

Adaptation Actions in Systems: *The Hindu-Kush Himalayan Region*



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Forum
Incheon, Republic of Korea***

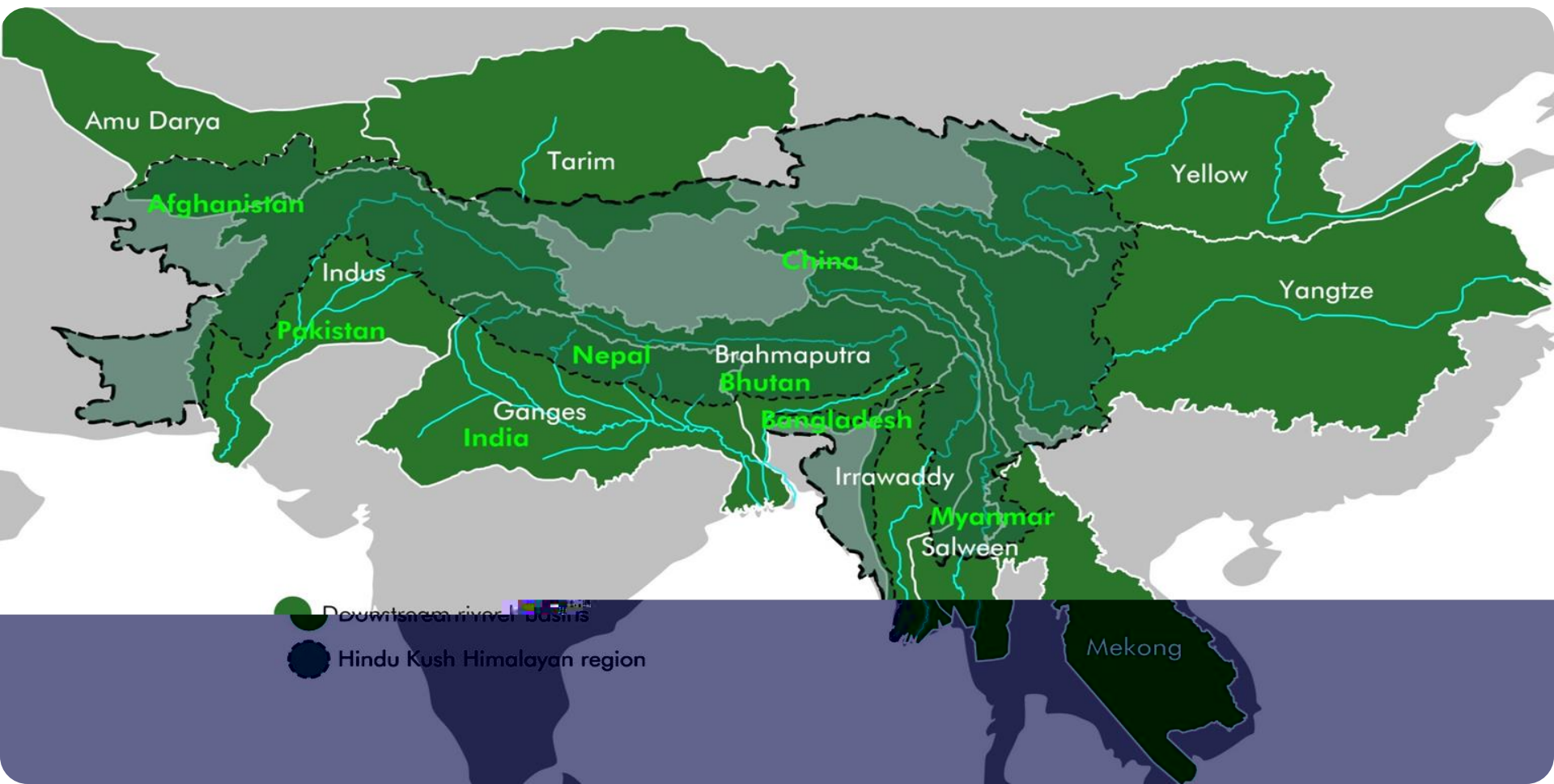
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Serving the eight countries of the Hindu Kush Himalayas

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Intergovernmental learning and knowledge centre



Responding to the challenges of global change

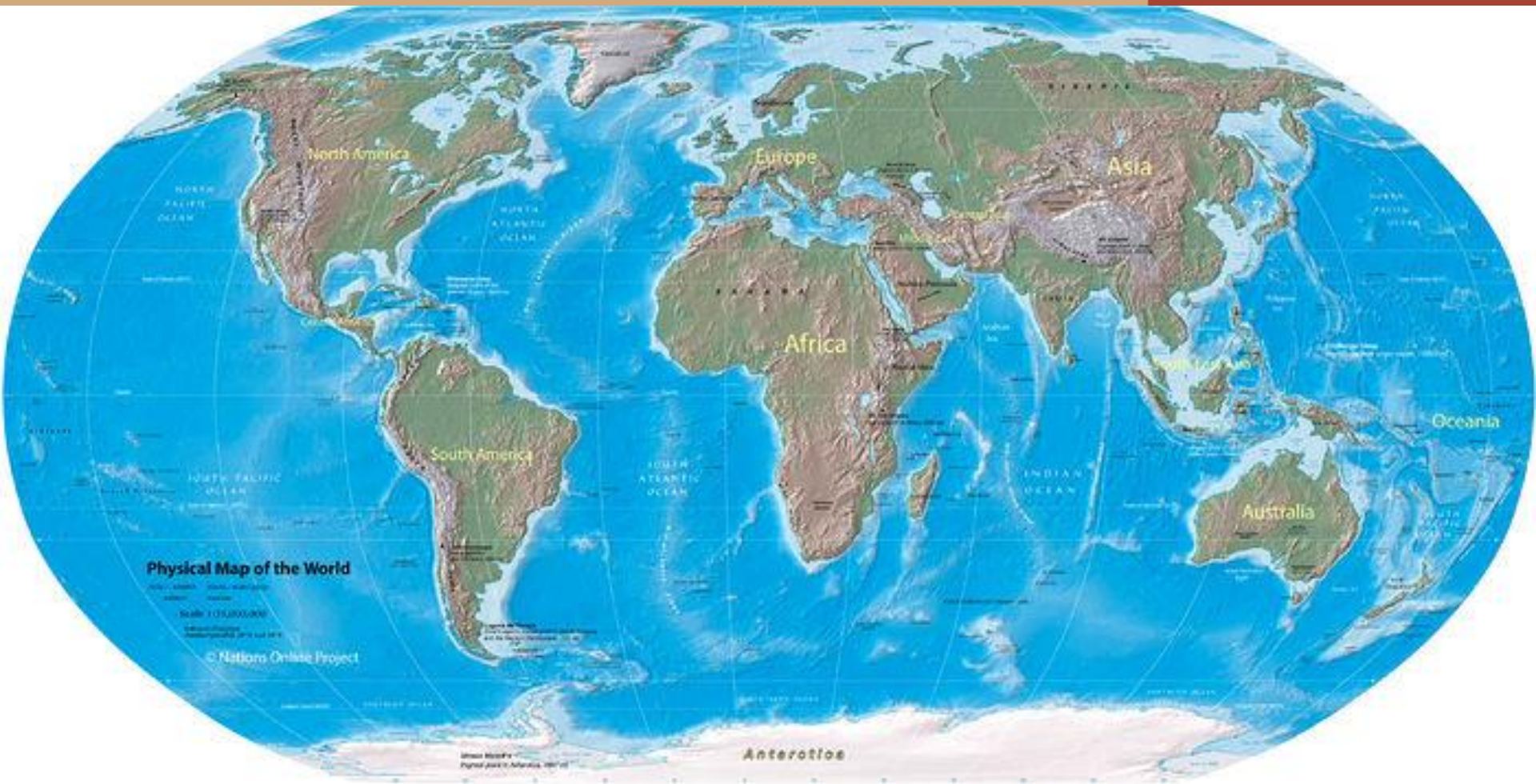
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Enhancing
resilience and
supporting
adaptation of
mountain
communities



Importance of Mountain Regions

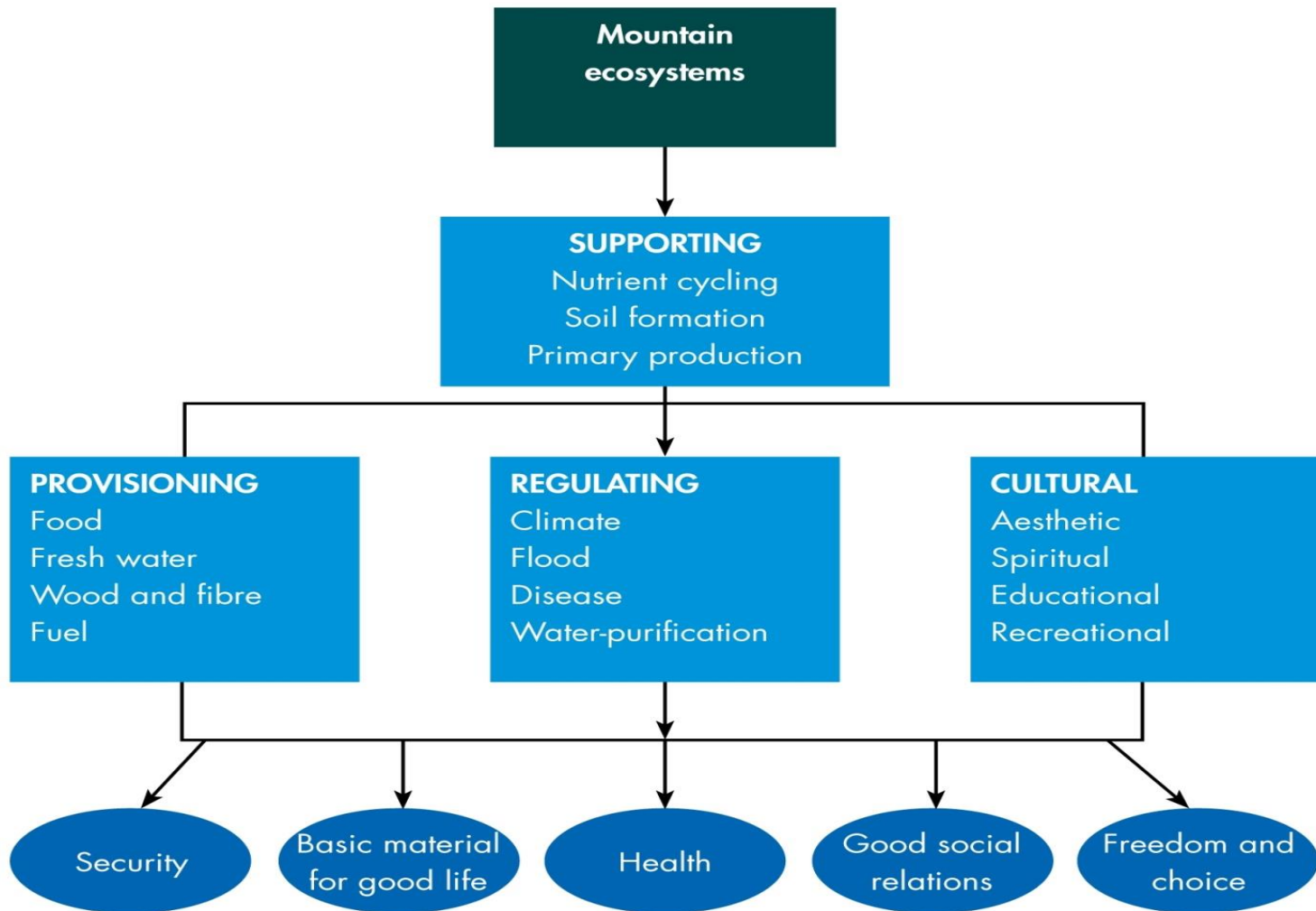


Mountains occupy **24%** of global land surface; home to **12%** population; About **10%** of world's population directly depend on the mountains for their livelihoods; **40%** indirectly depend on water, hydroelectricity, timber, biodiversity and niche products, mineral resources, recreation, and flood control

Mountain ecosystem services and human well-being

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Upstream-downstream linkage

SERVICES

WELLBEING

Mountains: The World's Water Towers

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Vital source of
water, food,
energy, forests,
biodiversity...

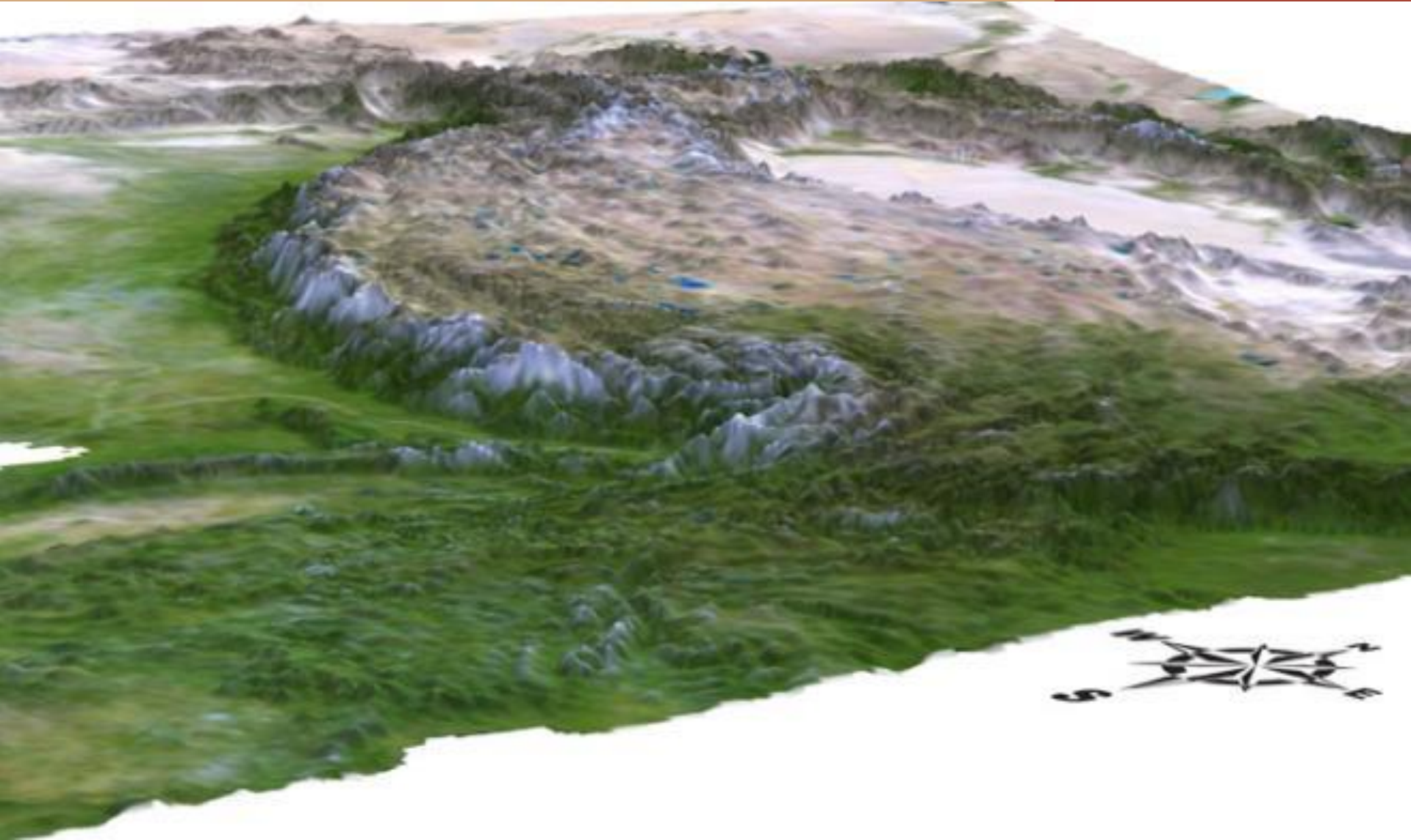
For people in the
mountains and
downstream



The Himalaya: The Third Pole

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Ten major river basins of Asia

**210 million
people in the
HKH**

**1.3 billion
people
downstream**

The HKH Region

...has a wide variety of ecosystems and a rich cultural diversity (repository of biodiversity and traditional knowledge)

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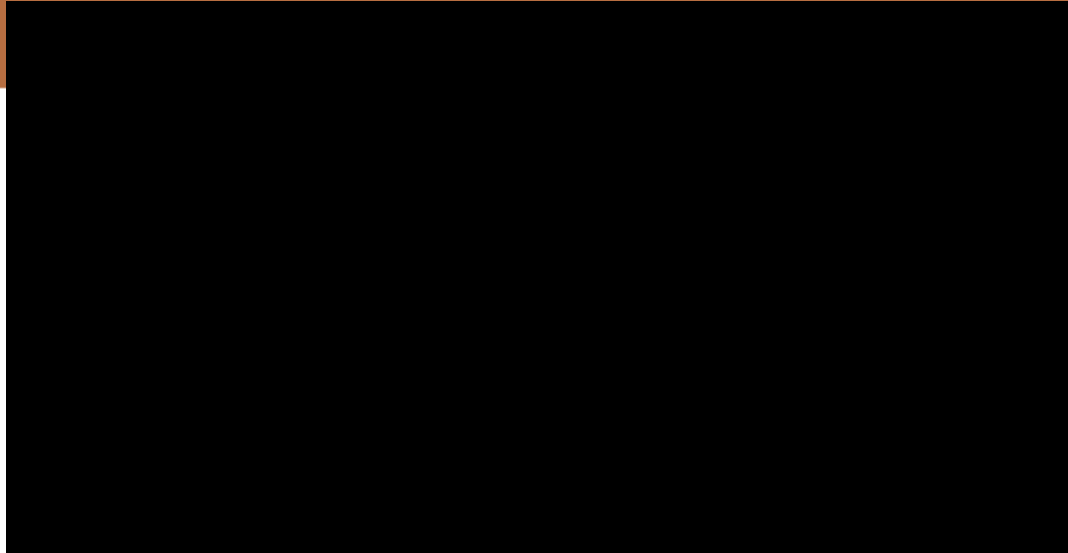
ICI

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Snow cover over parts of the Himalaya has been decreasing...

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1973
(photo ICIMOD archive)



2011
(photo Panday)

Mt. Machhapuchhare, Nepal, 6993 meters

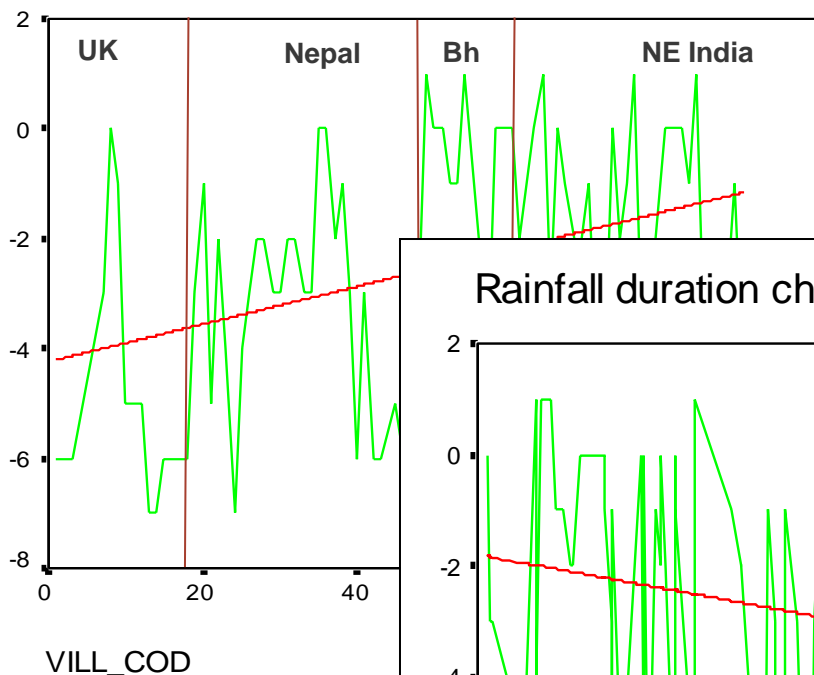
Changing patterns of the monsoon...



Changes in rainfall (intensity, duration, erratic, extremes) water availability, disaster frequency

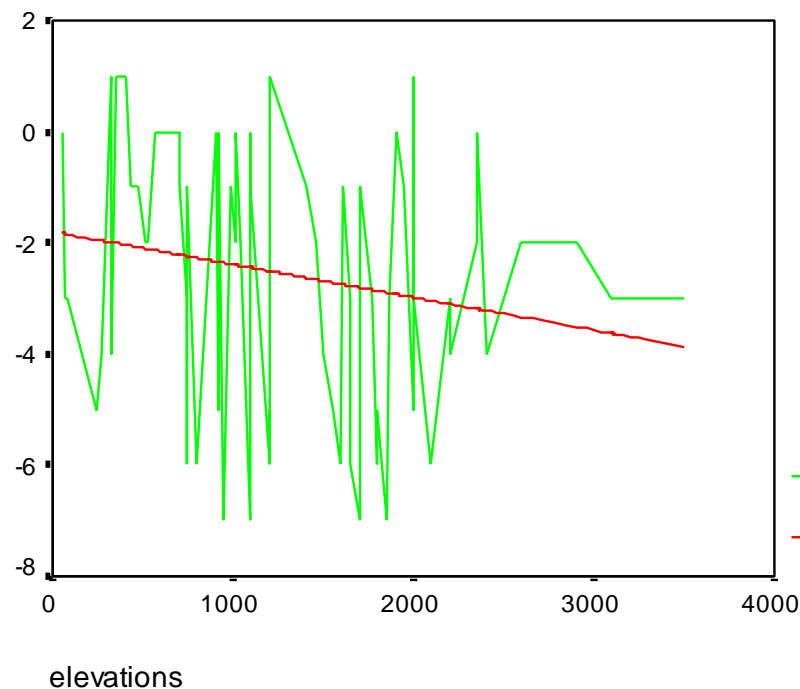
Community perceptions: Trends of change in annual duration of rainfall & dryspells (west to east)

Rainfall duration change

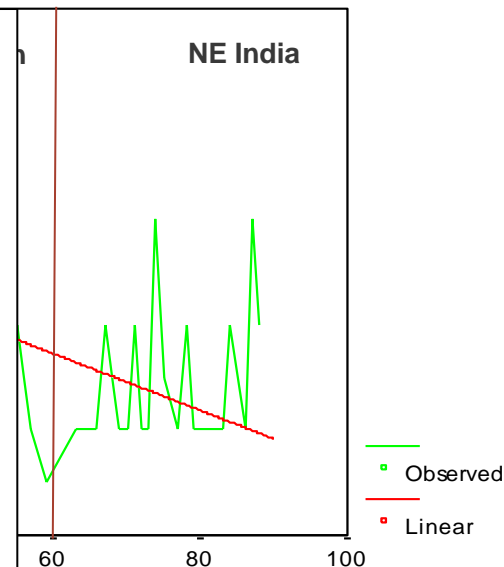


Dryspell duration change

Rainfall duration change



NE India



(PRA
documentation:
AdaptHimal,2010)

Impact of Climate Change - Some Examples from Southern Himalayas

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**Increased
scarcity of
drinking water**



**Natural springs
and water sources
drying up**



**Loss of productive
lands**



**Habitat loss for wildlife and productive lands
for domestic animals**

**Increased
incidence of forest
fires**



Impact of Climate Change - Water Induced Disasters - Downstream

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**Assam, North
East India –
flood impact
(sand casting)**



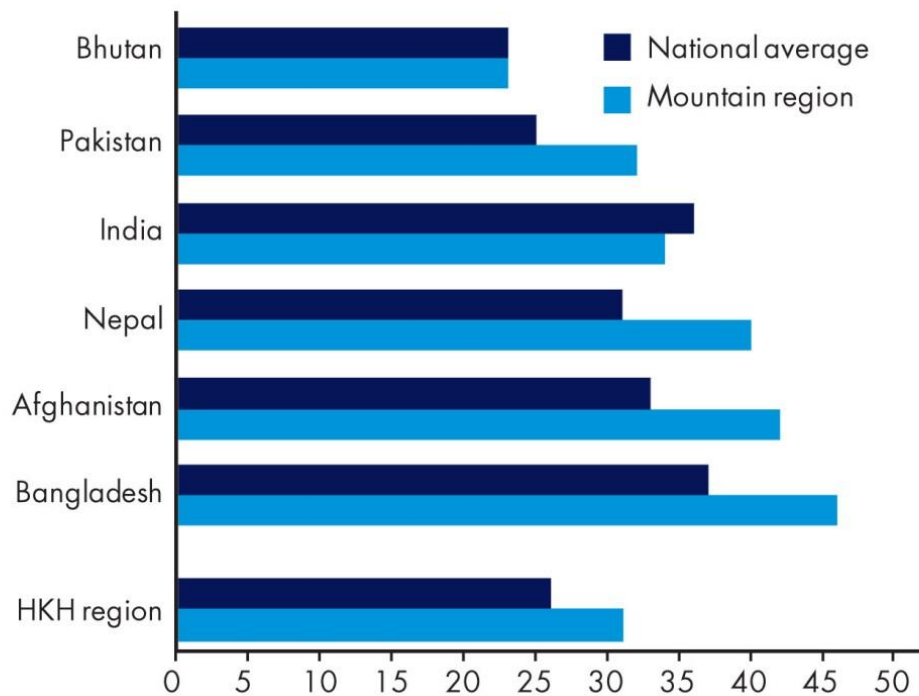
How to adapt to a changing ecological and social environment?

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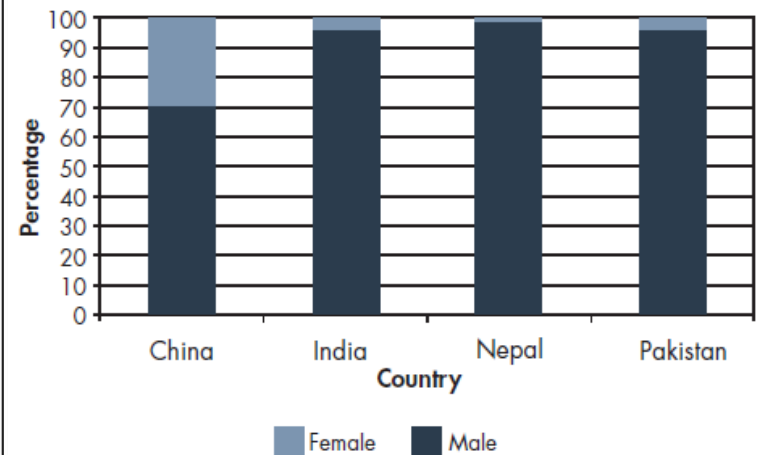
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High Poverty, Gendered Migration and increased 'Feminisation' (increased burden of management)

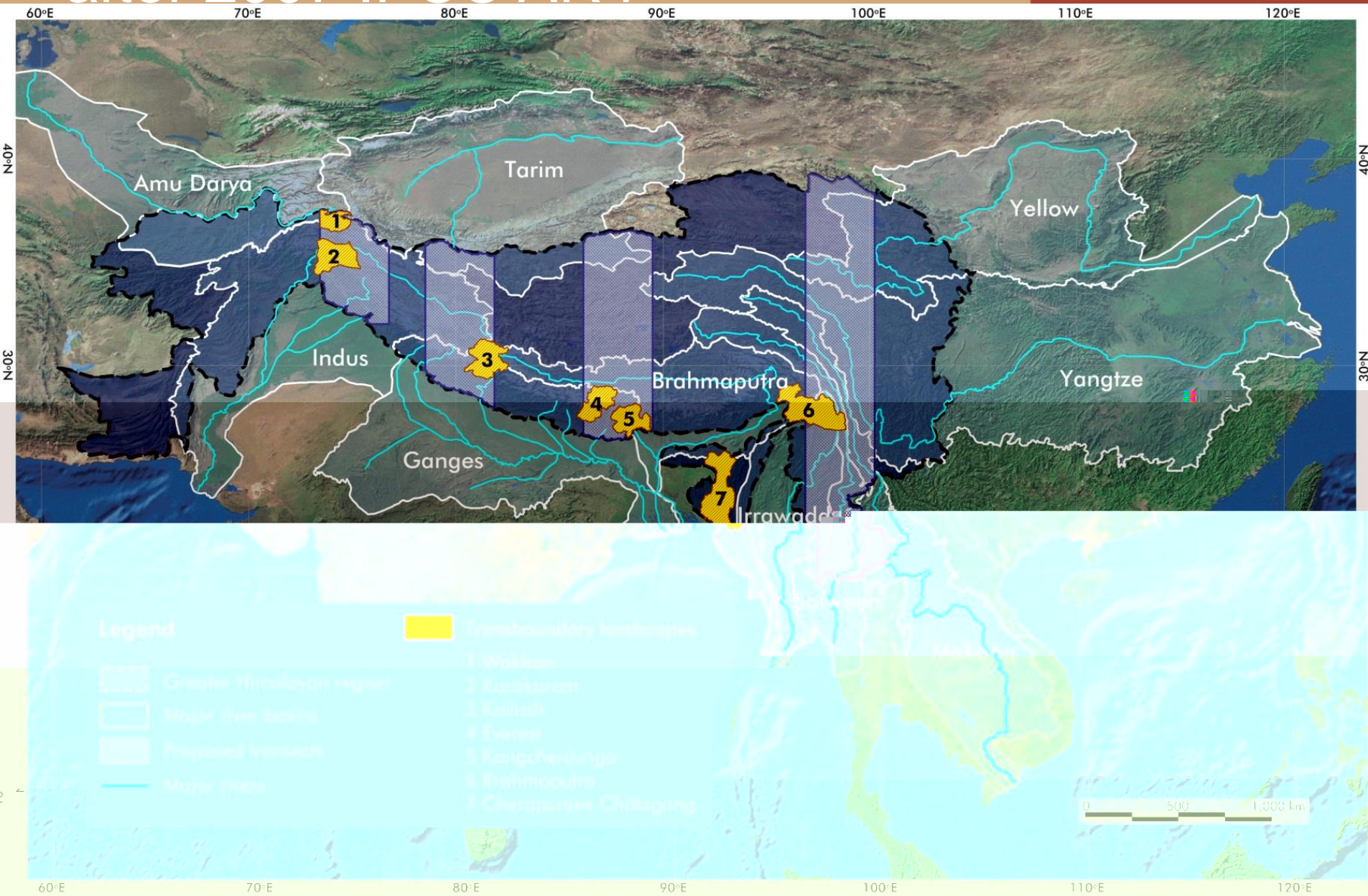


Source: Hunzai, K; Gerlitz, JY; Hoermann, B (2011) *Understanding mountain poverty in the Hindu Kush-Himalayas – Regional report for Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan*. Kathmandu: ICIMOD

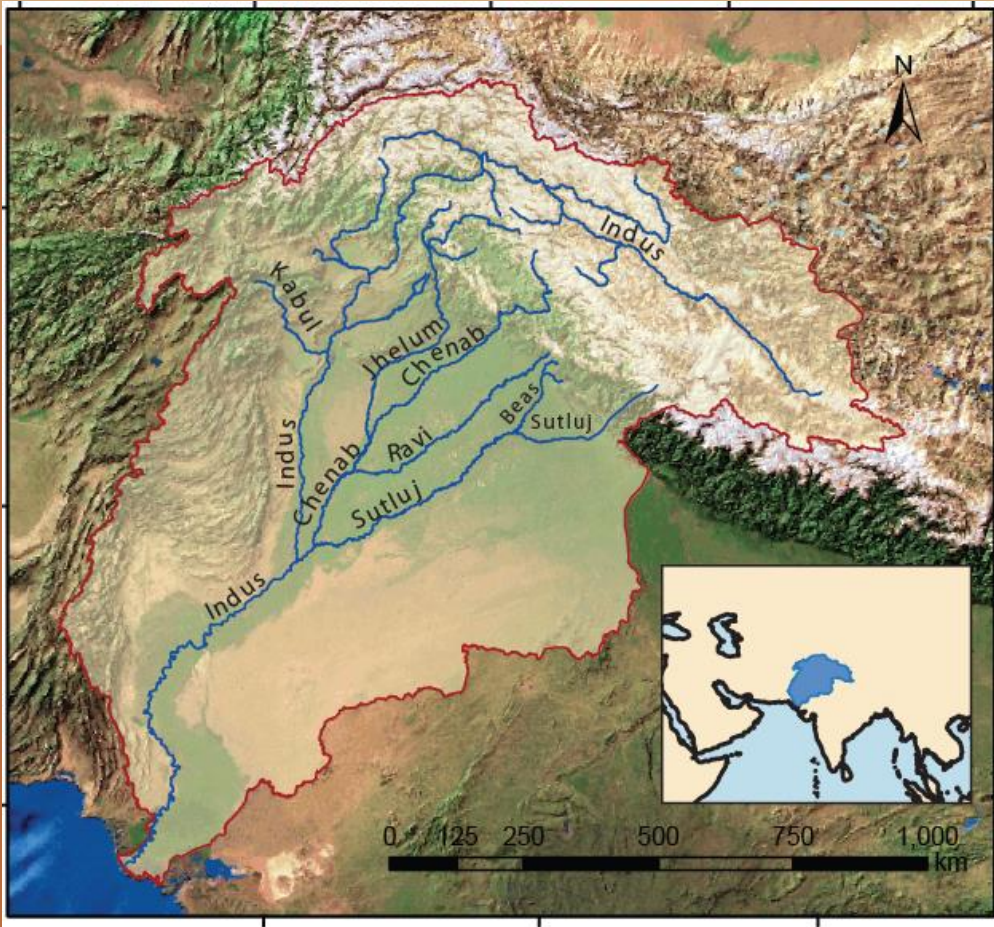


Regional Transboundary Approaches – after 2007 IPCC AR4

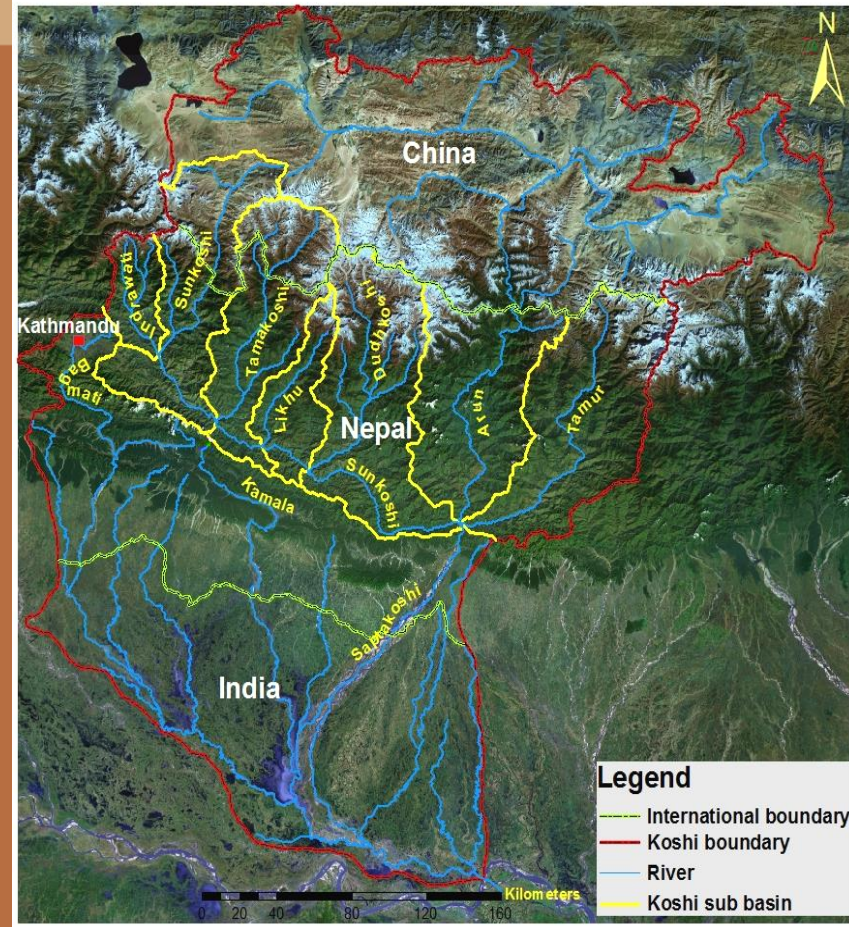
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River Basin Management – Linking Upstream and Downstream



Indus Basin



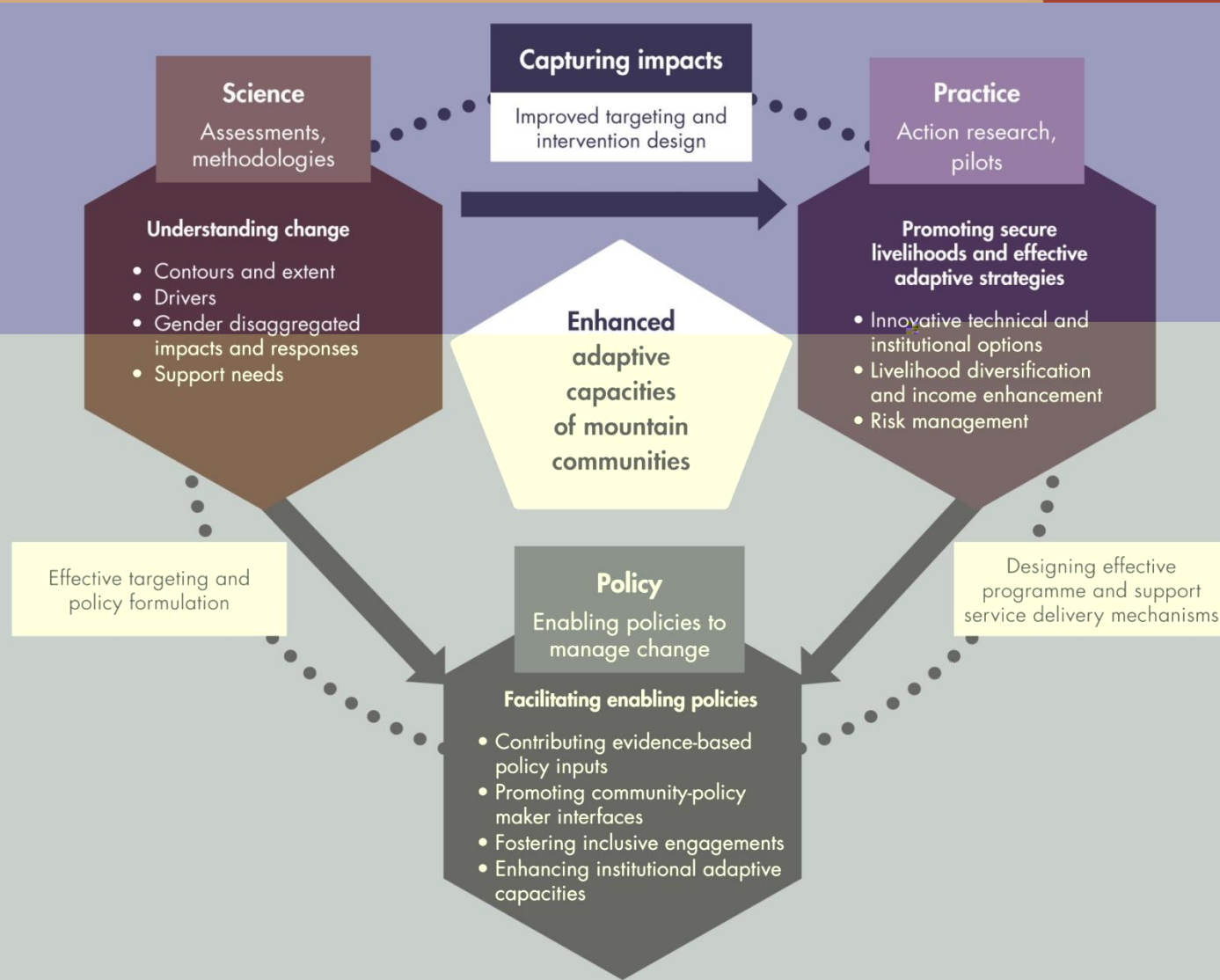
Kosi Basin

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- Addressing scientific uncertainties
- Regional cooperation framework for research
- Capacity building and information sharing

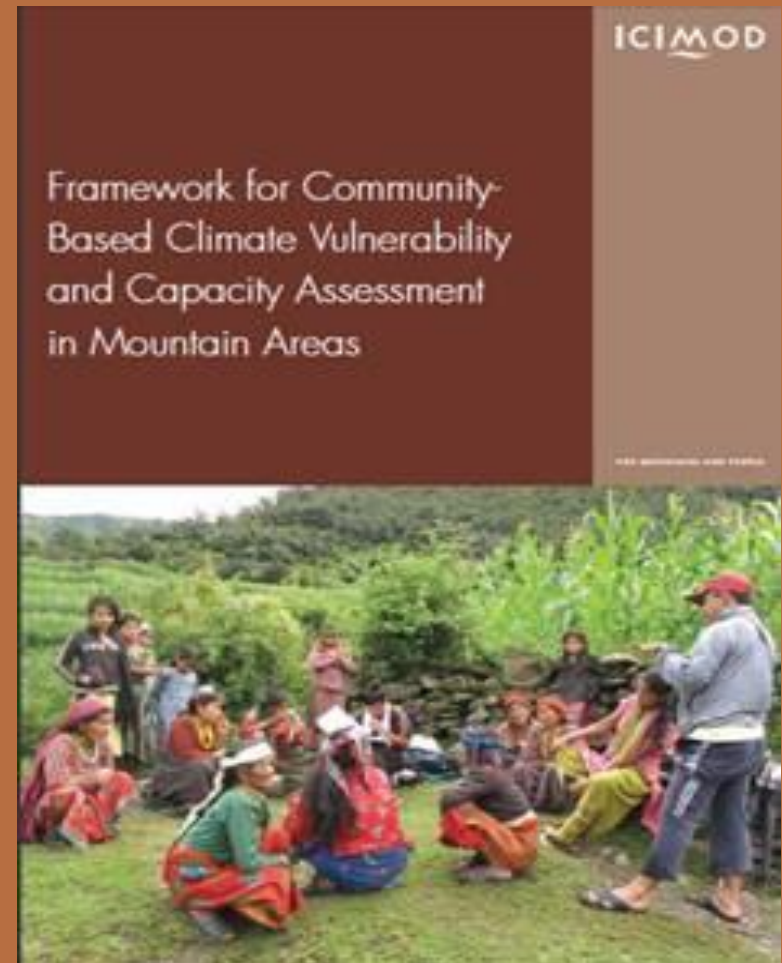
Regional Programme on Adaptation to Change: Understanding Change to shape Action and Policy



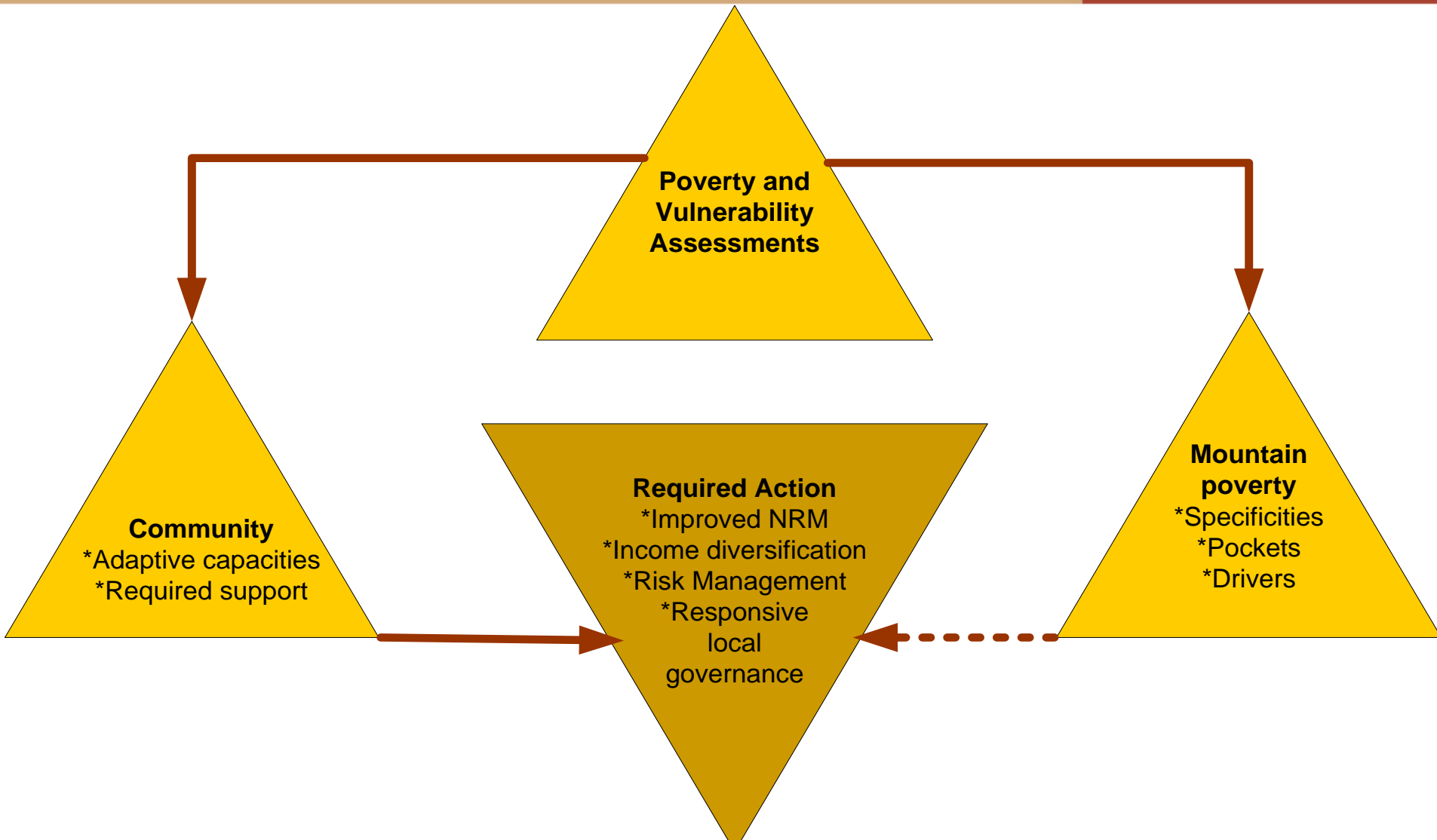
Managing Change: Assessing resource dependency, responses and needs

- Community perceptions
 - Impacts
 - Resource dependency
 - Responses (capacities)
 - Institutional support needs

(AdaptHimal, Too Much Too Little Water, Himali....IFAD, SIDA, ADB, MacArthur...)



Knowledge to Practice: Shaping development interventions (Action Research pilots)



Livelihood Diversification Options: Building on past experiences from the region

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Income enhancement and
diversification through
Value Chain approaches:

- On-farm and non-farm opportunities
- Market linkages
- Access to commodity pricing
- Support services
- Extension and technical services




'Bridging the Last Mile' : Technical backstopping (veterinary healthcare) Garo Hills, India

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JINGIADA DA KABA AI


- Ia ka jingai tika dei ban ai tang da ki Doktor (Vety) lane ki VFA
- Sngewbha shim jingiarap na ki Dispensary mrad kiba jan tam ia phi, lane na ki hospital mrad lane ki jaka ba ai jingiarap na ki bynta ki jingdonkam jong ki jingri jongphi.

Kiei kiei kaba ngi dei ban leh ha kaba iadei bad ka jingai tika:

- Ym dei ban ai tika ha ka por ba ki syiar ki pang
- Dei ban ai tika ia ki syiar kiba khlain bad ba shait
- Wat nym khleh lang ia ki tika. Ai la kajong kajong.
- Wat nym ai dawai (khamtam ki antibiotic) ha ka por ba phi ai tika.
- Ki Broiler ki donkam ka jingshah kaba kham lyngkot na kata ka daw lah ban ai tang iwei ne ar tylli ki jait tika ban sumar ia ki.
- Ia ki syiar kha pylleng donkam ban ai palat ia ka artylli ki dawai tika, namar ki donkam ka por jingiada kaba kham bun.

Jait syiar	Tika	Rta (da ki sngi)	Rukom ban ai tika	Ka jingthaw
Broilers	Marek's disease	1 sngi	Ha snieh doh	0.2 ml
	Lasota vaccine	5-7 sngi	Khmat	1 drop
	IBD vaccine	14 sngi	Khmat	1 drop
Layers	Marek's disease	1 sngi	Ha snieh doh	0.2ml
	Lasota	5-7 sngi	Khmat	1drop
	IBD	14 sngi	Khmat	1drop
	Fowl pox	4-5 taiew	Ha khap thapniang	
	R2B	6-8 taiew	Umdih	
Kuroiler	Fowl pox	14-15 taiew	Ha khap thapniang	
	R2B	16-20 taiew	Ha doh kshah	0.5ml
	Marek's disease v	1 sngi	Ha snieh doh	0.2
Kuroiler	Lasota v	5-7 sngi	Khmat	1dp
	IBD v	10-14 sngi	Khmat	1- 2dp
	Fowl pox	6-8 taiew	Ha khap thapniang	
	R2B v	8 taiew shaneng	Dohkshah	1ml

National Institute of Veterinary Research and Training
 Government of India
 Ministry of Agriculture and Farmers Welfare
 Department of Animal Husbandry and Fisheries
 National Institute of Veterinary Research and Training
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 Ministry of Agriculture and Farmers Welfare
 Department of Animal Husbandry and Fisheries



Promotion of Community Resource Persons (CRPs), linked to veterinary clinics of department

Basic and preventive (vaccinations) healthcare, extension material

Complimented with promotion of improved feed and forage from local resources

Access to Commodity Prices and Extension Information through ICT Dailekh, Nepal

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- Updated information on commodity prices
- Providing a 'level playing field' for producers
- Increasing their bargaining power, hence returns.
- Access to technical information for extension using SMS



SMS **एस एम् एस (SMS) कृषि सूचना सेवा**

५६५६ मा एस एम् एस (SMS) पठाई
आफ्नैलाई फाइदाको सूचना सुरुन प्राप्त गर्नुहोस् ।

संसारका कोषको एस एम् एस (SMS) बाट सूचना प्राप्त गर्न सकिने प्रविधि सरल र सहज छ । यस प्रविधिको माध्यमबाट किसान र उत्पादकहरूले बजारको, कृषि र पशुपालनको बारेमा सूचना प्राप्त गर्न सक्छन् । यस प्रविधिको माध्यमबाट किसान र उत्पादकहरूले बजारको, कृषि र पशुपालनको बारेमा सूचना प्राप्त गर्न सक्छन् । यस प्रविधिको माध्यमबाट किसान र उत्पादकहरूले बजारको, कृषि र पशुपालनको बारेमा सूचना प्राप्त गर्न सक्छन् ।

एस एम् एस (SMS) पठाउने तरिका

- आफ्नो मोबाइल कोषको Message सेन्ड गर्नुहोस् ।
- Create Message फिन्डिङ र नम्बरबाट Text Message फिन्डिङ ।
- यदि फाइदा लाग्ने रोग, कोषको तल्लोको बजार जानकारी चाहिएमा ध्यान प्याटर्न lac.ट्याप गर्नुहोस् ।
- जसरी २५५२ मा आफ्नो Message Send गर्नुहोस् ।
- Message फाइलको माध्यमबाट फाइदा लाग्ने रोग, कोषको तल्लोको बजार जानकारी प्राप्त गर्नुहोस् ।

एस एम् एस (SMS) सेन्डिङको लागि आवश्यक नम्बर फाइलको बजार गर्नुहोस् ।

यस प्रविधिको फाइदाहरू

- सरल र सहज तरीकाले बजारको सूचना प्राप्त गर्न सकिने ।
- यदि रोग लाग्नु रोग र अन्य प्रविधिको माध्यमबाट सूचना प्राप्त गर्न सकिने ।
- यस प्रविधिको माध्यमबाट बजारको तल्लोको बजार जानकारी प्राप्त गर्न सकिने ।
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यो सेवा निशुल्क प्रविधिको माध्यमबाट एस एम् एस (SMS) पठाउने तरिका

ICIMOD PRACTICAL ACTION

Managing Change: Perspective Land Use Mapping Garo Hills, India

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Managing land use change in shifting cultivation areas

- Accommodating livelihood and income needs
- Participatory resource management at the landscape level
- Promoting community management and conservation of forests, water, and ecosystem services



Improved Access to Information Uttarakhand, India

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The screenshot shows the homepage of the 'सामुदायिक सूचना केन्द्र राजगढ़ी' (Community Information Centre Rajgadi). The header includes a globe logo, the center's name in Hindi, and its mission: 'सप्तऋषि कृषि स्वावत सहकारिता राजगढ़ी विकासखण्ड - बीर्गोवा, जलपट उत्तरकाशी उत्तराखण्ड प्रदेश'. Logos for 'सहयोग' (Sahayog), 'NISC', 'ICIMOD', and 'राजीव गांधी राष्ट्रीय ग्रामीण विकास कार्यक्रम' (Rajiv Gandhi National Rural Development Programme) are also present. A date stamp reads 'November 25, 2011'. The main content area is divided into two columns. The left column, titled 'सरकार की योजनाएं (Government Schemes)', lists various schemes like 'प्रधानमंत्री स्वच्छता योजना', 'प्रधानमंत्री कृषि सिंचन योजना', 'प्रधानमंत्री ग्रामीण सड़क योजना', 'प्रधानमंत्री ग्रामीण प्रशिक्षण योजना', 'प्रधानमंत्री ग्रामीण स्वास्थ्य योजना', and 'प्रधानमंत्री ग्रामीण शिक्षा योजना'. The right column, titled 'सामुदायिक सूचना केन्द्र ध्येय' (Community Information Centre Objectives), lists three points: 1. 'ग्राहकों को सूचना का प्रभावी प्रसार करना।' (Effective dissemination of information to customers.) 2. 'स्थानीय समाजों को बेहतर उपयोग के लिए तकनीकी एवं जानकारी का प्रसार।' (Dissemination of technical and knowledge for better use by local communities.) 3. 'लोगों को ग्राम जागतिक के विकासों एवं कार्यक्रमों के प्रति जागरूक करना।' (Creating awareness among people about the development and programs of the village community.) To the right of the objectives, there is a section titled 'योजनाएं' (Schemes) featuring logos for 'International Bank for Reconstruction and Development', 'State Bank of India', and 'LIC'.

- Information on government/bank/insurance schemes and programmes
- Guidelines for application; forms, contact details
- At SHG Federation offices in pilot sites
- Online www.infodev.in/
- Sustainability: Advertisements from agencies

Building capacities to manage risks: Flood Preparedness - Early Warning Systems

- Participatory early warning system
- WiFi link for relay warning downstream – communities, DRR system
- Complimented with Flexible Planning for enhancing adaptation to flood-related hazard management



Capacity Enhancement: Enhancing community and institutional capacities

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- Need Assessments for capacity enhancement
- Institutional capacity enhancement
 - Local institutions
 - National institutions
 - Partner institutions
- Support to strategic partners for capacity enhancement
- Leadership skills enhancement for women professionals



Bridging the Information Gap: Consultative policy engagement for strengthening local adaptation

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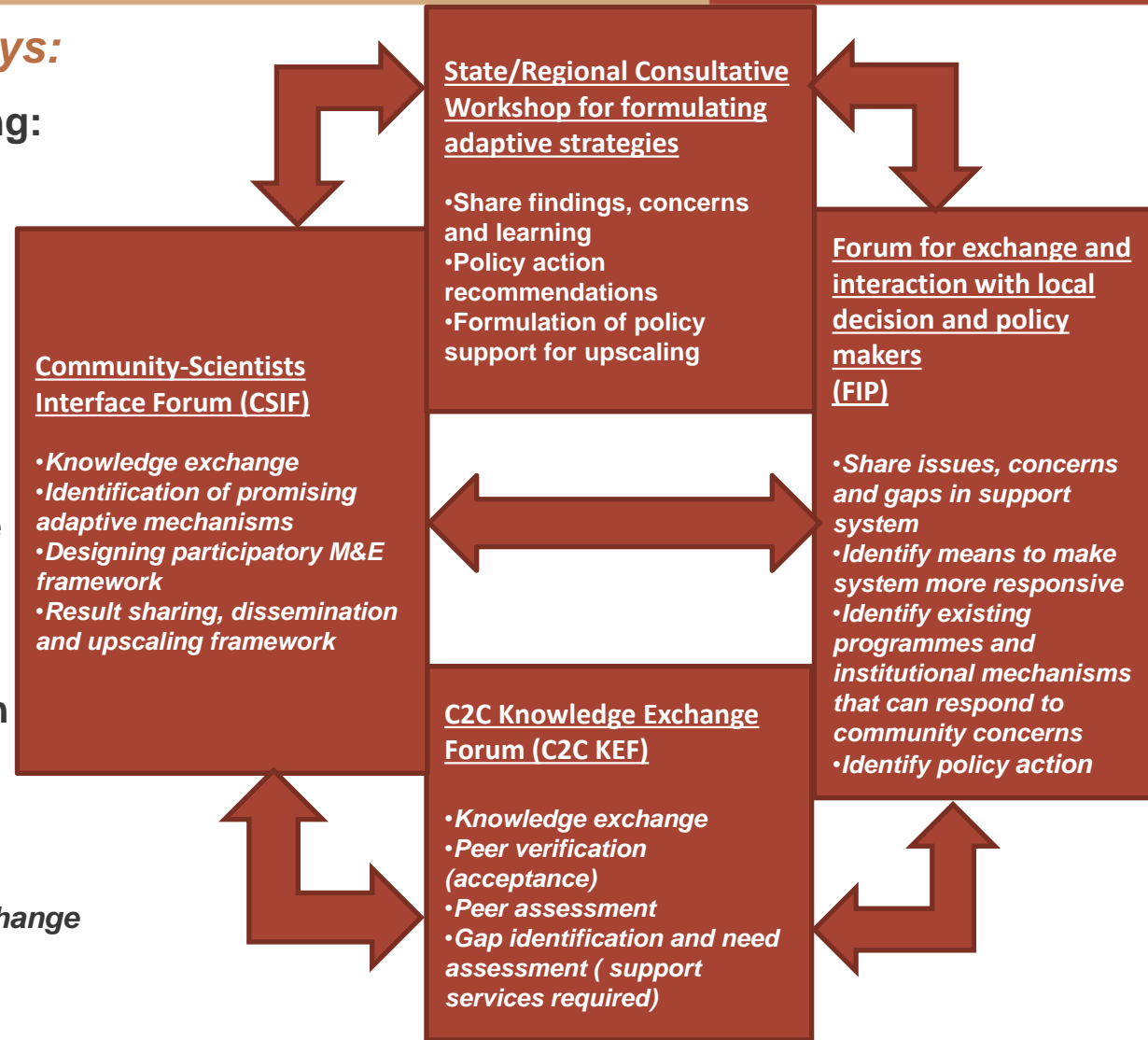
Adaptation Learning Highways:

Process framework for facilitating:

A horizontal and vertical exchange of information and knowledge to strengthen

- informed decision making
- making local governance more responsive; and
- to contribute to effective local adaptive strategies formulation

*Implemented in India and Nepal
(supported State Action Plan for Climate Change
Adaptation of Uttarakhand, India)*



Contributing to evidence based policy making for real impacts: shaping national policy and action

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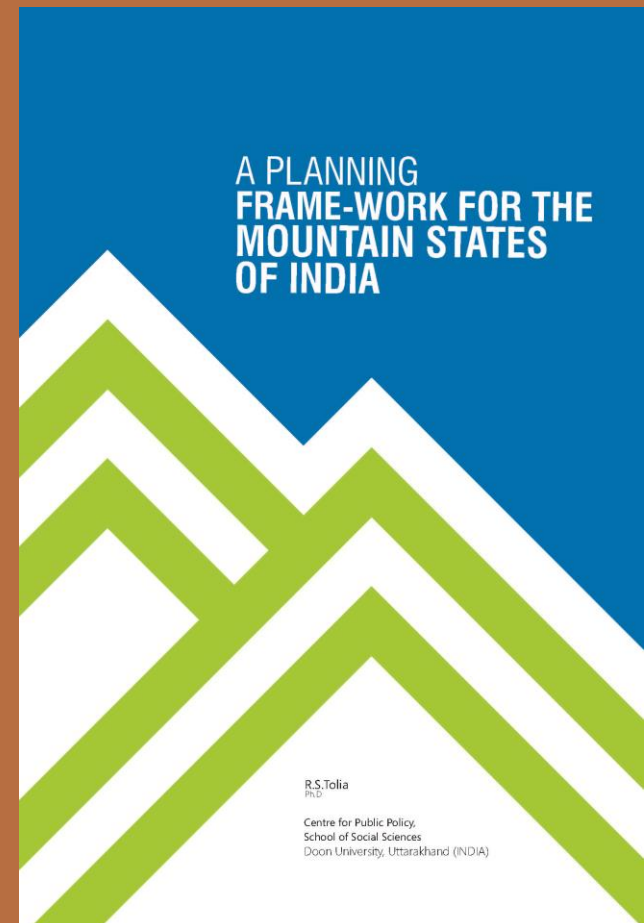
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‘...to promote the formulation/
refinement of pro-poor policies through
analytical work and knowledge sharing’

Working Group on *Mountain Ecosystems and Challenges faced by Hilly Areas*, set up for first time by the Planning Commission, Government of India for preparation of the Approach Paper for XII Five Year Plan,

In the Report

- draws extensively on Poverty Assessment Framework
- recommends re-appraisal of poverty indices and poverty assessments for mountain states



Promotion of sustainable action: Green Economy and SMD – Refining understanding & approaches

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- Green economy, SMD & adaptation to CC
- Role of mountains in green economy & adaptation to CC
- Promoting green economy & adaptation to CC
- Policies & insitutional measures needed for promoting green economy & adpatation to CC



Supporting Regional Governments for long-term policy action



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Mountain Initiative 2010-2013

- Technical backstopping to Government of Nepal to launch Mountain Initiative
- State of the art report on Climate Change in HKH region
 - *Mountain Initiative* (India)
 - *Mountain Day 1 and 2* (CoP)

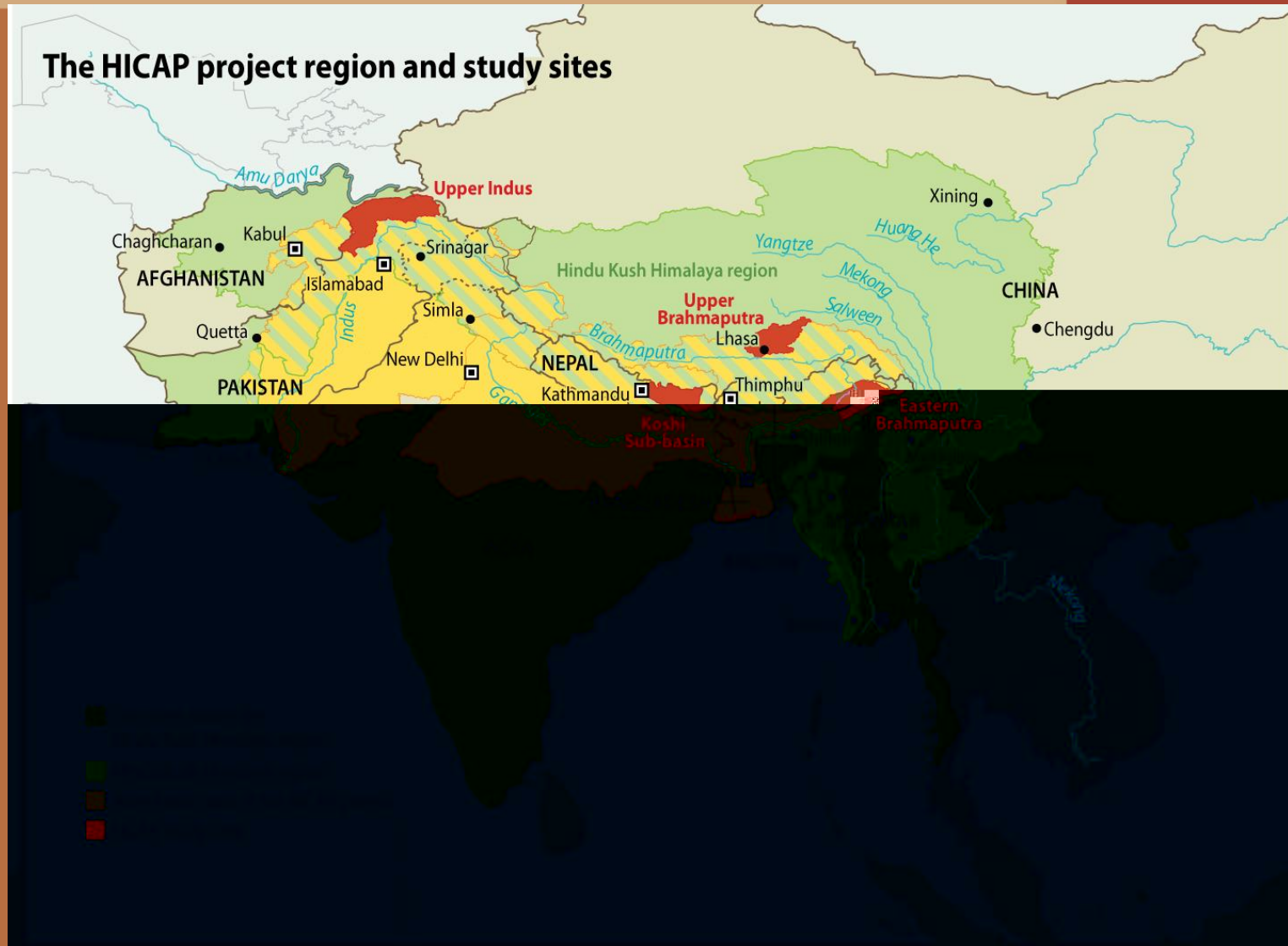
UNFCCC and Rio

- Spearheading Mountain Issues (Nepal)
- *The Future We Want* : Mountains
- Nepal elected Chair of LDC group for 2013 and 2014
- International Conference of Mountain Countries on Climate Change, 2012 - *Kathmandu Call for Action*

Reducing Uncertainties: Himalayan Climate Change Adaptation Programme (HICAP)

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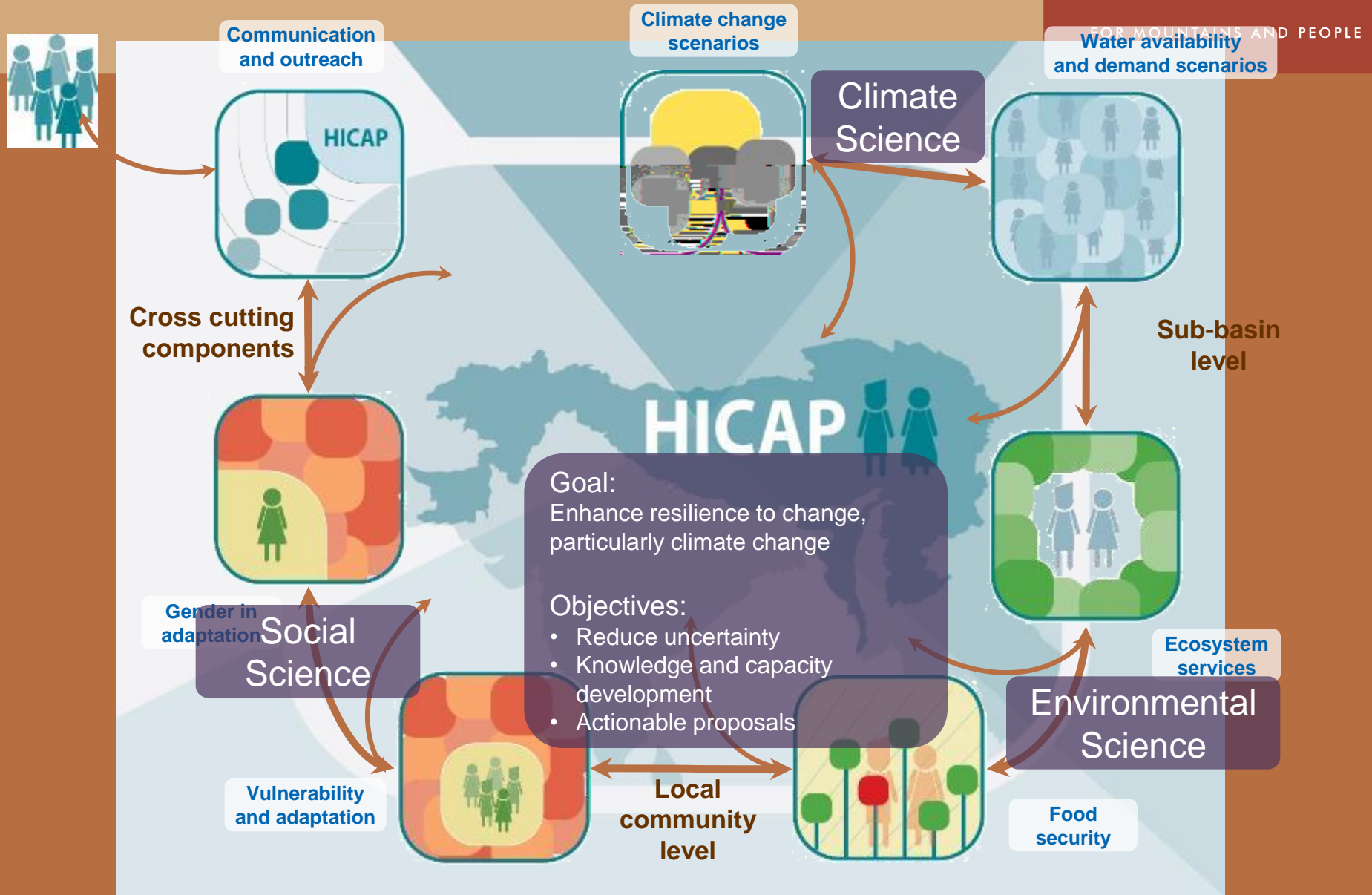
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Himalayan Climate Adaptation Programme (HICAP)

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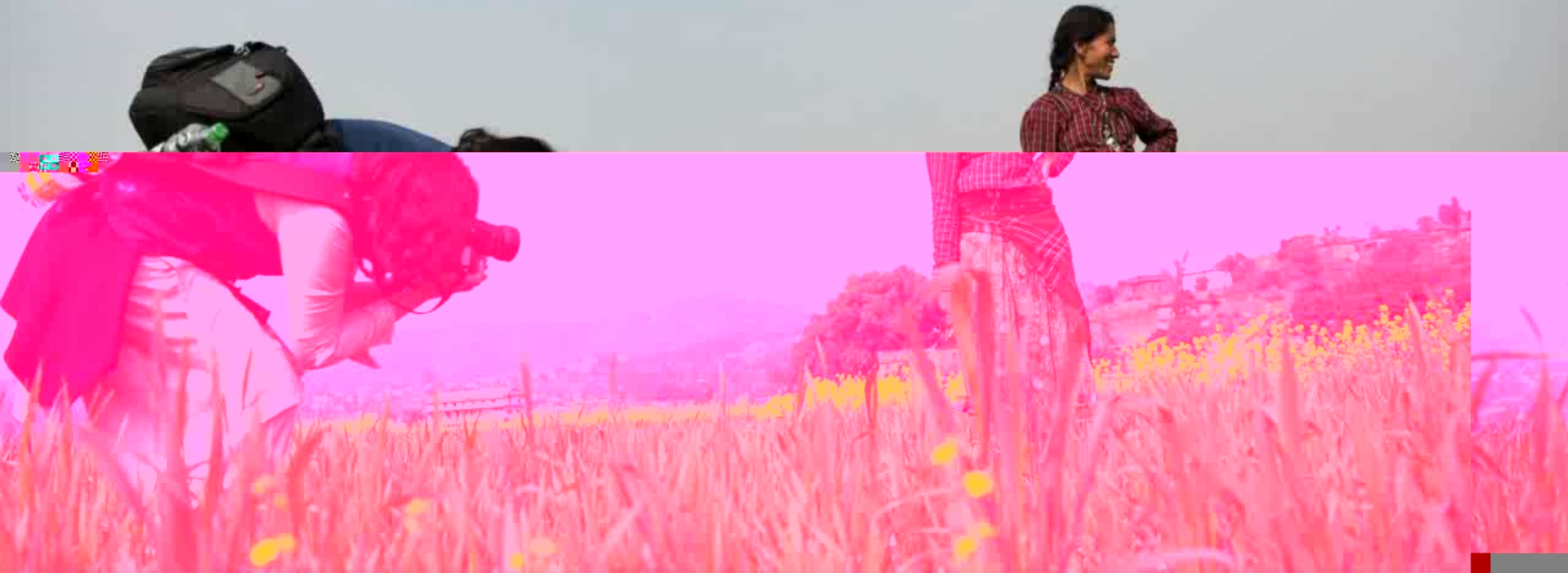


Partnering with Media: Increasing understanding, raising awareness for shaping policies and action

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REGIONAL JOURNALISTS' WORKSHOP CLIMATE CHANGE AND ADAPTATION



Thank you!

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