

ADAPTATION AT ALTITUDE

KNOWLEDGE
NETWORK

Lessons Learned: "Designing and Implementing Transboundary Adaptation in Mountains"



Rosie Witton and Kate Williamson

9th July 2024



Agenda:

Welcome

Introduction to transboundary climate risks - Katy Harris, SEI & Adaptation Without Borders

Panel discussion and Q&A

- Mandira Singh Shrestha, Senior Water Resources Specialist at ICIMOD
- Cristina Dengel, Knowledge Management Team Lead at the Adaptation Fund
- Marc Prohom, Head of Climatology at the Meteorological Service of Catalonia

Closing and AOB

Transboundary climate risks occur when an impact from climate change in one country generates risks to people in another.

Risks propagate through dependencies between countries –



Through biophysical systems – when climate change disrupts the flow of transboundary rivers and aquifers, or exacerbates regional air pollution, or affects shared ecosystems and natural resources



Through flows of people – when climate change influences patterns of migration and displacement between countries



Through trade and supply chains or financial investments – when climate change damages infrastructure projects, the production or distribution of goods, services and critical raw materials, or alters remittances and financial flows



Increasing food and water insecurity, threatening trade and energy supplies, risking jobs and livelihoods, escalating geopolitical instability, spurring social inequality, and undermining social and economic development



**Adaptation
Without
Borders**



Katy Harris

What role does transboundary adaptation play in your own work and why do you consider it to be important?

Reducing risks and building resilience in the HKH region

Mandira Singh Shrestha

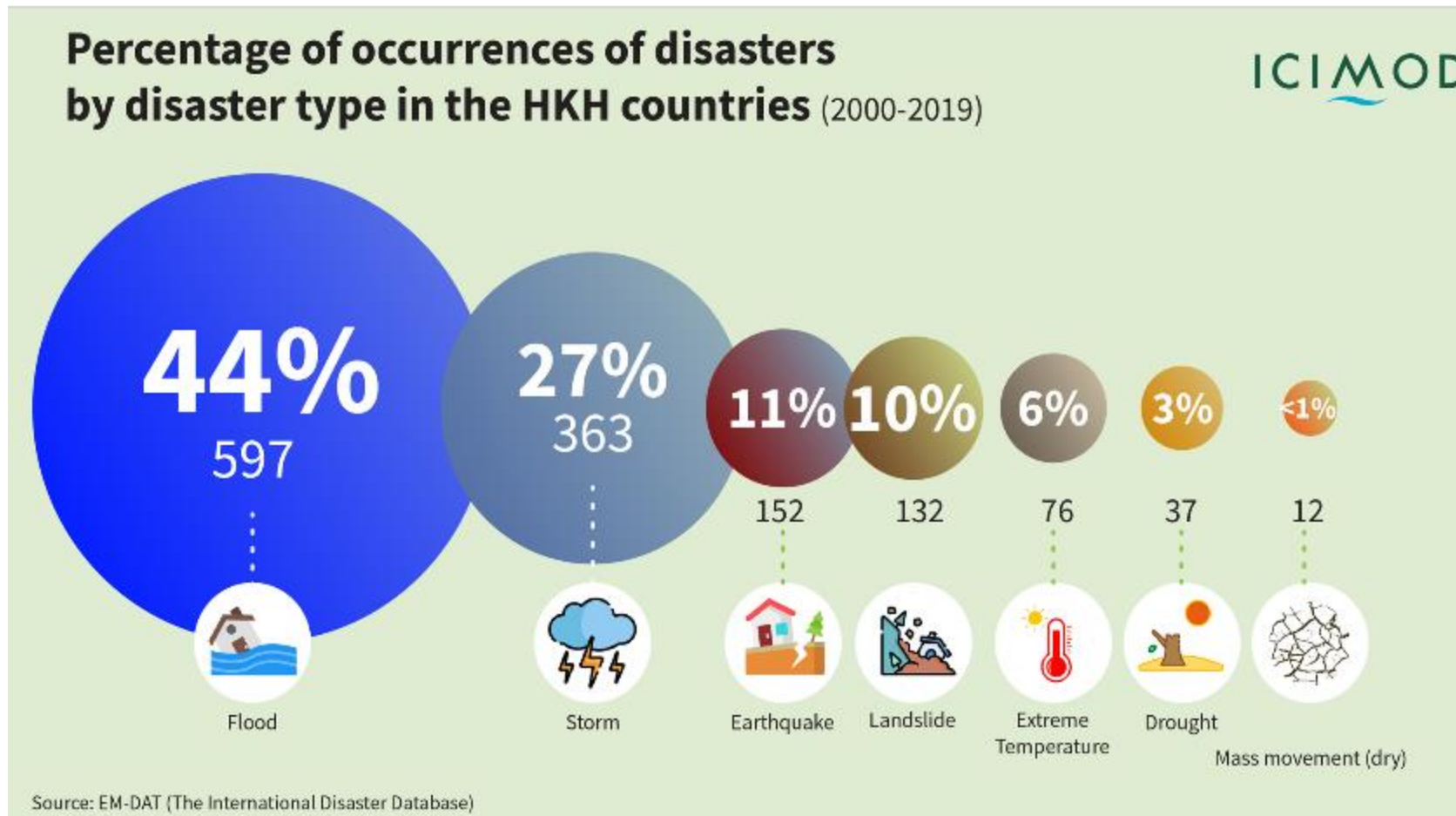
Senior Water Resources Specialist
ICIMOD

A@A Knowledge Network:
Learning event #2

09 July 2024

Hindu Kush Himalayan region is a hot spot for disasters

More than one-third of disasters are floods



More than 1 billion people are at risk of exposure to increasing frequency and intensity of natural hazards



Transboundary disasters



Bhoté Koshi GLOF: 2016

GLOF in TAR, China. Major impact d/s in Nepal

GLOF in TAR, China Major impact was in Nepal
<https://www.hydroreview.com/world-regions/surviving-three-natural-disasters-lessons-learned-at-upper-bhoté-koshi-in-nepal/#gref>



Koshi Floods: 2008

Impacted more than 3 million people in India



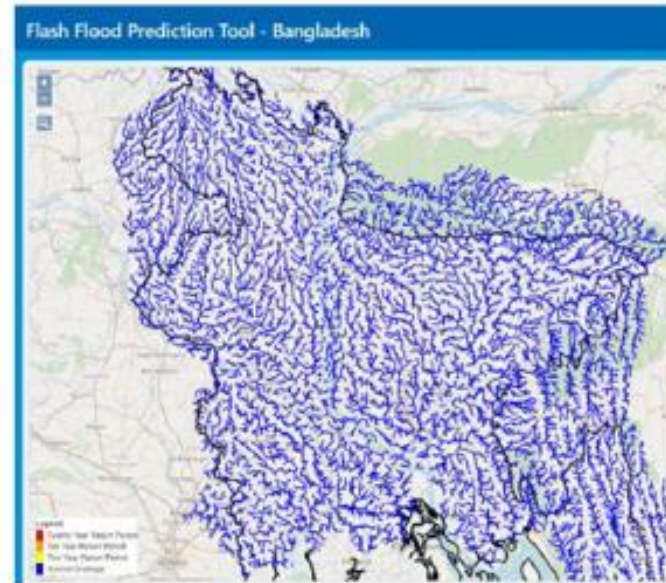
Predicting short term high impact weather events

High Impact Weather Assessment Tool (Hi-WAT): ensemble based modelling

54-hour lead time

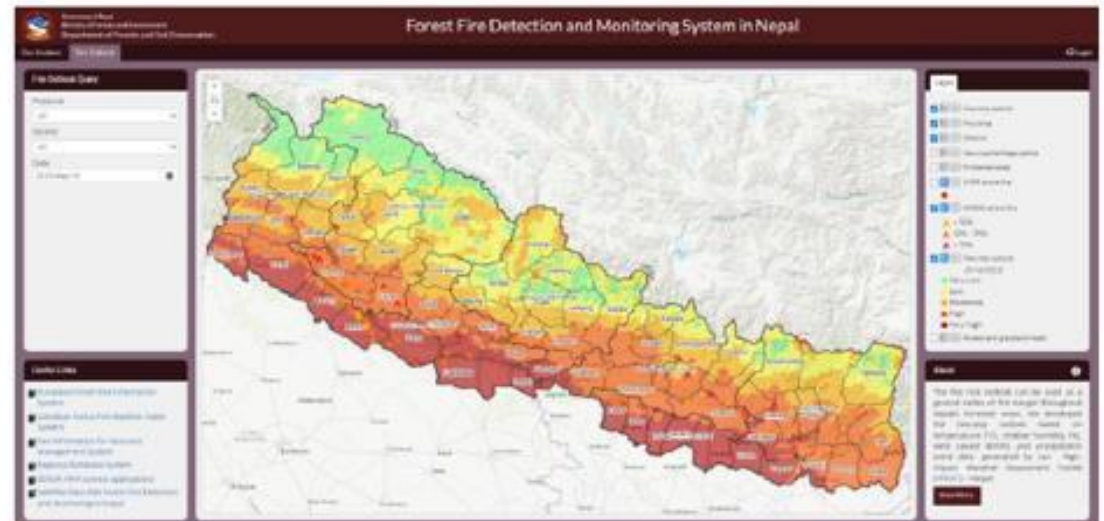
Rainfall, temperature, lightning strikes, winds, hail

Afghanistan, Bangladesh, Bhutan, Nepal and Pakistan



Flash Flood Prediction Tool developed using HIWAT

2 days lead time
HIWAT rainfall
Localized flood

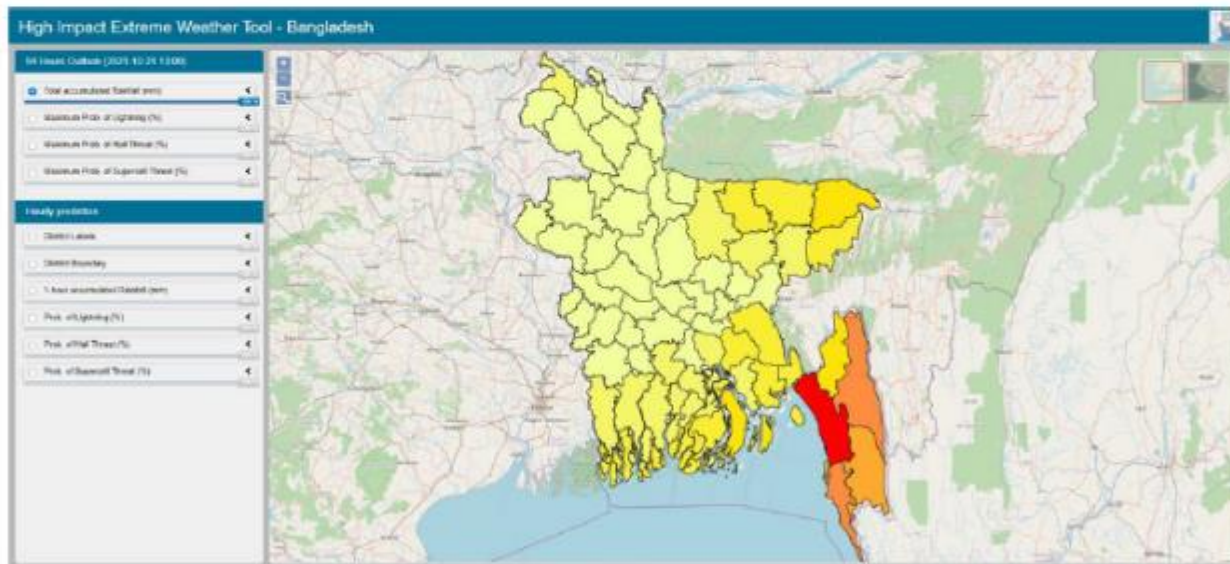


Fire weather index based on HIWAT for two days' outlook on areas with high fire risks



Customized applications to reaching out to communities

Web applications with simple user interfaces for easy understanding of information – HIWAT in Nepal and Bangladesh

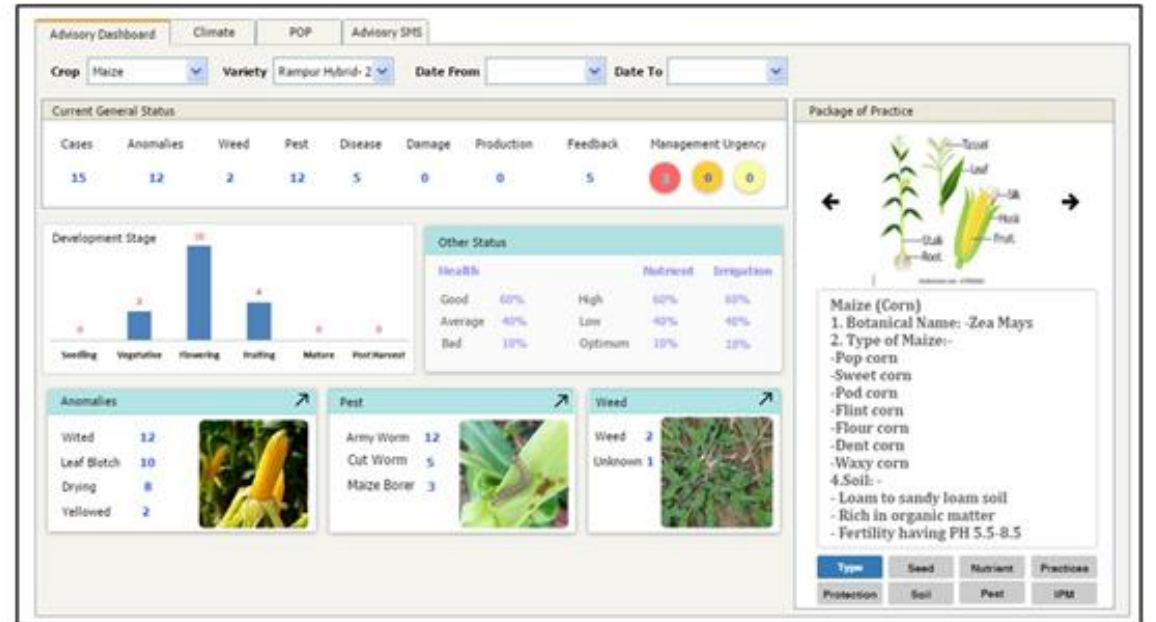


Prakop Alert a mobile app developed on user demand (Red Cross, Start Network) to provide weather and flood forecast information generated from HIWAT System in Nepal





Mobile app for field based reporting by the Ag extension staff



Agro-met information Dashboard to support Ag advisory process



Key messages

- Increase in intensity and frequency of extreme events many of which are transboundary;
- Technology, innovation and use of climate services in EWS minimize adverse impacts, accelerate climate action and build resilience of mountain communities;
- Capacity building, stakeholder engagement and sharing best practices support climate change adaptation at local and transboundary levels.





Thank you



ADAPTATION FUND

Adaptation Fund - Lessons learned on transboundary adaptation

Adaptation@Altitude

July 9, 2024

Cristina Dengel – Knowledge Management Team Lead

Adaptation Fund Board Secretariat



Adaptation Fund at a Glance



Only global UN fund created to fund concrete adaptation projects, in most climate-vulnerable developing countries



Pioneered innovative 'Direct Access' climate finance modality



As urgency of climate change has risen, it has grown rapidly to \$1Billion funding today



ADAPTATION FUND

AF portfolio – Regional distribution to date

Multi
2 projects
\$ 10 M



Latin America & Caribbean
32 projects
\$ 271.1 M



Eastern Europe
6 projects
\$ 29.8 M



Africa
51 projects
\$ 401.5 M



Asia Pacific
48 projects
\$ 275.8 M

AF regional window – Access modality

- ❑ Pilot programme introduced in 2015 with at cap of \$30 million Up (AFB.25/28)
- ❑ to \$14 million and \$100k PPG for regional project (2+ countries)
- ❑ Implemented by MIE or RIE and endorsement by each DA of participating countries
- ❑ **Concrete adaptation actions** in multiple sectors including Transboundary Water Management, Enabling Environment, water security, Nature-Based Solutions, EBA, etc.
- ❑ Total of US\$151M under the regional window, or 20% total portfolio
- ❑ Funding on the basis of the **full cost of adaptation** (No co-financing required, addressing adaptation needs and co-benefits if any, no BAU)
- ❑ **Environmental, socio-economic benefits** especially for the most vulnerable and gender considerations

Why is transboundary adaptation important?

- Possibility of tackling climate challenges across borders due to common climate risks across borders
- Opportunity of fostering a culture of regional coordination and shared learning
- Where common languages across nations/borders, communities more readily enabled to share experiences and knowledge of climate impacts and solutions
- Increasing capacity of entities at regional level or basin-level authorities
- Increased cost-effectiveness
- Cooperation through knowledge-sharing and learning across scales



**Towards a
cross-border mountain
community resilient
to climate change
in the Pyrenees**

*Lessons learned: Designing and
implementing transboundary adaptation
in mountains*
9th July 2024

Pyrenean Climate Change Strategy

Marc Prohom

Meteorological Service of Catalonia

marc.prohom@gencat.cat



Co-funded by
the European Union



Bio-Region PYRÉNÉES – Network Governance



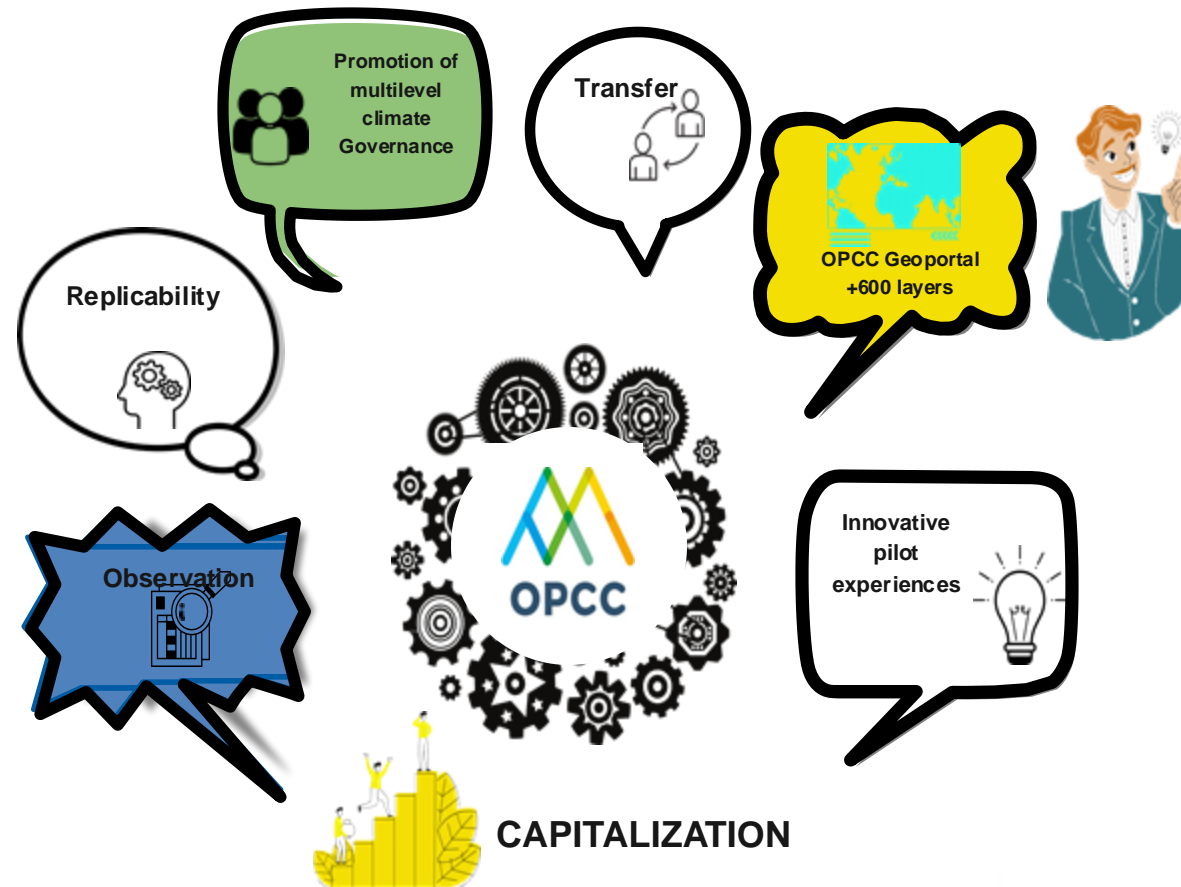
**Total inhabitants of the Pyrenees Mountain Range:
2.625.190 people**
**Total Surface of the cross-border Pyrenean área:
41.876 Km²**



Características:
territorio de montaña
territorio transfrontera



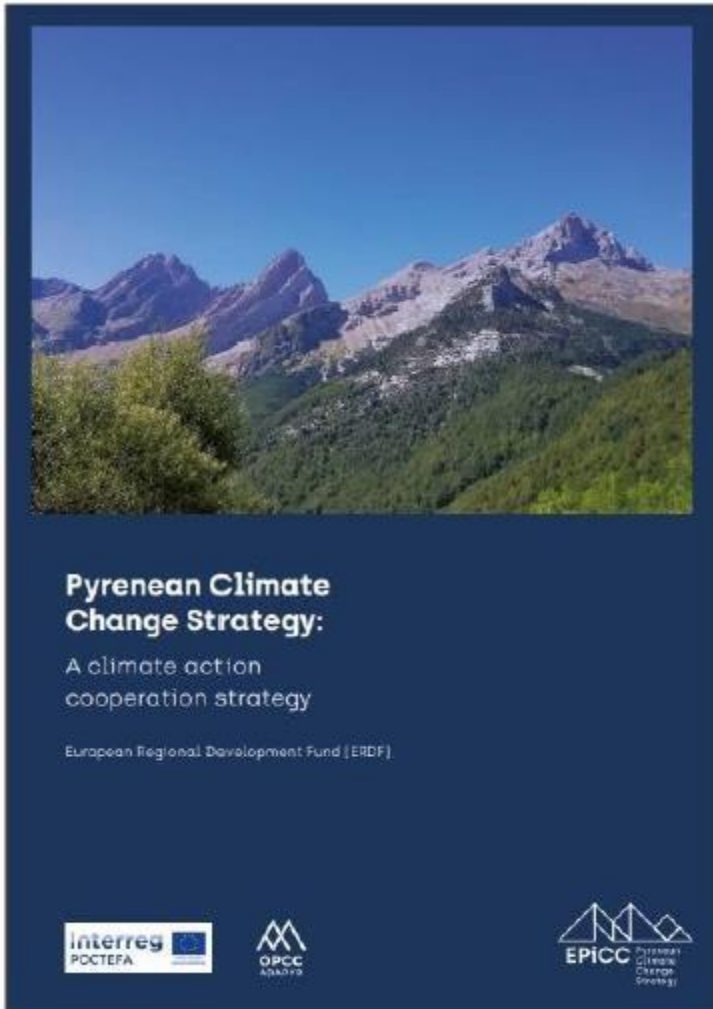
The Observatory (OPCC) produces common instruments



- Providing **knowledge** about climate change impacts and vulnerabilities in the Pyrenees.
- Promoting **innovation** and capitalize successful experiences.
- Creating **demonstrative** experience and generates **alliances** in the territory.
- Supporting transfer and replicability, and **decision-making in adaptation** policies within the CTP territory.
- Improving the **visibility** of the Pyrenees across Europe and internationally.




Pathways: Systemic and holistic approach to climate change: vision 2050 and Roadmap 2030



Pyrenean Climate Change Strategy:
A climate action cooperation strategy

European Regional Development Fund [ERDF]




EPICCChange
Natural areas



EPICCChange
Climate



EPICCChange
Population



EPICCChange
Mountain economy



EPICC



EPICCChange
Governance

- **Multidisciplinarity**
- **Integrated**
- **Interconnected**
- **72 actions**
- **Around 5 systems:**
 - Climate**
 - Resilient ecosystems**
 - Adapted mountain economy**
 - Population and territory, and Governance**

Implementation of the Operational Plan EPiCC 2030

UMBRELLA PROJECT



CATALYST

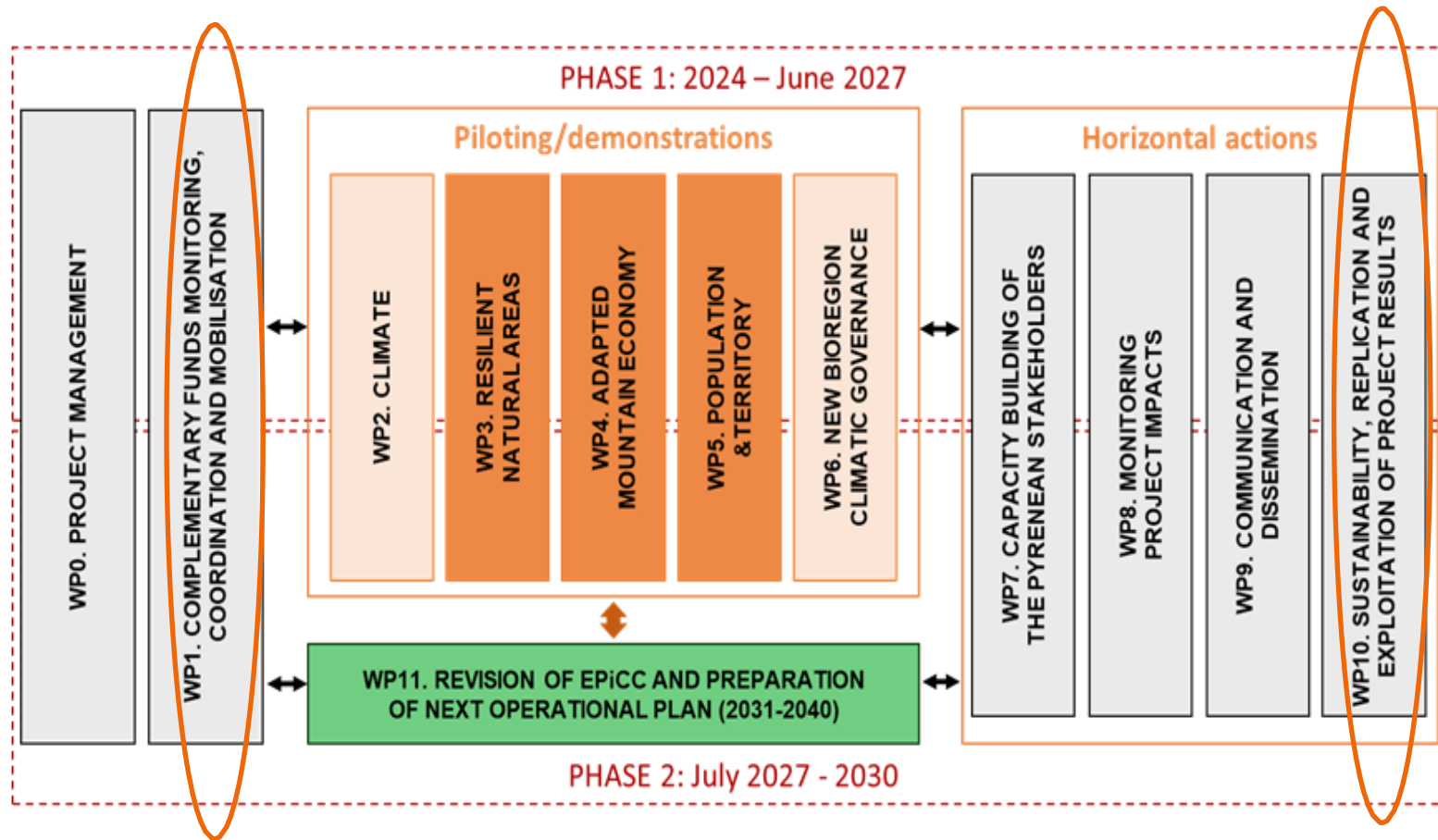
"Accelerator, tractor, unifier of efforts"

<https://www.youtube.com/watch?v=m09PbnFiL9I&feature=youtu.be>



General Vision

54 Entities



12 WP

34 Task

117 Subtask

- 7 regional administration partners (6 territories and CTP)
- 33 specialized beneficiary partners
- 6 affiliated entities
- 8 associated entities (AND)
- Investment: 20M€ in 7,5 years (2023-2031)

AOB:

- Join us for our next A@A Knowledge Network meeting in September/October – more details to follow!
- Sign up to the Adaptation at Altitude website to share content and stay up-to-date: <https://adaptationataltitude.org/>

Get involved!

1. Climate Change Adaptation in Mountains theme on weADAPT



► Join the Theme *Climate Change Adaptation in Mountains*

Join to share content with Network Members.

Unsubscribe from Theme



weADAPT



Join the discussion

Discuss this Theme with the experts on the Forum

Go



Skip to category: Mountain Communities Biodiversity & Ecosystem Services

Water Stress And Hazards

Data And Knowledge For CCA In Mountains

Agriculture In Mountains

2. A@A Solutions Portal

ADAPTATION AT ALTITUDE


Adaptation at Altitude Solutions Portal

Welcome to the Adaptation at Altitude Solutions Portal (A@A-SP)! This portal allows you to explore tried and tested climate change adaptation solutions for mountain regions, see where they have been implemented, and by who. Use the filters and search option below to explore the solutions, or find solutions in your area of interest using the map (coming soon!).

[Read more](#)


Search Detailed solution Short solution Reset

Scales: Select option(s) ▼ Ecosystem Types: Select option(s) ▼ Solution Types: Select option(s) ▼ Sectors: Select option(s) ▼ Impacts Addressed: Select option(s) ▼




Detailed solution

SUSTAINABLE WATERSHED MANAGEMENT IN GLACIAL MOUNTAIN ECOSYSTEMS IN PERU
The Glaciere+ project was led by



Detailed solution

ASSESSING THE ECONOMIC IMPACTS OF DISASTERS ALONG KEY TRANSPORT CORRIDORS: TAJIKISTAN
This World Bank and Global Facility for



Short solution

RENEWING THE FLOW OF WATER IN MIRESELLI, AZERBAIJAN
This project was part of the "Integrated Rural Development for internally

