Key Findings of Diagnostic Study on Inland Waterways in Nepal

Expanding Tradable Benefits of Trans-boundary Water: Promoting Navigational Usage of Inland Waterways in Ganga and Brahmaputra Basins

Dikshya Singh

Research Officer

South Asia Watch on Trade, Economics and Environment (SAWTEE)

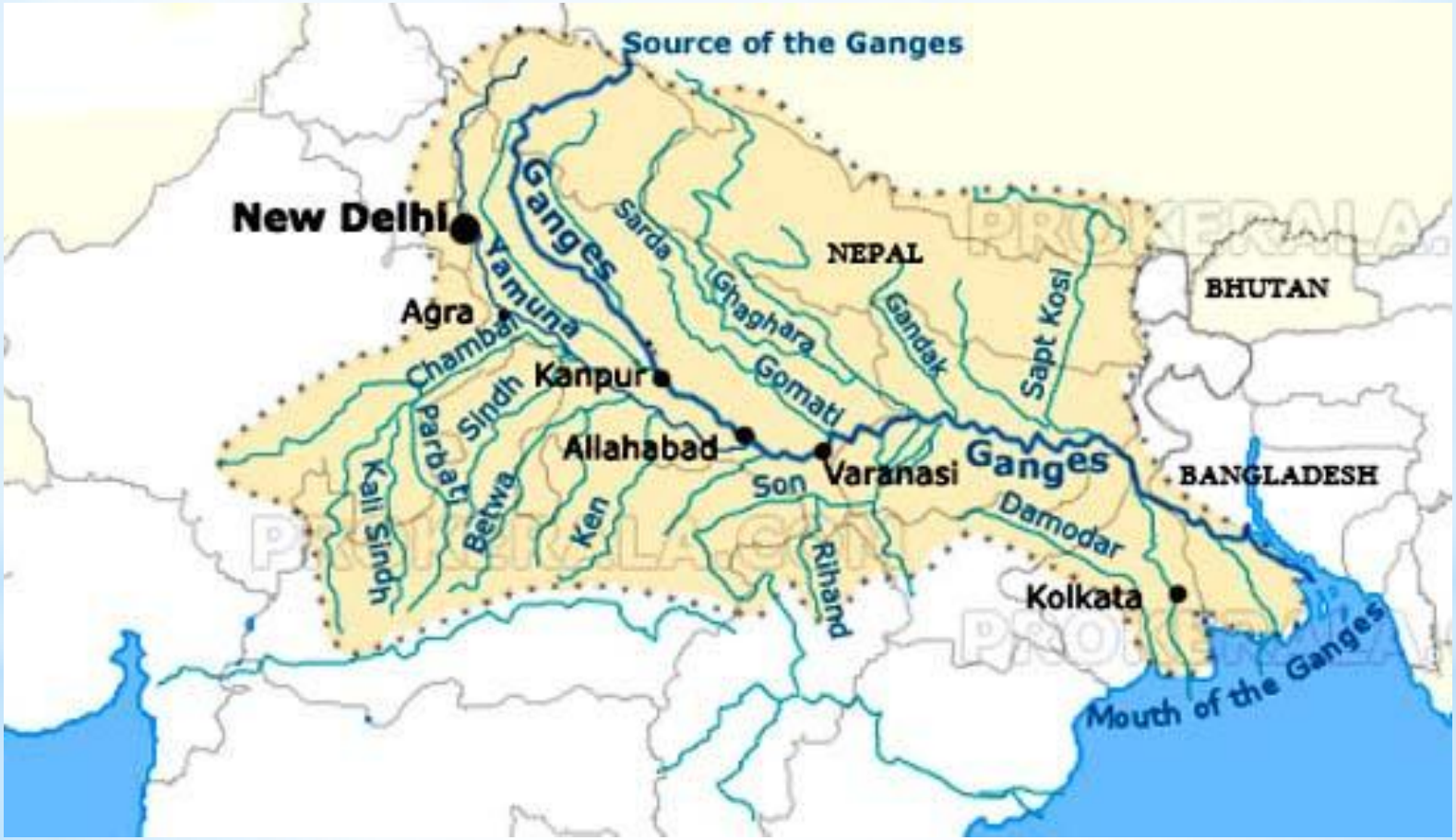
Background

* Institutional analysis on the policies, laws and regulations related to the management of inland waterways
* Assess the state of institutions —legal and governmental — which govern inland waterways for potential trans-boundary connectivity.
* Evaluate the connection between existing water transport services and impact on the livelihood of the locals, with a focus on gender concerns
* Identify gaps in policies and institutional capacity prevailing in the existing system

Methodology

* One-to-one interaction was undertaken with experts in Kathmandu, such as water resources experts, current and former officials at different government entities, private sector and so on.
* The location for field study was the Koshi River Basin (Bhimnagar to Chatara in Sunsari) and the Gandaki/Narayani River Basin (Triveni-Susta VDC in Nawalparasi).
* Interaction with stakeholders, including inhabitants of the area impacted by water transport, boat operators, fishermen and community-based groups
* Undertook Sub National Dialogues at Inaruwa (Koshi River Basin) and Tribeni (Narayani River Basin)

Regional Connectivity through Rivers



Water transport vs. other modes

PARAMETERS	WATERWAYS	RAIL	ROAD
Energy Efficiency 1 HP can move what weight of Cargo in (Kg)	4000	500	150
Fuel Efficiency 1 Litre of Fuel can move how much freight (ton/km)	105	85	24
Equivalent Single unit carrying capacity	1 Barge	15 Rail Wagons	60 Trucks
Air Pollution	Low	Medium	High
Land Acquisition	Low	High	High
Capital Required	Low	High	High

Source: Key Issues & Challenges for Inland Water Transportation Network in India

Institutional And Legal Entities Governing Waterways

* **Constitution of Nepal:** Federal government has the rights related to developing treaties, legislation and regulation for governing national and international waterways

* **Laws, strategies and plans:** Water Resource Strategy 2002; National Transport Policy 2002; National Water Plan 2005; Water Resource Act 1992; Ship Registration Act 1971; Local Self-Governance Act 1999

* **Institutions:** Ministry of Physical Infrastructure and Transport (MoPIT); Water and Energy Commission Secretariat (WECS)

* **Bilateral Treaties:** Gandak Treaty; Koshi Treaty; Mahakali Treaty

Feasibility Study of Water Transport along Koshi, Gandaki and Bheri River Basins (MoPIT) 2012

S.N.	Section	Remarks	S.N.	Section	Remarks
1	Koshi: Barrage -Chatara	Feasible	8	Gandak: Devghat-Mugling	Feasible
2	Koshi: Chatara -Simle	Feasible to high willingness to pay	9	Gandak: Mugling-Fisling	Feasible for Tourism
3	Koshi-Tribeni-Simle	Feasible	10	G: Mirme-Setibeni	Feasible
4	Koshi: Saune-Ghurmi	Technically not Feasible	11	Bheri: Chisapani-Ghatgaun	Feasible
5	Koshi: Dolalghat-Chatara	Feasible for Tourism	12	Bheri: Ghatgaun-Taranga	Feasible
6	Gandak: Devghat-Ramdi	Feasible for Tourism	13	Bheri: Taranga-Kamalpur	Feasible
7	Gandak: Devghat to Aptra	Feasible	14	Bheri: Kamalpur-Bbotechaur	Not Feasible due to no willingness to pay

Navigation in the Koshi River Basin

* Navigation limited to boats used for river crossing
* Wooden boats are used by people in the villages that are across the river as an alternate to bridges (Prakashpur and Mahendranagar VDCs). People on the other side are dependent on these boats for daily activities.
* Used to be a couple of jet boat services operated from Chatara upstream on the Koshi River's tributary Arun, but, the service stopped after an accident drowned a vessel and other boats fell into disrepair

Navigation in the Gandak River Basin

* Gandak tributaries do not have any inland waterways.
* A steamer service on the reservoir created by the construction of dam for Kali Gandaki A Hydroelectric Project in Synagja.
* At Triveni-Susta VDC (near Gandak Barrage) wooden boats are operated to ferry people around Trivenidham
* Motorised boats are not allowed on the river inside Chitwan National Park

Livelihood and Water Transport

* Numbers of people such as boatmen, fishermen and inhabitants of villages near river banks whose lives are touched by waterways.
* For people in Srilanka Tappu in Sunsari district, the makeshift water transport is the only mode to get them to their jobs, schools, hospital; transport their agriculture produce to sell in the market.
* Lack of expansion of water transport in those areas has also constrained their economic activities as well. Boatmen in Trivenidham rely on the smaller wooden boat to ferry passengers on a short stretch of the Narayani River and their inability to expand their fleet even during high demand season (winter during Maghi) mean their income remains stagnant.
* Most of the locals perceive water transport would not only impact mobility but would create employment opportunities
* Navigation could especially give impetus to tourism development in the areas

Navigation and the environmental concerns

* At present, navigation is limited to country boats used for short distance, thus the direct environmental impact of the navigation is minimal.
* The rivers flow through protected forest reserves, so due consideration is provided to the environmental aspects.
* The Narayani River and its concerns regarding habitation of aquatic animals have prevented navigation on larger motorised vehicles.
* In the Koshi River, the Koshi Tappu Wildlife Reserve actively monitors the boating and fishing taking place in the river.

Navigation and Gender Linkage

* Inadequate river transport service has restricted mobility and loss of economic opportunities for women.
* Women in the so-called Srilanka Tappu expressed that difficulty in river crossing meant that they are unable to seek employment on the other side of the river
* As better healthcare facility is available across the river Thus women during last months of their pregnancies tend to avoid living in the village to avoid emergency medical attention

Trade facilitation through navigation

* Nepal could get access to Haldia Port through the Ganges
* Cheaper trading cost (cost of freight per tonne km will be around NPR 2.26 by railways, NPR 4.1 by road and NPR 1.7 by inland waterways to transport the same cargo on same route (Rites 2013))
* India investing in river ports in Patna and Varanasi targetting Nepal bound cargo; investment in Indian stretch of the rivers Koshi, Gandaki and Karnali to develop as waterways
* Possibility of connecting BBIN through the Ganges and the Bramhaputra

Recommendations

* Undertake comprehensive feasibility study of the rivers to assess navigability.
* Identify sites for possibility of upgrading existing traditional boats, keeping in mind its social and ecological impact.
* Identify complementary infrastructure such as connecting roads to facilitate multi-modal transport services.
* Incentives to increase private sector participation.
* Prepare a set of guidelines to monitor and regulate existing services for safety of the passengers.

*Contd...

* On the institutional front, Nepal needs to set up a body or an entity assigned with a task of developing waterways.
* A comprehensive set of policy, Act and regulation needs to be framed to facilitate navigation in coordination with other water usage.
* To establish transboundary inland waterways connectivity to facilitate trade, Nepal needs to hold discourse with neighbouring countries, especially with India.
* Integrated basin navigation management approach need to be adopted.

THANK YOU