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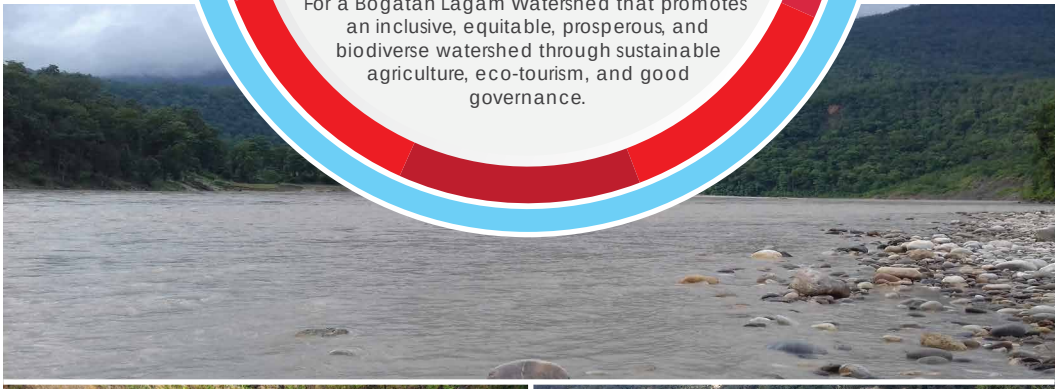
BOGATAN LAGAM KARNALI

WATERSHED BRIEFER

Community Vision:

For a Bogatan Lagam Watershed that promotes an inclusive, equitable, prosperous, and biodiverse watershed through sustainable agriculture, eco-tourism, and good governance.



THE BOGATAN LAGAM KARNALI WATERSHED

The Bogatan Lagam Watershed contains 36 tributaries and streams, all of which flow into the Karnali River. Bogatan Lagam is characterized by rugged terrain and sharp hills that descend sharply from north to south. The Karnali River runs through the watershed, originated in Mansarovar and Rakas lakes in China and entering Nepal through Humla District. The major natural resources in Bogatan Lagam include water, forests, gravel deposits, and numerous species of flora and fauna.

Agriculture is the largest source of livelihood, although migration abroad and in country has become more common for young men. The watershed has little infrastructure in terms of roads, irrigation and hydropower. Magars, a Janajati group, have assumed a leading role in protecting natural resources in the watershed.

To bolster livelihood security, numerous forms of climate-smart technologies were being employed to offset the potential impacts of climate change and natural hazards, including tunnel farming, rainwater harvesting, and kitchen water reuse. In spite of these practices, 46% of respondents in our surveys claimed no knowledge of available climate-smart technologies.

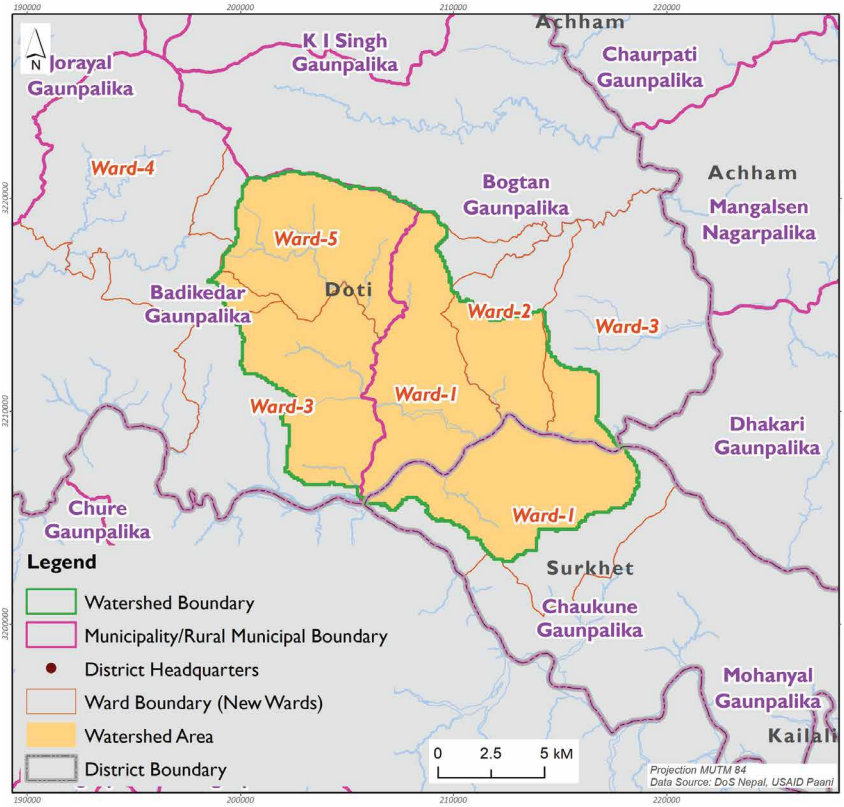
BOGATAN LAGAM KARNALI BY NUMBERS

RIVER BASIN	Karnali
WATERSHED	Bogatan Lagam Karnali
PROVINCE	Numbers 6 (Doti) and 7 (Surkhet)
TOTAL DRAINAGE AREA	205.63 km^2
NUMBER OF STREAMS	36
MAJOR RIVERS	Serrigaad, Bandgaad, Guinada Khola, Pogade Khola, Baral Khola, Buda Khola, Bhatmare Khola, Kunadagaad, Kedarsain Khola, Dhameli Khola
LAKES AND WETLANDS	Sunpaal Taal, Libukhola Taal and Debalkhola Taal
LAND COVER	Forest - 80%; agriculture -18%; rivers and streams - 2%; grazing land - <1%
RURAL MUNICIPALITIES	Badikedar and Bogatan (in Doti) and Chaukune (in Surkhet)
POPULATION	10,764 (49% Male, 51% Female) (CBS, 2011)
ETHNIC GROUPS	Brahmin/Chhetri/Thakuri - 68%; Janajati - 4%; Dalit - 27%; Others - 1%

Location Map

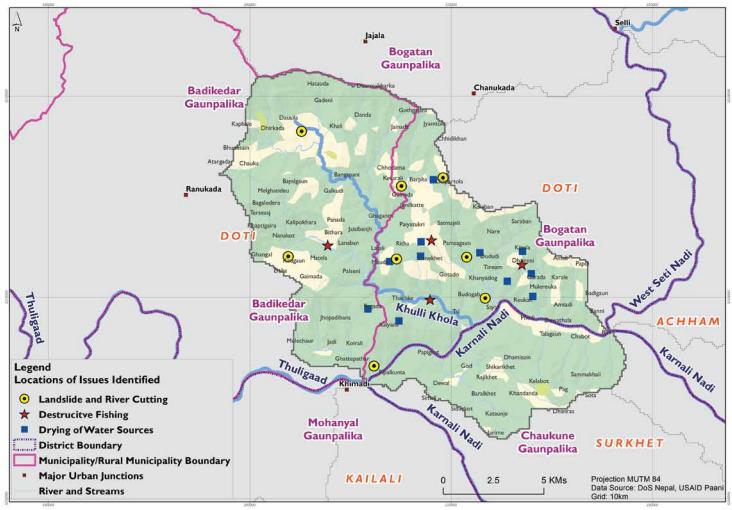
Watershed Name: Bogatan Lagam Karnali

River Basin: Karnali **Watershed Code: 331**



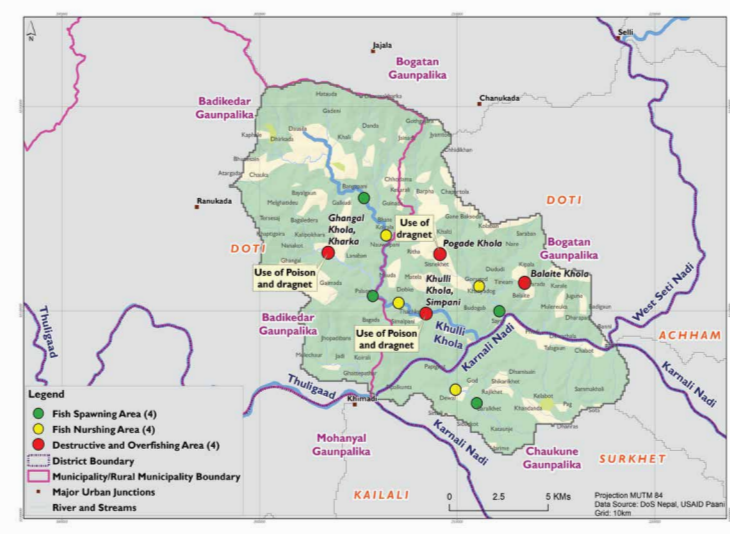
ENVIRONMENTAL ISSUES IN THE BOGATAN LAGAM KARNALI WATERSHED

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 BOGATAN LAGAM KARNALI 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 BOGATAN LAGAM 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 Bogatan Lagam 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 resources
- 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

WAYS FORWARD IN THE BOGATAN LAGAM KARNALI 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 Bogatan Lagam that provide remediation or improvements for all groups in the watershed.

ISSUE	ACTION/RECOMMENDATIONS
DRYING WATER SOURCES	• Establish water conservation measures such as recharge ponds, infiltration ponds, rainwater harvesting, and other multiple-use water techniques; • Develop and implement Water Use Master Plans in the watershed; • Protect existing water sources through improved catchment management of natural springs; • Introduce more climate-smart watershed and agricultural practices such as drip and sprinkler irrigation, mulching, organic farming, and increased use of drought-resistant crop and forest species; and • Support local government to develop and implement environmental-friendly road construction guidelines.
DESTRUCTIVE FISHING PRACTICES	• Raise community awareness about the impacts of destructive fishing practices; • Support the government to enforce the Aquatic Animals Protection Act in local rivers; and • Form community groups to monitor and regulate fishing practices in the watershed.
LANDSLIDES	• Providing training on low-cost bioengineering techniques to minimize the impact of landslides; • Support implementation of Environment Friendly Local Governance frameworks, Local Disaster Risk Management Plans (LDRMP), Local Adaptation Plans of Action (LAPA), and Water User Master Plans; and • Advocate for environment-friendly construction with local development agencies.