

# National Adaptation Plan (NAPs)

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# Regulatory Framework

- Currently there is no specific act/legislation/policy on cc
  - NEPA 2007: (Roles of the Commission and Secretariat)
    - Negotiate and enforce bilateral and multilateral environment agreement
    - Development and implementation of bilateral and multilateral environmental agreements, conventions, treaties or declarations

- Constitution: Article 5

*Every Bhutanese is a trustee of the Kingdom's natural resources and environment for the benefit of the present and future generations and it is the fundamental duty of every citizen to contribute to the protection of the natural environment, conservation of the rich biodiversity of Bhutan and prevention of all forms of ecological degradation including noise, visual and physical pollution through the adoption and support of environment friendly practices and policies.*



# Regulatory Framework

- Climate Dialogue was held in May 2015
  - Directives to develop an indicative mandate for climate change action in Bhutan through a policy, legislation, or strategy for climate change.
  - Launch preparation of Intended Nationally Determined Contribution (INDC) from Bhutan for the new climate agreement under UNFCCC due by October 2015.
  - Initiate process for preparation of National Adaptation Plans for Bhutan.
  - Inform stakeholders on climate change action and activities in Bhutan.



# Institutional Arrangements for NAPs

- Coordinated by the National Environment Commission Secretariat (NECS)
  - NEC: High level climate change committee
  - NECS: UNFCCC focal agency
  - Secretary, NECS: UNFCCC focal point
  - MSTCCC (to be enhanced)



# Components of national development planning to prioritize adaptation efforts

In the 11<sup>th</sup> Five Year Plan for Bhutan:

- National Key Result Areas:
  - Carbon Neutral and Green/Climate Resilient development
- Objectives:
  - National policies, plans and capacity strengthened to achieve carbon neutral and climate resilient development

INDC (NAPs): long term

# Bhutan's Vulnerability to Climate Change





# fragile mountainous landscape



landlocked & least developed country

Heavy dependence on climate sensitive sectors  
*Low level of economic diversification*



Agrarian society  
(69% of population)



Large investments in  
hydropower

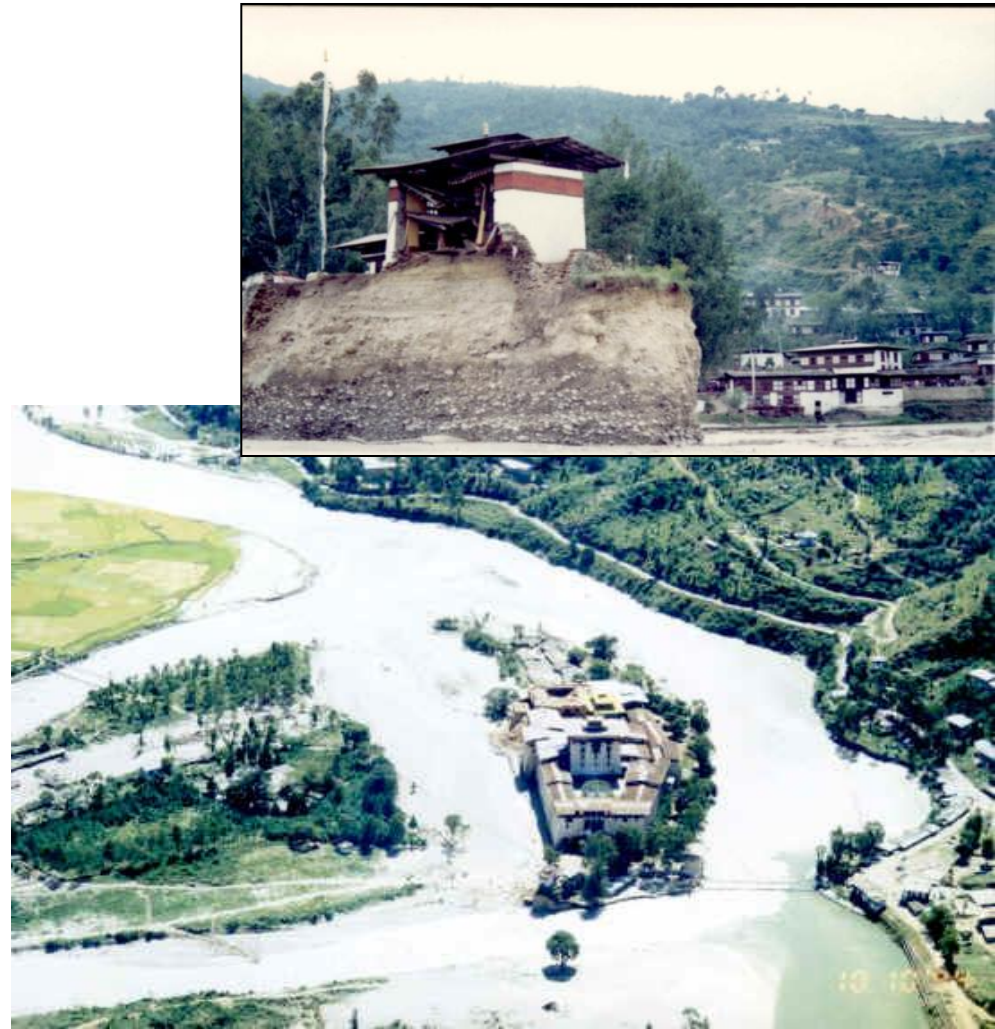


# Large areas of glaciers and glacial lakes



# Current Vulnerabilities

- Glacial Lake Outburst Floods
  - due to temperature rise
- Land Degradation
  - Landslides, erosion due changes in to weather patterns, high intensity rainfall, cyclones
- Flashfloods
  - Intense rainfall periods, cyclones





# Current Vulnerabilities

- Droughts
  - Drying water sources due to temperature rise, longer intervals between rains
- Wind and Thunder storms
- Pests and diseases



# Potential areas impacts of climate change in Bhutan



## Human Health

Rising Temperatures may cause the spread of tropical diseases and heat stress into higher altitudes.



## Natural Disasters

Rapidly retreating alpine glaciers is increasing the risk of 'glacial lake outburst floods' endangering life and property downstream. Increasing flash floods may also be caused by intensifying



## Agriculture

80% of the Bhutanese practice subsistence farming. Climate Change can cause changes in temperature and precipitation patterns and increase the vulnerability of a large group of this population.



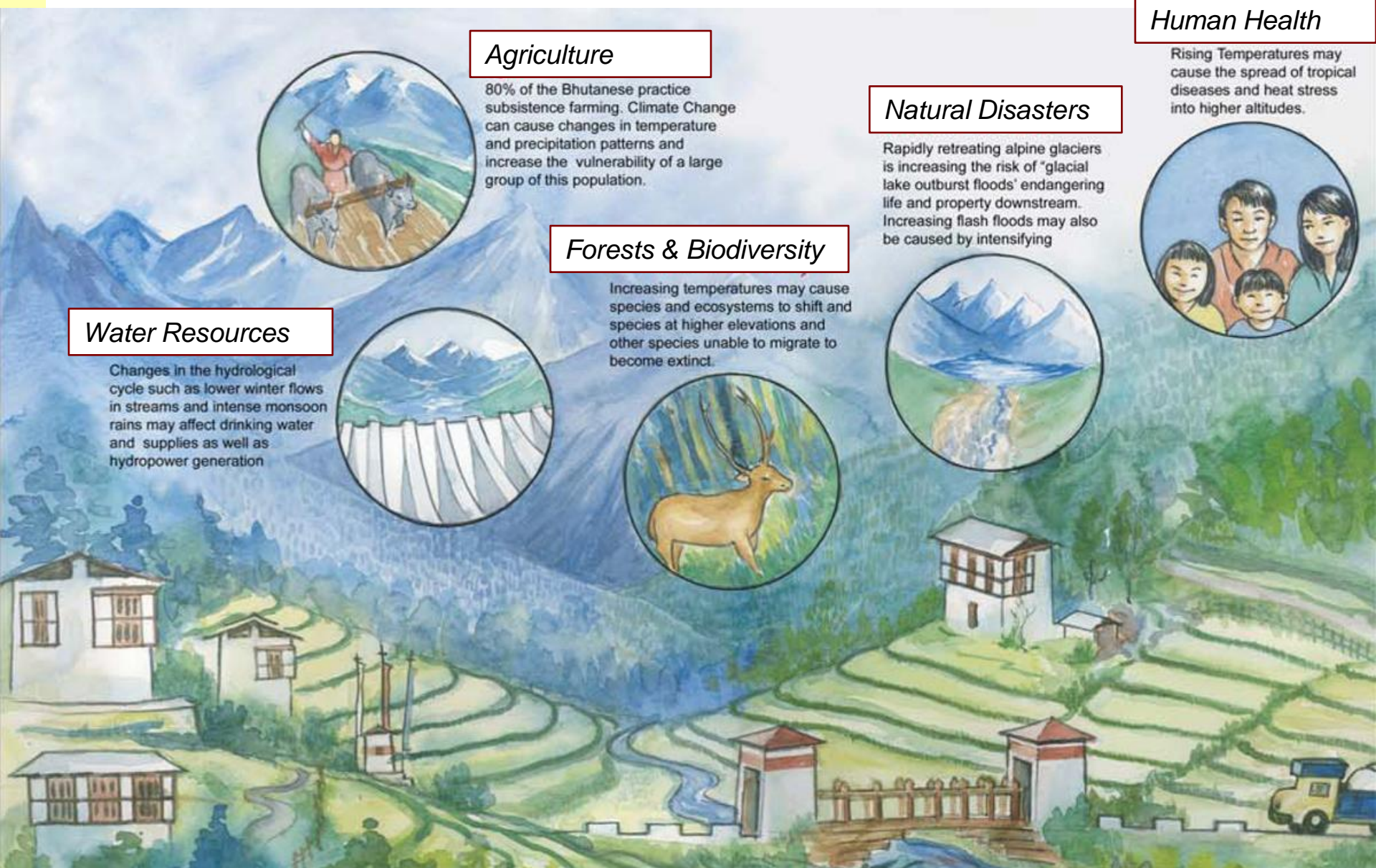
## Forests & Biodiversity

Increasing temperatures may cause species and ecosystems to shift and species at higher elevations and other species unable to migrate to become extinct.



## Water Resources

Changes in the hydrological cycle such as lower winter flows in streams and intense monsoon rains may affect drinking water and supplies as well as hydropower generation



# Adaptation Projects (currently implemented)



- <C:\Users\dell\Desktop\Adaptation Projects.docx>





# M&E framework for Adaptation & for National Planning Process

- Adaptation Projects: Have their own project specific M&E as per donor and government requirement
- M&E for National Planning process:
  - Annual Performance Agreement (APA)
  - Mid Term Review



# National Roadmap for NAP

- NAPA & SNC (adaptation options)
- Stocktaking activities (report & CC dialogue)
- Sensitization on NAP
  - Commission (high level cc committee) has been briefed
  - Wider sector/stakeholder informed through climate dialogue
- A LDCF MSP is being prepared for NAP (need support)



**Annexure 1. Ongoing climate change adaptation related projects/activities across sectors**

<b>Sl. No.</b>	<b>Projects</b>	<b>Fund</b>	<b>Source</b>
<b>Agriculture</b>			
1.	Climate Change Adaptation in the RNR sector -CoRRB-Secretariat	Euro 4.397 million	EU GCCA
2.	Climate change adaptation potentials of forests in Bhutan – building human capacities and knowledge base BC-CAP- Department of Forests & Park Services	Euro 1.1 million	Austria (University of Natural Resource and Life Science – BOKU)
3.	Comprehensive assessment of climate change impacts on endemic plant diversity- National Biodiversity Center	Nu.7.51 Millions	BT FEC
4.	Climate Change Adaptation in Himalayas (HIMALICA Pilot project) - Tsirang Dzongkhag.	US \$ 500,000	ICIMOD
<b>Metrological Information</b>			
5.	Institutional Strengthening & Setting up of GLOF Early Warning and Rainstorm Flood Forecasting in Mangdechu and Chamkhar Basin Project	US \$ 1.8 mn	JICA
6.	Strengthening of hydro-meteorological services for Bhutan (2013-16).	Euro 462,076	Ministry of Foreign Affairs, Finland
7.	Cryosphere Monitoring Program (2014-2018). The project aims to increase the understanding of the climate cryosphere water nexus in Bhutan Himalaya.	USD 1.086 million Nu. 90,800	Government of Norway/ICIMOD RGOB
<b>Disaster Risk Management</b>			
8.	Time Series monitoring of glaciers and glacial lakes in Bhutan Himalayas (To see changes in glacier retreat and lake expansion).	Approx. 1 million Ngultrum per year	RGOB
9.	Local Climate Adaptive Living Facility (LoCAL) (Enhancing community resilience and adaptive capacity for climate change at the local level)	USD 500,000	UN Capital Development Fund (UNCDF)
<b>Health</b>			
10	Piloting Climate Change Adaptation to protect human health.	USD 549,000	SCCF
<b>Cross Sector</b>			
11	National Adaptation Programme of Action (NAPA II)	USD 11.49 million	LDCF