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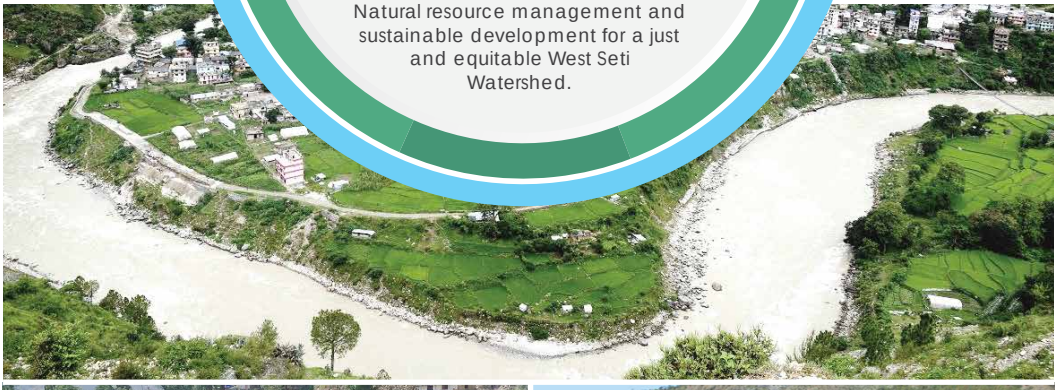
WEST SETI

WATERSHED BRIEFER

Community Vision:

Natural resource management and sustainable development for a just and equitable West Seti Watershed.



THE WEST SETI WATERSHED

The West Seti Watershed sits in the Karnali Basin in western Nepal. Ninety-seven percent of the watershed is contained in Bajhang district, with nominal parts located in neighboring Doti and Bajura. The watershed runs southward to confluence with the Karnali River and eventually the Ganges Basin in India.

Due to Nepal's unique altitudinal variation and geographic diversity, the West Seti watershed contains a wide range of ecosystems, providing habitats to an impressive floral (567 species) and faunal diversity. As a reflection of more recent efforts to protect and conserve this diversity, the government of Nepal established Khaptad National Park (KNP) at the watershed's southern boundary in 1984. The area also attracts religious devotees who visit the Shiva shrine, the temple of Khaptad Mai, and the ashram of the Khaptad Swami.

The Seti River is the primary waterway of the area, a snow-fed river enriched by numerous tributaries that are both snow and rain fed. However, in recent years, residents in the areas have noted significant changes to the watershed's hydrological flow, changes they attribute to a range of causes, including increasing landslides and soil erosion, improper road construction, deforestation, and shifting cultivation practices on steep hillsides.

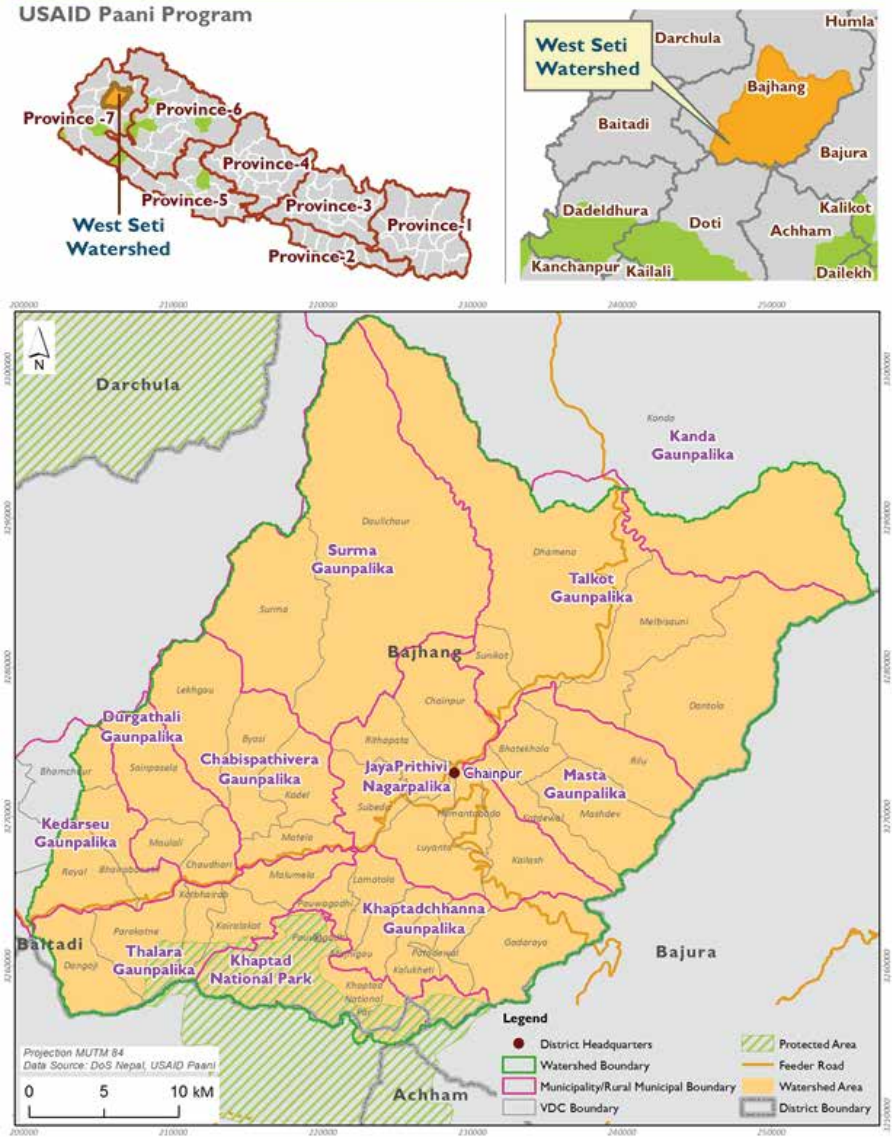
WEST SETI BY NUMBERS

WATERSHED	West Seti (327)
RIVER BASIN	Karnali
PROVINCE	Sudurpashchim (No. 6)
TOTAL WATERSHED AREA	1,488 km2
PHYSIOGRAPHIC ZONE	High Himal (15%), high mountain (78%), middle mountain (7%)
NO. OF STREAMS	22
MAJOR RIVERS	Sunikotgaad, Baluligaad
LAKES AND WETLANDS	Dau Tal, Khaptad Tal
LAND USE	Forest and shrub-(51%), grazing land-(15%), barren land and rock -(13 %) and agricultural land-20%
TOTAL DRAINAGE LENGTH	963 km
DRAINAGE DENSITY	647 km3
MUNICIPALITIES	Ten rural municipalities, and one municipality
POPULATION	130,539 (53% female; 47% male)
POPULATION DENSITY	88 person/sq. km
ETHNIC GROUPS	Brahmin (9.6%), Chhetri (66.2%), Janajati (8.8%), and Dalit (15.2).

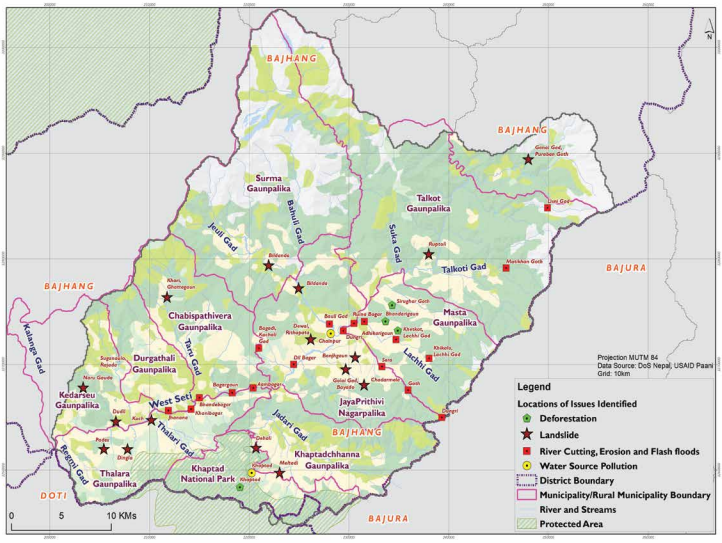
Location Map

Watershed Name: West Seti

River Basin: Karnali **Watershed Code: 327**

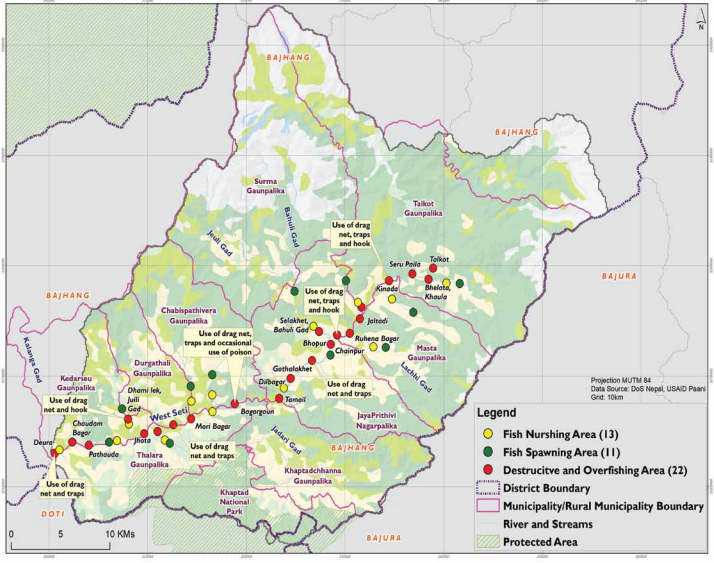


ENVIRONMENTAL ISSUES IN THE WEST SETI WATERSHED



The environmental issues identified in this map were provided by watershed stakeholders who participated in Paani-sponsored entry and exit workshops. By identifying these issue "hotspots," it is hoped local governments and constituencies will be able to draw on this information to make short- and long-term plans to insure clean water, robust biodiversity, and sustainable use of natural resources.

THREATS TO AQUATIC BIODIVERSITY IN THE WEST SETI WATERSHED



This aquatic biodiversity map was constructed with the assistance of various stakeholders who helped to locate places where they noted challenges specifically related to aquatic habitats and biodiversity. Combining GIS and ground-truthed data to create reference maps such as this one will be helpful in developing effective strategies to protect aquatic health in the watershed.

ENVIRONMENTAL REPORT CARD
FOR THE WEST SETI WATERSHED

This health report card illustrates watershed health conditions measured against a set of pre-defined indicators chosen through a multi-stakeholder consultation process. These indicators show the current health status of West Seti and using a color code for the threats, opportunities, and challenges facing the watershed.

WATERSHED HEALTH CONDITIONS

GOOD | FAIR | POOR

GOVERNANCE AND EQUITY

- Households engaged in local level planning
- Community active in NRM groups
- Conflicts over NRM
- Women and marginalized groups in leadership positions
- Equitable access and benefit sharing with natural resourcces
- People comply with environmental laws and regulations
- Government enforces laws and regulations
- Coordination between local and provincial government

SUSTAINABLE INFRASTRUCTURE

- Hydropower
- Roads
- Gravel mining
- Irrigation

CLIMATE RESILIENCE AND DISASTER RISK REDUCTION

- Areas vulnerable to landslides, floods and landslides
- Use of climate resilience adaptation practices
- Households with access to early warning systems

BIODIVERSITY AND HABITAT

- Household sanitation
- Quantity of fish
- Fishing Practices
- Land use and land cover
- Solid waste disposal
- Invasive species
- Species diversity

WATER

- Water availability
- Water acccessibility
- Water quality

SUSTAINABLE AGRICULTURE

- Agricultural productivity
- Climate and physiography
- Soil management and fertility

WAYS FORWARD IN THE WEST SETI WATERSHED

Numerous stakeholders from the watershed formulated these recommendations that represent a variety of viewpoints, from government officials to local business owners and residents. In that way, these actions and commitments seek to address environmental issues in West Seti that provide remediation or improvements for all groups in the watershed.

ISSUE	ACTION/RECOMMENDATIONS
LANDSLIDES, RIVER CUTTING, FLASH FLOODS AND SEDIMENTATION	• Identify and map areas prone to landslides, river cutting, flash floods, and sedimentation in consultation with local governments and stakeholders; and • Develop local level adaptation and disaster risk response plans based on the existing national framework.
IMPROPER RURAL ROAD CONSTRUCTION	• Promote bioengineering techniques for road building to protect water sources and mitigate the effects of potential disaster precipitated by improperly constructed roads; • Build capacity in local residents to inspect and monitor road building practices; and • Develop long-term road network vision and guidelines for building these roads in accordance with policies requiring sufficient environmental assessment beforehand.
DEGRADED AQUATIC HABITATS AND DECLINING FISH NUMBERS	• Disseminate and promote existing aquatic habitat policies through mass media; • Promote awareness in local schools to increase sensitivity to aquatic habitats and the importance of conservation measures; and • Encourage stronger enforcement of fish protection policies that prohibit illegal fishing practices and overharvesting.
FOREST DEGRADATION AND FOREST FIRES	• Raise awareness about the dangers of wild fires and how to prevent them; • Provide community training for firefighting and distribute equipment to support these trainings • Minimize livestock grazing in the national park and wherever else possible; and • Establish community patrols during the dry season to warn about potential fire risk areas
DRYING WATER SOURCES (AND INCREASING WATER POLLUTION)	• Map existing wate r sources to inform future conservation efforts; • Improve implementation of water use master plans; • Adopt modern and simple technologies, such as solar water pumps, Dhiki pumps (treadle pump), drip irrigation, and rainwater harvesting; • Promote regulated gravel mining and excavation in upstream areas; and • Encourage enforcement of existing laws and regulations related to watershed conservation and management.
NO N-POINT SOURCE POLLUTION AND WASTE DISPOSAL IN RIVERS AND STREAMS	• Improve waste management at local levels; • Promote awareness about dangers of waste dumping in rivers; • Train government representatives in health and sanitation standards; and • Increase water quality monitoring of the Seti River and tributaries.