



CHAPTER 10:

IMPLEMENTATION ARRANGEMENTS AND CONCLUSIONS

Chapter 10 summarizes the suggested institutional arrangements and structure to implement mitigation measures provided in the high-management actions across the Trishuli River Basin (TRB). The structure and approach toward implementation have taken cognizance of the following:

- USAID’s Program on Aquatic Natural Resources Improvement’s River Stretch Co-Management Concept Paper (forthcoming)
- Information available in the public domain on the evolving regulatory landscape for Nepal to govern river-basin planning and sustainable hydropower development
- Feedback and insights from participants at the Fourth Hydropower Developer’s Forum, facilitated on November 29, 2018

Organization Structure

It is recommended that three key collaborative management groups be formed to implement sustainable development pathways identified under the high-management action as in the proposed institutional structure in Figure 10.1.

Senior leadership and representatives of hydropower developers across the TRB can consider coming together to form the Trishuli Hydropower Developer’s Forum (THDF) at a Kathmandu level in order to be accountable for overall implementation.

The THDF may facilitate the formation of Local Impact Management Committees (LMCs) across the upstream, midstream, and downstream reaches of the basin. The key roles and responsibilities of the LMCs are to implement and monitor the high-management action for an identified river stretch in order to manage their local river sources for multiple uses (for example, sustainable capture fisheries, environmentally friendly

irrigation infrastructure, and sustainable hydropower, among others), with a focus on aquatic biodiversity conservation.

In recognition of the need to provide strategic support, undertake studies, and provide guidance to the LMCs and the THDF, a Technical Resource Group (TRG) can be formed through funding from the THDF. (See “Budget and Funding Modalities” in Chapter 10.)

Overarching River Basin Management Plan

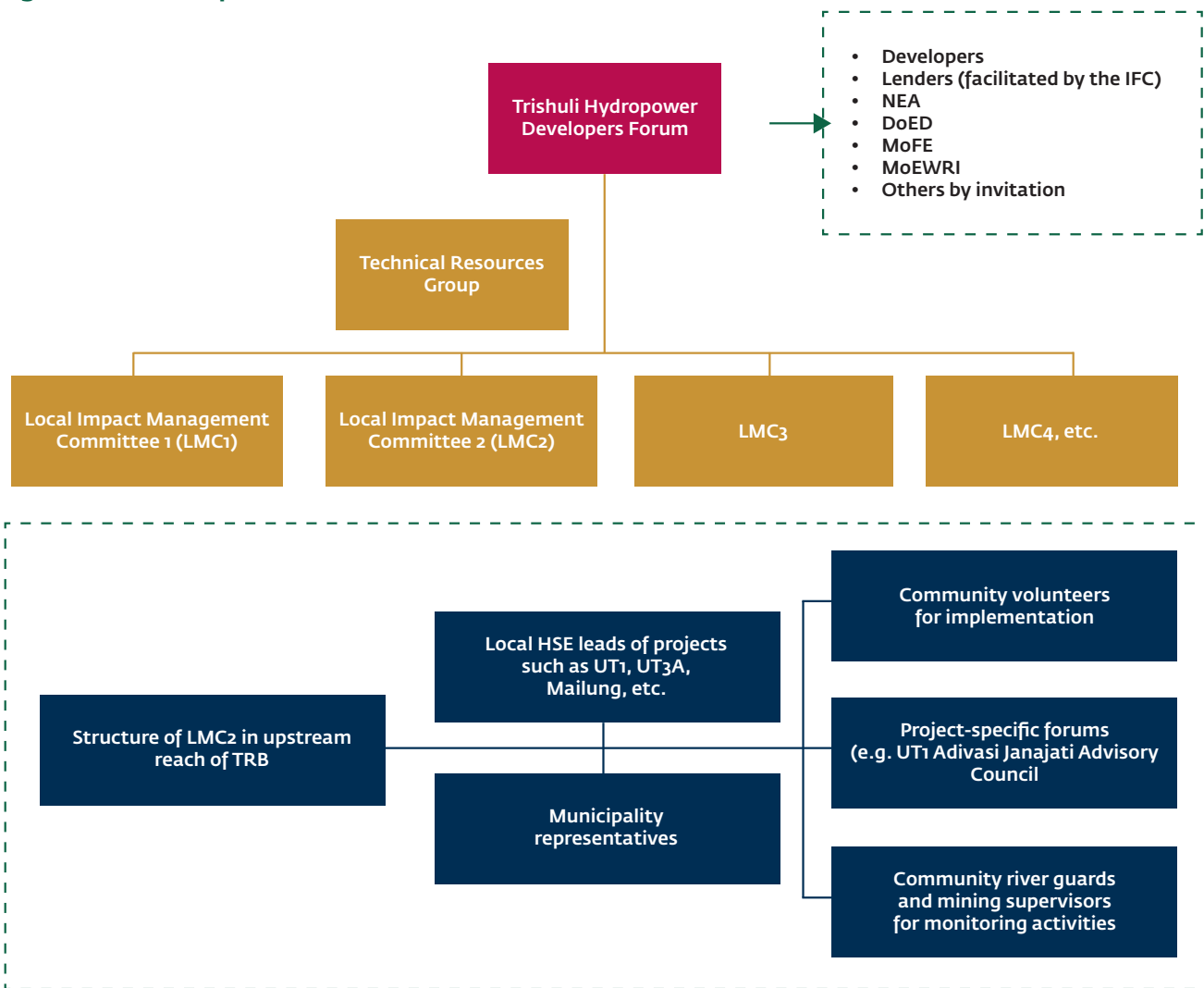
For the TRB, a conceptual framework like the one developed for the Koshi Basin Program, (Figure 10.2) can help develop shared understanding and effective communication among all stakeholders involved in the process of basin-wide water management.

The Soil and Water Assessment Tool and Water Evaluation and Planning System assessment tools were used in the Koshi Basin Program to determine in which geographic region or location there is higher precipitation and water availability in the water basin. On these were superimposed sector demands for highest water need by use (hydropower, agriculture, and domestic), along with seasonal and interannual variability in water availability.

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Using the Koshi Basin Program as inspiration, the proposed institutional structure for TRB can be set up to implement high-management actions that are combined into a TRB Management Plan by the TRG in the context of the Sustainable Hydropower Development

Figure 10.1 Proposed Institutional Structure



Note: IFC = International Finance Corporation; NEA = Nepal Electricity Authority; DoED = Department of Electricity; MoFE = Ministry of Forests and Environment; MoEWRI = Ministry of Energy, Water Resources and Irrigation.

Charter. This TRG may be coordinated by a think tank or conservation agency respected by the local communities in the basin and will be supported by the Fisheries Research Station (Nuwakot and Dhunche); district and provincial department representatives of Ministry of Forests and Environment, Ministry of Population, Ministry of Federal Affairs and Local Development, and the Fisheries Department; and inputs from district chapters of Federation of Community Forestry Users Nepal.

It is strongly recommended that an LMC for the upstream reach be set up first, given the advanced stage of environmental and social planning under the Nepal Electricity Authority and other developers such as UT-1, and that lessons learned from this initiative

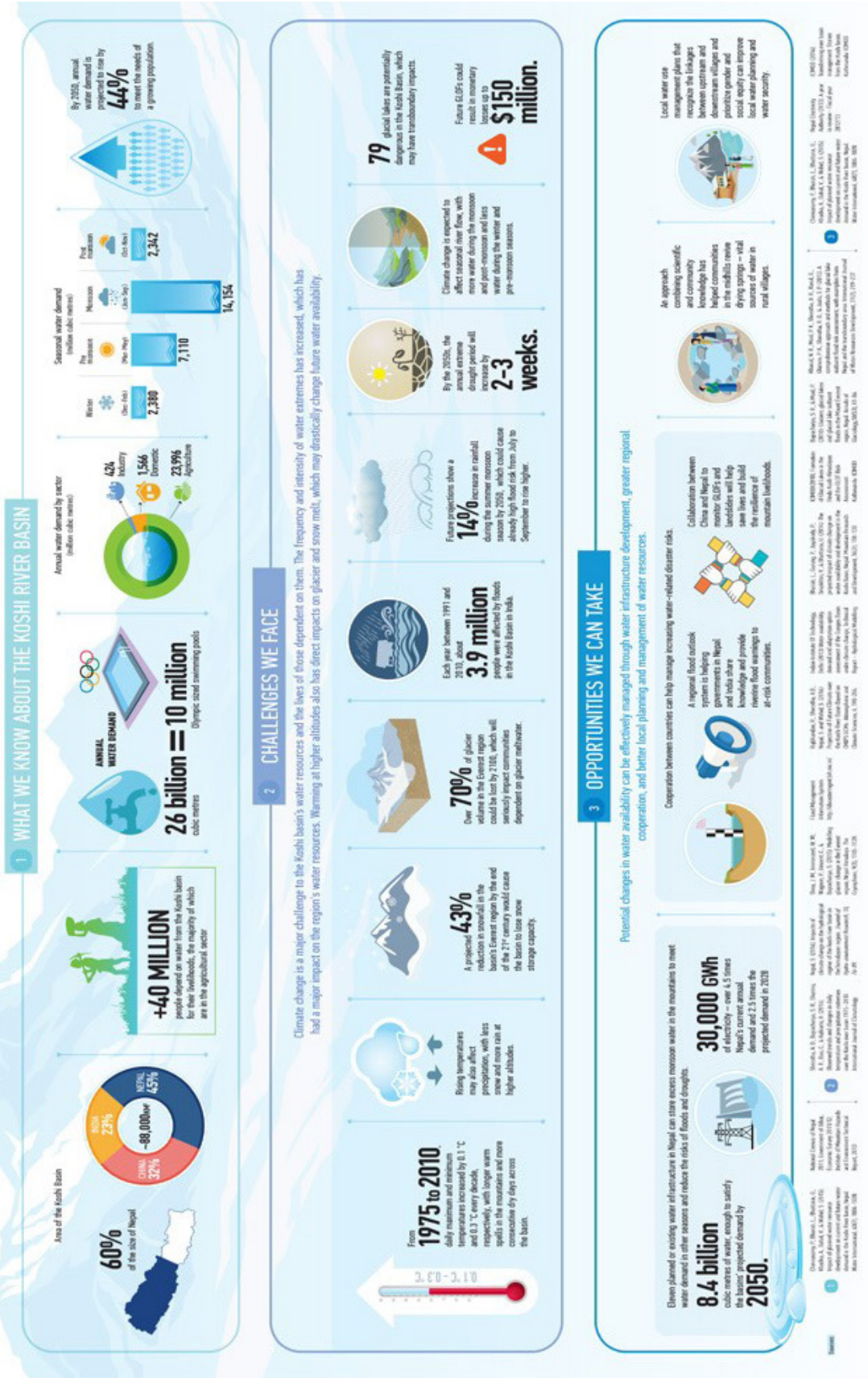
be emulated across all identified stretches. The Trishuli Basin Management Plan should ultimately capture the basin-wide collective experience from all LMCs.

The TRB Management Plan will also include a specific data collection and monitoring protocol that should be the basis for collaborative monitoring through the LMCs. The Hydropower Sustainability Assessment Protocol (ESG Tool) may be used to develop the same. The TRB Management Plan (TRBMP) will be presented to the THDF, local municipality authorities and the LMCs (once formed), and thereafter handed over for implementation. The TRG may revisit the TRBMP once policies governing basin-level planning are disclosed.

Figure 10.2 Conceptual Framework for the Koshi Basin Program

FUTURE OF THE KOSHI BASIN

Thinking about water in an age of uncertainty



Source: ICIMOD n.d.

Facilitating the formation of Local Impact Management Committees

Constituting the LMCs

The structure of each LMC will build on existing networks of health, safety, and environment teams of hydropower developers; river-user groups (fishing, irrigation, sanitation, and so forth); Langtang National Park authorities; Community Forest User Groups, and representatives of project-specific committees: for example, the UT-1 Adibasi Janajati Advisory Council. The process of selecting volunteers to implement the TRBMP and its monitoring (through river guards and mining supervisors) will give priority to groups that are dependent on river-based livelihoods and will give due consideration to gender equity and social inclusion.

A suggested function of each LMC includes the following:

- Implementation of the TRBMP for an identified spatial stretch of the river
- Creating awareness among local communities and settlements on biodiversity conservation, proper waste management, and sustainable fisheries
- Imposing regulations and/or moratoriums on capture fisheries during the breeding season and on intensive techniques of fishing
- Formation and mobilization of community-based patrolling (river guards and mining supervisors) who will also undertake periodic monitoring of the implementation of commitments under the Sustainable Hydropower Development Charter
- Carrying out administrative responsibilities, such as maintenance of the account and records and annual audit of income and expenditure with its disclosure to local municipalities and the THDF

Once constituted, each LMC should develop a funding proposal for their relevant municipalities under the Environment-Friendly Local Governance Framework, 2013.

Spatial Extent

With support from the THDF and the TRG, LMCs will delineate the boundaries for implementation of the TRB Management Plan, aiming to establish stretches that are within the area of influence of the key hydropower projects (HPPs) identified for that reach. Identification of river stretches will consider a manageable length's or area's topographical factors; local social, environmental, and biodiversity values of the settlements; and the area of influence of two-to-three HPPs represented within the LMC.

The case study in Box 10.1 illustrates the outcome of free, prior, and informed consent (FPIC) consultations for UT-1 as an example for a developer and local community-led forum.

Budget and Funding Modalities

The key sources of funding for LMCs are suggested as follows:

- Diversion of a portion of taxes and royalties received from sand-mining entities by municipalities (For example, 10 percent of revenue from sand-mining entities within the spatial extent of the area managed by each LMC could be reinvested.)
- One to 2 percent of the annual environmental and social management plans (ESMPs) implementation budget of constituent HPPs within that LMC (It is expected that the existing EMP will be revised into an ESMP based on the adoption of the Sustainable Development Charter.)

Federal government funding through the Environment-Friendly Local Governance Framework, 2013.

Each LMC should establish its procedures and guidelines for the management of the funds and an accounting system based on guidance provided by the Environment-Friendly Local Governance Framework, 2013.

It is expected that the THDF will fund the TRG based on submission of proposals and expression of interests to participate in or undertake studies.

Box 10.1 Free, Prior, and Informed Consent (FPIC) Agreement for UT-1

A tripartite agreement was executed on November 1, 2018 in Battar (Bidur Municipality) to document the outcomes of discussions between the UT-1 Adibasi Janajati Advisory Council and the Nepal Water and Energy Development Company (NWEDC), the project proponents of UT-1, to mitigate impacts linked to the project's use of land under traditional ownership/customary use of the Tamang community across 10 affected villages in Rasuwa District.

The key principles governing the agreement include the following:

- Recognition of the role of a partnership among the local indigenous peoples (IPs), local government, and NWEDC for the purpose of the sustainable development of the indigenous community
- Respect for the priority right of the local Tamang indigenous people to use the resources of fauna and flora and their growing aspiration for self-governance and control over the environment of their native habitat
- Emphasis on the distinctive spiritual ties of the Tamang people to their land and the paramount importance of the preservation and protection of their habitat
- Recognition of the local IP rights to define their sustainable development priorities

The key components of the agreement included (i) building capacity (in the form of leadership training and skill development) to enable the residents to actively participate in the management of their own affairs; (ii) improving the lives and livelihoods of the Tamang project-affected people through the implementation of social and economic development plans in a culturally appropriate manner; and (iii) disclosing information about the environmental impact of the project.

Source: *Urja Khabar* 2018.

Finally, budgets for any changes that HPPs need to undertake to implement adaptive management measures will be borne as project costs.

Disclosure and Stakeholder Engagement

The identified institutional structure will also have a formal mechanism to communicate its approach, initiatives, and outcomes. Localized stakeholder engagement will also need facilitation by the Provincial, Municipality, and District Coordination Committees' representatives. Finally, any feedback, suggestions, and grievances on implementation of LMC initiatives may be addressed to urban and rural municipalities at the local level.

Conclusions

Hydropower development combined with stressors and key regional initiatives cumulatively affect valued environmental components (VECs) such as aquatic

and terrestrial biodiversity, livelihoods, cultural and religious sites, and water resources within the TRB. The coinciding project development timelines of hydropower developments in the planning stage are likely to further accentuate localized impacts pertaining to community health and safety, labor influx, pressure on local resources (especially drinking water, roads, and health infrastructure), and demographic and economic changes. The upstream reach is likely to be more significantly affected due to the number of projects that are coming up in Mailung Khola, Langtang National Park, and Salankhu Khola over and above the main stem.

Given the large number of proposed HPPs and other stressors in the TRB, continuation of a business-as-usual approach is predicted to result in significant degradation of the Trishuli River and other important VECs, including terrestrial biodiversity, community livelihoods, cultural and religious sites, and water quality. The outcome of the Cumulative Impact Assessment and Management suggests that a high-

management action offers a sustainable development pathway to maintain, or potentially even enhance, current levels of ecosystem integrity and VEC conditions with stakeholder initiative across developers, local governments, and basin-level affected communities. The high-management action is envisioned as a collaborative approach that could be implemented through a combination of developer-driven mitigation measures, community-based monitoring, civil society and university technical support, and governmental oversight.

Development of an institutional structure through the THDF, LMCs, and a TRG (supported by imminent policy initiatives, basin management plan, collaborative data collection and monitoring mechanisms, and proactive stakeholder engagement) will enable the following:

- Recognition of the roles and responsibilities of individual HPPs in impact mitigation and monitoring
- A more direct line of communication among stakeholders that are interested in enabling sustainable hydropower development within the TRB: government agencies, project developers, finance institutions, international organizations, and affected communities
- Early identification of key issues that are specific to a reach or section of the river in a collaborative manner and through coordinated solutions (as well as by sharing good practices and lessons learned)
- Coordination in reach-level planning and siting of facilities
- Provision of the opportunity for exchange of information for better mitigation of adverse cumulative impacts and enhancement of positive cumulative impacts at a basin level
- Engagement of local communities across the basin to enable their participation and community-based monitoring in the river basin initiative, thereby facilitating ownership and managing expectations

The implementation of these mitigation measures is expected to promote sustainable development while developing hydroelectric projects in the TRB, balancing the need for optimal energy supply with environmental protection, maintenance of social livelihoods and well-being, and sustainable management of water resources.