

Climate Change: Impact and Resilience in Bhimeshwor City

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(Chair person: FECOFUN)

An Introduction of Bhimeshwar City

- ▶ Hilly City ranging from 900 meters to 4000 meters height from sea level
- ▶ Total Area : 132.5 Sq. Kilometer
 - ▶ Agricultural Land Area 30 Sq. Kilometer
 - ▶ Forest Area 45 Sq. Kilometer
 - ▶ Major Forest (Pine, Ornamental Trees,)
 - ▶ Total Population: 32,480
- ▶ Major Economic Activity
 - ▶ Agriculture (Major Crops) : Rice, Potato, Maize
 - ▶ Tourism (Temple, Natural Beauty, Adventure Tourism)
 - ▶ Trade (Potato, Black Cardamom, Kiwi Fruit, Herbs, Green Vegetable)
- ▶ Major Potential
 - ▶ Hydropower (Tamakoshi 3rd 556 Megawatt, other small hydro projects)
 - ▶ Timber Trade (Community forestry and Scientific Forest Management)

Major Natural Disasters in Last five Years

- ▶ Before Massive Earthquake of 2015
 - ▶ Occurrence of Major Land Slide 3 times
 - ▶ Occurrence of Forest Fire 10 times
 - ▶ Flood and Displacement of Settlement 2 times
 - ▶ Depletion of Agricultural Land
- ▶ After Massive Earthquake of 2015
 - ▶ Occurrence of Major Land Slide 7 times
 - ▶ Occurrence of Forest Fire 15 times
 - ▶ Flood and Displacement of Settlement 10 times
 - ▶ Depletion of Agricultural Land
 - ▶ Displacement and Depletion of Water Sources
 - ▶ Number of Displaced Human Settlement : 2 (Boshimpa 84 Houses, Ghoksila)

Major Impact of Climate Change Experienced in Last Ten Years

- ▶ Increasing Temperature
- ▶ Depleting of Snow Level in Mountain
- ▶ Increasing Water Level in Glacier Lake and Increasing Threat in Downstream of Tamakoshi River Basin
- ▶ Agriculture Sector
 - ▶ Changing farming season
 - ▶ Degradation of land productivity
 - ▶ Effect on Rain-fed agriculture
 - ▶ food security
- ▶ Appearance of Mosquitos in Upper Land Area of the City
- ▶ Un-seasonal rain fall
- ▶ Blooming of forest flower (e.g., Rhododendron) before the season

Issues of CC in Hilly City Area

- ▶ Greenhouse Effect : Rising in temperature
- ▶ Adaptation in Agriculture Sector
 - ▶ Farming and Cultivation Schedule
 - ▶ Irrigation Method
 - ▶ Proper Use of fertilizer and pesticides
 - ▶ Organic farming
- ▶ Preservation of Drinking Water Source and Ponds
- ▶ Coping with Challenges of awaiting disease caused by newer species (e.g., Appearance of mosquitos)
- ▶ Facing newer trend of rainfall and snowfall
- ▶ Adapting of lowland vegetation in highland

Example of Adaptation in Dolakha, Nepal

- ▶ The Tsho Rolpa risk-reduction project in Dolakha, Nepal is an example of adaptation measures being implemented to address the threat of glacial lake outburst. This is one of the most significant examples of collaborative protective and planning by the government, donors, and experts in Glacier Lake Outburst Flood (GLOF) mitigation.

Adaptation Activities in Agriculture field

- ▶ The planning of agriculture is mostly based on weather calendar and particularly precipitation, cultivating before rainy season and after snowfall.
- ▶ Adopting Agro-forestry program for forest production and agri-residues
- ▶ Adopting indigenous strategies and techniques. Some of such strategies included covering vegetables with bamboo nets (chitra).
- ▶ Digging deep to protect from snowfall, dry leaves spread over crops (millet, carrot and cabbage).
- ▶ Support sticks to prevent crops from falling down due to heavy rainfall.
- ▶ Agriculture, livelihood and market linkage

Some CC Adaptation programs in Municipality area

- ▶ Urban and private Forestry enhancement
- ▶ Forest encroachment control
- ▶ Management practices are implementing sustainably.
- ▶ Drinking water-source conservation and management
- ▶ Soil erosion and Land slide control.

Some CC Adaptation programs in Municipality area

- ▶ Garden and green park development
- ▶ Livelihood improvement program
- ▶ Drinking water and sanitary program
- ▶ Roads and Traffic management
- ▶ Settlement management
- ▶ Health campaign

Reduction, Emission from Degradation and Deforestation (REDD) plus and Forestry Focus program in town area

- ▶ REDD plus program conducting
 - ▶ Awareness campaigning
 - ▶ Communication
 - ▶ Sustainable Forest Management
 - ▶ Community based forest management support
 - ▶ Plantation in barren land
 - ▶ Biodiversity conservation
 - ▶ Conservation of vulnerable species
 - ▶ Awareness against Forest fire

Thank You

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the frame, creating a modern, layered effect against the white background.