

PRIVATE SECTOR ENGAGEMENT IN THE MAHAKALI BASIN

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BACKGROUND

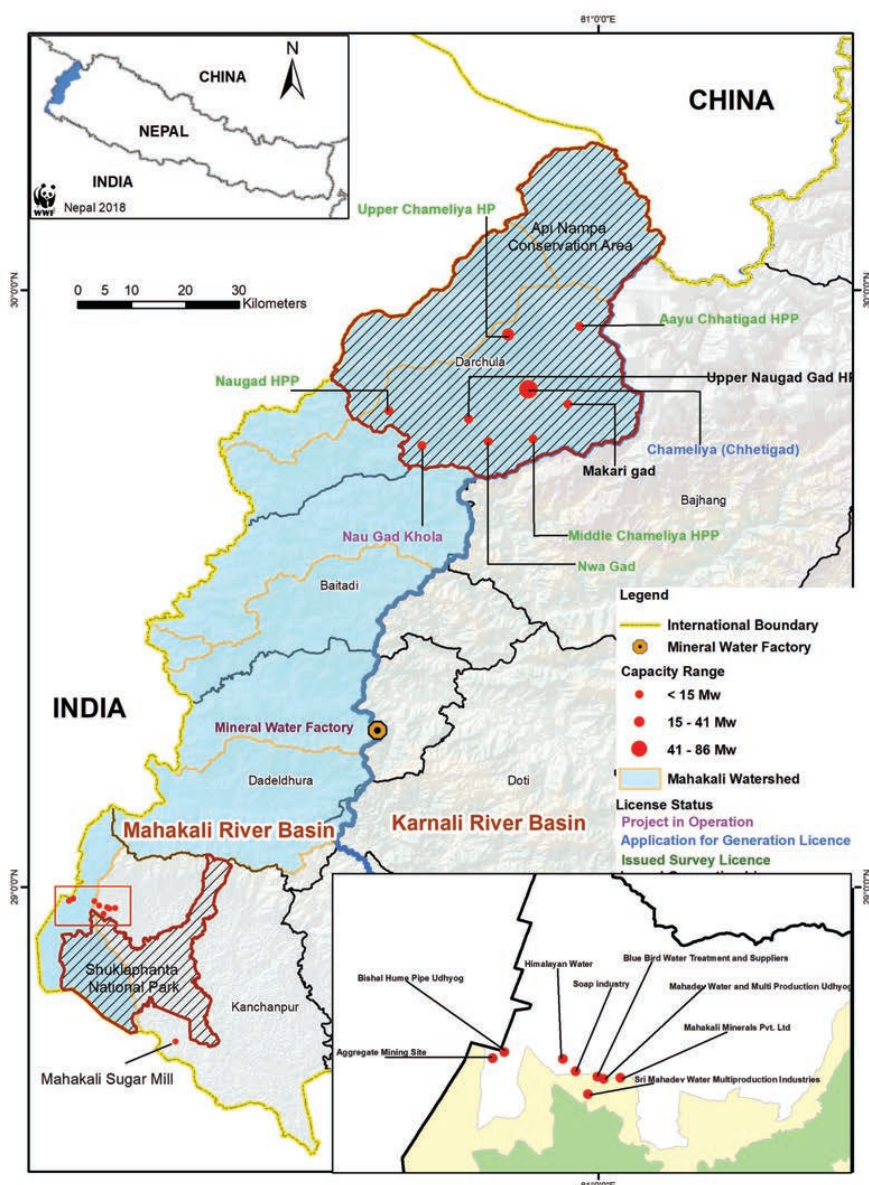
The private sector; small and large-scale, has been a major stakeholder in developing infrastructure, agribusiness, manufacturing industries and hydropower plants in and around the Mahakali river basin. Meanwhile, with the new decentralized federal model in place in Nepal, local governments will now take on the responsibility of natural resources in their jurisdiction.

While the private sector often plays a major role in economic development, this progress is often at the cost of nature and biodiversity. Similarly, another important point of consideration is also the impact on local river basin communities; that depend on these natural resources for their livelihoods. Private sector being key stakeholder of the basin, they have potential

to influence governments and basin communities on sustainable or unsustainable practices in the basin.

As Transboundary Rivers of South Asia (TROSA) program envisions of reducing poverty and marginalization of vulnerable communities through increased access to and control over riverine water resources on which their livelihood depends, it is essential to sensitize and work with this group on the impact of unplanned growth and development, its increasing burden on natural resources including water resources, livelihood of indigenous communities and consequently sustainability.

This document therefore summarizes some of the major private sector engagements in the Mahakali basin, their implications, and a possible way forward as a part of TROSA program.



SAND, STONE & GRAVEL MINING

According to an unpublished study in 2016 supported by WWF Nepal, Nepal's estimated annual production of sand, stone and gravel (aggregates) stands at 35 million tons. Moreover, demand for these aggregates are projected to increase with the Government of Nepal's push towards economic growth through linear and non-linear infrastructure development. Meanwhile, the 10-year projection of the Ministry of Urban Development also identifies that housing demands are likely to increase by 2 million by 2080, thereby further increasing the burden on Nepal's natural resources.

Private Sector Engagement

Extraction of aggregates is currently a primary source of income for those living along the banks of the Mahakali river, with local communities from around the district also depending on it. Extraction of aggregates from rivers by the private sector is subject to approval by the local government after an Initial Environmental Examination (IEE) is undertaken to determine the impact on natural resources. On approval of the IEE local governments may contract out extraction from river resources to the private sector under a tender.

Mining and extraction operations are generally undertaken for nine months of the year – from mid-September to mid-June, stopping briefly during the monsoons. One tractor of sand, stone and gravel takes approximately eight days with extraction primarily done manually without any safety measures.

Aggregates generally demand a higher market price for the first three months due to low supply in the previous months.

Individuals roughly earn NRs. 162,000/year (USD 1500) which is marginally higher than the national per capita income of USD 1,012 (FY 2017-18). The Kanchanpur DCC generated a revenue of NRs. 33 million (USD 0.3 million) in the last fiscal year through extraction of aggregates from the Mahakali River, while the Bheemdutta Municipality of Kanchanpur is now planning to contract out five rivers for extraction of 50,000 m³ each and has released a Request for Proposal for IEE of these five rivers.

Recommendations

Establish regulations on extraction of aggregates from rivers by fixing the sites and time period for mining and collection so that aquatic biodiversity and local communities will not be adversely affected.

Establish a monitoring committee to control haphazard extraction, with regular monitoring every 15-30 days.

Provision of training to people involved in extraction to minimize impact on aquatic ecosystem and avoid extraction from sites other than those mentioned in the IEE.

Conduct awareness programs on health and safety measures for individuals and contractors involved in extraction, and on environmental protection to minimize detrimental impacts.

Prepare and implement environment friendly sand and gravel mining guideline



HYDROPOWER DEVELOPMENT

Hydropower development is one of the major private sector investments in the Mahakali Basin, however sustainability is often an issue. Given the context of climate change, erratic precipitation patterns result in unprecedented landslides and have a huge effect on the geology. Furthermore, the issue is exacerbated by increasingly haphazard development of rural roads resulting in cumulative impacts on the environment.

Private Sector Engagement

There are currently two hydropower projects in operation in the Mahakali Basin - the government owned 30MW Chamelia Hydropower Project and the private sector owned 8.5MW Naugadh Hydropower Project. Besides these, there are 9 more private-owned hydropower projects being planned in Mahakali basin.

A major cause of concern has been regarding the dewatered zones, downstream of the Naugadh and Chamelia hydropower plants. While Clause 6.1.1 of the Nepal Hydropower Development Policy 2001 states that at least 10% (or more if identified by EIA) of the minimum monthly average discharge should be released by hydropower operators, this is often not the case. Additionally, 10% is considered inadequate to conserve freshwater biodiversity.

Private sector hydropower projects operate under the BOOT Principle (Build, Own, Operate, Transfer) whereby the project must be transferred to the

government after 25 years of operation. As a result, the private sector is often unwilling to consider sustainability beyond 25 years.

Additionally, given that the powerhouse of Naugadh Hydropower Project is located close to banks of the river Chamelia just 1.5 km away from a landslide area, another major concern is the lack of access to early warning systems on landslide or any additional climate information.

Recommendations

Bring in System Scale Planning to identify and avoid the most damaging sites and instead focus on sites that result in less impact and integrate conservation into hydropower development to help hydropower developers achieve environmental friendly practices.

Advocate for assessing E-flow, alongside ensuring implementation to maintain river connectivity and to ensure enough water availability for downstream communities and aquatic biodiversity.

Establish timely climate information systems to better integrate climate change into hydropower design.

Hold the private sector accountable in terms of implementing mitigation measures based on EIA report.

Conduct geomorphological monitoring around large infrastructure to identify hazardous and safe zones.

Develop appropriate fish ladder/ passage to help upstream-downstream movement of fish



FISH ISSUES IN MAHAKALI

T.K. Shrestha recorded 69 species of fish in the Mahakali River in 1990, however, T.B. Saund and his team recorded only 24 species of fish around the Pancheshwar Multipurpose Project area of same river in 2012. Though there is no scientific data to support the findings of decline in fish diversity in Mahakali river, local communities believe that there has been a huge decline in fish diversity in the river.

Private Sector Engagement

Currently fishing in the Mahakali River is leased out to contractors by the local government generally for the period between July – mid January. However local communities that depend on fishing for their livelihood are barred from fishing activities unless they secure a permit from the District Coordination Committee, or the government contracted contractor. A major issue identified in the region has been the use of poison to kill fish.

Recommendations

Prohibit fishing in spawning and breeding sites from mid-June to mid-August to avoid disturbances during breeding season.

Generate sensitization on fish conservation through awareness raising programs or use of hoarding boards in different locations.

Maintain a river guard to monitor and control illegal fishing in the river.

Develop fish sanctuaries for river stretches which could be suitable for spawning.

Prohibit mining in fish spawning and feeding sites

CONCLUSION

With increasing demand for natural resources, rivers like the Mahakali and its tributaries are being tapped into for infrastructure development, resulting in long river stretches drying out. Additionally, regulations on EIA and E-flow impacting the environment and aquatic biodiversity are often inadequately implemented. The environmental situation around the Mahakali currently does not seem positive with the Chamelia and Naugadh tributaries having more than a kilometer of dry stretch.

What becomes important as we move ahead in the quest for development and economic benefits is therefore bringing in sustainability in infrastructure development and the responsible use of natural resources by the private sector that takes into consideration the ecosystem and the rights of river basin communities.





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