresses heartfelt thanks to John Soussan, Lailai Li, Kai Kim Chiang, Lisa Schipper, Sabita Thapa, Tatirose Vijitpan, Muanpong Juntopas, Nantiya Tangwisutijit, Chanthay Sam, and Dusita Krawanchid for their contributions to AKP.

Introduction

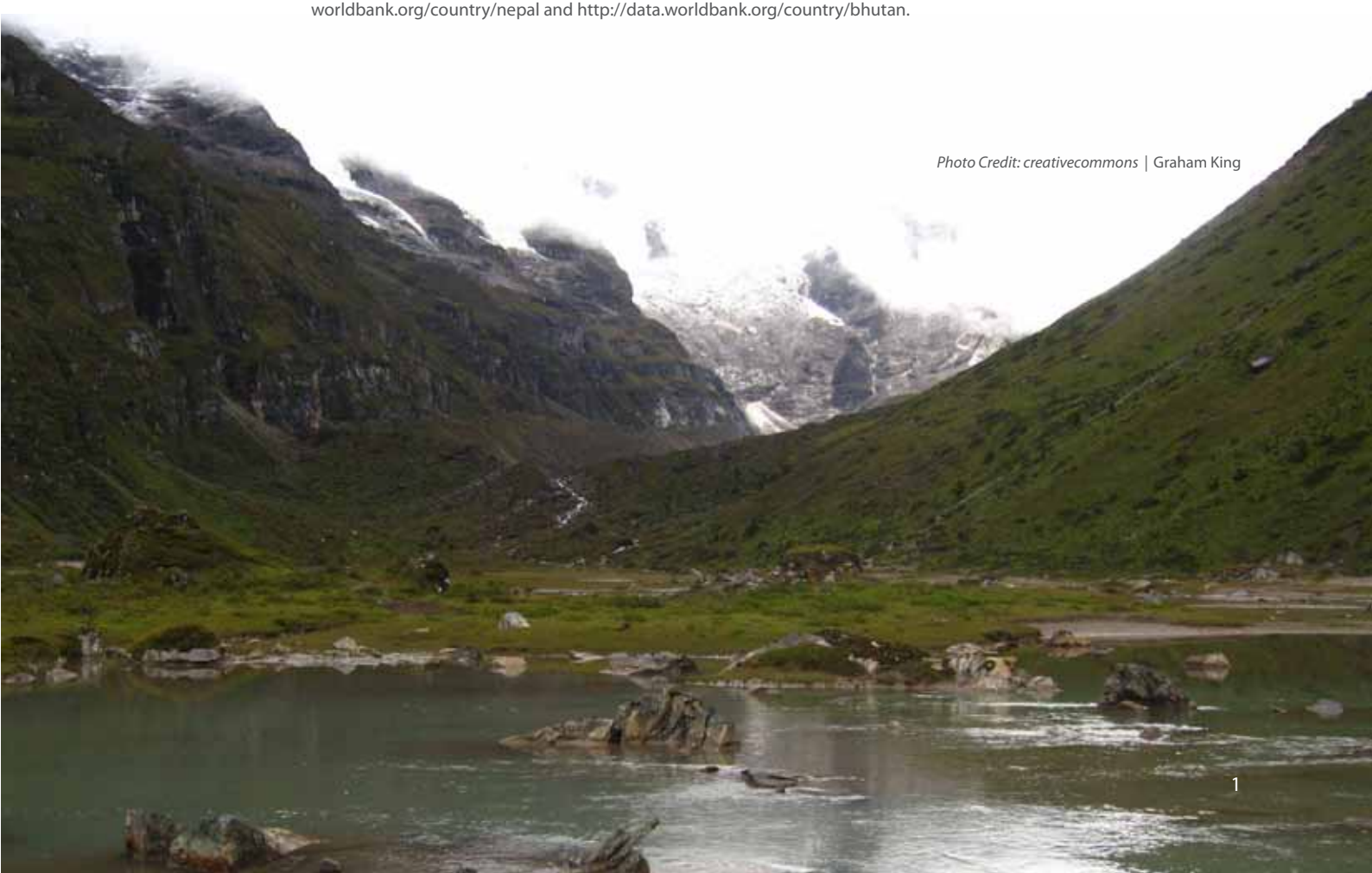
This report is a synthesis of two Adaptation Knowledge Platform studies that sought to understand the policy contexts for addressing climate change adaptation and key conservation issues in Nepal¹ and Bhutan.² These two Himalayan countries have significant commonalities and differences. Nepal and Bhutan are both mountainous, landlocked Himalayan countries sandwiched between China and India and covering a similar landmass. Set on the Himalayan slopes, both countries are seeing tangible signs of climate change already; most notably, shrinking glaciers. The two countries have predominantly rural populations whose heavy reliance on agriculture and forests makes them particularly vulnerable to climate change. Both have undergone dramatic political changes in recent years. However, while the transition was peaceful in Bhutan, Nepal spent a decade in turmoil. Furthermore, Bhutan, with an area around 47,000 km² is roughly a third of the size of Nepal, but has less than one-fortieth of the population, and almost three times the forest cover. Bhutan is also developing and overcoming poverty much faster; so, while Nepal's per capita annual gross national income was \$540 in 2011, Bhutan's gross national income for the same year was \$2070.³ The purpose of this synthesis is to compare the policy contexts for mainstreaming climate change adaptation in Bhutan and Nepal, and to draw lessons that might help improve policies in the two countries and beyond.

¹ Pant, D. and K. Gautam 2013. Policy Provisions and Local Response on Climate Change Adaptation in Nepal. Regional Climate Change Adaptation Knowledge Platform for Asia, Partner Report Series No. 12. Stockholm Environment Institute, Bangkok. Available online at www.asiapacificadapt.net or www.weADAPT.org.

² Lhendup, P. and T. Wangdi 2013. Policy Context: An Analysis of Forestry Policy, Acts and Rules of Bhutan to Mainstream Climate Change Adaptation. Regional Climate Change Adaptation Knowledge Platform for Asia, Partner Report Series No. 13. Stockholm Environment Institute, Bangkok. Available online at www.asiapacificadapt.net or www.weADAPT.org.

³ For the data underlying this section, see the respective country profiles on the World Bank website: <http://data.worldbank.org/country/nepal> and <http://data.worldbank.org/country/bhutan>.

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Methodology

This paper uses an analytical framework that combines elements from methodologies developed by the International Fund for Agricultural Development (IFAD) for assessing the policy context of poverty reduction and food production programmes (2009), by Stanford University in assessing the policy context for state education policies in the U.S. (NCPI 2007), and by an analysis for the United Nations Environment Programme (UNEP) for addressing policy enabling conditions for transitioning to a green economy (Wooders et al. 2011).



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Policy context defined by relations amongst policy actors

Policy context is complex, defined by a set of relationships or linkages amongst different policy actors who are affected by or actively affect the policy agenda and the formulation and implementation of particular policies. IFAD (2009) focuses on the most obvious linkages, examining the legal framework, resources, incentives and feedbacks in the realm of rural poverty reduction and food production and security. It also pays special attention to the gaps between a policy's objectives and its implementation. IFAD's analysis includes the following steps:

- An assessment of the policies that are immediately relevant to a particular set of concerns, focusing on **policy objectives** and the **consistency** of policy statements;
- An analysis of the formal mechanisms which **generate** policy, including mechanisms for identifying how **policy agendas** are set, the kinds of **information** (and their sources) that feed into policy-making, the process of **consultation** leading to policy formulation, the form of **policy statement** produced, and the roles played by different actors in these processes;
- An analysis of the **informal** mechanisms that generate policy, including factors that influence the setting of **policy agendas**, the effect of past **policy practice** (both policy-setting and implementation) and **incremental factors** that contribute to the policy process, the role of **key actors and opinion leaders**, different **policy narratives** (the stories that describe events and gain more or less authority and acceptance), and the **actor networks** that spread and maintain different policy networks and whose interests they serve;
- A look at the mechanisms envisaged for the **implementation** of those policies, any gaps between policy-setting and implementation, and the processes that may change policies during the process of implementation, including the **relationships between policy-makers and policy implementers** ("enabling agencies" and "service providers"), and the **interests and incentives** of different actors involved in policy implementation;
- An analysis of the ways in which **feedback** about policy implementation and impact reach policy-makers and influence future policy processes; and
- A **comparison** of policies across areas, sectors and levels to identify possible areas of **linkage, harmonization** and **policy conflict**. Particular care is paid to linkages and conflicts between sectoral policies and the policies developed at different levels of government.

In summary, IFAD's framework assesses 1) policy needs and policy objectives set up to meet needs; 2) policy actors or stakeholders involved in policy agenda-setting and/or affected by the agenda, whether formal or informal; 3) institutional arrangements for implementation, whether formal or informal; and 4) feedback systems for future improvement.

Policy context defined in terms of inputs

Stanford University's National Center for Postsecondary Improvement (NCPI) developed a framework to assess the policy context for post-secondary education in the U.S. (NCPI 2007). It defines the policy context in terms of four sets of inputs that affect policy formulation, facilitating or constraining it:

- **Historical inputs** – the perceived needs leading to policy development or previous policies addressing the needs. This can be understood as policy rationale and objectives, set up by policy-making bodies.
- **Political inputs** – policy actors or stakeholders who influence or are influenced by policies and their implementation or institutional arrangements.
- **Economic inputs** – financial or other budgetary elements leading to or affecting the policies and their implementation, including economic needs and expenditures on the issues the policy addresses.
- **Social inputs** – demographic or societal concerns about the issues targeted by the policies. These inputs are an important aspect of the feedback system that influences future policies.

When compared with the IFAD framework, the most notable addition by NCPI is the analysis of economic inputs, including budgets and government spending on the issues addressed by the policies.

Photo Credit: Albert Salamanca

Enabling conditions for policy implementation

The UNEP report *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication* notes that even though the green economy is a compelling concept, “enabling conditions” still need to be created to encourage private-sector actors to invest in it (Wooders et al. 2011). Those conditions include “the right mix of fiscal measures, laws, norms, international frameworks, know-how and infrastructure” combined with capacity, information, dissemination of good policy practice, social assistance, skills, general education and awareness to ensure that measures are well-designed, implemented, enforced and understood, without unintended impacts or obstacles. The same applies to climate change adaptation: with the right enabling conditions, adaptation measures will provide more opportunities for social and economic development, with stakeholders at all levels empowered to participate in agenda-setting and implementation. In the context of adaptation, five key types of enabling conditions are needed:



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- **Finance** for government and other policy actors to implement the policies in discussion
- **Governance** – laws and norms that encourage adaptation and long-term and efficient management of natural resources, as well as improved administrative and technical capacity in government and other policy actors
- **Markets** that reflect the true costs of goods and the value derived from natural resources, e.g. water and forests
- **Infrastructure** for sustainable management or conservation of natural resources and for adaptation
- **Information**, including knowledge of the issues addressed by the policies, e.g. forests, water resources and adaptation, and the skills needed to manage them

Clearly, policy contexts are complex. Drawing on the frameworks described above, this study summarizes and analyzes the findings of the Bhutan and Nepal policy-context reports in terms of:

- The objectives of the policies reviewed;
- The policy players or actors and institutional arrangements for implementation;
- Finance and markets;
- Enabling conditions for implementation; and
- Feedback systems for future improvement.

Country overviews

Bhutan and Nepal are neighbours on the southern slopes of the Himalayas, with many commonalities but also substantial differences, both in their geography and in their socio-economic and political contexts.

Nepal is one of the world's poorest countries, with 57% of its 30.5 million people living on less than \$2 a day as of 2010 (in purchasing power parity or 'PPP' terms), according to the World Bank. By contrast, Bhutan is considered a lower-middle-income country, with nearly four times the gross national income of Nepal, and only 10% of its 738,300 people living on less than \$2 as of 2007 (in PPP).⁴

Nepal's economy is overwhelmingly agrarian, with 80% of the people deriving their livelihoods from agriculture and forests; tourism is also a significant source of income (Shrestha and Aryal 2011). In Bhutan, the agriculture sector, including forestry, employs roughly 60% of the labour force and contributed nearly 17% of GDP in 2010 (National Statistics Bureau 2007), even though just under 3% of Bhutan's land is available for farming (Kingdom of Bhutan 2011). Hydropower is the most significant economic sector according to the Bhutanese government, accounting for over 21% of GDP and 45% of revenue; it also provides almost 100% of the country's electricity (Kingdom of Bhutan 2011). All these sectors are very climate-sensitive, so without adaptation, both countries' economies and people's livelihoods could be severely affected by the impacts of climate change.

In Nepal, those impacts are already measurable, with annual mean temperatures rising by an average of 0.06°C per year, and by even more in the highlands, where the glaciers are retreating rapidly. Future impacts are uncertain, but significant additional warming is expected, as well as changes in precipitation. Also, as the glaciers melt, there are concerns about water supplies and flood risks (Shrestha and Aryal 2011).

Historical climate data for Bhutan is very limited, but observations from 2000-2009 show both maximum and minimum temperatures are increasing. Future climate models indicate that annual mean temperatures will increase by 0.8°C to 1°C by 2039 and by 2°C to 2.4°C by 2069; winter temperatures will rise slightly more, by 1.2°C by 2039 and by 2.8°C by 2069. Annual precipitation is expected to increase by 10% by 2039 and 20% by 2069, but not evenly: the monsoon season will be wetter, while the winter will be drier. Extreme weather is already increasing, with more flash floods and landslides caused by heavy rains, and damaging wind storms (Kingdom of Bhutan 2011).

In both Nepal and Bhutan, stakeholders at various levels – governments, donors, local and international non-governmental organizations (NGOs) – are actively working on adaptation policies, programmes and plans. Their success will depend on how well they meet local communities' needs, and how well they fit with local-level responses. The policy review that follows examines key policies and institutions that could create opportunities or obstacles to effective local-level adaptation. A central question is how local responses are shaped by (and help shape) national and sub-national conditions. This would help determine whether there are adaptation "best practices" that can be easily replicated, or whether each set of local circumstances (and external conditions) will require customized responses.

⁴ All data taken from the World Bank's World dataBank website, <http://databank.worldbank.org>.

Photo Credit: Albert Salamanca



Policies reviewed

The authors of the two reports reviewed conservation policies that are relevant to climate change adaptation, as well as the countries' adaptation strategies. In Bhutan, the conservation policies are specific to forestry; in Nepal, they cover water and forestry. Table 1 lists the policies; the sections that follow describe the policies.

Table 1: Policies discussed in the two reports

Year	Bhutan	Nepal
1969	Forest Act of 1969	–
1974	National Forest Policy	–
1979	Land Act of 1979	–
1989	–	Master Plan for the Forestry Sector (MPFS)
1990	Master Plan for Forestry Development	–
1993	–	Forest Act of 1993
1995	Forest and Nature Conservation Act	Forest Regulation 1995
2000	Forest and Nature Conservation Rules	Forestry Sector Policy 2000
2002	–	National Water Resources Strategy
2003	Forest and Nature Conservation Rules revision	–
2005	–	National Water Plan
2006	National Adaptation Programme of Action Forest and Nature Conservation Rules revision	–
2007	National Environment Protection Act	–
2010	National Forest Policy of 2010	National Adaptation Programme of Action
2011	–	Climate Change Policy 2011

Forests, water and climate change adaptation in Nepal water and climate

Forest resource management

In 1989, the Government of Nepal adopted the Master Plan for the Forestry Sector (MPFS), a long-term policy and planning framework with a time span of 25 years. The Forest Act of 1993 provided the legal framework for the plan's implementation; it was followed by the Forest Regulation of 1995. Together, these documents enabled a major shift in forest resource management in Nepal by establishing community forestry, a system in which the government delegates its authority over a forest area to a community forest user group (CFUG). The group then becomes responsible for sustainable management of the forest, under the oversight of district-level forestry officials, and group members are guaranteed access to forest products. Over time, community forestry has grown to cover nearly a quarter of Nepal's forests.



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In 2000, Nepal revised its forest policy to cover forest management in the Terai, the lowlands at the foot of the Himalayas. The new policy focused on the conservation of biodiversity, ecosystems, and genetic resources, and proposed extending community forestry and leasehold forestry programmes into the hilly areas of the Terai. The intent was to enhance the livelihoods of the region's poor and to protect ecologically sensitive forests.

Community forestry is widely seen as a success on multiple fronts. It has engaged local communities in forest protection, helping curb illegal logging and rapid deforestation. It has ensured that people who rely on forest products can get what they need, enhanced livelihoods, and supported development in rural areas that sorely need it. And it established mechanisms for self-governance and participatory decision making across the country, even during a period of extended political turmoil.

Still, community forestry in Nepal has also faced significant challenges due to conflicting laws, regulations and agency mandates; weak local institutions; big differences in resources, capacity and quality of management across CFUGs; and in some cases, corruption and abuse. In the Terai, where the timber is particularly valuable, community forestry faces competition from commercial interests. The government itself is also now seeking a greater share of forest revenues, with proposed amendments to the Forest Act that would not only put a share of CFUGs' incomes into government coffers, but would also limit the CFUGs' autonomy.

Photo Credit: creativecommons | Andrea Williams



Water resource management

Nepal's Water Resources Strategy (WRS 2002) and National Water Plan (NWP 2005) lay the groundwork for a coordinated, unified approach to water resources in the context of sustainable development and participatory decision making. The goal was to move away from sector-by-sector planning and policies and take an integrated, coordinated approach to ensure that Nepal could simultaneously provide safe, easily available water to all its people; increase agricultural productivity through efficient use of irrigation water; boost hydropower production; reduce water-induced disasters; and protect biodiversity. Targets are set for the short term (up to 2007), medium term (up to 2017) and long term (up to 2027), with basic needs met first, and gradual coordination and optimization over time. The core approach is Integrated Water Resources Management (IWRM), applied at the basin and sub-basin levels.

The NWP identifies specific programmes and projects in line with the WRS priorities, as well as institutional reforms to support them. The key principles underlying the NWP are integration, coordination, decentralization, popular participation, and a foundation of good governance, equity and sustainable development. One big priority is to expand irrigation and make it more efficient, in order to support long-term food security. Proposed projects will be assessed and ranked on the basis of whether they are sustainable, cost-effective, and equitable in their benefits. Where feasible, irrigation development is to be integrated with multipurpose water storage projects and inter-basin transfers. The storage projects are important to reduce the potential impacts of climate change, but given the technical and financial challenges involved, implementation may be delayed for a long time.

The WRS and NWP aimed to address both critical development needs and related legal and institutional issues. For example, Nepal had lacked a comprehensive water-resource policy, and activities were uncoordinated, with blurred responsibilities between institutions. Water use rights and priorities were also unclear, subject to conflicting laws and policies. The review of the WRS and NWP finds that while there are successes in terms of participatory decision making – stakeholders were amply consulted and engaged in shaping both documents – they have not been as successful in practice. Significant resource constraints have gotten in the way, and so has the existing bureaucratic culture. In fact, the integrated approach was undermined by the splitting of the Water Resources Ministry in two, with the creation of the Ministry of Irrigation in 2010. Political instability has also delayed implementation, and given the time lag and significant changes over the last decade, these documents may need to be significantly revised and updated.



Photo Credit: creativecommons | Curt Carnemark

Climate-specific policies: Nepal's NAPA and Climate Change Policy 2011

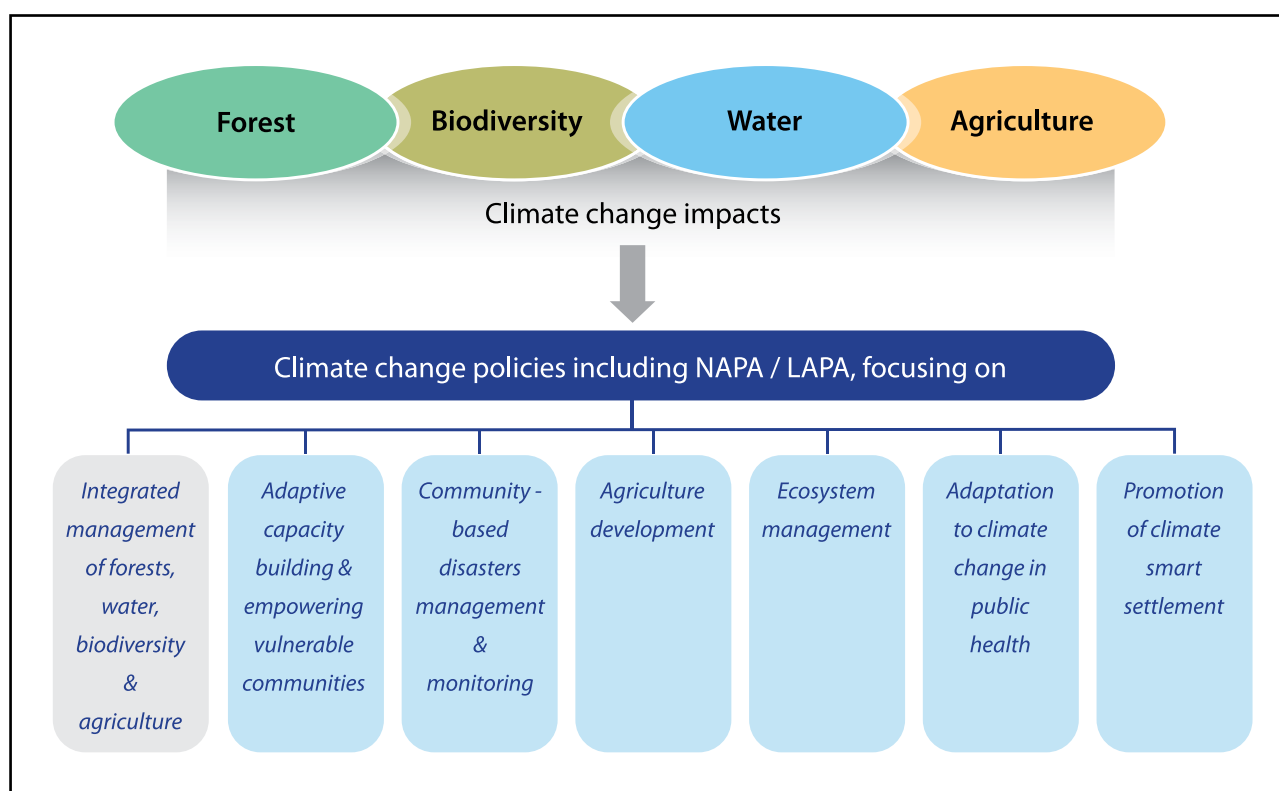
Nepal completed its National Adaptation Programme of Action (NAPA) in 2010, after extensive discussions and participation from a wide range of experts and stakeholders. The NAPA offers a detailed vision for adaptation in Nepal, with priorities that reflect the country's diverse needs – agricultural adaptation, forest and ecosystem management, public-health improvements, glacial lake outburst flood monitoring, community-based disaster risk management – and a governance structure to support it, led by the Ministry of Environment.

Most notably, the NAPA emphasizes the need for local-level decision-making and local control of adaptation funds, setting a target of 80% of funds to be spent at the grassroots level. The local emphasis is further reinforced by a provision for Local Adaptation Plans of Action (LAPAs), which will provide an opportunity for stakeholders to identify their communities' specific needs and tailor adaptation measures accordingly, all while following a unified, coordinated approach laid out by the NAPA.

The 2011 Climate Change Policy complements the NAPA with some international-policy context and proposed mitigation actions. It sets specific goals, with target dates for completion, and it calls for further institutional reforms, including having a Climate Change Council coordinate all climate programmes at the policy level, and the Ministry of Environment at the functional level. In terms of financing, the policy provides for a new, centrally administered Climate Change Fund to support adaptation and resilience programmes, low-carbon development, risk identification, research, and development and utilization of technologies. The budget is to be submitted for approval each year to the Climate Change Council, and made public.

There are significant linkages between the policies reviewed above. Namely, the NAPA directly envisions the CFUGs and irrigation users groups as the local implementers of adaptation measures, for example. Indirectly, the NAPA covers the extent that forest and water policies can support or undermine the resilience of local communities. Figure 1 below aims to help illustrate these linkages.

Figure 1: Linkages between climate change and key development issues



Forest and climate policies in Bhutan

Forest protection and community forestry⁵

As in Nepal, forests are a critical resource for people's livelihoods in Bhutan. But while Nepal has suffered significant deforestation, Bhutan has an astounding 72% of its land area under forest cover, including extensive primary forest. People rely on those forests for food, timber, fibres and medicines, as well as for ecosystem services such as water purification, climate regulation, soil formation and nutrient recycling. Forests are also valued aesthetically and spiritually. They are among Bhutan's greatest treasures, and thus forest policy is vitally important for the country, key to protecting a rich heritage of renewable natural resources.



Photo Credit: creativecommons | Curt Carnemark

The Forest Act of 1969 nationalised all of Bhutan's forests, declaring even trees on private land to be 'government reserved forests', and withdrawing traditional rights and customary laws. The National Forest Policy followed in 1974, setting a goal of maintaining 60% of the land under forest cover in perpetuity, creating a framework for scientific management of the forests, and providing for the restoration of degraded land. At the same time, the government began to recognize that rural communities depended on local forests to meet basic needs. The Land Act of 1979 allowed the use of forest resources on private land for domestic and non-commercial purposes, and a royal decree that year laid the groundwork for 'social forestry', an attempt to engage the community in forest protection and restoration. One of the participatory activities established under this initiative was community forestry.

In 1995, the Forest and Nature Conservation Act strengthened the scientific management of forest resources, restored communities' traditional rights, and provided for private forestry in privately registered lands and for community forests on government forest lands, with community groups granted management and use rights in conjunction with an approved management plan. The ensuing Forest and Nature Conservation Rules, promulgated in 2000 and revised in 2003 and 2006, enabled a rapid expansion of community forestry, with 16,400 ha in 135 community forests, benefiting more than 6,000 households, by 2009 (this, however, represents less than 1% of Bhutan's national forest area).

The National Environment Protection Act of 2007 further strengthened forest protection by requiring anyone taking natural resources or deriving economic benefits from them to ensure that they are sustainably used and managed. The act also embraced a participatory approach geared to the equitable sharing of costs and benefits among resource users. The following year, Bhutan's new constitution declared every citizen to be 'a trustee of the Kingdom's natural resources and environment', and reaffirmed the 60% minimum for forest cover.

Most recently, Bhutan approved the National Forest Policy of 2010, which adopts an integrated landscape-level approach to sustainable forest management, balances conservation with an emphasis on poverty reduction, enables payments for environmental services, and recognizes the country's commitments under international treaties such as the Convention on Biological Diversity, the United Nations Convention to Combat Desertification, the United Nations Framework Convention on Climate Change, and the Millennium Development Goals.

It should be noted that along with forestry laws and policies, several other policy measures have impacts on Bhutan's forests. For example, the Biodiversity Act of 2003 provides for conservation and sustainable use of biochemical and genetic resources and for equitable benefit-sharing. The National Environmental Protection Act promoted the use of clean energy sources and alternative technologies, which would reduce pressure on forests for fuelwood. The Economy Policy of 2009 builds on this by calling for accelerated hydropower development, for a minimum of 10 GW by 2020; energy expansion is an important economic driver for the country, but hydropower development also changes the landscape, with potential impacts on forests and ecosystems.

⁵ The policy timeline in this section draws on the background provided in the Forest Act of 2010 as well as by Gilmour et al. (2009).

Bhutan's NAPA

Bhutan's National Adaptation Programme of Action (Kingdom of Bhutan 2006) is based on a comprehensive review of the country's climate change-related vulnerabilities. The NAPA notes that Bhutan has fragile mountain ecosystems, is highly dependent on monsoon rains, and faces a growing threat of glacier lake outburst floods from the northern mountain ranges. Floods and flash floods are becoming more frequent and deadly, and Bhutan's economy is vulnerable to climate change on multiple fronts, most notably because of its large agrarian population and because changes in seasonal water flow threaten hydropower production.



Photo Credit: Albert Salamanca

The NAPA process, which began in mid-2004, involved in-depth assessments by five working groups on agriculture and livestock, forestry and biodiversity, health, water resources and energy, and natural disasters and infrastructure. After identifying vulnerabilities, the groups developed adaptation strategies to address them, proposing dozens of projects and then choosing nine priorities, based on costs, human life and health impacts, and impacts on land, water and infrastructure. Several involve disaster risk management: risks mapping, protection from landslides, floods and forest fires, and warning system development; rainwater harvesting is also prioritized. The NAPA notes that although Bhutan does not have 'abject poverty', these activities will benefit vulnerable communities.

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Key insights from the policy review

Policy objectives

Forests are crucial to the livelihoods of rural people in both countries, and community forestry has played an important role in protecting those livelihoods while also engaging forest users directly in the protection of the forests. This is particularly relevant for adaptation because those are very poor and vulnerable populations. In Bhutan, for example, while only 1.7% of Bhutan's urban residents lived in poverty as of 2007, and 0.2% in extreme poverty, in rural areas, the rates were 30.9% and 8%, respectively (National Statistics Bureau 2007).

Nepal's Master Plan for the Forestry Sector (MPFS), which laid the foundation for community forestry, had four stated objectives:

- Meet the people's basic needs for forest products on a sustained basis;
- Conserve ecosystems and genetic resources;
- Protect the land from degradation and other effects of ecological imbalance; and
- Contribute to local and national economic growth.

Bhutan's Forest Act, meanwhile, laid out the following objectives:

- Guide and safeguard Bhutan's natural resources from over-exploitation;
- Ensure the conservation of Bhutan's renewable natural resources; and
- Maintain 60% total forest cover.

In Nepal, as of January 2011, 15,256 community forest user groups (CFUGs) had been formed, comprising 40% of the total population and managing 22% of the country's total forest area, more than 1.3 million hectares (Poudyal 2011). In Bhutan, meanwhile, as of 2009, there were 16,400 ha in 135 community forests, benefiting more than 6,000 households (Gilmour et al. 2009). In both countries, community forestry is credited with helping curb (but not eliminate) deforestation and improve watershed management and biodiversity protection.

In addition, as highlighted especially in the Nepal analysis, community forestry has brought significant benefits in terms of livelihoods by ensuring easy, low-cost access to forest resources for household and agricultural purposes. Community forestry has also provided new funds for rural development activities such as building, operating and maintaining infrastructure: roads, schools, health clinics, etc. Some CFUGs also provide microfinance.

From an institutional perspective, the Nepal analysis notes, community forestry has built and strengthened local-level institutions, which have come together through a national network of their own: the Federation of Community Forestry Users, Nepal. It has also engaged a large share of the population in participatory decision-making, laying the groundwork for broader self-governance and providing a useful foundation for community-based adaptation.

Nepal's water policies, while also focused on laudable goals (ensuring a safe and sufficient water supply for all, adopting participatory decision-making processes, and providing a strong framework for future water resources development), have not been equally successful. As recommended by the World Bank, the government embraced Integrated Water Resources Management (IWRM) to guide water sector development, and it engaged external and local experts and stakeholders to prepare the Water Resources Strategy (2002) and National Water Plan (2005). These documents identified key issues but failed to properly account for resource availability and did not recognise the existing political and bureaucratic culture. As a result, most provisions have not been implemented, and the integrated approach was undermined by the splitting of the Water Resources Ministry in two, with the creation of the Ministry of Irrigation in 2010. The policy analysis concludes that the documents will have to be reviewed and revised to reflect changing conditions and the country's new political structure.

Bhutan's National Adaptation Programme of Action (NAPA) was not examined in depth in the policy analysis, but like Nepal's water policies, it has yet to yield significant results. The NAPA text notes that Bhutan needs "sound coping mechanisms" to deal with the adverse impacts of climate change, and it says its findings are "aimed at addressing the immediate threats of climate change by putting in place long-term preventive measures" (Kingdom of Bhutan 2006). However, the policy analysis found that few activities have been proposed or undertaken since then, mainly due to a limited understanding of climate impacts.



Photo Credit: creativecommons | Curt Carnemark

Nepal's NAPA, submitted in 2010, is detailed and comprehensive, with identified adaptation priorities in agriculture and food security, the water sector, the energy sector, disaster risk management, forests and biodiversity, public health, and urban settlements and infrastructure. Proposed actions are then grouped into nine clusters:

1. Promoting community-based adaptation through integrated management of agriculture, water, forests and biodiversity;
2. Building and enhancing the adaptive capacity of vulnerable communities through improved systems and access to services related to agricultural development;
3. Community-based disaster risk management to facilitate climate adaptation;
4. Glacial lake outburst flood monitoring and disaster risk reduction;
5. Forest and ecosystem management to support adaptation innovations;
6. Adapting to climate change in public health;
7. Ecosystem management for climate adaptation;
8. Empowering vulnerable communities through sustainable management of water resources and a clean energy supply; and
9. Promoting climate-smart urban settlements.

The implementation of Nepal's NAPA activities relies on local governments, the private sector, NGOs and community-based organizations to submit proposals for government review. The setup is meant to ensure that at least 80% of the funds for climate activities flow to the grassroots level; CFUGs and irrigation groups are among the local-level implementing entities envisioned by the plan.

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Institutional arrangements and implementation

Both country reports found multiple constraints to the effective implementation of policies, including institutional frameworks, limited funding, sectoral divisions, and private actors who simply break the law. In Bhutan, for example, rapid development and climate variability are making some provisions of the Forest and Nature Conservation Act and the Forest Policy hard to implement. The Department of Forest and Park Services, meanwhile, has institutional and financial limitations that hinder its work. Some guidelines are also simply not suitable for implementation at the field level, and other provisions are unclear (e.g. on additional sources of income for community forest groups). In addition, there are conflicts between sectors, such as between hydropower supporters in the energy sector, and conservationists.

In Nepal, the policy analysis found that the success of community forestry has been limited by several factors, including the sector-specific nature of most development programmes, policies, acts, rules and regulations, with no coordination among government agencies. This leads to contradictory policies; for example, the Local Self-Governance Act of 1997 says the natural resources within the territory of a District Development Committee or Village Development Committee are considered the committees' property, which they can manage and use to generate revenue; this contradicts the Forest Act of 1993's community forestry provisions. Thus, there is a need to review these laws and resolve the contradictions.

Political instability has also been a serious problem in Nepal that has directly affected forests. In 2010, for example, there were several reported cases of massive illegal logging involving collusion between local loggers, forest-based industries, government officials and even some CFUG officials. The government has now proposed several amendments to the Forest Act that would curb specific CFUG rights that were deemed to be promoting illegal logging, including their right to fix the prices of forest products and to sell forest items on a commercial scale; CFUGs' revenue would also be reduced, with 50% of the proceeds of forests product sales to non-members to be allocated to the government. In turn, CFUGs' much-valued autonomy would be curtailed, with any amendment to the community forestry operational plan requiring approval by the District Forest Office. The analysis finds that there are compelling arguments on both sides, involving a desire to prevent corruption and abuse. An appropriate solution will require finding a middle ground that addresses these concerns.

Climate change adaptation requires an integrated strategy and coordinated policies, and in both countries, the policy analyses found a significant need for greater sectoral integration and coordination. Laws, rules and regulations also need to be reviewed to ensure they are consistent. The Bhutan report urges the government to develop coherent policies within its sectoral plans and programmes that consider the impacts of climate change on forests. The Nepal review also identifies a "major communication gap" between national and local-level government agencies, especially on climate change issues. It also notes that in the years since Nepal's forest, water and environmental policies were drafted, conditions have changed significantly. Public awareness may have increased; the government has changed repeatedly, and local-level government has become weaker, while Nepal's dependence on support from bilateral and multilateral agencies has increased. Thus, significant updates may be needed.

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Enabling conditions

The success of a policy depends not only on the quality of the policy itself, but also on several key factors or “enabling conditions” that are needed to provide a solid foundation and facilitate implementation. Adequate financing, for example, is crucial: if the implementing agencies have no money, they will not be able to act. Governance is another key factor, and a major constraint to adaptation in many countries – lack of adequate institutions, lack of vertical (national-to-local) integration, and lack of cross-sectoral integration can hinder everything from planning and policy development, to implementation. Markets, infrastructure and information are also important enabling conditions (Wooders et al. 2011).



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Finance and markets

Both Bhutan and Nepal are Least Developed Countries; the World Bank classifies Bhutan as a lower-middle-income country, and Nepal as a low-income country. Thus, both countries have limited resources, and while Bhutan has been developing rapidly, Nepal has become more dependent on overseas aid in recent years. The policy analyses do not examine the overall availability of funds for forest and water resource management or for climate-related activities, but they do indicate that at the implementation level, inadequate funding is an issue. This is particularly noted for the Department of Forest and Park Services in Bhutan, which is responsible for a large share of forest policy implementation. Finance has also been a major obstacle in implementing Nepal’s water policies.

In this context, community forestry is a good example of how to get past such resource constraints, leveraging the value of forest products to cover the costs of enhanced forest protection and management. In Bhutan, the Forest Policy and Act also offers timber subsidies to rural communities, providing them with lower-cost wood to build their homes. In Nepal, CFUGs have also generated funds for livelihoods diversification and rural development. Extrapolating from a rapid appraisal of 1,788 CFUGs by the Community Forest Division in 2004, Kanel and Dahal (2008) estimated the market value of products harvested from community forests at about 2 billion NRs (roughly \$24 million USD). They also estimated that CFUGs produce about 913 million NRs (\$11 million USD) in annual revenue, from the sale of forest products and from fines, fees and grants. CFUGs retained about half their income in their accounts and spent the rest, with about 36% of that on community development. A major national pilot project is now developing a payment mechanism under the Reducing Emissions from Deforestation and Forest Degradation Plus (REDD+) system that would also work through the CFUGs. However, it is important to note that in Nepal, the benefits of community forestry have been quite uneven. Researchers have found significant differences in how CFUGs manage their resources, and they have noted that in the Terai, especially, few CFUGs have embarked on income-generating activities through forest-based enterprises. This reflects an important regional difference: the Terai is rich with valuable timber, so CFUGs can make more money from the timber itself. However, in that region, competition over forests from commercial enterprises has been fierce. While the reports do not delve into market conditions, it is clear that they can also help or hinder policy implementation. Competing interests are cited in the Bhutan report as well, with regard to hydropower and biodiversity/ecosystems conservation.

The Bhutan report also notes the importance of adequate financing for capacity building and for enhancing technical capacity. It is important to invest in training and infrastructure, the report notes – for example, weather stations at different elevations – in order to achieve a better understanding of the impact of climate change on forests and biodiversity.

Governance and institutions

The reports offer strong examples of both the power of effective institutions to advance policies, as seen with CFUGs, and the difficulties created by ineffectual and/or splintered governance, as in multiple examples of competing and mutually contradictory laws, policies, institutional mandates, and practices.

The Bhutan report finds that there are numerous government institutions and non-governmental organizations working in isolation on biodiversity and climate change issues. Thus, it advises, there is an “urgent need to revisit and realign the existing framework to ensure that all organizations work transparently and in synergy with one another”. This could also help ensure that the limited resources available are used effectively, the authors write.

The Nepal report also stresses the importance of addressing conflicts and divisions between the agencies responsible for different sectors – a major factor in the difficulties in implementing new water policies – and, in the context of Nepal’s significant political turmoil of recent years, identifies the weakness of local government entities as a concern. The country’s NAPA explicitly seeks to strengthen local entities’ roles, not only providing for 80% of the funds to be channelled to local entities, but also calling for the development of Local Adaptation Plans of Action (LAPAs) as a way to identify needs and set priorities at the local level for more effective implementation of the NAPA agenda.



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Information, knowledge and public awareness

Both reports identified the lack of crucial information, technical knowledge and public awareness as serious obstacles to successful adaptation. The case studies in Nepal and Bhutan show that most community members recognize that the climate is changing, but they do not actually know much about climate change, adaptation, or related policies or government initiatives. National government officials have recognized the seriousness of climate change, and both countries have submitted NAPAs, but significant scientific knowledge and data gaps remain. At the sub-national level, especially at the community level, knowledge of climate change even among government officials is very limited, so significant capacity building is required.

Policy recommendations

The reports offer multiple suggestions for ways both to improve sector-specific policies and to support a more integrated and effective approach to adaptation. To a great extent, those recommendations have already been noted above, in the context of the relevant policies. Thus, this concluding section offers only a synthesis of the key priorities identified:

- Systematically review laws, policies and practices affecting development, natural resources, conservation and other environmental issues, and ensure that they are consistent, and not mutually contradictory.
- Foster institutional linkages, cooperation and coordination among agencies involved in these issues, to ensure they work in tandem rather than at cross-purposes. This will be particularly important for effective adaptation.
- Invest in research and infrastructure to ensure that planners, decision-makers and implementing agencies have the knowledge they need to do their jobs effectively.
- Invest in capacity building at all levels of government, especially with regard to climate change and adaptation.
- Further empower communities to participate in planning, conservation and natural resource development and management, and ensure that their feedback on policies can reach decision-makers and influence future policy-making.

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