State of Agricultural Climate Change Adaptation Policy in Nepal

Working Paper No. 44

CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

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Abstract

This report is intended to complement the 2011 CCAFS publication "State of Climate Change Adaptation and Mitigation Efforts for Agriculture in Nepal" (Wang 2011). It provides relevant updates regarding the policies, projects, or initiatives introduced therein, and an assessment of the quickly evolving political scenario.

Specifically, this document presents an objective look at 16 key policy/program/project documents within three principal thematic areas: (1) governance, (2) agriculture, and (3) climate change institutions in Nepal. Objectives and priorities for each of these documents are outlined, together with their evolution over time, intending to identify the temporal shifts in agricultural climate change policy direction in Nepal. Later sections address policy interplay between and within these thematic areas.

The document aims to provide sufficient background to inform future CCAFS research in Nepal, particularly in the policy arena. The document is primarily addressed through an adaptation lens, as this research results from the Systemic Integrated Adaptation project, a CCAFS Theme 1 Adaptation to Progressive Climate Change initiative in collaboration with Oxford University's Environmental Change Institute (ECI).

Keywords

Climate Change; Adaptation; Agriculture; Policy; Governance; Nepal.

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Tables

Acronyms

ADB	Asian Development Bank
AEPC	Alternative Energy Promotion Centre
APP	Agricultural Perspective 20-Year Plan
BNMT	Britain-Nepal Medical Trust
CA	Constituent Assembly
CADP-N	Climate Adaptation Design and Pilot Testing
CCAFS	CGIAR Research Program on Climate Change, Agriculture and Food Security
CCC	Climate Change Council
CCP	Climate Change Policy
CDM	Clean Development Mechanism
CGIAR	Formerly the Consultative Group on International Agricultural Research. CGIAR is now a global research partnership for a food secure future
CIAT	Centro Internacional de Agricultura Tropical (International Center for Tropical Agriculture)
CIF	The World Bank Climate Investment Funds
CIP	Nepal Agriculture and Food Security Country Investment Plan
CPA	Comprehensive Peace Agreement
CPN-M	Communist Party of Nepal-Maoist
CPN-UML	Communist Party of Nepal-Unified Marxist Leninists
CRP	Climate-Resilient Planning
DADO	District Agriculture Development Office
DAP	Document Analysis Protocol
DDC	District Development Committee
DEEU/S	District Energy and Environment Units/Sections
DFID	United Kingdom Department for International Development
DLSO	District Livestock Services Office
DNA	Designated National Authority
DP	Development partners
DTR	Diurnal temperature range
ECI	Environmental Change Institute
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse gases

GLOFs	Glacial Lake Outburst Floods
GoN	Government of Nepal
IFC	International Finance Corporation
IIED	International Institute for Environment and Development
INC	Initial National Communication
INGO	International non-governmental organization
ISET-N	Institute for Social and Environmental Transition-Nepal
KCA	Kathmandu Call for Action
LAPA	Local Adaptation Plans of Action
LDC	Least Developed Countries
LEG	Least Developed Countries' Export Group
LGCDP	Local Governance and Community Development Program
LI-BIRD	Local Initiative for Biodiversity Research and Development
LSGA	Local Self-Governance Act
MCCICC	Multi-stakeholder Climate Change Initiatives Coordination Committee
MDB	Multilateral development bank
MoAC	Ministry of Agriculture and Cooperatives
MoAD	Ministry of Agriculture Development
MoFALD	Ministry of Federal Affairs and Local Development
MoFS	Ministry of Forests and Soil Conservation
MoLD	Ministry of Local Development
MoSTE	Ministry of Science, Technology and Environment
NAP	National Agricultural Plan
NAPA	National Adaptation Programme of Action
NARC	Nepal Agricultural Research Council
NARS	National Agricultural Research System
NARSC	National Agricultural Research and Service Centre
NASDP	National Agriculture Sector Development Priority for the Medium Term
NC	Nepali Congress
NCCSP	Nepal Climate Change Support Programme
NCCSP-SUP	Nepal Climate Change Support Programme Start-up Phase
NCSA	National Capacity Self-Assessment
NEPAP	Nepal Environmental Policy and Action Plan
NEWAH	Nepal Water for Health

NGO	Non-governmental organization
NPC	National Planning Commission
NSSD	National Strategy for Sustainable Development
PEI	Poverty-Environment Initiative
PPCR	Pilot Program for Climate Resilience
REDD+	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
RIMS-N	Resource Identification and Management Society-Nepal
RSDC	Rural Self-Reliance Development Centre
SCF	Strategic Climate Fund
SDAN	Sustainable Development Agenda for Nepal
SIA	Systemic Integrated Adaptation
TWG	Thematic working groups
TYIP	Three-Year Interim Plan
TYP	Three-Year Plan
UML	Unified Marxists-Leninists
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VDC	Village Development Committees

Context

This document was produced based on field research conducted in Nepal's Rupandehi district between May and September, 2012, by a team of researchers within the Systemic Integrated Adaptation (SIA) project, an initiative of the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) under Theme 1 Adaptation to Progressive Climate Change, through Oxford University's Environmental Change Institute (ECI).

The SIA project aims to produce a truly integrated research program, bringing together students with backgrounds in sociology (social differentiation), global environmental change, economics and finance, and politics—the four project lenses. The program is investigating what conceptual, methodological and practical tools, and frameworks are required to support adaptation policy development that represents the interests of multiple groups (both human and non-human species), makes explicit tradeoffs in policy decisions, accounts for long-term resilience, addresses and challenges existing downfalls in the current development trajectories, and builds on the existing assets at the community level.

For more information on the Systemic Integrated Adaptation initiative: http://ccafs.cgiar.org/blog/Integrating-sciences-find-tools-support-adaptation

Introduction

Nepal's economic future is inextricably linked to the health of its agricultural sector (Nepal 2010a). Nepal's largely rainfed agricultural sector, in turn, is closely linked with climate and climate change. It is estimated that between 75 and 80% of the Nepalese population is dependent upon agriculture as their primary source of income, with an even greater percentage living in rural areas and dependent upon the wider agricultural economy. While the share of agriculture in Nepal's gross domestic product (GDP) has been in decline in recent years, it still counts for as much as 35% of total national GDP (Nepal 2010c). As poverty rates are particularly high in Nepal's rural areas, agricultural sector development not only represents an imperative for economic growth, but also a crucial entry point for national poverty alleviation.

Nepal is made up of three principal "physiographic regions:" high mountains, mid-hills, and the Terai plains, each with distinct altitude and climatic characteristics that vary from sub-tropical (Terai) to alpine (high mountains), all within a geographic span of less than 200 km. Nepal's climate is primarily influenced by two features: the Himalayan mountain range and the South Asian monsoon. The climate, manifesting differently within each of Nepal's regions, can be broadly categorised as pre-monsoon (Mar–May), monsoon (June–Sept), post-monsoon (Oct–Nov), and winter (Dec–Feb).

According to Nepal's National Adaptation Programme of Action (NAPA) document (Nepal 2010b), observed data indicate a consistent warming trend across the country, with a rise in maximum temperatures at an annual rate of 0.04–0.06 °C. Precipitation data show a general decline in the pre-monsoon rainfall, particularly in Nepal's west and far-west development regions (Nepal's regions are: Far Western, Mid-Western, Western, Central, and East). Washington et al. (2012) in an assessment of the wider Indo-Gangetic Plains region suggests that station-based data from 1960 indicate that temperatures are increasing by approximately 0.1 °C per decade in the region, with a reduction in the diurnal temperature range (DTR). The authors indicate that this trend is likely to continue, with warming occurring at a rate higher than the global average. Results for precipitation in this study were less conclusive given the complex dynamics of monsoon rainfall. Overall, general consensus is recognised on the following trends for Nepal: (1) significant warming, particularly at higher elevations, leading to reductions in snow and ice coverage; (2) increases in climatic variability and the frequency of extreme events, including floods and droughts; and (3) an overall increase in regional precipitation during the wet season but decrease in precipitation in the middle hills (NCVST 2009).

Nepal's Terai region, the location of CCAFS baseline site in Rupandehi district, is referred to as Nepal's "food basket" and accounts for nearly 65% of the country's agricultural output (Madhesi 2011). The region is composed of alluvial flat deposits producing rich soils suitable for the farming of staple crops, such as maize, wheat, and rice. The region therefore plays an important role in providing food to the country, and sustaining the economy and subsistence livelihoods. Smallholder farmers in this region, however, are particularly vulnerable to the impacts of climate change and other environmental phenomena. In the last 50 years, the region has undergone a notable degree of environmental change, prompted to a large degree by immigration from the mid-hills to the lowland Terai. This has led to extensive deforestation for farmland expansion. Concurrently, the agricultural success of the region has also led to a notable increase in population pressure, adding additional stress on natural resources.

Collectively, the farmers in the Terai region report of more frequent and less predictable monsoon flooding. They also face more extreme climatic events, including severe cold waves that destroy winter vegetable crops, severe temperatures, and prolonged heat spells, affecting wheat at maturity stage. Winter droughts are also increasingly evident, causing widespread damage (Nepal 2010c).

In this context, agricultural development in the face of climate change has benefited from increased attention in Nepal, but efforts today remain uncoordinated and vastly insufficient. It is the aim of this report to outline the major trends and initiatives in Nepal related to agriculture and climate change to better understand the evolution and interplay between these efforts.

Political history of Nepal

To truly understand the policy context in Nepal, a brief overview of the country's political history, particularly recent events, is necessary. The political history informs our understanding of the perceptions of government and authority, the causes and treatment of minority groups, and other key factors contributing to the success or failure of central-level adaptation planning. Generally speaking, we can divide its modern history into the following key periods:

1846 – 1951	Rana Dynasty
1951 – 1962	Parliamentary Monarchy
1962 – 1989	Panchayat
1989 – 1995	Parliamentary Monarchy
1995 – 2006	People's War
2006 – Present	Interim Federal Republic

Nepal has been ruled under an absolute monarchy for almost its entire existence. It was first established following the unification of the Kingdom of Nepal in 1768. Nepal remained under autocratic rule for nearly two centuries until 1951 when King Tribhuvan of the staunchly pro-British Rana dynasty (ruling from 1846–1951) was expelled in what would be Nepal's first experiment in parliamentary governance. The uprising and political posturing in 1950's Nepal can be explained in part by the independence movements in both India and Pakistan, occurring in the late 1940s.

The year 1959 saw the first general elections in Nepal; however, the victory of the Nepali Congress (NC) was short lived, as King Mahendra dissolved the parliament under royal decree just a few years later. In its place, the king instated a system known as Panchayat in 1962, a Nepalese governing tradition of forming caste-based village-level councils of elders. The Panchayat was a monarch-guided, party-less authoritarian system that emphasised development and nation-building over democracy.

Nepal remained under the Panchayat system for almost 30 years until a trade dispute in 1989 with India united the peasantry and influential middle-class intellectual elite movements by prompting mass unemployment and inflation. The extreme social unrest ("Jan Andolan" or People's Movement), together with increasing pressure from both the NC and emerging communist parties provided the final impetus for democratic reform in Nepal and forced King Birendra to draft a new constitution, instating a constitutional monarchy with a multiparty democratic assembly (Gordon 2005).

Several years of political posturing between the NC and communist parties ensued, and factional disputes within the communist party itself became more pronounced. Two communist factions emerged from the realignments of the early 1990s; the Maoist Party and the Unified Marxists-Leninists (UML). While the UML were content to use their position within Nepal's new democratic assembly to leverage support for the establishment of a full communist state, the Maoists launched an effort to replace the parliamentary system through violent means. The "People's War" (Nepalese Civil War) had begun, one that would lead to the deaths of nearly 13,000 Nepalese. The Maoist insurgency was successful in garnering support among Nepal's rural, underprivileged caste populations in the south and west of the country, due in large part to their demands for agrarian (land) reform.

In 2005, after nearly ten years of violence, King Gyanendra seized control over the government in an effort to unilaterally coordinate the elimination of the Maoist movement. Nepal's demanding geography rendered King Gyanendra's efforts ineffective, but was also responsible for the stalemate that would lead to the eventual signing of a Comprehensive Peace Agreement (CPA) in November of 2006 (Hall 2011). In this window of peace, King Gyanendra relinquished sovereign power to the people of Nepal. Elections were held in 2008, and the newly elected assembly voted to abolish the monarchy and transitioned Nepal into a Federal Republic. Today, the country continues to operate under the terms of the CPA and maintains only a transitional constitution. The major parties today responsible for finalising the new Nepalese constitution are the Communist Party of Nepal-Maoist (CPN-M), Communist Party of Nepal-Unified Marxist Leninists (CPN-UML), and the Nepali Congress (NC) (Gobyn 2009).

This tumultuous and recent political history informs the subsequent sections of this report.

State of policy in Nepal

The analysis of climate change adaptation policies, programs, and projects presented here is shaped by in-depth interviews with key informants related to agriculture, climate change, and development sectors in Nepal (see Appendix 1 for a complete list of interviews). These interviews, along with document review, informed the selection of the key documents listed in Table 1 and referred to subsequently as "target documents" chosen for content analysis.

Given the crosscutting nature of climate change adaptation, reviews concerning the current state of initiatives must go beyond policies, projects, and initiatives that contain the explicit language for climate change adaptation in agriculture. The Local Self-Governance Act (LSGA), for example, could potentially represent the greatest impact on climate change adaptation success in

Table 1. Policies and projects selected for content analysis

Governance and Institutional Policies
Local Self-Governance Act (LSGA), 1999
Nepal Interim Constitution, 2007
Three-Year Interim Plan (TYIP), 2007
Local Governance and Community Development Program (LGCDP,) 2008
Three-Year Plan Approach Paper, 2010
Agricultural Policies*
Agricultural Perspective Plan (APP), 1995
National Agriculture Sector Development Priority for the Medium Term (NASDP), 2010
Nepal Agriculture and Food Security Country Investment Plan (CIP), 2010
Nepal Agricultural Research Council (NARC) Strategic Vision for Agricultural Research, 2010
Climate Change Policies
Nepal's Initial Communication of the United Nations Framework Convention on Climate Change (UNFCCC), 2004
National Adaptation Programme of Action (NAPA), 2010
Poverty-Environment Initiative (PEI), 2010
Pilot Program for Climate Resilience (PPCR), 2010
Local Adaptation Plans of Action (LAPA) Framework, 2011
National Planning Commission (NPC) Climate-Resilient Planning (CRP), 2011
Climate Change Policy (CCP), 2011

* Note that the National Agricultural Plan (NAP) 2004 is available only in Nepali script. Summaries of the NAP are available in English and are included in several of the documents listed above. NAP objectives and priorities have been identified through this means.

Nepal, despite its seemingly widespread applicability. The LSGA formally establishes Village Development Committees (VDC) and a District Development Committee (DDC), the autonomous bodies linked to the Ministry of Federal Affairs and Local Development (MoFALD) (formerly the Ministry of Local Development-MoLD). VDCs and DDCs are considered the development-aimed extensions of the central government and will play a crucial role in the implementation of Local Adaptation Plans of Action (LAPA) (Nepal 2011c).

Thus, this analysis will first cover the general governing institutions (organizations and policies) in Nepal—such as LSGA—and then move to institutions in agriculture and climate change. For each section, relevant background information is provided, followed by the summary of the documents listed in the table above.

Governing institutions in Nepal

Nepal is currently transitioning to a Federal Republic state structure, a process that began in 2006, following a CPA between warring factions. The CPN-M signed a 12-point agreement with seven political parties in Nepal[1] that would serve as the foundation for the interim constitution and the, now delayed, Federal Constitution. The documents analysed in this section include the Interim Constitution of Nepal (Nepal 2007a), the Local Self-Governance Act (LSGA) (Nepal 1999), the Three-Year Interim Plan (TYIP) (Nepal 2007b), the Local Governance and Community Development Program (LGCDP) (Nepal 2008), and the Three-Year Plan (TYP) Approach Paper (Nepal 2010g).

Interim Constitution of Nepal (2007)

The Interim Constitution of Nepal was put into force in July of 2007, replacing the 1990 Constitution of the Kingdom of Nepal (Nepal 1990). The 1990 Constitution had established multiparty parliamentary monarchy following the People's Movement that led to the collapse of the Panchayat (assembly) system.

The Interim Constitution represents, still today, the fundamental law of Nepal. It establishes a Constituent Assembly (CA) responsible for drafting a new constitution based on a federal republic structure. The initial deadline for ratifying the new constitution was May 2010, but due to significant political infighting over the structure of the proposed federal system and the inclusion of marginalised groups (Dalits, Madhesi, Janjati, and so on), this deadline has been delayed on multiple occasions. On 27 May 2012, the CA yet again failed to ratify the document, leading to the CA's dissolution and prompting a virtual political vacuum. New CA elections have been called by the Prime Minister for early 2013.

The existing Interim Constitution contains several critical elements related to the governance of natural resources, agriculture/rural development, and food sovereignty. Specifically, under Part 3 Fundamental Rights, the right to a clean environment (Section 16, Clause 1) and the right to food sovereignty (Section 18, Clause 3) are established. Part 4 Responsibilities, Directive Principles and the Policies of the State, Section 35, Clause 6 then addresses agriculture directly, stating "The State shall, by encouraging peasants and by increasing productivity, create conditions for economic progress of the majority of the people who are dependent on agriculture, and by launching land reform program, develop the agricultural sector as an industry."

[1] The seven-party alliance consisted of the Nepali Congress, Nepali Congress (Democratic), Communist Party of Nepal (Unified Marxist-Leninists), Nepal Workers and Peasants Party, Nepal Goodwill Party, United Left Front, and People's Front.

While climate change is not explicitly mentioned in the Interim Constitution, early drafts of a Federal Constitution and CA thematic committees suggest that it will hold an unprecedented central position in the new federal constitution. That is, six of the ten CA thematic working groups (TWG) address climate change in their recommended inclusions in the Constitution's final draft. It is further anticipated that the Fundamental Rights section of the constitution will contain a direct reference to the "rights to adaptation and to compensation against climate-related disasters," for example (Paudel 2010). The explicit references to climate change and even adaptation in the Constitution should ensure adequate support from the state for future climate-related initiatives.

Local Self-Governance Act (1999)

The LSGA was established in 1999. It is the direct result of a growing movement in Nepal, calling for the increased autonomy of the country's diverse ethnic and cultural groups, and thus the devolution of decision-making from the central to district level. The spirit of this message was formally recognised in the 1990 Constitution, following the reinstatement of multiparty democracy in Nepal.

The LSGA formally establishes several key "local bodies," including the DDC, District Council, VDC, Village Council, Ward Citizen committee, and their relevant chairpersons, vice-chairpersons, and secretaries. In short, the focus of LSGA is to provide a legal basis for the decentralisation of power from central authority to district, village, and municipality levels.

While neither climate change adaptation nor mitigation are explicitly specified within its legal framework, the LSGA is of critical importance as it serves as the lowest state body of government in Nepal and handles the direct delivery of its rural development services. While both the VDC and DDC are considered "autonomous" institutions, they are bound within a hierarchical structure of the Government of Nepal (GoN), especially for planning and funding purposes. Administratively, the VDC and DDC fall within the jurisdiction of the Ministry of Federal Affairs and Local Development (MoFALD). As such, plans developed by the VDC are dictated by DDC guidelines and those of the DDC by the priorities identified by the National Planning Commission (NPC). It is through this hierarchical planning process that development projects and funding, including climate change, are delivered in Nepal.

Within this structure, the LSGA outlines explicit responsibilities for both the VDC and DDC within the agricultural sector. Broadly speaking, the LSGA suggests the VDC will "carry out or cause to be carried out agricultural development programmes within the village development area," while it is envisioned that the DDC will take a policy development and extension service coordination role. Specifically, the DDC is expected "to make District-level policy on agriculture

and livestock development, and formulate and operate programmes…" The document similarly denotes responsibilities to the VDC and DDC in the area of irrigation, soil erosion, land ownership, and forest administration.

Unfortunately, as suggested in Rai and Paudel (2011), three years after the LSGA was passed, the entire elected leadership of local bodies was dissolved as their tenure expired. Continuing through today, the local bodies identified in the LSGA are staffed by unelected civil servants appointed by MoFALD.

Local Governance and Community Development Program – LGCDP (2008)

LGCDP is a joint initiative between the Government of Nepal and a host of development practitioners (the largest donors being the Asian Development Bank (ADB), United Kingdom Department for International Development (DFID), and United Nations agencies). As stated in the project document, "the programme will [serve as] the national framework for achieving improvements in the system of local governance and community development. Initiated in 2008, LGCDP supports Nepal's vision of local governance and decentralisation of decision making, articulated in both the LSGA and the Nepal Interim Constitution (2007). It aims, in part, to fill the vacuum created by the suspension of local elections beginning in 2002.

The program supports MoFALD's vision of bringing good governance and development interventions to the people "by maintaining fiscal discipline, correcting mismanagement, delays, and non-transparent procedures." It operates on three main components: (1) citizens and communities engaged actively with local governments and hold them accountable; (2) increased capacity of local governments to manage resources and deliver basic services in an inclusive and equitable manner; and (3) strengthened policy and national institutional framework for devolution and local self-governance.

At the community level, LGCDP utilises social mobilisers to incorporate the voices of marginalised community members into development planning and prioritisation, working in close coordination with the VDC Secretary. As such, LGCDP represents that lowest level of social mobilisation in Nepal, particularly that of women, children, and other disadvantaged groups.

While the program is intended to close in 2012, it is envisioned that the institutional structures created by the program will remain in place. Consequently, LGCDP and its social mobilisers are at the front lines in addressing local-level impacts from climate change, and in developing sustainable community interventions.

Three-Year Plans (2007–2012)

Nepal began planned development efforts in 1956. Since that time, the country has seen 10 five-year plans, the last of which expired in 2006, one three-year Interim Plan (designed to manage the development planning process while a Federal Constitution was drafted), and a three-year plan approach paper, the most recent short-term planning document in Nepal. The five- and three-year plans are produced by the NPC in consultation with key line ministries, multilateral development banks (MDB) and key development partners (DP). These short-term development plans are intended to build on existing medium- and long-term development plans [for instance, the National Agricultural Plan (Nepal 2004)].

The Three-Year Interim Plan (TYIP) for the years 2007–2010 set the country on a path to rebuilding following the extended armed conflict that marked the previous decade. The plan emphasised the following priority areas: (1) Physical infrastructure will be reconstructed and rehabilitated, and people affected by conflict will be provided relief and rehabilitation, as well as social integration; (2) Investments will be increased to accelerate the pace of development through the inclusion of excluded groups, areas, and gender in all mechanisms, spheres, and processes of development; (3) In order to revitalise the national economy, investments will be increased in physical infrastructures like hydropower, roads, irrigation, and communication for supporting agriculture, tourism, and industries; and (4) Investment will be increased in education, health, water supply, and sanitation sectors for the development of human resources.

The most recent Three-Year Plan Approach Paper (2010–2012) released by the NPC continues along the directives of the TYIP, but places additional emphasis on the establishment of a federal governance structure and, for the first time in the country's history, recognises climate change as a top priority in the development plan. The complete list of prioritised areas in the TYP Approach paper includes:

- To make the economic development sustainable, broad based, and poverty alleviation oriented, emphasis will be given to the balanced development of the physical and social infrastructures taking into consideration the future federal republic state structure.
- Priority will be accorded to employment creation and economic growth by providing priority to agriculture sector, tourism, industry, and export trade.
- Investment will be increased to support development by promoting inclusion of excluded communities, regions, and gender in all structures, sectors, and processes of the nation.
- To ensure availability and regularity of essential services for human livelihood (drinking water, energy/electricity, roads, communication, food security, health, and education), the required investment in these sectors will be increased.

- Emphasis will be given to ensure availability of quality services to the people on time and at concessional prices by promoting good governance.
- Attention will be paid towards minimising the impacts of climate change by protecting environment and availing opportunities.
- High priority will be accorded to nationally important priority projects and those that will contribute directly to the relief of the people.
- Priorities related specifically to the agricultural sector, as found within the TYIP and Three-Year Approach Paper, can be found in Table 2.

Agricultural institutions

Several key documents comprise Nepal's portfolio of agricultural policies, plans, and programs. These include: the Agricultural Perspective 20-Year Plan (APP) (APROSC/JMA 1995); National Agricultural Plan (NAP); National Agriculture Sector Development Priority for the Medium Term (NASDP); Nepal Agriculture and Food Security Country Investment Plan (CIP) (Nepal 2010d), and the Strategic Vision for Agricultural Research.

The Ministry of Agriculture Development (MoAD) (formerly the Ministry of Agriculture and Cooperatives-MoAC) is the GoN focal point for agricultural development in Nepal. Other key bodies for this sector include the Ministry of Irrigation, the Ministry of Forests and Soil Conservation, the Department of Agriculture, the Department of Livestock Services, the Nepal Agricultural Research Council (NARC), the Department of Hydrology and Meteorology, and the Department of Irrigation.

The District Agriculture Development Office (DADO) and District Livestock Services Office (DLSO) are housed within the DDC complex and provide district-level services as well as manage the MoAD's most rural bodies, the Agriculture and Livestock Service Centres.

Agricultural Perspective Plan (1995–2014)

While the policies that guide Nepal's agricultural development are numerous, each is intended to follow on the wider objectives set by its predecessor. By this logic, the APP represents perhaps the most foundational planning document in the agricultural sector. The APP was prepared in 1995 prior to the start of the People's War in a collaborative effort between the GoN and John Mellor Associates (Washington, DC). The APP outlined five key objectives:

1. Accelerate the growth rate in agriculture through increased factor productivity.
2. Alleviate poverty and achieve significant improvement in the standard of living through accelerated growth and expanded employment opportunities.
3. Transform the subsistence-based agriculture into a commercial one through diversification and widespread realisation of comparative advantage.
4. Expand opportunities for an overall economic transformation by fulfilling the precondition of agricultural development.
5. Identify immediate, short-, and long-term strategies for implementation, and provide clear guidelines for preparing periodic plans and programs in the future.

These objectives were to be achieved through action in four priority areas: expansion of irrigation services; application of sufficient fertilizers; adoption of modern technologies and tools; and development of marketable road connections.

Nepal Agriculture and Food Security Country Investment Plan (2010)

The Nepal Agriculture and Food Security Country Investment Plan (CIP) is a 2010 funding document built on the priorities identified in the Nepal's National Agriculture Sector Development Priority for the Medium Term (NASDP). The NASDP, in turn, identifies sector priorities according to the National Agricultural Plan (NAP)[2] and the targeted goals identified in the Three-Year Plan.

The overall goal of the CIP is to reduce poverty and household food insecurity on a sustainable basis and to strengthen the national economy. Towards this end, the CIP outlines ten agriculture and food security programs, identifying subprogram, components, and activities that will be carried out by the GoN Ministries, in particular the Ministry of Agriculture Development (MoAD), for the period 2010–2014. These programs include:

- enhancing agriculture production and productivity;
- supply of quality agricultural inputs and services;
- developing and strengthening agriculture and marketing infrastructure;
- increasing agriculture competitiveness and commercialisation;
- agriculture research and development;
- promotion and conservation of agricultural biodiversity;
- food safety and consumer protection;

[2] The objectives laid out in the National Agricultural Plan and the National Agriculture Sector Development Priority are captured in this CIP summary. A detailed list of NAP and NASDP priorities can be found in Table 2.

- inclusive agricultural development;
- human resource development in the agri-food sector;
- strengthening policy research, planning, and monitoring and evaluation.

Climate change adaptation is mentioned briefly in the document, stating that "the institutional and technical capacity of MoAD at the national and district levels needs to be increased to address climate risk management and disaster prevention, and preparedness-related issues from an agricultural perspective."

The CIP outlines current investment in each of the 10 programs and also calculates the financing gap existing between current and required allocations. The total funding gap identified by the CIP is USD 1.02 billion. The CIP is to be looked upon as a preliminary investment plan that requires further refinement but that has captured the overall direction of agriculture in Nepal in the future.

Strategic Vision for Agricultural Research (2011–2030)

The Nepal Agricultural Research Council (NARC) was established in 1991 following the dissolution of the National Agricultural Research and Service Centre (NARSC)—the body that had previously taken over agricultural research responsibilities from the then Ministry of Agriculture and Cooperatives (MoAC) in 1984. NARC is an autonomous body responsible for producing agricultural research, and is considered the apex body of Nepal's national agricultural research system (NARS).

NARC's Strategic Vision for Agricultural Research (2011–2030) policy was produced in 2010 with the aim of outlining key reformations within NARC and to produce a research agenda for the upcoming 20 years. Its newly stated mission is "to contribute to a national campaign of increasing productivity, reducing poverty, and promoting commercialisation and competitiveness of the agriculture and natural resource sectors through the generation and promotion of technology, knowledge, and information that respond to client demands and climate change." The inclusion of climate change within the mission statement reflects the visibility that the research area is being afforded by Nepal's NARS.

The central position of climate change on the research agenda is further articulated in its inclusion within NARC's stated research macro-areas: (1) Crops and Horticulture; (2) Livestock and Fisheries; (3) Natural Resource Management & Climate Change; (4) Biotechnology; and (5) Outreach, Technology Dissemination, and Extension. (A detailed list of NARC priority research areas can be found in Box 1).

Box 1. Strategic Vision for Agricultural Research priorities

NARC's Strategic Vision for Agricultural Research - Priority Areas

- Increasing productivity and generating on-farm and off-farm employment for food security;
- Commercialisation of agriculture for employment generation, poverty alleviation, and export promotion;
- Utilisation of available farm resources for rainfed and relatively low-fertility land;
- Sustainable use of natural resources and utilisation of degraded land (conservation agriculture);
- Cost-effective technology, especially for small and marginal farmers;
- Eco-friendly management practices;
- Farming system-oriented outreach research;
- Coping with negative effects of climate change and global warming.

Specifically, NARC has identified a number of short-term adaptation measures needed to reduce climate vulnerability: (1) identifying and developing crop varieties, livestock, and fish species that are tolerant to stress conditions and locally emerging pests and diseases; (2) supplying farmers with new crop varieties, livestock, and fish species; and (3) demonstrating appropriate farming practices to reduce vulnerability and maximise returns from new agricultural technologies.

NARC was made autonomous to accelerate research activities by removing many of the bureaucratic processes; however, by its own account, this structure has resulted in isolation from mainstream government, which has limited the dissemination of NARC technology (Nepal 2010a). A renewed structure has been proposed, linking NARC more closely with MoAD through the creation of a MoAD research secretariat.

Agricultural objectives and priorities

Table 2 summarises the key objectives and priorities outlined in this section on agricultural policies. In addition to those plans specific to agriculture, objectives/priorities related to agriculture within the Three-Year Interim Plan and the Three-Year Approach Paper have been included in this table, as they serve as the GoN's principal short-term planning documents. Both 'objectives' and 'priorities' have been listed in this table in an effort to include the full range of potential outcomes envisioned in these planning documents, given that the terms are applied differently (interchangeably) between documents.[3]

[3] Content for Table 2 Priorities and Objectives was obtained from the "Common Data Capture" section of the Document Analysis Protocol (DAP), Appendix 2.

Table 2. Agricultural objectives and priorities by document

Agricultural Perspective Plan (APP), 1995	National Agricultural Plan (NAP), 2004	Three-Year Interim Plan (TYIP), 2007	Three-Year Plan (TYP), 2010	National Agriculture Sector Development Priority for the medium Term (NASDP), 2010	Nepal Agriculture and Food Security Country Investment Plan (CIP), 2010	Strategic Vision for Agricultural Research, 2010
Objectives (Agricultural)						
• Accelerate the growth rate in agriculture through increased factor productivity. • Alleviate poverty and achieve significant improvement in the standard of living through accelerated growth and expanded employment opportunities. • Transform the subsistence-based agriculture into a commercial one through diversification and widespread realisation of comparative advantage. • Expand opportunities for an overall economic transformation by fulfilling the precondition of agricultural development.	• Increase agricultural production and productivity. • Make agriculture competitive with regional and world markets by developing commercial agriculture system. • Protect, promote, and utilise natural resources, environment and biological diversity.	• Increase agricultural production and productivity. • Maintain food sovereignty by ensuring food security. • Make the agriculture and livestock sector competitive by transforming subsistence agriculture into commercial agriculture. • Increase employment opportunities for rural youths, women, Madhesis, persons with disability, Muslims, and deprived groups. • Conserve, promote, and utilise agricultural biodiversity through the development and dissemination of environment-friendly technologies.	• Employment generation and poverty reduction and balance of trade by means of its modernisation and commercialisation, considering agriculture sector as the backbone of national economy. • Improve economic status of rural people by increasing the production and productivity of agriculture and livestock commodities in line with the requirements of farmers and other stakeholders.	• Make the interventions reflective of agriculture development and food security needs. • Make the strategic policies and priorities selective. • Mobilise resources for inclusive development. • Become selective (priority wise) in obtaining support of the UN Agencies, bilateral, and multi-lateral DPs. • Make the development agenda country needs driven (in line with the current and forthcoming TYIPs. • Promote complementarities by recognising respective comparative advantage / mandate of the DPs.	• Improve the coordinated planning and investment of resources in the agriculture sector that will address overall agriculture development and food security (availability, access, and utilisation). • Increase external resources through Government-International partnership collaboration. • Monitor and evaluate the indicators and management of the investments made in agriculture, food security, and nutrition so as to maintain an efficient and robust agricultural investment programme.	• Create and scale up technologies that contribute to: (1) food security (2) poverty reduction (3) value addition (4) export promotion (5) environmental sustainability (6) cost effectiveness*

(continued)

Table 2. (continued)

• Identify immediate, short- and long-term strategies for implementation, and provide clear guidelines for preparing periodic plans and programs in the future.						
Priority Areas						
• Expansion of irrigation services. • Application of sufficient fertilizers. • Adoption of modern technologies and tools. • Development of marketable road connections.	NOT AVAILABLE IN ENGLISH LANGUAGE TRANSLATION	• NARC institutional reforms and strengthening. • Crops, horticulture, and fisheries development; integrated crops management system; market development; and business promotion. • Livestock development, strengthening of animal health, market development, and business promotion. • Food health, quality control, food technology, and nutrition.	• Commercialisation of agriculture and livestock commodities and development of rural infrastructure. • Boost the availability of improved breed livestock and reduce the cost of livestock production. • Make quality control, monitoring, and regulation of food agriculture and livestock commodities effective. • Develop climate change resilience technology and disseminate conservation,	• Enhance food and nutrition security and safety. • Enhance application of "getting-better" technologies and tools. • Promote an enabling environment. • Promote market-orientation and competitiveness. • Sustain natural resource conservation and utilisation. • Develop infrastructure support facilities. • Enhance integration of gender in agriculture. • Manage the effects of migration of agricultural labour.	• Enhance agriculture production and productivity. • Supply of quality agricultural inputs and services. • Develop and strengthen agriculture and marketing infrastructure. • Increase agriculture competitiveness and commercialisation. • Agriculture research and development. • Promotion and conservation of agricultural biodiversity. • Food safety and consumer protection. • Inclusive agricultural development.	• Increase productivity and generate on-farm and off-farm employment for food security. • Commercialisation of agriculture for employment generation, poverty alleviation, and export promotion. • Utilisation of available farm resources for rainfed and relatively low-fertility land. • Sustainable use of natural resources and utilisation of degraded land (conservation agriculture). • Cost-effective technology, especially for small and marginal farmers. • Eco-friendly management practices.

(continued)

Table 2. (continued)

Agricultural Perspective Plan (APP), 1995	National Agricultural Plan (NAP), 2004	Three-Year Interim Plan (TYIP), 2007	Three-Year Plan (TYP), 2010	National Agriculture Sector Development Priority for the medium Term (NASDP), 2010	Nepal Agriculture and Food Security Country Investment Plan (CIP), 2010	Strategic Vision for Agricultural Research, 2010
Priority Areas						
			promotion, and utilisation of agricultural biodiversity. • Encourage organic agriculture. • Coordinate research, extension, and education. • Encourage contract farming and cooperative farming. • Develop and extend the agriculture market.		• Human resource development in the agriculture and food sector. • Strengthen policy research, planning, and monitoring and evaluation.	• Farming system-oriented outreach research. • Coping with negative effects of climate change and global warming.

* The Strategic Vision for Agricultural Research 2010 also includes a list of priority crops and livestock areas. This includes: major food crops such as rice, maize, wheat, and potato; minor food crops such as barley, buckwheat, millets, and *Amaranthus*; potential commercial crops such as apple, citrus, mango, banana, and vegetables; cash crops such as large cardamom, ginger, turmeric, and other spices; industrial crops such as tea, coffee, jute, sugarcane, cotton, sunflower, and Jatropha (biofuel); specialised commodities such as sericulture, bee-keeping, flowers, mushrooms, and wool animals; high-value, low-volume commodities such as saffron, yarshagumba, herbs, and nontimber forest products; fish, including cold-water fish and warm-water fish; dairy animals such as buffalo, cattle, and yak; animals for meat production such as poultry, goats, sheep, buffalo, and pigs; and power use in agriculture and agro-industries—draft animals, solar, biodiesel, and farm waste utilisation.

Evolution of agricultural objectives and priorities

As there have been several generations of agricultural policies represented in this analysis (covering the years 1995–2010), it is worth investigating how the objectives and priorities have evolved, with an emphasis on the policy aims that have remained consistent over this period and those that have emerged more recently.

The NASDP report summarises the evolution in the following way:

> *Subsequent periodic plans—the Tenth Five-Year Plan (2002–2007), Three-Year Interim Plan (TYIP 2007–2010), and the National Agriculture Policy (2004)—draw on the fundamentals set by the APP and share the common thread of (1) agricultural commercialisation and (2) diversification for broad-based, (3) inclusive growth, and (4) poverty reduction (2010).*

Similarly, the CIP, the most recent of these documents under analysis here, states:

> *The objectives for the agriculture sector as expressed in the TYIP (2010/11–12/13) and addressed by the National Agriculture Sector Development Priority plan (NASDP 2011–2015), and associated Country Investment Plan are: (1) To ensure food and nutrition security; (2) To make agriculture sector competitive and business oriented, with increased production and productivity; (3) To reduce poverty by increasing employment and income-generating opportunities in agriculture sector; (4) To minimise adverse effects of environment, climate variability, and climate change in the agriculture sector; (5) To develop cooperatives for agriculture development; (6) To develop human resources for the management of a sustainable agriculture development process (2010).*

Commercialisation and poverty reduction are commonly recognised as key objectives of the agricultural sector between these two studies, with inclusive growth implied as well. If, however, Table 2 is examined in a more systematic way, the following insights can be produced. In total, 28 unique 'objectives' and 'priorities' are listed within the five agricultural (plus TYIP and TYP) policy documents reviewed here. Each of these 28 objectives was tested for its inclusion in the listed priorities and objectives for each of the analysed documents. As a result, no single priority area proved consistent across all seven documents. Four objective/priority areas, however, were common throughout six of the documents: (1) Increased agricultural productivity; (2) Commercialisation of agriculture; (3) Improved market access; and

(4) Protection of biodiversity/natural resources. Table 3 displays the objectives/priorities common to three or more of the documents under analysis. The complete table can be found in Appendix 3. An 'x' at the intersection of a row and column indicates the presence of a given policy objective within a policy document.

Note that inconsistencies (or a perceived lack of continuity) between these policy and project documents do not necessarily suggest a failure in achieving a "shared vision" among the contributors and authors of these documents. Rather, this analysis is intended to improve our understanding of the evolution of policy objectives and priorities over time; evolutions that result from multiple factors, including changing socioeconomic conditions, civil conflict, or—perhaps most importantly—the diverse planning horizons (short-, medium-, long-terms) articulated in these documents.

Table 3. Objectives and Priorities between policy documents

	Agricultural Perspective Plan (APP), 1995	National Agricultural Plan (NAP), 2004	Three-Year Interim Plan (TYIP), 2007	Three-Year Plan (TYP), 2010	National Agriculture Sector Development Priority for the Medium Term (NASDP), 2010	Nepal Agriculture and Food Security Country Investment Plan (CIP), 2010	Strategic Vision for Agricultural Research, 2010	Frequency Identified as Objective/Priority
Increased agricultural productivity	x	x	x	x		x	x	6
Commercialisation of agriculture	x	x	x	x		x	x	6
Improved market access	x	x	x	x	x	x		6
Protection of biodiversity/ natural resources		x	x	x	x	x	x	6
Adoption of technologies	x		x	x	x		x	5
Increased employment opportunities	x		x	x			x	4
Additional/improved research			x	x		x	x	4
Poverty reduction	x			x			x	3
Achieve food security			x			x	x	3
Improved quality control			x	x		x		3
Improved nutrition			x		x	x		3
Development of rural infrastructure				x	x	x		3

Climate change in national planning and agriculture documents

Before moving on to discuss climate change specific policies and programs, it is worth analysing the evolution of the inclusion of climate change within key agricultural planning and project documents. Table 4 lists relevant planning documents in chronological order, together with a description of any references to "climate change" within the document. Generally speaking, we see markedly improved visibility of climate change in government planning documents following the establishment of the Interim Constitution in 2007.

Table 4. Climate change inclusion in key agricultural sector plans

Policy or Plan	Reference
Agricultural Perspective Plan (APP), 1995	No reference made to climate change
National Agricultural Plan (NAP), 2004	No reference made to climate change
Three-Year Interim Plan (TYIP), 2007	**[Count: 7]** **[Referenced heavily in Chapter 35: Environment, Science and Technology** Recognises "International UNFCCC commitments and the need to establish national policy on climate change." Highlights the "need for programs on mitigation of adverse effects of climate change." Recognises the "need to intensify diplomatic efforts effectively to cash the opportunity to receive international resources using provisions like carbon trade, climate change mitigation and payment against environmental services." Acknowledges "the problems generated by climate change for which the country is not responsible but has to face it and it could even be dangerous in the future." "Today, among the various problems of environment in the world, climate change has become a matter of serious concern. Because of the greenhouse gas effect, a problem related with the outburst of glacier lakes in Nepal has begun to emerge."
Three-Year Plan Approach Paper (TYP), 2010	**[Count: 43]** **[Included in preface]** "It is also necessary to be attentive in the areas such as global economic crisis, climate change, and so on." **[Allocated its own section in Chapter 9: Infrastructure Development Policy]** "Section 9.8 Environment and ClimateChange" **[Deemed TYP priority]** "The Government has given high importance on generating employment opportunities, poverty alleviation, food security, and the climate change through a three-year strategy." **[Included in Agriculture and Food Security strategies, Section 7.19]** "Develop climate change resilience technology and to disseminate conservation, promotion, and utilisation of agriculture biodiversity." **[Referenced heavily in Forest and Soil Conservation (Section 7.21), Drinking Water and Sanitation (Section 8.11), Irrigation and Water Induced Disaster Prevention (Section 9.2.1), Alternative Energy (Section 9.2.2), and Science and Technology (Section 9.7)]**

(continued)

Table 4. (continued)

Policy or Plan	Reference
National Agriculture Sector Development Priority for the Medium Term (NASDP), 2010	**[Count: 53]** **[Included as a central subject area (1 of 12) in developing NASDP, [Included under NASDP priority 5 Sustaining Natural Resource Conservation and Utilisation]** "5.5 Climate change risks adapted with enhanced counteracting capacities of the local communities." **[Identified as a current agriculture development and food security challenge]** "Limited capacity for adaptation to climate change effects." **[Included as an appendix full thematic study on "Climate Change and Agriculture Production System"]**
Nepal Agriculture and Food Security Country Investment Plan (CIP), 2010	**[Count: 8]** **[Identified as a "Main Agriculture Development and Food Security Issue and Challenge"]** "Adaptation to climate change: Nepal has recently been experiencing irregular rainfalls, frequent floods and droughts, cold waves, increased landslides, and increased prevalence…" **[Included in CIP programs 5, 6, and 9]** "Agricultural Research and Development; Promotion and Conservation of Agriculture Biodiversity; and Human Resource Development in the Agriculture and Food Sector."
Strategic Vision for Agricultural Research, 2010	**[Count: 32]** **[Selected as a central thematic area for NARC research (1 of 5)]** "Natural Resource Management and Climate Change" **[Recognised as a key challenge to Nepal's agricultural sector]** "Nepal's already struggling agriculture sector is further challenged by several emerging trends, the most prominent of which, perhaps, is climate change." "Nepal is already seeing visible effects of climate change—such as increased melting of glaciers in the Himalaya Region, the changing pattern of monsoon rains, and thick cloud cover during the winter in the Terai—which are impacting agriculture, biodiversity, and the natural resource base." **[Identified as key to reposition NARC to address modern challenges]** "NARC is being redefined as a promoter, facilitator, regulator, and implementer. Its agenda is expanding to address the emerging issues of commercialisation, globalisation, climate change, and food security." "NARC's mission is to contribute to a national campaign of increasing productivity, reducing poverty, and promoting commercialisation and competitiveness of the agriculture and natural resource sectors through the generation and promotion of technology, knowledge, and information that respond to client demands and climate change." **[Included in NARC's Seven Guiding Principles for Agricultural Research]** "Promoting adaptability to climate change."

Climate change institutions

This section of the report introduces institutions aimed directly at climate change and climate change adaptation.

The Ministry of Science, Technology and Environment (MoSTE) (previously the Ministry of Population and Environment) serves as the focal point for all climate change activities in Nepal, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. The MoSTE is also the Designated National Authority (DNA) to the

UNFCCC's Clean Development Mechanism (CDM). The Climate Change Management Division of the MoSTE (established in 2010) houses the Ministry's work on climate and represents one of three divisions in the MoSTE together with the Environment Division and the Planning, Evaluation and Administration Division. MoSTE's coordinating role is supported by a 25-member Climate Change Council (CCC) operating within parliament and headed by the Prime Minister. The CCC provides coordination and guidance for the implementation of climate-related policies and legislation in Nepal. A final consultative body, established through the NAPA framework, the Multi-stakeholder Climate Change Initiatives Coordination Committee (MCCICC) serves as a multi-stakeholder forum to support the CCC and includes representatives from national ministries, national and international non-governmental organizations (NGOs), academia and private sectors, and donors.

Nepal's Ministry of Forests and Soil Conservation (MoFS) is responsible for forest management and national parks, and serves the country's focal point agency in the UNFCCC for the United Nations Collaborative Programme on Reducing Deforestation and Forest Degradation in Developing Countries (REDD+), while the Ministry of Agriculture Development (formerly MoAC) is charged with integrating the agriculture-relevant climate policy and legislation into sector initiatives. Finally, Nepal's National Planning Commission is tasked with coordinating individual ministry programs and projects with other ministries to ensure coherence and avoid conflicting/contradictory policy and legislations.

Nepal has seen a host of environmental and climate change policies over the past 15 years, including the Nepal Environmental Policy and Action Plan (2003), the Environmental Protection Act (1996), Environmental Protection Rules (1997), the Ozone-Depleting Substance Consumption Rules (2001), the United Nations Convention to Combat Desertification (UNCCD), the United Nations Convention on Biological Diversity (UNCBD), and the National Strategy for Sustainable Development (NSSD) – Sustainable Development Agenda for Nepal (SDAN) (Wang 2011).

Internationally, Nepal signed the UNFCCC charter in 1992 and gained full membership in 1994. The Initial National Communication (INC) was completed in 2004, and the MoSTE began work on Nepal's NAPA in 2005. The NAPA was completed in September of 2010, with financial assistance from the Least Developed Countries (LDC) fund, United Nations Development Programme (UNDP), the United Kingdom Department for International Development (DFID), and the Embassy of Denmark. Occurring simultaneously to the development of Nepal's 2010 NAPA was The World Bank's Climate Investment Funds (CIF) Pilot Program for Climate Resilience (PPCR). The PPCR focuses on building climate resilience into development planning and has been piloted in 16 recipient countries, including Nepal.

Finally, during the Bonn Climate Change Conference in May of 2012, Nepal was selected to chair the LDC Coordination Group of the UNFCCC. The Coordination Group's role is to raise developing countries' concerns during UNFCCC negotiations in a more coordinated way, particularly those concerns of the 48-country LDC group. Nepal follows Gambia in holding the UNFCCC LDC chair and will formally hold the position beginning in 2013 for a period of two years. It is envisioned that Nepal will use this position to bring visibility to highly vulnerable mountain communities, to which a great percentage of the global population owe their livelihoods and their freshwater resources.

In addition, on 5–6 April 2012, Kathmandu hosted the International Conference of Mountain Countries on Climate Change, which culminated in the issuance of the Kathmandu Call for Action (KCA), a document that in ten key points calls to:

> *"Urge the development partners to support through the establishment of dedicated funding arrangements for the adaptation and mitigation programmes in mountain countries within the framework of UNFCCC and other sustainable development processes and build the resilience of communities, women and disadvantaged groups in particular, through a comprehensive and holistic approach at the local, national, regional and international levels in the spirit of enhanced global partnership."*

In response to its appointment to this new UNFCCC position and the KCA ten-point agreement, Nepal sent a 21-member delegation to the United Nations Conference on Sustainable Development (Rio+20 Earth Summit) in Rio de Janeiro, Brazil, on 20–22 June 2012. The conference came at a highly controversial time during Prime Minister Baburam Bhattarai's administration. With the CA failing to adopt a new constitution by the 27 May, a political vacuum emerged in Nepal, and the opposition parties began calling for Bhattarai's resignation given the dissolution of the CA. Some saw the Rio+ conference as a timely escape for Bhattarai to avoid the political turmoil in Kathmandu, while others commended his commitment to this important role given Nepal's emerging LDC leadership position.

Within this context, key climate change documents selected for content analysis include Nepal's UNFCCC Initial Communication, 2004; NAPA, 2010; Poverty-Environment Initiative (PEI) (Nepal 2010f); PPCR (Nepal 2010e); LAPA, 2011; National Planning Commission Climate-Resilient Planning (Nepal 2011b); and the Climate Change Policy (CCP) (Nepal 2011a).

National Adaptation Programme of Action (2010)

The National Adaptation Programme of Action (NAPA) was ratified in September 2010. It builds on Nepal's 2004 Initial National Communication to the UNFCCC (2004) and the National Capacity Self-Assessment (2008). The NAPA is defined as "a strategic tool to assess climate vulnerability, and systematically respond by developing appropriate adaptation measures" and was structured according to decision 29/CP.7 and the guidelines developed by the LDCs' Export Group (LEG). The Government of Nepal expects that any and all climate change adaptation support programmes will carefully consider the NAPA outcomes as a first step, making the NAPA a foundational document in Nepal's national adaptation planning.

The NAPA was developed by the MoSTE —Nepal's climate change focal point—with support from the Embassy of Denmark, DFID, Global Environment Facility (GEF), and UNDP-Nepal. The methodology used for its development began with the creation of six thematic working groups (TWG): Agriculture and Food Security; Forests and Biodiversity; Water Resources and Energy; Climate-Induced Disasters; Public Health; and Urban Health and Infrastructure. Following a comprehensive literature and policy review, a series of regional and national induction workshops were conducted, followed by microlevel transect appraisals, vulnerability assessments, and TWG "long lists" of prioritised adaptation options.

The project team collated the long lists in adaptation measures and systematically applied a multicriteria prioritisation analysis, leading to the prioritisation of the most urgent and immediate climate adaptation options. These urgent and immediate responses were then grouped together into nine integrated projects, four of which are immediately relevant to agriculture and rural development: (Project 1) Promoting community-based adaptation through integrated management of agriculture, water, forest, and biodiversity sectors; (Project 2) Building and enhancing adaptive capacity of vulnerable communities through improved system and access to service related to agricultural development; (Project 5) Forest and ecosystem management for supporting climate-led adaptation innovations; and (Project 7) Ecosystem management for climate adaptation. The total cost associated with the nine portfolios is estimated at USD 350 million.

"More focus has been given to providing information, knowledge, skills, and technology to the most vulnerable households living in fragile and climate-vulnerable districts across Nepal." As such, Nepal's NAPA is accompanied by two additional "pillars": the creation of a Climate Change Knowledge Management and Learning Platform and the development of a Multi-stakeholder Framework of Action on Climate Change in Nepal (leading to the development of

the MCCICC. In addition, during a May 2009 inception meeting, LAPAs were identified as necessary to inform implementation of NAPA adaptation measures. As of November 2012, LAPA preparations are underway in 17 pilot districts across Nepal.

The NAPA document indicates an implementation strategy, which places the majority of implementing responsibility on existing community-level organizations including Community Forest User Groups, Irrigation groups, and so on. This role reflects the allocation of 80% of the NAPA budget to implementation at the VDC level and below, with 10% budget allocated to district and line agency coordinators and 10% to central level coordinating groups.

Poverty-Environment Initiative (2010)

The Poverty-Environment Initiative (PEI) is a joint effort between the Government of Nepal (GoN), the Poverty-Environment Initiative of the UNDP and the United Nations Environment Programme (UNEP), and UNDP-Nepal. It was designed as a two-year program (2010–2012) aimed to support poverty reduction and inclusive development in Nepal by integrating climate and environmental concerns and opportunities of the poor into development planning and economic decision making. The key implementing partners for the PEI are the NPC and the Ministry of Federal Affairs and Local Development (MoFALD) with technical support of UNDP.

The PEI utilises two existing frameworks to deliver its capacity building mandates: the Institutional Strengthening Support to NPC for Inclusive Planning and Monitoring project led by UNDP and the Local Governance and Community Development Program (LGCDP), which has a wide scope of interventions nationwide. Integration with LGCDP indicates the PEI's emphasis on local body level environmental capacity development, given the LGCDP's emphasis on the DDC and VDC planning processes. The PEI is a USD 300,000 program ($200,000 from the UN Poverty Environment Facility and $100,000 from UNDP) with in-kind support from the GoN.

Pilot Program on Climate Resilience (2010)

The Pilot Program for Climate Resilience (PPCR) was initiated in 2010. Nepal is one of 16 'pilot' countries implementing the Strategic Program of Climate Resilience (SPCR), thus the working title of Pilot Program for Climate Resilience (PPCR), which is broadly aimed at improving the integration of climate risk and resilience into development planning, strengthening the capacities of national governments, and scaling up successful climate interventions. The SPCR is a targeted program of the Strategic Climate Fund (SCF) housed within the CIF framework and, in Nepal, is implemented by The World Bank, the International Finance Corporation (IFC), and the ADB.

The PPCR initiative focuses on five areas of intervention including: (1) Building Climate Resilience of Watersheds in Mountain Eco-Regions; (2) Building Resilience to Climate-Related Hazards; (3) Mainstreaming Climate Change Risk Management in Development; (4) Building Climate-Resilient Communities through Private Sector Participation; and (5) Enhancing Climate Resilience of Endangered Species. These activities have been prioritised based on alignment with Nepal's NAPA, the National Capacity Self-Assessment (NCSA), and CCP. The total portfolio allocated to achieving these interventions is USD 110 million, of which $60 million is in the form of credit, and $50 million grant. The loan portion of the PPCR has been a point of contention in Nepal, with detractors citing climate justice and the obligation of industrialised nations to pay outright for the required adaptations in developing nations resulting from historical industrial emissions.

The national focal point for the PPCR is the MoSTE, with coordination charged to MoSTE's newly established Climate Change Management Division.

Local Adaptation Plans of Action (2011)

During a NAPA inception workshop in May 2009, it was suggested the establishment of Local Adaptation Plans of Action (LAPAs) for the effective implementation of Nepal's NAPA. Specifically, it was envisioned that LAPAs could be used to identify local adaptation needs that match priorities under the NAPA through the integration of bottom-up approaches to mainstreaming adaptation into planning.

In November 2011, the GoN Council of Ministers approved the LAPA Framework, under the Ministry of Science, Technology and Environment and Ministry of Federal Affairs and Local Development. The framework had been developed in its current form through the DFID-funded Climate Adaptation Design and Pilot Testing (CADP-N) which incorporated intellectual and logistical support from a team of NGOs and international NGOs (INGOs), including Livelihoods Resource Centre, HTSPE Ltd., International Institute for Environment and Development (IIED), Britain-Nepal Medical Trust (BNMT), Institute for Social and Environmental Transition-Nepal (ISET-N), Local Initiative for Biodiversity Research and Development (LI-BIRD), Nepal Water for Health (NEWAH), Resource Identification and Management Society-Nepal (RIMS-N), Rupantaran Nepal (RN), and Rural Self-Reliance Development Centre (RSDC).

Following this development phase, the CADP-N informed the Nepal Climate Change Support Programme (NCCSP) framework, its successor program in Nepal, jointly supported by DFID

and the European Commission. NCCSP aims to implement the LAPA framework in 14 districts in Nepal's mid- and far-west divisions. Three of the initial piloting organizations, BNMT, LI-BIRD, and Rupantaran Nepal were chosen as implementing partners in this "start-up phase" (NCCSP-SUP) and will develop LAPAs for 70 communities.

Box 2. Local Adaptation Plans of Action - Objectives and activities

The LAPA framework will support the following activities:

- Identify the most climate-vulnerable VDC, municipalities, wards, and communities and their adaptation challenges and opportunities, including possible activities.
- Identify and prioritise adaptation actions in easy ways whereby local communities make the prioritisation decisions about their needs.
- Prepare Local Adaptation Plans of Action and integrate them into local and national plans in accordance with the Local Self-Governance Act.
- Identify and mobilise appropriate service delivery agents and necessary resources for the implementation of the Local Adaptation Plans of Action.
- Adopt and/or implement adaptation actions sequentially by the service providers in a timely and resource-efficient manner.
- Conduct monitoring and evaluation by ensuring effective implementation of the plan of action.
- Identify cost-effective adaptation alternatives for scaling-up into local and national planning.

The LAPA Framework ensures that the process of integrating climate adaptation and resilience into local and national planning is bottom-up, inclusive, responsive, and flexible—its four guiding principles.

The LAPA framework has been developed with the understanding that the VDCs (and municipalities) are capable of consolidating and channeling budgets and implementing climate adaptation activities. Its proposed institutional design thus builds on existing organizational "infrastructure" of local bodies, placing a climate change representative within the existing Alternative Energy Promotion Centre (AEPC) District Energy and Environment Units/Sections (DEEU/S).

Both NAPA and national policy have made mandatory provisions to disburse at least 80% of the available budget for the implementation of adaptation and climate change activities at the local level.

NPC Climate-Resilient Planning (2011)

The National Planning Commission (NPC) has recently created a Climate-Resilient Planning (CRP) document with the intent to improve the climate resilience of periodic development plans created by the NPC and other relevant ministries, departments, and development organizations. The document was released in July 2011, authored by two members of the NPC, following a series of consultation workshops with the ADB and UNDP. In addition to improving the climate

resilience of development plans, the initiative seeks to provide a greater understanding of climate variables at the local level so as to reduce the emerging and anticipated climate threats that face development plans and programs.

The document suggests a general screening protocol for projects and programmes. The protocol assesses each policy for its impact on relevant "subsystems" of the biophysical and socioeconomic system in table format (water, food, energy, ecosystem, land, physical [infrastructure and geography], social characteristics, knowledge, organization, networks, linkages, legal provisions). The user indicates a level of risk as High (H), Medium (M), or Low (L) for variables related to the subsystem in question (e.g., Land > erosion).

The protocol also suggests a sensitivity matrix unique to each system in question (e.g., sensitivity matrix of agriculture). The rows in the matrix represent "points of entry" (e.g., temperature, precipitation, and land use change) and the columns the anticipated impacts (e.g., glacial lake outburst floods [GLOFs], drought, flooding, erosion, and so on). At the intersection of each point of entry, the same high, medium, or low assessment is applied by the user. The ultimate aim of the wider protocol is to ensure that the proposed plan or program does not exacerbate the climate impact by inadvertently adding additional stresses to an already stressed environment.

The NPC Climate-Resilience Planning tool is not recognised as a direct output from the PPCR project, although it does acknowledge support from the ADB-PPCR representatives for support in conceptualising and shaping resilient planning, and the forward to the document is written jointly between the ADB country director and the vice chairperson of the NPC.

Climate Change Policy (2011)

The Climate Change Policy (CCP) was developed and approved by the Government of Nepal on 17 January 2011. The MoSTE is responsible for implementing, monitoring, and evaluating the policy, which envisions a country spared from the adverse impacts of climate change, by considering climate justice, through the pursuit of environmental conservation, human development, and sustainable development—all contributing toward a prosperous society. The mission of the policy is to address the adverse impacts of climate change and utilise the opportunities created from it to improve livelihoods and achieve climate-friendly physical, social, and economic development.

The policies and activities prioritised and endorsed under the CCP include the mobilisation of funds to implement programs on climate change. Under Section 8.3.1 of the policy, a Climate

Change Fund is to be established to mobilise the financial resources from public and private, internal and external sources to address the issues of climate change. Furthermore, climate change adaptation and disaster risk reduction; low-carbon development and climate resilience; capacity building, peoples' participation and empowerment; study and research; technology development, transfer, and utilisation; and, climate-friendly natural resource management are prioritised under the policy.

Climate change objectives and priorities

As was completed for the agricultural policies in this document, the key objectives and priority areas identified in each of the preceding climate change policies have been included in Table 5 below. (Note: The NPC Climate-Resilient Planning [CRP] is not addressed in this table as it is considered an output from the wider PPCR project).

Evolution of climate change objectives and priorities

The analysis of these six climate change policy/project documents yielded 33 unique 'objectives/priorities'. Each of these 33 objectives was tested for its inclusion in the list for each of the target documents. The results show that three of these objectives are common across four of the six documents, including: (1) Management of natural resources and conservation of biodiversity; (2) Capacity development; and (3) Vulnerability assessment. Table 6 below displays the objectives/priorities common to three or more of the documents under analysis. The complete table can be found in Appendix 4.

Policy interplay

To this point, the policy/project documents relevant to governing institutions, agriculture, and climate change in Nepal have been introduced; and the principal objectives and priorities indicated in those documents outlined, together with their evolution over time. What remains is to analyse the interplay between these documents and between other key policies, projects, and institutions relevant to climate change adaptation in agriculture in Nepal. To this end, the Document Analysis Protocol (DAP) (Appendix 2) contains a section entitled "Policy Context." In this section, references made to existing (or forthcoming) legislation, policies, projects, frameworks, conventions, and so on, were recorded, together with a brief description of the relationship (interplay). An example of the policy context section of the DAP (for the National Adaptation Programme of Action) can be found in Table 7.

Table 5. Climate change objectives and priorities by document

National Adaptation Programme of Action (NAPA), 2010	Climate Change Policy (CCP), 2011	Pilot Program on Climate Resilience (PPCR), 2010	Local Adaptation Plans of Action (LAPA), 2011	UNFCCC Initial Communication, 2004	Poverty-Environment Initiative (PEI), 2010
Objectives					
• Assess and prioritise climate change vulnerabilities and identify adaptation measures. • Develop proposals for priority activities. • Prepare, review and finalise the NAPA document. • Develop and maintain a knowledge management and learning platform. • Develop a multi-stakeholder framework of action on climate change.	• Establish a Climate Change Centre as an effective technical institution to address issues of climate change and also strengthen existing institutions. • Implement climate adaptation-related programmes and maximise the benefits by enhancing positive impacts and mitigating adverse impacts. • Reduce greenhouse gas (GHG) emissions by promoting the use of clean energy, such as hydro-electricity, renewable, and alternative energies, and by increasing energy efficiency and encouraging the use of green technology. • Enhance the climate adaptation and resilience capacity of local communities for optimum utilisation of natural resources and their efficient management. • Adopt a low-carbon development path	• Build climate resilience of watersheds in mountain eco-regions. • Build resilience to climate-related hazards. • Mainstream climate change risk management in development. • Build climate-resilient communities through private sector participation. • Enhance climate resilience of endangered species.	• Identify the most climate-vulnerable VDC, municipalities, wards, and communities and their adaptation challenges and opportunities, including possible activities. • Identify and prioritize adaptation actions in easy ways whereby local communities make prioritisation decisions about their needs. • Prepare Local Adaptation Plans of Action and integrate them into local and national plans in accordance with the Local Self-Governance Act. • Identify and mobilise appropriate service delivery agents and necessary resources for the implementation of the Local Adaptation Plans of Action. • Adopt and/or implement adaptation actions sequentially by the service providers in a timely and resource-efficient manner.	• Provide an overview of the circumstances that influence Nepal's capacity to respond to climate change. • Describe the GHG emissions and potential mitigation options. • Discuss developments with regard to vulnerability, impact, and adaptation. • Introduce policies and measures taken. • Discuss areas of improvement in response capacity.	• Integrate climate change into national- and local-level planning and budgeting. • Strengthen local government own-source revenue collection and sharing of natural resources-based revenues. • Improve expenditure of local government on rural infrastructure. • Improved consistency between local government and community-based natural resource management.

(continued)

Table 5. (continued)

National Adaptation Programme of Action (NAPA), 2010	Climate Change Policy (CCP), 2011	Pilot Program on Climate Resilience (PPCR), 2010	Local Adaptation Plans of Action (LAPA), 2011	UNFCCC Initial Communication, 2004	Poverty-Environment Initiative (PEI), 2010
Objectives					
	by pursuing climate-resilient socioeconomic development. • Develop capacity for identifying and quantifying present and future impacts of climate change, adapting to climate risks and adverse impacts of climate change. • Improve the living standard of people by maximum utilisation of the opportunities created from the climate change-related conventions, protocols, and agreements.		• Conduct monitoring and evaluation by ensuring effective implementation of the plan of action. • Identify cost-effective adaptation alternatives for scaling-up into local and national planning.		
Priorities					
• Promote community-based adaptation through integrated management of agriculture, water, forests, and biodiversity sectors. • Build and enhance adaptive capacity of vulnerable communities through improved system and access to service related	• Climate adaptation and disaster risk reduction. • Low-carbon development and climate resilience. • Access to financial resources and utilisation. • Capacity building, peoples' participation, and empowerment. • Study and research. • Technology development, transfer, and utilisation.	• Address the problem of too little or unreliable access to freshwater resources by communities in mountain eco-systems for drinking, irrigation, and other uses. • Address the priority risk of floods and droughts that take human lives and undermine progress on economic growth and poverty alleviation.	NO LISTED PRIORITIES (DESIGNED TO INFORM NAPA)		• Strengthen NPC's capacity to integrate pro-poor environmental measures in the national planning, budgeting, and monitoring processes. • Improve NPC's understanding and tools for integrating pro-poor environmental measures in the next periodic plan. • Review national development budgetary

(continued)

Table 5. (continued)

to agricultural development. • Community-based disaster management for facilitating climate adaptation. • GLOF monitoring and disaster risk reduction. • Forest and ecosystem management for supporting climate-led adaptation innovations. • Adapting to climate challenges in public health. • Ecosystem management for climate adaptation. • Empowering vulnerable communities through sustainable management of water resource and clean energy supply. • Promoting climate-smart urban settlement.	• Climate-friendly natural resources management.	• Facilitate the integration of climate change risk management into development planning and practices. • Address some of the key agricultural productivity constraints including (a) climate-induced stress conditions, (b) access to finance for agricultural supply chain, including farmers, (c) climate proofing of some vulnerable infrastructure, such as the hydropower sector, (d) private sector opportunities and challenges in climate-resilient housing for vulnerable communities. • Address the risks of climate variability and change on the habitats of endangered wildlife species.			process and financing mechanisms. • Incorporate the Poverty-Environment indicators in the national poverty monitoring system. • Integrate pro-poor environmental priorities into the MoFALD-, DDC-, and VDC-level planning process, financial management and rural infrastructure development practices. • Improve selected guidelines and directives of MoFALD. • Provide evidence to influence local government's investment in unsustainable rural road construction. • Train local governments at targeted districts and villages on integrating pro-poor environmental considerations in local planning and budgeting process. • Train communities, VDCs, and community organizations on integrated development planning process. • Develop incentives and measures to improve access to fiscal resources for investing in sustainable natural resource management by local governments, communities, and the private sector.

Table 6. Objectives and Priorities between climate change policy documents

	National Adaptation Programme of Action (NAPA), 2010	Climate Change Policy (CCP), 2011	Pilot Program on Climate Resilience (PPCR), 2010	Local Adaptation Plans of Action (LAPA), 2011	UNFCCC Initial Communication, 2004	Poverty-Environment Initiative (PEI), 2010	Frequency identified as Objective/ Priority
Biodiversity/natural resource management	x	x	x			x	4
Capacity development	x	x			x	x	4
Vulnerability assessment	x		x	x	x		4
Community-based adaptation	x			x		x	3
"Resilient" development		x	x*			x*#	3
Exploiting climate change opportunities		x	x	x			3
Access to finance		x	x			x	3
Climate change planning integration			x	x		x	3
Risk monitoring	x			x		x	3

* Climate proofing infrastructure.

\# Curbing unsustainable rural road development.

Table 7. Example policy context section for NAPA

Policy Title	Notes (relationship)
Nepal's Initial Communication to the UNFCCC, 2004	Pre-NAPA review
National Capacity Self-Assessment, 2007	Pre-NAPA review (UNDP Project)
Least Developed Countries	Outlines structure of the NAPA (decision 29/CP7)
Expert Group Tenth Plan, 2002	Included in introduction to NAPA thematic areas. "Agricultural growth was a major priority in tenth plan and continued in the ensuing Three-Year Interim Plan"
Three-Year Interim Plan (TYIP), 2007	Included in introduction to NAPA thematic areas. "Agricultural growth was a major priority in tenth plan and continued in the ensuing Three-Year Interim Plan"
Agricultural Perspective Plan (APP), 1995	Included in introduction to NAPA thematic areas. "Emphasised a stronger role for the private sector involvement and increased role of communities, farmers groups, and cooperatives in the management of infrastructure assets"
Local Adaptation Plans of Action (LAPA), Forthcoming	Identified during NAPA inception workshop in May 2009
Donor Compact on Climate Change, 2009	Linked to MCCICC and signed between GoN and 14 donors. "The compact commits development partners to a set of principles to guide how development partners will support the GoN in implementing a series of actions that identify and assess climate risks, elaborate, test, and implement adaptive responses and establish the basis for a climate-resilient economy, and that adaptation financing is done in a strategic manner"
Local Self-Governance Act (LSGA), 1999	"LSGA provides the local governments with the mandate to carry out various environmental and development activities"

The policy context sections for each of the 16 central documents have been compiled to produce Table 8 below. In total, 68 separate policies, programs, acts, or conventions were listed within the target document (See Appendix 5). The most frequently cited policies (> 25% coverage) include: (1) Local Self-Governance Act; (2) Three-Year Interim Plan; (3) Agriculture Perspective Plan; (4) National Agriculture Policy; (5) Interim Constitution of Nepal; (6) Millennium Development Goals; and (7) Donor Compact on Climate Change.

While this is not necessarily reflective of the current policy situation in Nepal (as there is an inherent bias towards documents written before 2009, giving more time for integration and citation to older documents), it does reflect the policy precedent in Nepal, and speaks to the foundations of key documents like the NAPA, LAPA framework, CCP, Vision for Agricultural Research, and the Three-Year Approach Paper, for example. The influence of "policy precedent" will be explored in greater detail in the discussion section below.

Table 8. Policies, programs, and legal documents most frequently cited within target documents

Policy Title	Frequency Cited (from 16 target documents)
Local Self-Governance Act (LSGA), 1999	9
Three-Year Interim Plan, 2007	8
Agriculture Perspective Plan (APP), 1995	7
National Agriculture Policy, 2004	6
Interim Constitution of Nepal, 2007	4
Millennium Development Goals (MDG)	4
Donor Compact on Climate Change, 2009	4
Constitution of the Kingdom of Nepal, 1990	3
National Adaptation Programme of Action (NAPA), 2010	3
Kyoto Protocol, 1997	3
Sustainable Development Agenda for Nepal (SDAN), 2003	3
Tenth Five-Year Plan, 2002	3
National Capacity Self-Assessment (NCSA) Project, 2007	3

Discussion

Having introduced the 16 target documents in detail, including their objectives and priorities, evolution over time, and interplay with other relevant policies, we can make a few objective claims concerning the major trends in Nepalese agricultural climate change adaptation policies.

Decentralisation

The topic of decentralisation and devolution of decision making has been ongoing over the past decades in Nepal. Not only was it a considerable driving factor for Nepal's armed conflict, but it

remains, still today, a tripping point in the adoption of a new Federal Constitution. Since the dissolution of the Parliament in 2002 (before the signing of the CPA), the Local Self-Governance Act (LSGA) (1999)—addressed in detail throughout the body of this document—has not achieved its goals of promoting decentralisation and autonomy of decision making by local bodies. In fact, the LSGA is described in the most recent NPC Three-Year Plan Approach paper in the following way:

> *"Because of the lack of technical and skilled manpower in implementing plans, various problems have been observed such as lack of quality in completed projects, ineffective project selection process, lack of institutional development of local bodies, lack of implementation of Local Self-Governance Act, and Regulations, lack of amending laws and regulations colliding with the provisions for devolution, lack of financial discipline at the local bodies, duplication in works of governmental and nongovernmental organizations." (Nepal 2010g).*

Despite these challenges, this document analysis suggests LSGA to be the most commonly cited legislation through the 16 target documents. This underlines the continued relevancy and political weight of decentralisation within Nepal's planning and policy circles.

In terms of its relevancy to climate change, Nepal's most recent community-based adaptation initiative, the LAPA framework, envisions its financial and human resource service delivery to pass through the DDC and VDC offices. The capacity of bureaucrats and elected leaders within these local bodies is thus critical for the successful integration of climate change adaptation policies into national planning frameworks and for the ultimate implementation of adaptation interventions.

A complete analysis of the trends and discourses in local governance in Nepal has been produced by Forest Action (Rai and Paudel 2011). The document looks closely at the LSGA, election manifestos (platforms) of major political parties, and concept papers produced by CA working groups for inclusion in the Federal Constitution—all for their interpretations of decentralisation. Rai and Paudel cite varying definitions of "autonomy" between the major political parties and CA working groups, and more crucially, significant ambiguities between the VDC and DDC responsibilities within the LSGA legislation:

> *"...such ambiguities in the legal provisions are also creating the problems of overlapping powers/roles of the different tiers/layers of governing units or possibility of dual exercise of governing powers. There are other more ambiguous provisions for*

the roles and power of VDC and DDC in different areas and sectors as well. The major contradictions and confusions exist in the sector of resources management, such as agriculture, water, forest, environment, irrigation, and hydropower." (Rai and Paudel 2011).

Continuity and document proliferation

The 16 target documents analysed in this report represent a total of 1839 pages of text. As discussed in previous sections, the documents prioritise approximately 60 different areas of development (28 for agriculture and 33 for climate change), over a period of 15 years. The seven documents analysed within the agricultural sector represent various temporal planning horizons (i.e., APP =Long Term; NASDP = Medium Term; TYIP/TYP = Short Term), so the plurality of objectives and priorities is to be expected.

We see that the Agricultural Perspective Plan is among the documents most highly cited in this report (approximately 50% coverage), and several of its key objectives remain central to the agricultural development planning, most notably its call for the commercialisation of agriculture. This document, produced in 1995 prior to Nepal's People's War, is intended to expire in 2014 (as does Nepal's 1989 Master Plan for the Forestry Sector). Much has changed since APP's establishment, most notably the arrival of climate change on the agricultural agenda. This evolution is most clearly visible when the APP is compared to the objectives of the most recent agricultural sector development document, NARC's Vision for Agricultural Research (see Table 9).

While the commercialisation, employment generation, and poverty alleviation objectives remain consistent between the documents, the most notably trend visible in the NARC 2030 document is the incorporation of the language "sustainable use of natural resources," "utilisation of available farm resources," "small and marginal farmers," "eco-friendly management practice," and "climate change."

The recent proliferation of climate change-related documents (only one of the seven climate change documents analysed here was produced before 2010), however, do not articulate such clear temporal horizons, yet suggest a much wider range of intervention areas. It is precisely for this reason that the LAPA initiative in Nepal is warranted to specify and articulate clear adaptation pathways within the broad objectives of climate change national planning.

Table 9. Comparison of objectives/priorities between APP and NARC Vision 2030

APP, 1995	NARC Strategy, 2010
• *Accelerate the growth rate in agriculture through increased factor productivity.* • Alleviate poverty and achieve significant improvement in the standard of living *through* accelerated growth and expanded employment opportunities. • *Transform the subsistence-based agriculture into a commercial one through diversification and widespread realisation of comparative advantage.* • Expand opportunities for an overall economic transformation by fulfilling the precondition of agricultural development. • Identify immediate, short- and long-term strategies for implementation, and provide clear guidelines for preparing periodic plans and programs in the future.	• *Increasing productivity and generating on-farm and off-farm employment for food security.* • *Commercialisation of agriculture for employment generation, poverty alleviation, and export promotion.* • **Utilisation of available farm resources for rainfed and relatively low-fertility land.** • **Sustainable use of natural resources and utilisation of degraded land (conservation agriculture).** • **Cost-effective technology, especially for small and marginal farmers.** • **Eco-friendly management practices.** • **Farming system-oriented outreach research.** • **Coping with negative effect of climate change and global warming.**

Note: *Italicised = shared objective*; **Bold = new objective**.

Areas for continued research

This document represents an entry point into the analysis of agricultural climate change adaptation in Nepal. As such, its scope is limited to an objective review of the documents themselves and does not engage stakeholders for their perceptions of the development, challenges, and implementation of the policies.

Regarding content analysis, this report has illuminated several other documents worth incorporating, including the Donor Compact on Climate Change, SDAN, and the NCSA project. The Document Analysis Protocol in Appendix 2 also highlights several additional areas of analysis beyond objectives, priorities, and policy interplay. That is, the reference sections of these target documents can be analysed for trends in the sources of information regarding climate change and agriculture used in formulating policy. Similarly, the acknowledgements, forwards, and authors sections can provide insights into the major organizations and individuals responsible for formulating the key policies, perhaps illuminating issues of national ownership and participation in the policy development process. Finally, among numerous other possibilities, the implementation, monitoring, and evaluation frameworks can be analysed for their associations with key actors, revealing the distribution of responsibilities on government agencies and highlighting shortfalls in capacity and human resources within these institutions.[4]

[4] The Document Analysis Protocol is developed for integration into NVIVO qualitative data analysis software, to facilitate the analysis of key areas of interest.

In terms of stakeholder engagement, several key areas of research are envisioned. As this project falls within CCAFS wider SIA initiative, it draws on four complementary, disciplinary lenses. The economic lens, in particular, can provide a more robust analysis of financial flows to complement this study, which addresses finance in climate change only superficially.

As referenced in the section "State of policy in Nepal," the 16 target documents resulted from semi-structured, in-depth interviews with relevant stakeholders across multiple levels of Nepal's agriculture and climate change regime. These interviews will serve as a second lens of analysis with which to assess the policy regime. That is, each of the SIA lenses will contribute to an assessment of whether the policy approach to climate change in Nepal is serving the interest of small-scale agricultural producers. It will also illuminate the ways of improving the delivery of climate change finance and services by analysing the interests and resources of relevant stakeholders, the power dynamics in policy development and implementation, and other political-ecological considerations.

Appendix 1. Informant interviews

Organization	Category
Southasia Institute of Advanced Studies (SIAS)	Federation/ Regional Body
Federation of Community Forestry Users Nepal (FECOFUN)	Federation/ Regional Body
Climate Action Network (CAN)	Federation/ Regional Body
National Association of VDCs in Nepal (NAVIN)	Federation/ Regional Body
Association of District Development Committees of Nepal (ADDCN)	Federation/ Regional Body
Federation of Nepalese Chambers of Commerce and Industry (FNCCI)	Federation/ Regional Body
Nepal Forum of Environmental Journalists (NEFEJ)	Federation/ Regional Body
GoN District Development Committee (DDC), Bhairahawa	GoN
DDC, Bhairahawa	GoN
District Livestock Services Office (DLSO), Bhairahawa	GoN
District Agriculture Development Office (DADO), Bhairahawa	GoN
VDC Secretary, Makrahar	GoN
Agricultural Inputs Company Limited (AICL)	GoN
Local Governance and Community Development Program (LGCDP), Social Mobilizer	GoN
District Administration Office, Rupandehi	GoN
Ministry of Science, Technology and Environment (MoSTE)	GoN
Ministry of Federal Affairs and Local Development (MoFALD)	GoN
Alternative Energy Promotion Centre (AEPC)	GoN
Ministry of Finance (MoF)	GoN
Climate Change Council (CCC)	GoN
Ministry of Agriculture Development (MoAD)	GoN
National Planning Commission (NPC)	GoN
Social Welfare Council (SWC)	GoN
Nepal Election Commission	GoN
Ministry of Physical Infrastructure and Transport (MoPPW)	GoN
Tribhuvan University	GoN
Department of Agriculture (DoA)	GoN
Socioeconomics and Agri-research Policy Division, Nepal Agricultural Research Council (NARC)	GoN
Agriculture Environment Unit (AEU), NARC	GoN
International Maize and Wheat Improvement Centre (CIMMYT), Butwal	Multilateral/Bilateral
Climate and Development Knowledge Network (CDKN)	Multilateral/Bilateral
UK Department for International Development (DFID)	Multilateral/Bilateral
European Union (EU)	Multilateral/Bilateral
United States Agency for International Development (USAID)	Multilateral/Bilateral
Danish International Development Agency (DANIDA)	Multilateral/Bilateral
Global Environment Facility (GEF) - Small Grants Programme	Multilateral/Bilateral
United Nations Development Programme (UNDP)	Multilateral/Bilateral
Swiss Agency for Development and Cooperation (SDC)	Multilateral/Bilateral
International Finance Corporation (IFC)	Multilateral/Bilateral
The World Bank	Multilateral/Bilateral
International Rice Research Institute (IRRI)	Multilateral/Bilateral
International Maize and Wheat Improvement Centre (CIMMYT), Kathmandu	Multilateral/Bilateral
International Development Enterprises (IDE), Butwal	NGO/INGO
World Vision	NGO/INGO

(continued)

Appendix 1. (continued)

Seto Gurans Child Development Service (SGCDS), NGO Federation	NGO/INGO
Institute for Social and Environmental Transition (ISET)	NGO/INGO
Oxfam	NGO/INGO
Practical Action	NGO/INGO
International Centre for Integrated Mountain Development (ICIMOD)	NGO/INGO
Integrated Development Society (IDS-Nepal)	NGO/INGO
World Wildlife Federation	NGO/INGO
International Development Enterprises (IDE), Kathmandu	NGO/INGO
Himalayan Climate Initiative (HCI)	NGO/INGO
Hariyo Ban Program, CARE/WWF Nepal	NGO/INGO
Winrock International	NGO/INGO
Rupantaran Nepal	NGO/INGO
Himalayan Alliance for Climate Change (HIMCCA)	NGO/INGO
Youth Initiative	NGO/INGO
Human Development and Peace Campaign (HUDEP)	NGO/INGO
Institute for Development Policy Research (IDPR)	NGO/INGO
Institute for Policy Research and Development (IPRAD)	NGO/INGO
Communist Party of Nepal (United)	Political Party
Tarai-Madhesh Loktantrik Party	Political Party
Nepali Congress (NC)	Political Party
Unified Communist Party of Nepal (Maoist)	Political Party
Nirdhan Utthan Bank Ltd., Bhairahawa	Private Sector
Pashchimanchal Grameen Bikas Rural Development Bank, Butwal	Private Sector
Agricultural Development Bank, Butwal	Private Sector
Local Agro Mart, Bhairahawa	Private Sector
ACE Development Bank Ltd.	Private Sector
Clean Energy Development Bank (CEDB)	Private Sector
The Himalayan Times	Private Sector
Himalayan Agri-Business & Research Service (Pvt) Ltd. (HARS)	Private Sector
The Communicator	Private Sector
BBC Media Action	Private Sector
Alliance for Social Mobilization - Alliance Nepal	Private Sector
NCCSP-SUP – National Climate Change Support Program – Start-up Phase	Project

Appendix 2. Document analysis protocol

Note: This document has been formatted for integration with qualitative data analysis software and Microsoft Excel. Do not alter/add sections, tables, headers, and so on.

Doc#:
DocName:
RecoderName:
Date:

1. Relevance

This section is intended to identify (quantitatively) the relevance of the document under analysis as it pertains to key concepts of the SIA Political Lens. Use "Ctrl + F" to search the document for each of the terms below and indicate the frequency (#) of occurrences within the second column. Note that a brief reading of the context surround each occurrence may be necessary for some terms so as to ensure the appropriate meaning has been captured (e.g., environment as an earth-systems characteristic as opposed to "a policy environment"). Use notes to highlight common misinterpretations of the term when relevant.

Term	Frequency	Notes
Agriculture		
Climate change		
Adaptation		
Decentralization		
Devolution		
Food security		
Environment (nature)		
Sustainability (of resources)		
Rural development		
Vulnerability		
Forest		
Livestock		
Crop(s, ing)		
We [discourse analysis]		
Them [discourse analysis]		
Autonomous		
Donor		
Other [Specify]		

2. Key data

Document name:	
Author (if listed):	
Publishing date:	
Document type: 1 = Policy 2 = White paper (policy statement) 3 = Working paper 4 = Project document 5 = Legal document	
# of Pages	
Translated by:	
Sourced from 1 = Internet 2 = Direct source (e.g., author) 3 = Key informant	

3. Summary and context

The summary and context section should highlight (1) who developed the policy, (2) the key objectives (in paragraph form), (3) who is responsible for implementing, (4) the timeline for implementation / duration of the policy, and (5) the anticipated funding structure and allocation. Apart from this basic summary, this section should contain information to place the policy within the broader policy context. This may include, for example, the reason for the development of the policy, its relationship to other policies (explored in greater detail in section 5 below), historical and other considerations. Links to key sources to help contextualize the policy can be placed in the following table. [approximately 300 words].

Context links

4. Common data capture

This section is designed to capture information that will likely be found in every document under analysis; this includes the document objectives, goals, challenges (context), priorities/objectives/ key activities envisioned (climate change, agriculture, land use change), implementation arrangements, and monitoring and evaluation schemes.

Document objectives:

Challenges (context):

Priorities/objectives/activities:

Implementation arrangements:

Monitoring and evaluation schemes:

5. Additional data capture

This section is an extension of section 4, Common Data Capture. It is designed to collect information that is likely not included in every document under analysis, including Acknowledgements, Rationale, Results Indicators, Risk Assessment, Implementation Period, Funding (source + quantity), Areas for Further Research. [copy-paste relevant info from document]. Indicate the page number in parentheses following the entry.

Acknowledgements:

Rationale:

Results indicators:

Risk assessment:

Implementation period:

Funding:

Total funding:

Areas for further research:

Definition of adaptation:

6. Policy context

This section lists the policies referenced in the document under analysis. It aims to demonstrate interplay (positive and negative) between policies. The notes section can be used to indicate a specific relationship between policies (e.g., "policy X replaced policy Y" or "X in conflict with Y") [Use Ctrl + F to search "act, policy, law, framework, clause, guidelines, mandate, program, project" or read through manually and identify policies].

Policy Title (pg #)	Notes (relationship)

7. References

This section is designed to highlight the sources of information used to inform policy. If the document under analysis has a reference list, it should be loaded into this section.

8. Actor network

This final section addresses the main actor/actor network relationships identified in the document. That is, any actors/actor groups that are key in drafting, implementing, or monitoring and evaluation.

Actor/Actor group	Relationship

Extracts related to actor network:

Appendix 3. Objectives and priorities between agricultural policy documents

	Agricultural Perspective Plan (APP), 1995	National Agricultural Plan (NAP), 2004	Three-Year Interim Plan (TYIP), 2007	Three-Year Plan (TYP), 2010	National Agriculture Sector Development Priority for the Medium Term (NASDP), 2010	Nepal Agriculture and Food Security Country Investment Plan (CIP), 2010	Strategic Vision for Agricultural Research, 2010	Frequency Identified as Objective/ Priority
Increased agricultural productivity	x	x	x	x		x	x	6
Commercialisation of agriculture	x	x	x	x		x	x	6
Improved market access	x	x	x	x	x	x		6
Protection of biodiversity/natural resources		x	x	x	x	x	x	6
Adoption of technologies	x		x	x	x		x	5
Increased employment opportunities	x		x	x			x	4
Additional/improved research			x	x		x	x	4
Poverty reduction	x			x			x	3
Achieve food security			x			x	x	3
Improved quality control			x	x		x		3
Improved nutrition			x		x	x		3
Development of rural infrastructure				x	x	x		3
Improved planning in agriculture	x					x		2
Women in agriculture			x		x			2
Institutional reform			x		x			2
Livestock development			x	x				2
Climate change				x			x	2
Extension services				x		x		2
Sustainability					x		x	2
Diversification	x							1
Expansion of irrigation	x							1

(continued)

Appendix 3. (continued)

Efficient use of fertilizer	x							1
Develop road network	x							1
Food sovereignty			x					1
Encourage organic agriculture				x				1
Cooperative farming				x				1
Managing migration of labour					x			1
Export promotion							x	1

Appendix 4. Objectives and priorities between climate change policy documents

	National Adaptation Programme of Action (NAPA), 2010	Climate Change Policy (CCP), 2011	Pilot Program on Climate Resilience (PPCR), 2010	Local Adaptation Plans of Action (LAPA), 2011	UNFCCC Initial Communication, 2004	Poverty-Environment Initiative (PEI), 2010	Frequency identified as Objective/ Priority
Biodiversity/natural resource management	x	x	x			x	**4**
Capacity development	x	x			x	x	**4**
Vulnerability assessment	x		x	x	x		**4**
Community-based adaptation	x			x		x	**3**
"Resilient" development		x	x			x	**3**
Exploiting climate change opportunities		x	x	x			**3**
Access to finance		x	x			x	**3**
Climate change planning integration			x	x		x	**3**
Risk monitoring	x			x		x	**3**
Prioritisation of measures	x			x			2
Integrated development planning	x					x	2
Agriculture	x		x				2
Water conservation	x		x				2
Improved service delivery	x			x			2
Disaster risk management	x	x					2
Clean energy	x	x					2
Impact assessment		x			x		2
Stakeholder participation		x	x				2
Private sector engagement			x			x	2
Knowledge management	x						1

(continued)

Appendix 4. (continued)

Forestry	x						1
Glacial lake outburst flooding	x						1
Public health	x						1
Ecosystem management	x						1
Climate-smart urban settlement	x						1
Institutional development		x					1
Green technologies		x					1
Research		x					1
Protection of endangered species			x				1
Flood management			x				1
Drought relief			x				1
Climate variability			x				1
Scale-up measures				x			1

Appendix 5. Policies listed within 16 target documents

Policy title	Frequency cited (from 16 target documents)
Local Self-Governance Act (LSGA), 1999	9
Three-Year Interim Plan, 2007	8
Agricultural Perspective Plan (APP), 1995	7
National Agricultural Policy, 2004	6
Interim Constitution of Nepal, 2007	4
Millennium Development Goals (MDG), 1999	4
Donor Compact on Climate Change, 2009	4
Constitution of the Kingdom of Nepal, 1990	3
National Adaptation Programme of Action (NAPA), 2010	3
Kyoto Protocol, 1997	3
Sustainable Development Agenda for Nepal (SDAN), 2003	3
Tenth Five-Year Plan, 2002	3
National Capacity Self-Assessment (NCSA) Project, 2007	3
Agriculture Biodiversity Policy, 2006	2
Medium-Term Expenditure Framework (MTEF), 2007	2
Three-Year Plan Approach Paper, 2010	2
Climate Change Policy, 2011	2
National Irrigation Policy, 2003	2
National Fertilizer Policy, 2002	2
Local Infrastructure Development Policy, 2004	2
Environmental Impact Assessment (EIA) Guidelines, 1993	2
Master Plan for the Forestry Sector, 1989	2
National Water Plan, 2005	2
Poverty Reduction Strategy Paper (PRSP), 2007	2
Nepal's Initial Communication to UNFCCC, 2004	2
Local Adaptation Plans of Action (LAPA) Framework, 2011	2
Nepal Agriculture Extension Strategy, 2006	1
Animal Health and Livestock Services Act, 1999	1
Animal Slaughterhouse and Meat Inspection Act, 1999	1
Nepal Biodiversity Strategy, 2002	1
Animal Breeding Policy, 2003	1
Poultry Policy	1
Comprehensive Peace Accord (CPA), 2006	1
Immediate Action Plan (Yearly)	1
Environment Conservation Act (1997)	1
Environment Conservation Regulations (1998)	1
Plants Diversity Protection Rights Act	1
Targeted District Priority Production Program	1
United Nations Convention to Combat Desertification (UNCCD), 1994	1
Support for climate change adaptation in Nepal - design and piloting phase (CADP-N), 2007	1
Revised Forest Policy, 2001	1

(continued)

Appendix 5. (continued)

National Biodiversity Strategy, 2002	1
Water Sector Strategy, 2002	1
Private Sector Development Policy, 2002	1
Tea and Coffee Development Policy, 2000	1
Nepal Trade Integration Strategy (NTIS), 2010	1
Special Area Development Programme for Poverty Alleviation (SPPA)	1
Common Country Assessment (CCA), 2006	1
National Agriculture Sector Development Priority (NASDP), 2010	1
National Seed Policy, 2000	1
Agri-business Promotion Policy, 2006	1
NARC's Strategic Vision for Agricultural Research, 2010	1
National Action Plan for Disaster Management, 1996	1
Local Governance and Community Development Programme, 2008	1
GoN Foreign Aid Policy, 2008	1
Governance Management and Operation Action, 2008	1
Nepal's Second Communication to UNFCCC, 2009	1
Kala Patthar Declaration, 2011	1
Village Development Committee Act, 1991	1
District Development Committee Act, 1991	1
Decentralization Act, 1982	1
Environment Protection Act (EPA), 1996	1
Environment Protection Rules (EPR), 1997	1
Nepal Environmental Policy and Action Plan (NEPAP), 1993	1
Ozone-Depleting Substance Consumption (Control) Rules, 2001	1
Soil Conservation and Watershed Management Act, 1982	1

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