

CLIMATE CHANGE: Livelihoods, Adaptation and Employment from a NEPAL Perspective

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Jeunes Volontaires
pour l'Environnement
Nepal

Definition of CLIMATE CHANGE

"Climate change" means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

-By UNFCCC

According to the Oxford Dictionary; Climate Change earth's weather including changes in temperature, wind patterns and rainfall, especially the increase in the temperature of the earth's atmosphere that is caused by the that is caused by the increase of particular gases, especially carbon dioxide.

Highlights

- Effects of climate change are more harsh in the rural Mountain and Tarai communities .
- Climate change enhances resource degradation, food scarcity and social inequalities.
- Day by day increase unemployment in Nepal.
- Poor households are more vulnerable than medium and well-off households.
- The changing climate is an additional trouble to the poor people.

CLIMATE CHANGE in Nepal

Climate change can be particularly hard-hitting for small underdeveloped countries. Nepal is one among these country, being landlocked, with different physiographical characteristics within a relatively small area and with strong landscape. Effects of climate change tend to be more harsh where people dependent rain-fed agriculture for their livelihoods. In rural Mountain and Tarai communities with limited livelihoods options, adaptive capacity is low due to limited information, poor access to services, and unfair access to productive assets. This presentation is based in the remote Mountain and Tarai areas of Nepal to explore how climate change is affecting the livelihood and employment of local communities in mountain and Tarai areas ? and how different wellbeing groups are differentially impacted. ?

The main occupation is agriculture, largely based on rain-fed farming practices. Tourism based on high altitude adventures is one of the major sources of income for the country. Nepal has a large hydropower potential. Observations show clear evidences of significant warming. The average trend in the country is 0.06°C per year.

Features of the **LIVELIHOODS** a Economy

- Mountain and Tarai people harsh living conditions, isolation, limited access to resources, slot products
- Higher incidence of poverty, explained by reasonably higher, levels of vulnerability, marginality and inaccessibility
- Malnutrition, shortage of safe drinking water, poor health, and education systems
- Primarily subsistence agriculture, with limited opportunities for development, using post-harvest technology
- Few mineral resources, water as a main economic asset (power) but there is potential for developing ecosystem services linked to the protection of the environment
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Effects in Livelihoods, adaptation and employment by climate change

- Increased temperatures in the high altitude areas,
- Increased frequency and duration of extreme events, i.e.: local extreme increases in temperature, and extreme rainfall events
- Receding Himalayan glaciers (concerns 67% of glaciers), higher permanent snowline, snow melt cycle and river system changes,
- Reduced damp retention and ground water recharge,
- Changes in the forest ecosystems (shift in the latitude of forest boundaries, upward movement of trees, changes in species composition and vegetation types),

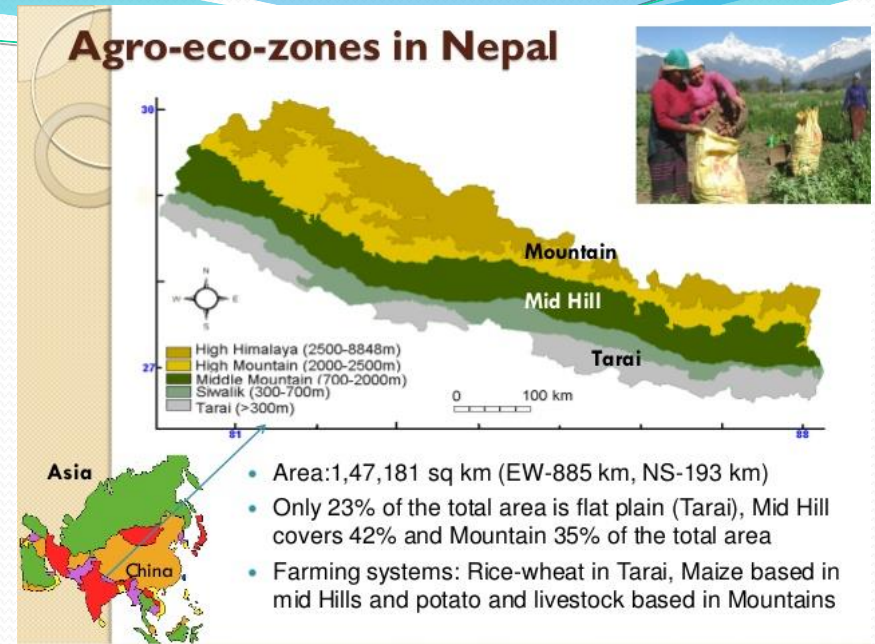
Key Impacts On LIVELIHOODS

- 1. Impact on Agriculture and Food Security**
- 2. Impact on Loss of land and human life**
- 3. Impact on Hydro-meteorological hazards**
- 4. Impact on Human Health**
- 5. Impact on Poor Ethnic Groups**
- 6. Impacts on Gender Role**

1. Impact on Agriculture and Food Security



Agriculture and food security are intervention under climate change. Over the next 50 years, the world population is conventional to increase by 9.6 billion. Yet, even today, some 800 million people go hungry daily and more than a billion live on less than a dollar a day. This food insecurity and poverty affecting one-quarter of the world's population is a sad outcome of the failure to respond effectively in a time of record scientific progress and economic development. Agricultural production is highly vulnerable even to 2°C predictions for global mean temperatures in 2100 with major implications for rural poverty and for both rural and urban food security.



Nepal's agricultural lands are divided into three agro-ecological zones: the lowlands of the *tarai*, the hills and the mountains. Total area 147,181 sq km but 23% of the total area is flat plain (Tarai) Mid Hill covers 24% and Mountain 23% of the total area.

Loss of land and human life

Communities indicated that climate change risks and hazards had negative impacts on their resources and livelihoods. Intense rainfall induced riverbank and frequent massive landslides, farms, crops, livestock and infrastructure.



Best example for Sunkoshi...

Hydro-meteorological hazards



Agriculture-dependent livelihoods are frequently exposed to a variety of climate extremes such as floods, cold waves and heat waves. About 90% of crop loss in Nepal is caused by weather or meteorological events.

Impact on Human Health

Climate change is expected to have many penalty for human health. Diseases such as malaria and Japanese encephalitis have spread to new areas. One area prone to increased diseases is the lowlands of Nepal, i.e. the Tarai, which is warmer than mountain regions. Temperature between 22-32°C favor development of mosquito and completion of its life cycle.



Impact on Poor Ethnic Groups

Poor ethnic groups are vulnerable to loss of physical capital (damage to shelter and infrastructure), human capital (malnutrition and diseases), social capital (displacement of communities), natural capital (loss of productivity in agriculture) and " financial capital (more disasters and lower income).



Impacts on Gender Role

Gender dimension analysis in climate change impact is essential for developing countries like Nepal, where women, children and resource- poor are vulnerable and marginalized. Of the total households surveyed by questionnaire for climate change risks and hazards, 30% were female respondents.



Thank you!



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