



Welcome
to Presentation from Nepal

Panel 4.4
Water resources and
management

By –
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Water Resources and Climate Change

Management in Nepal

(Efforts and Needs)



Focus

- ▶ Introduction (Nepal at a Glance)
- ▶ Use of Water
- ▶ Climate Change Impacts
- ▶ Efforts for Adaptation
- ▶ Recent plan/policies
- ▶ Further Needs



Introduction

- ▶ Nepal – A land locked country, in Central Himalayas
- ▶ 6000 rivers with drainage area of 191000 sq. km.
- ▶ 3,252 glaciers covering an area of 5,323 sq.km.
- ▶ 2323glacial lakes covering an area of 75 sq.km.
- ▶ Total 225 BCM/annum (Estimated)
- ▶ 95.9% used for agriculture,
- ▶ 3.8% for domestic purpose and
- ▶ About 0.3% for industry



Use of Water

- ▶ Irrigation– 82% through surface water and 18% through groundwater
- ▶ Power generation
- ▶ Domestic
- ▶ Industrial




Climate Change Impacts

- ❖ Increased risk of Glacial Lake Outburst Flooding (GLOF)
- ❖ Increased run-off variability (as a result of glacier retreat,
- ❖ More intense precipitation during monsoon,
- ❖ Potentially decreased rainfall in the dry season)
- ❖ Increased sediment loading (and landslides) as a result of GLOFs, as well as intense rainfall events
- ❖ Increased evaporation losses from reservoirs as a result of rising temperatures
- ❖ Less amount of snowfall in winter affecting the crops.



Efforts for Adaptation

- ▶ Sitting in non-threatened locations.
 - ▶ Smaller Hydropower plants.
 - ▶ Physical reduction in GLOF risks.
 - ▶ Incorporation of future reduced generation capacity in design.
 - ▶ Alternative source of energy supply.
 - ▶ Glacial Lake Outburst Flood (GLOF) monitoring and disaster risk reduction.
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Recent plan/policies

- ❑ In line with Nepal's Climate Change Policy– 2011 Nepal has prepared its National Adaptation Program of Action (NAPA).
- ❑ How NAPA address the impacts on water resources–
 - ▶ Community based adaptation
 - ▶ Enhancing adaptive capacity of vulnerable communities
 - ▶ Community–based disaster management
 - ▶ GLOF monitoring and disaster risk reduction.
 - ▶ Sustainable management of water resource



Recent plan/policies contd...

- ▶ For the implementation of NAPA and integration of adaptation options into development policy and planning processes, Nepal has recently approved the **LAPA**.
- ▶ It ensures the bottom-up, inclusive, responsive and flexible process
- ▶ It identifies local adaptation needs



Further Needs

- ❑ Integrated watershed management.
- ❑ Prioritization of Climate response (GLOF hazard, Hydropower size, Social system).



Thank you

