

# Climate Change and Current Initiatives in Nepal



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- Knowledge and skill development on climate change programming
- Global and regional initiatives on climate change
- RC/RC initiatives and priority on climate change
- Scope of climate change programming (adaptation and mitigation)
- Funding opportunities from external and internal sources
- Established linkage and knowledge/resources sharing mechanism



- Early monsoon
- Late monsoon
- More rain
- Less rain
- Erratic rain
- Prolonged season
- Shorter season



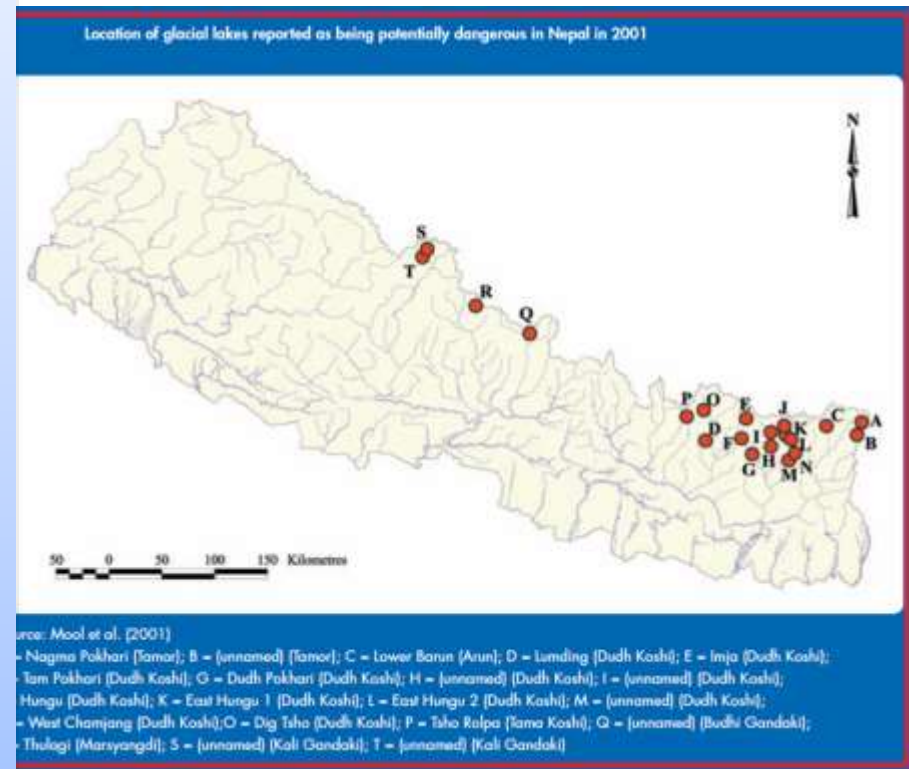
- Flood and landslide
- Drought
- Heat waves
- Soil erosion
- Water shortage
- Cold waves
- Misquote at high altitude
- Snow covered areas – now seen as black stone

- **Glacier movement, GLOFs**
- **Changes in snow pattern, snow avalanches**
- **Variation in temperature than average**
- **Floods and rainfall-induced landslides**



**Flooding in 2014, Surkhet, Nepal**

1. About 35 GLOF events in the past
2. About 25 GLOF events impacted Nepal
3. Among them 10 originated in Tibet
4. About 200 dangerous glacial lakes
5. 21 potentially dangerous glacial lakes in Nepal (ICIMOD 2011)





# Past GLOFS in NEPAL

## Dig Tsho GLOF (1985)

- Dig Tsho lake burst in 4 August 1985 due to ice avalanche from Langmoche hanging glacier
- The GLOF destroyed nearly complete Namche Hydropower Plant, 14 bridges, cultivated land and caused many casualties



SOURCE: WECS



## Chubung GLOF (1991)

- Chubung is located in Rolwaling Valley
- There was no large single lake
- The GLOF possibly was caused by chain outburst of several small ponds
- This GLOF caused damage to several houses in Beding and killed one person



## Tam Pokhari GLOF (1998)

- The lake burst due to ice avalanche from Sabai Glacier
- Two persons were killed, six bridges and agriculture land were destroyed



Flood wave from the Tam Pokhari GLOF (Photo: Lakpa Gøeljen Sherpa, 1998)

Sixteen GLOF events have been recorded, which were originated in Nepal. However, 24 if we consider the GLOF having source in Tibet (China) and affected in Nepal in downstream areas.

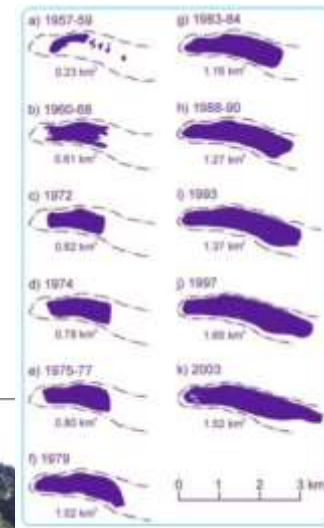




TSHO ROLPA



THULAGI



IMJA



LOWER BARUN



# 2017 Floods in Nepal

## Statistical Situation: Summary (As of August 27, 2017)

Dead	149
Missing	27
Injured	134
Displaced Families	92,216
Affected Families	352,744
<b>Houses Destroyed</b>	
Completely	64,997
Partially	144,973



Dang District, Nepal

## २६ जिल्ला बाढीमय

• कम्तीमा ७० को मृत्यु, ५० बेपत्ता • ३४ हजार घर डुबानमा

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मृतकका परिवारलाई  
दुई/दुई लाख

आचार्यजी (जन्म- १५ अक्टोबर १९१५, विष्णुपुरा, बल्लि-सिंहिया)  
पदोन्नति पंजाब राज्य, बल्लि-सिंहिया राज्य, नेपालको  
सन् २००० सालको १५ अक्टोबर दिनांकमा भएको ।

[illegible]

संस्कृत ३३१, पुनःपुनः एक प्रश्नपत्रावली  
यस्य विषयस्य यथा संस्कृत विज्ञानिभिः प्रेरित  
सिद्धः । इति प्रश्नस्य नवी विचारणा अत्रापि यथा  
संस्कृतस्य नवी विचारणा प्रेरितः । अत्रापि  
संस्कृतस्य प्रेरितस्य संस्कृतस्य विज्ञानिभिः  
प्रेरितः अत्रापि ।

[illegible]

कान्तिपुरद्वारा  
राहत कोष

[illegible][illegible][illegible]

अस्पताल अधित्तिरै जिप डुव्यो

प्रभाव केवल जागेकीसहित परिवारका सबै १ जनाको मृत्यु

1999

<sup>a</sup>  $\chi^2$  test results are in parentheses.

no legal liability against them.

...a world with a lot of...

1. *What is the main purpose of the study?*

... ..

Figure 1. Schematic diagram of the experimental setup.

1000

[illegible]

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# Mahakali River Flooding, Darchula: Far Western Nepal

Nepal Red Cross Society





# Landslide in Nepal



**Jure Landslide**



## Landslide displaces five families; entire village at risk

### POST REPORT

SINDHUPALCHOK, AUG 17

A landslide at Ghumthang Bimbu in Barhabise Municipality of Sindhupalchok district has displaced five families and put the entire village at risk.

Badi Thami, a landslide-displaced villager, on Thursday said his family have been left with nothing and that they are taking shelter in a shed owned by their neighbour.

The houses spared by the landslide are also in danger, because the area where the village is located has started to sink.

Bikram Thami, a local man, said they plan to relocate if they find a safer land nearby.

Landslide risk is also troubling around 50 families of Patali Village in Sindhupalchok.

Continuous landslide in the area has also posed the danger of obstructing the flow of Sunkoshi river.

The river blockade could trigger a massive flood in the areas downstream, including Barhabise Bazaar, said



■ Landslide threat looms over Ghumthang Bimbu Village in Barhabise Rural Municipality, Sindhupalchok.

POST PHOTO

Shambhu Bahadur Timalsina of Patali.

Sindhupalchok District Administration Office has identified Tatopani, Duguna,

Listikot, Phulpingkatti, Jhirpu, Hindi, Marming, Gati Sigarche, Chaku Bazaar, Patali and Ghumthang as landslide-prone areas.





- **Population movement**
- **Malnutrition**
- **Poverty**
- **Epidemics**
- **Civil wars (for source capture)**
- **Political shifting and conflicts**



- Rainfall is decreasing in places
- Water scarcity is rising (where long-term water management plans were made)
- Heavy rains are reported in areas that are not known for it
- Hailstorm (something that people did not know before)
- Shift in rainfall time is well recorded (planting time??)
- Ripening period for paddy has shortened
- Plants are migrating uphill (*Nilo gandhe*)
- Insects are increasing (bugs in *Utis*)
- Fungal diseases (citrus plants)
- Small snails replaced by large ones (valleys in middle hills)



- Institutional structure
- Nepal participation in CC regime
- Ongoing and completed initiatives
- Guidelines/Standards

- 1980s - The GON started activities related to environmental management in early at the project level
- 1995 - Establishment of the Ministry of Population and Environment
- Establishment of Environmental Protection Council (EPC)
- National development plans, policies, laws and guidelines in favor of biodiversity conservation and environment protection
- 1996 – Environment Protection Act
- Nov 1996 – Alternative Energy Promotion Centre (AEPC)
- 1997 – Environment Protection Rules
- 2003 – Sustainable Development Agenda
- 2007 – 25 member Climate Change Council under the Prime Minister
- 2009 - Established a separate Ministry of Environment
- The Government has also established the climate change Management Division
- Nepal is chaired the LDCs for 2013-2014



## 1. Interim Constitution of Nepal (2007)

- Article 35(6) proclaims that the state shall make necessary arrangements to keep environment clean
- Article(16) Rights regarding environment and health
- 16 (1) Every person has the right to live in a clean environment.

## 2. Legal Aspect: EPA and EPR, 1997



## UNFCCC

- Text adopted: 9 May 1992 at New York
- Signature: 12 June 1992 during Rio Earth Summit
- Ratification: 2 May 1994
- Entry into force in Nepal: 31 July 1994
- First Initial National Communication Report, July 2004 and shared with Parties
- Second National Communication- in progress

## Kyoto Protocol

- Text adopted: 11 December 1997 in Kyoto
- Deposition of instrument of Accession: 16 Sept. 2005
- Entry into force (global) 16 February 2005; and Nepal: 14 Dec. 2005
- CDM/DNA
- MoSTE to function as DNA for CDM activities
- MoSTE to function as NIE for Adaptation Fund

- **Climate Change Council (CCC)**

A high-level coordinating body constituted on 23 July 2009  
Chair-Rt Honorable Prime Minister

- **Climate Change Coordination Committee (CCCC)**

A coordination committee for implementing climate change projects

Chair – Hon Minister, **Ministry of Population and Environment (MoPE)**

- **Multi-stakeholder Coordination Committee Initiative on Climate Change (MCCICC)**

Coordinate among different climate change programmes and projects

Chair-Secretary, MoPE



# NRCS Initiatives



- Declaration at 39<sup>th</sup> Central Assembly:
  - Putting climate change on top agenda
- NRCS 6<sup>th</sup> Development Plan
  - ***"Strategic aim 1: Save lives, protect livelihood, strengthen recovery from disaster and crisis"***
- Disaster Management Strategic Framework 2010 – 2015
  - ***under strategic direction 1 action area b. "Sector specific detailed assessments and analysis will be carried out and the assessment findings and recommendation made by other stakeholders will be applied for the planning"***
- Climate Change Adaptation Framework
- Developed and piloted Climate Change smart VCA
- Piloting CCA integrated DRR program

- Preparedness for Climate Change Program
  - National level sensitization workshop
  - development of background document on climate change
  - Action Plan (DMSF 2010 - 2015)
  - Development of IEC material
  - District Level Orientation on Climate Change
  - Sensitization Workshop on climate change
- J/YRC
- Advocacy
- Attending various forum



## जलवायु परिवर्तन (Climate Change)

### जलवायु परिवर्तन भनेको ?

एउटा निश्चित समयको अन्तरालमा हुने वातावरणीय परिवर्तन हो । जुन प्राकृतिक प्रक्रिया एवं मानवीय क्रियाकलापबाट निर्दिष्ट हुन्छ । जसमा मानवीय क्रियाकलापको गहिरो सम्बन्ध रहेको हुन्छ । विशेषतः वनजङ्गल विनास, अव्यवस्थित कृषि प्रणाली, प्राकृतिक इन्धनको प्रचुर प्रयोग आदि जलवायु परिवर्तनका प्रमुख कारणहरू हुन् ।



### असरहरू

- > पहाडबाट निस्कने पानीको मुहानहरू क्रमशः सुक्दै जानु र खडेरी एवं मरुभूमीमा परिणत हुँदै जानु ,
- > हिमालको हिउँ बढि पमिलिएर हिमाल कालो देखिन थाल्नु ,
- > खेतबारीमा लगाएको बालीनालीमा विभिन्न रोगहरू देखा पर्नु ,
- > तापक्रममा निरन्तर वृद्धि हुनु ,
- > अतिवृष्टि तथा अनावृष्टि हुनु
- > वेमौसममा फलफूल पाक्नु ,
- > महामारी फैलिनु ,
- > खडेरी तथा अनिकाल बढ्दै जानु आदि ।

### कारणहरू

- > प्राकृतिक स्रोत साधनको अधिकतम प्रयोग हुनु वन विनास गर्नु,
- > उत्पादनका लागि खेतबारीमा विभिन्न प्रकारका रासायनिक मल तथा विषादीको प्रयोग गर्नु,
- > प्राकृतिक इन्धन (कोइला, म्याँस, पेट्रोलियम पदार्थ) को अधिकतम प्रयोग हुनु,
- > अव्यवस्थित रूपमा विकासका पूर्वाधारहरू र उद्योग कलकार खाना निर्माण एवं सञ्चालन गर्नु ,



### असर कम गर्नका लागि अपनाउनुपर्ने उपायहरू

- > वन संरक्षण तथा वृक्षारोपण गर्ने ,
- > दीर्घकालिन रूपमा विकासका पूर्वाधारहरूको योजना निर्माण तथा कार्यान्वयन गर्ने,
- > वेकल्पिक उर्जा (जस्तै गोबर म्याँस तथा आधुनिक चुल्हो) को प्रयोग गर्ने,
- > वैज्ञानिक कृषि प्रणाली लागू गर्ने,
- > उद्योग कलकारखानाबाट निस्कने धुँवाँलाई कम तथा व्यवस्थित गर्ने,
- > फोहोर व्यवस्थापनमा वैज्ञानिक पद्धति अवलम्बन गर्ने,
- > सामुदायिक छलफल तथा जनचेतना एवं वहस/पैरवी सञ्चालन गर्ने ।

जलवायु परिवर्तनमा सबैको हात, शुरु मरो बहस र पैरवी पूर्वतयारीका साथ



# Newsletter

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## 39<sup>th</sup> Central Assembly put climate change and Strategy 2020 on top two agenda

Nepal Red Cross Society (NRCS) completed its two-day conference of the 39<sup>th</sup> Central Assembly in Parsa district on 19 April.

"There are challenges ahead of us but we do have hope our work would benefit to the communities for their capacity building and resilience," said Sanjeev Thapa, NRCS Chairman.

Dev Ratna Dhakhwa, Secretary General, presented a progress report of the year 2009 and 2010 and programme for the year 2010 and 2011. Similarly, Bhakta Khawas, Treasurer, presented financial report and budget. Both were approved by the Assembly. The budget of the year 2010 to 2011 totals 580 million rupees (approx. 8.2 million USD).

The Central Assembly completed with four point resolution: i) reducing the impact of climate change, promoting humanitarian diplomacy and promoting image of NRCS; ii) disseminating and adopting Strategy 2020 of the International Federation of the RCRC in designing local strategies; iii) developing the institutional capacity through resource mobilization, coordination, mutual cooperation and planned programmes,



*NRCS Chairman Sanjeev Thapa addressing the Central Assembly at Birgunj, Parsa*

iv) and making Central Assembly procedure further effective for better results.

The Central Assembly was attended by 350 delegates from 72 of 75 districts, Central Executive Committee members, country delegate of Belgium RC/FL, Federation Country Representative, the representative of the ICRC in Nepal, distinguished and illustrious members, NRCS staff and volunteers, local political leaders and media persons. The programme was hosted by Parsa district chapter in cooperation with the national headquarters.



## Villagers have noticed changes



Wild pigs in the forest now have their young earlier in the year.



The days are hotter and some trees now flower twice a year.



Some types of rice and cucumber will not grow where they used to.



## ***What and how can we do about it ?***

- **Interagency Collaboration**
- **Mainstreaming (Programmatic, Planning, Implementation)**
- **Policy reform**
- **Funding collaboration**
- **Investment on climate change adaptation for future prospective**

# Thank You

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