

Adapting to the inevitable- Climate effects Asia and the Pacific Region.

Chencho Norbu ,
Director, Department of Agriculture,
Thimphu, Bhutan.

Media coverage on Warming: *South East Asia and Pacific Region*

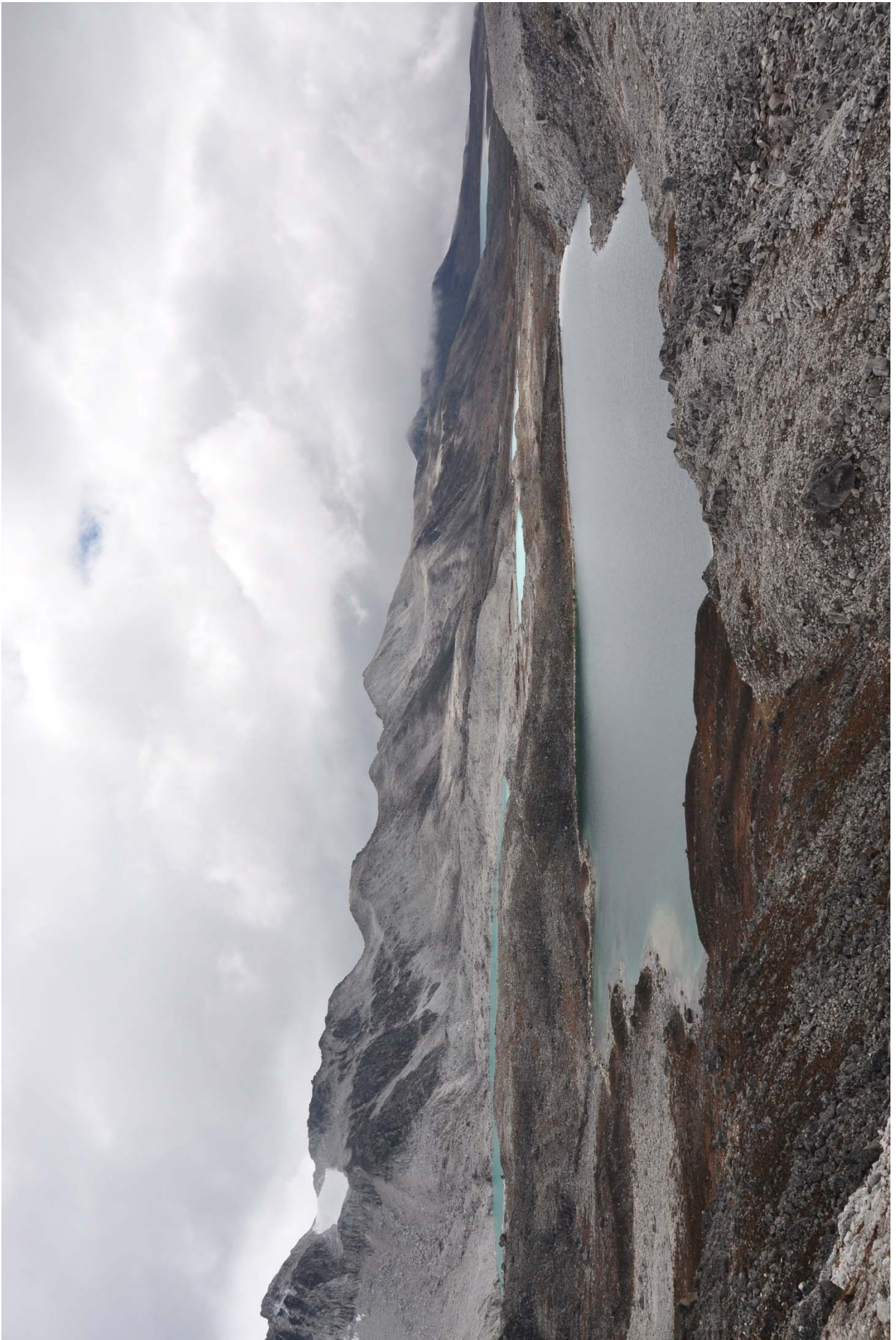
- Melting of Himalayan *Glaciers*
- Loss of Mangroves (*Biodiversity*, wetland),
- Stress on Coral Reefs (livelihoods),
- *Land Degradation*/Desertification (livelihoods and soil erosions)
- *Water resources* (too much or too little)
- *Health Impacts*: Malnutrition, Dengue fever, Malaria, Diarrhea and Cholera

Experiences from Bhutan

- Hail and windstorms *frequency increased* in 2010 and 2011.
- Northern corn blight disease 2007 : More than 50% of production lost for *high altitude farmers*
- Rice blast epidemic 1996: 80 to 90 % of rice harvest lost for *high altitude farmers*

Status of water resources in Bhutan

- *NAPA* places high importance to water management.
- Incidences of sources drying up for drinking and irrigation *increasing annually*.
- Incidences of flooding and land slides *rising*
- *Watershed management and land use* change will have a huge impact on water resources





Poorest of poor...to suffer first and foremost- Where..?

- Small, scattered and *inaccessible* settlements
- *Flood Plains* of remote and urban areas of mountainous countries
- *Delta* communities of plains
- Islanders of *coastal region*
- *Indigenous and tribal people*
- Urban poor

Working with vulnerable groups: challenges

- Working with small farmers deeply rooted in *traditional beliefs* is not easy, adoption technology.
- Climate science and weather information are *not available*, and *not understood*.
- Communication and coordination are usually poor *among stakeholders* addressing issues of isolated and distance places. .
- Only through *partnership* dialogue and action, we can help these groups.





Building Resilience through Community participation- examples from Bhutan

Education and Awareness-social and environment harmony

- Establishment of Community Forests - ecosystem benefits- *REDD+*
- Community Seed Banks - conservation of local landraces- *biodiversity*
- Simple Postharvest storage facilities to store potato and maize- *Food Security*
- Water harvesting technologies both for irrigation and drinking water- *Water*
- SLM to reduce soil erosion, and increase carbon sequestration- *Land degradation*

Thoughts on adapting to inevitable..

- *Education and awareness* should form core agenda of adaptation measures for all parties involved
- *Simple procedures* to access technologies, and funds from institutes created by Global/Regional funds.
- Building *local capacity* to generate climate/weather information , and create avenues for sub-regional or regional network on weather information sharing
- *Strengthen Partnership* (GCCA)- helping vulnerable groups and addressing trans boundary concerns : glacial melt, flooding, loss biodiversity, erratic weather patterns., sea level rise

