



2nd NCOF

May 12, 2016

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National Institutional Arrangements

- **NEC acts as National Climate Change Committee (NCCC)**
 - High Level policy making body for climate change
 - Under NEPA 2007, NEC is mandated to oversee all international environmental agreements (UNCBD, UNFCCC, UNCCD etc)
- **NEC Secretariat is focal agency for UNFCCC**
 - As empowered under NEPA 2007
 - Climate Change Division to implement Climate Change mandates
- **National Focal Point for UNFCCC**
 - Secretary, NECS (supported by CCD)
- **Multi-Sectoral Technical Committee for Climate Change (MSTCCC)**
 - Formed under decision of NEC
 - National forum and body for Coordination
 - Chaired by Secretary, NECS

Key Vulnerable Sectors

- Water Resources
- Forests & Biodiversity
- Agriculture
- Energy
- Human Health





Water Resources: Impacts

- Dwindling water resources
- Erratic rainfall
- Water related disasters
- Deterioration in water quality

Water Resources: Adaptation Plans

Objectives	Activities
Conduct comprehensive water resources assessment	Survey, mapping and assessment of quality and quantity of water resources Analysis of glacial and seasonal snow covers
Increase resilience to the impacts of climate change on water resources	V&A of CC on water resources through hydrological modelling Installation of EWS Build multi-purpose impoundments to store water during lean season
Water resources management through adoption and implementation of IWRM	RWH for rural and urban areas Water demand management
Strengthening climate observatory and network for early warning and forecasting of extreme events	Establishment of EWS and upgrading weather forecasting centre Extension of met stations in the northern highlands with snow gauging



Vulnerability and Adaptation

- Adaptation planning in Bhutan so far
 - bottom up (NAPA) using “current vulnerabilities” approach
 - Top down (SNC)
- Need good information at both levels
 - National Level: good climate scenarios and data for national level assessments and prioritisation
 - Local level vulnerabilities and realities should inform national level planning and prioritisation



Future Plans

3rd National Communication from Bhutan to UNFCCC (TNC)

- More focus on vulnerability and adaptation assessment (V&A)

- Climate change scenarios + socio economic scenarios
 - “Future climate + future society”

- Expect to have better information from
 - local level vulnerability information through water inventory and district level collaborators
 - Better climate scenarios from investments in DHMS



Future activities for Adaptation

Formulation of *National Adaptation Plans* (NAP)

- Under UNFCCC process in a “*country driven process*”
- Objectives of (1) **reducing vulnerability** by building climate resilience (2) through **integration of adaptation planning into development planning**
- ***medium to long term scope,***
- informed by best available science for vulnerability assessment
- Cross cutting issues (gender sensitive, environmentally friendly, indigenous knowledge)
- ***“continuous” and “iterative” process***
- at all relevant levels (local to national or by sector or theme)
- establishing permanent institutional processes and mandates



Directives from 42nd Commission (NEC)

- CCD, NECS to submit a concept note to Cabinet on need for a Climate Change Policy
- CCD,NECS to take the lead on NAP development



Conclusion

- Basic climate maps for Bhutan (eg. Annual average temp/rainfall maps etc) to give basic description of Bhutan's climate (currently using MoAF agro ecology zone map)
- Climate scenarios and projections for:
 - medium and long term adaptation planning (NAPs)
 - Vulnerability assessments at the district/local/urban areas (will use regional products but local preferred)
- Past data, changes in seasonal averages in the past and changes in extreme event frequency and intensity observed
- Analysis of sediment load data (can be used as a proxy for disturbance in upstream watersheds for state of environment reporting)