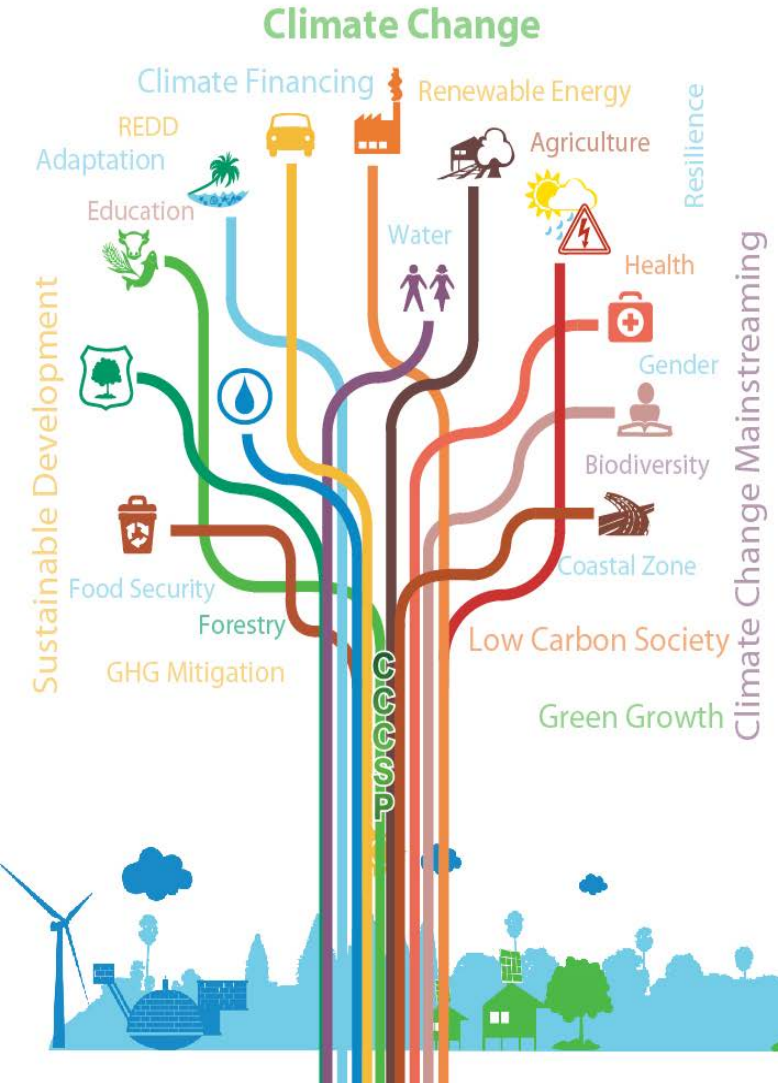
3rd National Forum on Climate Change

5 – 7 November 2013, Cambodia

"Taking Action for Sustainable Development in the Changing Climate"



Climate Change Response in Water Resources and Meteorology

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CAMBODIA CLIMATE CHANGE ALLIANCE

Implemented by: Ministry of Environment

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1-The Rationale for Climate Change Planning

Climate risk: means a risk resulting from climate change and affecting natural and human systems and regions.

-Changing of Climate mainly continue increasing of temperature and rainfall intensity cause to frequently occur extreme events such as storm, flood,

drought…

-Severe weather phenomena gradually increase year by year.

1-The Rationale for Climate Change Planning

The impact of climate change will be an unprecedented and increasing global threat to life, livelihoods and life-supporting system:Warmer temperatures increase the rate of evaporation of water into the atmosphere, in effect increasing the atmosphere's capacity to "hold" water. Increased evaporation may dry out some areas and fall as excess precipitation on other areas.

-As temperatures rise, people and animals need more water to maintain their health and thrive. Many important economic activities, like producing energy at power plants, raising livestock, and growing food crops, also require water.

1-The Rationale for Climate Change Planning

a) ***Impact on water resources sector***:

-Problems of increased frequencies of flood, drought and storms , changes in water supply, water quality, and increased competition for water;

-The irregular seasonal time of raining and dry months caused by climate change especially during the last few decades imposes on water resources management and development effort. At the same time, the inceasing demand of water for emerging sectors including industry, livestock, domestic uses, and especially for agriculture while season is changing due to CC, creates many more social problems.

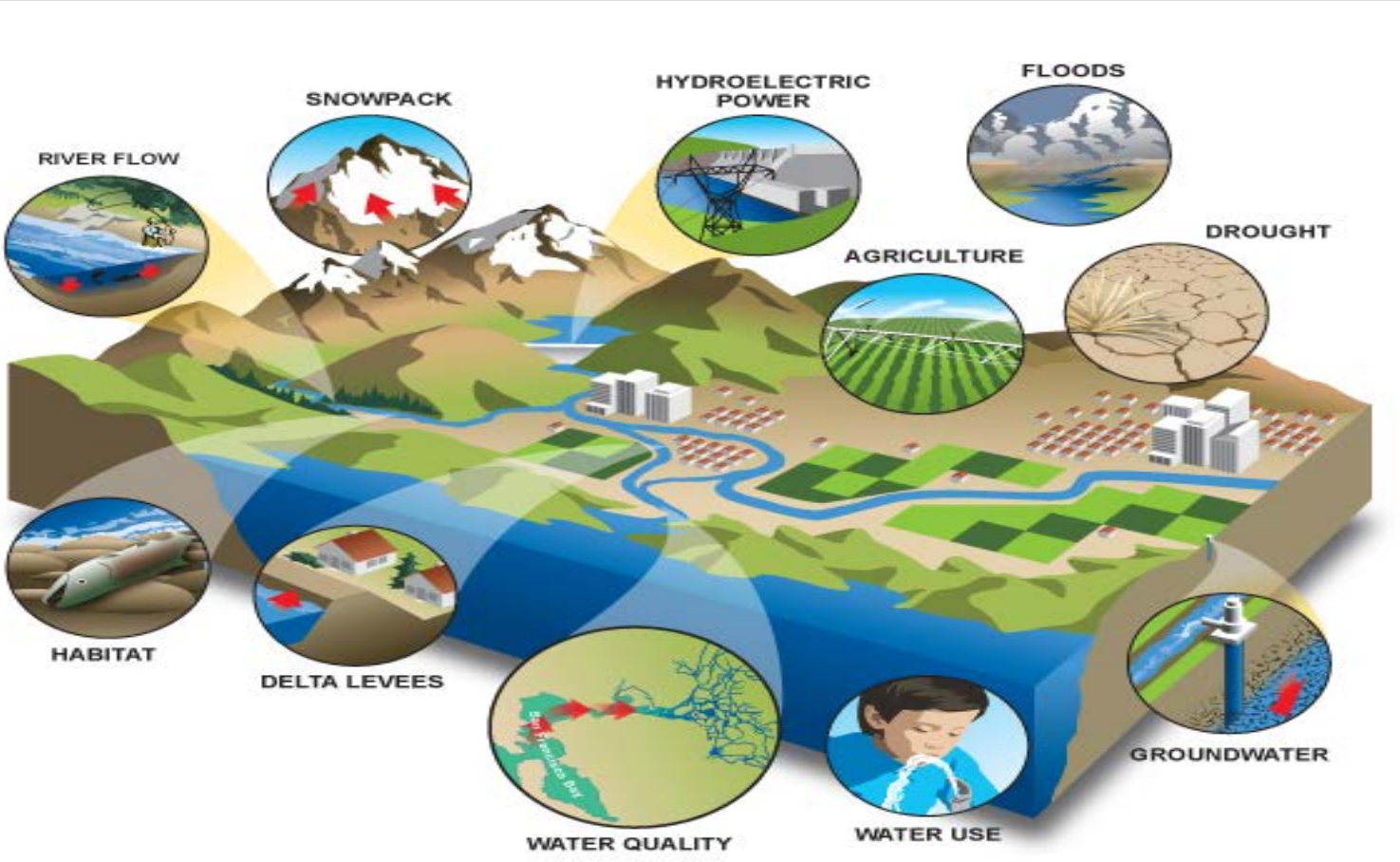
b) ***Reservoir:*** Many reservoir have gradually been shallower cause by sedimentation, which lead to reduce capacity of water storage.

1-The Rationale for Climate Change Planning

c)***Irrigation systems and hydraulic infrastructure :*** It is noted that the irrigation systems and hydraulic infrastructure have not yet been modernize d enough and taken CC into consideration in almost all areas of the country. Flood impact on irrigation systems and hydraulic infrastructure . Most importantly floods cause tremendous negative impact on irrigation systems located in the low land areas.

d) ***Flood Protection Dike:*** Most dikes have been destroyed by floods because during each floodwater overflows on these flood protection due to their height are not high enough compared to flood level . The problem is that CC impacts were not taken into account during the FPD construction.

Climate Change Impact and Various Sector Relevant to Water



2-Current Planning Responses to Climate Change

-Vision:

The Vision of the Climate Change Strategic Plan for Water Resources and Meteorology is sustainable for water resources uses in adapting to climate change; and timely trusted weather, climate information.

-Mission:

Our mission is to ensure water Resources and meteorology are effectively and sustainably managed and timely serviced warning systems and climatic information, equitably accessed, shared and adapted to the changing of climate for better livelihoods of the Cambodia people.

2-Current Planning Responses to Climate Change(Cont.)

Climate Change Objective for Water Resources:

-Protect, manage and use water resources with effective, equitable and sustainable manners from CC negative impacts;

-Along with the climate change adaptation and/mitigation schemes, regulate, modify and intervene water services fee of all water resources development activities;

-Adapt to climate change and mitigate its affect on water resources based livelihood;

2-Current Planning Responses to Climate Change(Cont.)

-Apply Integrated Water Resources Management(IWRM) that allow for holistic planning across sectors, jurisdictions and local government border for climate change adaptation and mitigation;

-Take stronger community participation such as Farmer Water Use committee (FWUC) in water resources management and development to address impact or obtain benefits from climate change induced opportunities;

2-Current Planning Responses to Climate Change(Cont.)

-Raise awareness, capacity in institutions and quality of officials in climate change adaptation and mitigation to enable sustainable development and management of water resources;

-Ensure protection and conservation of water resources;

-Apply modern sustainable management models adaptive to climate change context.

2-Current Planning Responses to Climate Change(Cont.)

Climate Change Strategy for Water Resources:

-Awareness and knowledge on climate change related to water resources management and development must be mainstreamed into the development aspects of all water-related sectors at local, provincial and national levels, through TV spots, radio and media campaigns;

-Establishment of a data management system for collecting and sharing data and information on water resources/related climate change issues, and adaptation/ mitigation capacity of related stakeholders;

2-Current Planning Responses to Climate Change(Cont.)

-Mobilization of secured financial resources from government agencies and development partners for programs/projects, research and development on water resources/climate change adaptation or mitigation;

-Strengthening the capacity of local farmers, especially FWUC members, on the selection of lower-water crop varieties, and the planning of a lower-water crop system for climate change adaptation;

-Improve and introduce technologies in water work development to respond to the negative impacts of climate change

2-Current Planning Responses to Climate Change(Cont.)

Climate Change Objective for Meteorology:

-To build a reliable and predictable meteorological service;

-To improve human resource capacity in national and provincial level to meet high quality requirement as information service provider;

-To extend climate network nationally and internationally;

-To set up a national early warning system and information related to extreme climate and weather events.

2-Current Planning Responses to Climate Change(Cont.)

Climate Change Strategy for Meteorology:

-Meteorology management and development within the changing of climate

-Data management and methodology analysis and technology development in regards to hydro-meteorology.

-To become a national organization with accountability and responsibility in providing excellent weather forecasting and climate information services in Cambodia.

-Develop capacity and meteorology management to reduce vulnerability against actual or expected climate risk and their effect on society, the economy and the environment.

3-Way Forwards

Climate Change Action Plan for Water Resources and Meteorology

Irrigation related works :

- Climate risk management and rehabilitation of small, medium and large-scale irrigation infrastructure
- Promoting innovated irrigation technology structure in areas affected by torrential rain such as in Mondulkiri, Pursat, and Koh Kong.
- Capacity building and awareness raising on CC and DRR for Farmer Water User Community (FWUC) (nation-wide)>$5 million up.
- Capacity development for irrigation engineers on climate risk management.

3-Way Forwards

Flood and Drought :

- Development and rehabilitation of flood protection dike (Kampong Trabek, Bateay) for agricultural and urban development.
- Improve capacity for flood and drought forecasting and modeling for technical officers at national and subnational level (mostly at Mekong Delta)
- Establishment of national forecasting center (ADB) (two departments)
- Up scaling ground water management by using ISOTOP application (original source of water, recharge areas, water balancing) current implemented in Saang (kandal).

3-Way Forwards

Sea level rise/saline intrusion :

- Promoting climate resilience of agriculture through (especially rice, agriculture) building sea dikes in coastal areas.
- Assessment of potential impact of seas level rise, salt water intrusion (Mekong delta) and coastal areas.

Climate change and Gender :

- Promoting gender responsiveness in water management, climate change impact and adaptation.

3-Way Forwards

Hydro-Meteorology :

- Strengthening Climate Information and Early Warning System (GEF-Nationwide with $5.5 million from 2015-2017 .
- Capacity building for national and provincial department of water resource on climatic data collection, recording, reporting and forecasting and predicting.
- Improving institutional structure, networking with mass media for public weather, warning and climate forecasting dissemination.
- Installation of gauging station to monitor seas level rise, wind speed, storms and sea waves (three provinces), (develop oceanography).

3-Way Forwards

- Develop and manage based on climate data and information, capacity analysis and technology.

- Reduce impact from storms, flood, droughts on people lives, property and livelihoods trough the accuracy weather forecast and climate information dissemination.

Thank You !

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