



NATIONAL CLIMATE CHANGE ACTION PLAN

EXECUTIVE SUMMARY

Climate Change Commission, Office of the President, Malacañang, Metro Manila

August 19, 2011

Climate Change Commission

Since climate change is a cross-sectoral issue, and there is a need for convergence among government agencies in responding to the impacts of climate change, an institutional mechanism was established.

The Climate Change Commission (CCC) was created by virtue of Republic Act No. 9729 or the Climate Change Act of 2009. It is the lead policy making body of government which shall be tasked to coordinate, monitor and evaluate its programs and action plans as regards to climate change.

The Commission is headed by President Benigno Simeon C. Aquino III. Joining him in the Commission are three commissioners who have a fixed term of six years. They are Secretary Mary Ann Lucille L. Sering, appointed as vice chairperson of the Commission and the Executive Director of the Climate Change Office; Commissioners Heherson T. Alvarez, and Naderev M. Sano.

A total of 23 government agencies, local government units (LGUs) and representatives from the academe, business sector, and non-government organizations (NGOs) compose the body's advisory board to ensure accountability.

Its powers and functions include the formulation of a strategic framework on Climate Change to serve as basis for a program for climate change planning, research and development, information and knowledge management, and monitoring of activities on climate change.

The Commission also recommends legislation, policies, strategies, programs on and appropriations for climate change adaptation and mitigation and other related activities. It also recommends key development investments in climate-sensitive sectors to ensure the achievement of national sustainable development goals.

The Commission is mandated to formulate the official National Framework Strategy on Climate Change (NFSCC) and the National Climate Change Action Plan (NCCAP). The NFSCC was signed last April 28, 2010 at Puerto Princesa, Palawan. Under Section 13 of the Republic Act 9729, the Commission is expected to develop the NCCAP on or before April 28, 2011.

National Framework Strategy on Climate

As mandated by RA 9729, the Commission, together with a select group from government and non-government agencies and the academe crafted the National Framework Strategy on Climate Change (NFSCC).

The Framework is the Country's roadmap in creating a climate risk-resilient Philippines, with the general goal of building the Country's adaptive capacity and increasing the resilience of natural ecosystems to climate change, and optimizing mitigation opportunities.

The NFSCC was formulated within the context of the country's sustainable development goals and governance/institutional factors that affect the country's ability to respond to climate change.

The changing climate conditions will have a myriad of impacts and underscore the vulnerabilities in all sectors of society and the economy. Addressing climate change moves beyond the environmental challenges and will have to be closely linked with economic targets and social sustainability.

This will serve as the basis for a program for climate change planning, research and development, extension, and monitoring of activities to protect vulnerable communities from the adverse effects of climate change. In addition, the NFSCC was formulated based on climate change vulnerabilities, specific adaptation needs, and mitigation potential, and in accordance with the international agreements.

National Climate Change Action

Within one year from the approval of the National Strategic Framework on Climate Change, the Commission is tasked to formulate the National Climate Change Action Plan (NCCAP).

The NCCAP is developed to address a realistically achievable country-driven program of action for integrated climate change adaptation and mitigation.

Under the NCCAP, priority programs and activities will also be developed to address the urgent and immediate needs and concerns of the Philippines relating to the adverse effects of climate change.

Seven (7) strategic priorities were identified to address the impacts of global warming to the country. The 7 priorities are:

- Food Security
- Water Sufficiency
- Environmental and Ecological Stability
- Human Security

- Sustainable Energy
- Climate-Smart Industries and Services
- Knowledge and Capacity Development

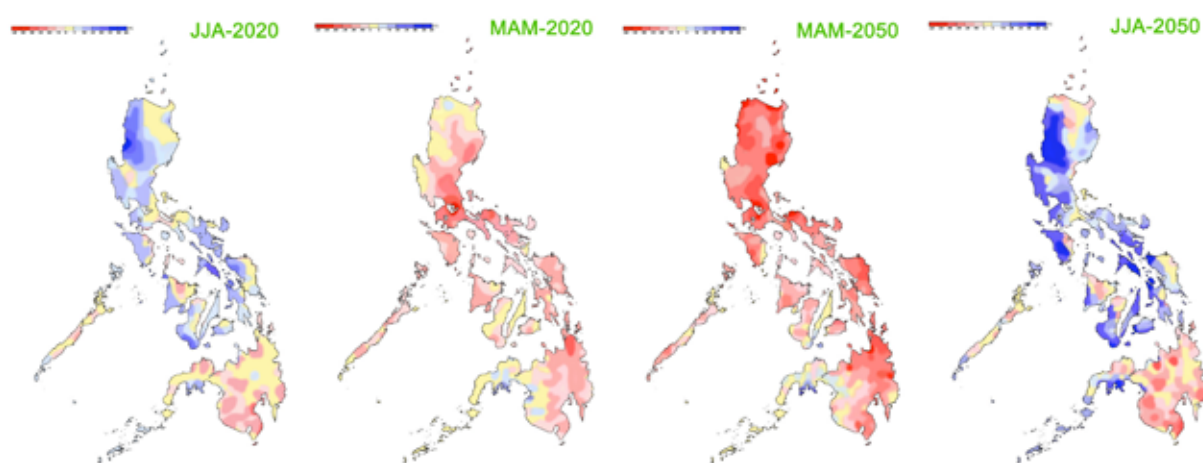
The NCCAP also recognizes that certain activities cut across strategic priorities. These include: Gender and development, Technology transfer, Research and development, Information, education and communication, and Capacity building. These should be integrated in all strategic priorities.

The means of implementation to the strategic priorities are: Financing, Valuation of natural resources, Multi-stakeholder partnership, and Capacity Building.

From the approval of the NCCAP, the Commission is mandated by law to provide assistance to local governments for the formulation of their respective local climate change action plan.

Briefing Paper

Current climate trends show that the Philippines, like the rest of the world, has exhibited increasing temperatures, with observed mean temperature increase of 0.57 °C or an average of 0.01 °C per year-increase from 1971-2000. The climate projections done by the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) for 2020 and 2050 indicate that all areas of the Philippines will get warmer, with largest increase in temperatures in the summer months of March, April and May (MAM). A reduction in rainfall in most parts of the country will also be expected during MAM season.



The Philippines, being archipelagic and because of its location, is one of the most vulnerable to the impacts of climate change. The country ranked highest in the world in terms of vulnerability to tropical cyclone occurrence and third in terms of people exposed to such seasonal events. A recent Climate Change Vulnerability Index (CCVI)¹, released by the global risks advisory firm Maplecroft, ranked 16 countries out of 170 as extremely vulnerable to climate change. Of the 16, the Philippines is ranked sixth (Maplecroft 2010).

For this reason, the Philippines formulated its framework strategies and actions towards adaptation and mitigation. Being an insignificant emitter of greenhouse gases, the country puts greater emphasis on adaptation as necessary to complement measures that reduce greenhouse gas emissions. It is a mechanism to manage risks, adjust economic activity to reduce vulnerability and to improve business certainty.

¹ The Climate Change Vulnerability Index is a global ranking instrument, calculating the vulnerability of 170 countries to the impacts of climate change over the next 30 years. CCVI evaluated 42 social, economic and environmental factors to assess national vulnerabilities. These included: exposure to climate-related natural disasters and sea-level rise; human sensitivity, in terms of population patterns, development, natural resources, agricultural dependency and conflicts; and assessment of future vulnerability by considering the adaptive capacity of a country's government and infrastructure to combat climate change (Maplecroft 2010).

THE CLIMATE CHANGE COMMISSION RECOMMENDS THE:

- Adoption of a clear policy on public financing by prioritizing adaptation and provision a policy environment to encourage private sector investments;
- Creation of a climate finance group that will rationalize all funding sources for climate change and disaster risks for the national and local levels;
- Adoption of a national plan on Climate Change that will hasten financing for the local government and local communities;
- Adoption of an ecosystem-based management approach in key biodiversity areas that promotes sustainable practices;
- Alignment of the National Greening Program of the President with the national plan for climate change.

For the next five years, the NCCAP proposes the following:

- Vulnerability Assessments
- Demonstration sites for Eco-towns
- Research and Development on components to support Renewable Energy and Sustainable Transport Systems

NCCAP SEVEN STRATEGIC PRIORITIES

The NCCAP outlines the agenda for adaptation and mitigation for 2011 to 2028. Consistent with the Framework, the ultimate goal is *to build the adaptive capacities of women and men in their communities, increase the resilience of vulnerable sectors and natural ecosystems to climate change, and optimize mitigation opportunities towards gender-responsive and rights-based sustainable development*. Within the two long-term objectives of adaptation and mitigation, NCCAP will pursue seven strategic priorities:

1. Food Security
2. Water sufficiency
3. Ecosystems and Environmental Stability
4. Human Security
5. Climate-smart Industries and Services
6. Sustainable Energy
7. Knowledge and Capacity Development

NCCAP Strategic Priorities

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1. Food Security

- Enhanced CC resilience of agriculture and fisheries production and distribution systems
- Enhanced resilience of agricultural and fishing communities from climate change

2. Water sufficiency

- Water governance restructured towards integrated water resources management in watersheds and river basins
- Sustainability of supplies and access to safe water ensured
- Knowledge and capacity for CC adaptation in the water sector enhanced.

3. Ecosystems and Environmental Stability

- Ecosystems protected, rehabilitated and ecological services restored.

4. Human Security

- CCA and DRR practiced by all sectors at the national and local levels
- Health and social sector delivery systems are responsive to climate change
- CC- adaptive human settlements and services developed, promoted and adopted

5. Climate-smart Industries and Services

- Climate-smart industries and services promoted, developed and sustained
- Sustainable livelihood and jobs created from climate-smart industries and services
- Green cities and municipalities developed, promoted and sustained.

6. Sustainable Energy

- Nationwide energy efficiency and conservation promoted and implemented
- Sustainable energy development enhanced
- Environmentally sustainable transport promoted and adopted
- Energy systems and infrastructures climate-proofed, rehabilitated and improved

7. Knowledge and Capacity Development

- Knowledge on the science of climate change enhanced
- Capacity for CC adaptation and mitigation at the national and local level enhanced
- CC knowledge management established and accessible to all sectors at the national and local levels

NATIONAL CLIMATE CHANGE ACTION PLAN

ULTIMATE OUTCOMES		1.0 Enhanced adaptive capacity of communities, resilience of natural ecosystems, and sustainability of built environment to climate change.				2.0 Successful transition towards climate-smart development.	
STRATEGIC PRIORITIES	100 Food Security	200 Water Sufficiency	300 Ecosystem and Environmental Stability	400 Human Security	500 Climate-smart Industries and Services	600 Sustainable Energy	700 CC Knowledge and Capacity Development
INTERMEDIATE OUTCOMES	Availability, stability, accessibility, affordability, safe and healthy food ensured amidst climate change.	Water resources sustainably managed and equitable access ensured.	Enhanced resilience and stability of natural systems and communities.	Reduced risks of the population from climate change and disasters.	Climate-resilient, eco-efficient and environment-friendly industries and services developed, promoted and sustained.	Sustainable renewable energy and ecologically efficient technologies adopted as major components of sustainable development.	Enhanced knowledge on and capacity to address climate change.
IMMEDIATE OUTCOMES	1000.1 Enhanced CC resilience of agriculture and fisheries production and distribution systems.	2000.1 Water governance restructured towards integrated water resources management in watersheds and river basins.	3000.1 Ecosystems protected, rehabilitated and ecological services restored.	4000.1 CCA and DRR practiced by all sectors at the national and local levels.	5000.1 Climate-smart industries and services promoted, developed and sustained.	6000.1 Nationwide energy efficiency and conservation promoted and implemented.	7000.1 Knowledge on the science of climate change enhanced.
	1000.2 Enhanced resilience of agricultural and fishing communities from climate change.	2000.2 Sustainability of supplies and access to safe water ensured.		4000.2 Health and social sector delivery systems are responsive to climate change.	5000.2 Sustainable livelihood and jobs created from climate-smart industries and services	6000.2 Sustainable renewable energy development enhanced.	7000.2 Capacity for CC adaptation and mitigation at the national and local level enhanced.
		2000.3 Knowledge and capacity for CC adaptation in the water sector enhanced.		4000.3 CC-adaptive human settlements and services developed, promoted and adopted	5000.3 Green cities and municipalities developed, promoted and sustained.	6000.3 Environmentally sustainable transport promoted and adopted.	7000.3 CC knowledge management established and accessible to all sectors at the national and local levels.
						6000.4 Energy systems/infrastructures climate-proofed, rehabilitated/improved.	

NATIONAL CLIMATE CHANGE ACTION PLAN

1. Strategic Actions on Food Security for 2011 to 2028

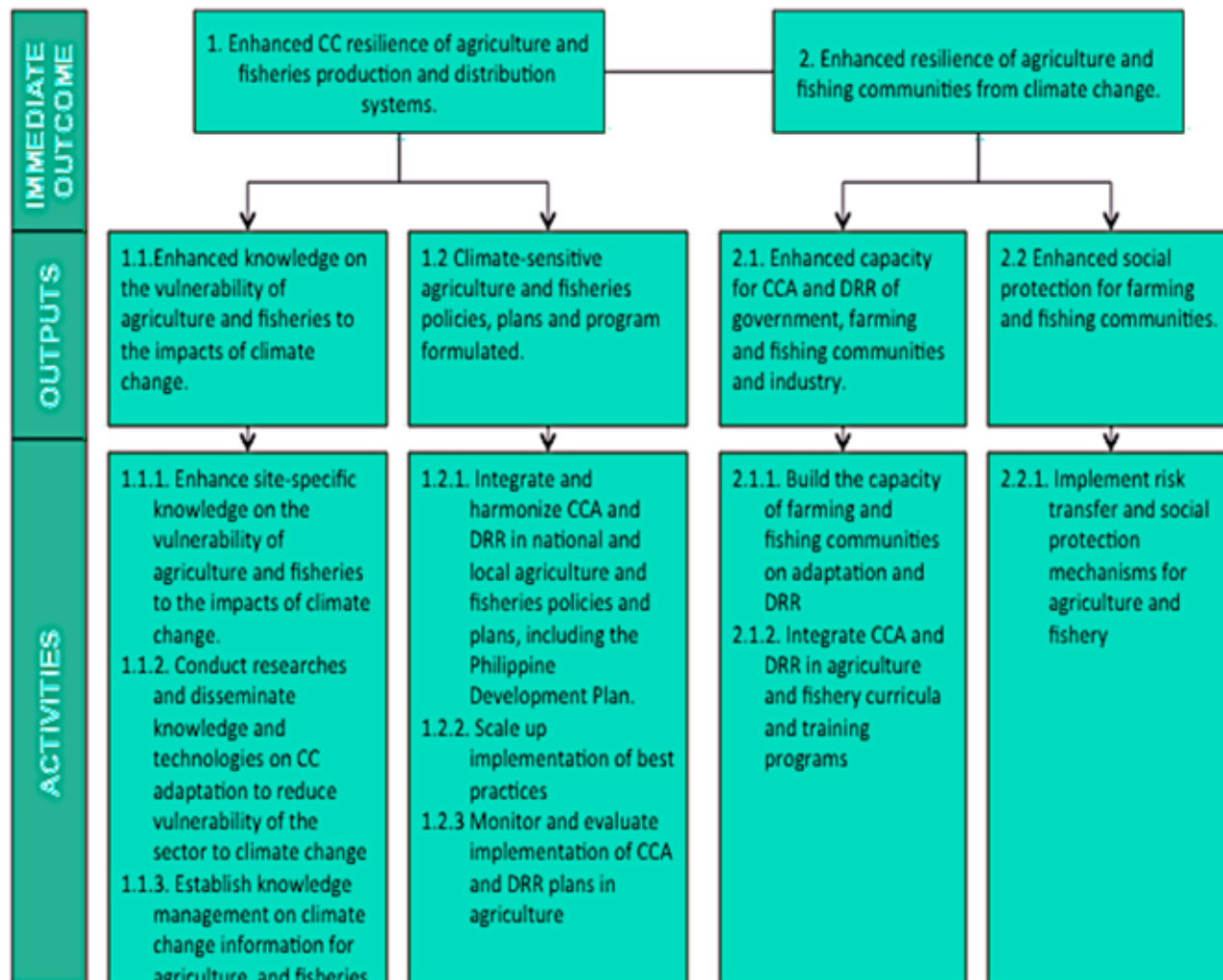
Agriculture remains the country’s backbone for the sustainable attainment of food security with an average of 16.82 million metric tons of rice, 6.92 million metric tons of corn, 57.75 million metric tons of other crops, and 4.04 thousand metric tons of livestock and poultry. It employs about one-third of the total employment in the sector, and contributes about 18% to the country’s GDP.

This sector is greatly vulnerable to climate change especially due to the increase occurrences of El Nino Southern Oscillation (ENSO) and La Nina events, bringing drought and extreme rainfalls respectively. Agriculture, being strongly dependent on water resources and climatic conditions, and crop production, being extremely sensitive to large year-to-year weather fluctuations, will greatly affect the country’s production and have a domino effect of our target to self sufficiency by 2013.

The national strategic priority on food security is to *ensure availability, stability, accessibility, and affordability of safe and healthy food amidst climate change*. It will focus on two immediate outcomes:

1. Enhanced CC resilience of agriculture and fisheries production and distribution systems;
2. Enhanced resilience of agriculture and fishing communities in the midst of climate change.

To achieve these planned outcomes, summarized below are the planned outputs and major activities for 2011 to 2028. To date, there are on-going efforts to provide timely information to farmers on climate so that adjustments in the cropping can be done to avoid losses. In the fisheries sector, coastal area management is vigorously pursued. To support on-going activities, what needs to be done are:



2. Strategic Actions on Water Security for 2011 to 2028

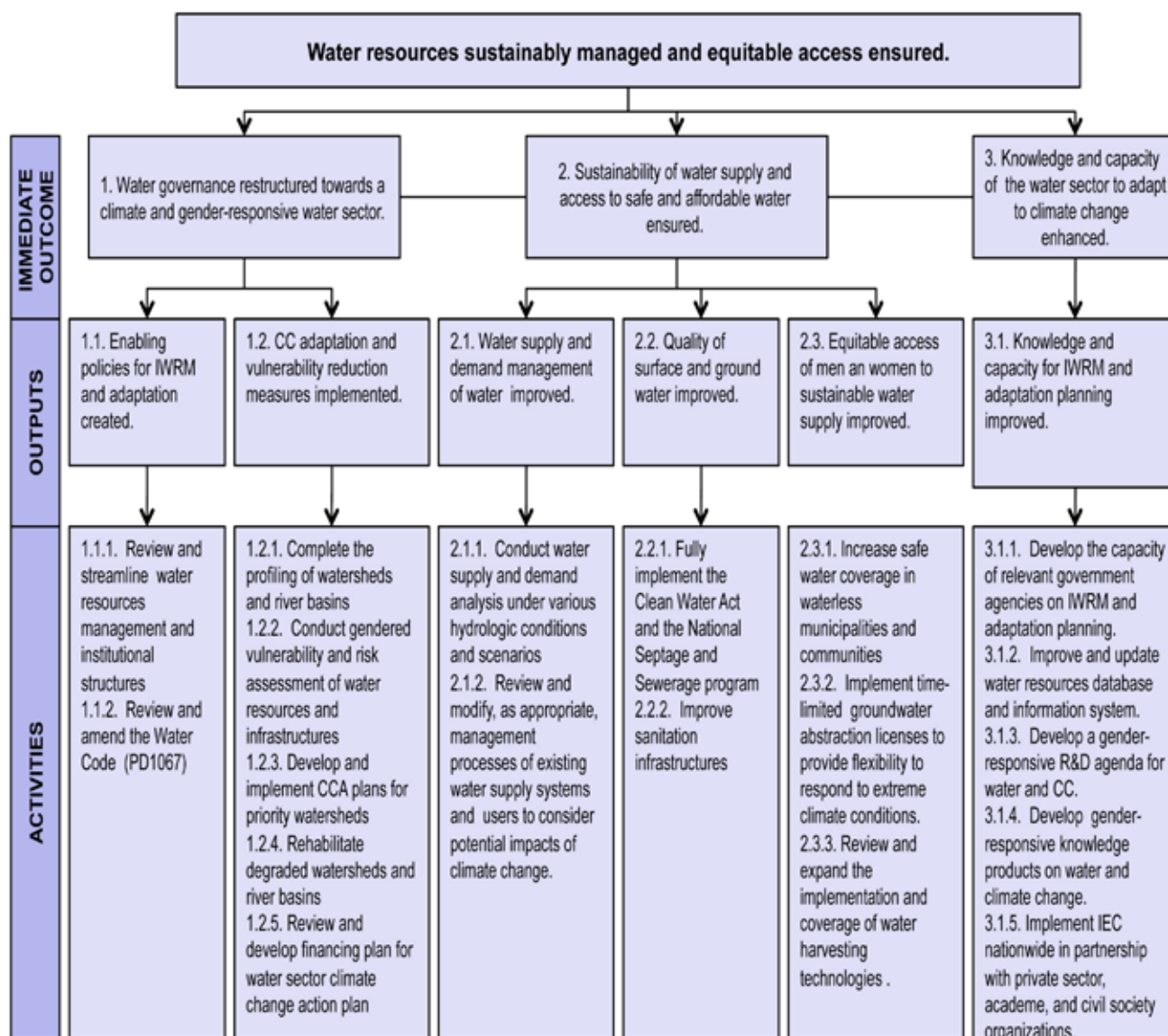
The Philippines, given its geography and location, has abundant freshwater resources obtained from three sources: rainfall, surface water and groundwater. Theoretically, the Philippines should have sufficient water supply. However, due to geographic and seasonal variations, water availability has become time and site-specific. Only about 81.4 percent of the population has access to safe drinking water in 2008, equivalent to almost one out of five (or 15.73 million) without access to safe water. These demand put significant pressure on this finite resources, making its sustainable management critically important.

Climate change will likely exacerbate the country's water problems. It will likely intensify and accelerate the dynamics of the hydrological variability and scarcity, thereby, increasing the complexity of managing water resources. Climate projections in the Philippines of wetter climates during the wet season and drier climate during the dry season by 2020 and 2050 would most certainly impact on domestic water supply, irrigation, hydro power generation, recharge of aquifers, water quality, watersheds and fishery.

Currently, water management is lodged in over 30 government offices, which results to fragmented sector planning and monitoring in the absence of a national government agency responsible for translating policies and strategies into a comprehensive water-climate change program.

To address the issues and needs, the NCCAP will focus on the following immediate outcomes and outputs for 2011 to 2028:

1. Water governance restructured to improve management of water resources;
2. Sustainability of water supplies and equitable access to safe and affordable water ensured;
3. Knowledge and capacity on water sector adaptation enhanced.

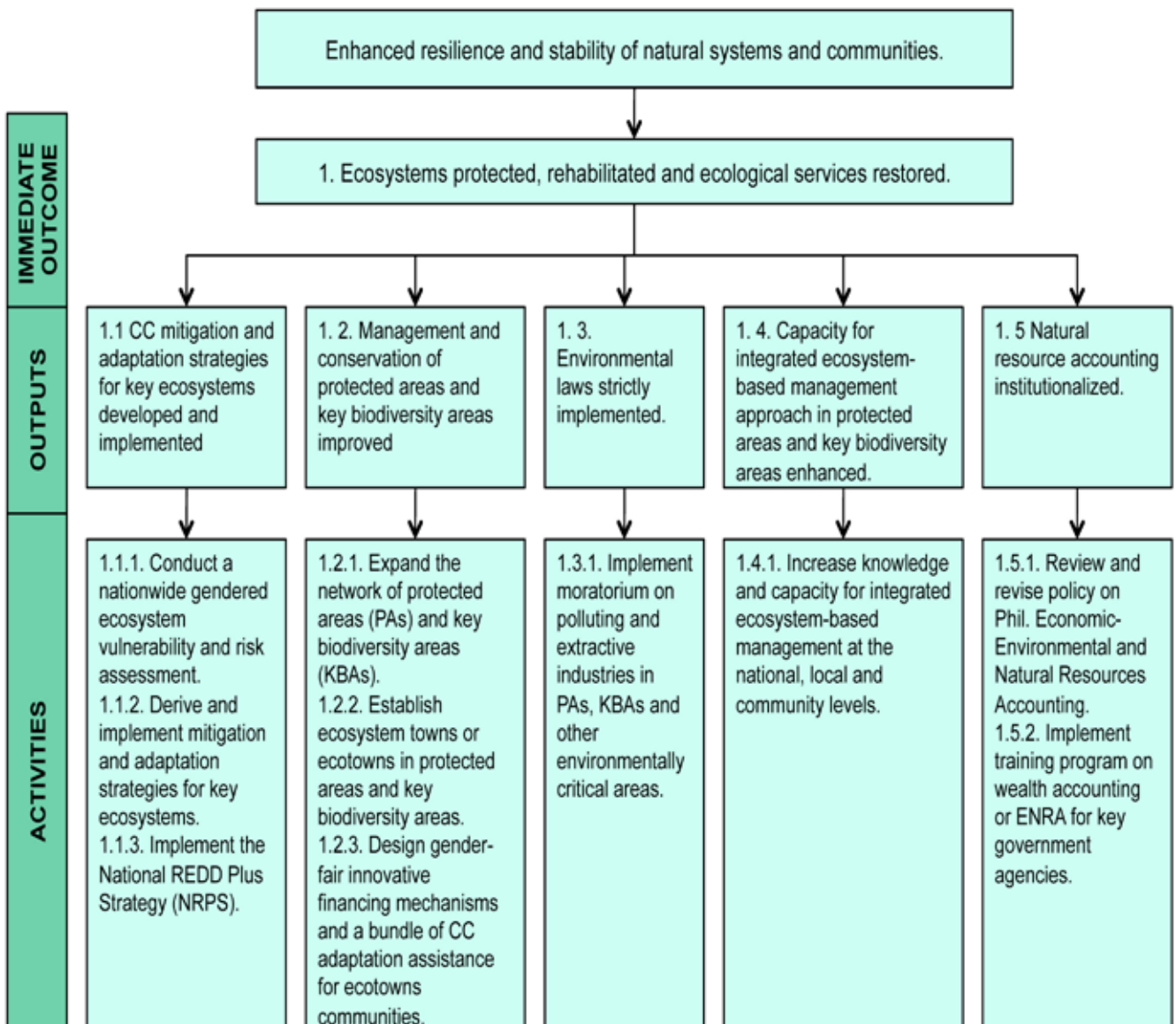


3. Strategic Actions on Ecosystem Resilience and Environmental Stability for 2011 to 2028

Almost all of the country’s ecosystems have been significantly transformed or degraded. Philippine ecosystems have changed more rapidly, through large-scale conversion of forests and grasslands into cropland, settlements and mining areas, diversion and storage of freshwater behind dams, pollution of rivers and lakes from domestic and industrial effluents, and the loss of mangrove and coral reef areas. Only about 6-8% of the country’s primary forest remains due to massive logging; only 5% of the country’s coral reefs have 75-100% live coral cover. According to the IUCN, 21% of the Philippines vertebrates and over half of the known plant species are already threatened (Posa, et al 2008).

With climate change, we expect additional adverse impacts to ecosystems. The NCCAP’s strategic priority on ecosystem and environmental stability during the plan period is focused on achieving one immediate outcome: the protection and rehabilitation of critical ecosystems, and the restoration of ecological services. Five outputs are expected to be achieved:

1. CC mitigation and adaptation strategies for key ecosystems developed and implemented;
2. Management and conservation of protected areas and key biodiversity areas improved;
3. Environmental laws strictly implemented;
4. Capacity for integrated ecosystem-based management approach in protected areas and key biodiversity areas enhanced;
5. Natural resource accounting institutionalized.



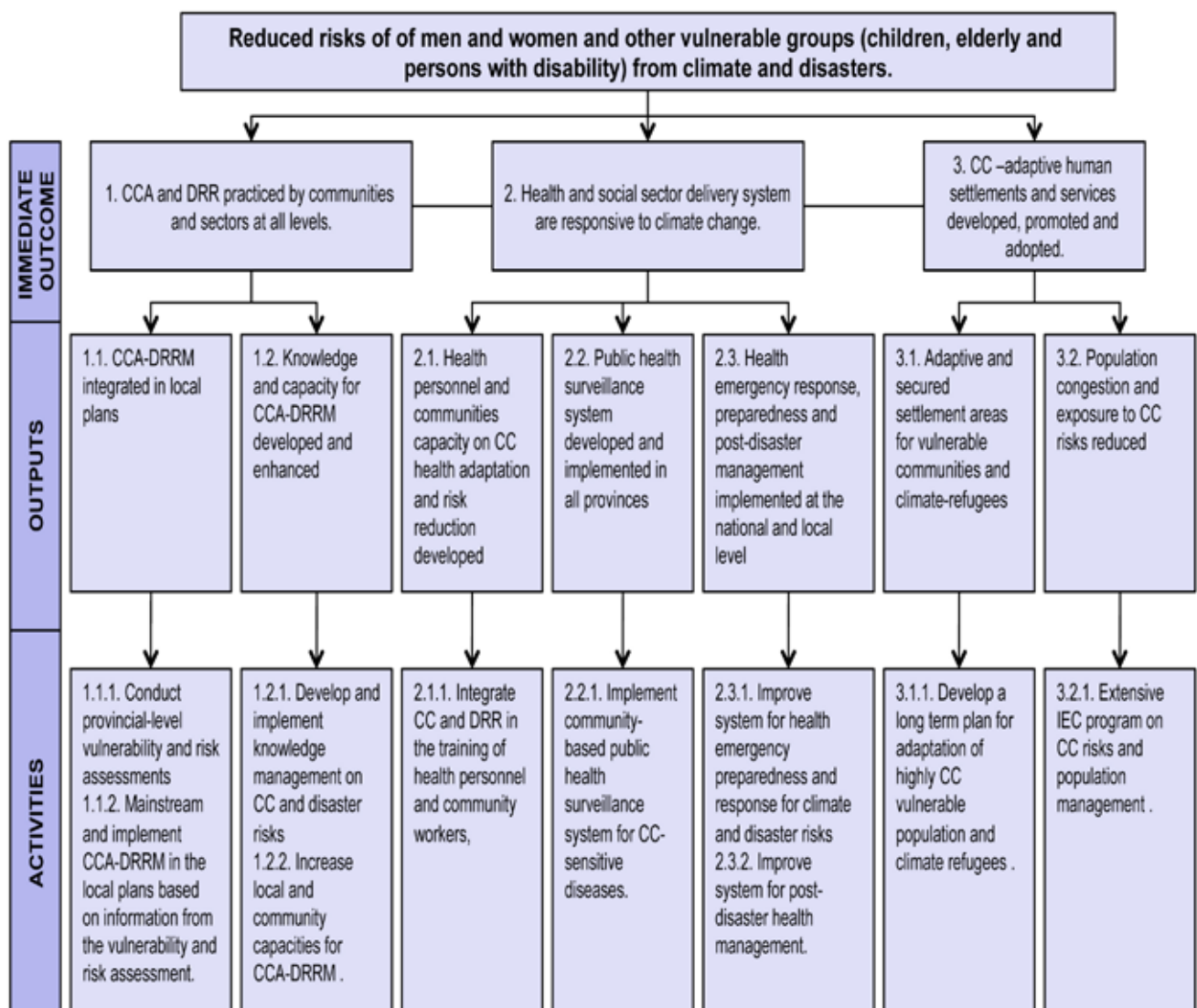
4. Strategic Actions on Human Security for 2011 to 2028

The Philippine Development Plan defines human security as the state where the rights of the Filipino family and individuals, especially the poor and vulnerable, are protected and promoted through access to education, health housing and social protection, while ensuring environmental sustainability. The notion of human security amidst climate change risks considers a state of condition where individuals and communities have the options necessary to end, mitigate or adapt to threats to their human, environmental and social rights; have the capacity and freedom to exercise these options, and actively participate in pursuing these options (O'Brien, et al. 2008).

The climate change adaptation should be a complementary action to disaster risk management to reduce the risks and impacts of additional hazards brought by extreme climate events, as well as the creeping long term effects of sea level rise, rising temperatures, and changes in the pattern of precipitation.

The Human Security agenda of the NCCAP provides key strategic actions that give importance to coordinated efforts on disaster risk reduction and climate change adaptation to minimize the threats to human security. The objective of the human security agenda is to reduce the risks of women and men to climate change and disasters. There are three immediate outcomes expected with the associated output and activities, as summarized below:

1. Climate change adaptation and disaster risk reduction practiced by communities and sectors at all local levels;
2. Health and social protection delivery systems are responsive to climate change risks; and
3. CC-adaptive human settlements and services are developed, promoted and adopted.



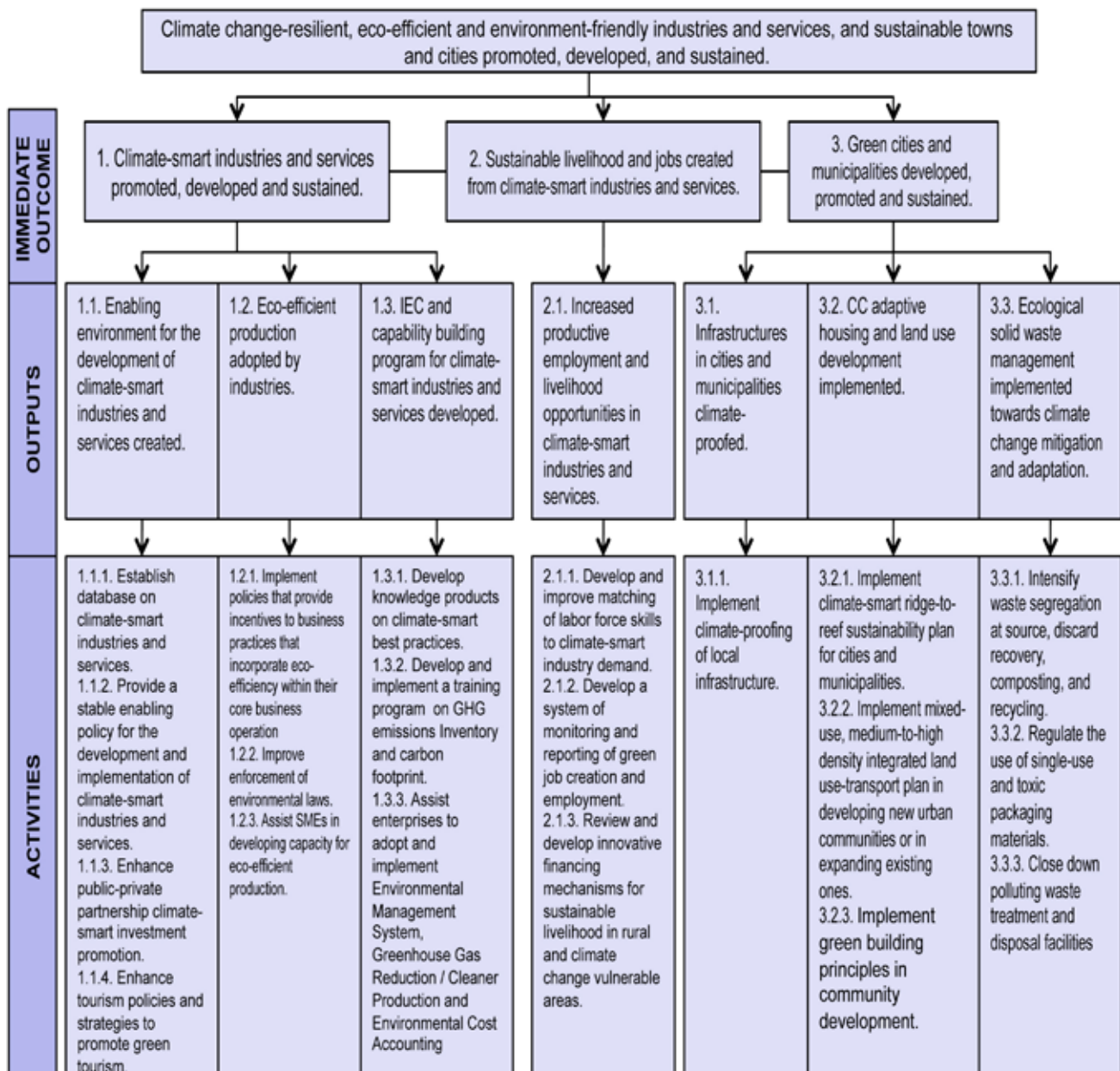
5. Strategic Actions on Climate Smart Industries and Services for 2011 to 2028

Despite the fact the Philippines is not a significant emitter of greenhouse gases globally, it recognizes that green growth is a relevant approach to sustainable economic growth for the country to reduce poverty, achieve social progress, protect the environment and diminishing natural resources, and adapt and mitigate the impacts of changing climates.

For the NCCAP, the long-term goal is to sustainably transition towards green growth by developing climate-smart industries and services. Priorities will focus on promoting climate-smart industries in partnership with the private sector, creating green jobs and sustainable livelihoods especially in the rural areas and the most vulnerable men and women in these communities, and promoting climate-resilient and sustainable cities and municipalities.

In the next 17 years (2011 to 2028), these strategic priorities are expected to result in the following:

1. Creation of policies and stable policy environment for the development of climate-smart industries and services;
2. Adoption of eco-efficient production;
3. Development of capacity building programs and knowledge for promoting climate-smart industries and services;
4. Development of productive employment and livelihoods from these industries;
5. Climate-proofing of infrastructures in eco-towns;
6. Development of CC-adaptive housing and land use; and
7. Full implementation of ecological waste management.



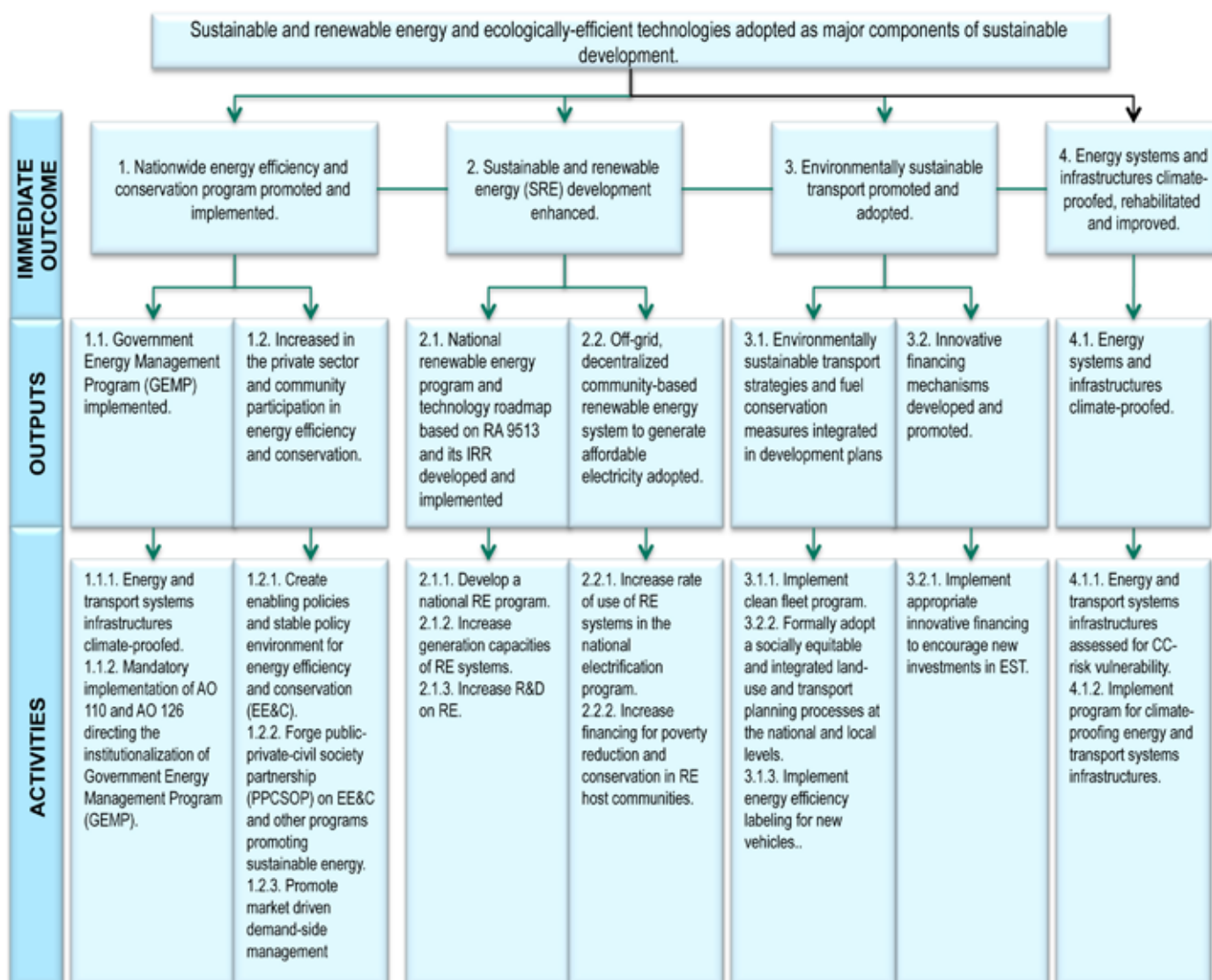
6. Strategic Actions on Sustainable Energy for 2011 to 2028

The Philippines is facing a formidable challenge of developing sustainable clean energy options to support the requirements of economic and social development with minimal adverse effects on the environment. While energy demand has gone down at an average of 0.03 percent annually from 1999 to 2009, the country continues to rely on importation to meet energy demand. In 2009, 41% of the total primary energy supply (TPES) comes from imported oil, coal and ethanol (Figure 9). On the average, the country imports over 300,000 barrels per day of crude oil and petroleum products and more than three quarters of its coal consumption (Department of Energy 2010). The country's total energy self-sufficiency, however, has been increasing from 48% in 2001 to 59% in 2009 due to the increase in renewable energy production.

Economic growth and rapid urbanization have led to twin energy challenges in the country: environmental sustainability and energy security. The energy sector is a major source of greenhouse gas emissions in the country, whereas the transport and electricity generation are the biggest GHG emitters.

The energy sector is also affected by the impacts of climate change. This sector has to respond to significant changes in demand due to fluctuations in temperature and weather condition and ensure that energy systems are able to adapt to the impacts of climate change. To address climate change issues for the sector, the NCCAP priorities the following:

1. Promotion of energy efficiency and conservation;
2. Expansion in the development of sustainable and renewable energy;
3. Promotion of environmentally sustainable transport; and
4. Climate-proofing and rehabilitation of energy systems infrastructures.



7. Strategic Actions on Capacity Development for 2011 to 2028

Climate change is a complex issue and in order to effectively address the issue, it is important to have enough knowledge about the holistic understanding of its causes and impacts especially at the local and sectoral levels.

The priorities of the NCCAP on knowledge and capacity development are: (1) to enhance knowledge on the science of climate change; (2) to enhance capacity for CC adaptation, mitigation and disaster risk reduction at the local and community levels; and (3) to establish gender-responsive CC knowledge management accessible to all sectors at the national and local levels.

