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RANGUN KHOLA

WATERSHED BRIEFER

Community Vision:

Promotion of social, economic and environmental prosperity in the Rangun Watershed through conservation, sustainable use, and equal distribution of benefits.



THE RANGUN KHOLA WATERSHED

Rangun is one of seven watersheds within the Mahakali River Basin. The watershed ranges in elevation from 2,500 m in the north, near the Mahabharat range, to 300 m along its southern reaches where it flows into the Makakali River at Parshuramdham.

Subsistence agriculture and small-scale livestock are the common livelihood options in Rangun, but declining production and limited opportunity for off-farm income activities have contributed to rising food insecurity in many households.

Major climate-induced hazards in the watershed include extreme rainfall events, which often precipitate flooding, river cutting, sand, and gravel deposition. Collectively, these events are affecting the availability of water, the quantity of water, and water quality, all of which impact natural habitats for aquatic and terrestrial species.

Monsoon floods have exacted large economic losses in parts of Aalital, Shirsha, and Jodbudha rural municipalities. The Government of Nepal and donor agencies have implemented some river control practices in parts of Katal, Parigaun, Simalkhet, and Laldhunga; however, deforestation, soil erosion and river cutting continue to pose substantial threats to communities downstream. The District Soil Conservation Office (DSCO) has supported the Rangun Khola Control Master Plan since 2010.

RANGUN KHOLA BY NUMBERS

WATERSHED	Rangun
PROVINCE	Number 7
TOTAL DRAINAGE AREA	690.1 km ²
NUMBER OF STREAMS	135
MAJOR RIVERS	Rangun, Puntura Gad, Sirsha Gad, Sun Khola, Sandani Khola
LAKES AND WETLANDS	Ali Tal, Pipalkot Tal, Kumad Gad
LAND USE	Forest - 91%; agricultural land - 6.3%; grazing land - 1.6%
MUNICIPALITIES	Parshuram Municipality, Alital Rural Municipality, Jorayal Rural Municipality
POPULATION	53,109 (48% male; 52% female) (CBS, 2015)
ETHNIC GROUPS	Brahmin (9.6%), Chhetri (66.2%), Janajati (8.8%), Dalit (15.2%)

Location Map

Watershed Name: Rangun Khola

River Basin: Mahakali

Watershed Code: 323

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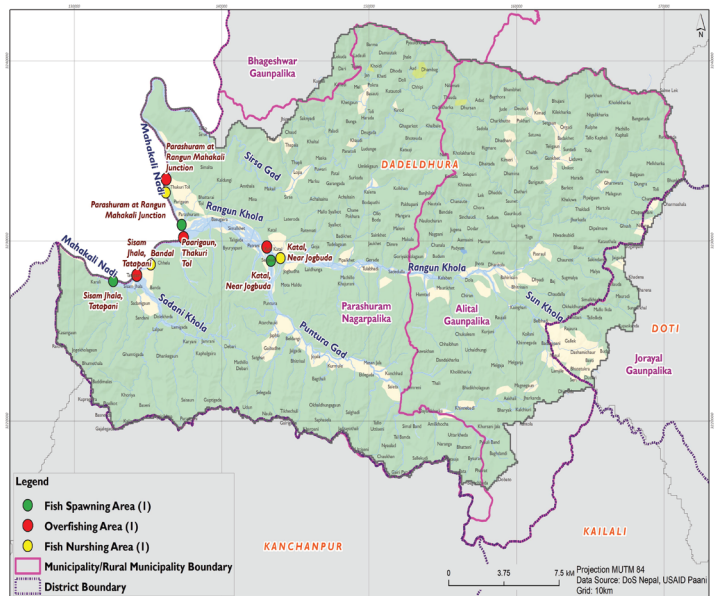




ENVIRONMENTAL ISSUES IN THE RANGUN KHOLA WATERSHED

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 RANGUN KHOLA 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 RANGUN KHOLA 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 Rangun 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 accessibility

Water quality



SUSTAINABLE AGRICULTURE

Agricultural productivity

Climate and physiography

Soil management

WAYS FORWARD IN THE RANGUN KHOLA 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 Rangun that provide remediation or improvements for all groups in the watershed.

ISSUE	ACTION/RECOMMENDATIONS
FLOODING, LANDSLIDES, SOIL EROSION, AND RIVER CUTTING	<ul style="list-style-type: none"> • Raise awareness among communities about the need for re-plantation and other sustainable forest management practices; • Strengthen existing early warning systems, and install EWS where not yet available; • Provide training and support for low-cost slope and riverbank stabilization techniques, such as check dams, embankments, spurs, bunds, eye-brow trenches, conservation ponds, and slope terracing; and • Construct check dams, embankments, spurs, and bunds along major rivers and tributaries.
DRYING WATER SOURCES AND WATER CONFLICTS OVER DRINKING WATER AND SANITATION	<ul style="list-style-type: none"> • Preserve, protect and clean water sources; and • Raise awareness about insuring equitable access to water for all.
DECLINING FISH STOCKS	<ul style="list-style-type: none"> • Conduct a survey to develop a capture fishery database; and • Encourage fishing groups to form and unify to discourage illegal fishing practices and raise awareness about destructive fishing practices
FOREST DEGRADATION, DEFORESTATION, AND ILLEGAL LOGGING	<ul style="list-style-type: none"> • Strengthen the capacity of local government agencies to implement and enforce existing forest-related policies and legislation; • Raise awareness about the benefits of sustainable forest management practices; and • Strengthen capacity of forest user committees for implementing and monitoring forest management plans.