

USAID's Digo Jal Bikas Program Publications List

Peer-Reviewed Journal Articles: PUBLISHED

Hydrologic response of Chamelia Watershed in Mahakali Basin to climate change (2018).

This study simulated the current and future hydrological system of Chamelia, a tributary of Mahakali, a snow-fed watershed in Western Nepal, using the Soil and Water Assessment Tool (SWAT). They found high consensus for increase in temperature but less certainty with respect to precipitation. Average annual streamflow is simulated to increase gradually.

Available at: <https://www.sciencedirect.com/science/article/pii/S0048969718334892>.

The politics of river basin planning and state transformation processes in Nepal (2018).

This article argues that river basin planning -- a central idea in water resources management and a mainstream approach supported by international donors -- is not an antidote to current 'dysfunction' in water resources management, rooted in overlapping jurisdictions, fragmented decision making, and bureaucratic competitions between various government agencies, but rather a new arena of power struggles. Available at:

<https://doi.org/10.1016/j.geoforum.2018.07.019>.

Trade-offs in multi-purpose land use under land degradation (2017).

The authors reviewed literature on carbon sinks, water storage, biodiversity, and space for urbanization in order to illustrate the trade-off dilemma between food production and one or more other ecosystem services provided by land. They find that Landscape designs and urban planning should aim for the preservation of agricultural land and the integrated management of land resources by closing water and nutrient cycles, and by restoring biodiversity.

Available at: <http://dx.doi.org/10.3390/su9122196>.

Valuing the environmental costs of local development: evidence from households in western Nepal (2019).

A survey in 2017 in western Nepal elicited respondent's willingness to pay (WTP) for a land conservation program that would prevent future development in and around their villages.

The authors found a WTP of about US\$2. Available at:

<https://doi.org/10.1016/j.ecolecon.2018.12.021>.

Blogs/Op-Eds/News Articles in the Media

पानीका स्रोतको दिगो व्यवस्थापनमा जोड [The need for long term management conservation of water resources management] (2019)

Pilot-studies in Mellek and Punebata villages in Doti and Kuti in Kailali show the potential of interventions like recharge ponds and solar pumping for increasing the efficiency in water use can help long term water resources management.

<http://www.hakahakionline.com/np/2019/03/01/19991/>

Call to maintain environmental flow of rivers (2019)

Scientists have found that the growing number of hydropower and other development projects along the water resources are disturbing the environmental flow of rivers. <http://kathmandupost.ekantipur.com/news/2019-03-10/call-to-maintain-environmental-flow-of-rivers.html>

पानीका स्रोतको दिगो व्यवस्थापनमा जोड [Stress on long term management of water resources] (2019)

It is high time to focus on the long term conservation and management of river basins in Western Nepal for sustainable water resources development under climate change. Visions for hydropower and irrigation development in the basin need to consider the protection of the rich biodiversity and high climate vulnerability of the region.

Balancing people and energy in the Karnali Basin (2018).

There are a variety of socio-economic, cultural, and religious uses for water in addition to hydrological and ecological needs that environmental flows must consider. Available at: <https://www.thethirdpole.net/en/2018/08/20/balancing-people-and-power-in-the-karnali-basin/>.

It's A Rocky Road To Power For Rural Women. (2018).

A woman's right to make decisions doesn't always follow from the conventional measures of success like education or income. Available at: www.npr.org/sections/goatsandsoda/2018/03/08/591658610/its-a-rocky-road-to-power-for-rural-women.

The importance of local voices in Nepal's hydropower projects (2018).

Amidst the ongoing process of federalism and with a large number of development projects proposed, we must keep prominent in the discourse the need to incorporate local community views into decision making processes if we are to have regionally appropriate infrastructure that captures community development needs, priorities, and aspirations. Available at: <https://www.thethirdpole.net/en/2018/08/08/the-importance-of-local-voices-in-nepals-hydropower-projects/>.

Nepal and socially just hydropower (2019).

Investigates how to help decision makers handle complex tradeoffs of large dams for hydropower in ways that are fair for people and the environment. Available at: <https://www.asiatimes.com/2019/02/opinion/nepal-and-socially-just-hydropower/>.

Over and under the pond? (2018).

The authors explain how isotope analysis can help to identify the source of wells and springs in order to improve water management. Available at: <http://kathmandupost.ekantipur.com/news/2018-03-23/over-and-under-the-pond.html>.

River basin planning: An imaginary bureaucratic territory (2017).

While the idea of river basin planning and management highlights the need for better coordination and integration in water sector planning, in its application, river basin approaches are hindered by power struggles and bureaucratic competition between sectoral ministries. Available at: <http://water-future.org/blog/river-basin-planning/>.

Should we still focus on woman farmers? (2018).

The answer is yes, because attitudes and practices at the policy formulation and implementation level are still gendered. Available at: <http://kathmandupost.ekantipur.com/news/2018-03-16/should-we-still-focus-on-woman-farmers.html>.

Unacknowledged Irrigations (2018).

Smallholder women farmers are not acknowledged by water institutions. Available at: <http://kathmandupost.ekantipur.com/news/2018-02-08/unacknowledged-irrigators.html>.

Water Crises are hitting our economies: Time to hit back with natural infrastructure (2018).

We need natural infrastructure like forests, swamps, aquifers and grasslands to overcome droughts and floods. Available at: <https://news.trust.org/item/20180221150159-vjq6b>.

What's a river worth? (2017).

Maintaining a policy in Nepal that balances river health with development requires a three-fold strategy: 1) multi-stakeholder process to establish rigorous river health requirements; 2) a dedicated governing body with authority to monitor and punish non-compliance; 3) knowledge building and advocacy to mobilize citizens to hold private and public groups accountable. Available at: <http://kathmandupost.ekantipur.com/printedition/news/2017-12-15/whats-a-river-worth.html>.

Why we need to discuss masculinity in the water sector (2018).

From trainings to project quotas, guidelines to women's groups, gender has become a permanent fixture of most development initiatives. Yet, what's often missing is tackling the issue from the angle of masculinity. Available at: <https://wle.cgiar.org/thrive/2018/06/26/why-we-need-discuss-masculinity-water-sector>.

Conference Papers: Full Papers

Sustainable irrigation development: Knowledge generation for Karnali-Mohana River Basin (2017). For more information, contact Vishnu Pandey at v.pandey@cgiar.org.

Climate Change and Water Availability in Western Nepal (2018). For more information, contact Vishnu Pandey at v.pandey@cgiar.org.

Gender differences in water security and capabilities in Far-West Nepal (2018). For more information, contact Gitta Shrestha at g.shrestha@cgiar.org.

River health assessment for sustainable water resources management in Western Nepal. For more information, contact Luna Bharati at l.bharati@cgiar.org.

Peer-Reviewed Journal Articles: UNDER REVIEW

- Climate Futures for Western Nepal based on Regional Climate Models in the CORDEX-SA (2019).
- Climate change and spatio-temporal distribution of water availability in Karnali-Mohana Basin, Western Nepal (2019).

- Modelling Hydrology in Large Basins using Multi-site Calibration Approach: A Case of Karnali-Mohana Basin, Western Nepal (2019).
- Water diversion induced changes in aquatic biodiversity in monsoon-dominated rivers of Western Himalaya, Nepal: Implications to Environmental flows for river (2019).
- Whose river is it: An assessment of livelihood and cultural water flow requirements for the Karnali (2019).
- Unravelling gendered practices in the public water sector in Nepal (2019).
- Putting power and politics central in Nepal's water governance (2018).
- Spatial Politics and Local Alliances Shaping Nepal Hydropower.

Knowledge Products in development

1. A global perspective on the science and practice of environmental flows. From theory to implementation. *IWMI Working Paper*.
2. Gender in water policies and institutions in Nepal: Policy Recommendations on Gender for Nepal's water Sector. *IWMI Policy Brief*.
3. Gender, Social capital and collective commons: A gender perspective on collective sustainability of water resource governance in Far-West Nepal. *Journal Paper*.
4. Hydroeconomic modeling of water use trade-offs in Western Nepal. *Journal Paper*.
5. Implication of changing agricultural practices on agricultural system in changed governance context of Nepal. *Journal Paper*.
6. Linkages between migration, remittances and rural economies in Far Western Nepal. *Journal Paper*.
7. The Karnali and Mahakali Basins, Nepal- Water Resources Planning for Multiple Objectives. *Journal Paper*.
8. The Role of Hydropower in Vision of Water Resources Development for the Rivers of Western Nepal. *Journal Paper*.
9. Unpacking climate change: Assessment of sector-wise impact in Western Nepal. *Journal Paper*.
10. Women who do not migrate: Social interactions and participation in Western Nepal. *Journal Paper*.



These publications were made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the [Diyo Jal Bikas \(DJB\) project](#). The project seeks to promote sustainable water resource development in Western Nepal through balance economic growth, social justice, and healthy, resilient ecosystems. The contents are the responsibility of the authors and do not necessarily reflect the views of USAID or the United States Government.