



**Climate Change and Rural Institutions
in Nepal**

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ACRONYMS

| | |
|-----------|--|
| ACOFUN | Association of Collaborative Forest Users |
| ADB | Asian Development Bank |
| ADS | Agricultural Development Strategy |
| AICL | Agriculture Inputs Company Limited |
| APM | All Party Mechanism |
| CAPA | Community Adaptation Plan of Action |
| CCC | Climate Change Council |
| CCNN | Climate Change Network Nepal |
| CCRI | Climate Change and Rural Institutions |
| CDM | Clean Development Mechanism |
| CF | Community forestry |
| CFM | Collaborative Forest Management |
| CFUG | Community Forest User Group |
| CHESS | Child Health and Environment Save Society |
| CIAA | Commission for the Investigation of Abuse of Authority |
| CPA | Comprehensive Peace Agreement |
| CPN-UML | Communist Party of Nepal (Unified Marxist Leninist) |
| CSO | Civil Society Organization |
| DADO | District Agriculture Development Officer |
| DANAR | Dalit Alliance for Natural Resources |
| DDC | District Development Committee |
| DDMC | District Disaster Management Committee |
| DDP | Disaster District Plan |
| DFID | Department for International Development, UK |
| DFO | District Forest Officer |
| DISCO | District Soil Conservation Officer |
| DNA | Designated National Authority |
| DoF | Department of Forest |
| DRM | Disaster Risk Management |
| DRR | Disaster Risk Reduction |
| FECOFUN | Federation of community Forestry Users, Nepal |
| FNCCI | Federation of Nepalese Chambers of Commerce and Industries |
| GCM | General Circulation Models |
| GLOF | Glacier Lake Outburst Floods |
| GoN | Government of Nepal |
| HIMAWANTI | Himalayan Grassroots Women's Natural Resource Management |

| | |
|---------|--|
| ICIMOD | International Centre for Integrated Mountain Development |
| ICRC | International Committee for the Red Cross |
| IFRC | International Federation of the Red Cross and Red Crescent Societies |
| ILO | International Labour Organisation |
| INGO | International Non Government Organisation |
| IPCC | Intergovernmental Panel on Climate Change |
| LAPA | Local Adaptation Plan of Action |
| LDC | Least Developed Country |
| LDO | Local Development Officer |
| LDRMP | Local Disaster Risk Management Planning Guidelines |
| LFP | Livelihood and Forest Project |
| LIBIRD | Local Initiatives for Biodiversity Research and Development |
| LSGA | Local Self Governance Act |
| MCCICC | Multi-Stakeholder Climate Change Initiatives Coordination Committee |
| MoAC | Ministry of Agriculture and Cooperatives |
| MoE | Ministry of Environment |
| MoFSC | Ministry of Forests and Soil Conservation |
| MoHA | Ministry of Home Affairs |
| MOSTE | Ministry of Science, Technology and Environment |
| NAPA | National Adaptation Programme of Action |
| NCDM | National Council for Disaster Management |
| NDMA | National Disaster Management Authority |
| NEFIN | Nepal Federation of Indigenous Nationalities |
| NFA | Nepal Foresters' Association |
| NGO | National Government Organisation |
| NRCS | Nepal Red Cross Society |
| NRRC | Nepal Risk Reduction Consortium |
| NSDRM | National Strategy for Disaster Risk Mangement |
| RECOFTC | The Centre for People and Forests |
| REDD | Reducing Emission from Deforestation and Forest Degradation |
| SPA | Seven-Party Alliance |
| UNDP | United Nations Development Programme |
| UNDRIP | UN Declaration of Rights for Indigenous People |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VDC | Village Development Committee |

ABSTRACT

This working paper provides a summary of initial findings on the factors influencing how meso-level institutions in Nepal are responding to climate change and extreme climate events.

Nepal is still experiencing difficult processes of transition from war to peace. Underlying these difficulties and central to a view of Nepal as a state with limited capabilities is the ongoing challenge to its legitimacy, the failure of the state to perform in terms of delivery of basic public goods and reduce poverty, all underpinned by the persistence of an old political elite based on old social hierarchies and practices leading to enduring patterns of social exclusion.

Through a combination of landscape features characteristic of mountainous countries, a largely subsistence agrarian sector, high poverty levels, and limited government capability Nepal has been ranked as the fourth most at risk country according to one Climate Change Vulnerability Index. Natural disasters – especially landslides and droughts in the mountains and hills and floods in the Terai – accentuated by extreme weather events are argued to be likely to have a significant impact on agricultural production and livelihoods, especially for marginal locations farmed by the more food insecure households. Although there is talk of climate policy integration or climate mainstreaming with assumptions of government coherence this is far from reality. The state and government are internally complex and incoherent, and the institutional landscape around climate change is complex both at national and district levels.

Nepal's mountainous landscape makes it difficult to make wide generalizations about climate change impacts, risks and effects. Re-

lated to this, effects of climate-linked disasters and change may often, although not always, be localized and of small scale with respect to human impact in the mountains and hills although not in the plains. But the absence of a political settlement and the weakness of the state, a significant presence and influence of donors juxtaposed against a dynamic and increasingly contentious civil society leads to an extremely complicated, often muddled and context specific institutional landscape at all levels

The climate change agenda has made inroads into policy processes and into the programmes and activities of the Government of Nepal entities and several donor agencies and service providers. Despite political contention and conflict, climate policy seems to have been supported by relevant government agencies. A significant part has been concerned to localise the climate change and disaster agenda and the development of policies. These still need translation into detailed policy and programmatic instructions for the meso-level government institutions. But policy development on climate change and disaster risk is mainly dictated and driven by donor agencies, and there is less ownership across various levels of governments. In some cases, government officers at the district level are even not aware of the plans that they themselves endorsed – indicating a co-option in climate change and disaster planning by donor-funded organisations who are keen to legitimize their own work through these plans.

I. INTRODUCTION

This working paper provides a summary of initial findings on the factors influencing how meso-level institutions in Nepal are responding to climate change and extreme climate events. It draws on preliminary findings from the research on Climate Change and Rural Institutions (CCRI) in Nepal and is part of a four-country comparative study.

Landlocked Nepal, located in the central Himalayas, has three distinct ecological zones – the Mountain, Hills and Terai (plains) and more than 6,000 rivers, most of which drain from the north to the south. There is an estimated forest cover of about 37 percent. Historically the bulk of Nepal's population has lived in the middle mountains, but since the 1960s there has been significant migration of hill and mountain people into the Terai where just over 50 percent of Nepal's population is now located.

Three districts have been selected as research sites: Dolakha, Lamjung, and Rupandehi. Dolakha and Lamjung lie in the Mountain and Mid-hills region respectively and are ranked as having “very high” vulnerability in the National Adaptation Plan of Action or NAPA (Ministry of Environment 2010) of Nepal district vulnerability ranking. The third district (Rupandehi) is ranked as very low vulnerability to climate change risk. Lamjung and Dolakha each have snow-fed rivers and contain glacial lakes. Rupandehi lies in the Terai and does not have snow-fed rivers but various other rivers emerge from the adjacent hills and storms in the hills frequently cause flooding in the plain areas.

Nepal remains one of the poorest countries in the world ranking at 195th out of 210 countries in terms of Gross National Income per capita (World Bank 2010). While

the poverty incidence has fallen from about 42 percent in 1995/96 to 25.4 percent of the estimated population of 28 million in 2009 (National Planning Commission 2010) the levels of poverty remain high and the levels of inequality have been rising over the same period – from 0.34 to 0.41 in terms of the Gini coefficient. In 2007/08, it ranked 142nd in the world on the Human Development Index, with life expectancy of 63 years and adult literacy at 63 percent for 2008/9.

Nepal has recently emerged from ten years of an armed conflict (1996-2006) between the government and the Communist Party of Nepal (Maoist) which seriously challenged the state and caused significant death, destruction and displacement. Since 2006, when the comprehensive peace agreement (CPA) was signed, there has been a long drawn-out process of developing a new constitution. In May 2012 the Constituent Assembly charged with developing the new constitution reached a fourth extended deadline without resolution. Accordingly it was dissolved and new elections were called for November 2012, but this did not happen. With intense disagreement between political parties, the Constituent Assembly election has been announced for November 2013 but this is still uncertain, in the face of several parties boycotting or actively resisting it. Local government has now been running without elections for more than ten years.

Nepal is still experiencing difficult processes of transition from war to peace, from a monarchy to a republican state and in social and economic relations. Underlying these difficulties and central to a view of Nepal as a state with limited capabilities is the ongoing challenge to its legitimacy, the failure of the state to perform in terms of delivery of basic public goods and reduce

poverty, all underpinned by the persistence of an old political elite based on old social hierarchies and practices leading to enduring patterns of social exclusion.

Although the policy talk around climate change activities may speak of climate policy integration or climate mainstreaming with assumptions of government coherence (Ahmad 2009) this is far from reality. The state and government are internally complex and incoherent, and the institutional landscape around climate change is complex both at national and district levels.

First, the government is spread across several ministries and departments, with their own mandates, legacies, expertise, capacities and weaknesses, as well as inter-agency tensions about resource control, domination, coordination and so on. Second, the mandate and authority of many of these ministries/departments have been transferred to varying degrees – under devolution, or administrative, fiscal or political decentralization – to sub-national (especially district or meso-level and local) levels with various degrees of autonomy for subnational action. Third, there is significant involvement of donor agencies and international organizations on government policy, and particularly in climate change. These often engage bilaterally with multiple local actors and promote ‘role play’ around their priorities. Fourth and linked, the climate change agenda has had significant take up at national/sub-national levels by non-governmental actors as diverse as non-governmental organizations (NGOs), consulting firms, civil society organizations (CSOs) and movements, the media, researchers and academics. Last but not the least, the post-1990 political order in Nepal has provided civic rights and liberties with which individual citizens and their associa-

tions have the opportunity to air views and make demands on the government, even if these are not met. These factors add complexity to how district institutions operate, and how they link themselves to those above and below them.

Nepal in comparison with its regional neighbours has performed poorly with respect to economic development and growth has been the lowest in the region since 1990, ranging from 4-7 percent annually. While the economy has traditionally been agrarian in nature, its share of GDP has fallen from 51 percent in 1985 to about 40 percent in 2000 and to 33 percent in 2007. The contribution of industry has been more mixed and has shrunk during the conflict years contributing 16.3 percent in 2007. Remittance flows are estimated to contribute somewhere between 25-30 percent of GDP coming from the two million Nepali men and women working in India, Malaysia and the Middle East. There has been considerable capital flight, as reported by Global Financial Integrity; this totalled USD 8.01 billion over 2001-2010, through illegal transfers facilitated by lax capital control measures.¹ In contrast contribution from services to GDP reached nearly 50 percent in 2007 linked to the tourist industry, trade and transport and communication.

Around 80 percent of Nepal’s people live in rural areas and draw their livelihood primarily from agriculture and related activities although remittances provide substantial inflows into the rural economy and as noted earlier the share of agriculture in GDP has been falling. Agriculture remains largely

¹ Republica (2012) “Nepal loses \$8b in capital flight in last ten years,” www.myrepublica.com, 19th Dec, accessed 19th Dec 2012.

subsistence or semi-commercial with only 15 percent of gross outputs being sold in 2003/04. Self employment in agriculture and agricultural wage employment are the country's most important source of household income.

Thus through a combination of landscape features characteristic of mountainous countries, a largely subsistence agrarian sector, high poverty levels, and limited government capability Nepal has been ranked as the fourth most at risk country according to one Climate Change Vulnerability Index (CCVI).² Natural disasters – especially landslides and droughts in the mountains and hills and floods in the Terai – accentuated by extreme weather events are argued to be likely to have a significant impact on agricultural production and livelihoods, especially for marginal locations farmed by the more food insecure households.

Two main themes run through this paper. First and as discussed in the next section, Nepal's mountainous and complex landscape makes it difficult to make wide generalizations about climate change impacts, risks and effects. Related to this, effects of climate-linked disasters and change may often, although not always, be localized and of small scale with respect to human impact in the mountains and hills although not in the plains. Second, the absence of a political settlement and the weakness of the state, a significant presence and influence of donors juxtaposed against a dynamic and increasingly contentious civil society leads to an extremely complex, often muddled and context specific institutional landscape at all levels. This is discussed in section 3. Section 4 moves on to outline the key policies and mandates with respect to climate change, and the paper concludes with a final discussion.

2. THE IMPACT OF CLIMATE CHANGE IN NEPAL

2.1 Changes in temperature and rainfall

Nepal is considered to be one of the world's most sensitive countries to the effects of climate change. This is largely due to its low level of development, a problematic governance and institutional environment, the poverty of its largely rural population combined with the effects of topography, and heavy monsoon rains (Sudmeier-Rieux et al. 2012:123, MoHA 2009 :17).

About 83 percent of Nepal is mountainous, and the remaining 17 percent lies in the northern part of the Ganga Basin plain or Terai (MoHA 2009 :5). The hottest part of the country is the southern Terai belt and the coldest parts lie in the high mountain and the Himalayas in the north (Practical Action 2009:5;19, Agrawala et al. 2003:11). The climate types within Nepal range from subtropical in the south to arctic in the north. The climate is essentially dominated by the South-Easterly monsoon, which provides most of the precipitation during the rainy summer months in June until September. Depending on the location, about 70-85 percent of the annual precipitation in the country falls during this period (Shrestha and Aryal 2011:66-67).

About 20 percent of total area of the country is used for agricultural activities. The agricultural sector largely relies upon the annual monsoon rainfall since the irrigation system only covers a small area of the country (Shrestha and Aryal 2011:66-67). Due to its high dependence on rain-fed agriculture, Nepal is highly sensitive to changes in rainfall (Ministry of Environment 2010).

² <http://maplecroft.com/about/news/ccvi.html> (accessed /2/07/12)

Key climate change impacts on Nepal will most likely include significant warming, particularly at higher elevations, leading to reductions in snow and ice coverage and thus flow of snow fed rivers. There will be an increased frequency of extreme events, including floods and droughts, and an overall increase in precipitation during the wet season (Ministry of Environment 2010), shorter monsoon seasons (typically June, July, August), more intensive rainfall patterns, and drought (Sudmeier-Rieux et al. 2012:123). In addition a variety of different non-climate factors will have varying but negative effects on water resources and agricultural systems in the region, including pervasive resource mismanagement and rapid population growth. This will confound the effects of climate change making it more difficult to disentangle what change is related to external global climate changes, and what is due to local land-use and development issues (Bartlett et al. 2010:4).

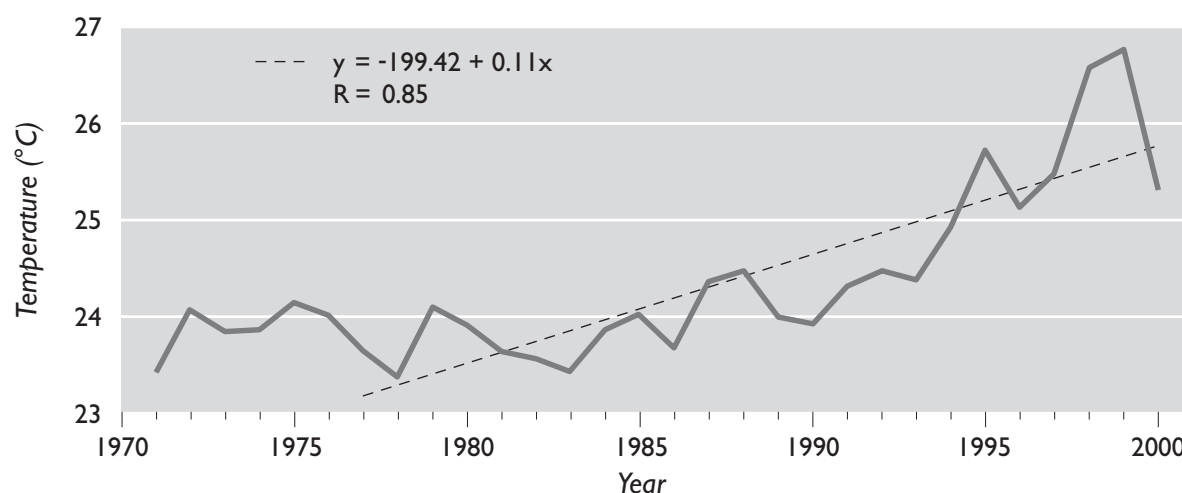
2.1.1 Temperature

According to McSweeney et al. the annual mean temperature has not increased in Ne-

pal, in the observed climate period of 1960 to 2006 (McSweeney et al. 2008:1). This conclusion contradicts findings in the Shrestha et al. (1999) study on temperature records in the country. The latter study shows that, based on data from 49 stations in Nepal for the period 1971–94, there is a warming trend after 1977, ranging from 0.06°C to 0.12°C increase per year in the higher altitudes such as the Middle Mountain and Himalayan regions, while the southern, lower plains, i.e. the Siwalik and Terai regions, show warming trends of less than 0.03°C per year (Shrestha et al. 1999:2775). Warming seems to be more pronounced in the winter season (ibid. 2775; 2779). The study was later extended with more recent data, which shows that the warming trend is still continuing in Nepal (Shrestha and Aryal 2011:69):

The Nepalese National Adaptation Programme of Action (NAPA) prepared by the Ministry of Environment indicates that there has been an annual, non-uniform increase in temperature, of 0.04–0.06°C, with higher altitudes warming at a faster rate than the southern, lower plains (Ministry of En-

Figure 1. Nepal annual mean-maximum temperature trend, 1970–2000



Source: Shrestha and Aryal 2011:70.

vironment 2010:ix). In line with this, the IPCC report concludes that Nepal's annual temperature has increased by 0.04°C in the Terai region, more in the winter months, and 0.09°C per year in the Himalayas (Cruz et al. 2007:475).

Even if McSweeney et al. (2008) did not find any evidence of annual temperature increase, the study does conclude that there is a small increase in the frequency of hot nights together with decreases in number of cold days and nights between 1960 and 2003 (McSweeney et al. 2008:1-2), thus indicating a warming trend in Nepal.

One plausible reason to why findings on Nepal temperature increase are conflicting is that analysis of observed temperature and precipitation data in Nepal is limited to the relatively short length of records of about 30 years (Shrestha and Aryal 2011:68-69), making it difficult to draw solid conclusions. In addition, Nepal's unique physiographical and topographical distribution presents enormous climatic and ecological diversity (Shrestha and Aryal 2011:66-67), adding to the challenge of projecting impact of climate change on ecosystems in the country.

McSweeney et al. (2008) predict that the mean annual temperature will increase by 1.3 to 3.8°C by 2060, and 1.8 to 5.8°C by 2090. The range of projections by 2090 under any one emissions scenario will be 1.5–2°C. The number of hot days will continue to increase, and days and nights considered cold will by 2090 vanish completely in some parts of the country (McSweeney et al. 2008:3).

The Ministry of Environment concludes in the NAPA report that, based on the SRES B2 scenario, General Circulation Models (GCM) show a mean annual temperature increase with an average of 1.2°C by 2030, 1.7°C by 2050 and 3°C by 2100, compared to the pre-2000 baseline (Ministry of Envi-

ronment 2010:X). The NAPA included projections offer a higher projection rate than the McSweeney report. The NAPA report also offers temperature projections based on experiments with Regional Circulation Models (RCMs), which show higher mean annual temperature projections: 1.4°C by 2030, 2.8°C by 2060, and 4.7°C by 2090. Higher increments of temperatures are projected over western and central Nepal, compared to eastern Nepal for these years (Ministry of Environment 2010:X).

There is difficulty in scaling down GCMs to the Nepalese geography, which has extreme topography and complex reactions to the greenhouse effect. GCM outputs lack sufficient spatial resolution to provide information on changes across the different elevation zones. Even high-resolution climate models cannot give reliable projections of climate change in the Himalayas (Jianchu et al. 2007:49, Bartlett et al. 2010:4).

2.1.2 Rainfall

According to McSweeney et al. (2008) a significant decrease in precipitation, averaging 3.7mm per month per decade, has been observed in annual precipitation in Nepal in the last few years; mainly due to average decreases in the summer rains (June, July and August) (McSweeney et al. 2008:2-3). The IPCC report however concludes that there are no distinct long-term trends in precipitation, based on the existing records between 1948 and 1994 (Cruz et al. 2007:475).

Either way, future projections indicate that mean annual rainfall will increase in the country, largely due to increases in rainfall during the wet season (June until November). The proportion of total rainfall that falls in heavy events is projected to increase as well (McSweeney et al. 2008:2-3; Ministry

of Environment 2010:X). Nepal's adaptation plan suggests that the summer months will see an increase in rainfall for the whole country of 15-20 percent (Ministry of Environment 2010:X). A report by Sudmeier-Rieux et al. (2012) concludes that less monsoonal rain across the high mountains and more monsoonal rain along the southern hills is to be expected (Sudmeier-Rieux et al. 2012:121).

In summary, Nepal can expect increases in mean annual rainfall during the wet season, with decreases in rainfall during the winter months. Monsoon and post-monsoon rainfall and the intensity of rainfall will increase (Ministry of Environment 2010:X). However, the complex topography in Nepal will mean that local precipitation variations in response to global warming will be large and many areas will vary from the regional trend (McSweeney et al. 2008:2-3).

2.2 Disasters triggered by extreme climate events

A total of 64 out of Nepal's 75 districts are prone to some type of disaster. Nepal is ranked number 23 in the world when it

comes to total natural hazard-related deaths, from 1988 to 2007, with total deaths reaching above 7,000. In addition, the country ranks 7th for the number of deaths resulting from all floods, landslides and avalanches and in 8th position for flood-related deaths alone. Globally, Nepal therefore ranks very high in terms of relative vulnerability to earthquakes and water-related disasters, respectively (MoHA 2009:17). In 2010 alone, casualties from natural disasters totaled 837 people, respectively caused by floods (27), landslides (67), fire/forest fires (61), epidemics (130), other hydro-meteorological reasons (161) and other causes (391). In that year 4259 houses were destroyed and 8453 houses were damaged due to disasters (MoHA 2011: 54). These figures indicate that climate-related disasters remain significant.

Given Nepal's small size and relatively low population density, in comparison to the other countries such as Bangladesh, Indonesia, China and India featuring at the top of the natural hazard-related deaths score, these rankings are particularly high and emphasize the high annual human toll of disasters such as floods, even during events that

Table I. Number of floods and landslides and resultant casualties in the three districts, 1900-2005

| Region | No of floods | No of flood casualties | No of landslides | No of landslide casualties |
|----------|--------------|------------------------|------------------|----------------------------|
| Mountain | 163 | 9344 | 555 | 14 397 |
| Hill | 903 | 388 745 | 1610 | 31 610 |
| Terai | 1674 | 2 856 193 | 113 | 14 226 |
| Total | 2740 | 2 904 282 | 2278 | 60 233 |

Source: Aryal 2007:32.

Box 1. Perceptions of climate-related extreme events

Informants in the hill districts have strong perceptions of climate-related extreme events (landslides, floods, hailstorms, forest fires etc.) although the effects of these are usually highly localised. An increase in forest fires has been noted but the most frequent hazards are flood and landslides. Landslides are reported to be one of the major causes that induced hills people migrate to the Tarai over the last decades. When Nepal's planned development began in 1950s, "*badhi pidit*" – literally flood victims – comprised a particular category of people who deserved government support in the form of being provided free land in the Tarai. In Lamjung, some respondents suggested that some villages were entirely relocated to the Tarai due to landslides or related food problems in the 1970s.

On the other hand, people in Terai district appeared to have less sense of climate-induced extreme events although floods occur and have general impacts. Two distinct characteristics of flood prevail in Rupandehi: floods in the Tinahu river which affects the population living along the river banks (particularly landless people); flooding in the southern part of the district due to embankment and road construction in India which does not allow flood waters to drain away.

are considered "normal" for the country, and not exacerbated by changes in the climate (MoHA 2009:17).

As noted earlier, NAPA ranks two districts (Dolakha and Lamjung) as amongst the most climate-vulnerable and Rupandehi the least vulnerable of Nepal's 75 districts. However a review of the historical record (Aryal 2007:22) suggests that it is the floods in the Terai (table 1) that have given rise to the greatest number of casualties from natural disasters (reflecting probably higher population densities there) although the hills have reported over 50 percent of the casualties due to landslides. Nevertheless the perceptions of climate-related extreme events seem to be greater in the hills rather than in the plains (see box 1)

The risk of natural disasters in Nepal is likely to be exacerbated by the increase in the intensity and frequency of weather-related hazards, induced by climate change. One area which will probably be exacerbated by climate change, is the frequency of water-induced disasters (MoHA 2009:25-26). The other important disaster likely to be exac-

erated by climate change is forest fires³ – which in addition to causing fatalities and damages to property, reduces forest stock for use by local inhabitants (NCVST 2009).

Floods and landslides take their toll every year, resulting in loss of human life, crops and infrastructure (MoHA 2009:21). Since 80 percent of Nepal's rainfall occurs during the monsoon period (June-September), more intense monsoon rainfall periods are likely to lead to landslides and floods, especially in fragile environments near the mountains and mountain valleys (Sudmeier-Rieux et al 2012:121, Agrawala et al. 2003:16). Table 2 provides a historical record of the frequency of disasters due to landslides in Dolakha (showing both their frequency and relatively small casualty rates) while Box 2 presents a story of the genesis of a landslide and its effects. According to the Nepal Risk Reduction Report, the trend of increased intensity in rainfall has already led to an increase in the frequency and magnitude of water-related

³ In the recent past, forest fire was particularly prominent in the spring of the year 2009 (see NCVST 2009:22-26).

hazards such as floods, debris flows and landslides (MoHA 2009:26).

Another consequence of increasing temperature is the loss of snow and ice in the mountains. Glaciers in the Himalayas have

diminished in volume over the past few decades, with many of the glaciers retreating faster than the world average. Estimates conclude that the glaciers are thinning at a rate of 0.3-1 meter per year (Jianchu et al. 2007:49).

Table 2. Disaster History in Dolakha

| <i>Year (BS)</i> | <i>Month</i> | <i>Disasters</i> | <i>Impacts</i> |
|------------------|--------------|------------------|---|
| 1986 | July | Floods/landslide | 4 people died in Suspa-ward 7 and 4 Loss of physical assets |
| | August | Floods/landslide | 16 people lost their lives, 7 houses destroyed, 50 houses displaced in Boach-ward 1 |
| 1988 | July | Floods/landslide | 4 people lost their lives, 1 house destroyed and 26 houses affected in Gairimudi- ward 1 5 people died, loss of physical assets in Suspa-ward 2,5,7 affected 7 people died in maize field, 50 m road destroyed in Malu ward 3 |
| | June | Lightening | 3 people died in Mali-ward 3 |
| | July | Floods/landslide | 15 people died due to landslide in Lapilang |
| 1995 | June | Epidemics | 4 people died and many affected in Gairimudi-wards 7,8,9 |
| | July | Flood/landslides | 8 people died, land and property destroyed in Sunkhani-ward 1 14 people died, missing, property destroyed due to landslide in Vyaku |
| 1988 | June | Epidemics | 8 people died in Lamabagar |
| 2000 | August | Landslide | 7 people died, land and physical assets destroyed in Thulopatal-ward 5 |
| 2001 | June | Landslide | 11 people died, 5 missing, 18 house affected and 22 livestock killed due to landslide in Chankhu |
| | August | Landslide | 3 people died, physical assets destroyed in Babare |
| 2002 | August | Epidemic | 8 people died in Gujipa, Laduk-ward 4 |
| 2004 | June | Epidemic | 4 people died due to diarrhea in Khopachangu-ward 1, 3 |
| 2006 | July | Lightening | 5 people died in Khare wards-4, 5 |
| 2008 | June | Lightening | 2 people died in Chetrapa |
| 2011 | July | Flood/landslide | 11 people died, 5 injured in Gaurishankar VDC (Siring Khola) |

Source: DDRC Dolakha 2012:27-28.

Significant areal expansion of several glacial lakes has also been documented in recent decades, with an extremely high likelihood that such impacts are linked to rising temperatures (Agrawala et al 2003:13).

Valley communities surrounding the mountains depend on the ice masses for water supply. The melting will therefore decrease water supplies for rural populations. Another catastrophic consequence is the creation of gla-

Table 3. List of GLOF events recorded in Nepal

| <i>Date</i> | <i>River Basin</i> | <i>Name of Lake</i> |
|-------------------|--------------------|---------------------|
| 450 years ago | Seti Kola | Machhapuchhare |
| 1935 August | Arun | Taraco |
| 1964 September 21 | Sun Koshi | Gelhaipu Co |
| 1964 | Trishuli | Zhangzangbo |
| 1964 | Arun | Longda |
| 1968 | Arun | Ayaco |
| 1969 | Arun | Ayaco |
| 1970 | Dudh Koshi | Ayaco |
| 1977 September 3 | Tamur | Nare |
| 1980 | Aun | Puncham |
| 1981 July 11 | Sun Koshi | Zhangzangbo |
| 1982 August 27 | Arun | Jinco |
| 1985 August 4 | Dudh Koshi | Dig Tsho |
| 1991 July 12 | Tama Koshi | Chubung |
| 1998 September 3 | Dudh Koshi | Sabai Tsho |

Source: Rana et al. 2000:563.

Box 2. An account of the history of a landslide in Dolakha

The households in Ward 8 Bhirkot in Dolakha described a specific intense rainfall event of August 8th 2012 that led to mass land slumpage, house damage and in two cases physical destruction although no deaths. However they traced the root causes of the landslide back to a feeder road wrongly sited and badly constructed in the 1990s. The feeder road was built by a contractor with Nepali Congress party affiliations who through bribery of district officials and the use of gangs to break up a three months protest at the road by villages (who also filed a court case), shortcut the route the road should have taken to avoid damage and in the process undercut the underpinnings of the village lands. Small-scale landslides and subsidence appeared within a few years after this construction and a feeder road constructed by the VDC at the top end of the slope in 2008 (driven to all appearances by rent seeking-practices of the VDC APM members) further contributed to the events of August 8th 2012.

cial lakes that is closely linked to the glaciers' retreat. Melting glaciers create depressions in the mountain areas, which are filled with the melted water. This will cause, sometimes rapidly, the formation of glacial lakes. The loose moraine dams retaining glacial lakes are structurally weak and unstable, therefore they are deemed catastrophic, as failure to keep the water inside the dams could cause something called "glacial lake outbursts floods", also known as GLOFs, which have happened (table 3). GLOFs have the potential of drowning large areas and destroying infrastructure. Currently, there are 2315 glacier dammed lakes in Nepal and 20 are considered dangerous (Jianchu et al. 2007:50, Bartlett et al. 2010:5).

In the short term, higher temperatures will lead to an increase in annual discharge in rivers since a great proportion of river water comes from snow and ice. However, in the long run the annual discharge may decrease, and the discharge in dry season decline, affecting livelihoods and ecosystems widely (Jianchu et al. 2007:51, Bartlett et al. 2010:5). The melting of Himalayas' glaciers could impact the Indus and Brahmaputra rivers in the upper reaches where glacial melt is important throughout the year. For other rivers, such as the Ganges, discharge is important during the non-monsoon seasons. Climate change and its impacts on deglaciation are likely to have serious implications for hydrology including agriculture and hydropower generation in Pakistan, Nepal and India (Jianchu et al. 2007:51).

2.3 Gradual environmental change

As noted in section 2.1 there is some evidence of national-level gradual change in temperature and rainfall environments but given the complexity of Nepal's geography

the specific effects of these cannot be easily assessed. There is as yet no evidence of such changes leading to tipping points in agroecological systems, and these, if they are happening, are likely to be location-specific rather than generalisable. That said, communities in the study districts reported gradual changes in climate patterns which they stated were affecting their lives directly or indirectly.

As summarised in Table 4, informants in both Dolakha and Lamjung reported warmer weather, changing rainfall patterns and longer drought periods. These, they reported, have caused decreased availability of water both for drinking and irrigation and reduced agricultural productivity. The Programme Officer of DDC Lamjung for example reported that local communities from northern Lamjung (Glale Gaun) had told him that agriculture productivity has declined in recent years due to decreased precipitation (including snowfall). The Chairperson of the Irrigation Federation of Dolakha stated that: 'water sources are drying and availability of water for irrigation has declined'. (Interview Notes 2012)

Rupandehi has also been experiencing change in weather pattern, for example prolonged winter cold waves and prolonged drought. There have also been reports that the availability of water for irrigation is gradually decreasing. For example the DADO of Rupandehi commented (Interview Notes 2012) that "rainfall patterns have been changing over recent decade. During my childhood (30 years back), we could see very heavy and continuous rainfall for even a week. However, these days there is very short duration of heavy rainfall and then prolonged drought. This has affected agricultural productivity." Such decreased water availability could also be attributed to increased demand for water due to rapid population growth and the commercialization of agriculture.

Table 4. Gradual climatic changes in the three districts

| <i>Dolakha</i> | <i>Lamjung</i> | <i>Rupandehi</i> |
|----------------------------|----------------------------|---|
| Warming | Warming | Cold periods (prolonged fog in winter affecting winter crops, particularly legumes) |
| Drought | Drought | Drought |
| Changing rainfall patterns | Changing rainfall patterns | Irrigation water scarcity |
| Drinking water scarcity | Drinking water scarcity | |

Source: Field Interviews

Many of those interviewed during the field visit in Dolakha and Lamjung identified recent changes in weather, making particular reference to the emergence/growth of crops grown in warmer weather and change of flowering/fruited season of wild flowers or vegetables. They also referred to changes in rainfall patterns – high intensity rains or prolonged droughts. Droughts hit particularly hard those areas where agriculture is rainfed, and in the hills ground water extraction is unavailable. In the Tarai district of Rupandehi, respondents suggested that there has been a drop in the ground water table. However increased human settlement (leading to use of ground water for drinking water and other purposes) and several decades of irrigation based on ground water extraction, linked to the commercialization of agriculture in this district are likely to have contributed to this decline. There is some evidence that the technical changes in agriculture may in part be attributable to climate change (box 3)

Informants at the district level consistently commented on gradual change and did not refer to any particular ‘extreme event’ or tipping point, although the perception of extreme events may be more pronounced in the hills/mountain districts of Dolakha and

Lamjung, perhaps because of the fears of GLOF. The flooding in Rupandehi, however, occurs at some scale almost every year, and there has been a big flood and inundation every decade or so. Similarly foggy days in the

Box 3. Changing agricultural practices in Rupandehi and Dolakha

In Rupandehi fertilizers, improved/hybrid seeds, and pesticides are available in the Agrovet shops and farmers are switching into new practices. One major change in the rice-wheat system has been to favour a high yield shorter duration rice varieties variety, in place of traditional varieties. The change is partly a response both to market needs and declining demand for higher priced traditional varieties. These autonomous modes of adaptation may help offset stresses related to temperature and precipitation. This process has been primarily facilitated through community groups – the farmer groups/cooperatives in Rupandehi. In Dolakha, on the other hand, local NGOs such as Tuki promote leader farmers who serve as resource persons to diffuse agricultural technology. Tuki officials mentioned that these resource persons are helping communities to introduce crop varieties that are suited to specific climatic and socio-economic contexts.

winter in Rupandehi plains last for one to a few weeks every year, and the longest was in 1995, when the district experienced 52 continuous foggy days. Such winters result in the damage of the onion crop in particular, and reduction of productivity in other crops, in addition to the difficulties of extended cold periods for the old and sick and children.

3. CLIMATE CHANGE AND INSTITUTIONS IN NEPAL

3.1 The institutional landscape

3.1.1 A 'failing' state? The elusive political settlement

The roots of Nepal's current predicament date back to the establishment of an absolute monarchy when Nepal was unified in the 18th century and the capture of that monarchy by the Ranas by the middle of 19th century. Even after the overthrow of the Rana regime in early 1950s, there has been a process of 'punctuated equilibrium' where windows of opportunity for change have emerged but been thwarted by the elite who have largely remained unaccountable. The effect has been a gradual increasing awareness and agitation for democratic rights that have fuelled increasing political contention over political representation at multiple levels.

The Ranas who remained in control from 1846 to 1950 established an effective rule of hereditary prime ministers for over 100 years and created a repressive regime based on social hierarchy, reinforcement of the caste system and patriarchy with heavy taxation of the rural population. From the 1950s when an alliance of the Congress Party of Nepal and the monarchy toppled that rule, there was a brief period of democratic pos-

sibility and the creation in 1959 of a multi-party system. However this was blocked by the king of the time who in 1962 banned political parties and instituted a multi-level *panchayat* system from village to national level. This arrangement remained contested and during the 1980s there was a rise of a pro democracy movement. Eventually in 1990 under pressure, including the effects from a trade conflict with India, a multi-party democratic system was enacted as a compromise between the left and centrist parties and the monarchy. With the establishment of a constitutional monarchy, democratic elections were finally held giving way to a series of unstable governments. In part this has been due to political parties lacking a democratic culture to handle differences and play the game of competitive politics. At the same time they have taken a liberal view in addressing the issues of social exclusion and inequality that exist in the country.

Frustrated by the lack of progress on reform, the Communist Party (Maoist) declared war against the government in 1996, and for the next 10 years a major insurgency in rural areas took place although there were periodic phases of truce and negotiation. In 2005 the King dismissed the government and took control, but the combined opposition of all political parties led ultimately to the transfer of power to parliamentary parties, the Comprehensive Peace Agreement (CPA) with the Maoists and the stripping of the King of his powers. With the Maoists brought into government, steps were taken by the newly elected constituent assembly to abolish the monarchy and in 2008 Nepal was declared a republic. Since 2008 there has been a long drawn out process of drafting a new constitution. This was planned to be completed within two years but conflict between the major political parties over the state restructuring

for a federal model and basic tenets of the new constitution meant that despite five extensions of deadline it was still not drafted four years later when the mandate for the constituent assembly ran out.

At present, Nepal is governed under the Interim Constitution of 2007, which was the outcome of the CPA. Upon the expiry of CA tenure, the government was declared a care-taker by the President. With its failed attempts to hold another CA election, the care taker prime-minister gave way to a non-partisan government, led by the Chief Justice with retired civil servants as ministers. While this new government is facing questions of legitimacy, especially on account of violation of the principles of “separation of powers” and “checks and balance” between the executive and judiciary, preparations are underway to hold the next CA election in November 2013. It is not unlikely that the country will go through more intense legal and political contestation in regard to the promulgation of the constitution, as there has been no resolution on the issues that led to the demise of previous CA.

Underlying the political gridlock are the historic patterns of exclusion that the current political elite have done little to address and this has fuelled the rise of regional and identity-based politics. The power structures of the main political parties have never been representative in terms of the gender, caste or ethnicity of the diverse citizens which they claim to represent. There is a widespread belief that the feudalistic culture nurtured by Rana and monarchy is being reproduced by the leadership of the political parties. This has had two major effects. First, the centralization of authority and resources in Kathmandu. Second the old hierarchies continue to structure access to political influence and economic opportunities.

There are multiple dimensions to this exclusion. Part of it is based on the caste system and the exclusion of the lower castes (*Dalit*); there is also the exclusion of non-caste *Janajatis* which include the myriad of ethnic groups (an estimated 100+) and Muslims who together constitute over 40 percent of the population. Running through these identity-based exclusions are strong elements of gendered exclusion. In addition the political marginalization of the Terai, which is now the most populous region, has led to an increasing demand for autonomy there. There is also an emerging basis of political-economic differentiation as counter-elites claim to represent the disadvantaged without adhering to any transparent norms of representation and accountability.

The state thus has long lost legitimacy. In part this is a result of patterns of exclusion and the absence of a clear social agenda by government to address them. In part it has been through a patchy record of building accountability based on domestic revenue collection and service delivery. Delivery of basic public goods in the form of water, education and health has been poor in the past although there have been recent improvements. An urban middle class who might have demanded greater accountability have largely looked to the private sector to meet their needs for public services – for example, water, electricity, education and health. Tax receipts which might have helped build the demand for accountability are low, reflecting widespread tax evasion. In addition donor funding contributes about 80 percent to capital expenditure and 28 percent to the overall budget (World Bank 2010) indicating the major influence that donors play within the country.

Thus while in some respects the government is seen to have had what the World Bank terms “prudent financial management” with

a positive balance on the budget, the sources of that budget have done little to help build a capable and legitimate state.

3.1.2 Decentralisation

Nepal currently has a three-tier system of political representation: center, districts, and Village Development Committees (VDCs) or municipalities established by the Local Self Governance Act (LSGA) in 1999. The intention has been to have elected representatives in each district where most line ministries have their offices. In addition to the 75 districts (which contain 3,815 village development committees (VDCs) and 59 municipalities, there are also a number of supra district entities that should be noted. This includes five development regions (Eastern, Central, Western, Mid-Western, and Far-Western) which have 'regional directorates' of line ministries and regional magistrates. The regional offices are used for regional-level planning to integrate planning from districts up to link to the central-level planning. There are also the 14 zones, which during the *panchayat* rule served as key centres for power over security and control. These are now largely defunct but remain in the health sector for zonal hospitals.

However, the development and zonal structures are likely to be changed once a new constitution is established. This is likely to include a more federal structure in Nepal. The political settlement of 2006 made two major commitments for a peaceful end to the insurgency: the making of new constitution through the election of a constituent assembly, and the restructuring of the Nepalese state, to end the excessive centralization of the last 250 years. The restructuring is primarily understood in terms of creation of a federal structure, but the basis on which this will be created has become extremely conten-

tious. Disagreement over this is believed to have been the main reason for the expiry of constituent assembly without delivering its mandate.

When multiparty democracy was restored in 1990, Nepal embarked on a range of local governance and other reforms supported by a number of donors, and especially UNDP. The first election of local bodies after the restoration of democracy in 1990 was held in 1992, and the second in 1997. However it was the 1999 LSGA that significantly advanced the cause of local representation and devolution of authority to the local level. There was a wide demand for this at all levels and local elections were conducted through an ordinance even before the LSGA Act was passed. As a result, about 220,000 representatives, including approximately 40,000 women, were elected or nominated to the councils of local bodies.

Under the provisions of LSGA, the devolution of service delivery took place in the key sectors of health, education, infrastructure and agriculture extension. UNDP projects were established to support the capacity development of the District Development Committees (DDCs) to undertake district-level planning and provide leadership and oversight capacities. There are however inconsistencies between the sectoral laws (particularly in forestry which remains under central control) and the LSGA, while in some sectors 'harmonization' has been accomplished (especially in education), allowing local governments to take charge of education service delivery and associated management and funding.

However, after the enactment of the 1999 LSGA there have been no further elections to the local bodies (DDCs, VDCs, and municipalities). In 2002 the term of office for officials elected in 1997 expired and since then the

local bodies have been run by government employees. In part in response to the representative vacuum a new arrangement – called the all-party mechanism (APM) emerged informally around 2005 and was formalized in 2008. Representatives of political parties served as a consultative body to support the work of government officials working in the local bodies. Many APMs however exceeded their mandate and gained a free hand in resource allocation decisions. As a result many devolved structures (including some resource user groups, school management committees, etc) were increasingly corrupted and became a vehicle for rent-seeking practices. In the last three years there was wide media coverage about corruption and abuse of authority by the APMs and local bodies, and the Commission for the Investigation of Abuse of Authority (CIAA) issued an order in late December 2011 to dissolve the APMs. The Ministry of Local Development did that on 3rd January 2012, but in most districts, municipalities and VDCs, the former APM members continue to play an influential but informal role.

3.1.3 Sub-national government, disaster management and climate change

With the passing of the Local Self Governance Act in 1999 all developmental activities were brought under the umbrella of local governments. The engagement of local government and its capacity to influence is most pronounced in the activities of ‘devolved sectors’ and to some extent in the activities of other line agencies, and in the work of non-governmental organizations. The ‘devolved sectors’ include health, education, infrastructure, and agricultural extension. In non-devolved sectors (such as forestry), however, the DDC does not have direct budgetary control but can exercise broad administrative

oversight. These DDC mandates, however, have become less effective given the absence of elected leadership.

Although the LSGA itself does not explicitly mandate local governments on DRR and adaptation, it is clear that they are expected to lead and oversee activities on adaptation and disaster risk reduction/management within their jurisdiction and district disaster committees and disaster planning have been instituted. In addition DDCs are expected to take a lead role in local climate change adaptation planning and take administrative leadership and oversight over the work. There appears to have been consensus amongst the donors around the idea that the local governments would lead activities on disasters and on climate change adaptation.⁴

There is, however, an issue of the capacity of local governments to take up their extensive mandate since it largely remains an unfunded mandate, and with the exception of a few municipalities and DDCs, the local governments rely largely on central government funding. The central government provides (a) a minimum of unconditional grants to cover recurrent expenses; (b) formula-based funds to account for variations of geography, location, population size, etc, and (c) performance-based funds to reward good performance. Local governments as yet have very limited source of revenue generation, and their autonomy of action is also limited by the directives from Ministry of Local Development.⁵

On top of budgetary constraints, local governments have limited human resources to

⁴ The Nepal Climate Change Support Program, funded by DFID and EU, agreed in January 2012 with the GON, plans to work through local government on adaptation planning.

⁵ Recently renamed Ministry of Federal Affairs and Local Development).

respond to major disasters and under such circumstances draw on the army or police. This calls for coordination among different district stakeholders – for example, security personnel (police and army), Red Cross and other INGOs which are working in the district. The coordination role has been played by the Disaster Management Committees at different levels. In many instances including the 2008 flooding in Koshi river in the eastern Terai, the army and police were extensively mobilized in rescue operations, as was the NRCS. The NRCS was active in rescuing victims, providing relief packages (tents, clothes, etc) and first aid services. Federation of Nepalese Commerce and Industries has also been providing food support in many disaster cases.

3.1.4 The roles of markets and civil society

The private sector in Nepal is poorly developed and tends to be more urban based focusing on services and construction reflecting the absence of a market-oriented rural economy.

On paper official policy since mid-1980s (1985-90) and especially since the eighth plan (1992-97) has been to liberalise the economy and reduce state control of key economic sectors but in practice this has not happened in a comprehensive way. Key functions related to agriculture, such as input provision (e.g. fertiliser) were under state control and subsidised. In 1998 the government undertook to withdraw from the fertiliser market. However in the face of falling supply through formal market channels because of the extent of imported low-quality fertilisers through informal channels, the government reintroduced in 2008 a price subsidy on chemical fertilizers to be managed by the Agricultural Inputs Company Limited (AICL). The private sector is not entitled to import and distribute the

subsidized fertilizers and have proved unable to compete with the subsidized fertilizer and unofficial imports. The problem is that the volume of fertilizer (100,000 MT) that AICL is able to import and distribute at a subsidized rate through farmer cooperatives falls far below market demand (Shrestha 2010).

The nature of state control of the market and its consequences is clearly exemplified in the forest sector. The timber trade in Nepal is heavily regulated by the government, which has created an artificial scarcity and considerable price gaps between price at harvest (stumpage) and final market. District Forest Offices are designated authority to issue permit to harvest timber, mark the timber before harvest, issue transport orders and regularly monitor the process throughout the value chain (starting from marking tree for harvest till sawing timber for sale). The checkpoints in the highways frequently serve as ‘rent-seeking points’, raising price and causing ‘market disintermediation’.

However despite the evidence that timber can substantially contribute to CFUG income, the regulatory and institutional barriers around timber harvesting and sale largely discourage timber management, and have reinforced existing wealth and caste-based social inequalities (Chhetri et al. 2011). Nepal’s forest policies, laws and institutions are largely protection oriented (Hill 1999, Edmonds 2002, Bampton and Cammaert 2007). For community forestry the regulatory and institutional framework appears to deliberately discourage timber harvesting and trade (Paudel et al. 2008, Bampton and Cammaert 2007, Paudel et al. 2010, Banjade et al. 2011), i.e. favouring forest protection over community forestry income. The government policy of not handing over the Terai Forest (with valuable timber resources) and putting strict regulatory control over timber harvesting and

high royalties on timber rent (Sinha 2011) is consistent with this. But the consequence of this regulation combined with poor governance practices is that there is widespread corruption in the timber trade in Nepal with rent-seeking practices by forestry officials and elite capture of the community forestry (e.g. Iversen et al. 2006, Thoms 2008, Paudel et al. 2010).

A report by the Asian Development Bank (2009) pointed to a number of factors that have constrained growth including political instability and weak governance, inadequate infrastructure and labour unrest. But it also identified a number of constraints to the inclusiveness of economic growth, the outcome of which has been indicated in the rising levels of inequality. These include and in combination point to unequal access to markets:

- Limited productive employment opportunities particularly in rural areas where most poor live;
- Lack of rural employment is due in particular to the poor growth and performance of agriculture; this is evidenced by the high migration rates within and out of the country with about 15 percent of adult men commonly away from their usual place of residence;
- Unequal access to agricultural inputs and opportunities to commercialise and diversify agricultural activities due in part to small landholdings and unequal access to irrigation;
- The poor and other disadvantaged groups – based on identity/caste and gender have fewer opportunities for non-agricultural employment;
- The poor and disadvantaged groups have less opportunities to migrate to countries other than India;

- Inequality in accessing infrastructure and productive assets such as credit and land

ADB (2009: 93) argues that the root causes underlying the constraints to inclusiveness in economic growth are linked to systematic patterns of exclusion and inadequate public service delivery. In sum this level of exclusion is an outcome of Nepal's problematic political trajectory but in turn it has been a cause of the rise of political contention and the demand for rights as evidenced by the remarkable rise of civil society activism in Nepal.

To some extent Nepal's NGO sector has dimensions of being 'private sector' entities. Although many have had an activist agenda, they have also through funding from donors come to play a key role in providing goods and services to rural households. However such NGOs do not appear to have been used to provide services, except for the self-appointed role taken up internationally by the Red Cross to respond to natural hazards, nor have they been contracted by international agencies for disaster response. Non-governmental entities, however, have been engaged by the government – primarily owing to donor pressure or requirements – to facilitate disaster or adaptation planning and policy/strategy development through the funds made available by donors.

Civil society has grown in Nepal since the political change of 1990. The Constitution of 1990 established the right to association and thus provided an opportunity for an unprecedented rise in the organizations in the post-1990 period (see Box 4). This period also saw the growth of the media – national broadsheets, local newspapers, television stations, and a huge number of FM radio stations throughout Nepal. Similarly, groups, networks, federations and alliances have sprung

up, some of which have been enduring, others short-lived.

In legal terms, associations, federations as well as NGOs are established under the Association and Organization Act, 1977, and are treated in equal terms. According to the global integrity report,⁶ Nepal's civil society organizations have the highest integrity score compared with other institutions of the country.

A particular moment in which the presence of civil society was most evident was in the run-up to and during and the 19-day second people's movement (6-24 April 2006). This movement led to the ending of the Maoist insurgency and a wider range of agreements on a political settlement. The King's seizure of power in February 2005 had brought little immediate response from the parliamentary parties or popular protest. However a number of civil society organizations and 'civil society leaders' – from media houses, professional associations (Nepal Bar Association, Federation of Nepalese Journalists, teacher unions, Medical Association), human rights organizations, networks of NGOs and networks of natural resource user groups across the country and so on – began to rally the support of their respective constituents and eventually mobilised a larger mass of people. This culminated into the second people's movement, forcing the King to relinquish power. However the movement did not sustain this and subsequently returned to previous roles. But the movement is seen to have contributed significantly to the popularization and propagation of the ideas of rights, equality, identity, human rights, democracy, secularism, community rights and gender equality.

One particular aspect of Nepalese civil society development over the past decade has been the growth of socially differentiated civil society organizations – for example, an

alliance or federation of NGOs or other organizations based on a specific identity-based constituency. For example, while Nepal has a national federation of NGOs, there are also associations of Madhesi (People of the Tarai) NGOs or Dalit (Untouchable caste) NGOs – implying that the membership is drawn out of NGOs representing specifically Madhesi or Dalit interests. Similarly, the National Federation of Indigenous Nationalities (NEFIN) has been advocating the rights of indigenous/ethnic groups over the past two decades.

Another aspect of civil society development relates to the sectoral focus of some associations. For instance, a number of grassroots-led associations/federations are constituted of 'forest users', 'irrigation users', 'milk cooperatives'. Such associations tend to be aligned with the sectoral divisions within the government. At times, NGOs have been labelled as 'civil society'. Although these associations may be concerned with the rights and interests of their constituent members, they are frequently funded by donor agencies to conduct development programmes or support advocacy, lobbying or socio-economic development of those groups.

Three federations – FECOFUN, NEFIN, and HIMAWANTI – have been closely associated with the climate change agenda for several years, although each of them have had other interests as well. FECOFUN has consistently been advocating for grassroots people's rights over forest resources and to safeguard the autonomy of forest user groups from potential violation by the forestry bureaucracy. They have also argued that community forest not be brought under the mandate of local government,⁷ but be allowed to maintain the autonomy accorded to forest user groups.

⁶ See www.globalintegrity.org.

⁷ This debate has to do with the contradiction of the local self-governance act of 1999 and the Forest Act of 1993.

Box 4. Examples of civil society organizations in Nepal

Federation/ association

- Federation of Community Forest Users Nepal (FECOFUN)
- Association of Collaborative Forest User groups of Nepal (ACOFUN)
- National Association of Community Electricity Users Nepal (NACEUN)
- National Federation of Irrigation Water Users Association Nepal (NFIWIAN)
- NGO Federation of Nepal (NFN)
- Municipality Association of Nepal (MuAN)
- Himalayan Grassroots Women Natural Resources Management Association (HIMAWANTI Nepal)
- National Association of Village Development Committees Nepal (NAVIN)
- Association of District Development Committees of Nepal (ADDCN)
- Water and Energy Users Federation Nepal (WAFED)
- Federation of Drinking Water and Sanitation Users Nepal (FEDWASUN)
- Federation of Nepalese Journalists (FNJ)
- Nepal Bar Association

Alliances

- Human Rights Alliance
- DEAN (Democracy and Election Alliance Nepal)

Climate change related networks

- Climate Change Network Nepal(from 2003): especially to ratify Kyoto protocol initially
- Disaster Network (DP-Net)
- NGONCC – NGO network on climate change, led by LIBIRD
- NYCA – Nepalese Youth for Climate action
- AINCCTF – Association for International NGOs Climate Change Task Force (which has merged (INGO deliberation platform)
- Climate Action Network South Asia (CANSAs) – steering committee Nepal – focus on international negotiations and SA regional issues
- Land rights group – land and climate change
- Red Cross and Red Crescent Societies – mainly on DRR

Advocacy-oriented NGOs

- ForestAction
- CDO (Community Development Organization)
- Community Self Reliance Center (CSRC) (on land reform)
- Nepal Forum of Environmental Journalists (NEFEJ)
- National Forum for Land Rights Nepal
- Advocacy Forum
- Pro-Public
- LIBIRD

Identity/caste-based associations/federations

- Nepal Federation of Indigenous Nationalities (NEFIN)
- Dalits NGO Federation
- Rastriya Dalit Network
- Dalit Alliance for Natural Resource Nepal (DANAR Nepal)

NEFIN, on the other hand, has primarily been concerned with promoting the rights and interests of indigenous/ethnic groups. For several years, starting in 1990s, NEFIN advocated for the ratification of ILO Convention 169, and the implementation of its provisions. This was done in 2007, and Nepal was also party to the UNDRIP (UN Declaration on the Rights of Indigenous Peoples 2008). A significant part of NEFIN's advocacy and lobby concerns the implementation of ILO 169 and UNDRIP, and its provisions such as free, prior informed consent, the prerogative of rights of IPs/ethnic groups over natural resources – the forests, land, water, and more recently carbon. In the final days of the tenure of the constituent assembly in May 2012, NEFIN organized nation-wide strikes and lobbied for single-identity provinces and clashed with other social groups (especially Bahun-Chetri, or so-called Khas-Arya community) and parties aligned with liberal/civic agenda. NEFIN faces a challenge of how to balance its political agenda with some of its non-political mandate.

Many of these civil society organizations (including NGOs and associations) participate in climate change policy-making, programming and implementation processes. For instance, FECOFUN, NEFIN and ForestAction have been part of the REDD (Reducing Emissions from Deforestation and Forest Degradation) policy processes. FECOFUN is involved in implementing a number of REDD+ projects; for example it is engaged with a REDD pilot project under the leadership of ICIMOD and in collaboration with another NGO, Asia Network for Sustainable Agriculture and Bioresources (ANSAB). This is addressing the design and setting up of a governance and payment system for Nepal's Commu-

nity Forest Management under REDD. It has also been implementing a grassroots capacity development on REDD+ with RECOFTC.

The role of civil society actors in response to extreme climate events remains largely ad hoc, except for the internationally recognized role of the Red Cross. They (the Youth Clubs, NGOs etc.) have supported people after disasters with relief materials, but primarily as a matter of social responsibility, rather than with any formal recognition of roles and contracting out of service by the government and donors.

Note should also be made of a number of business associations in Nepal such as the Federation of Nepalese Chambers of Commerce and Industries (FNCCI), Women Entrepreneurs Association, Confederation of Nepalese Industries (CNI), Federation of Nepal Cottage and Small Industries (FNC-SI) and other commodity associations. Of these FNCCI is more prominent and visible in the national and district levels than others and their representatives are called to participate in different forums including those addressing climate and disaster planning.

The FNCCI is an umbrella organization of the district chambers, commodity associations and of its associate members (Amatya and Shrestha 2010). FNCCI is identified as one of the stakeholders in the formation of the Strategic Program for Climate Resilience (SPCR) representing the private sector. At the district level FNCCI have been involved in the formation of the District Disaster Plans (DDP) (in Lamjung, Dolakha and Rupaandehi) and have responsibilities such as to provide service of food in the case of a disaster.

3.2 Institutional structures for response to climate change

3.2.1 Roles in disasters associated with floods, landslides and earthquakes.

Nepal has long been prone to natural disasters including a series of devastating earthquakes in its recent history (in 1934 and 1988). The notion of disaster has long been present in the public psyche. However disasters have long been popularly understood as “*daiwi prakop*”⁸ – divinely caused disasters – reflecting a cultural disposition which signifies an absence of human agency in causing and responding to disasters.

Nepal established a Natural Calamities Relief Act, in place in 1982, designed to develop and coordinate policies, planning and implementation of relief in response to natural disasters. Key natural disasters were characterised as earthquakes, fires, storms, floods, landslides, heavy rainfall, drought, famines and epidemics. A Central Disaster Relief Committee under the chairmanship of the Home Minister (MOHA) was established to guide the process of implementation and establish norms of assistance to disaster victims to be distributed through District Disaster Relief Committees. Under this central committee was a four-tier Calamity Relief Committee structure at the national, regional, district and local level, with the operational responsibility placed at the local committee level. The terms of reference suggests, in accordance with the name of the act, that the primary function of these committees was in relation to relief after disasters rather than any actions related to disaster preparedness or planning. Although the Natural Calamities Relief Act has provided a legislative framework for disaster management in Nepal, the

stakeholders argue that it is limited only to relief, recovery and reconstruction after any calamity happens. It has not provided a comprehensive framework for disaster risk reduction (IFRC 2011).

The National Strategy for Disaster Risk Management (NSDRM), approved in October 2009 and funded by UNDP and the EU, and developed out of the Hyogo Framework for Action (2005-2015) is focussed on disaster preparedness and planning and has developed sectoral strategies. Although the strategy was submitted to Parliament in 2009 it has yet to be approved by government, a delay which recently⁹ prompted the Resident Chief of Mission of the UN in Kathmandu to state that ‘I have come to recognise that addressing Nepal’s vulnerability to natural hazards is first a governance problem and only second about funding and expertise’. He went on to claim that there was between the major actors, developmental, humanitarian, government and non-governmental, a shared sense of urgency and ambition, but most of Nepal’s political leaders remained focused exclusively on politics and power.

The NSDRM envisages a National Council for Disaster Management (NCDM) and a National Disaster Management Authority (NDMA) with authority for the implementation of DRM, coordinating across the ministries and sectors and supporting the development of disaster risk management planning at the district, municipality and community levels. As with the Disaster Relief Act the key actors are foreseen to be local actors: at the district level through District Disaster Preparedness and Response Plans (DDPRP) and the community and VDCs. As a reflection of this, local (community and VDC) disaster risk

⁸ In English, it was called ‘natural disaster’.

⁹ <http://www.guardian.co.uk/commentisfree/2013/jan/12/perfect-storm-earthquake-cripple-nepal> Accessed 21/01/13

management planning guidelines (LDRMP) were issued in 2011. These are foreseen to provide communities with the tools for vulnerability and capacity assessments and for the development of local disaster management plans.

The Nepal Red Cross Society (NRCS) has long been an important actor in disaster response. It started its operations in 1963 and is one of two NGOs that sit on the Central Disaster Relief Committees. The components of the Red Cross and Red Crescent Movement – the ICRC, IFRC and NRCS – are all present in Nepal. They have been working to reduce the risk of disasters and provide relief during emergencies. The NRCS, in its auxiliary role to the government, provides relief and assists with building safer and more resilient communities. The IFRC has been supporting the NRCS in capacity-building activities and coordinates with other actors on an international level during large-scale disasters. The ICRC has been working in Nepal to protect and assist conflict-affected persons and to promote international humanitarian law (NRCS 2011). It is also a member of core disaster management committees at national, regional and district levels. The Red Cross has also been mandated by Nepal's Ministry of Home Affairs to formulate and implement disaster management policies, plans and programmes (NRC 2010: 5). For instance, NRCS has prepared Disaster Management Policy in 2008 (NRCS 2008) and Disaster Management Strategic Framework in 2010 (NRCS 2010). It responds to at least three disasters every year in the country, mainly flood and landslides, fire and water-related diseases (NRCS 2010: 4).

There are a range of organizations involved in responding to extreme events at national and district levels (see table 5).

Government organizations and agencies such as the Red Cross have a clear mandate in relation to planning and responding to disasters and these are similar in all three study districts. A few organizations have specialized roles. For example, the DFO has the role to reduce the risk of and respond to forest fires, and the Department of Water Induced Disaster Prevention (DWIDP)¹⁰ is responsible for minimizing damage from flooding through river embankment work. Even if the roles and mandates are similar in each of the three districts, the effectiveness of delivery by specific organizations appears to vary. For example, the DDC Dolakha appears to be more active and responsive to disaster events in comparison with other districts. Similarly, INGOs working in Rupandehi were found to have formed an informal network for mobilizing relief funds in the district. World Vision is coordinating all INGOs for disaster-related work. It is likely that this INGO network is supported through a larger Nepal Risk Reduction Consortium (NRRC).

The NRRC is an arrangement, which is coordinated by the UN System and brings together humanitarian and development partners with financial institutions in partnership with the Government of Nepal in order to reduce Nepal's vulnerability to natural disasters.¹¹ The NRRC comprises of the GoN, UN, ADB, AusAID, EU, UKaid, the World Bank and some other donor agencies. Based on the Hyogo Framework and Nepal's National Strategy for Disaster Risk Manage-

¹⁰ Department of Water Induced Disaster Prevention (DWIDP) is one of the departments under Ministry of Irrigation which aims to prevent damages of infrastructures due to water-induced disasters by the appropriate management and conservation of rivers and river basins of Nepal (log on <http://www.dwidp.gov.np/goal-82.html> for detailed information).

¹¹ Excerpts from <http://un.org/np/coordinationmechanism/nrrc>, downloaded 20th Jan 2012.

Table 5. Roles for district organizations in disaster mitigation, response preparation, response and recovery

| Organization | Roles in responding disaster events | | |
|--|--|---|-------------------------------------|
| | Mitigation | Disaster Preparation & Response | Recovery |
| Villages/local community | Implementing DISCO/NGO work as community organization | Self-help | |
| DISCO | Watershed management activities, construction of small structures (check dams & bio-engineering structures), plantation; Prioritise watersheds at risk | | |
| Red Cross | | As member of DDR committee; maintenance of relief materials; training to volunteers; relief materials; emergency supplies; medical relief | |
| DDC | Funding mitigation e.g. DISCO | Coordinate DDR committee Contribute fund for relief materials | Funding for recovery |
| CDO | | Coordinate DDR committee and keep the security people in alert; Coordinate/Mobilise security personnel (especially police) | |
| Police /Army | | Mobilize for rescue | |
| DFO (in case of forest fire) | Fire Lines Extension Material | | State forestry |
| Department of Water Induced Disaster Prevention (in case of flood) | Engineering work like river training | | |
| Prime Minister relief fund | | Funding for major disasters | |
| NGOs | Early warning system in collaboration with donor and DDC | As member of DDR committee | INGOs funding to implement recovery |
| INGOs | | Fund and materials for relief (i.e. World Vision in Rupandehi) | Funds and materials |
| UNDP | Supporting for early warning system (i.e. Dolakha) | Support to DDR committee | |

Table 6. Organisational structure proposed by the climate change policy

| Organizations | Mandates |
|------------------------|---|
| Climate Change Council | Coordinate and oversee climate change policy development |
| MOSTE | Coordinate climate change programmes (functional level coordination) |
| Climate Change Center | Semi-autonomous technical institution for formulation and implementation of climate change programme and research (it has not been established yet) |

Table 7. Organisational mandates proposed under NAPA and LAPA

| Organizations | Mandates |
|--|--|
| Central level: | |
| MOSTE | <ul style="list-style-type: none"> • Coordination between adaptation policy and on-the-ground implementation of adaptation activities • Climate Change Program Coordination and Monitoring Unit within the MOSTE will coordinate the climate change adaptation programmes under NAPA |
| Multi-stakeholder Coordination Climate Change Initiative Coordination Committee (MCCICC) | <ul style="list-style-type: none"> • Oversee climate change policy development and programme implementation |
| Project level: | |
| Line ministries | <ul style="list-style-type: none"> • Implement projects |
| Local level: | |
| District Coordination Committee (at DDC) | <ul style="list-style-type: none"> • Coordinate project planning and delivery at district level |
| Line agencies (DFO, DADO etc) | <ul style="list-style-type: none"> • Implementing projects |
| Community-based organizations (like CFUGs), private sector etc (service delivery agents) | <ul style="list-style-type: none"> • Implementation of activities |
| Local bodies (District, VDC and municipalities) (As stipulated in LAPA) | <ul style="list-style-type: none"> • Support to identify climate-vulnerable communities and prepare LAPA at respective level • Promote LAPA • Oversee/coordinate implementation of LAPA • Integrate LAPA in sectoral and local development planning process |

ment, the NRRC has identified five priorities for sustainable disaster risk management: school and hospital safety, emergency preparedness and response, flood risk management in Koshi river, community-based DRM, and policy and institutional strengthening.

3.2.2 Roles in climate change adaptation

There are two main climate change relevant policies. The first is the Climate Change policy (Government of Nepal 2011) which is general and limited to identifying the key responsible organisations and their roles in relation to climate change action (table 6).

The second is NAPA (Ministry of Environment 2010) which develops a national adaptation programme framework, organisational mandates (Table 8) and identifies key adaptation needs. This has given rise to Local Adaptation Planning (LAPA) which is beginning to be initiated (Table 7). There is talk of Community Adaptation Planning (CAPA) although this has no formal status.

However in the study districts the local government and government line agencies' response did not appear to be well prepared to respond to gradual climate-related changes and their impacts. In interviews, the district-level line agencies indicated that there was a lack of mandate for them to initiate adaptation planning on their own.

The response from the development partners including donor agencies and I/NGOs has been ad hoc and project-based. Their focus has been towards support for adaptation planning and developing capacity of stakeholders rather than actual action to respond to the changes the communities are confronted with. For example, USAID through the Hariyo Ban Program in Lamjung and DFID through LFP in Rupandehi have been helping to develop community adaptation plans

(CAPA) and sensitize district institutions on climate change issues. In contrast, World Vision in Rupandehi is concerned primarily with engaging the DDC and others in producing disaster plans. In Lamjung, a CAP development process has just started this year and four communities are on the way to draft their plans; in Dolokha ten CAPAs have been developed and supported for implementation.

Major shift in role of organizations in response to the climate change agenda have not been seen. The climate agenda has gradually been understood/adopted by the district line agencies and local government but there has been very little communication from central ministries to their district offices regarding any change of roles. However activities of the District Soil Conservation Offices have increased in terms of adaptation to the impact of climate change. In Dolakha, the DDC was found to have provided funding to the DISCO to undertake climate-related activities. In the other two study districts, however, this did not appear to have happened. But DISCO officials in these two districts anticipate a greater role, in view of their mandate in relation to soil and watershed conservation, in the future as climate change programmes are implemented.

The Climate Change Policy (Government of Nepal 2011) has made provision for a district-level coordination committee to coordinate adaptation-related activities. However, this does not yet appear to be functioning at ground. The LAPA framework has laid out the path for local-level adaptation planning projects to be funded under the Nepal Climate Sector Support Programme (NCCSP) by the EU/DFID and is expected to engage the local governments (DDCs, VDCs, municipalities). It is expected that this programme would further clarify the role of these agencies and build their capacity.

4. POLICIES, PLANS AND MANDATES AFFECTING CLIMATE CHANGE ADAPTATION

4.1 National climate change policies

There is evidence that the climate change agenda has grown in significance in Nepal driven largely by the international policy debate. As commented on by one source (GoN 2011:xiii):

Nationally, climate change remains an emerging policy theme with variable interest at the sector level. The 2011 climate change policy statement appears a significant landmark, although much remains to be seen whether this will catalyse a major mainstreaming of this policy theme across all sectors of the economy. At present, climate change continues to be strongest when seen as an environmental – rather than an economic – concern. The challenge will be for climate change to move beyond its origins as an environmental matter to become a major context for all development planning.

Nepal signed the United Nations Framework Convention on Climate Change (UNFCCC) on 12 June 1992 (GoN 2011). Upto 2000, the climate change debate in Nepal at the government level was primarily centred on the measurement of greenhouse gas emission and its volume and trends (Ghimire 2011). After 2000, the 2001 Millennium Development Goals initiatives and the 2003 Sustainable Development Agenda for Nepal, the climate change policy agenda has widened. Prior to the 15th Conference of the Parties (COP 15) to the UNFCCC, held in Copenhagen in 2009, the Government of Nepal organized a cabinet meeting at Kalapatthar, near the base camp of the Mount Everest, and issued the “Kalapatthar Declaration.” From 2009, climate change appeared as a national development agenda item in Nepal, as

evidenced by the 2011 Climate Change policy statement.

Currently there are two major national institutional structures operating at the government level for coordination and policy making in climate change in Nepal: Climate Change Council (CCC) and Multi-stakeholder Climate Change Initiatives Coordination Committee (MCCICC). The CCC is a higher-level body and is chaired by the Prime Minister with membership from various ministries and ‘experts’ from academia, private sector and NGOs. It was instituted in July 2009. It aims to provide the long-term policy and strategic guidelines for CC activities in the country. The MCCICC was formed under the Ministry of Environment during the NAPA process in July 2010 with an aim to contribute to the programme level. It includes representatives from line ministries, local government, donors and civil society (Ghimire 2011). The Government of Nepal established the Climate Change Management Division in the Ministry of Environment (MoE) in early 2010 (GoN 2011). Beneath them there are a range government ministries, key departments and agencies, local bodies and other organisations that to varying degrees have an interest or dedicated sections to climate change issues (GoN 2011). The Ministry of the Environment has been given the mandate to coordinate the Climate Change agenda and is also the National Focal Point for the UNFCCC. However in May 2012 MoE was merged into the Ministry of Environment, Science and Technology (MoEST).

MoE has been seen to be a weak ministry with no district presence. It has had to rely on the DDC (under Ministry of Local Development) for the climate change related project implementation at the local level. The NAPA document, discussed below has

included five line ministries and one department (MoAC, Ministry of Home Affairs, Department of Urban Development and Building Construction, Ministry of Health and Population, MoFSC and Ministry of Energy) to work with. The MoFSC (which is considered as a strong ministry) has its own separate REDD and climate change division leading on the REDD process in Nepal. This will also challenge the ability of MoE to coordinate the climate change agenda across ministries.

There has been a longer history of disaster risk planning which was introduced in the early 1990s by UNDP through its engagement with several government agencies, INGOs and NGOs. A UN-wide strategy was prepared to respond to major disaster, especially for a big earthquake that has long been expected in Kathmandu. The UNDP initiative had three major components: disaster management planning, institutional and legal systems, and disaster information management systems. These components have been taken forward and in the past few years radiated out to the development of district-level disaster planning either directly under UNDP support, or independently by other INGOs. These planning exercises 'rationalize' a way of responding to disasters across districts. A recent pledge of Home Minister Bijaya Kumar Gachhadar to earmark two percent of national budget on disaster risk reduction (DRR)¹² indicates that the concern on disasters has grown significantly within the government. There should however be caution in regard to whether such promises will translate into actual resource allocation decisions.

¹² Kathmandu Post, Back from Jakarta, Gachhadar focuses on mitigating risks, 28th October 2012. From <http://www.ekantipur.com/the-kathmandu-post/2012/10/27/top-story/back-from-jakarta-gachhadar-focuses-on-mitigating-risks/241102.html>

As noted earlier two major policy documents frame the climate change debate. Chronologically the first is the National Adaptation Programme of Action (NAPA) to Climate Change (Ministry of Environment 2010) funded by a range of donors and structured according to the guidelines provided by an international group of experts. It thus forms part of a global approach to climate change planning and NAPA's are to be found in other countries including Zambia. For the preparation of the NAPA document the Ministry of Environment (MoE) as the lead Ministry organized three regional-level and seven national-level consultations from June 2010 to September 2010. Along with this, they have also done 15 regional-level consultation and awareness raising activities during the period from June 2009 to May 2010.

Through a planning exercise a ranking of districts vulnerable to climate risk was identified and through expert groups, nine project proposals with tentative budgets totalling an estimated USD 350 million, timeframe, activities and outcomes were made. The core risks used in the ranking included those of extreme events (landslide, floods, drought and GLOF) and risks associated with climate change such as changing temperature and rainfall patterns. The ranking of districts was undertaken and mapped through a complex process of use of direct and proxy indicators, expert opinion, ranking and weighting processes and assessments of sensitivity and adaptive capacity at district level.

Linked to NAPA, an approach called Local Adaptation Plans for Action (LAPA) has been developed to assist identification of local adaptation actions with people's participation and to support the integration of climate change adaptation into sectoral and area-specific plans. Initially 10 districts have been selected for implementation and pilot-

ing: Ilam, Udaypur, Nawalparasi, Kapilvastu, Kaski, Dadeldhura, Pyuthan, Rukum, Achham and Kalikot.

The National Policy on climate change (2011) in part arose from obligation to the Kyoto Protocol which demands concrete climate change policy for providing a basis for securing support under climate financing. The policy states that new climate change policy was urgently needed in order to inform parties of the UNFCCC about the institutionalized implementation of the convention and responding to the climate change through formal policy process (GoN 2011). WWF provided technical and financial support to the preparation of this document.

The policy seeks to address all aspects of climate change – ‘a climate change center within a year, financial management for community based local adaptation by 2011, low carbon economic development strategy by 2014, loss and benefit assessment in all geographic areas by 2013, establish reliable impact forecasting systems’ GoN, 2011:5) etc. – but issues of implementation are not addressed. Like NAPA it talks in terms of ensuring a downward flow of money (80 percent to be spent at the VDC level) but it is far from clear how that will materialize.

Indeed the issue of capacity to implement and manage climate change risk programmes was the key focus of the Strategic Programme for Climate Resilience or SPCR (Climate Investment Funds 2011) assessment undertaken by a joint mission of ADB and the World Bank in February 2011. The funding of it has proved controversial since the costs of USD 110 million for the SPCR have been divided between a concessional loan and grant (60 million loan and 50 million grant. The assessment pointed to (Climate Investment Funds 2011:33) ‘*considerable limitations in climate change risk management capacity* at the systematic, insti-

tutional and individual levels, at the national, sectoral, district and local level, and within the public sector and civil society’.

4.2 Financing climate change actions

Drawing on an analysis of Climate Expenditure (National Planning Commission 2011) the following summary points can be made.

There is no clear or consistent definition of climate-change related expenditure in use in the Government nor is it easily separated from normal development spending. There is no formal budget code that recognises climate specific expenditure or budgeting and a distinction between planned and actual expenditure is often not clear.¹³ Climate change budgets and expenditure are spread across eight ministries with the Ministry of Local Development and Ministry of Physical Planning and Works accounting for over 70 percent of the 2011/12 Budget (National Planning Commission 2011:34). About 76 percent of climate change spending appears to relate more to adaptation activities.

The level of climate-related expenditure by GoN is significant, amounting to 1.5-2 percent of Gross Domestic Product (GDP) and 2-6 percent of Government Expenditure, depending on how the relevance of expenditure is assessed. Budget allocations and expenditure are increasing, reflecting both a growth in budgets and expenditure in the Government of Nepal as a whole and in climate change funded activities in particular. Budgeted climate change expenditure in 2011/12 was NPR 27,625 million.

Funding of climate change expenditure has a larger proportion of donor funding (55 percent) than the donor element of overall

¹³ This has however been resolved after introduction of the budget code in the fiscal year 2013/14.

government expenditure which comprises about 25 percent. Donor funding for climate change is increasing and there are considerable sums spent on technical assistance which is not budgeted through the GoN. Ongoing and pipeline climate change financing is summarised in table 8.

Around 60-70 percent of climate change expenditure is made directly by central gov-

ernment and the remainder is spent through local agencies of the Ministries. This is mainly allocated through unconditional capital grants and programmes in the Ministry of Local Development.

There is also some private sector climate change expenditure including that financed by communities, nearly 50 percent of which (NRP 1,267 million of NRP 2,641 million) is

Table 8. Climate Change Financing in Nepal (ongoing and pipeline)

| No. | Name of the Project/program | Donor | Amount (USD Million) | | Remarks |
|--------------|---|-------------------------------|----------------------|--------------|------------------|
| | | | Grant | Loan | |
| 1 | Nepal Climate Change Program | DFID/EU | 18.9 | | Pipeline |
| 2 | Pilot Project for Climate Resilience (PPCR) | Climate Investment Fund (CIF) | 50.0 | 36.0 | Pipeline |
| 3 | Scaling-up of Renewable energy program | CIF | 40.0 | | Pipeline |
| 4 | Energy Sector Assistance Program | Danida, Norway, Germany, DFID | 60.0 | | Ongoing |
| 5 | Rural Energy for Rural for Livelihood | WB, UNDP | 3.3 | | Ongoing/pipeline |
| 6 | Renewable Energy Project | EU | 18.0 | | Ongoing |
| 7 | Biogas Support Program | SNV, KFW | 2.4 | | Ongoing |
| 8 | Improved Water Mill Support Program | ADB | 1.1 | | Ongoing |
| 9 | Global Environment Fund Allocation for Nepal (Bio-Diversity Climate Change and land Degradation) for next 4 years | GEF | 8.3 | | Pipeline |
| 10 | Micro Hydro Power development Fund | Germany | 7.0 | | Ongoing |
| 11 | REDD forestry and Climate Change | World Bank Trust Fund | 3.4 | | Ongoing |
| 12 | Energy Efficiency Through Loss Reduction | ADB | 0.3 | 65.0 | Ongoing |
| 13 | Kathmandu Sustainable Urban Transport | GEF | 2.5 | | Ongoing |
| 14 | Kathmandu Sustainable Urban Transport | ADB | 10.0 | | Ongoing |
| <i>Total</i> | | | <i>225.0</i> | <i>101.0</i> | |

Source: National Planning Commission 2011:39

estimated to come from community forestry groups, mostly in terms of human labour.

Nepal's climate change-related policies (NAPA) aim to provide 80 percent of climate financing to local levels. However, it is not clear how and through which structure such money will be flown to local level. Until now, the climate change money has also flown to district level in the form of ad hoc projects.

Table 9 summarizes the different activities and projects being implemented in the three study districts and other parts of Nepal.

4.3 District-level action

In all three study districts, the climate change agenda has been introduced by different donors/INGOs through stakeholder sensitiza-

Table 9. DRM and CCA projects in one or more of CCRI study districts

| <i>Project</i> | <i>Donor</i> | <i>District</i> | <i>Budget</i> | <i>Partners</i> | <i>Period</i> |
|--|--------------------|--|---|--|-----------------------|
| Disaster preparedness plan for effective response | UNDP | Dolakha and Lamjung | | Ministry of Home Affairs (MoHA), DDC, District Disaster Relief Committees (DDRC) | |
| Comprehensive Disaster Risk Management Programme (CDRMP) | UNDP ¹⁴ | 25 hill, 12 terai and 6 mountain districts | \$20.25 million | Ministry of Home Affairs, Ministry of Physical Planning and Works, MOFALD | Feb 2011 - Dec 2015 |
| Nepal Climate Change Support Programme (NCCSP) | DFID/EU | Districts of Mid- and Far-Western regions of Nepal (No CCRI districts) | EURO 16.5 million (equivalent to NPR 1.8 billion) | Ministry of Environment, MOFALD | Dec 2011 - March 2015 |
| Hariyo Ban Program | USAID | Lamjung | \$37 447 000 | WWF, CARE Nepal, FECOFUN and NTNC | Five year |
| Initiative for Climate Change Adaptation (ICCA) | USAID | 8 districts from Mid-West including Rupandehi | | International Development Enterprises (IDE) Nepal, Rupantaran Nepal and RIMS-Nepal | 2012 - 2017 |

¹⁴ <http://www.undp.org.np/environment--energy/program/cdrmp-108.html> It is not yet clear which districts they are working in

tion events. For instance, in Dolakha district, workshops for sensitization on climate change were held by the Nepal Academy for Science and Technology (NAST), with support from the Climate and Development Knowledge Network (CDKN). For several years, a local NGO (named ECARDS) was engaged by UNDP to work on DRR-related work. Similarly the Nepalese Federation of Indigenous Nationalities (NEFIN) conducted a radio programme from local FM stations to create awareness on climate change. A few NGOs have already been started to implement different climate change-related projects. For example, ECARDS has been implementing a UNDP-funded project in collaboration with PracticalAction which is related to disaster preparedness. It has been focusing activities around raising awareness among communities living along the Tamakhosi river which has perceived threat from the risk of Tshorolpa GLOF. The speculation about GLOF from Tshorolpa caused public concern in the mid 1990s and an early warning system was installed by UNDP along the bank of Tamakhoshi river.

About half a dozen NGOs are implementing different climate change-related programmes in Lamjung. Among others, these include CARE Nepal and FECOFUN under the Hario Ban Program (a five year project sponsored by USAID and implemented by a consortium of WWF, CARE, and FECOFUN) supporting to prepare community-level adaptation plans. During this process, CARE has organized sensitization workshops at DDC and VDC levels and also conducted vulnerability ranking of the VDCs of the district. The Red Cross in Lamjung supported the development of the district disaster management plan. The NGOs in Lamjung indicate that they are increasingly required to bring in climate

change in the proposals they submit for donor support.

Different organizations are working in Rupandehi around the agenda of climate change. Some organizations like Red Cross and World Vision are working on mitigating disaster and providing relief to the victims. Organizations such as Indreni and Rupan-taran Nepal have initiated preparation of community adaptation plans through Village Forest Coordination Committees and CFUGs.

Despite the activities of national NGOs, INGOs and donors, government agencies including the local government have not engaged with the climate change agenda and it is not reflected in their activities although they have been witnessing activities by the non-government sector. What appears to be behind the slow take up of the climate change agenda is that mandates provided for in national policies have not been internalized and there is lack of practical guidelines for those organizations in the form of budgeted activities, circulars, guidelines and so on. The government agencies appear to have taken up the climate change agenda only upon encouragement from the NGOs/INGOs, rather than on their own, or in response to the specific events.

All three districts have prepared disaster risk reduction plans with support from UNDP and other non-government partners. Varying levels of awareness were found about the plan and commitments to put into action by the key district actors. The LDO of Dolakha has fully internalized the plan and taken the role of coordinating disaster-related initiatives in the district. In contrast DDCs in Lamjung and Rupandehi have not even read the plan. We asked an NGO person in Rupandehi why the DDCs did not use the disaster plan, and even did not know what the

plan is. He suggested that the disaster plans provide the NGOs and INGOs the basis to work, while projecting the plan as government's provides legitimacy for NGO activities (Interview Notes 2012).

The NGOs working in the study districts have perceived the climate change agenda as an opportunity for funding and thus have taken up the agenda very quickly. The DDC official from Lamjung reported that 'about a half dozen different organizations started working in climate change issues over recent 5 years' (Interview Notes 2012). Some organizations are re-branding their existing activities under the banner of climate change which help them to build a profile and get additional funding earmarked for climate change. For example, CHESS Nepal in Lamjung has modified its activities related to tourism and environmental conservation and re-labeled the budget line around climate change adaptation.

A few local civic organizations are skeptical about the climate change agenda and have not moved opportunistically into it. For example representatives from Rural Development Tuki Association (popularly known as Tuki) Dolakha have shown skepticism about the climate change and see it as an agenda promoted by donors. They feel that the climate change has been overly talked about by NGO people and government officials rather than by communities. Their fear is that the climate money will be grabbed by the I/NGOs in the name of vulnerable communities in the field ground.

Perceptions that possible threats due to climate change among local communities and district officials appear in case to differ from those in policy documents. NAPA identified Dolakha and Lamjung as the most vulnerable districts to the risk of extreme events. However, local community and district officials have not felt a significant threat from climate

change. The officials in Dolakha are aware that it has been ranked as a highly vulnerable district because of Tsherolpa GLOF, but they have not seen this as a serious threat. In Lamjung, the stakeholders have asked the researchers why the district has been put in the highly vulnerable category. This suggests that the local perspective and knowledge has not been reflected in national vulnerability assessment exercises.

5. CONCLUSIONS

This working paper provided a summary of initial findings on the factors influencing how meso-level institutions in Nepal are responding to climate change and extreme climate events. Drawing on preliminary findings from the research on Climate Change and Rural Institutions (CCRI) in Nepal, we have outlined the impacts of climate change, the dynamics of climate change-related institutions and their mandates, and the evolving policy regime on climate change. The following main points emerge out of our analysis:

Although Nepal is seen by many to be highly sensitive to climate change, its mountainous and complex landscape makes it difficult to make wide generalizations about climate change impacts, risks and effects. Linked to this, effects of climate-linked disasters and change may often, although not always, be localized and of small scale with respect to human impact in the mountains and hills although not in the plains. Further perceptions of climate risks as assessed in formal reports and as seen by local inhabitants and officials can differ significantly.

In part the sensitivity to climate change is attributed as much to weak institutional capacities, political conflict and poor development outcomes. Against this note has to be

taken of the significant role of both donors and national-level civil society in the institutional landscape.

However the climate change agenda – in terms of adaptation and mitigation as well as the disaster risks – has made considerable inroads into policy processes and into the programmes and activities of the Government of Nepal entities and several donor agencies and service providers. Despite a considerable degree of political contention and conflict, climate policy seems to have been supported by relevant government agencies. A significant part of this is concerned with the localisation of the climate change and disaster agenda and the development of policies, which still need translation into detailed policy and programmatic instructions for the meso-level GoN institutions.

Policy development on climate change and disaster risk is mainly dictated and driven by donor agencies, and there is less ownership across various levels of governments. In some cases, the GoN entities at the district level are even not aware of the plans that they themselves endorsed – indicating a co-option in climate change and disaster planning by donor-funded entities who are keen to legitimize their own work vis-à-vis those plans.

There is an increasing number of NGOs that have re-focused towards climate change and disaster-related programme development, and these NGOs are likely to remain in future planning and implementation and become an important source of experience and knowledge.

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