



## Introduction to Bhutan's NAP process



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# Outline

- Country profile
- Key vulnerabilities to climate change
- NAP detail timeline
- Overview of NAP proposal
- Component of proposal and its outputs
- Key challenges
- NAP road map
- Next Step;



# Country profile

- Total land area: 38,816 sqkm
- **Location:** South East Asia (Eastern Himalayas)
- **Topography:** Mountainous terrain (200 –7000 meters)
- **Forest cover:** 72.5% of the total land area
- **Total population:** approximately 700,000
- **Development philosophy:** Gross National Happiness
- **Main economic sectors:** Hydropower, Agriculture and Tourism

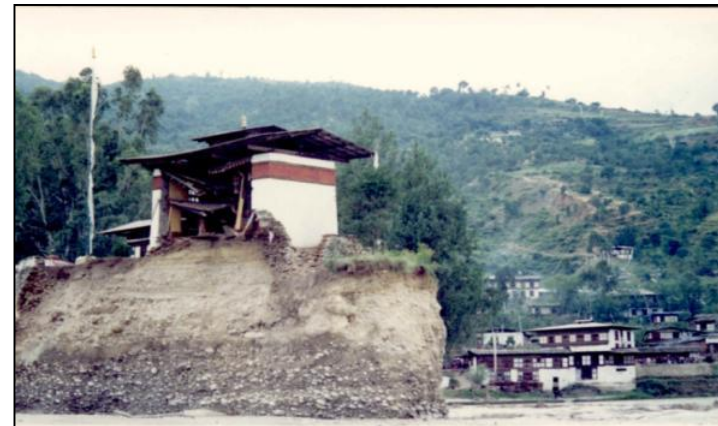
# Key Vulnerabilities to climate change

- High dependence on climate sensitive sectors
  - Agriculture and hydropower
- Level of economic development
  - 70% population engaged in subsistence agriculture
- Least Developed Country (LDC)
- Geography
  - Fragile mountain ecosystem
  - Land locked
  - Increased risk of disasters (GLOF and floods, drought, forest fires, landslides)



# Continued..

- Increase in average temperatures, consistent warming trend in the Himalayas, at approximately three times the global average
- Decrease in precipitation during the dry season; increase during the wet season in the long-term
- Increased intensity of rainfall events, erratic rain fall patterns
- Shift in monsoon timing
- Hydro-meteorological and geological disasters: glacial lake outburst floods (GLOFs), earthquakes, landslides, river erosion, windstorms, forest fire



# Summary of key issues, vulnerabilities and risk



<b>Issue</b>	<b>Subcomponents</b>	<b>Vulnerabilities, risks</b>
Agriculture and food security	<ul style="list-style-type: none"><li>• Mostly rain-fed</li><li>• Production</li><li>• Livelihoods</li><li>• Commercial agriculture</li></ul>	<ul style="list-style-type: none"><li>• Farmer livelihoods at risk from disrupted production</li><li>• Decline in production due to shifting rainfall patterns and prolonged droughts</li></ul>
Energy	<ul style="list-style-type: none"><li>• Hydropower generation</li><li>• Infrastructure</li><li>• Energy for industry</li></ul>	<ul style="list-style-type: none"><li>• Changes in generation due to run-off variability</li><li>• Energy availability</li><li>• Siltation damage on turbines</li></ul>
Water	<ul style="list-style-type: none"><li>• Glacier, river, streams</li><li>• Centralized water supply system</li><li>• GLOFs</li></ul>	<ul style="list-style-type: none"><li>• Decline in river flows</li></ul>



# Bhutan's NAP detail timeline

## **May 2015**

- NAP process presented to stakeholders and launched during *a Dialogue on Climate Resilient and Carbon Neutral Development* in Thimphu, which also acted as the launch of the NDC.
- It was recognized that a clear climate change policy should support the NAP process and that the NAP process should include an implementation strategy and timeline.

## **February 2016**

- NEC meeting directives established that the Climate Change Division (CCD) of NECS would take the lead on NAP development and that a Climate Change Policy concept note would be developed.

## **March 2016**

- A roadmap for Bhutan's NAP process was presented for discussion and finalization at a *National Workshop on Advancing Action on Climate Change for National Priorities and International Obligations*





### ***April 2016***

- NECS have prepared a draft proposal for NAP readiness support from the GCF, with support from UNDP, and engaged stakeholders in consultations, including on project objectives and outputs and on institutional roles. Two NAP consultation workshops were held.

### ***March 2016***

- A roadmap for Bhutan's NAP process was presented for discussion and finalisation at a *National Workshop on Advancing Action on Climate Change for National Priorities and International Obligations* workshops were held.

### ***June 2016***

- A workshop on *Climate Change Information and Tools for Vulnerability and Adaptation* included a stocktaking of existing information in Bhutan on vulnerability and adaptation and

### ***September 2017***

- The NAP Readiness proposal was submitted to the GCF by NECS through Gross National Happiness Commission (GNHC).





# Bhutan's NAP Readiness Proposal



# Overview of Bhutan's NAP proposal

*Preparation of Bhutan National Adaptation Plan (NAP) with a focus on implementation of comprehensive risk management in the water sector*

Budget: 3 million USD

Duration: 48 months (4years)

Principal entities: Led by the National Environment Commission secretariat and in collaboration with the Gross National Happiness Commission and other partners

Delivery partner/Accredited entity: UNDP

# Components of the proposal

**Output 1** National mandate, strategy and mechanisms are in place and gaps are assessed and addressed

**Output 2** Preparatory elements in place to support an iterative and continuous NAP Process

**Output 3** Develop a NAP and enhance adaptation planning process to support medium & long term adaptation planning Planning and budgeting systems integrate CCA actions

**Output 4** NAP implementation and monitoring facilitated

Generating knowledge about risks, vulnerability, opportunities, social-economic impacts and learning from CCA interventions

# Outputs and activities



## **Output 1 National mandate, strategy and mechanisms are in place and gaps are assessed and addressed**

### **Deliverables**

- Guidelines and Protocol for the NAP process formulation and implementation
- Comprehensive stock-take
- SDG and adaptation linkages mapped
- Capacity/skills assessment and design of training
- Strategy and roadmap for climate research agenda including scientific observation to support adaptation planning.
- Network of scientific institutions engaged in scientific observation
- Screening guidelines for planning/budget staff to screen business as usual and climate additional components
- Costing an appraisal tool for adaptation costing.
- Mechanism for synergizing approaches and adaptation planning across different cross cutting issues and thematic areas (biodiversity, desertification etc)



# Outputs and activities

## **Output 2 Preparatory elements in place to support an iterative and continuous NAP Process**

### **Deliverables**

- Design & implementation of training for scientific and technical communities in partnership with national training institutes and universities
- Training programme for government and other relevant institution for entry level and civil servants at all levels in collaboration with RIM.
- Synthesize and downscale existing data and information including climate scenarios and prepare socio-economic scenarios that include macroeconomic modelling
- Appropriate tools applied for climate risk and impact assessment of key sectors at national level & interface with local level v&a ongoing initiatives
- Assessments on indigenous knowledge, vulnerable communities, vulnerable ecosystems and gender related vulnerabilities
- Establish an Information and knowledge management system for climate responsive planning with standardised protocol for data management



# Outputs and activities

**Output 3 Develop a NAP and enhance adaptation planning process to support medium and long term adaptation planning *with particular thematic focus on multi-sectoral water related adaptation actions***

## Deliverables

- Comprehensive national inventory of water resources including contribution from ground water and wetlands/assessment of potential climate change impacts on urban water supply and sanitation system for major urban centers which include projections
- Identify adaptation options in the water sector and water dependent sectors –
- Prepare prefeasibility assessments for adaptation options in the water sector
- Review and appraise adaptation interventions for climate sensitive sectors/issues building on SNC, such as energy, agriculture, health, forest, biodiversity, glaciers and GLOFs, and disaster and infrastructure with appropriate timelines for implementation
- Draft the national adaptation plan including peer review and public outreach NAP To be endorsed by C4 and NCCC. Implementation and financing strategy to be included.



# Outputs and activities

- **Output 4 NAP implementation and monitoring facilitated**

## **Deliverables**

- A medium-term National Adaptation Plan Implementation Strategy as part of KYR 6 of 12FYP.
- A participatory and result-based monitoring and evaluation (M&E) framework will be prepared to review and monitor the implementation of the NAP
- Develop a M&E framework framework for assessing climate resilience to inform and assist integration of cc adaptation into development planning (Five Year Plans).
- Annual consultation meetings on NAP implementation to gauge progress as part of the M&E framework
- System to report, monitor and review the progress to ensure sustainability and iterative integration of adaptation in planning





# Key Challenges faced during NAP process

- Need to strengthen both institutional capacity for adaptation planning and implementation;
- Enhance inter-sectoral coordination;
- Climate change information and data is very limited;
- Climate change is included in 11<sup>th</sup> FYP but yet to integrate into entire government decision making process cross-sectorally and ;subnational level;
- Access to finance;



# Road map towards a full NAP and access to the GCF NAP funding



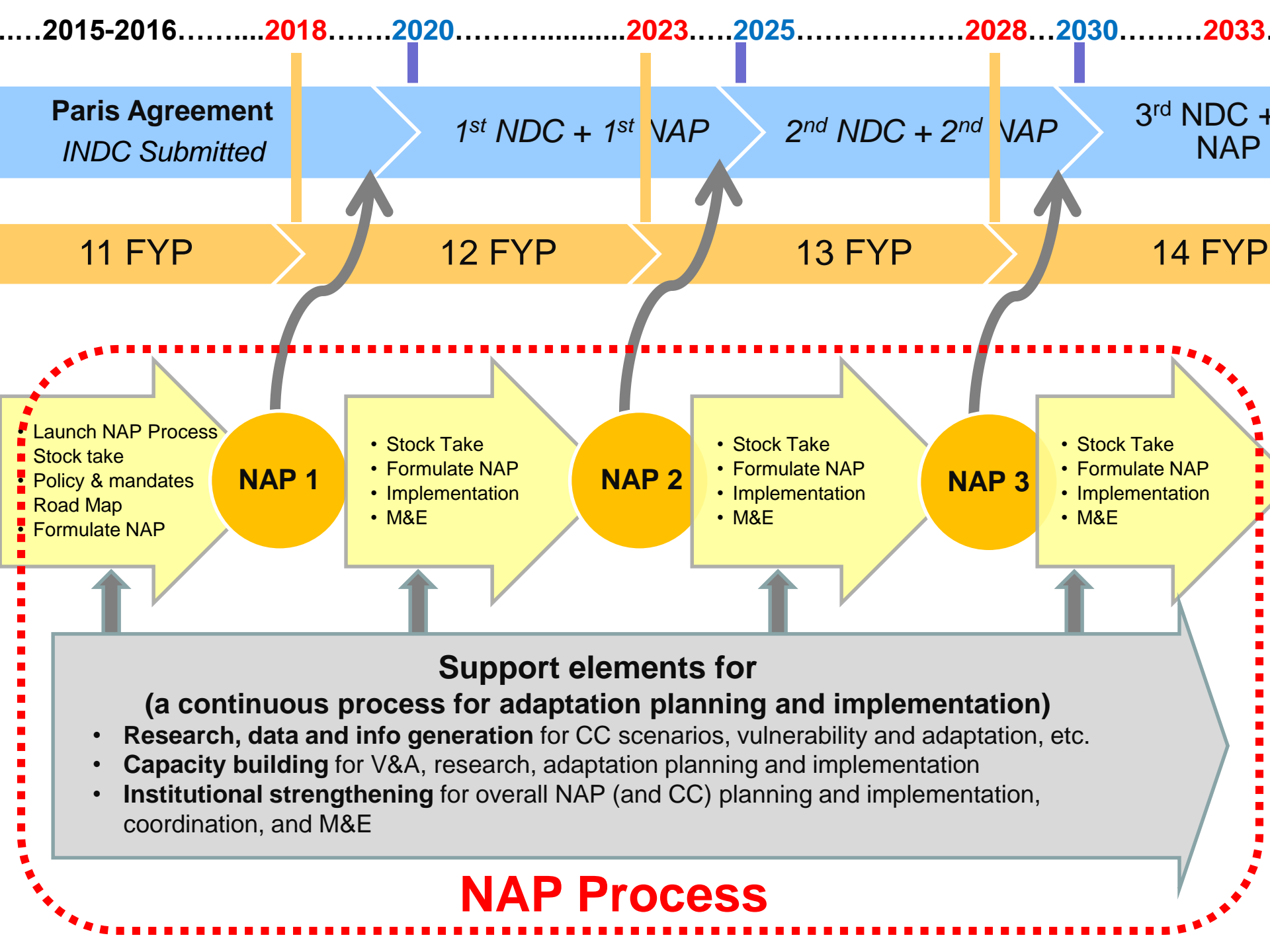
# NAP roadmap

Element	Yea 1	Year 2
Element A: Laying the groundwork and addressing gaps	<ul style="list-style-type: none"> <li>• National guide/protocol for NAP formulation</li> <li>• Comprehensive stocktaking, gaps and needs analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Design and implement training programme to enhance capacity</li> <li>• Develop a protocol for management of data and information</li> </ul>
Element B: Preparatory elements	<ul style="list-style-type: none"> <li>• Climate risk analysis</li> <li>• Socio-economic scenarios</li> <li>• Development-adaptation linkages</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed impact assessments</li> <li>• Produce a NAP</li> </ul>
Element C: Implementation strategies	<ul style="list-style-type: none"> <li>• Identify and appraise adaptation options for water, energy, agriculture, health, forest, biodiversity, glaciers and GLOFs and disaster and infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Develop implementation strategy as part of the NAP</li> <li>• Develop screening guidelines for adaptation programmes</li> </ul>
Element D: Reporting, monitoring and review	<ul style="list-style-type: none"> <li>• Annual NAP Implementation Progress report</li> </ul>	<ul style="list-style-type: none"> <li>• Annual NAP Implementation Progress report</li> </ul>

# NAP roadmap



Element	Yea 3	Year 4
Element C: Implementation strategies	<ul style="list-style-type: none"> <li>• Enhance capacity for planning, budgeting and implementation of adaptation</li> <li>• Implement policies, projects and programmes for key sectors: water, energy, agriculture, health, forest, biodiversity, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance capacity for planning, budgeting and implementation of adaptation</li> <li>• Implement policies, projects and programmes for key sectors: water, energy, agriculture, health, forest, biodiversity, etc.</li> </ul>
Element D: Reporting, monitoring and review	<ul style="list-style-type: none"> <li>• Disseminate NAP</li> <li>• Establish participatory and result-based M&amp;E framework</li> <li>• Annual NAP Implementation Progress report</li> </ul>	<ul style="list-style-type: none"> <li>• Annual NAP Implementation Progress report</li> <li>• Initiate review of the NAP for the second iteration</li> </ul>



# Next Steps



- NECS, UNDP and GNHC are working on responding to the comments received from GCF
- Plan is to resubmit the revised document January-February 2018 to GCF
- Draft climate change policy 2017



- “ WE CANNOT STOP CLIMATE CHANGE BUT WE CAN SLOW DOWN THE CLIMATE CHANGE’





Thank you !