



In cooperation with:



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Introducing Integrated Watershed Management to Strengthen Conservation in Key Protected Areas of the Transboundary Western Tian-Shan

CONTEXT

The Western Tian Shan (WTS) is a UNESCO World Heritage site and a critical “Water Tower” for Central Asia. It sustains both world-class biodiversity and millions of people downstream. Accelerating glacial melt is destabilizing regional water security. Unregulated land use is degrading vital headwaters. Despite its importance, existing transboundary frameworks lack actionable integrated watershed management plans, leaving ecosystems fragmented and vulnerable.

OBJECTIVES

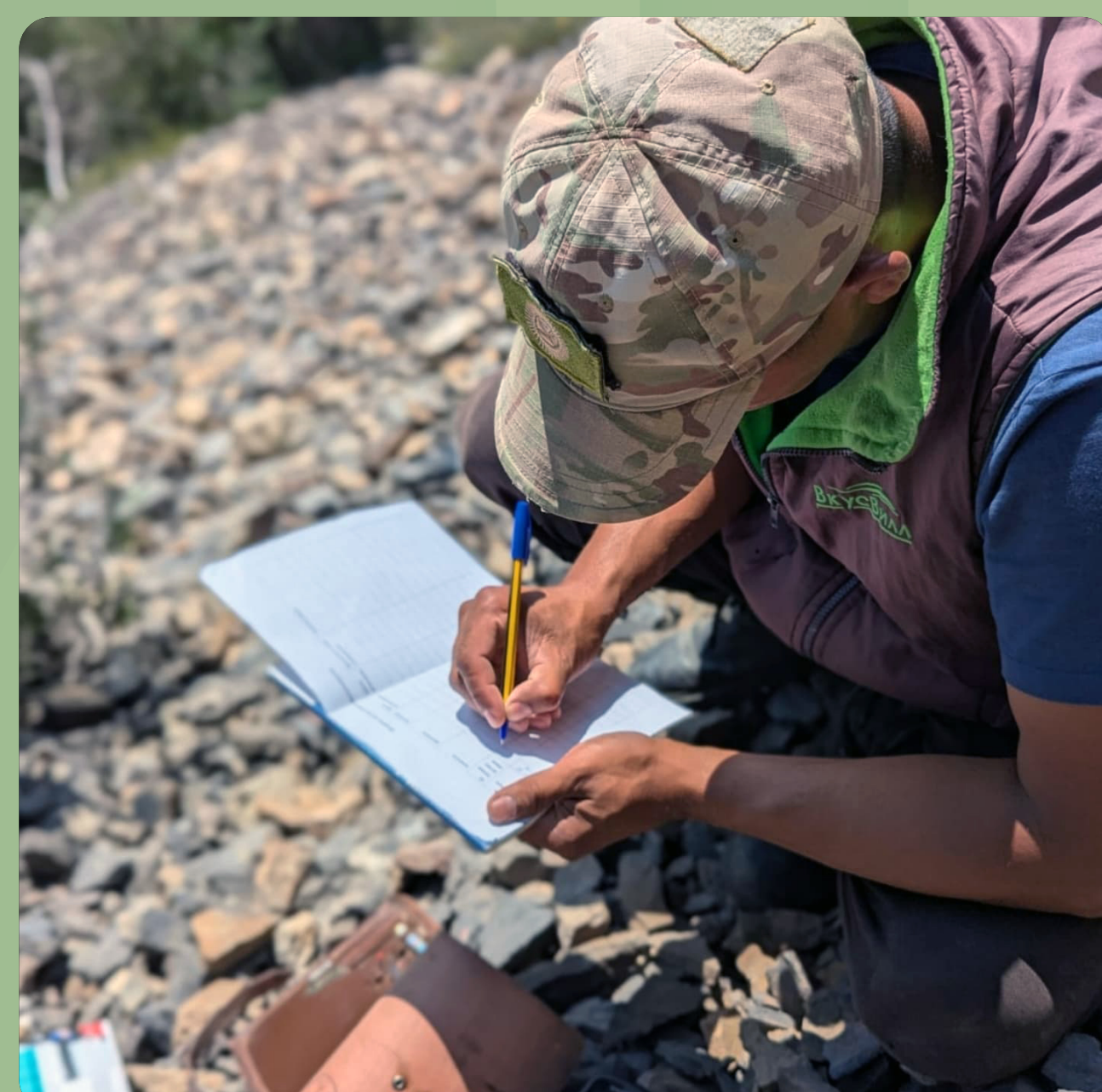
The primary goal of this project is to safeguard the ecological integrity of WTS by embedding integrated watershed management into the core operations of key protected areas in WTS.

IMPLEMENTATION

The project was implemented in three protected areas: Aksu-Zhabagly SNR (Kazakhstan); Padysha-Ata SNR (Kyrgyzstan); Ugam Chatkal SNNP (Uzbekistan) in 2025.

Key activities included:

- Watershed assessment and hydrological analysis
- Wildlife monitoring using camera traps, and human-wildlife conflict surveys
- Community consultations on land-use pressures
- Regional exchange meetings to strengthen cooperation
- Capacity building on watershed management, SMART monitoring and wildfire risk reduction
- Development of integrated watershed management plans



FINDINGS

- **Mountain Catchments — Regional Water Towers:** The ecological health of mountain catchments is a prerequisite for regional water security and the stability of downstream agricultural systems.
- **Transboundary Impact of Land Degradation:** Unsustainable land use upstream creates cross-border risks by increasing turbidity and causing the siltation of critical infrastructure.
- **Connectivity Beyond Protected Areas:** While individual PAs provide core protection, the riparian corridors linking them are under stress, disrupting the landscape connectivity essential for species migration and genetic diversity.
- **The Basin is a Single Hydrological Unit:** Climate-driven shifts in high-altitude zones impact the entire drainage basin, requiring a coordinated, basin-wide response to changing water dynamics.
- **Data and Monitoring Fragmentation:** Limited data exchange between countries constrain the ability of PA managers and watershed planners to fully understand basin-scale dynamics and emerging environmental risks.
- **Local Communities — Key Watershed Stakeholders:** local land-use practices significantly influence watershed conditions and should be integrated into management approaches.



RECOMMENDATIONS

- Establish joint monitoring of glacier extent, snow cover, and river discharge in headwater areas.
- Exchange information on land-use activities, and erosion hotspots within shared basins.
- Integrate watershed considerations into PA management plans and regional planning frameworks.
- Integrate nature-based solutions for watershed resilience, such as forest restoration and erosion control, into regional watershed planning.
- Establish a regular transboundary technical exchange mechanism between watershed experts and PA managers.
- Engage local communities and water user groups in watershed planning processes

