

Water Sanitation and Hygiene (WASH) services: Climate Change Mitigation and Adaptation practices in Nepal

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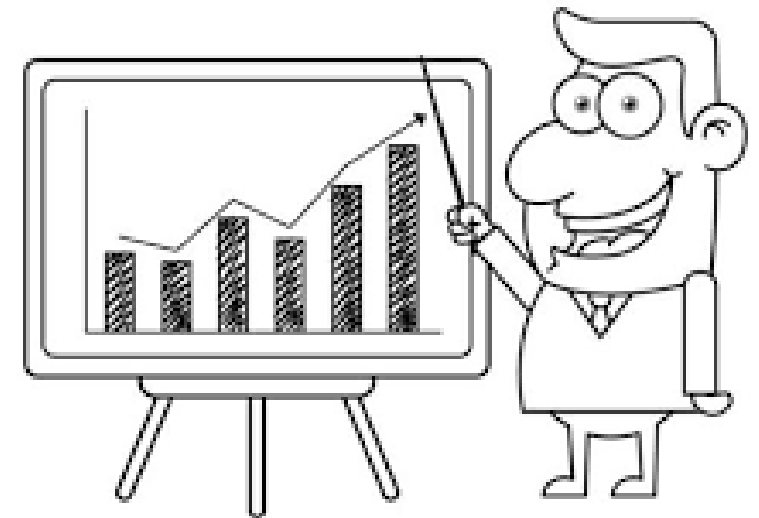
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Presentation Outline

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Background

Nepal - experience the negative effect of climate change;

❖ variability in temperature and precipitation, overbank flooding from snow-fed rivers.

❖ Affecting water access for people

(causing more severe droughts and floods. Increasing temperatures)

❖ Impacts on water cycle - when, where, and how much precipitation falls.; likely more severe weather events over time.

❖ Health risks consequences from sanitation systems generally are:

- ❑ increased risk of disease or illness from exposure to pathogens and hazardous substances through increased environmental contamination, and
- ❑ increased risk of disease or illness.

❖ Poor sanitation is linked to transmission of diarrhoeal diseases:

(cholera and dysentery, as well as typhoid, intestinal worm infections and polio)

❖ Sustainable availability of safe drinking water and hygienic sanitation

(risk unless water supply systems are resilient: current levels of climatic variability and future change)



Ensure healthy lives and promote well-being for all at all ages

Study Problem and Scope

- ❖ Geographically, hills of country are in-between snow clad Himalayas and downfallen roaring rivers, that passes through the down deep valley.

(Downstream community people are facing high scarcity of water)

- ❖ Springs are being dry up across the country reverse effects of rampant development such as the un-engineering way of construction of road, and damaging of side ponds (very big source of springs recharging, and also changing of rainfall patterns due to other climatic factors and activities)
- ❖ Functioning Water Supply and Sanitation (WSS) system – have problem with WASH system governance of service providers (lead to poor management of financial resources and sustainability)
- ❖ Poor Governance System, Poor Operation and Maintenance Management and Problem of participation (issue of Gender, Disability, Social Inclusion (GEDSI))



Study Objectives

- ❖ Study of impact of climate change on Water Sanitation and Hygiene (WASH) services and provide Mitigation and Adaptation practices in Nepal.
- ❖ To emphasize the impact of climate change on Water Sanitation and Hygiene (WASH) services, and provide Mitigation and Adaptation practices in Nepal.



Study Methods

Research method has been separated into two distinct areas:

1. Climate Change Impact on WASH services:

- A review of national documents of Climate Change Impact on WASH services across the country.
- Focus to look for the added value on climate resilient WASH system can provide for an area of interest.

2. Mitigation and Adaptation Practices of WASH services in Nepal



Study Findings

- ❖ Water Users and Sanitation Committee (WUSC) are involved in leadership roles in WASH system running at all levels of the decision making process.
- ❖ Poor Governance System
(Poor Operation and Maintenance Management and Poor inclusion and participation)
- ❖ Sources are drying up and less water available at water points.
- ❖ Women involvement is limited for WASH services implementation from Catchment to Consumer (C-to-C) chain of system
- ❖ Vulnerable - children are sent to carry water from long distances
- ❖ Exploitation and deteriorate of local natural resources; less and inadequate for the supply of water to the needy population.
- ❖ Less water means adverse effects on sanitation and hygiene at household and community.



Implementation of Climate Resilient Water Supply and Sanitation (WASH) System

1. Water Source Recharging

- ❖ Source Protection
- ❖ Plantation
- ❖ Establishment of Impounding Reservoir System
- ❖ Rainwater Harvesting and Recharging

2. Climate Resilient water Safety Plan (CR-WSP) implementation

- ❖ Ensure - Water quality, quantity, reliability and accessibility
- ❖ Ensure Operation and Maintenance Management
- ❖ Participation from Catchment to Consumer (C-to-C) Chain

3. Establishment of Governance System (Service Provider)

- ❖ Ensure Participation of all – Women (GEDSI)
- ❖ Awareness not to sent children for water collection.
- ❖ Awareness of Preservation of local resources
- ❖ Implementation of Total Sanitation and Citywide Inclusive Sanitation (Community, school and health services)

Major changes after implementation of Climate Resilient WASH

1. Got water nearer water points: 'no need to wake up too early, or wait in long lines, and reduced idle gossiping and conflicts' within community people.
2. Time saving from the carrying of water from long distance, can use for income generation activities.
3. Right to decide how to use their own earnings.
4. More time can be invested for the organizing meetings, decision-making and community development activities.
5. Can gain knowledge on health, hygiene and sanitation, group formation, literacy, construction, operation and maintenance (O&M) management of WASH services.
6. WASH facilities are also linked to school attendance and performance particularly among girls, safety and security of women and girls, and the economic and social development of communities.

Major changes..... (Contd.)

7. People are well aware on local resources, women's rights: roles and responsibilities in community development, welfare of family, and other institutions for example - agriculture extension, health posts etc.
8. School children have got safe water in nearer locations of all systems, which reduces the hardship of drinking water during the school time, they can use saved time for the study.
9. After getting water in nearer locations, it has been significantly reduced diseases associated with water and cold.
10. Uterine prolapse in women has been significantly reduced, as they are getting water in nearer location.

Conclusion

1. Climate Change adaptation and mitigation on WASH services, is a process of adjusting and to minimize negative impacts on water supply and sanitation related events.
 - ❖ Climate change affects water and sanitation system - has impacts on our health, the economic activities.
 - ❖ The water quality threatened by increases in wastewater and Faecal Sludge runoff, erosion and sedimentation, and algal blooms.
 - ❖ Protecting ecosystems may become more difficult as a result of warming air and water temperatures, and drought.
2. Climate Resilient Water Supply and Sanitation System should focus.



Recommendation and Scale up

1. Short, mid and long term mitigation and adaptation options of climate change on WASH services should be implemented.
2. The mitigation and adaptation indicators include various socio-economic, technological, policy and governance, and socio-cultural elements.
 - ❖ Climate Resilient Water Safety Plan (CR-WSP) should implement in all types WSS systems- to ensure sustainability and Operation and Maintenance Management.
 - ❖ It is recommended to apply CR-WSP tool in all water supply systems across the country.
 - ❖ Rural and Urban Water Supply and Sanitation Policy should be reviewed and include: Climate change considerations from catchment to consumer (c-to-c) of all types of system.
3. It is recommended establishment of Climate Resilient water supply and sanitation system that supports resilient WASH system in three ecological regions of Nepal. Later it can be scaled up across the country.



Question and Answer (Q&A)

Thank You

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