

# Fostering Disaster Resilient Communities to Climate Change Induced Disasters

## Reducing the Risks from Glacial Lake Outburst Floods

Dushanbe, 2010



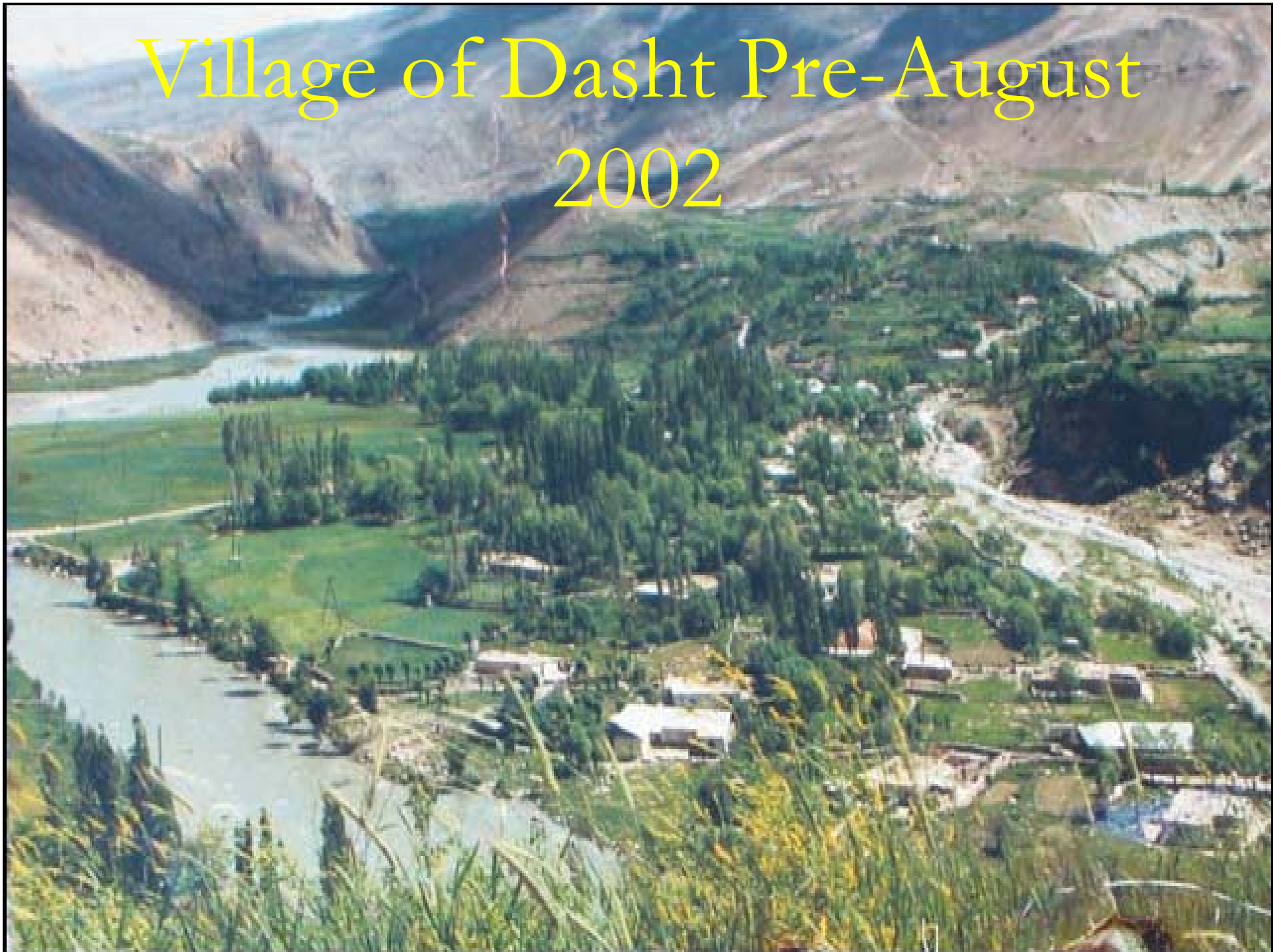
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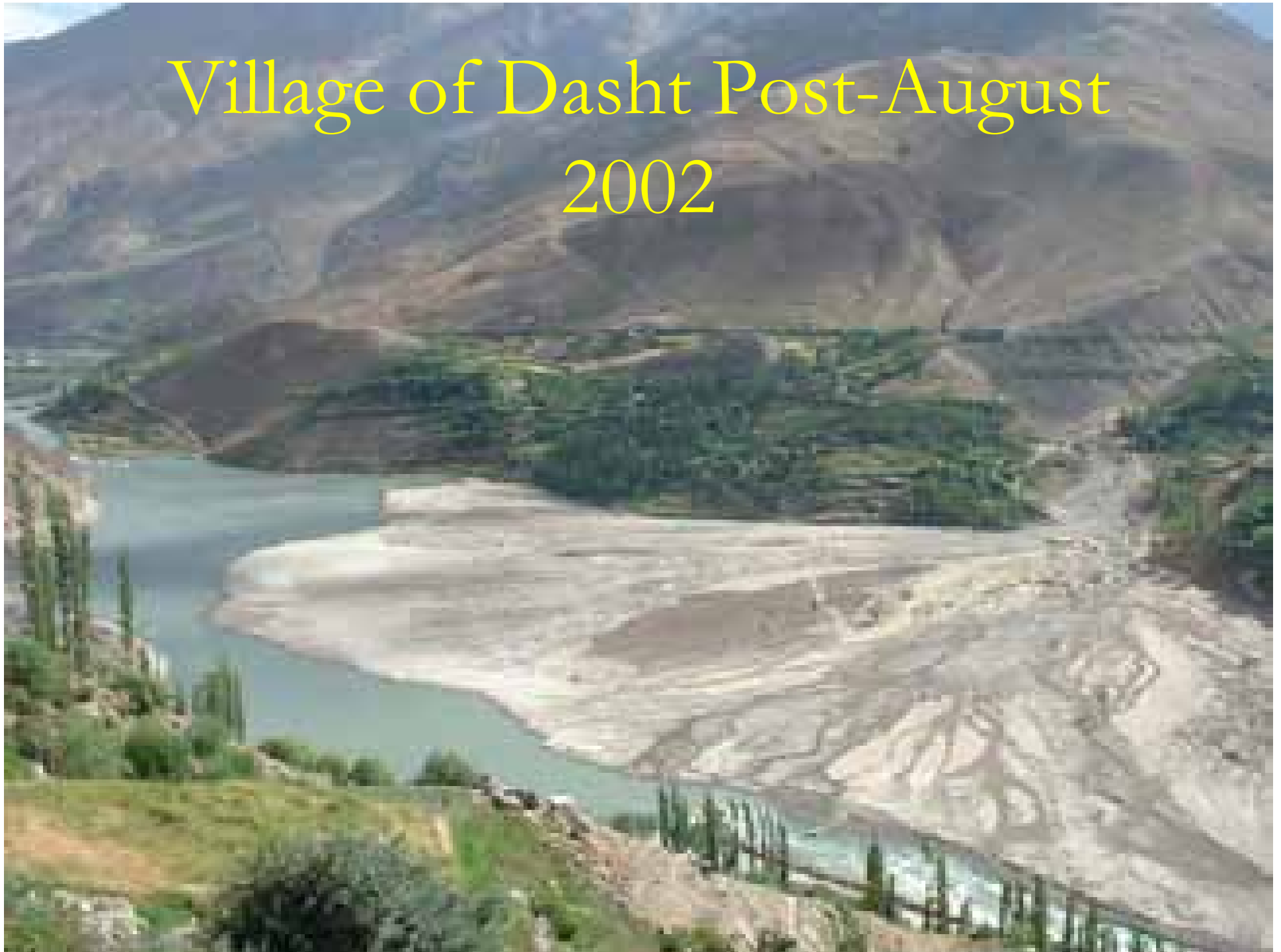


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# Village of Dasht Pre-August 2002



# Village of Dasht Post-August 2002



# Some Recent Major Glacial Lake Outburst Flood events in Western & Central Asia

- July 2008 – Northern Areas, Pakistan
  - August 2002 – GBAO, Tajikistan
  - July 2000 – Tyrnyauz, Russian Federation
  - July 1998 – Kyrgyz Republic, Shahimardan Valley
- \* Loss of hundreds of lives and millions of dollars of livelihoods



# Tajikistan at Highest Risk

**Tajikistan ranked  
as one of the  
most globally at  
risk countries**

\*Natural Disasters Hotspots: A Global Risk Analysis, March 2005, World Bank, Columbia University, DFID

## Top 15 Countries Worldwide - Most Exposed to Multiple Hazards (3 or more hazards)

- |                  |                       |
|------------------|-----------------------|
| 1) Taiwan, China | 9) Vietnam            |
| 2) Costa Rica    | 10) Solomon Islands   |
| 3) Vanuatu       | 11) Nepal             |
| 4) Philippines   | 12) El Salvador       |
| 5) Guatemala     | <b>13) Tajikistan</b> |
| 6) Ecuador       | 14) Panama            |
| 7) Chile         | 15) Nicaragua         |
| 8) Japan         |                       |



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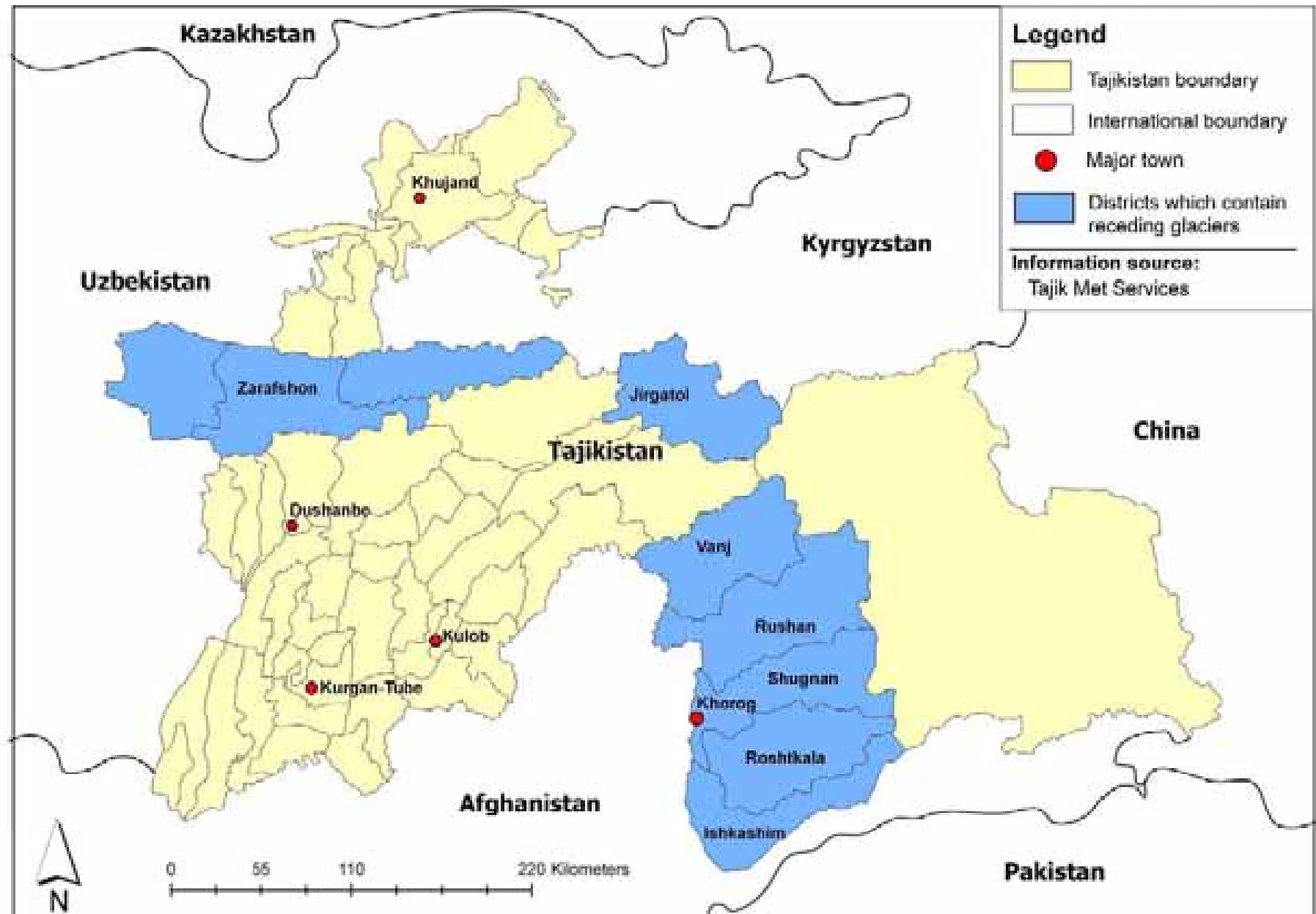
# Joint European / Tajik Scientific Assessment in the Pamir Region from 2003 - 2005

- Identified over 200 glacial lakes
- Identified thousands of village community members living at-risk from potential for GLOFs
- Tens of millions \$ of assets at-risk
- Provided recommendations to mitigate against these hazard threats including:
  - Establishing regular monitoring and early-warning
  - Building capacity of institutions to manage these risks
  - Building the capacity and awareness of communities



\* Assessment lead by the University of Natural Resources and Applied Life Sciences based in Vienna, Austria

## Project Coverage Areas Containing Receding Glaciers



# Focus Humanitarian Assistance' Approach



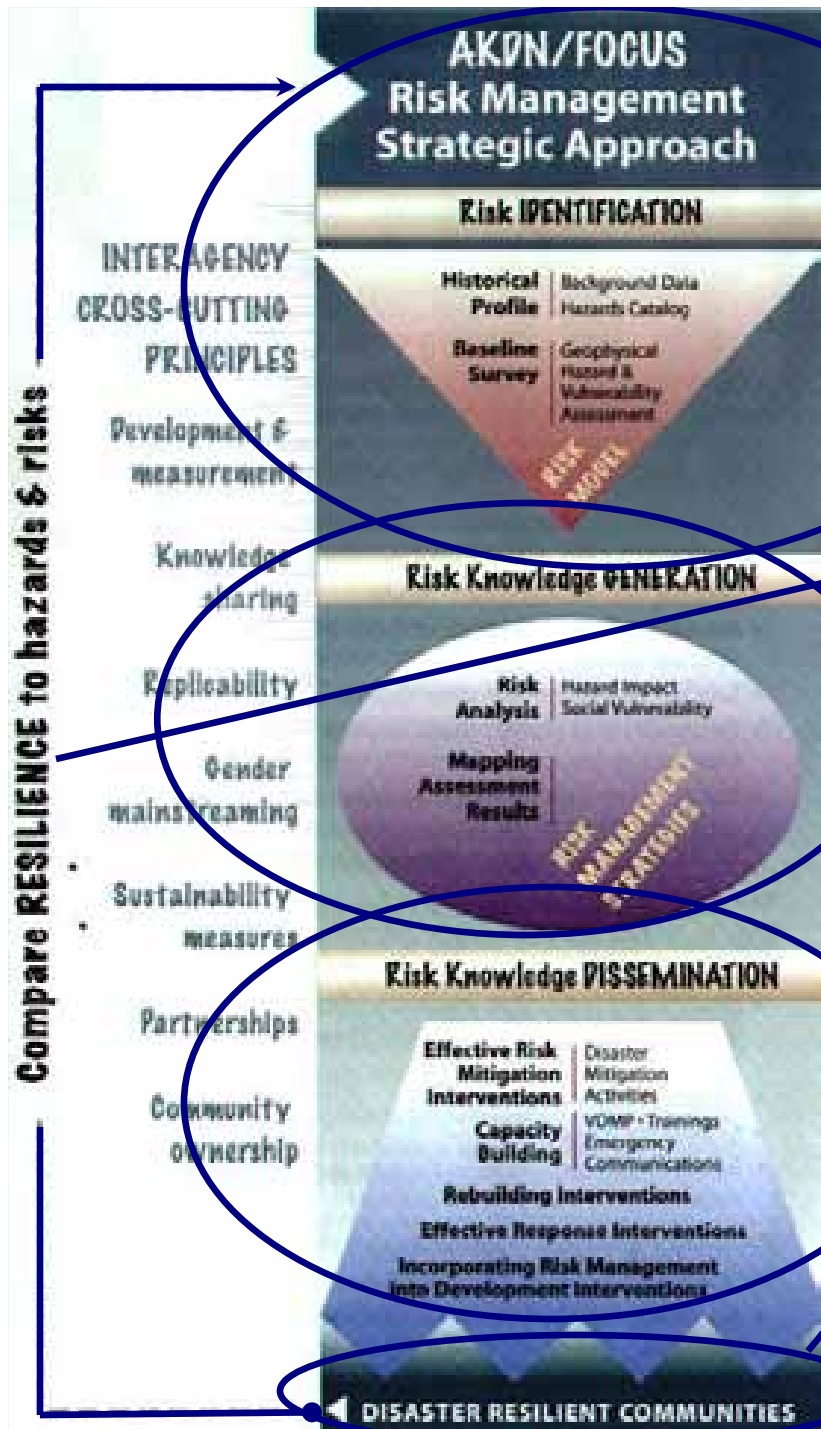
Social Mobilizer with Community assessing vulnerabilities



Workshop for government trainers on earthquake safety

- Sustained risk reduction occurs through an effective effort at multiple levels:
  - Build resilience at local community levels
  - Build capacity with relevant national and local level government partners

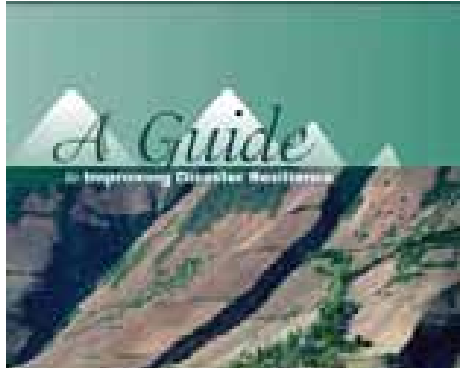




Promote  
**Disaster Resilience**



# Key Results



- FOCUS conducted risk assessments and mapping of more than 300 communities in GBAO, Tajikistan
- Increased the risk assessment capacity of more than 100 Tajik government staff
- Adapted and applied the approach for Afghanistan
- Adapting and applying the approach in Kyrgyzstan
- Developed and distributed to partners a guidebook based on FOCUS' approach through DIPECHO:



[http://www.akdn.org/publications/2010\\_Focus\\_mountainguide.pdf](http://www.akdn.org/publications/2010_Focus_mountainguide.pdf)



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Polskie Przedstawicielstwo ds. Współpracy z Kantonem SDC



# Remote Geo-Hazards Capacity Building and Monitoring Project (Overview)

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- ❑ **Goal:** Foster resiliency to glacial lake outburst flood (GLOF) risks in Tajikistan
- ❑ **Duration:** 14 months
- ❑ **Beneficiaries:** 195,500
- ❑ **Funding:** USD 1.47 million
  - 42% United Kingdom's Department for International Development (DFID)
  - 38% Swiss Agency for Development and Cooperation (SDC)
  - 20% Aga Khan Development Network (AKDN) / FOCUS
- ❑ **Implementing Partners:**
  - Tajik Government Departments of Hydrometeorology, Geology, Seismology and Emergency Situations
  - Aga Khan Foundation
  - University of Natural Resources and Applied Life Sciences
  - Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)
  - United Nations Development Program (UNDP)



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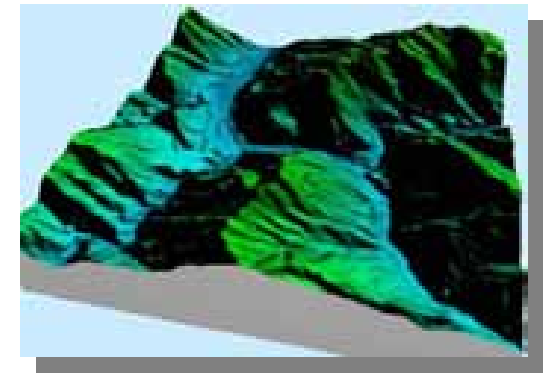


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# Remote Hazards Project (Cont.)

## ▣ Objectives

- ▣ Build the capacity of the local communities and the relevant government departments to assess and monitor the sources of these remote threats
- ▣ Enhance the awareness and preparedness of the local communities, and government institutions to more effectively respond in hazard situations



# Remote Hazards Project (Cont.)

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## □ Project Outcomes:

- 1) 13 communities are more disaster resilient as a result of community-based disaster risk reduction activities in 13 communities including:
  - Risk assessments and hazard mapping
  - Installation of hazard monitoring tools
  - Piloting small-scale early-warning systems
- 2) Un-assessed areas of Tajikistan are assessed for remote hazard risks:
  - Preliminary results indicated approximately 60 other communities are at risk in Zarafshan, Jirgital and GBAO.

# Remote Hazards Project (Cont.)

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## □ Project Outcomes

- 3) Government partners (Departments of Emergency Situations, Geology, Hydrometeorology and Seismology) have increased capacity in conducting risk assessments and using modern tools such as GIS and remote sensing data
- 4) Sharing of experiences in programs, policies and tools to key stakeholders (e.g. Climate Risk Resilience Workshop)

# Recommendations for Future Interventions

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- Donors, governments and international agencies must integrate disaster risk reduction interventions into climate change adaption / development strategies whereby such strategies sustainably build capacity of both governments and communities

# Recommendations for Future Interventions

- ▣ Donors, governments and international agencies should support relevant programs which seek to:
  1. Conduct community-based risk reduction interventions in approximately 60 communities that are assessed to be at-risk from climate change induced threats
  2. Build the capacity of governments to sustainably assess, analyze and monitor such threats
  3. Build the capacity of communities and governments to prepare for and respond to such threats



# Fostering Disaster Resilient Communities to Climate Change Induced Disasters

Thank you / Questions

Dushanbe, 2010



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