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PAANI PROGRAM | पानी परियोजना

SIXTEENTH QUARTERLY REPORT

(January 1 – March 31, 2020)

Cover photo: A woman from the Majhi community living near the banks of the Karnali River in Rakam, Middle Karnali Watershed weaves a fishing net.

Photo credit: Nabin Baral for USAID Paani Program

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ABBREVIATIONS

AABCA	Aquatic Animal and Biodiversity Conservation Act
AABCB	Aquatic Animal and Biodiversity Conservation Bill
AABCC	Aquatic Animal Biodiversity Conservation Council
ADB	Asian Development Bank
AFU	Agriculture and Forestry University
AGM	Annual General Assembly
APS	Annual Program Statement
ASHA	Adaptation for Smallholders in Hilly Areas (project)
AWP	Annual Work Plan
BAFER	Balchaur Forest and Environment Resource Development Centre
BC	Business Case
BCN	Bird Conservation Nepal
BCP	Business Continuity Plan
BCTS	Brahmin, Chhetri, Thakuri and Sanyasi
BLMC	Bhagaraiya Lake Management Committee
BMP	Best Management Practice
BRIDGE	Biodiversity Results and Integrated Development Gains Enhanced
BZMC	Buffer Zone Management Committee
CAACG	Community Aquatic Animal Conservation Group
CAPA	Community Adaptation Plans of Action
CAS	Catch Assessment Survey
CBAPU	Community Based Anti-Poaching Units
CBD	Convention of Biological Diversity
CDES- TU	Tribhuvan University, Central Department of Environment Sciences
CBR	Community Biodiversity Register
CCA	Climate Change Adaptation
CDES	Central Department of Environmental Science

CFPCC	Central Fisheries Promotion and Conservation Center
CFMG	Capture Fisheries Management Guidelines
CFUG	Community Forest User Group
CIA	Cumulative Impact Assessment
CIS	Creative Innovation Society
CMDN	Center for Molecular Dynamics Nepal
CODEFUND	Conservation Development Foundation
CREEW	Center of Research for Environment, Energy and Water
CS	Citizen Scientist
CSO	Civil Society Organization
CTS	Chief Technical Specialist
DCC	Dolphin Conservation Center
DDC	District Development Committee
DEM	Digital Elevation Model
DG	Director General
DHM	Department of Hydrology and Meteorology
DJB	Digo Jal Bikash
DNF	Dali NGO Federation
DNPWC	Department of National Parks and Wildlife Conservation
DOED	Department of Electricity Development
DQA	Data Quality Assessment
DRR	Disaster Risk Reduction
DSV	Dolma Group, SAFAL, and VRock
EAIPS	Exotic Aquatic Invasive Plant Species
EAP	Emergency Action Planning
ECC	Environment Coordination Committee
EF	Environmentally-Friendly
EFLG	Environment-friendly Local Governance Framework

EFRC	Environment Friendly Road Construction
EIA	Environmental Impact Assessment
EMP	Environment Management Plan
EOI	Expression of Interest
EOA	Energy Options Assessment
EPLE	Environmental Policy and Law Expert
ESIA	Environmental and Social Impact Assessment
ESRM	Environmental and Social Risk Management
EWS	Early Warning System
FAA	Fixed Amount Award
FAN	Forest Action Nepal
FCOE	Freshwater Center of Excellence
FDI	Foreign Direct Investment
FDM	Foundations for Development Management
FECOFUN	Federation of Community Forest Users Nepal
FEDWASUN	Federation of Water and Sanitation Users Nepal
FEED	Environment Development Consult Pvt Ltd
FEWS	Flood Early Warning System
FFS	Freshwater Fisheries Specialist
FGD	Focus Group Discussion
FIRDO	Fulvari Integrated Rural Development Organization
FNCCI	Federation of Nepalese Chamber of Commerce and Industry
GEEC	Greenwich Environment and Engineering Consult Private Limited
GESI	Gender Equality and Social Inclusion
GIIS	Global Institute of Interdisciplinary Studies
GIS	Geographic Information System
GMP	Good Management Practices
GON	Government of Nepal

HB-CARE	Hariyo Ban Program-CARE Nepal
HbD	Hydropower by Design
HCV	High Conservation Values
HCVR	High Conservation Value Eivers
HEC-RAS	Hydrologic Engineering Center's
HIMAWANTI	Himalayan Grassroots Women's Natural Resource Management Association
HPFC	Harpan-Phewa Fish Cooperative Pvt. Ltd.
HWEPC	Human Welfare Environmental Protection Centre
ICH	International Centre for Hydropower Norway
ICID	International Commission on Irrigation and Drainage
ICIMOD	International Centre for Integrated Mountain Development
IDE	International Development Enterprises
IDES	Integrated Development Society
IEE	Initial Environmental Examination
IEC	Information, Education and Communication
IFC	International Finance Corporation
ILBM	Integrated Lake Basin Management
IPM	Integrated Pest Management
IPPAN	Independent Power Producers' Association, Nepal
IR	Intermediate Result
IRBM	Integrated river basin management
IRBMP	Integrated River Basin Management Platforms
IUCN	International Union for the Conservation of Nature
IWMA	Integrated Watershed Management Activity
IWMI	International Water Management Institute
IWRM	Integrated Water Resource Management
ISET-N	Institute for Social and Environmental Transition – Nepal
JS	Joint Secretary

KCDC	Karnali Community Development Center
KDCN	Kalika Development Center Nepal
KELSA	Karnali Entrepreneurship and Leadership Summit and Awards
KII	Key Informant Interview
KIRDARC	Karnali Integrated Rural Development and Research Center
KRB	Karnali River Basin
KRBCF	Karnali River Basin Conservation Fund
KU	Kathmandu University
LAPA	Local Adaptation Plans of Action
LDCRP	Local Disaster Risk Management Planning
LK	Lower Karnali
LM	Lower Mahakali
LTTA	Long Term Technical Assistance
MoALD	Ministry of Agriculture Livestock Development
MoE	Ministry of Energy
MOEWRI	Minister for Energy, Water Resources and Irrigation
MoFE	Ministry of Forest and the Environment
MoI	Ministry of Irrigation
MoITFE	Ministry of Internal Affairs and Law, and Ministry of Industry, Tourism, Forest and Environment
MoLMAC	Ministry of Land Management, Agriculture and Cooperative
MRC	Multi Dimensional Resource Center Nepal
MRDCC	Mallarani Rural Development Concern Center
MPDS	Multipurpose Development Society
MSC	Multi-Stakeholder Consultation (workshops)
MWU	Mid-Western University
MUS	Multiple Use Water System
NARA	Nepal Association of Rafting Agents
NARC	Nepal Agriculture Research Council

NASRI	the National Animal Science Research Institute
NATHM	Nepal Academy of Tourism & Hotel Management
NBA	Nepal Bankers Association
NC	Natures Conservation
NCE	No-Cost Extension
NEA	National Electricity Authority
NEOC	National Emergency Operating Center
NFIWUAN	National Federation of Irrigation Water Users Association Nepal
NGO	Non-Governmental Organization
NHA	Nepal Hydropower Association
NHDP	Nepal Hydropower Development Project
NEEDS	Nepal Environment and Equity Development Society
NENCID	Nepal National Commission on Irrigation and Drainage
NEFEJ	Nepal Forum of Environmental Journalists
NEFIN	Nepal Federation of Indigenous Nationalities
NFIWUAN	Nepal Federation of Irrigation Users Associations
NMEL	Nepal Monitoring, Evaluation and Learning
NNSWA	Nepal National Social Welfare Association
NPR	Nepali Rupees
NRs	Nepali Rupees
NRBCF	Nepal River Basin Conservation Fund
NRCT	Nepal River Conservation Trust
NSHAA	Nepal Sustainable Hydropower Advocacy Alliance
NTB	Nepal Tourism Board
PEA	Political Economy Analysis
PES	Payment for Environmental Services
PHG	People's Help Group
PIO	Public International Organization

PLA	Participatory Learning and Action
PSC	Project Steering Committee
PTC	Project Technical Committee
RBO	River Basin Office
RCDC	Rural Committee for Development Centre
RFA	Request for Application
RHF	Resources Himalaya Foundation
RLRFFC	Rupa Lake Rehabilitation & Fisheries Cooperative
RM	Rural Municipality
R-METT	Ramsar Management Effectiveness Tracking Tool
RSC	River Stretch Co-management
RSN	Renaissance Society Nepal
RTS	Real Time Solutions
RuDEC	Rural Development and Empowerment Center
SA	Strategic Approach
SAEWCC	Sustainable Agriculture Environment Water Conservation Center
SBS	Sonaha Bikash Samaj
SCCI	Surkhet Chamber of Commerce and Industry
SEE	Sustainable Eco-Engineering
SEED	Social, Environmental and Economic Development office
SEN	Small Earth Nepal
SESA	Strategic Environmental and Social Assessment
SIA	Social Impact Assessment
SOW	Scope of Work
SPNP	Shey Phoksundo National Park
SSP	System Scale Planning
STTA	Short Term Technical Assistance
SWAT	Soil and Water Assessment Tool (SWAT)

SWN	Scott Wilson Nepal
TAL	Tarai Arc Landscape
TNC	The Nature Conservancy
TOC	Theory of Change
TOT	Trainer of Trainers
TU	Tribhuvan University
UNDF	United National Development Forum
USFS	United States Forest Service
USG	United States Government
VDC	Village Development Committees
VCA	Vulnerability Capacity Assessments
WECS	Water and Energy Commission Secretariat
WMS	Watershed Management Specialist
WRP	Water Resource Policy
WUG	Water Users Groups
WUMP	Water Users Management Plans
WWF	World Wildlife Fund
YAE	Youth Alliance for the Environment

SECTION 1: ACTIVITY OVERVIEW

The USAID Paani Program – युएसएड पानी परियोजना – aims to enhance Nepal's ability to manage water resources for multiple uses and users through climate change adaptation and the conservation of freshwater biodiversity. Paani employs an integrated, whole-of-basin approach with activities at the watershed, river basin, and national scales, to reduce threats to freshwater biodiversity and strengthen the resilience of targeted human and ecological communities in the Karnali, Mahakali and Rapti river basins through improved water management.

At the community and watershed levels, Paani increases the knowledge, engagement, and benefits of local water users in target river basins to build water management capacity (Intermediate Result 1). At the river basin level, Paani's activities focus on sustainable hydropower, flood risk reduction, and participatory governance (Intermediate Result 2). At the national level, Paani focuses on policy and the enabling environment and improves coordination among stakeholders at all levels (Intermediate Result 3). Underlying its support across these three levels, Paani expands the knowledge base and Nepal's capacity for on-going learning in the areas of freshwater biodiversity, climate change and water resources management (Intermediate Result 4).

In June 2017, the program shifted its approach to planning and implementation around 11 strategic approaches (SA). Each approach provides a logical path for understanding Paani's work under each strategic theme. Result chains were then developed to set forth a pathway for each of the SAs, which are grouped under the four intermediate results as follows:

- **Intermediate Result 1**: Increased knowledge, engagement and benefits for local water users. To improve integrated water resource management, sustainable use of resources, and collaboration and investment on a significant scale, Paani is helping stakeholders build capacity through collaboration with local government, NGOs and other locally active stakeholders to address problems in their particular watersheds. Paani is helping stakeholders establish effective **collaborative decision-making (governance) processes** across **five strategic approaches** carried out at the watershed level:
    - SA 1a: Improve management of capture fisheries
    - SA 1b: Improve local capacity for water management
    - SA 1c: Improve local capacity for regulation and management of local road construction and (riverbed) aggregate mining
    - SA 1d: Improve local capacity for managing invasive species
    - SA 2b: Improve local capacity for disaster risk reduction (also applicable at the river basin level, under IR 2)

The experience and trust developed through collaboration will help Paani stakeholders work more credibly with other levels of government, and other stakeholders, donors, and decision-makers at the river basin (IR 2) and other levels (IRs 3 and 4).

- **Intermediate Result 2**: Improved basin-level resource management. At the basin level, activities take into consideration entire catchment areas and the high level of connectivity of freshwater systems. Paani is building on watershed-level experience to carry out four approaches at the basin-level:
    - SA 2a: Improve basin level planning
    - SA 2b: Improve local capacity for disaster risk reduction (also applicable at the watershed level)

- SA 2c: Support sustainable hydropower (also linked with a strategic approach under IR3)
- SA 3b: Support CSOs to advocate for transparent and accountable hydropower decision-making (also cross-cutting at the national level)

- **Intermediate Result 3:** Strengthened coordination and enabling environment
  - SA 3a: Strengthen policy and planning for integrated water resource management (IWRM)
  - SA 3b: Support CSOs to advocate for transparent and accountable hydropower decision-making (also applicable at the basin level)

- **Intermediate Result 4:** Expanded knowledge base
  - SA 4a: Learn and discover (generate knowledge) through a research agenda that informs the strategic approaches under IRs 1 and 2
  - SA 4b: Support capacity building, learning and knowledge sharing in academic and other learning spaces over the long term

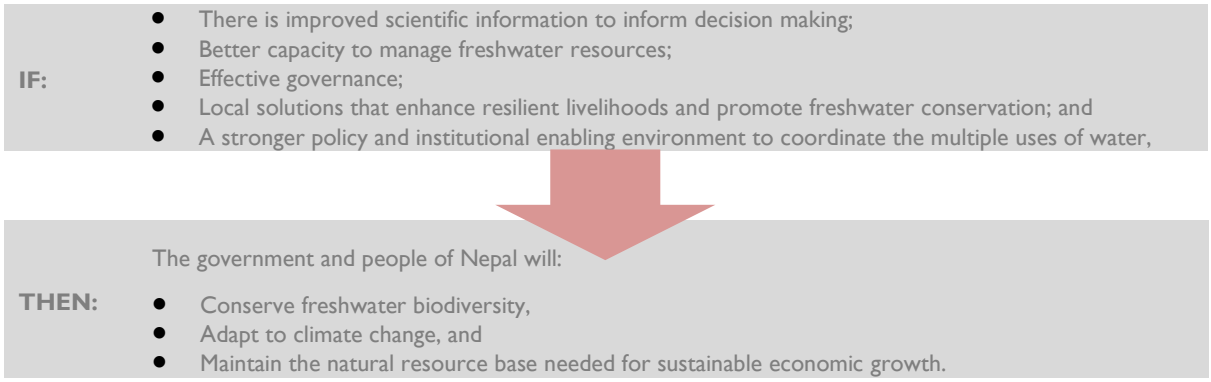
With the understanding that IRs still provide the broad framework for Paani's work, the program implements according to the above SAs. Therefore, and in line with the Paani Year 4 (Y4) Annual Work Plan (AWP), this quarterly report documents project activities according to the 11 SAs and the tasks that fall under them. Nonetheless, the SAs are interwoven differently in each river basin or watershed. To ensure that activities under each SA complement each other effectively across areas of implementation. Paani has also identified focused initiatives to increase the program's impact, as described later in this section.

Paani is a sister project to the USAID-funded Nepal Hydropower Development Project (NHDP) and to complementary projects funded by the U.S. Forest Service (USFS) and the International Water Management Institute (IWMI). The program also builds on USAID/Nepal's experience and on-going projects in terrestrial conservation, extending successful community-based models for reducing threats to key species and for building resilience.

Paani is a part of USAID's on-going investment in strengthening natural resource management in Nepal. The Task Order was signed on April 11, 2016 for a 56-month period that ends on December 16, 2020. In mid-July 2016, the Government of Nepal (GON), Ministry of Finance and USAID signed an implementation letter that enabled DAI to formally begin coordination and planning with the GON and other partners to carry out the Paani program. The program is helping the GON achieve results related to several national policies, strategies and action plans, both existing and under formulation. Paani is also making real the provisions in the country's 2015 Constitution, particularly in integrating improved water governance into the newly established provinces.

Paani believes that by demonstrating the value of freshwater biodiversity, strengthening governance and stakeholder relationships at all levels and strengthening the base and use of evidence, the program can catalyze transformative change in Nepal's capacity to manage its freshwater resources and enhance resilience to a changing climate - from Nepal's high mountain slopes to the rich waterways of the Tarai. The overall development hypothesis upon which Paani is based is presented in Figure 1.

Figure 1: PAANI DEVELOPMENT HYPOTHESIS



To translate this theory of change into action, Paani is applying five key principles that are integral to an overall integrated river basin management (IRBM) approach that connects upstream and downstream stakeholders—including women and lower caste members—in taking actions that will strengthen water resources governance, management and protection. Promoting stakeholder engagement and collaboration flows through all five principles:

- Engage Paani stakeholders through user-centered design
- Foster upstream-downstream linkages
- Apply theories of change and adapt activities to reflect evolving political, ecological and economic circumstances
- Focus on sustainability
- Integration of technical components and modalities to mutually reinforce tasks

By December 2020, Paani will have helped stakeholders accomplish the following in the Rapti, Karnali and Mahakali river basins:

- Each basin will have reduced threats to freshwater ecosystems, conserved biodiversity, and enhanced human well-being.
- Communities and water users from local to national levels will have **increased their knowledge and capacity to deal with climate vulnerabilities** through climate smart practices.
- Through a center of excellence, stakeholders engaged in sustainable water management will **have access to information on biodiversity and climate change to inform basin level planning.** The center will serve as **a forum for decision makers, planners, researchers and others involved in fresh water** in Nepal to exchange knowledge and form networks.
- **Issues related to integrated and basin-level water management, freshwater biodiversity, gender and social inclusion will be accepted** as essential to national discourse and policy development on water, energy and development.
- In multiple watersheds throughout the three river basins, baseline and end-line surveys will have demonstrated **significantly reduced threats, increased resilience and other benefits** through implementation of watershed and basin level plans with the following key features: upstream and downstream linkages, gender and social inclusion (GESI), climate change adaptation and disaster risk reduction (DRR), monitoring by local people, and "green" infrastructure.
- A **long-term funding mechanism for river basin management and innovation** will have been established.

- Multiple users of water and freshwater biodiversity will have **improved their understanding, attitudes, values and behaviors** relating to the conservation and sustainable use of water and freshwater biodiversity.

Paani Year 4 Focused Initiatives[1]

In June 2018, Paani determined it could be more strategic by aligning resources to leverage program activities for greater impact where early successes could be scaled, or emerging opportunities seized. These opportunities, referred to as focused initiatives, included four thematic areas tied to Paani's strategic approaches. These focused initiative concepts were further refined in early February 2019 at a strategy workshop and again during the June 2019 annual work planning retreat. For Year 4, Paani's program strategy builds upon these focused initiatives and includes a more focused implementation strategy for all its basins, watersheds, and strategic approaches.

FOCUSED INITIATIVES			
RIVER STRETCH CO-MANAGEMENT MODELS	**SUSTAINABLE HYDROPOWER**	**ENVIRONMENTALLY FRIENDLY ROADS**	**BASIN PLATFORMS**
SA 1a Fisheries	SA 2c Hydropower	SA 1a Fisheries	SA 1a Fisheries
SA 1c Roads and Mining	SA 3b Advocacy	SA 1b LWM	SA 2a Basin Management
SA 1d Invasives	SA 3a Policy	SA 1c Roads and Mining	SA 3b Advocacy
SA 3a Policy	SA 4b Learning	SA 4b Learning	SA 3a Policy
SA 4c Research			
SA 4b Learning			

A. COLLABORATIVE AQUATIC RESOURCES CO-MANAGEMENT MODELS

One of Paani's most innovative efforts is the work being done by team members, grantees, and local stakeholders to create a model for river stretch co-management to enhance protection of Nepal's high value aquatic biodiversity areas. Paani's river stretch co-management model is derived from Nepal's successful community forest program. The community forestry program in Nepal is a government effort to reduce forest degradation, promote sustainable forestry practices and improve the livelihood of the community. Last year, the desired outcome was to create at least one successful collaborative aquatic resources co-management example in Nepal. Building on rapid progress and increased local community interest in this initiative during Year 3, Paani is continuously refining the approaches taken by its grantees to develop the river stretch co-

[1] See Paani's Year 4 Annual Work Plan for full descriptions of the Focus Initiatives

management model and a step-by-step process to establish the authority for Community Aquatic Animal Conservation Groups (CAACGs). Paani will adapt lessons from this experience as it works with the DNPWC and communities in protected areas and as it helps stakeholders integrate livelihood initiatives into these models.

In Year 4, the model refinement focuses on developing an appropriate operational system for governance and management of the CAACGs as well as integration of livelihood development. The goal is to complete the entire development process for river co-management in four watersheds in the Karnali and Rapti Basins, the location where river groups are the furthest along in the process. These four watersheds – the Lower Karnali, Middle Karnali, Middle Rapti and Jhimruk Kola – will serve as models for all other watersheds implementing fishery activities to replicate.

B. NATIONAL SUSTAINABLE HYDROPOWER STRATEGY

Paani refined its sustainable hydropower strategy for Year 4 based on an opportunity to conduct a national system-scale analysis in partnership with WWF, which is building support for energy development in Nepal that promotes prosperity and protects high value conservation areas. This analysis will utilize a methodology pioneered by The Nature Conservancy (TNC) called Hydropower by Design (HbD). The concept of HbD is that by shifting the scale of hydropower planning and management – decisions about which projects get built and how they are operated – away from single dams and towards the system scale, a country can achieve better ecological, economic, and social outcomes.

WWF USA, a Paani subcontractor, is conducting a system scale planning (SSP) assessment to inform how hydropower planning and development in Nepal can be balanced with other energy options and conservation goals. The project is led by WWF USA with technical expertise provided by TNC, University of California - Berkeley, Stanford University, McGill University, and additional international independent consultants. The project will inform and complement WECS' river basin management planning and ultimately support Nepal to make informed decisions about the proper siting and design of hydropower projects.

By the fall of 2020, the work will result in a final report that includes:

- An energy options assessment for Nepal that will quantify the costs and benefits of alternative development electricity systems, including an option that pursues increased investment in solar, wind, and pumped storage.
- A report detailing the High Conservation Value of the Rivers of Nepal, based on characteristics such as connectivity, sediment, fish habitat and other aquatic biodiversity, and cultural, social and economic values to communities.
- A report and decision support database on system scale planning for the Karnali Basin. The report will describe the SSP approach and demonstrate how the decision support database can be used to explore tradeoffs, make those tradeoffs visually clear and understandable, and to search for a set of investment options (defined in terms of location, design and operation) that perform well across a range of economic, social and environmental objectives.

The system scale planning project provides Paani the opportunity to create a more comprehensive and strategic approach to sustainable hydropower which aligns efforts of the SAs for sustainable hydropower, policy, advocacy, and river basin management.

C. A COMPREHENSIVE CASE STUDY FOR ENVIRONMENTALLY FRIENDLY ROAD DESIGN

Paani sharpened its approach to the rural roads and mining strategy based on the realization that adopting guidelines alone does not directly lead to better road practices. It is well known that despite the threats that roads and mining development have on watershed health and public safety, current practices continually fail to comply with existing rules and guidelines required by the Government of Nepal (GON). Paani has identified three principle, but not necessarily equal, drivers for why best practices are not followed for rural roads.

1) The GON has yet to establish the institutional oversight and standards at the provincial level to support local governments with technical infrastructure design.
2) The socio-economic and political pressures for improving quality of life, livelihoods, and development opportunity at the local, provincial, and national scale is overriding any environmental or public safety concerns.
3) The lack of knowledge and technical expertise at the local level results in heavy equipment operators acting as road engineers during construction.

In Year 3, Paani developed a contractual partnership with Scott Wilson Nepal (SWN) to provide engineering technical assistance for an environmentally friendly road design model demonstration project in the Middle Karnali watershed to be implemented early in Year 4. Similar to their contributions in Year 3 in Middle Karnali watershed, USFS may continue to collaborate on providing similar technical assistance on Paani in Year 4, depending on their funding situation.

In Year 4, Paani and its grantees are working across 3 watersheds – Middle Karnali, Jhimruk, and West Seti - to build awareness of the benefits of environmentally friendly roads through workshops, providing support on the adoption of rural road guidelines, and building capacity of user groups on monitoring and advocacy. Paani is working to integrate its different activities to develop a stronger proof of concept demonstration of not only the technical feasibility and ecological benefits of environmentally friendly infrastructure, but also the social, economic, and political value of higher quality rural roads.

D. INFORM AND STRENGTHEN A MULTI-STAKEHOLDER VISION AND PLATFORM FOR THE KARNALI

Paani will continue to support the development of watershed platforms that can engage in future basin level platforms and inform Nepal's vision and capacity to balance development and conservation in the Karnali River ecosystem through the following:

- Build capacity of watershed level stakeholder platforms though water resource co-management models.
- Support Karnali Pradesh with tailoring the federal Water Resources Bill and National Water Resources Policy to support co-management.
- Develop an engagement strategy to involve stakeholders interested in the Karnali River in the national hydropower strategy, especially the system scale planning project.
- Disseminate key findings to stakeholders interested in the Karnali including:

- Key findings from the NRCT Karnali River expedition report, which identifies highest value conservation areas across the Karnali River Basin.
- Existing and internationally accepted best practices to advance a rationale for sustainable hydropower in Nepal.

SECTION II: EXECUTIVE SUMMARY

This report presents overall accomplishments and detailed reporting for activities during Paani's sixteenth quarter, from January 1 – March 30, 2020 (Year 4 Quarter 3).

This quarter, at the National level, Paani and GON partner WECS coordinated on a number of events that facilitated greater collaboration and data sharing. In February, WECS committed to incorporating aquatic biodiversity conservation into the upcoming National Water Resource Policy and to use Paani-produced information in its River Basin Master Plans and Hydropower Master Plan at the WECS-led Project Technical Committee (PTC) meeting with other high level GON, USAID, Paani and donor/development stakeholders. The Secretary of WECS asked Paani to arrange a learning visit for PTC members to Paani working sites, following on the success of the smaller joint visit conducted last quarter[2]. Paani also held two advisory group meetings on high conservation value rivers (HCVR), and shared research on energy options, systems scale planning (SSP) and HCVR in a webinar with WECS and other national level stakeholders. In addition, Paani supported WECS to participate, present and highlight Paani's sustainable hydropower initiatives at the 2nd International Mahseer Conference in Chiang Mai, Thailand.

At the local level, Paani formed 47 Community Aquatic Animal Conservation Groups (CAACGs) in Y4 Q3 and supported them in monitoring aquatic resources, which they will oversee through Paani's new river stretch co-management model. To date, Paani has formed 90 CAACGs in all 12 of its priority watersheds. Paani also provided technical assistance to 14 municipalities and rural municipalities (RMs) in Lower Karnali, Tila Karnali and West Seti Watershed to develop Aquatic Animal and Aquatic Biodiversity Conservation Bills (AABCBs). Five out of these 14 local governments passed bills from their respective municipal and village assemblies this quarter. Out of 64 local government units in three river basins, 24 have enacted and are implementing the AABC Act to date in the Karnali and Rapti River Basins.

Paani also conducted workshops with 15 local governments to finalize the environment friendly rural road construction (EFRC) guidelines and conducted 21 Information, Education, and Communication (IEC) awareness campaigns in Jhimruk, Middle Karnali and West Seti Watershed, reaching more than 460 road users, planners, and implementers. This quarter, 6 local governments endorsed the EFRC guidelines and 8 local governments allocated a total of NPR 58,100,000 (approx. $475,284) to EFRC road construction.

In Rangun Watershed, Paani supported the installation of hydro met stations in Y4 Q3 to provide hydro met data to local authorities to help them better understand and manage flood risk. Downstream flood-vulnerable communities, including approximately 918 households from 17 villages, will now receive flood risk warnings, allowing them to respond more quickly and ultimately minimize loss of life and property. With the Department of Hydrology and Meteorology (DHM), Paani also prepared flood hazard maps for 10 watersheds, which identified potential flood prone

[2] This trip was scheduled for March but was subsequently cancelled due to COVID-19 restrictions.

settlements in different inundation scenarios. Paani will disseminate these maps to local governments, communities, and stakeholders next quarter to inform DRR planning.

In terms of capacity building, Paani held 17 trainings at the local and national level. In February, Paani conducted its first training-of-trainers (TOT) on river stretch co-management and post-harvest fisheries for grantees and CAACGs from Jhimruk, Middle Rapti and Phoksundo Suligaad Watersheds. Paani also supported 6 trainings on climate smart watershed management practices in different watersheds for CAACG, water user and other community group members, covering low-cost bioengineering techniques to help them conserve and protect water sources. Paani supported CAACGs specifically through a variety of trainings to build their capacity in leadership and advocacy in freshwater biodiversity, GESI mainstreaming in freshwater biodiversity conservation, and basic operations/management skills, such as accounting. As a result, CAACGs will be better equipped to register and maintain their groups, and manage river stretches handed over to them by local governments.

At the provincial level, Paani made significant progress laying the foundation for the Karnali River Basin Conservation Fund (KRBCF). The Dolma Group, SAFAL, and VRock consortium registered themselves as a joint venture called DSV Advisors; engaged in a number of critical forums and meetings with local government, private sector, and non-profit stakeholders in the Karnali River Basin (KRB) region; and developed an initial list of investible projects.

As for research, Paani supported a winter season ornithological survey in the Lake Rara wetland site, counting 104 species, 15 orders and 39 families. Paani also identified potential sites to declare as fish sanctuaries in the Karnali River Basin and selected municipalities to pilot an Integrated Lake Basin Management (ILBM) Model with special focus on water governance.

Finally, it is important to note that the COVID-19 pandemic has heavily affected Paani's programs this quarter due to the threat to health and subsequent responses from GON and USAID to ensure public safety. In coordination with USAID, Paani has followed all restrictions put in place by GON beginning in early March, and the "Stop Work Order" issued by USAID on March 22. At that time, Paani immediately moved to teleworking as Nepal went into "lockdown," abiding by the government directives that instructed the majority of the population to stay at home and only allowed essential businesses to remain open. As a result, a number of events, field activities, site visits, seasonally-based research, and work involving international consultants who could not travel has been delayed/potentially cancelled, which may affect project targets. Paani has stayed in regular communication with USAID and its grantees/subcontractors as the situation has evolved.

SECTION III: ACTIVITY IMPLEMENTATION

This section covers progress on tasks under each strategic approach (SA). Participation broken down by gender and caste/ethnicity for events and select activities across the program that are mentioned under these SAs are outlined in the Annex, Exhibit A2.

STRATEGIC APPROACH 1A: IMPROVE MANAGEMENT OF CAPTURE FISHERIES

The goal of this strategic approach is to reduce threats to freshwater biodiversity and fisheries livelihoods by reducing poaching, destructive and illegal fishing, and overfishing.

Throughout Year 4 Quarter 3 (Y4 Q3), Paani has made progress towards the desired and focused initiatives that fall under this SA. For example, Paani identified 3 unique and endemic fish species, including 2 critically-endangered species, which will inform the Rara Lake Ramsar site management plan (high altitude wetland) in the Karnali River Basin. Paani also formed 47 Community Aquatic Animal Conservation Groups (CAACGs) and supported them in monitoring aquatic resources, which communities will manage through river stretch co-management. The 90 CAACGs formed thus far by Paani held regular meetings to discuss conservation activities and plans to monitor aquatic biodiversity.

Paani also continued to assess high conservation value rivers (HCVR) of Nepal to complement GON's ongoing River Basin Plans, Hydropower Master Plan, and Strategic Environmental and Social Assessment (SESA) for integrated river basin planning. This will ensure aquatic biodiversity conservation is considered during infrastructure development. Paani developed a draft methodology for a catch assessment survey (CAS) to generate data for the development of business cases on capture fisheries. Paani also conducted an additional feasibility study on aquaculture and culture-based fisheries sites in three mountain districts of Karnali Province. Analysis of initial desk review results revealed the feasibility of aquaculture in 24 municipalities and culture-based fisheries in 10 wetlands of the districts studied. With support from Paani, 17 municipalities drafted Aquatic Animal and Aquatic Biodiversity Conservation Bills (AABCB) and capture fisheries management guidelines (CFMG); of these, 6 AABCBs and 1 CFMG were endorsed by municipalities. Paani conducted 11 training programs and 7 livelihood support programs in different thematic areas to enhance the capacity, knowledge, and skills of CAACG members to lead conservation activities and undertake additional livelihood initiatives. Awareness efforts by Paani have also created a forum for collaborative aquatic biodiversity management. This quarter activities have included technical dialogues with government line agencies, community awareness campaigns, and the display of hoarding boards and information at an agricultural trade fair in Middle Rapti Watershed.

We report further progress over Y4 Q3 below:

TASK 1.1.1: ASSESS CAPTURE FISHERIES

Sub-task C 1.1.1. Prepare fisheries and biodiversity inventories

During Y4 Q3, Paani identified 3 unique endemic fish species and 8 aquatic plant species through aquatic biodiversity research (International Union for Conservation of Nature [IUCN]) for Rara Lake (Annex, Exhibit A3). With this finding, Paani has identified a total of 224 fish species from Mahakali (Lower Mahakali Watershed only), Karnali, and Rapti River Basins. Paani also identified that these river basins, including lakes, host 49 migratory, 12 threatened and 7 endemic fish species

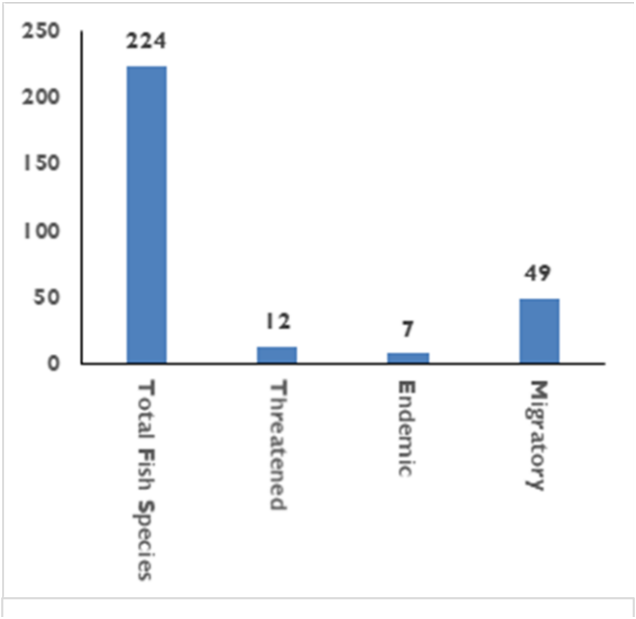


Figure 2: Number of unique fish species, including threatened, endemic and migratory fish identified in the Mahakali, Karnali and Rapti River basins, including lake wetlands

(Figure 2). In addition to fish species, Paani also identified 16 waterfowls and 13 wetland dependent bird species of the 104 species of birds observed in Rara Lake through Bird Conservation Nepal (BCN) research. BCN conducted a water quality survey in five strategic sites of Rara Lake using 11 parameters and found the value of all parameters within the range for supporting cold water aquatic species, except phosphate, which is elevated in one sampling site. The persistence of the diversity of fish and wetland birds in high altitude Rara Lake (2900 masl) indicates that the lake habitat is suitable for the coexistence of these two different taxa and their interdependence for survival and growth. Thise biodiversity and water quality information will provide technical background for developing the Rara Ramsar Site development plan and help in prioritizing conservation activities. In Y4 Q4, work under SA 4A will further inform the aquatic biodiversity inventory for strengthening the regulatory framework, conservation measures and identifying protected areas.

In Y4 Q3, 8 CAACGs in Middle Rapti, with support from grantee Human Welfare and Environment Protection Centre (HWEPC), monitored aquatic resources in 8 river stretches collectively, covering 43.6 km of the Rapti River (1535 ha) in 8 monitoring events. The CAACGs identified and recorded 39 fish species, 18 non-fish aquatic animals, 20 aquatic plant species (including one invasive - water hyacinth) and 28 bird species. Besides resource monitoring, Paani supported CAACGs to prepare maps of river stretches with information of biodiversity rich, spawning and fishing areas (Figure 2). The information generated from resource monitoring and river stretch maps will provide current information to be included in the community biodiversity register (CBR), and preparation/amendment of CAACGs' statutes with a detailed description of river stretches (as required by the AABCA) for delineating and providing management authority of the river stretch to the respective CAACG through the AABCA. The maps will help CAACGs prioritize conservation activities and develop operational plans to conserve aquatic biodiversity in river stretches of Middle Rapti Watershed. The activities and plan may include protection of specific habitats for endemic and keystone species, regulation of fishing gear in specific seasons to protect juvenile fish, and identification and implementation of the allowable catch of important fish stocks, etc.

In Y4 Q3, Paani worked to establish better science on dolphins through research and institutional strengthening of the Dolphin Conservation Center (DCC). DCC's interventions include promotion of information exchange on traditional practices and livelihood needs of local communities to improve the conservation of dolphin habitats in the Lower Karnali Watershed. Focus Group Discussions (FGDs) were conducted in DCC's 14 sub-centers to consolidate information on the socio-ecological behavior of dolphin. In Y4 Q4, Paani will continue mapping and characterizing dolphin habitats and strengthening DCC's institutional capacity through a training program on water

quality surveillance and dolphin habitat monitoring for community conservation champions. This will support long-term monitoring and habitat conservation of dolphins and aquatic biodiversity in the Lower Karnali and Mohana River.

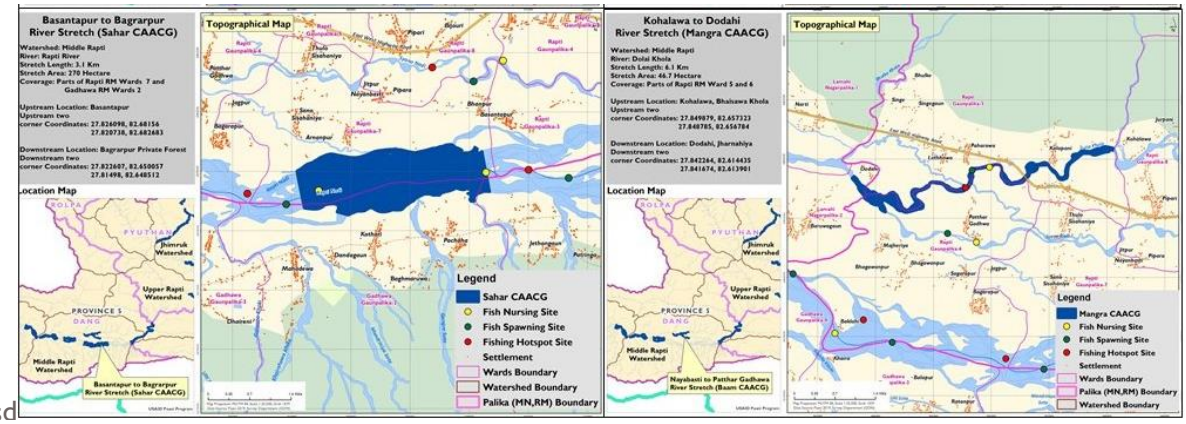


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Figure 3: River stretch map with biodiversity information for Sahar and Mangra CAACGS in Middle Rapti Watershed. River stretch map prepared for all eight CAACGS formed in the watersheds.

In Y4 Q2, Paani assessed water quality and threats to water management of the Rapti River Basin through CODEFUND-IUCN's water governance research. Paani utilized water quality parameters to identify dissolved oxygen and lead in human settlement sites on the side of the Rapti River that could negatively affect aquatic life and drinking water. The assessment also identified aquatic biodiversity-rich sites and human induced threats, including: infrastructure development, hazard cremation sites, water lifting, water pollution, solid waste management, gravel mining and construction, increased commercial fishing, population growth, and poverty. Additionally, the assessment identified natural threats, such as forest fire, floods, landslides and river cutting. In Y4 Q4, this assessment will inform governance and larger scale (basin and province) management of aquatic resources and aquatic life by developing and piloting a model of integrated lake basin management (ILBM), and by integrating river stretch co-management in the Rapti River Basin.

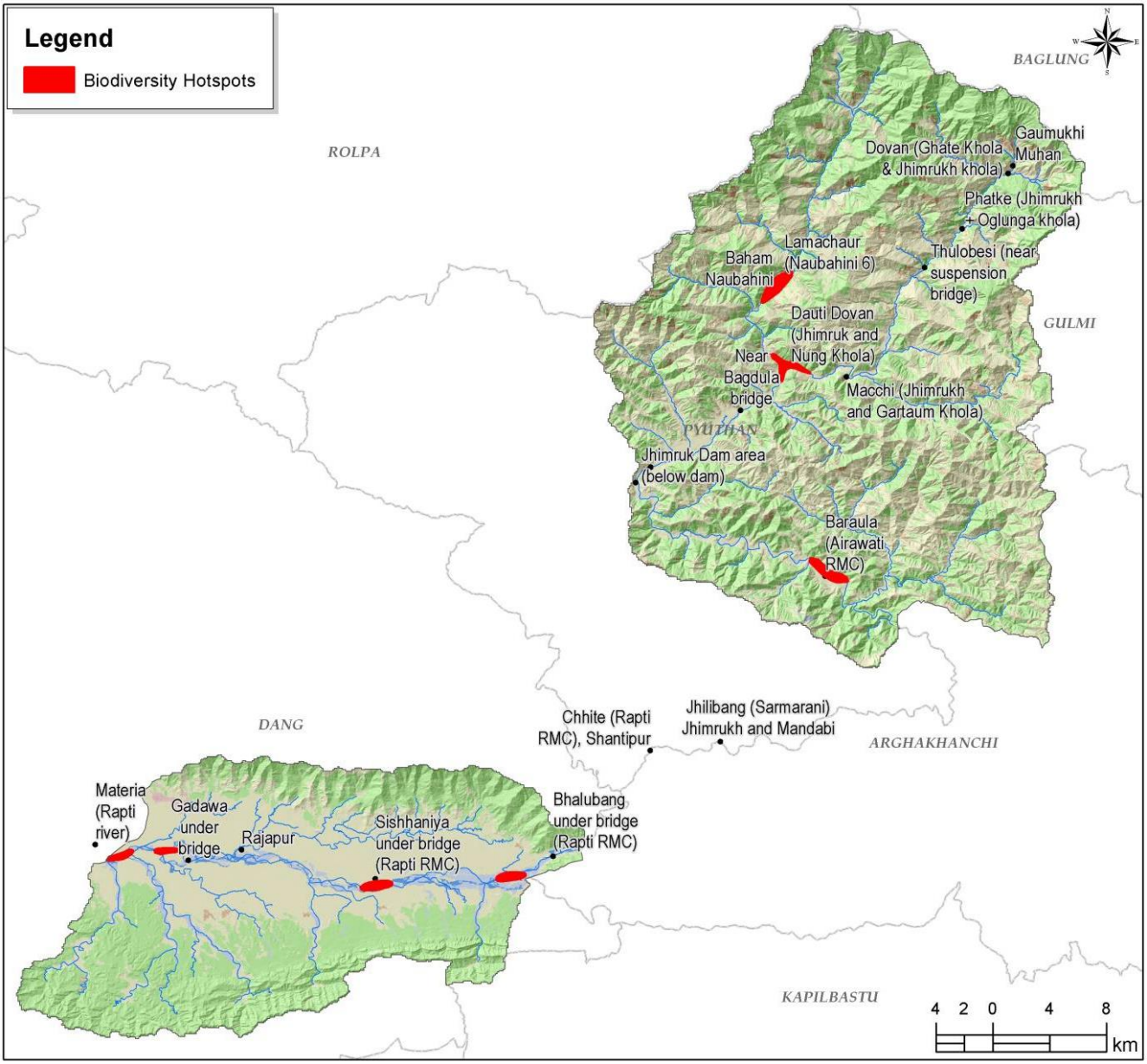

Figure 4: Fish biodiversity rich spots in Jhimruk and Middle Rapti Watersheds

This quarter, Paani conducted two advisory committee meetings and two expert consultation meetings through WWF Nepal to enrich the data and information required for appropriately identifying high conservation value rivers (HCVR). The meetings adapted the classification of HCVR and defined the criteria for classifying them in Nepal. Based on that criteria, WWF collected data and information, and prepared preliminary maps ofn the distribution of keystone aquatic species including migratory, endemic threatened fish species, gharial, dolphin, otters, angling hot spots, and major religious and cultural sites across the river systems of Nepal (Figure 4). WWF also organized a webinar to share the updates of HCVR, System Scale Planning (SSP) and the Energy Options Assessment (EOA) and received feedback from multi-sectoral stakeholders. The objective of the HCVR assessment is to complement the GON's ongoing River Basin Plans, Hydropower Master Plan, and Strategic Environmental and Social Assessment (SESA) to ensure aquatic biodiversity conservation is considered during infrastructure development (more details under SA 2c and 4a). In Y4 Q4, Paani will update results with revised data (e.g., fish distributions), review weighting options with the aAdvisory Groupcommittee, aggregate alternative representations of results (by river or catchment), prepare an interactive web map to visualize results, integrate HCV values with SSP assessment, and collaborate with WECS to link HCV with the SESA.

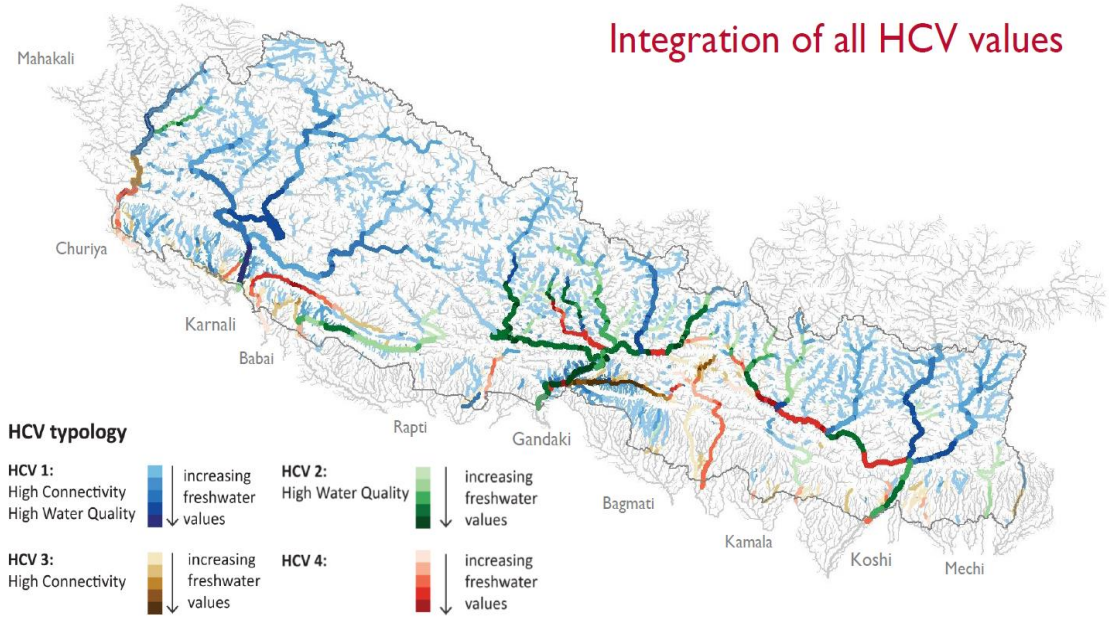

Figure 5: High Conservation Value Rivers of Nepal based on HCV typology shared during webinar

This quarter, Paani provided financial and technical support to WECS and the Ministry of Agriculture and Livestock Development (MoALD) in the form of international travel for two high-level officials (Joint Secretaries [JS]) to present at the 2nd International Mahseer Conference in Chiang Mai, Thailand. WECS JS shared the concept of integrated river basin planning to balance the conservation of freshwater biodiversity and infrastructure development, and how Paani's independent assessments (HCVR, SSP, and EOA) contribute to these planning processes. Paani also shared learning from the river stretch co-management pilot. The two JS gained a broader understanding of the importance and different dimensions of conservation of aquatic resources and biodiversity symbolized by the iconic Mahseer group of fishes. Paani expects their understanding and learning to be reflected in upcoming conservation-related policy, planning, and program development. One example of the

inclusion of aquatic biodiversity issues appears in WECS' recently drafted Water Resource Policy (WRP). The policy clearly mentions that aquatic biodiversity shall be prioritized in integrated water resource management (IWRM) through research, preparation of river specific biodiversity inventory, ensuring e-flow, maintaining minimum water quality standards, controlling extraction of river aggregates, regulating waste disposal, and promoting aquatic biodiversity friendly infrastructure. In Y4 Q4, Paani will continue to provide knowledge support for developing policy and plans for WECS and MoALD.

Sub-task C.1.1.1-2 Build capacity of fisher community to engage in alternative business enterprises

Conduct catch assessment survey (CAS) in selected river stretches (STTA service) (Linked with SA 4a)

In Y4 Q3, Paani, in collaboration with SNV's national and international consultants, drafted the outline of a catch assessment survey (CAS) in selected stretches of the Karnali River. A CAS is an approach used to enable characterization of a fishery, including the total catch, type of fish in the catch, and the level of fishing effort. A well-designed CAS provides basic data that can be used to estimate the status of fish stocks and performance of the fishery. Over time, documenting and analyzing this information lays the foundation for strategy development on sustainable capture fisheries. In Y4 Q4, Paani will finalize the CAS methodology to characterize fisheries and generate baseline data for the development of a capture fisheries-based business case (BC). Although planned in Y4 Q4, delay of this activity is likely due to the COVID-19 lockdown; it may need to be shifted to the next season.

Develop business case study of capture fisheries, aquaculture and fisheries-based **ecotourism (STTA service) (Linked with SA 4a)**

In Y4 Q3, Paani engaged SNV to develop the CAS and business cases for capture fisheries, aquaculture, and fisheries-based ecotourism. The business cases will inform investment opportunities and risks associated with the fisheries sector. These case studies build on the previously completed value chain assessment, fisheries conservation framework, market development strategies, and the Karnali River Basin ecotourism scoping study. The business cases will also include a financial model to determine whether investment is worthwhile. In Y4 Q43, Paani will continue to develop and pilot business cases in previously mentioned areas of fisheries.

Conduct feasibility study of aquaculture and culture-based fisheries in Karnali Pradesh

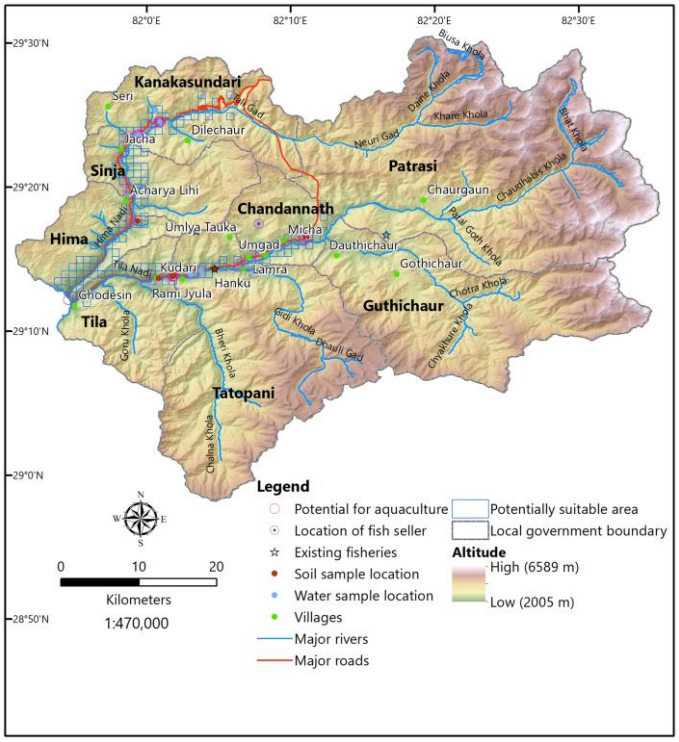

Figure 6: Map of Jumla district showing the potential sites for aquaculture and culture-based fisheries

In Y4 Q3, Paani conducted a feasibility study of aquaculture and culture-based fisheries in three mountain districts (Kalikot, Jumla, Mugu) in Karnali Province through the Global Institute of Interdisciplinary Studies (GIIS). Based on technical criteria for site selection, secondary spatial data, 3 district level workshops, 10 FGDs, survey of 15 market spots and 68 key informants interview (KII), GIIS identified suitable areas in 20 Rural Municipality (RM)/Municipality (M) for cold water aquaculture, 24 RM/M for warm water aquaculture, and 10 wetlands (river stretches and lakes) for promoting culture-based fisheries (Figure 4). The objective of this study is to inform the Karnali provincial government's plans to develop a capture fisheries livelihood program for fishers and marginalized communities dependent on capture fisheries, thus reducing pressures on freshwater biodiversity conservation in situ.

In Y4 Q4, Paani will complete the feasibility study in Dolpa and Mugu and prepare a consolidated final report to submit to the Ministry of Land Management, Agriculture and Cooperative (MoLMAC) of Karnali Province for prioritizing investment in potential sites for capture fisheries and aquaculture. Paani will also prepare a detailed project report (DPR) for commercial fish hatcheries and an aquaculture farm for distinct ecological areas of Karnali Province.

Ecotourism Market Assessment study

In Y4 Q3, Paani provided its final report on the assessment of nature-based tourism in the Karnali River Basin, which was used by the provincial government in the development of its Tourism Master Plan.

River Guide training

In Y4 Q3 (continued from Y4 Q2) Paani provided a 14-day long river guide training to river dependent community members, including the marginalized Raji and Sonaha communities of Lower Karnali Watershed through FEDWASUN. Karnali Rafting & Adventure Pvt. Ltd. provided training services.

The training developed river guide skills and technical knowledge of the trainees on white water-based ecotourism. The training also prepared trainees to take the Nepal Academy of Tourism & Hotel Management (NATHM) certification test to obtain river guide licenses. As a result, 15 training participants have applied for river guide licenses and 6 have joined Karnali Rafting & Adventure Pvt. Ltd as assistant guides. Among the trainees, two participants from the Raji community are engaged in the Raji Cultural Museum project funded by the government of Karnali Province (more details are included in the GESI section).

Raji youth participate in a training program to become river raft guides in Sani Veri/Thuliberi River, Lower Karnali Watershed. Photo credit: Paani

Hospitality and homestay management training

This quarter, Paani grantee HWEPC conducted a two-day training on basic hospitality and homestay management to 12 members of CAACGs and homestay entrepreneurs of Rapti Rural Municipality (RM), Middle Rapti Watershed. The training motivated the CAACG members to combine homestays with their knowledge of recreational fishing tourism (i.e., catch and release). During the training, participants developed an action plan, including legal registration of homestays, development of attraction sites, awareness of aquatic resources conservation, development of codes of conduct, information board display, etc. The training will support livelihoods of aquatic resource-based communities aligned with improved aquatic biodiversity.

Paani also provided technical support to organize homestay management training, form an ad hoc homestay management committee, develop a code of conduct, prepare and display information boards, and form a homestay management committee in Rigmo village, Phoksundo-Suligaad Watershed. With financial support worth NRs. 400,000 from the local government, Paani supported the formation and registration of a community homestay in Shey Phoksundo RM. Additionally, Karnali Province allocated NRs 3 million for strengthening community homestays and eco-tourism promotion. The province envisages these endeavors as alternative livelihoods options to reduce the risk to aquatic biodiversity in this watershed.

Vocational training

In Y4 Q3, Paani, through Kalika Development Center Nepal (KDCN) and with technical collaboration from Jhimruk Skill Development and Vocational Education Pvt. Ltd., initiated two different vocational trainings: gabion box weaving and junior technician level training on aquaculture and fisheries for 20 CAACGs members (10 in each training). With the potential outbreak of COVID-19, KDCN postponed a planned 40-day long training

Women from the Damti Dovan CAACG learning gabion weaving during vocational training in Jhimruk Watershed. Photo credit: KDCN

program due to the GON lockdown. The training will resume after it is lifted.

Support for agriculture/aquaculture-based livelihood

In Y4 Q3, Paani, through grantee Multi-Dimensional Resource Center Nepal (MRC-Nepal), provided 20 plastic tunnel houses with drip irrigation to 20 members of the Rawa CAACG and 7 farmers' groups in Middle Rapti Watershed. With this support, CAACG members expect to improve their agricultural practices and productivity, particularly off-season vegetable production.

Similarly, Paani, through grantee Creative Ideal Society (CIS) Kanchanpur, supported Rampure Tapu CAACG to install 5 plastic tunnels, drip irrigation, solar technology, and insect traps in Lower Mahakali watershed. In addition, the local government coordinated with CIS Kanchanpur by allocating NRs. 82,800 to construction of a permanent nursery shed and NRs. 76,000 for green nets and plastic tunnels. As a result, the CAACG has produced different off-season vegetables as a first crop and generated income worth NRs. 16,000. With the income generated from vegetable production, the CAACG decided to run a monthly savings scheme. To date, the CAACG has collected NRs. 10,800 in their savings fund and NRs. 17,800 in a revolving credit fund for their members with a nominal interest rate for income generating activities.

In Y4 Q3, CIS Kanchanpur also assisted the newly formed Gairabari Farmers Group to promote their indigenous knowledge and climate friendly farming practices, such as local microclimate suitable farming of pointed gourd[3]. The group received technical backstopping from CIS Kanchanpur for site selection, lease agreement management, soil and nursery bed preparation, and regular monitoring of the group's farming practices.

This quarter, CIS Kanchanpur also helped Sonaha CAACG of Lower Mahakali Watershed lease a fish pond to begin aquaculture as an additional livelihood. The Sonaha CAACG has prepared the ponds and is waiting for the availability of carp fish fingerlings to stock them.

Irrigation Management and water resource protection support to livelihoods

In Y4 Q3, Paani, through the National Federation of Irrigation Water Users' Association Nepal (NFIWUAN), conducted a one-day orientation on irrigation management and water source protection to 68 farmers in Doti, Bogatan Lagam Watershed. The program highlighted water requirements by different cultivars and the importance of water management in irrigation systems to increase crop yields and for sustainable agriculture.

Fish collection center established

In Y4 Q3, Paani, through Mallarani Rural Development Concern Centre (MRDCC), supported materials and equipment for the establishment of a fish collection center for Rakasha Raha CAACG, Jhimruk Watershed. This support includes the supply of chairs, a table, stationary, a price display board, and weighing scale. The fish collection center will systematize the capture fish market and

[3] Pointed gourd is a vine plant in the family *Cucurbitaceae*, similar to cucumber and squash.

serve as center for the catch collection, which will provide primary data and information to evaluate the outcome of aquatic biodiversity conservation measures and overall river stretch co-management.

Support in the formation/strengthening of cooperatives

As part of Paani's goal to create a comprehensive river stretch co-management process for replication, Paani deepened its work to include integration of fisheries cooperatives using CAACGs. In Y4 Q3, Paani facilitated a workshop through Sustainable Agriculture, Environment and Water Source Conservation Center (SAEWCC) to form a fish cooperative in Rakam Karnali. The workshop finalized the criteria for membership of the cooperative and major provisions of the statute of the fish cooperative. A meeting with Aathbisha Municipality, Dailekh outlined the procedures and considerations to receive funding support from the municipality. Aathbisha Municipality allocated NRs. 2 million to support aquaculture activities through the cooperative.

This quarter, Paani, through grantee Fulvari Integrated Rural Development Organization (FIRDO), in Jhimruk Watershed also identified three existing multipurpose cooperatives and held meetings with them to include fisheries as a business component in their constitution. The cooperatives agreed to involve the members of three CAACGs. FIRDO also held one cooperative education event for Damti Dovan CAACG in Jhimruk Watershed.

In Y4 Q3, Paani, through CIS, conducted a three-day cooperative formation and leadership capacity building training for 25 participants from the Sonaha CAACG and Rampure Taapu CAACG, Lower Mahakali Watershed. The training delivered different aspects of cooperative management, including communication, organizational development, leadership development, leadership skills and qualities, and GESI.

In Y4 Q3, Paani, through grantee CIS Kanchanpur, facilitated and technically supported Sohana CAACG to form and register a 25 member fish cooperative in Bhimdutta Municipality, Lower Mahakali Watershed. Following cooperative registration, CIS Kanchanpur conducted a two-day training on cooperative accounting management for the Sonaha and Rampure Tapu CAACGS and Gairabari Farmers Group, Lower Mahakali Watershed to help them understand the process of cooperative account management necessary to establish, manage and strengthen cooperatives initiated by the CAACGs. The major contents of the training included account keeping, record keeping, minute writing, bookkeeping systems, loan and investment, indexing, filing, social audit and account management. CIS, Kanchanpur also established a Cooperative Revolving Fund with NRs. 37,500.

In Y4 Q4, Panni, through grantees, will further support the establishment/strengthening of fisheries-based cooperatives in Middle Karnali and Lower Karnali Watersheds.

C1.1.2.2. Facilitate participatory development of sustainable capture fisheries and co-management guidelines

In Y4 Q3, Alital RM in Rangun watershed endorsed the capture fisheries management guidelines (CFMG) developed with technical support from Paani and grantee Nepal National Social Welfare Association (NNSWA).

In addition, Paani, through grantee Environment Coordination Committee (ECC) Kailali, supported Chure RM to draft and finalize the CFMG. Paani also drafted a model CFMG aligned with the

AABCA and incorporating best practices, which has been customized by the local governments with support from ECC.

The CFMG is a technical guideline that describes the methods, processes and limitations of fishery management and fishing activities for the community to follow for the conservation of aquatic biodiversity and sustainable use. In Y4 Q4, Paani will share the model CFMG and support other local governments through respective grantee to develop and customize CFMGs and follow up on their endorsement.

Support local government to draft the Aquatic Animal and Aquatic Biodiversity Conservation Act (AABCA) [link with 3.1.3]

In Y4 Q3, Paani facilitated 16 RM/M to draft the AABCB in Lower Karnali, Mid-West Seti, Tila, Middle Karnali and Bogatan Lagam Watershed through consultations and workshops. The RM/M have endorsed 7 bills (6 in Karnali River Basin and 1 in Rapti River Basin). With the AABCA, the RM/M have the legal institution to regulate and manage aquatic resources and mobilize community groups for aquatic biodiversity conservation and their sustainable use.

This quarter, as in the case of Thuligaad Watershed reported last quarter, the local governments of Tila, West Seti and Lower Karnali Watersheds have adapted their governance structure to better control aquatic resources. As per provisions in the AABCA of RM/M in these watersheds, Paani, through grantees Renaissance Society Nepal (RSN), Sahara Nepal and Sonaha Bikas Samaj (SBS), facilitated to form an inter-municipality coordination forum known as the Aquatic Animal Biodiversity Conservation Council (AABCC). The objective of the council is to support and coordinate with municipalities to harmonize conservation activities within the watershed.

Sub-task C1.1.2-3 Support to form Community Aquatic Animal Conservation Groups (CAACGs)

In Y4 Q3, Paani formed 47 CAACGs in municipalities in Lower Karnali, Thuligaad, Tila and West Seti Watersheds to monitor aquatic resources. Collectively, Paani has supported the formation of over 90 CAACGs to date in 10 watersheds, of which 30 are registered and 60 are in the process of group statute formation and registration in theirrespective municipality and rural municipality (Annex, Exhibit A3). In the group formation process this quarter, ECC and Integrated Development Society (IDES) in Thuligaad; SBS in Lower Karnali; Rural Situation Nepal (RSN) in Tila; Sahara Nepal in West Seti; and HWEPC in Middle Rapti Watersheds supported communities and local governments to discuss the status, issues, and needs for local level initiatives on aquatic resources and aquatic biodiversity conservation. Paani shared the prospects of river stretch co-management (RSC), a collaborative model of shared governance of aquatic resources, where the community can play a central role in implementing AABCAs and CFMG. The new CAACGs are now in the process of developing statutes and registering. In Y4 Q4, Paani through grantees will support newly formed CAACGs in statute development and registration and provide various trainings to enable them to initiate co-management processes as legal institutions.

In Y4 Q3, Paani facilitated CAACGs to form an inter CAACG network (apex body) in Thuligaad Watershed through multi-stakeholder meetings led by ECC and IDeS. The apex body is composed of 21 members representing all CAACGs formed in four RM/Ms of Thuligaad Watershed. The meeting also led to formation of a 15-member advisory committee involving representatives of local

governments and other stakeholders to provide advisory services and share interests on aquatic biodiversity. Similarly, Paani, through HWEPC, facilitated formation of a 13-member apex body of CAACGs in Middle Rapti Watershed.

The responsibility of the apex body includes coordination among CCACGs, linking CAACGs to local government, advocating for and leveraging resources, and conducting joint monitoring of CAACGs' activities. In Y4 Q3, Paani will support formation of an apex body in Lower Karnali and Tila Watersheds and organize periodic meetings.

Preparation of Statute of CAACGs Registration

In Y4 Q3, Paani, through MRDCC, supported drafting of the statutes of 10 different CAACGs as prerequisite legal documents for their registration in Jhimruk Watershed. This included redrafting the statutes of 4 older CAACGs to align with the recently enacted AABCA. Mapping of river stretches, inventory of aquatic biodiversity, major biodiversity hot spots, and socio-demography are all technical components included in the statute. In Y4 Q4, Paani will support drafting of statutes for loosely formed CAACGs that are awaiting registration in Tila, Middle Karnali, Lower Karnali, Thuligaad, West Seti, Middle Rapti and Jhimruk Watersheds.

Sub-task P1.1.2.5 Organize & develop operational plans for community groups (Support for monthly and quarterly meetings of CAACGs)

In Y4 Q3, 36 CAACGs in Middle Karnali, Tila, Jhimruk and Middle Rapti Watersheds held 79 monthly meetings to discuss monthly action plans on conservation. Their monthly plans include preparation of a schedule for monitoring of aquatic resources and biodiversity, patrolling overfishing and destructive fishing, implementing awareness programs and collaborative activities with the local administration, including local police offices. Four CAACGs of Middle Rapti Watershed conducted their first Annual General Assembly (AGM). Review of the activities implemented in past year, plan of activities for the upcoming year, provision for new membership, and election of a new executive committee were the major agendas of the AGM.

This quarter, Paani, through MRDCC and HWEPC, supported the apex body to conduct its quarterly meeting in Jhimruk and Middle Rapti Watershed. The meeting raised the need for guidelines to mobilize monitoring of CAACGs' activities and request for Paani to help draft the guidelines.

In Y4 Q4, Paani, through ISET Nepal, will support training programs to help CAACGs strengthen their capacity to develop operational plans. Paani will also develop a model operational plan for grantees and CAACGs.

CAACG involved in enforcement of AABCA and CFMG

This quarter, CAACGs in Middle Rapti Watershed continued to adopt the fishing provisions in the AABCA and regularly monitored fishery resources in vulnerable areas (fishing and biodiversity hot spots). They attempted to confiscate destructive fishing equipment (i.e., four sets of electrofishing and seine nets with a small mesh size). They also educated other fishers about the specific provisions of the AABCA with regard to fishing gear and fishing practices. CAACGs during their routine aquatic resource monitoring noticed that most of the destructive fishing practices happen in the watershed because of poor awareness and general ignorance about the fishing provisions of the AABCA. This suggests that conservation legislation needs to be coupled with effective communications. CAACGs reported to their respective local governments about ongoing illegal fishing activities and asked for enforcement of the AABCA.

Uninterrupted power supply (UPS) device and electric wire used in destructive fishing practices confiscated by CAACG in Middle Rapti Watershed. Photo credit: Paani

CAACG strengthen saving and credit scheme

In addition, 18 CAACGs in Middle Rapti (8) and Jhimruk (10) Watersheds continued strengthening their saving and credit schemes to support their financial needs, saving more than NRs. 242,000 and providing credit to members at a nominal interest rate (Annex, Exhibit A3). Their savings have increased more than 150% over seven months of operation (Figure 7). These schemes have helped build strong relationships among the members, encouraging them to stay in the group and contribute to group objectives.

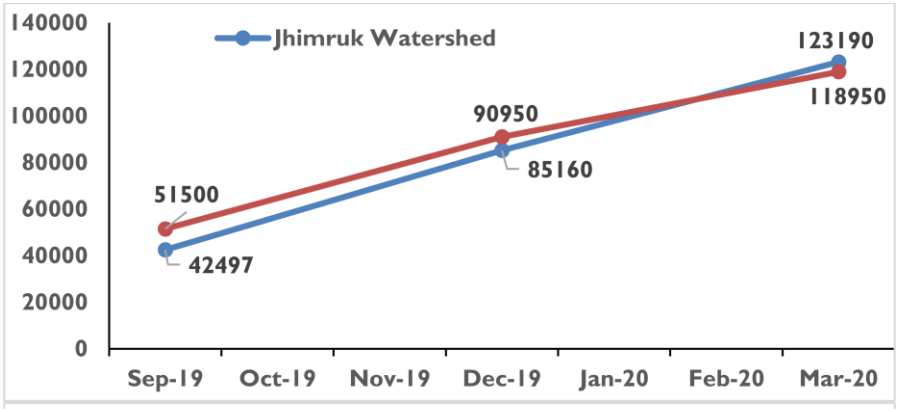

Figure 7: Increase of CAACGs' savings in Jhimruk and Middle Rapti Watershed

Sub-task C 1.1.2-7 Training for community fishing group

Training of trainer (ToT) on river stretch co-management and fish post-harvest [links with SA 4a]

In Y4 Q3, Paani conducted a six-day training of trainers (TOT) on river stretch co-management and fish post-harvest for Paani staff and 25 local grantee participants working in the Rapti River Basin and in Dang, Middle Rapti Watershed through ISET Nepal. The co-management training curriculum includes basic concepts of co-management, institutionalization and co-management governance, situation analysis, development and implementation of plans, alternative livelihood options, legal provisions, and monitoring and evaluation. Fish post-harvest includes overview of fisheries in Nepal, fish harvest, storage and transportation, preservation techniques, processing practices, value chain and marketing.

In Y4 Q4, Paani will conduct two more TOTs for Karnali and Mahakali River Basins. Grantees will serve as resource person (more details under SA 4b).

GESI mainstreaming freshwater biodiversity conservation

This quarter, Paani also organized a three-day training on GESI mainstreaming in freshwater biodiversity conservation through grantee Women Act for 20 participants from CAACGs of Jhimruk and Middle Rapti Watersheds. The training enhanced the understanding among training participants on the significance of GESI mainstreaming in natural aquatic resources management. The training encouraged participants to mainstream issues of freshwater biodiversity and river resources management into local planning process. The training also provided an avenue for participants to share their learning and field experiences of the effectiveness of the AABCA (more details in GESI section).

Collaborative leadership and advocacy skills development training in freshwater biodiversity conservation and river resource management

This quarter, Paani conducted 2 two-day trainings on collaborative leadership and advocacy skills development in freshwater biodiversity and river resource management in for 50 participants from CAACGs of Lower Karnali, Middle Karnali, Middle Rapti and Jhimruk Watershed. The training followed the manual developed by Women Act and reviewed by Paani.

Exposure Visit of Fisher Groups, Fish Farmers and Cooperative Members

This quarter, Paani, through CIS Kanchanpur, organized a five-day exposure visit for 25 participants (including members of CAACGs, fish farmers, cooperatives, and CIS staff) to various commercial fish farms, community farms and agriculture markets in Kanchanpur, Kailali, Banke, Bardiya and Dang districts. The objectives of the visit were to learn about exemplary work in fisheries management, fishers/fish farmers networking, and engagement with cooperatives and fish farming activities. Following the visit, the participants started to prepare action plans on fish farming.

In Y4 Q4, Paani will continue to organize CAACG capacity building training in different disciplines in other watersheds.

TASK 1.1.4 SUPPORT EXTENSION-TYPE CONTINUING EDUCATION PROGRAMS

In Y4 Q3, Paani, through grantee SBS, conducted 5 awareness programs with 5 different communities on aquatic bio-diversity conservation in Lower Karnali Watershed. The objective of the program was to interact on issues of aquatic biodiversity, to perceive community understanding to address the issues, and to share the concept of river stretch co-management.

In Y4 Q4, Paani will continue to organize awareness programs on legal provisions and application of guidelines on natural aquatic resource conservation in other watersheds.

Sub-task C1.1.4-1 Provide technical expertise to MoALD fisheries extension program on sustainable fisheries & aquaculture

In Y4 Q3, Paani provided technical expertise to 14 fisheries research and extension personnel from WECS, Ministry of Agriculture & Livestock Development (MoALD) and Nepal Agricultural Research Council (NARC) in various events. One JS each from WECS and MoALD participated in the 2nd International Mahseer Conference held in Chiang Mai, Thailand. 5 scientists from NARC and 7 Fisheries Development Officers from the Central Fisheries Promotion and Conservation Center (CFPCC) participated in the two HCVR advisory committee meetings, 2 expert working group meetings and 1 webinar organized by WWF, enhancing their knowledge on fisheries and aquatic biodiversity in Nepal.

TASK 4.1.9 CONDUCT OUTREACH TO COMMUNITIES

In Y4 Q3, Paani installed 8 hoarding boards in river stretches of 4 newly formed CAACGs in Middle Rapti Watershed through HWEPC. The hoarding boards displayed messages pertaining to sustainable capture fisheries and legal provisions against destructive fishing.

Paani, through HWEPC, also displayed information related to aquatic biodiversity conservation at the Siahaniya Agriculture and Trade Fair 2020 organized by the Federation of the Nepal Chamber of Commerce and Industry, Deukhuri Chapter, Middle Rapti Watershed. The major displays included traditional fishing gear, AABCA booklets, pictures of good fishing practices, catch and release of endemic and migratory fishes, aquatic biodiversity of the Rapti River, and media clips of aquatic resource conservation. CAACG members attended the display stalls to brief about the material, with approximately 1,000 visitors in attendance.

In Y4 Q2, NEFEJ conducted a town hall meeting on the issues of Phoksundo Lake management (opportunities & challenges) linked with eco-tourism in Rigmo village, Phoksundo Suligaad

Watershed. The meeting concluded with a nine-point consensus of action, including the development of policy for strengthening the homestay industry. Following town hall meeting, this quarter, Shey Phoksundo RM allocated NRs. 400,000 to promote homestay activities in Ringmo Village.

STRATEGIC APPROACH 1B: IMPROVE LOCAL CAPACITY FOR WATER MANAGEMENT

The goal of this strategic approach is to reduce Nepal's vulnerability to climate-aggravated conflicts resulting from water supply scarcity and/or water quality issues including infrastructure damage from disasters, decreased agricultural productivity, food shortages, and health risks.

This quarter, Paani grantees conducted training activities on watershed management best practices, which helped communities strengthen knowledge and skills on those practices most suitable to their areas. Paani grantees also promoted various watershed management best practices in communities, including sustainable water extraction and reducing pollution. Naraharinath RM in Middle Karnali watershed and Mahakali Municipality in Lower Mahakali watershed have leveraged funds to support recharge ponds and riverbank protection activities.

At the end of this quarter, grantees had to stop all field interventions due to COVID-19 restrictions. Outside of Paani support, some grantees (KIRDARC, FECOFUN, MRDCC, KDCN and HWEPC) are involved in relief work, such as the distribution of masks and soap, messaging through FM radio, providing spaces for self-quarantine, and cash contributions in their respective watershed areas.

TASK 1.2.2 TRAINING AND SUPPORT FOR WATERSHED MANAGEMENT ACTIVITIES

Multidimensional Resource Center (MRC) Nepal provided training on low cost bioengineering techniques for upstream and downstream communities (self-help groups and community forest user groups) to prevent landslides and erosion and to protect water sources in the Dahakholi and Kakrahawa Khola micro-catchment areas in Middle Rapti Watershed. Following the training, the MRC and Ranibaas CFUG prepared a plan to utilize this learning and skill in spring-shed protection activities in Dahakholi in Kakrahawa micro catchment area.

Eight farmers groups in Middle Rapti Watershed, based on technical support from MRC in the last quarter, prepared and applied organic pesticides in their fields to minimize pollution and support aquatic biodiversity conservation. MRC connected these groups to the Agriculture Service Centre of Gadhawa RM for services and resources. This technical support from MRC has gradually helped to improve the institutional capacity of these groups.

Fulbari Integrated Rural Development Organization (FIRDO) conducted best management practices training and skills development in Jhimruk Watershed. Topics included bioengineering techniques, such as how to construct bamboo watlings, hedgerows, palisades, fascines, and soil erosion control, as well as integrated GESI concepts. Participants then prepared a plan to implement these practices.

Rural Development and Empowerment Center (RuDeC) Nepal formed three water user groups in Bogatan Lagam Watershed and trained 90 members on best practices in watershed management. These water user groups will engage in conservation and management of water resources in the area. RuDeC Nepal conducted a quarterly participatory learning and action (PLA) meeting in Bogatan Futsil RM, in which the groups shared progress and learning from their previous activities and prepared an action plan.

Rural Community Development Center (RCDC) conducted 4 half-day workshops in wards of Bogatan Lagam Watershed and prepared sub watershed management action plans based on existing local plans, including Local Adaptation Plans of Action (LAPA), a Local Disaster and Climate Resilience Plan (LCDRP), and Environment-friendly Local Governance Framework (EFLG), as well as the Paani watershed profile. During the workshops, ward chairpersons and elected authorities

expressed their concerns about climate change, disaster risk reduction, sustainable use of water resources and aquatic biodiversity They also committed to collaborate on and support the recommended activities of the action plan.

National Federation of Irrigation Water Users' Association Nepal (NFIWUAN) conducted orientation programs on irrigation management and water source protection in Bogatan Lagam watershed, benefitting 68 participants there. NFIWUAN assessed existing irrigation systems in Bogatan Lagam Watershed, prepared inventory, and collected their associated data and information. They documented 36 irrigation canals constructed (Chukune RM-1) at different periods within the last 50+ years. They found that none of these systems were registered with the Water Users Association (WUA). Similarly, they documented 6 irrigation canals constructed (Bogatan Futsil RM-2) in the last 16 years and noted that only one was registered with the WUA. This information will benefit local communities and inform irrigation system management.

Multi-Purpose Development Society (MPDS) trained marginalized groups in water scarce areas and representatives of Aalital RM in Rangun Watershed on watershed management and climate smart best practices. They came up with an action plan for implementation in selected sites with support from the local government.

RDC Nepal conducted an inception workshop in Rangun Watershed to inform local governments and stakeholders of their project and seek their support and cooperation during its implementation. They conducted a training on municipality level sustainable watershed management in Parashuram Municipality in Rangun watershed. Potential stakeholders and intervention sites for the project were identified during the training.

TASK 1.2.3: DEVELOP AND PROMOTE CLIMATE-SMART BEST MANAGEMENT PRACTICES

CIS promoted climate smart agriculture practices in Lower Mahakali Watershed, including plastic tunnels, drip irrigation systems, solar water pumps and insect traps to Rampure Tapu CAACG. The local government (Ward 7) provided the group with a green anti-insect net. The group then prepared a temporary nursery for growing off-season vegetables in the second season. These tools and technologies will help them grow vegetables more efficiently and demand in the market for these products will provide income opportunities.

CIS supported 11 members of the Gairabari farmers group to farm gourds in Lower Mahakali watershed. A temporary nursery was prepared on the site to produce the seedlings. A team including the ward chairperson, community members, CIS team, lead farmer and WMS of Lower Mahakali Watershed also conducted a joint monitoring visit to encourage and support more farmers.

Mahakali Municipality approved ongoing riverbank protection work initiated by CIS in Jogbudha River in Lower Mahakali Watershed. With support from CIS and the Municipality, the community has built a 150-meter-long embankment out of sacks filled with soil to protect agricultural land from floods and river cutting. This work will benefit 30 households residing on the banks of the Jogbudha River. CIS Kanchanpur, Mahakali Municipality and the local community also joined forces to create a matching fund of NRS. 461,891 for the adoption of low-cost soil conservation and bioengineering techniques.

Climate smart and bioengineering techniques promoted by CIS in Lower Mahakali Watershed. Photo credit: Paani

KIRDARC constructed two recharge ponds (approx. 60 cubic meters in volume total) in Naraharinath RM in Middle Karnali Watershed, which will help recharge the ground water and improve water availability. The RM also allocated NPR 150,000 to this project, which was an outcome of a KIRDARC-led jalkachahari held the last quarter.

KIRDARC Nepal met with Tilagufa Municipality in Tila Watershed on Feb. 1 to discuss recharge pond construction and request them to provide a matching fund, an activity recommend in the action plan developed in a previous jalkachahari.

MRC provided farmers with 20 plastic tunnel houses with drip irrigation (including orientation and installation) to improve agricultural practices and productivity as part of their promotion of best practices in Middle Rapti Watershed. The farmers have started growing vegetables, such as cucumbers and tomatoes.

Paani with MRC and local community forest user groups (CFUGs) conducted field visits in Ranibas and Churighat community forests in Middle Rapti Watershed and discussed the selection of water source protection sites. They agreed to protect the Dahakholi spring shed in the Ranibas CFUG. The CFUG also constructed reservoirs in the lower part of the spring shed to supply drinking water to the Jamunibaas community. The team also planned conservation activities for integrated management of the spring shed (i.e., construction of recharge ponds and pits, plantation, laying brushwood and building dry stone check dams), which will be incorporated in the CFUG's operational plan. In total, MRC and Ranibas CFUG constructed 30 water recharge pits and 42 brushwood check dams in March. They stopped working in the last week of March due to the stop work order but will continue once it is lifted.

MRDCC built 10 recharge ponds in Gaumukhi RM in Jhimruk Watershed to harvest rainwater and promote recharge in the ground and spring sheds. The recharge ponds will ultimately hold 348,000 liters of water at a time during the rainy season.

TASK 1.3.2: FACILITATE THE PREPARATION OF COMMUNITY ADAPTATION PLANS OF ACTION (CAPAS), LOCAL ADAPTATION PLANS OF ACTION (LAPAS) AND WATER USE MASTER PLANS (WUMP)

Environment Coordination Committee (ECC) conducted 7 Vulnerability and Capacity Assessments (VCAs) this quarter, which feed into two Local Disaster and Climate Resilience Plans (LDCRPs) they are preparing in Chure and Mohanyal RMs of Thuligaad Watershed. help identify risks and vulnerabilities. Thirty cluster-level VCAs have been completed so far and will continue in the coming quarters, along with LDRCP preparation.

KIRDARC held a municipal level multi-stakeholder dialogue, known locally as jalkachahari, in Naraharinath RM, Middle Karnali watershed. The participants discussed coordination with the RM to prioritize activities and allocate budget to implement a Local Adaptation Plan of Action (LAPA). The final version of the LAPA was submitted to the RM following the jalkachahari. KIRDARC also held two ward level jalkachahari in Naraharinath RM. The participants proposed Community Adaptation Plans of Action (CAPAs) and coordination with the wards to implement the CAPA. A final version of the CAPA was provided to both wards for approval (more details under SA 2a, Task 2.3.3).

USAID IWMA COORDINATION

Paani participated in a two-day Integrated Water Management Activity (IWMA) coordination meeting in Rangun watershed (Jan. 13-14). The IWMA team shared progress updates with local government representatives on water security activities implemented through collaboration between USAID IPs in the watershed. Local governments suggested Paani to 1) set up a display board for sharing data generated by the tipping bucket rain gauge and river level radar sensor installed in Rangun Watershed 2) provide an orientation on Environment Friendly Road Construction (EFRC) guidelines to local government representatives and 3) promote and link low cost soil conservation activities with local governments' plans and policies.

Paani hosted an IWMA coordination meeting (Jan. 16) in Lower Karnali Watershed with USAID IPs, local government representatives and NGOs. The IWMA team presented progress updates on collaboration between USAID IPs. Paani shared its positive experience coordinating with Hariyo Ban/CARE on Early Warning System (EWS) training for the local community. The meeting also covered issues related to water security, including unregulated gravel mining, the use of chemicals causing water pollution, floods, and gaps in policy implementation.

Paani participated in an IWMA learning workshop in Kathmandu (Feb. 14). The IWMA team shared progress made over the last two years, including indicator data by IWMA NMEL. IWMA will share the final report with IWMA partners. IWMA partners shared knowledge, information, tools and technologies to improve water security and implemented collaborative actions in the pilot watersheds. For example, Paani and Hariyo Ban Care designed and conducted a training on community disaster management with a focus on flood EWS in Lower Karnali Watershed. IWMA highlighted opportunities for joint planning, leveraging of resources, knowledge and technical capacity, strengthening local grantees, and improving collaboration.

STRATEGIC APPROACH 1C: IMPROVE LOCAL CAPACITY FOR REGULATION AND MANAGEMENT OF ROADS AND MINING

The desired outcome of this strategic approach is to reduce watershed degradation resulting from sedimentation and landslides by reducing the negative impacts of: 1) rural roads and 2) unregulated and unsustainable aggregate mining.

__6__ local governments endorsed EFRC guidelines and __8__ local governments allocated __NRs. 58,100,000__ ($475,284) to EFRC road construction

This quarter, Paani, with technical support from Scott Wilson Nepal (SWN), conducted environment friendly rural road construction (EFRC) guideline finalization workshops in 3 watersheds (Jhimruk, Middle Karnali and West Seti) for 15 local governments. SWN conducted Information Education, and Communication (IEC) awareness campaigns, distributed IEC materials, and conducted study tours to demonstrate good and bad practices of road construction to local government representatives from these three watersheds. Because of these investments, 6 local governments endorsed EFRC guidelines and 8 local governments allocated NPR 58,100,000 (approx. $475,284) for EFRC road construction. Additionally, Paani supported Aathabis Municipality in Middle Karnali watershed with detailed project reports by conducting survey and design for the 5.68 km Rakam Rola Singhasain road.

Building on the report recommendations on the impact of aggregate mining on aquatic biodiversity completed last quarter, Paani prepared a SOW to support local governments of Lower Karnali and Lower Mahakali Watersheds to promote sustainable mining practices. Paani identified BAFER Nepal to support these efforts in the coming quarters.

TASK 1.2.1: CLIMATE-SMART ROAD CONSTRUCTION AND ENVIRONMENTALLY-FRIENDLY (EF) GRAVEL MINING

ROADS

Sub-task C1.2.1-1 Raise awareness of community road building/maintenance groups and local elected bodies of better road construction (link to 4.1.9 outreach) and

Sub-task C 1.2.1-6 Build capacity of road management user group to monitor EF road construction

To raise awareness on EFRC, Paani, with technical support from SWN, conducted 21 IEC awareness campaigns at the community level in January in Jhimruk, Middle Karnali and West Seti Watershed. The activities reached 466 road users, planners, and implementers from 15 target local governments. These awareness campaigns were based on the IEC materials prepared in the previous quarter, which included posters, brochures and flipcharts on messages such as proper design of road geometry, drainage management, proper infrastructure, local participation, bioengineering and road safety in terms of EFRC. Local governments launched these IEC materials during the EFRC workshops in their watersheds. SWN, with support from Paani WMSs and FIRDO and Sahara Nepal in their respective watersheds, provided an orientation on the EFRC IEC materials. Local communities reported finding these IEC activities important and useful in enhancing their awareness and raising their voices for better road construction in the future. Hard copies of the IEC materials (i.e., seven types of wall posters, two types of brochures, and a flip chart) were distributed to all the participant communities for their use and dissemination at the local level. In

addition, the team disseminated soft copies of the IEC materials to technical officials of the local governments. FIRDO Nepal also organized 12 IEC awareness campaigns in Jhimruk watershed on EFRC to more than 200 people and distributed copies of the IEC materials.

User community reading EFRC posters in Dhuwang, Airawati Municipality. Photo credit: SWN

Sub-task C1.2.1-2 Identify early adopters of environmentally friendly road techniques

SWN added 4 additional early adopters and champions to the existing list (12 total) for three watersheds (i.e., 4 in West Seti, 5 in Middle Karnali and 3 in Jhimruk). SWN then engaged them in the EFRC workshops, IEC awareness campaigns, and study tours in their respective watersheds this quarter. These early adopters and champions have started supporting local governments, community members and user groups, as well as coordinating with ward committees to promote better local road construction.

Sub-task C1.2.1-3 Conduct study tours with municipalities/rural municipalities to good and bad examples of road construction

Paani, with technical support from SWN, conducted one study tour each in Jhimruk, Middle Karnali and West Seti for representatives of local governments, and technical engineers, including early adopters and champions. The study tours aimed to educate the participants on good and bad practices of road construction, and adverse impacts of haphazard rural road construction on the environment and aquatic biodiversity, in particular. Participants were selected based on their interest and capacity to contribute to the EFRC approach at the local government level. Study tour sites were selected based on characteristics, including good road alignment, proper geometry, flexible road structures, drainage management and bioengineering measures to reduce soil erosion and landslides. SWN took Jhimruk Watershed participants to Kapurkot-Shreenagar-Khalanga Road in Salyan; Middle Karnali Watershed participants to Dadeldura-Rupal Road, Dadeldhura; and West Seti Watershed participants to Dehimandu-Girgada Road, Baitadi.

> *"I have observed that a good road is possible even in hilly terrain...I have also seen the dangers of excavation by machines without considering the proper alignment, road geometry, road structures and drainage facilities."*
> *- Mr. Birendra Bahadur Khadka, Mayor of Jayaprithvi Municipality in West Seti Watershed, EFRC Study Tour Participant*

The study tour covered different examples and the process of road construction, from starting with local demand, consultation, and project selection to hand over, repair and maintenance, bioengineering techniques, engineering processes, and standards for design and construction.

According to Mr. Birendra Bahadur Khadka, the Mayor of Jayaprithvi Municipality in West Seti Watershed, the EFRC Guideline that his municipality endorsed has enabled them to construct EFRC roads. He shared that the study tour complemented the EFRC workshops and IEC awareness programs conducted earlier.

SWN rural road expert demonstrating how proper road geometry and a water drainage system help to make a rural road durable throughout the year. Photo credit: SWN

Sub-task C1.2.1-4: Assist municipalities/rural municipalities/local elected bodies in developing criteria (construction guidelines) for prioritizing funding and assuring contracts that include environmental clauses (Link to 1.3.3: EFLG)

Paani, with technical support from SWN, held 6 EFRC guideline finalization workshops in Jhimruk, Middle Karnali and West Seti watersheds in January with a total of 155 local representatives and officials from 15 municipalities/RMs. The final guidelines cover important aspects of road construction, including: pre-feasibility, feasibility and design; project construction; repair and maintenance; public procurement; environmental management; and supervision and monitoring.

All the participant local governments committed to review the final draft of the EFRC guidelines and endorse them through their executive committees. They also committed to allocating funds to at least one rural road in their respective municipality/RM. Thus far, Paani's/SWN's efforts have resulted in endorsement of EFRC guidelines by 6 local governments in 3 watersheds. Eight local governments have allocated a total of NPR 58,100,000 to 8 EFRC roads, as shown in Table 1. The remaining local governments are in the process of endorsing the EFRC guidelines.

In addition, at the request of Aathabis Municipality last quarter, Paani/SWN conducted a detail survey and design for the Rakam-Rola Singhasain Road in Middle Karnali Watershed. Paani submitted the detail project report of this survey to the municipality for further action. Aathabis Municipality has allocated NPR 10 million from the provincial government for the construction of EFRC roads this fiscal year. FIRDO and Sahara Nepal also each conducted an orientation program on the EFRC guidelines for local government representatives in Jhimruk and West Seti Watersheds, respectively, following SWN's municipal level orientations in January.

Watershed	Local Government Rural Municipality=RM Municipality=M	EFRC guideline endorsement	Fund allocation (NPR)	Road
Jhimruk	Naubahini RM	4-Mar-20	20,000,000	Bahane Lung Tushara road
	Airawati RM	26-Feb-20	500,000	Jamune Kamire road
West Seti	Jay Prithivi M	20-Feb-20	1,000,000	Jakhkhet Simaltola Pungar road
	Chabispathivara RM	24-Feb-20	800,000	Jutera Danna Road
	Thalara RM	Awaiting meeting	2,000,000	Dangaji road
	Talkot RM	20-Feb-20	7,000,000	Dhamigaun Kidanna Road
Middle Karnali	Turmakhand RM	Awaiting meeting	16,800,000	Punepata Dhamali Belkhet road
	Kamalbajar M	14-Feb-20		
	Aathabis M	6-Mar-20	10,000,000	Rakam Rola Singhsian road
	Total		**58,100,000**	

Note: Except for Aathabis Municipality, funds were allocated this quarter.

Table 1: Funds allocated by local governments to EFRC roads.

Sub-task C1.2.1-5: Develop IEC materials for capacity building of municipalities/rural municipalities and contracting engineers on better road construction (potentially add training)

SWN prepared a tutorial video on EFRC this quarter based on field visits and interviews with local stakeholders conducted last quarter. This tutorial video will help educate planners and decision makers from the local government, communities, road user groups and contractors on the importance of EFRC at the local level. The video covers: 1) Formulating a Plan and Pre-Planning 2) Process for Rural Road Construction and 3) Repair-Maintenance and Transportation Services. The video will be finalized and disseminated next quarter.

SWN's Final Report can be found here.

MINING

Sub-task C 1.2.1-11 Raise awareness of communities of impacts of gravel mining and regulations
Sub-task C 1.2.1-10: Provide TA to miners (individuals and companies) on better practices
Sub-task C 1.2.1-12: Provide TA to rural municipalities on monitoring activities in compliance with IEEs

Based on recommendations from Paani's technical report on the impacts of aggregate mining on aquatic biodiversity in Lower Mahakali and Lower Karnali watersheds finalized last quarter, Paani prioritized key activities to address unregulated gravel mining in these watersheds. Paani developed

a SOW to strengthen the capacity of local governments to better regulate aggregate mining and help local stakeholders and communities advocate for enforcement of mining regulatory requirements. Paani plans to achieve this through educating local governments and other stakeholders on existing policies and practices on mining; supporting revision of Initial Environmental Examination (IEEs) with biodiversity sensitive inputs; conducting social audits of EMPs and public hearings of implementation of IEEs; and forming a joint team to monitor IEEs.

Paani plans to assign this task to BAFER Nepal, as they worked in Lower Karnali watershed in 2018-19, where they sensitized local communities and stakeholders on the importance of aquatic biodiversity conservation and controlling excessive river mining. In addition, BAFER Nepal has experience in impact assessment of mining in the Karnali River and mobilizing local communities to monitor mining activities. BAFER Nepal submitted a proposal based on the SOW, which was finalized through discussion with Paani. They will work with select local governments (Lamkichuha Municipality, Janaki Rural Municipality and Tikapur Municipality) in Lower Karnali watershed and (Bhimdutta and Mahakali Municipalities) Lower Mahakali watershed. Paani has received yellow light concurrence to move ahead and will develop the grant next quarter.

STRATEGIC APPROACH 1D: IMPROVE LOCAL CAPACITY FOR MANAGING INVASIVE SPECIES

The goal of this strategic approach is to minimize watershed degradation and its negative impact on natural resource-based livelihoods and freshwater biodiversity by reducing the population of non-native fish species and the total area affected by invasive plant species.

Throughout the quarter, Paani made progress towards the desired results for this strategic approach. Paani completed a status review of aquatic invasive management to consolidate knowledge on the source, spread, and impact of aquatic invasive species. The review highlighted the lack of a priority on research; poor knowledge of the impact of invasives on natural aquatic systems in communities; and an inadequate database on successes and failures of invasive eradication as major gaps in invasive management policy. The review also identified a number of policy gaps related to research environment, institutional capacity, sectoral policy coherence, community engagement, and wider communication for collaborative management of aquatic invasives. The review made several recommendations to inform policy and capacity building to regulate aquaculture and fisheries activities for the control of aquatic organisms with dominant and invasive characteristics. Paani also delivered and demonstrated the performance of equipment (i.e., water mower) to help users of wetlands control invasive aquatic plants. The application of mechanical measures will demonstrate differences in lake appearance and persistence of native aquatic biodiversity. Progress over the quarter is reported below:

TASK 1.1.3: IMPROVE CAPACITY ON INVASIVE CONTROL

Sub-task C1.1.1-1 Conduct freshwater biodiversity inventories

Consolidate knowledge of aquatic invasive management (links to Tasks 4.1.2 & 4.1.5)

In Y4 Q3, Paani consolidated knowledge on invasive management gathered from consultation workshops, meetings with the key stakeholders including government line agencies (e.g., MoALD, NARC, CFPCC, Central Animal Quarantine), academia (KU, TU, AFU), NGOs (CMDN, RHF, YAE), and CSOs (RLRFFC, HPFC, BFEA), and from the scoping study of invasive problems in Lower Mahakali, Lower Karnali, and Middle Rapti Watersheds conducted in Y3. The report also contains lessons learned from exposure visits to different sites in Gandaki Pradesh and a literature review of national/regional issues/experiences related to invasives.

The review revealed that 6 exotic invasive aquatic plant species have established a population in Nepal, and are reportedly having negative impacts on the environment, including aquatic ecosystems. Sixteen exotic fish species have established themselves in Nepal, mostly after farmers introduced them for aquaculture (Annex, Exhibit A4). Aquarists have introduced 241 species of ornamental fish species with limited cases of species establishment.

The Paani scoping study observed the presence of exotic aquatic invasive plant species (EAIPS), including water hyacinth, water lettuce, and bush morning glory in lakes and marshy areas of Lower Mahakali (LM), Lower Karnali (LK) and Middle Rapti (MR) Watersheds. From 1982 to1989, the Asian Development Bank (ADB) supported an aquaculture development project that intentionally introduced exotic carps to counter aquaculture shortcomings in the western Tarai of Nepal. Aqua culturists unofficially introduced catfish, including African catfish and freshwater piranha, in LK and MR watersheds and the country as a whole over the past 20 years (Annex, Exhibit A4).

The Paani review revealed that invasive species are emerging as a threat to a number of natural waterbodies in LM, LK and MR Watersheds. Multiple cases of bio-invasions have been responded by fisher community in wetlands and rivers of these watersheds, and exotic species are, to some extent, competing with native fish species both for food and space. Our review showed that a limited number of studies have evaluated the impacts of a few aquatic invasive plants and animals, while most of the perceived impacts of aquatic invasive species is largely anecdotal.

Though detrimental, producers and consumers see exotic fish as important food fish that serve as a source for livelihood of fish farmers and fishers in Nepal. High demand for freshwater food fishes encourages farmers to import freshwater fish from neighboring countries for aquaculture and consumption. Several freshwater fish introduced in the country have established populations, including tilapia, catfish, and carps. Inland aquatic ecosystems are already fragile and vulnerable to external influences in the form of invasive species or natural disasters; hence, it is of the utmost importance to understand the concepts of endemism, exotic fish, and impacts on native species in inland aquatic ecosystems.

Several policies, acts and rules (e.g., Forest Act 1995, Forest Policy 2014, National Park and Wildlife Conservation Act 1973, Plant Protection Act 2007, Plant Protection Rules 2010 and Agrobiodiversity Policy 2013, National Wetland Policy 2012 and National Biodiversity Strategy and Action Plan [NBSAP 2014]) exist in Nepal aimed at controlling invasive species, mostly terrestrial invasives, at the local and national level. These policy frameworks do not explicitly prioritize and discuss issues related to aquatic biodiversity and wild aquatic habitats in the context of invasive introduction, trade, use and threats.

Based on aquatic invasive reviews, the following broader recommendations have emerged:

- To date, there has been no detailed and in-depth study in Nepal to quantify the economic and biodiversity loss due to aquatic invasion in freshwater systems. Being an apex organization of government for agricultural research, NARC, in coordination with MOFE's Forestry Research and Training Center, could conduct coordinated multidisciplinary research that addresses the origin and mode of the spread of invasive species, trade-offs between invasiveness, economic attributes of a species in different ecological and business scenarios, and intensity of impacts to suggest management measures.

- Nepal is highly prone to additional invasion of aquacultured and ornamental fish in the future as a consequence of weak quarantine measures. Unless stringent measures are taken to monitor the aquaculture and aquarium fish trade and accidental release of exotic species, inland waters could emerge as breeding grounds for exotic fish that will eventually drive out native, indigenous freshwater fish. To resolve these issues, MoALD strictly implements the guidelines of the Convention of Biological Diversity (CBD) and carries out investigation related to the management/eradication of invasive exotic fish in the wild.

- MoFE and MoALD develop and disseminate national and regional databases on successful eradications as well as reasons of failures in inland invasion.

- Mechanical, chemical and biological control come with their own issues. Further analysis is needed for conservation related institutions and communities before practicing any of the methods, and frequent and adequate monitoring are essential requirements for many aquatic invasive species. Local communities can play an important role in both control and monitoring. To achieve this, a clear understanding is needed about the benefits/costs of invasive alien species.

- To address the lack of knowledge on invasives and their impact, an orientation-training program on the dimensions of invasive, their impact, and prevention and control measures would be useful for communities engaged in aquaculture and aquatic biodiversity conservation.

- Many sectoral policies and strategic plans are not yet coherent in Nepal on aquatic biodiversity conservation, and the management of aquatic invasives still not a national priority. The existing legal instruments are not sufficient to address the issues of aquatic biodiversity conservation in the face of increasing cases of aquatic bio invasion, primarily from the aquaculture industry. There is a strong and immediate need to develop and implement regulatory measures for responsible aquaculture under a framework of Good Management Practices (GMP).

In Y4 Q4, based on issues and broader recommendations, Paani will organize local level workshops to share the review findings and get feedback to confirm the need for regulations/best management practices for responsible aquaculture.

Sub-task C1.1.3-9 Facilitate selection of control measures

In Y4 Q3, Paani delivered and tested a water mower through in-kind support to FEDWASUN to remove water hyacinth and other aquatic invasive plants from water bodies, including Bhagaraiya Lake, Lower Karnali Watershed. Procura Innovations, the contractor for configuring the mower, handed over the mower to FEDWASUN and provided water mower maintenance and operation training to three members of the Bhagaraiya Lake Management Committee (BLMC). Paani observed that the mower is effective in collecting small and free-floating clusters of water hyacinth from the lake at a minimum water depth of 50 cm. The conveyer belt installed in front of the raft could not collect weeds from the larger clusters. The mower requires three people, including the outboard engine operator, someone to manage floating weeds that come into contact with the conveyer belt chain, and another person to disperse and pile up weeds on the boat deck. In Y4 Q3, Paani, through FEDWASUN, will provide training on water mower operation and facilitate preparation of an operation plan, including the source of funds required for the local government and BLMC to operate the water mower.

STRATEGIC APPROACH 2B: IMPROVE LOCAL CAPACITY FOR DISASTER RISK REDUCTION

The goal of this strategic approach is to develop the capacity of Nepal's communities to be less vulnerable to negative impacts resulting from disasters, including loss of life, injury, infrastructure damage, and economic hardship by strengthening the Department of Hydrology and Meteorology's (DHM) hydro met observation network, Emergency Action Planning (EAPs), and Environment Friendly Local Governance (EFLG) framework.

This quarter, hydro met stations were installed in Rangun Watershed to provide hydro met information to local authorities. This information will help them better understand flood risk and provide guidance on management of that risk. Downstream flood vulnerable communities, including approximately 918 HHs from 17 villages in Rangun Watershed, will receive flood risk warnings during flood events to help them respond more quickly and ultimately minimize loss of life and property. Through a grant with DHM, Paani prepared flood hazard maps for 10 watersheds, which identified potential flood prone settlements in different inundation scenarios. Depending on the type and location, just a few to hundreds of settlements could be impacted in different watersheds. These maps will be disseminated in the coming quarters. Communities and stakeholders will therefore be better prepared to respond to flood hazards, and local governments can use the maps in their local plans, including disaster management, urban and settlement plans. In addition, 5 hydropower companies committed to draft emergency action plans (EAPs) after receiving training on disaster risk management.

TASK 2.2.2 SUPPORT DHM TO EXPAND THE RIVER OBSERVATION NETWORK

In Y4 Q3, Paani coordinated with Real Time Solutions (RTS), a vendor for hydro-met equipment installation, and DHM, to plan installation of equipment in Rangun and Thuligaad Watersheds in January. This equipment included a Tipping Bucket Rain Gauge to measure rainfall in the Rangun and Thuligaad watersheds and a Radar Sensor to measure water level in the Rangun River in Rangun Watershed. Before going to the field, RTS tested and showed DHM all the equipment, which was registered in their inventory. DHM also ensured that all of the equipment specifications met their standards. RTS conducted site visits and installed the equipment from Jan. 12-16. One hydrologist from DHM's Mahakali Basin Office (Surkhet) and one Meteorologist from their Regional Office (Kohalpur) accompanied the RTS team, observed the installation work, and provided necessary support and guidance. Paani Watershed Management Specialists (WMSs) from their respective watersheds accompanied the team in the field.

The team upgraded DHM's existing manual hydrological station at Kainepani in Rangun Watershed to an automated radar system. This system will continuously record water level data in Rangun River and provide early warnings to downstream communities during flood events through mass mobile SMS. DHM has a collaboration with Nepal Telecom and Ncell, and when the water level reaches the warning level, SMS are automatically sent to people within potential flood risk zones. Paani GIS analysis estimated that 918 HHs (5,254 people) from 17 villages downstream will benefit from flood risk warnings in Rangun Watershed.

RTS also upgraded DHM's existing manual rainfall stations to an automated tipping bucket system: one in Jogbuda, Dadheldhura in Rangun watershed and one in Jorayal, Doti in Thuligaad watershed. In addition to upgrading these manual stations, two new automatic (tipping bucket) rainfall stations were installed: at Chaudbandale, upstream of Rangun, and at Gaidabe in Puntura, both within Rangun Watershed. These rainfall and water level stations record continuous data and are integrated in DHM's online data view system. Rainfall watch and river watch on this web page provide the status

(warning and danger levels) of rainfall and water level, respectively. The data generated from these instruments will first be verified by RTS before being transferred to DHM. DHM will then forward the data to the District Emergency Operating Center (DEOC) and National Emergency Operating Center (NEOC) during emergencies. Once the thresholds are crossed, DEOC and NEOC mobilize concerned agencies for flood risk warning and response. With these systems in place, communities and stakeholders in Rangun Watershed will receive flood risk warnings quickly and be better prepared to respond.

TASK 2.2.3: SUPPORT DHM AND LOCAL STAKEHOLDERS TO IMPROVE FLOOD RISK WARNINGS

Natures Conservation (NC) worked on flood hazard mapping for 10 watersheds under the DHM grant. They presented their inception report to Paani and DHM in early January and developed hazard maps incorporating the suggestions. Flood hazard maps provide an overview of the extent and scale of flood hazards over time and space in target watersheds to local stakeholders, governments and communities. NC completed all the desk analysis in January for preparing the flood hazard maps, which included preparation of a Digital Elevation Model (DEM), Flood Frequency Analysis, estimation of peak flows in ungauged basins, hydraulic modelling (HEC-RAS) and flood inundation mapping using Arc GIS.

In order to verify these draft maps, NC conducted stakeholder consultation meetings in a number of strategic locations, where they shared the draft maps, discussed them and collected feedback. The consultation meetings were conducted in the field during late January and early Feb. The primary stakeholders were key officials from the local government such as Mayors and Chiefs of RM/Ms, Ward Chairpersons, Ward Members, representatives from the Red Cross, Community Disaster Management Committees, and key informants and flood vulnerable communities. During this period, NC conducted field observation at flood vulnerable sites and checked different points on their maps, such as riverbank lines and historical flood lines and embankments. They held conversations with local community members to learn about flood history. The Assistant Hydrologist from DHM's regional office (Kohalpur) accompanied this field visit and provided technical support to the team. Paani WMS and Integrated Watershed Resource Management Specialist (IWRMS) provided coordination support and participated in stakeholder consultations as well.

NC revised the flood hazard maps based on the information collected from the stakeholder consultation and field verification. After sharing a draft report along with the hazard maps, NC presented all the findings and maps to Paani and DHM team for further suggestions. NC will finalize the report in April. The final product of flood hazard maps include hazard maps for different return periods (2, 5, 10, 20, 50, 100 and 200 year floods), warning level, danger level, and historical floods. Paani plans to disseminate these maps to local stakeholders in the coming quarters. Local governments can use these maps for their local disaster plans, flood mitigation and management plans, including urban and settlement plans. During the field consultation, the Mayor of Bhimdatta Municipality in Lower Mahakali Watershed said that they will use this information in their master plans and urban planning. Other agencies working on disasters can also use these maps for flood risk management. Customized maps can be placed at public places so that local communities are informed and better prepared for potential flood risks in their areas.

NC's final report on the flood hazard mapping activity is available here.

TASK 2.2.4: BUILD CAPACITY TO IMPLEMENT EMERGENCY ACTION PLANS

Paani supported the Independent Power Producers Association of Nepal (IPPAN) to build the capacity of hydropower developers and operators to promote sustainable hydropower development through different capacity building activities. With input on design from Paani, IPPAN conducted a training on Emergency Action Planning (EAP) and Dam Breach Simulation on Feb. 24-25. Resource persons from Himal Power Limited (for EAP) and NEA Engineering Company (for Dam Breach Simulation) delivered the training. Twenty-four participants from different hydropower companies, consulting companies, Department of Electricity Development (DOED), Nepal Electricity Authority (NEA), NEA Engineering Company and Mid-Western University (MWU) received this training. The training enhanced their knowledge and understanding on disaster risk management through emergency preparedness and response mechanisms and flood inundation analysis due to dam breach. The training revealed that hydropower companies generally have some emergency safety procedures but not necessarily a packaged EAP, except for a few hydropower operations supported by international funders, such as Khimti Hydropower (Norway) and Bhote Koshi Hydropower (Panda Energy Company/US). Participants realized the need for EAPs for better safety, although EAPs may differ for different companies depending on the disasters they face (e.g., earthquakes, floods, landslides, etc.). Dam Breach Simulation, part of an Environmental Impact Assessment (EIA), is a design process used to identify environmental and social risks before project construction.

Because of this training, 5 hydropower participants made a voluntary commitment (initial target was 2 companies) to develop EAPs for their companies, and the other participants committed to sharing the information with their organizations and to develop timelines that IPPAN and Paani will follow to check progress in the coming months.

IWMA COLLABORATION

Paani and the USAID Hariyo Ban Program-CARE Nepal (HB/CARE) organized 2 two-day trainings for 82 participants on community-based disaster management linked to flood early warning system (FEWS) in Madhuwan and Thakurbaba Municipalities, Lower Karnali Watershed from Jan. 6 to 9. The training covered disasters in the context of climate change and the FEWS system in connection to flooding. This training had a major focus on local communities identified by Paani, in consultation with the local governments and relevant stakeholders, who are vulnerable to Aurahi Khola floods, and where Paani has established low cost FEWS. Paani and HB/CARE have been collaborating on capacity building here under an IWMA initiative since DRR was identified as a key issue in Paani's watershed profiling and in the master plan of Thakurbaba municipality. HB/CARE facilitated the first day's session (overall scenario of disasters and climate impacts) and Paani (River Basin Team Leader and GESI Officer) facilitated the second day's session (local/global climate change issues linked to flood disasters and FEWS). The training enhanced participants' knowledge and understanding on the topics with the aim to help them better respond to floods through the exchange of flood risk information. Paani, HB/CARE and Thakurbaba Municipality also conducted a field visit to flood vulnerable communities. In addition, Paani, through KIRDARC, is developing a training manual on community-based disaster management targeting local government representatives from the same municipalities. This training will establish stronger linkages between the local government and communities in responding to flood risks.

STRATEGIC APPROACH 2A: IMPROVE RIVER BASIN PLANNING

The goal of this strategic approach is to reduce Nepal's vulnerability to conflict over water resources and protect its freshwater ecosystem through environmentally appropriate water management, including basin-level planning, sustainably sited and designed dams, and minimizing negative impacts of water diversions.

This quarter, the Fund Manager of the Karnali River Basin Conservation Fund (KRBCF) made significant progress in laying the foundation for the Fund. The consortium made up of Dolma Group, SAFAL and VRock registered themselves as a joint venture called DSV Advisors; engaged in a number of critical forums and meetings with local government, private sector and non-profit stakeholders in the Karnali River Basin (KRB) region; and developed an initial list of investible projects. Paani also participated in the WECS-led Project Technical Committee (PTC) meeting with other high level GON, USAID and donor/development stakeholders, where WECS committed to incorporating aquatic biodiversity conservation in the upcoming National Water Resource Policy and to use Paani-produced information in its River Basin Master Plans and Hydropower Master Plan. The Secretary of WECS asked Paani to arrange a learning visit for PTC members to Paani working sites. Paani also shared research conducted thus far on high conservation value rivers (HCVR), energy options and systems scale planning (SSP) in a webinar with WECS and other national level stakeholders in March, which will feed into river basin planning. At the local level, grantees continued to facilitate meetings with recently formed integrated watershed management platforms (IWMPs) in the Rapti River Basin and municipal level multi-stakeholder dialogues (*jalkachahari*) in the KRB to identify and address local issues related to water management and aquatic biodiversity conservation.

Detailed progress from Y4 Q3 is reported below.

TASK 2.1.2: EXPLORE DEVELOPMENT OF NEPAL RIVER BASIN CONSERVATION FUND (NRBCF)

Significant progress was made to set up the Karnali River Basin Conservation Fund (KRBCF) this quarter. The Fund Manager selected last quarter, i.e., a consortium of Dolma Group, SAFAL and VRock, created and registered a joint venture company called "DSV Advisors Private Limited" (DSV). In Y4 Q3, DSV informed Paani that they planned to create and manage: 1) the Karnali Fund, which will serve as DSV's investment vehicle and 2) the Karnali Trust, a not-for-profit sharing company that will help to develop the broader investment eco-system in the KRB while remaining focused on conservation and equitable development.

This quarter, DSV developed a list of investible projects based on meetings with businesspeople and potential entrepreneurs in Surkhet in January, e.g., officials from the Surkhet Chamber of Commerce and Industry (SCCI), Federation of Nepalese Chamber of Commerce and Industry (FNCCI), and other regional entrepreneurs. In February, the team traveled again to Surkhet to visit potential investment sties and conduct on-site due diligence. Based on information gleaned during these visits, DSV decided to focus on sectors for which the KRB has a comparative advantage, i.e., agriculture, herbs and tourism. DSV scoped four potential anchor projects from these sectors in and around Surkhet, with plans to explore the renewable energy sector as well in upcoming quarters.

DSV also engaged heavily with government stakeholders, including the Ministers of Economic Affairs and Planning from both Karnali and Sudurpaschim provinces. They also met with the Principal Secretary and Secretaries of most ministries and with parliamentarians and other local level government actors, who will be key in supporting KRBCF-related policy and implementation.

In terms of the private sector, DSV met with branch managers of all the major banks with a presence in Karnali Province, who provided a picture of the financial flow and trends in loans and investments, as well as potential sectors and challenges. The banks shared that while the KRB has great tourism potential, meaningful private sector-led investment is at least a decade away and cannot be realized until the enabling infrastructure in in place. DSV also met with registered auditors and business associations in KRB, learning that the majority of the key businesspeople in Nepal are affiliated with political parties, with business associations serving as gatekeepers.

During its scoping, DSV also realized a major lack of knowledge on entrepreneurship in the KRB. Therefore, activities such as skills training, business development training, and investment workshops will help build the soft infrastructure required for investments through the KRBCF. As such, DSV approached corporations such as NCell, Dabur, Yeti Group and Golyan Group to explore potential areas of collaboration that align with developing the broader investment eco-system in KRB. DSV also had productive discussions with non-profit organizations in the area, who could serve as implementing partners.

From Feb. 11-12, DSV helped organize and participated in the first Karnali Entrepreneurship and Leadership Summit and Awards (KELSA) in Surkhet. The event brought together prominent national and regional level stakeholders engaged in entrepreneurship and investment. Former PM of Nepal, Hon. Dr. Baburam Bhattarai, inaugurated the two-day event. On the first day, political party leaders and parliamentarians participated in panel discussions, which provided DSV insights into the political dialogues and realities in the region. On the second day, private sector actors, including DSV, discussed the potential and challenges in Karnali Province. In the first panel, Mr. Radhesh Pant, former CEO of the Investment Board of Nepal and Chairman of VRock, discussed the long-term potential of the Karnali Region. Asmod Karki, a core team member of DSV Advisors, moderated the second panel on doing business in the Karnali, and Bidhyabaridhi Sigdel, Managing Director of Dolma Impact Fund, who served as a panelist, highlighted the activities of the KRBCF and Dolma's experiences bringing in Foreign Direct Investment (FDI) in Nepal. In the third panel, Ashutosh Tiwari, Managing Director of SAFAL Partners, conversed with Kewal Prasad Bhandari, the Main Secretary of Karnali Province, about accelerating and generating employment in Karnali. Participating in KELSA allowed DSV to share its ideas and activities directly with more than 270 participants, including Ministers, Parliamentarians, Heads of Business Associations and other key stakeholders in Karnali Province.

In addition, Mr. Asmod Karki participated as a panelist in the Third Nepal Bangladesh Youth Conclave held at the Nepal Tourism Board on Feb. 22 in Kathmandu. Mr. Karki highlighted the KRBCF's activities as a groundbreaking effort in conservation and impact investment and invited regional investors and entrepreneurs to consider investment in KRB and in Nepal. In March, the DSV team participated in the Dhanghadi Development Conference in Sudurpaschim Province and began planning for an official launch of the KRBCF in Kathmandu with national level GON, private sector, donor/development and media partners, with potential attendance by the U.S. Ambassador. However, the event was called off at the request of USAID due to GON restrictions on gatherings to prevent the spread of COVID-19.

In summary, DSV made significant progress this quarter to lay the foundations for the KRBCF by building trust with stakeholders, participating in various forums, and developing a pipeline of investible projects. DSV's engagements and presence in the KRB has sent a positive signal that the region is preparing for investments, in particular those that prioritize conservation and strive for economic prosperity.

TASK 2.3.1: CREATE INTEGRATED RIVER BASIN MANAGEMENT PLATFORMS (IRBMPS)

Paani continues to work with stakeholders at the RM/municipality and watershed level to create integrated watershed management platforms (IWMPs), which can serve as the foundation for integrated river basin management platforms (IRBMPs) when WECS' river basin offices (RBOs) are set up and ready to serve as the government anchor at the river basin level.

To date, Paani has created five platforms in the Rapti River Basin (RRB) at the RM/municipality level in Jhimruk watershed and three in Middle Rapti watershed. These platforms bring stakeholders from different sectors together, including from local government, federations, water user groups, NGOs, and CAACGs, to identify shared river basin related issues and solutions to address them.

On Jan. 10, Fulbari Integrated Rural Development Organization (FIRDO) facilitated a meeting for the Airawati RM integrated watershed management platform (IWMP) in Jhimruk Watershed. Platform members reviewed progress made over the previous year, including implementation of a ban of destructive fishing practices, creation of 52 recharge ponds, and establishment of a plant nursery. The platform members also agreed to support the handover of rivers stretches to Community Aquatic Animal Conservation Groups (CAACG) for fisheries management and endorse EFRC guidelines. Airawati RM will also continue supporting integrated watershed management practices (IWMP) through their annual plans. In addition to the three IWMPs formed by Human Welfare and Environment Protection Centre (HWEPC) in Middle Rapti watershed, Paani is working with Lamahi Municipality on formation of a fourth platform in the watershed. The local government plans on conducting its first meeting for the IWMP in April; however, this will depend on future GON directives related to COVID-19.

TASK 2.3.2: ORGANIZE DISTINGUISHED SPEAKER SERIES

This quarter, IFC participated in the Paani/WWF webinar on March 13, which shared initial results from research conducted on high-conservation value rivers (HCVR), energy options and system-scale planning (more details under SA 3b, Tasks 3.2.1). Paani and IFC also discussed potential collaboration on a future training on Nepali's Environmental and Social Risk Management (ESRM) Guidelines, which require banks/financial institutions to integrate ESRM into the overall credit risk management process. IFC shared materials from its previous training on the ESRM Guidelines for financial institutions, including Class A banks (more details under SA 3b, Task 3.2.3).

TASK 2.3.3: HOLD LOCAL AND BASIN-LEVEL INFORMAL ROUNDTABLE DISCUSSIONS

KIRDARC held a municipal level multi-stakeholder dialogue, known locally as *jalkachahari,* in Naraharinath RM, Middle Karnali watershed on Jan. 19. The participants discussed coordination with the RM to prioritize activities and allocate budget to implement a Local Adaptation Plan of Action (LAPA). The final version of the LAPA was submitted to the RM following the *jalkachahari.* KIRDARC also held two ward level *jalkachahari* in Naraharinath RM on Jan. 20 and 21. The participants proposed Community Adaptation Plans of Action (CAPAs) and coordination with the wards to implement the CAPA. A final version of the CAPA was provided to both wards for approval. Over the last year, *jalkachahari* have become an effective platform to discuss local problems and identify solutions related to local water management and aquatic biodiversity conservation.

TASK 2.3.4: PROVIDE BIODIVERSITY AND CLIMATE CHANGE INFORMATION FOR BASIN LEVEL PLANNING

WECS facilitated the Project Technical Committee (PTC) Meeting on Feb. 18 to provide updates on progress from 2019 and deepen understanding of USAID's support for wider natural resource management in Nepal. The meeting covered issues and opportunities in Nepal in terms of basin wide planning, integrated water resource management, aquatic biodiversity conservation, sustainable development, and capacity building of communities and institutions. WECS expressed appreciation for Paani's initiation of conservation activities in remote Nepal and for increasing knowledge and awareness among communities. WECS assured the group that it will incorporate aquatic biodiversity conservation in the upcoming National Water Resource Policy and use information produced by Paani in its River Basin Master Plans and Hydropower Master Plan. The Secretary of WECS asked Paani to arrange a learning visit for PTC members to Paani working sites. Paani made arrangements for this trip to be held to Rara Kaptyad and Middle Karnali watersheds in March; however, the trip was canceled when travel restrictions were put in place by GON and USAID because of the potential spread of COVID-19.

On Mar. 6, Paani and WWF shared data and information on aquatic biodiversity with the WECS/World Bank river basin planning project being implemented by Tractebel. This information will support the project's preparation of the Hydropower Master Plan and Strategic Environmental and Social Assessment (SESA) for the major rivers of Nepal. The Tractebel team said that Paani's data and information will be a key resource during the preparation of an environmental baseline for their assessments. During the meeting, Paani formally requested approval from WECS to exchange data between the project and Tractebel.

This quarter, Paani continued to meet with CDES-TU to discuss the online Paani Freshwater Center of Excellence (FCOE). CDES-TU proposed that one of the top students in the department could serve as curator for the site to ensure sustainability beyond Paani. Paani and CDES-TU agreed to hire a vendor who could install the necessary hard/software as well as train department staff on the content management system. Paani also met with CDES-TU's central IT department to assess the existing IT infrastructure and needs and agreed that the IT hardware could likely be set up there, since it would be backed up by the well-established central system. Paani developed a draft program description for an in-kind grant for the FCOE, which will be finalized once the project receives more detailed information on the IT system and requirements from CDES-TU. The department had planned on submitting this list to Paani in mid-March; however, the university stopped working when GON declared that only essential businesses could remain open as a measure to prevent the spread of COVID-19. Paani is aiming to finalize this grant next quarter and be positioned to advertise for a vendor as soon as restrictions are lifted.

Also in Y4 Q3, Paani initiated widespread dissemination of its knowledge products, distributing hard copies of 240 watershed profiles, 660 health reports, 1800 profile briefers and 120 profile posters in all 12 priority watersheds to local government, community groups, grantees and civil society organizations (CSOs). As a result, a number of municipalities and rural municipalities (RMs) elected to share Paani's watershed profiles and health reports in English and Nepali on their websites, including Khandachakra Municipality in Tila Karnali Watershed, and Jayaprithivi Municipality and Chabbispathevera RM in West Seti Watershed, in an effort to make this information more widely available to the public. Paani also distributed a set of knowledge products and studies conducted by Paani to WECS, MOEWRI, DHM and the Department of Irrigation during the PTC meeting on Feb. 18.

STRATEGIC APPROACH 2C: SUPPORT SUSTAINABLE HYDROPOWER

The goal of this strategic approach is to reduce Nepal's vulnerability to climate-induced conflict over water resources and conserve its freshwater ecosystem through environmentally appropriate water management, including sustainably sited and designed dams, and minimizing negative impacts of water diversions.

In Y4 Q3, Paani moved forward on implementing and streamlining activities under this SA. The team completed a series of advisory group meetings and a webinar for three studies under the WWF sub-contract in Kathmandu, including online remote participation by international study team members. The study teams are in continuous discussion to obtain and analyze data. Paani organized and facilitated a series of meetings with the WWF and WECS/Tractebel teams to integrate and synergize Panni data and results into the WECS/Tractebel studies. Continuing its collaboration with WECS, Paani supported WECS to participate, present and highlight Paani's sustainable hydropower initiatives at the International Mahseer Conference in Chiang Mai, Thailand. In addition, Paani grantee IPPAN organized a two-day training on "Dam Breach Analysis and Emergency Preparedness" in Butwal.

Specific progress from Y4 Q3 is reported below.

TASK 2.1.1: ORGANIZE AN INTERNATIONAL SEMINAR ON SUSTAINABLE HYDROPOWER DEVELOPMENT

In Y4 Q3, Paani and the WWF US and WWF Nepal teams conducted advisory group meetings and a webinar as a part of three studies, including a study on energy options assessment for Nepal; high conservation values (HCV) of Nepal's rivers; and system scale planning (SSP) for the Karnali River. The studies bring together a global research team of experts from The Nature Conservancy (TNC), the University of California-Berkeley, Stanford University, and McGill University.

The study team organized the fourth advisory group monthly meeting for the High Conservation Value Rivers (HCVR) Assessment at the Paani office[4]. The team gave a brief introduction of: the SSP project and the HCV component, free-flowing river assessment, and water quality modeling, and shared preliminary results of HCVR for feedback (on presentation style, in particular). The team also discussed whether to include the Bheri Babai diversion and Rani Jamara Kuleria irrigation projects in the free-flowing river analysis, as well as planned infrastructure projects, e.g., potential impacts if all licensed projects are built in Karnali River. The team agreed to expand water quality modelling by including forest area, land use data and sedimentation. Thea team also discussed on the HCVR values to be considered, such as: the range of Mahseer movement (400 to 1400 masl); trekking routes which include the well-known section of the Great Himalayan Trail from Jumla to Phoksundo and Rara; livelihood values, including organic agriculture; social and cultural values, including religious

[4] All meeting notes, presentations, and participant details are stored here and shared with all advisory group members.

sites along the river corridor to extract from topographic maps; and potential displacement of locals due to dam constructions. In addition, the team discussed transferring qualitative and quantitative data through value mapping. Finally, the team agreed to share this information with the Tractebel team so that they can integrate it into their SESA studies.

After receiving guidance from GON and USAID to avoid holding large in-person meetings due to the risk of COVID-19, the study team agreed to hold a webinar on Mar. 13 to share progress rather than the planned workshop[5]. Team Lead Dr. Jeff Opperman gave an overview of the overall SSP activity, and theme leads on HCVR, EOA and SSP presented progress to date. Based on discussions following the presentations, the team suggested coordinating with the Tractebel team to get recent hydropower data, and to consider uses of water (other than hydropower) from reservoirs, e.g., irrigation, flood control and recreational uses. Participants inquired whether the team is considering collecting primary data on socio-cultural and religious aspects and suggested taking into account the seasonality factors for water quality and any available guidance on water quality classes. Participants suggested that the team could reach out to IWMI for socio-economic data for the KRB, which they collected as part of the Digo Jal Bikash (DJB) project. The team also suggested setting up a web-based tool for policy makers and researchers to explore outputs from the studies. As the SSP study is the first of its kind in Nepal, USAID and other development partners such as IFC are showing interest in study results, which can help guide sustainable hydropower development with designated conservation zones.

As a part of these studies, Greenwich Environment and Engineering Consult Private Limited (GEEC) upgraded the fish database. Environment Development Consult Pvt Ltd (FEED) also worked on river classification, which will feed into the HCVR assessment. These will be submitted to WWF early next quarter, at which time WWF will integrate the data into the HCVR assessment.

This quarter, Paani sent a formal letter to WECS requesting exchange of data and information between Paani and the WECS/World Bank/Tractebel consortium, who had mentioned that's Paani's information will be a key resource for their environmental baselines. Since then, WWF shared the HCVR study data with Tractebel and requested data on hydropower from Tractebel. This collaboration also led to Paani supporting WECS to participate, present and highlight Paani's sustainable hydropower initiatives at the 2nd International Mahseer Conference in Chiang Mai, Thailand (more details under SA 1A).

TASK 2.1.3: BUILD HYDROPOWER OPERATOR CAPACITY TO USE HYDRO-METEOROLOGICAL INFORMATION AND MODELLING

In Y4 Q1, IPPAN organized a training on hydro-met data and river basin planning based on a needs assessment conducted in Y2 Q2. Based on this, Paani and IPPAN have prepared a draft training manual on hydro-met data (see here for training materials).

In Y4 Q3, IPPAN organized a two day training on Disaster Risk Management for Hydropower: Dam Breach Analysis and Emergency Preparedness from February 24 – 25 in Butwal, Nepal for 24

[5] All meeting notes, presentations, and participant details are stored here and shared with all advisory group members.

independent power producers, including engineers, heads of power plants, hydropower developers, government officials and academicians (training participant details in the Annex, Exhibit X).

The training provided participants an opportunity to enhance their capacity of understanding disaster risks due to dam breach and develop power plant specific emergency action plans (EAPs). Post training evaluations showed that participants were familiar with emergency action planning for their respective power plants and able to interpret results of dam breach simulation and illustrate impacts during disaster. Training materials can be found here. As a result of the training, some participants have decided to draft EAPs and others will be disseminating this information within their organization. IPPAN will follow up with participants who have shown interest in preparing EAPs and application of dam breach simulations.

In Y4 Q4, Paani will closely work with IPPAN to prepare for and announce trainings dates and topics once lockdown restrictions are lifted. IPPAN informed Paani about these restrictions, impact on the grant timeline and possible extension.

TASK 2.1.4: DEVELOP MONITORING PROCEDURES AND TRACK COMPLIANCE WITH ENVIRONMENTAL AND SOCIAL SAFEGUARDS

In Y4 Q3, Paani began working with NESS STTAs to prepare briefings on the use of the environmental and social assessment and monitoring tool for Karnali provincial ministries and planning commission. In Y4 Q4, Paani will finalize these plans and work with NESS to conduct one interdisciplinary monitoring demonstration to evaluate water quality, ecosystem health, community impacts, disaster risk, and fisheries impacts in Jhimruk watershed. Paani will build local monitoring capacity through water user and conservation groups so that communities can directly conduct monitoring in their areas.

In Y4 Q3, Paani finalized the English version of the CSO Guide for Healthy Rivers, which provides guidance to local users to advocate for sustainable infrastructure (more details under SA 3b).

Paani outreach and knowledge sharing on environmental and social safeguards

In Y4 Q3, NHDP in close coordination with the Secretariat House of Representative (Federal) - Parliamentary committee on Agriculture, Cooperative and Natural Resources Committee, planned a two-day workshop on Opportunities, Challenges and Current Status of the Energy Sector in Nepal. Paani, in collaboration with NHDP, was preparing presentations on sustainable hydropower initiatives and a session on barriers to sustainable hydropower development in Nepal. However, upon request by the parliamentary committee, the training has been postponed until further notice. Paani will follow up with NHDP on this activity next quarter.

TASK 2.2.1: SUPPORT THE NEPALI GOVERNMENT AND IWMI TO PROMOTE E-FLOW ADOPTIONS

In Y4 Q2, IWMI was selected for establishment of Environment Flow (E-Flow) values for the Karnali Basin and Guidelines for its implementation through an RFP and bid procurement. Early in Y4 Q3, Paani realized that it could not issue a sub-contract or purchase order to IWMI since it is a Public International Organization (PIO) as categorized by USAID. IWMI then submitted a proposal for the grant, which is currently under review.

In Y4 Q4, Paani will follow up with key participants from the joint workshops with IFC on e-flows and invite them to take part in the IPPAN capacity building workshop to understand challenges and opportunities on implementing e-flow in select hydropower projects.

STRATEGIC APPROACH 3B: SUPPORT CSOs TO ADVOCATE FOR TRANSPARENT AND ACCOUNTABLE HYDROPOWER DECISION-MAKING

Most of the tasks under this SA are linked to those under SA 2C. Results under the advocacy strategic approach will contribute to Paani's priority focus initiative on sustainable hydropower.

This quarter, Paani held two advisory group meetings on HCVR and a webinar led by the WWF study team with GON, USAID, and other donor/development partners, thereby progressing steadily on its major work under sustainable hydropower (SA 2c). Paani also finalized its Sustainable Hydropower Advocacy Plan, which will encourage GON uptake of the HCVR, energy options and SSP studies, along with other sustainable hydropower development products. In addition, Paani met with the Nepal Bankers Association to begin plans for a training on Nepal's Environmental and Social Risk Management (ESRM) Guidelines for financial institutions. Finally, Paani began translation of the English version of the CSO Guidelines to Healthy Rivers into Nepali and initiated the recruitment process for an Illustrator/Graphic Designer for this key product under the Sustainable Hydropower Advocacy Plan.

TASK 3.2.1: CARRY OUT ANALYSES OF THE ENVIRONMENTAL AND SOCIAL COSTS AND BENEFITS OF HYDROPOWER DEVELOPMENT

Paani and WWF shared preliminary results of the HCVR studies during the fourth advisory committee meeting on Feb. 11. Twenty members from NARC, NRCT, the WB/WECS-Tractebel SESA team, USAID, the GON Fisheries Department, and four international experts (remote) gathered to discuss results and provide feedback to the study team. On Feb. 25, the advisory group met again and agreed on a list of 15 endemic species based on a literature review of research on endemic fish species in Nepal. They also agreed to use the distribution of migratory species across geographic range for HCVR and to prepare a list of short, mid and long-range migratory fish in light of inadequate knowledge on their route and ecology. The group also suggested preparing a fish distribution map based on fish ecology and the temperature gradient of rivers (see more details under SA 2c, Task 2.1.1).

During the PTC meeting on Feb. 18, WECS assured Paani and the rest of the participants that it will incorporate aquatic biodiversity conservation in the upcoming National Water Resource Policy and use information produced by Paani in its River Basin Master Plans and Hydropower Master Plan (more details under SA 2a, Tasks 2.3.4).

In addition, on March 6, Paani and WWF shared data and information on aquatic biodiversity with the WECS/World Bank river basin planning project being implemented by Tractebel. This information will support the project's preparation of a Hydropower Master Plan and Strategic Environmental and Social Assessment (SESA) for the major rivers of Nepal. The Tractebel team said that Paani's data and information will be a key resource for the preparation of an environmental baseline for their assessments. During the meeting, Paani formally requested approval from WECS to exchange data between the project and Tractebel (more details under SA 2c, Task 2.1.1).

Paani and WWF hosted a webinar on Mar. 13 to share initial results of their research on HCVR, energy options and system-scale planning. Participants from USAID, NARC, Nepal Association of Rafting Agents (NARA), World Bank, IFC and other GON, civil society and academic representatives attended in person at the Paani office, while the international study team participated from the WWF office in Washington, D.C. McGill University, Stanford University, and UC – Berkeley also joined remotely. Team Lead Jeff Opperman opened the event with an overview of the

research, which was followed by progress on HCVR, SSP and energy options. Dr. Opperman shared with the participants that all the major outcomes will be packaged into a user-friendly product that people can readily interact with based on their objectives (more details under SA 2c, Task 2.1.1).

TASK 3.2.2: DEVELOP BILINGUAL CIVIL SOCIETY GUIDE TO HEALTHY RIVERS, CLIMATE RESILIENCE, AND SUSTAINABLE HYDROPOWER AND STRENGTHEN CIVIL SOCIETY VOICES

This quarter, Paani contracted a vendor to translate the final English version of the CSO guidelines into Nepali. The translation was supposed to be completed by the end of March; however, the vendor informed Paani that it was unable to work during the GON-initiated lock down period and would request an extension once lock down restrictions were lifted.

Paani advertised for an Illustrator/Graphic Designer in February to create the layout and illustrations for the CSO guidelines. Paani shortlisted and interviewed two candidates in March and will complete the recruitment process next quarter.

This quarter, STTA Hydropower Advocacy Specialist Marjo Curgus developed a SOW for a local advocacy trainer and training curriculum for the CSO guidelines as part of Paani's Advocacy Plan for Sustainable Hydropower, which was finalized in March. Paani will advertise for the local trainer once the stop work order is lifted and Paani is able to hold events again.

TASK 3.2.3: DEVELOP NORMS AND STANDARDS FOR SUSTAINABLE HYDROPOWER DEVELOPMENT

In January, Paani met with the Nepal Bankers Association (NBA) to discuss their needs for a planned training on Nepal's Environmental and Social Risk Management (ESRM) Guidelines for financial institutions. NBA agreed to reach out to all Commercial Class A banks for their input, which helped to inform Paani's SOW for an international trainer, as well as the training agenda. Paani also reached out to IFC, who informed Paani that it held an ESRM training for banks in 2018 and are now planning to support 1-2 local training institutions with a curriculum/TOT so that they can have a pool of local/international trainers to serve the banks. Over the next 18 months, IFC will provide 5 trainings on ESRM (general and sector specific – starting with hydropower) for banks organized by NBA with technical support from IFC. IFC shared its training presentation from 2018 and offered to keep Paani posted on future trainings. NBA informed Paani that although banks had received training previously from IFC, they wanted a training focused more on the lender's perspective rather than the environmental regulator perspective (IFC's approach). In March, Paani identified potential international STTA candidates and set up an interview with the top choice. However, in light of the stop work order, Paani decided to conduct the interview once restrictions are lifted and the training can be planned with NBA. Paani will also develop a SOW for a Nepali co-facilitator to support the training.

Also this quarter, Paani finalized its Advocacy Plan for Sustainable Hydropower to raise awareness of CSOs and user groups on their rights in relation to hydropower development, and to increase their capacity to engage and advocate on behalf of those rights to the appropriate bodies (i.e. government or hydro-operators). The advocacy plan will guide dissemination of results from the studies under SSP within different forums to inform government policies on hydropower development. At a minimum, the sustainable hydropower "package" will include: three SSP reports; CSO guidelines; sustainable hydropower monitoring checklist; and e-flow methodology best practices.

As mentioned last quarter, Paani realized that a group of partners would need to be brought together to form a Nepal Sustainable Hydropower Advocacy Alliance (NSHAA) to bring about substantial change. This quarter, Paani began the process of creating this alliance; first, by developing and publishing an Expression of Interest (EOI) for parties interested in participating in a co-creation workshop to form the NSHAA. Paani envisions that the alliance would implement the sustainable hydropower advocacy plan and potentially support some key Paani tasks, such as organizing the International Hydropower Seminar and providing awards for developers implementing sustainable hydropower practices. Paani received 14 inquiries about the EOI but only three applications. After collecting feedback on why some organizations did not apply (e.g., not enough time, lack of understanding of purpose of the workshop, etc.), Paani revised the EOI and prepared to re-publish it, along with better targeting of potential alliance partners. However, this process was halted due to the stop work order issued by USAID on March 21. Paani plans to release the revised EOI once the stop work order is lifted and hold the co-creation workshop with selected applicants, ideally next quarter.

TASK 3.2.4: USE GRANTS TO BUILD CSO TECHNICAL, ORGANIZATIONAL AND ADVOCACY CAPACITY

As part of the Advocacy Plan for Sustainable Hydropower, Ms. Curgus developed an advocacy training curriculum to enhance the capacity of grantees to support/implement a variety of advocacy activities related to sustainable hydropower, roads and fisheries. The training curriculum builds advocacy skills that will help leverage messages on sustainable hydropower and the dissemination/uptake of the hydropower package. Paani is exploring holding this training in conjunction with the planned training for champions identified through the PEA (see SA 3a, Task 3.1.1), some of whom are advocates at the local and provincial levels. The training will use material from the CSO guidelines and likely involve peer-to-peer training so that champions/grantees with stronger skills in advocacy can share examples of their successes. Once the stop work order is lifted, Paani will schedule the training.

In addition, Paani is supporting IPPAN through a grant to enhance the use of hydro-met data; provide training to hydropower developers on risk analysis; train developers to implement procedures for emergency response; and build capacities of developers to design, build and operate hydropower resilient to natural disasters as well as the risks posed by climate change. The overall objective is to build capacities of developers for sustainable practices in environmental safeguards and create a conducive environment for policy improvements and create a friendly environment for prospective IPPs. On Feb. 24-25, IPPAN organized a two day training on Disaster Risk Management for Hydropower: Dam Breach Analysis and Emergency Preparedness in Butwal, Nepal for 24 representatives of independent power producers, private hydropower companies, consulting companies, and government institutions.

Also, this quarter, Paani held a series of meetings with Mr. Bhim Sharma, Head of the Kalawaati Nature Art Council, to plan for the 2nd Nature Art Festival, which would engage artists to paint on themes related to water and be held on World Water Day on Mar. 22. Paani had agreed to provide approximately $10,000 in funding for the event, supporting accommodation, transportation and food for an estimated 30 Nepali and international artists. In February, the Paani field team facilitated meetings between Mr. Sharma and the local government in Bardia and the provincial government in Surkhet to attempt to secure more funding. As a result, Mr. Sharma received a verbal commitment for support from the local government in Bardia and had confirmed the attendance of artists from Nepal, India, Bangladesh, and China. However, as restrictions were put in place due to COVID-19,

the event had to be called off. Mr. Sharma will contact Paani once the lock down is lifted to see if it is still possible to hold the event.

STRATEGIC APPROACH 3A: STRENGTHEN POLICY AND PLANNING FOR INTEGRATED WATER RESOURCE MANAGEMENT (IWRM)

The goal of this strategic approach is to increase the capacity of the GON and sub-watershed/basin level actors to integrate climate change and biodiversity into policy and basin level planning.

Paani has made steady progress towards the desired results and focused initiatives that fall under this SA. For example, Paani provided technical assistance to 14 municipalities and RMs in Lower Karnali, Tila Karnali and West Seti Watershed to develop Aquatic Animal and Aquatic Biodiversity Conservation Bills (AABCBs). Five out of 14 local governments in Lower Karnali and West Seti Watershed passed bills from their respective municipal and village assemblies in Y4 Q3. Other municipalities and RMs had to postpone their assemblies due to COVID-19 related restrictions and will likely enact the Aquatic Animal and Aquatic Biodiversity Conservation Acts (AABCAs) once they can hold them again. Out of 64 local government units in the three river basins, 24 have enacted and are implementing the AABCA to date in the Karnali and Rapti River Basins.

Paani, through its partner IUCN, continues the development of the Rara Lake Ramsar Site Management Plan. During the quarter, IUCN organized the second meeting of the project technical committee (PTC) chaired by Mr. Gopal Prakash Bhattarai, Director General, of the Department of National Parks and Wildlife Conservation (DNPWC). The PTC decided to conduct the second field visit to Rara Lake from March 1–6 to revise the log frame based on feedback from the PTC members and the expected site/quantity/time and budget specific plan.

In addition, the Senior Environmental Policy and Law Expert (Sr. EPLE) reviewed and revised the EFRC Guidelines to address input from 15 local governments collected in 6 workshops organized by SWN in three river basins. Six municipalities and RMs passed the Guidelines. Eight local governments have allocated Nrs. 5.76 million rupees for construction of environment friendly rural roads in their jurisdiction (more details under SA 1c).

Paani continued to support Karnali Province to revise draft legislation on aquatic animal conservation. The provincial Ministers for the Ministry of Land Management, Agriculture and Cooperatives (MoLMAC), Ministry of Internal Affairs and Law, and Ministry of Industry, Tourism, Forest and Environment (MoITFE) and their Law Officers reviewed sections of the AABCB, which they revised with Paani in a meeting on Mar. 10. The Bill is now more consistent with the Province's Environment Protection Bill.

Finally, the Political Economy Analysis was submitted to USAID (available here).

Progress over the quarter is as follows[6]:

[6] Note that *Task 3.1.2 Develop an issues and opportunities white paper* was dropped with the justification explained in Y4 Q1. Sub task to Support MoEWRI on Dispute Resolution Mechanism under Task 3.13. was completed in Y4 Q1 and therefore not reported here.

TASK 3.1.1 IDENTIFY CHAMPIONS FOR FRESHWATER POLICY CHANGE

In Y4 Q3, Paani engaged champions identified through the Political Economy Assessment (PEA) in the following activities:

- Selected champions of Jhimruk Khola and Middle West Rapti participated in the ToT on river stretch co-management and post-harvest fisheries in February.
- Champions of West Seti, Middle Karnali and Jhimruk watersheds were engaged in the development of EFRC rural road guidelines being developed by SWN.
- Some of the champions from Lower Karnali, Tila Karnali and West Seti Watershed participated in community consultation meetings and consultation workshops on the AABCB.

Paani also developed a draft Session Plan for a champions' capacity development training, which will be organized in Y4 Q4.

TASK 3.1.3 PROVIDE SUPPORT TO WECS, NATIONAL, PROVINCIAL, AND LOCAL GOVERNMENTS ON POLICIES, LAWS, AND PLANS

SUPPORT WECS TO ORGANIZE A CONSULTATION WORKSHOP

Paani developed the agenda for two interaction programs on the draft Water Resources Bill, draft Water Resources Policy, and conflict resolution mechanisms of the Bills as requested by WECS in Y4 Q1 to be organized in Surkhet and Dhangadi for members of the State Assembly and Agriculture, Cooperatives and Natural Resources Committee of the House of Representatives. Although WECS recently revised the draft of the Water Resources Policy and submitted it to the Minister for Energy, Water Resources and Irrigation (MOEWRI), WECS does not appear to be prioritizing these interaction programs at this time.

TECHNICAL SUPPORT TO FAR WEST PROVINCE

Paani re-approached the Secretary of the Far West Province's Ministry of Industry, Tourism, Forest and Environment (MOITFE) and offered technical support to draft an AABCB, as it was included in the Ministry's policy and program for fiscal year 2019/2020 as suggested by Paani. However, the Secretary is not showing interested in developing the Bill at this time. Paani will approach him again in Y4 Q4 to ascertain his level of interest then.

TECHNICAL INPUT TO LOCAL GOVERNMENTS TO DEVELOP AABC BILL

Paani received requests from and provided technical support to local governments in Lower Karnali, Tila Karnali and West Seti Watersheds to develop and finalize the AABCB. With the support of BAFER Nepal, Paani organized community consultation meetings with members of community, fishers, women's groups, dolphin conservation group and CFUGs. The purpose of community consultation was to collect local peoples' suggestions on what provisions they would like to be included in the Bill that would enable them to conserve, manage, sustainably use and equitably share the benefits arising from the utilization of fish. This quarter, Paani also provided technical support to local governments in Tila Karnali and West Seti Watershed to develop the AABCB. Paani followed the same process to develop and finalize the Bill in all three watersheds. First, Paani organized a consultation workshop on the Bill in which representatives of local government and CSOs

participated. Paani presented different provisions of the Bill and provided participants the opportunity to review and provide comments on it. The Participants suggested to include, *inter alia*;

- Fishing should be prohibited during fish spawning months.
- Dumping sites must be constructed at least 500 meters away from the bank of any river.
- As the Seti River is not as big as the Karnali River, e-flow should be at least 30 percent.
- The local government should conduct mandatory monitoring of CAACGs' work each quarter
- At least 30% e-flow should be required for the Tila River's tributaries and at least 25% for the Tila River.
- Formation of an expert committee to review Initial Environment Examinations (IEE) and Environment Mitigation Plans (EMP) and provide suggestions to the local government on the content and quality of the report so that they can approve or reject the report(s).

Paani revised the Bill incorporating these suggestions and provided the revised version to all the local governments for tabling in the Assembly and enactment. Tikapur Municipality's Assembly in Lower Karnali Watershed enacted the AABCA on Jan. 13. Similarly, Talkot RM, Jayaprithivi Municipality, Chhabispathivera RM and Kedarsiyu RM in West Seti watershed enacted the AABCA on Feb. 22, Feb. 24, Feb. 26 and Mar. 11, respectively. The local governments in Tila Karnali Watershed will enact the AABCA immediately after the COVID-19 crisis is over by convening the village and municipal assembly.

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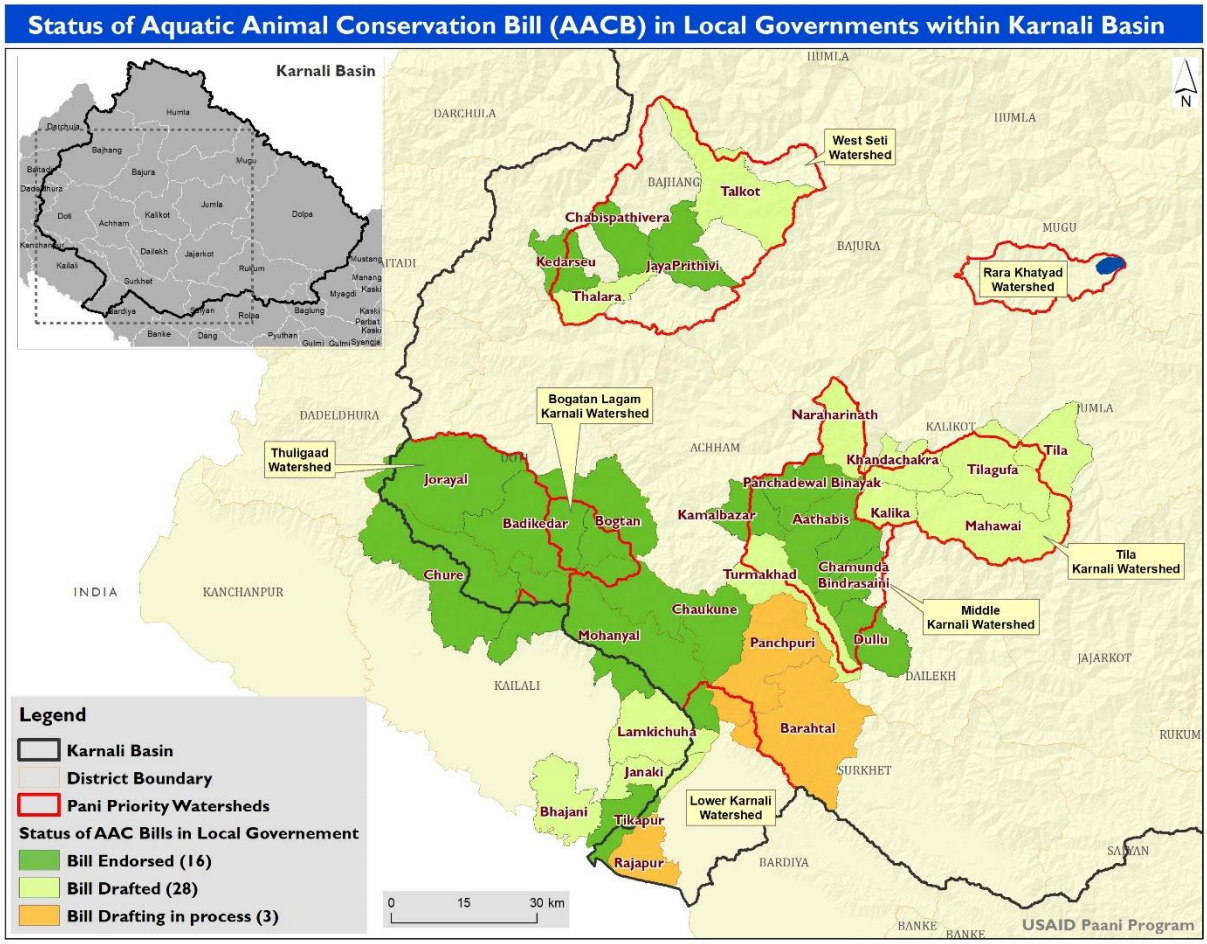


Figure 8: Status of AABCB in Karnali River Basin

Paani had provided technical support to different local governments in Jhimruk Khola Watershed to develop and finalize the AABCB in June 2019. Those local governments passed the Bill in June/July 2019, except for Jhimruk RM and Pyuthan Municipality. This quarter, Jhimruk RM enacted the AABCA, and Pyuthan Municipality passed the Bill in its Executive Council. It will pass the Bill from the Municipal Assembly when it meets in late April or May.

RuDeC Nepal provided the AABCB that Paani had developed to Choukune RM, Bogatan Lagam Watershed, which was passed this quarter from its village assembly. This is an unintended outcome of Paani's work. The Chairperson of Choukune RM has since approached Paani to request review and revision of the Bill, which Paani will conduct in April.

TRAINING ON DIFFERENT ELEMENTS OF PROVINCIAL OR NATIONAL LAWS

Since Karnali Province's State Assembly has yet to enact the AABCA, Paani could not organize the training program for local government, fishers, and CSOs on different elements of the Act this quarter. If the Assembly enacts the Act by the middle of May, Paani will hold the training in Y4 Q4.

DEVELOP STATUTES TO REGISTER CAACGS

In Y4 Q3, the Sr. EPLE reviewed and revised the draft CAACG statutes for Jhimruk Khola, Lower Karnali, Middle Karnali and Thuligaad Watershed. Altogether, 16 CAACGs have been registered with respective local governments in accordance with the provisions of the AABCA in Thuligaad (11), Lower Karnali (2) and Middle Rapti (3) Watershed. River stretches were handed over to them for management this quarter. Now, these CAACGs have legal personhood with the right and responsibility to conserve, manage, sustainably use, and equitably share the benefits arising from the sustainable use of fish and river stretches. Paani grantees in Bogatan Lagam, Jhimruk Khola and Middle Karnali Watershed have also revised the statutes. They will register the CAACGs at the respective municipality once the COVID-19 crisis is over and GON lifts the lockdown. Paani anticipates that 80 CAACGs will be registered, and river stretches handed over to them, by the end of Y4 Q4.

TRAINING ON LOCAL LAWS

MRDCC organized 5 orientation programs on the AABCA this quarter for 79 people (61 men, 18 women) to facilitate better understanding of the provisions of the AABCA among members of local government, CAACGs, IWMP members and office bearers. The orientation program helped to facilitate smooth implementation of the Act. Following the program, Naubahini RM issued a notice prohibiting fishing during the breeding season.

Representatives and staff of local governments in Lower Karnali, Tila Karnali and West Seti Watershed requested a training on the AABCA. Local governments in these watersheds have already enacted the Act, and others will enact it when they hold the Assembly in late May. They require a clear understanding and appreciation for the powers and functions of the local government, the actions they need to take for effective implementation of the Act, and conservation and sustainable use of rivers and lakes and aquatic biodiversity. Effective implementation of the Act hinges on the training and understanding of the law.

FORMULATE WETLAND MANAGEMENT PLAN OF RARA LAKE - A RAMSAR SITE

The IUCN expert team analyzed and synthesized the data collected during the field assessment from Nov. 5 -14, 2019. The team also reviewed literature to identify problems, gaps, challenges and issues at the Rara Lake Ramsar Site. The team used key tools such as the Ramsar Management Effectiveness Tracking Tool (R-METT), Capacity Building Need Assessment (CBNA) tool and water quality assessment to identify and assess the threats, strengths and the status of the Ramsar site.

The expert team developed a draft log-frame, including the long-term and operational objectives to manage existing threats, actions/activities based on the analysis of information and data, and evaluation of key features and constraints/threats of Rara Lake. The draft log frame is divided into four themes: Ecological, Socio-economic, Governance, and Knowledge & Communication. IUCN collected comments and feedback on the draft log frame from the DNPWC, the Nepal Tourism Board (NTB), and others, which were reviewed and incorporated into the log frame. The team had planned to conduct field consultations with the local community, Rara National Park officials, local government unit, and provincial government to discuss the log frame, objectives and activities, and to

prioritize the activities, including specific locations. Unfortunately, due to bad weather and then COVID-19, the program was halted.

The second PTC meeting took place on Feb. 23. Members of the PTC, including the Director General and Deputy Director General, attended the meeting. IUCN briefed them on progress to date, presented the log frame, and proposed a tentative date for advertising the notice for the IIE and a tentative date for the consultant team's visit to conduct the IEE of the Rara Ramsar Site Management Plan. The following are the PTC's decision:

- Conduct the second field visit to Rara Lake from Mar. 1– 6,
- Review the new Environment Protection Act and Regulations 2076,
- Revise the log frame by incorporating suggestions and addressing the comments made by the PTC members, and
- Start the IEE process immediately after the draft of Rara Ramsar Site Management Plan is ready.

PROMOTION OF ENVIRONMENT FRIENDLY RURAL ROADS CONSTRUCTION

SWN organized consultation workshops on the EFRC Guidelines in Jhimruk Khola, Middle Karnali and West Rapti Watersheds from last week of Dec. 2019 to the third week of Jan. 2020. The objectives of these workshops were to present section wise provisions of the EFRC Guidelines among the representatives, staff and technical team of local governments, champions and members of user groups, and to collect their feedback on the provisions for revision (more details under SA 1c).

STATUS OF KARNALI PROVINCE AQUATIC ANIMAL CONSERVATION BILL

Paani met with the Minister for MoLMAC, Karnali Province on Mar. 10 to follow up on the AABCB that the team had revised to make more consistent with the Karnali Province's Environment Protection Bill. Following this, Paani met with the Ministers for MoLMAC, MoITFE, and the Ministry of Internal Affairs and their Law Officers. The MoLMAC Minister asked them to review and approve the Bill so that they can forward it to the Chief Minister's Office. The two Law Officers raised questions, such as whether a province can develop the Bill when there is no legislation at the Federal level, and whether MoLMAC has the power to develop the Bill. Paani informed them that the project and MoLMAC had developed the Bill in a participatory manner in consultation with local government representatives and officials, fishers, and NGOs in 5 out of 10 districts of Karnali Province. Paani also explained that any province has the legal power to enact AABCA. The group then reviewed and revised the Bill together. Paani also met with the Under Secretary (Law), Ministry of Internal Affairs and Law and briefed him on the process of development of the Bill. He assured the team that he would ensure that the content and the quality of the Bill is maintained.

STRATEGIC APPROACH 4A: LEARN AND DISCOVER (GENERATE KNOWLEDGE) THROUGH A RESEARCH AGENDA THAT INFORMS SAs UNDER IRs 1 AND 2

The goal of this strategic approach is to fill gaps in knowledge necessary for implementation of river stretch co-management initiatives, capacity building packages (SA 4D), e-flow calculator (SA 2C), system scale planning, declaration of river stretch with high conservation values, drafting national fishery policies, fishery conservation framework and market strategies including basin-level planning. This cross-cutting approach underpins all the other Paani strategies and serves as an organizing framework for developing an annual research agenda that is carried out under the different Strategic Approaches.

This quarter, Paani, through BCN, made significant progress in generating data and knowledge related to migration of bird species; feeding and foraging behavior; and associated threats. A total of 2,415 winter birds belong to 15 orders and 39 families, each ranked against IUCN's threatened category. BCN shared its initial findings with IUCN, which is developing the Ramsar site management plan for Rara Lake with Paani's support. BCN also drafted a training manual to train local bird watchers and nature guides, who can also engage in future research. Under the WWF sub-contract, Paani also held advisory group meetings and an expert consultation workshop/webinar to further elaborate and share initial findings on the HCVR, EOA and SSP studies.

An initial assessment conducted through RHF/CDES revealed that a river stretch of West Seti Watershed, a potential candidate for fish sanctuary declaration, faces threats from disposal of urban waste, agro-chemicals and off-season floods that carry toxic vegetation and waste. Knowledge gathered in the assessment will inform the drafting of a protocol for declaring fish sanctuaries, which will then be validated with key stakeholders.

Paani, through different grantees (MRDCC in Jhimruk, DNPWC in Middle Rapti, SEWACC in Middle Karnali, Sonaha Samaj in Lower Karnali), has been piloting river stretch co-management. CF/IUCN has been piloting water governance in the Rapti River Basin. Conceptually, these frameworks are similar, but they differ in terms of operational units (river stretch vs. river basin), operational issues (migratory fish, water allocation and climatic hazards), implementation steps, and governing structure (local vs. basin/province offices). With Paani's support, CF/IUCN and ISET Nepal will be coordinating on the creation on a harmonized training manual, which will encourage cooperation of governing bodies formed at the river stretch and river basin levels. The experience and lessons learned through piloting of these frameworks will inform planning process for river basin offices, watershed management offices, and WECS's IRBM planning.

Paani is finalizing briefers based on completed reports, including: fisheries conservation framework, political economy analysis, gravel mining and ecotourism, for wider distribution, in particular to policy makers at all levels of government. The full versions of the reports are also being shared with government agencies and beneficiaries.

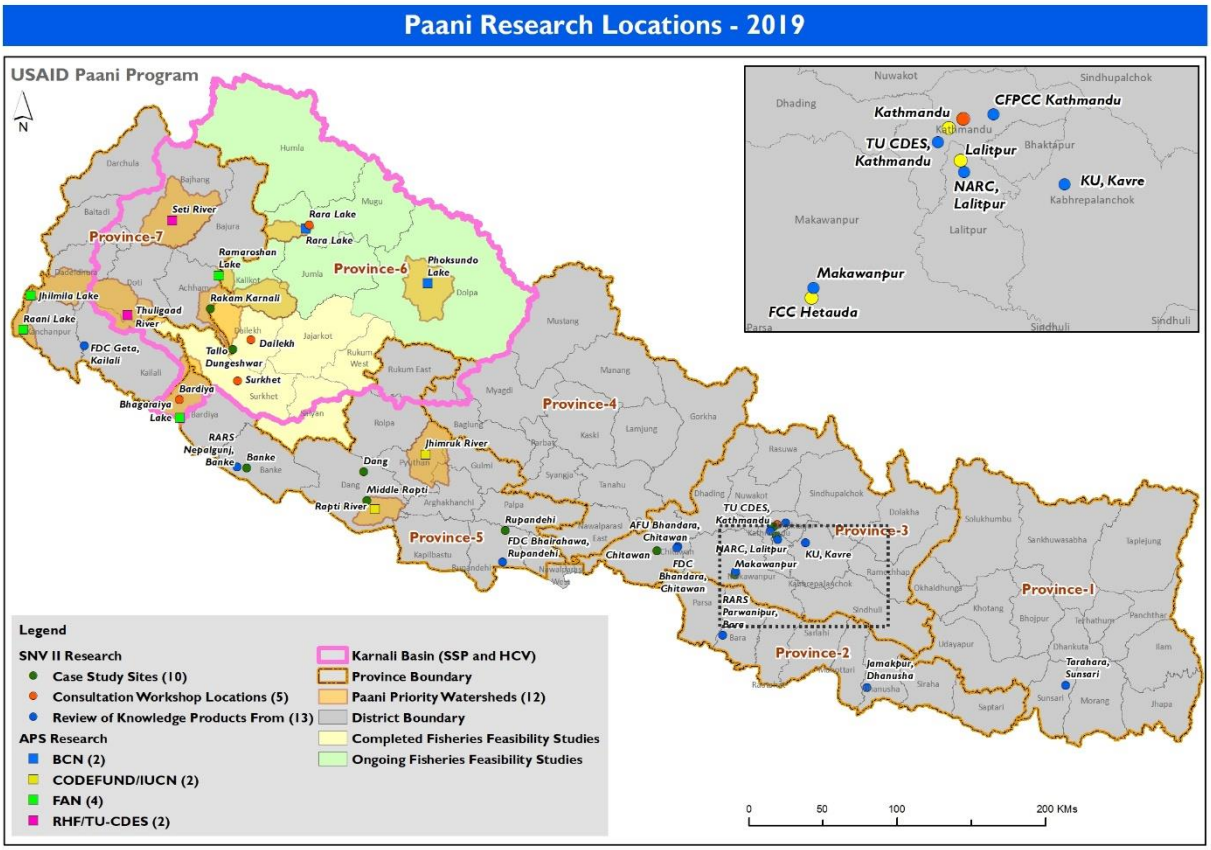


Figure 9: Research Activities within Paani Watersheds

RESEARCH HIGHLIGHTS

As Paani research cuts across other SAs, progress is presented below by topic with reference to the relevant SAs and Tasks.

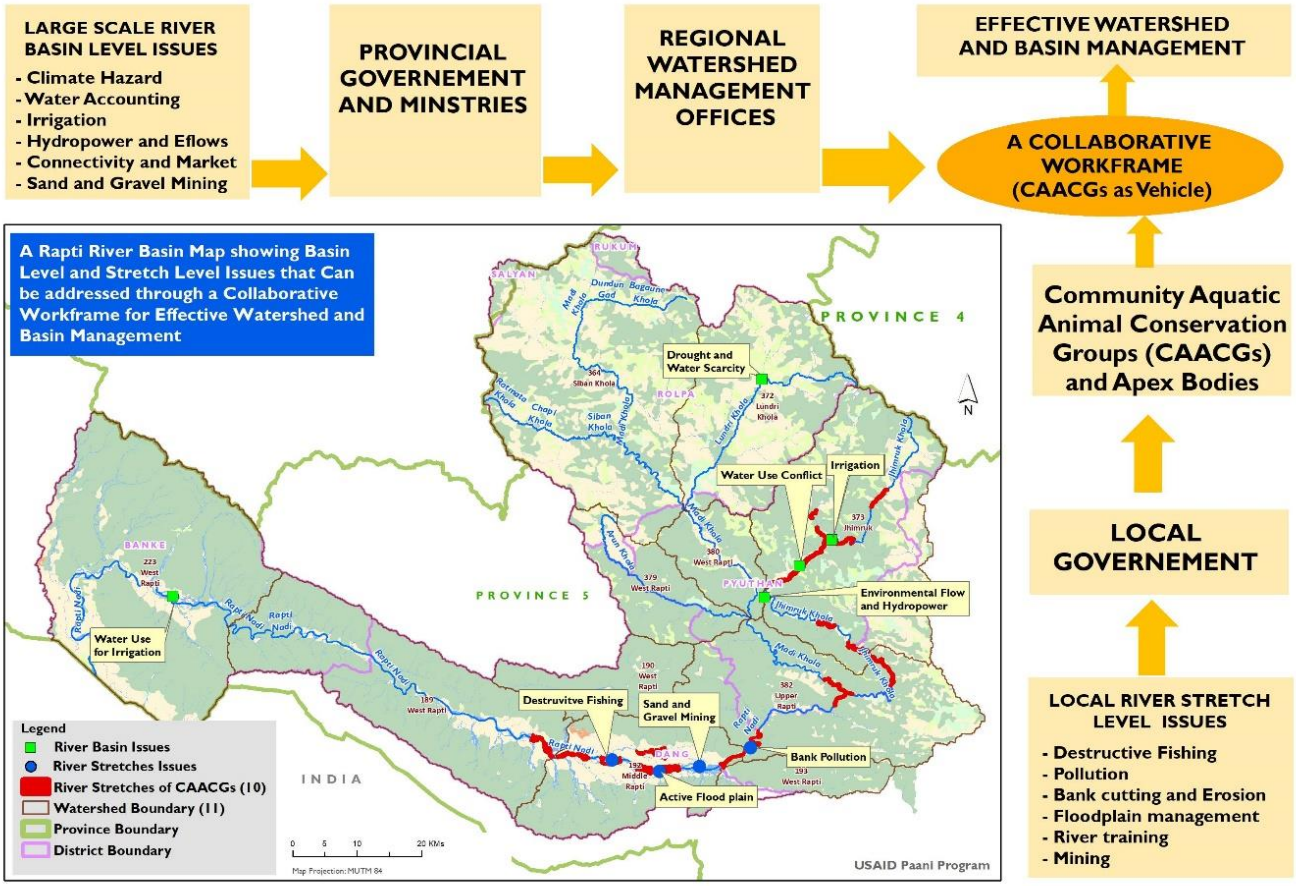
RESEARCH TO INFORM RIVER STRETCH CO-MANAGEMENT

This quarter, CF/IUCN selected Naubahini and Gadawa Municipalities (representing upstream and downstream, respectively) to pilot the Integrated Lake Basin Management (ILBM) Model with special focus on water governance. CF/IUCN is working closely with the provincial ministry and local governments, including the Watershed Management Office and Division of Forests. ILBM intends to govern at the basin scale, while much of Paani's other governance activities work at the river stretch scale. The team will engage local natural resource management (NRM) groups identified during the water governance piloting process. The experience and lessons learned though the implementation of these models will guide the remaining activities, which include:

i) Identifying issues in upstream and downstream municipalities related to catchment management and freshwater biodiversity, water governance, water allocation and gravel mining;
ii) Identifying and mapping specific issues against the ILBM framework
iii) Defining and distinguishing common issues at both the river stretch and basin level

iv) Polishing a governance structure considering the mandate of agencies per the respective scale, scope and intensity of issue for each model

v) Devising a mechanism that allows for the basin scale framework to also provide guidance and support for implementation of issues at the river stretch scale. The grantee should collect and structure information to harmonize the model per the framework below.



CF/IUCN has submitted a training manual designed to enhance the capacity of local governments, government departments, divisions, civic society organizations and CAACGs on basin level management with particular reference to water governance in Rapti River Basin. Under the same task, ISET Nepal and CF have been developing a training module and training manuals for capacity building of multiple stakeholders directly engaged in piloting the governance model.

TASK 4.1.2 CONDUCT FRESHWATER BIODIVERSITY INVENTORIES

This quarter, BCN carried out a winter season ornithological survey in the Lake Rara wetland site, counting 104 species, 15 orders and 39 families. Of the 104 bird species monitored in total, there were 16 waterfowls, 13 wetland and 75 forest birds. Common Coot (*Fulicia atra*) accounted for the highest count (489) of waterfowls, while the plain mountain finch (*Leucosticte nemoricola*) accounted for the highest count (420) among the observed forest birds (Figure 10). Among the 104 bird species listed, almost all birds (102 species) fall under the category of "Least Concern" in the IUCN Red list of Threatened Species. The common pochard (Aythya ferina) is listed as "vulnerable" and the bearded vulture (Gypaetus barbatus) as "near threatened." The full list is available in Annex, Exhibit A5.

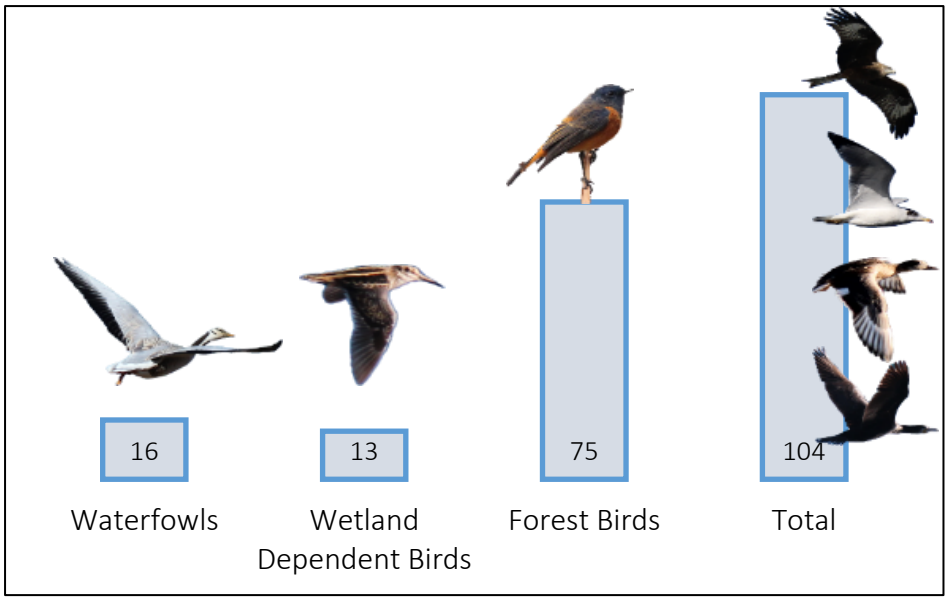
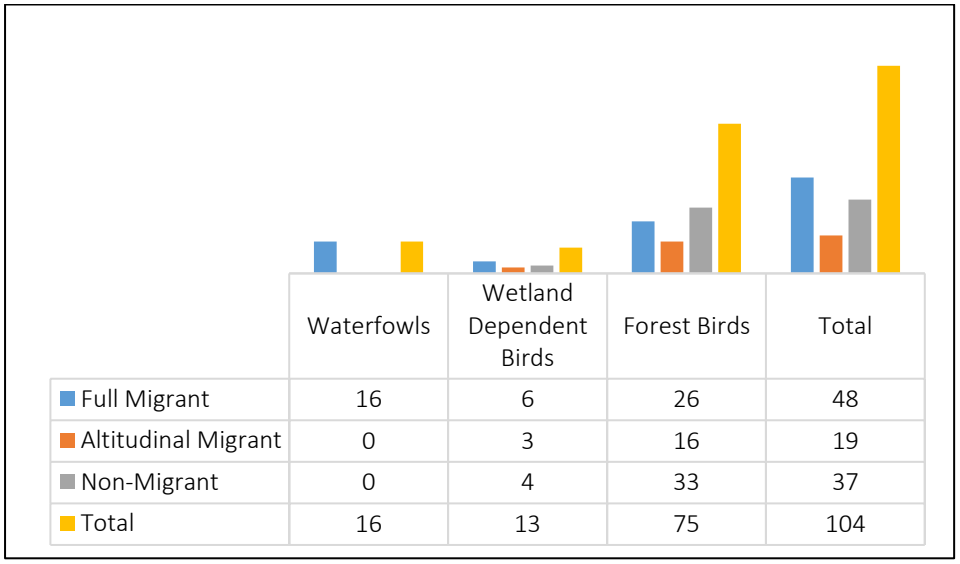


Figure 10: Bird species observed in Rara Lake

Among the observed forest bird species, the majority are common and widespread resident birds. However, raptor species are winter visitors and passage migrants. Of the raptors, the Peregrine Falcon (Falco peregrinus) is generally uncommon.



	Waterfowls	Wetland Dependent Birds	Forest Birds	Total
Full Migrant	16	6	26	48
Altitudinal Migrant	0	3	16	19
Non-Migrant	0	4	33	37
Total	16	13	75	104

Figure 11: Birds grouped based on their migratory behavior

TASK 4.1.3 IDENTIFY AREAS FOR FRESHWATER FISH OR BIODIVERSITY SANCTUARIES OR PROTECTED AREAS

Paani, through Resource Himalaya Foundation (RHF), has initiated development of a protocol for the declaration of freshwater biodiversity conservation areas or fish sanctuaries. The protocol is based on international practices, GON guidelines for declaration of conservation areas, and a review of the

IUCN standard format. Next quarter, RHF will take the draft protocol to the field for consultation and validation, including in a watershed where Paani has identified fish sanctuary areas for declaration. The grantee will do field consultations in West Seti, Rakam Karnali and Thuligaad Watershed of the Karnali River Basin. RHF has begun to conduct groundwork that can feed into the standard protocol, e.g., socio-ecological profiles and health reports, mapping of fish spawning stretches, fishing zones, endorsement of AABCAs, and formation of CAACGs.

In Kathmandu this quarter, RHF formed a project steering committee (PSC) including Paani representatives, consultants and six field research assistants. The PSC meeting approved the RHF action plan, methodology and tools this quarter. RHF also held an inception workshop to inform stakeholders about the project scope, get feedback and establish rapport locally. An interdisciplinary team conducted a reconnaissance survey to identify factors shaping freshwater biodiversity and river health while considering potential sources of pollution from urban waste, upstream floods that carries herbal plants, waste released by Yarsha collectors, and destructive and over fishing practices. The project team also visited 13 possible sampling sites, covering construction, tributaries, dumping, sewage and mining.

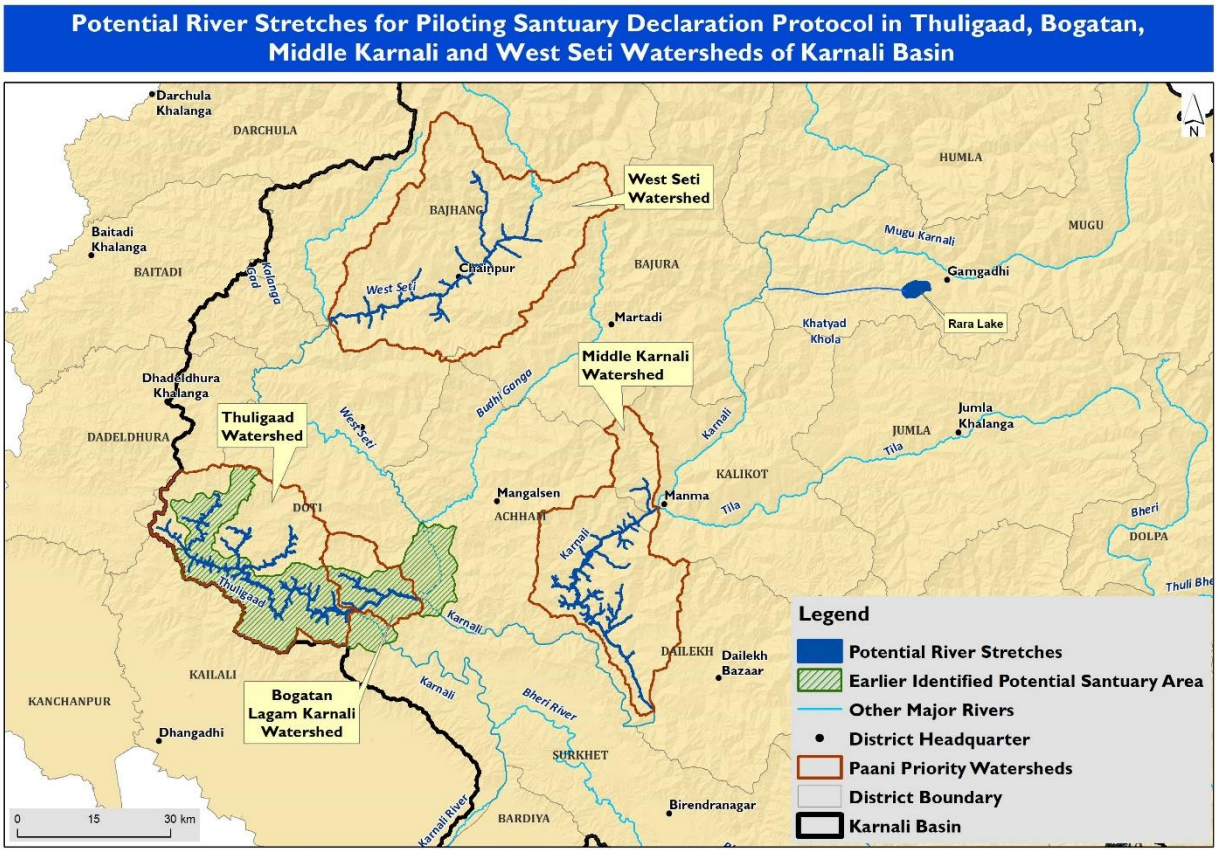


Figure 12: Potential River Stretches for Piloting Sanctuary Areas

TASK 4.1.4 CONDUCT ECOLOGICAL STUDIES TO INFORM INFRASTRUCTURE DEVELOPMENT

Paani will continue to consolidate results derived from the on-going desk review, case studies and stakeholder consultation related to the impacts of infrastructure, including rural roads, hydropower,

fish ladder and hydro dams, in particular. The lessons drawn from ongoing research on HCVR and SSP with WWF will be integrated into forthcoming work on fish ladders. In Y4 Q4, a Paani selected grantee or vendor will design a training manual to train local government and other stakeholders directly connected with aggregate mining. The overall outcomes and learning of this research will lay the foundation for developing a syllabus to integrate into the existing Master of Engineering program for hydropower by a Nepali university, especially the Institute of Engineering - TU.
Knowledge products developed will be made accessible to the public through the Freshwater Center of Excellence (see SA 2b).

TASK 4.1.5 ASSES IMPACTS OF NON-NATIVE FISH SPECIES ON FRESHWATER BIODIVERSITY

This quarter, Paani revised the draft review document on invasive management, and data and lessons learned through the workshop on HCVR. The invasive review report (described in detail under SA 1d) identified some major knowledge gaps in Nepal on:

- extent and distribution of invasive species across water bodies,
- impact of invasives on native fish diversity across water bodies
- extent of spread of exotic and or invasive fish species introduced from bordering India, which pose threats if they somehow enter the freshwater system, and
- categorization/definition of invasive species.

In light of these pressing issues, Paani in Y4 Q4, proposes the following actions:

- Review and analyze the HCVR consultant reports and track exotic and invasive fish species to enrich the review paper
- Carry out case studies in specific areas where invasive species have greater impacts
- Organize a consultation workshop to finalize the review document and disseminate the findings and learning through workshops
- Develop briefers for wider dissemination supporting evidence based advocacy and to inform policy makers
- Integrate Paani's learning and research findings on invasive management into capacity building packages developed on NRM modules

TASK 4.1.6 MAP WATER RESOURCES AND AVAILABILITY AND IDENTIFY SYSTEMS REQUIRING REHABILITATION, BOTH ECOLOGICALLY AND FOR HUMAN USE AND TASK 4.1.8 CONDUCT AN ANALYSIS OF GENDER AND CASTE-BASED ACCESS TO AND USE OF WATER RESOURCES

Women Act designed a training manual targeting communities, local governments CAACGs and CSOs with sections covering the impacts of drying water resources on humans as well as the impacts of decreased water discharge on fish stock. Based on desk review and lessons learned from the training program, Women Act will support select CAACGs to develop and/or revise their action plans and develop proposals to draw resources from the local government. CAACGs can submit proposals to Municipalities [e.g. Aathabisa] that have allocated budgets to support CAACG (more details in the GESI section).

TASK 4.1.9 CONDUCT OUTREACH TO COMMUNITIES

Paani is using information generated under SAs 1a and 4a to develop knowledge products. Both printed and electronic copies of products such as watershed profiles, health reports, and research briefers were distributed to stakeholders in Paani target areas. (see Communications section for more details). Paani is tracking how these products are being used.

KU, for example, is utilizing results in university level courses, and ICIMOD in a training program for midlevel technical experts of different disciplines. Paani also shared its work at the 2nd International Mahseer Conference in Chang Mai, Thailand during the quarter. In some cases, Paani's knowledge products have also either influenced policy or contributed to prioritization of freshwater biodiversity conservation and livelihood related plans. Some recommendations from the eco-tourism report were integrated into the Karnali Province Tourism Master plan, e.g., visitors' survey. As recommended in Paani-supported fish feasibility studies, the province has also allocated funds to aquaculture and to establish a fish resource center in Jajarkot District. The engagement of local government and potential users in the process of developing knowledge products also influences policy; as a result, Paani has received requests from various local governments to provide technical assistance in drafting the AABCB.

Paani is preparing short briefers of research reports, such as the Fisheries Conservation and Market Development Framework, the Ecotourism, the Gravel Mining and the Political Economic Analysis Reports, which will be distributed in Y4 Q4.

Paani is also in discussion with CDES-TU on setting up a Freshwater Center of Excellence next quarter (See SA 2a and the Communications Section for more details).

STRATEGIC APPROACH 4B: SUPPORT CAPACITY BUILDING, LEARNING, AND KNOWLEDGE SHARING IN ACADEMIC AND OTHER LEARNING SPACES

The goal of this strategic approach is to build local capacity for watershed and basin management by building the capacity of Nepal's educational institutions (schools, universities), government agencies, non-governmental organizations, community groups, and research institutions to integrate academic/non-academic curricula and programming. The aim is to develop future career professionals and community advocates in the Karnali, Mahakali, and Rapti River Basins who are committed to protecting Nepal's water resources, biodiversity, and climate resilience.

Throughout the quarter, Paani made progress towards the desired results for this strategic approach. Paani continued its support for local grant partners to build the capacity of communities on climate resilience, disaster reduction, leadership building, mainstreaming GESI in freshwater biodiversity conservation and river resource management, and development of homestays as an alternate livelihood option. In addition, ISET-N completed its first training of trainers (TOT) on river stretch co-management and post-harvest fisheries for Paani's field staff and local grant partners in Dang, Middle Rapti Watershed. This enabled participants to deliver quality training for local authorities and CAACGs. Paani also held discussions with TU, agreeing to support the integration of a four-credit course on the "Design of fish passage for hydropower project development in Nepal" in its master's program in Hydropower Engineering at the Institute of Engineering.

Detailed progress from Y4 Q3 is reported below.

TASK 4.2.3: ENGAGE YOUTH ON FRESHWATER BIODIVERSITY AND CLIMATE CHANGE

In Y4 Q3, following their participation in a Paani-supported river raft training in Y4 Q2, 4 women passed the trial exam and skills test offered by the Nepal Academy of Tourism and Hotel Management (NATHM). They, along with 6 male participants, were hired as assistant river guides (more details under SA 1a and the GESI section).

TASK 4.2.4: FACILITATE INTERNATIONAL COOPERATION BETWEEN NEPALI AND INTERNATIONAL SPECIALISTS AND STUDENTS REGARDING AQUATIC ANIMAL PASSAGE ISSUES AT DAMS AND OTHER WATER MANAGEMENT INFRASTRUCTURE

C4.2.4-4: Publish Nepal-focused engineering guide for designing hydropower projects that allow fish passage

In Y4 Q3, Paani conducted a needs assessment with academicians, engineers, fish biologists and other professionals working in the hydropower sector on the need for a fish passage guide focused on the Nepali context, which determined that there is high demand for such a product. Feedback indicated that a good design guideline should be based on long term research (mainly in Nepal), experience, and improved learning of existing designs. With rapid hydropower development in the country on the horizon, Paani will support integration of the course, "Design of fish passage for hydropower project development in Nepal," in to the master's degree in Hydropower Engineering Curriculum at the Institute of Engineering, TU. This course will serve as a precursor for students who later conduct a more in-depth research on fish passage design in Nepal and will help to generate additional scientific knowledge that will inform engineering design guidelines for fish passage structures in Nepal.

TASK 4.2.5: DEVELOP AND IMPLEMENT WORKSHOPS AND TRAINING PROGRAMS RELATED TO FRESHWATER BIODIVERSITY CONSERVATION AND CLIMATE RESILIENCE

This quarter, ISET-N conducted their first TOT on river stretch co-management and post-harvest fisheries for Paani staff and grantees and CAACGs from Jhimruk, Middle Rapti and Phoksundo Suligaad from Feb 19-24. Through the training, the trainees gained the capacity to provide trainings on basic principles of co-management, group formation and institutionalization, community resource mapping, preparing a biodiversity register, legal provision for management and conservation, GESI, biological indicators of water quality, ecosystem services, river health, bio-assessment, water status, multi-habitat sampling, rapid-field assessment, post-harvesting skills, processing of fish, fish economics, supply chain, value chain, marketing, branding, food security and livelihood.
Paani's recently produced learning video on "Collaborative Aquatic Resources through River Co-Management" was also shown during the training, which received informal positive feedback. The pre-post evaluation showed an increase of 26.4 % points in knowledge on river stretch co-management and 60.5% points in post-harvest fisheries. The draft training manual on river stretch co-management and post-harvest fisheries (English and Nepali versions) will be finalized next quarter and distributed during upcoming trainings at the community level.

"I am thankful to Paani and the ISET team for providing such important knowledge and skills. I am now excited to transfer this to CAACGs and other community members for proper management of river systems, as well work for better livelihoods."
- Poonam Shrestha, Board Member, MRDCC

In addition to this, 15 trainings were conducted in 7 watersheds and one at the national level through grant partners (more details in SAs 1b, 2b, 2c and the GESI section). A summary of trainings is outlined below:

Training name	Watershed	Training objectives	Pre-test score (%)	Post-test score (%)	Difference Pre-Post (% points)
Mahakali River Basin					
Technical and social aspects of watershed management and climate smart best practices	Rangun	Knowledge and skills transfer on technical and social aspects of watershed management, bioengineering as an option to address land management, and recharge pond & water source protection to increase water availability at water scarce sites (Feb. 18-20).	55.5	93.2	37.75
Cooperative formation and leadership capacity building	Lower Mahakali	Knowledge and skills transfer on the process of cooperative formation and leadership building necessary to establish and manage cooperatives for Sunaha CAACG and Rampure Taapu CAACG (Feb. 24-25).	30.8	57.2	26.4

Municipal level sustainable watershed management	Rangun	Knowledge transfer on river systems, watershed problems, upstream/downstream linkages, low cost and climate smart technologies, importance of GESI, and sustainability of watershed management for municipal executive councils and CFUGs, and Raute fish conservation and management groups (Mar. 4-6)	36.1	46.5	10.44
Cooperative accounting management	Lower Mahakali	Knowledge and skills transfer in cooperative account management for Sunaha CAACG, Rampure Tapu CAACG and Gairabari Farmers Group (Mar. 6-7)	50.4	91.8	41.4
Karnali River Basin					
Community based flood early warning systems	Lower Karnali	Knowledge transfer on low cost early warning systems for flood affected communities (Jan. 6-9)	4.15	38.7	34.56
Irrigation management and water source protection	Bogatan Lagam	Knowledge transfer on watershed and irrigation management for sustainable agriculture (Feb. 6)	N/A	N/A	N/A
Collaborative leadership and advocacy skill development	Middle and Lower Karnali	Knowledge and skills transfer in collaborative leadership and advocacy in freshwater biodiversity and river resource management (Feb. 27-28)	40	73	33
Technical and social aspects of watershed management and climate smart best practices	Bogatan Lagam	Knowledge transfer on climate change, its impact, best watershed management techniques and GESI in a changing climate context, as well as national policy provisions for climate resilience (Mar. 16-17)	30	80	50
Rapti River Basin					
GESI mainstreaming in freshwater biodiversity conservation	Jhimruk, Middle Rapti	Knowledge transfer in GESI mainstreaming in freshwater biodiversity conservation and river resource management for CAACGS (Jan. 3-5)	36	64	28
Climate smart best management practices	Jhimruk	Skills transfer on climate smart best management to control soil erosion and rain water harvesting such as bamboo fenceswatling fascine, brush layering, palisade, one rock dam, Zuni Bowl, rock mulch, boulder check dam construction technologies for user groups of rural roads, drinking water and irrigation (Jan. 27-29)	27.33	56.67	29.33
Collaborative leadership and advocacy skill development	Jhimruk, Middle Rapti	Knowledge and skills transfer in collaborative leadership and advocacy in freshwater biodiversity and river resource management for CAACGS (Mar 2-3)	63	89	26
Basic hospitality and homestay management	Middle Rapti	Knowledge and skills transfer on development of homestays, linked with eco-tourism as an alternate livelihood option for CAACGs and homestay entrepreneurs (Mar. 12-13)	67.5	95	27.5

Climate smart best management practice	Middle Rapti	Skills transfer on low cost bioengineering technologies to protect landslides, erosion, water protection areas and riverbank erosion bioengineering for self-help groups and CFUGs (Mar. 19)	30	80	50
Gabion box weaving and fisheries	Jhimruk	Skills transfer on gabion box weaving for CAACGs (vocational training in collaboration with CTEVT) (Mar. 7-22)	N/A	N/A	N/A
National					
Disaster risk management for hydropower-emergency action plan		Knowledge and skills transfer on Emergency Action Plans for hydropower developers. The training filled major knowledge gaps in terms of two aspects during emergencies: 1) how a disaster might occur and 2) who (POC) should an individual contact in times of disaster (Feb. 24).	73.3	90.8	17
Disaster risk management for hydropower dam breach simulation		Knowledge transfer on dam breach simulation for hydropower operators. The training filled a major knowledge gap in terms of various dam breaching scenarios and past disasters (Feb. 25).	72	80	8

PARTNERSHIPS, COLLABORATION, KNOWLEDGE SHARING

The following table represents Paani's coordination activities with USAID/Nepal and other USAID activities for Y4 Q3:

Table 2: Meetings with USAID/Nepal and Other USAID Programs

MEETINGS WITH USAID/NEPAL AND OTHER USAID PROGRAMS		
PARTNER/PROJECT NAME	DATE OF MEETING	OUTCOME OF COLLABORATION
IWMI, USAID	Feb. 27	Paani, IWMI and USAID discussed the proposed grant for e-flow value establishment and guideline preparation. USAID shared a list of topics for clarification from IWMI.

The following table represents Paani's coordination activities with stakeholders, including civil society, the private sector, GoN, and other development partners in Y4 Q3:

Table 3: Meetings with stakeholders

MEETINGS WITH STAKEHOLDERS		
PARTNER/PROJECT NAME	DATE OF MEETING	OUTCOME OF COLLABORATION
Department of Hydrology and Meteorology (DHM) and Nature's Conservation (NC)	January 3	NC presented its inception report on flood hazard mapping to DHM officials and Paani for feedback.
CFPCC	January 13	Freshwater Fisheries Specialist (FFS) participated in Organization and Management (O&M) meeting of CFPCC. CFPCC informed participants that the fisheries sector generates economic activity equivalent to NRs. 30 billion, of which capture fisheries contributes 18 %. They also shared policies in the process of development: Fisheries Policy, Aquatic Animal Conservation Rules & Community River Conservation Act. Paani suggested to add ecotourism, aquatic gene pool conservation, post-harvest, market and extension to the organization's major objectives. Paani also suggested that it could support CFPPC to draft the Aquatic Animal Conservation Rules and Community River Conservation Acts if requested.
MoALD	January 14	Chief Technical Specialist (CTS), FFS and Kashmira Kakati (USAID) met with the Joint Secretary (JS) of MoALD. Paani shared the Fisheries Conservation Framework and Market Development Strategy and promised to share other knowledge products related to fisheries development. JS explained the limitations and constraints of the fisheries sector that includes reform of organizational structure, curtail of human resources, and poor understanding of the fisheries sub-sector within livestock department. The JS

		urged Paani to continue its support to resolve some of these constraints and to develop policy and governance of inland water improvement through advocacy and related programs.
CDES-TU	Jan. 16, Feb. 28 and Mar. 5	Paani met with CDES-TU to discuss potential plans for development of the FCOE, including specifications required and a sustainability plan for the online platform. Paani also met with and assessed the IT infrastructure at CDES-TU and the central IT department.
NARC	January 21	FFS participated in NARC's annual planning workshop as a reviewer at the National Animal Science Research Institute (NASRI), Khumaltar. Paani reviewed the research project on ecology of mahseer, genetic and morphological characterization of economically and ecologically important fish species, impact assessment of hydropower dams in major rivers of Nepal, and aquaculture potential study in lakes, streams and marshy lands of the Tarai region.
IFC, WWF	January 30	Paani met with IFC (Ms. Kate Lazarus and Ms. Sofia Tamot) and WWF (Rajesh and Jibesh) to discuss the WWF-led studies. IFC informed Paani that they are in search of new projects and, prior to developing potential proposals, they wanted to know the progress on study outcomes from the Paani/WWF studies. After WWF shared the progress update on HCVR, IFC suggested the creation of a decision support tool flexible enough so that users themselves can play with a combination of theme layers.
State Assembly, Sudur Paschim Province	Jan. 31	Sr. EPLE, RBTL (Mahakali) and WMS West Seti had a courtesy meeting with the Honorable Speaker of the State Assembly of Sudur Paschim Pradesh. Sr. EPLE briefed him on Paani's work over the past four years. He also shared positive outcomes of the technical support Paani has been providing to local, provincial and federal governments to develop the AABCB, as well as technical inputs to revise and refine the federal laws and policy such as the Environment Protection Bill and Water Resources Policy. The Speaker highlighted the importance of aquatic animal and biodiversity, its significance to citizens and riverine ecosystem in Sudur Paschim province. Sr. EPLE informed him that Paani had planned to support MoITFE to develop an aquatic biodiversity or river conservation bill, which is also included in MoITFE's current fiscal year policy, program and budget passed by the Assembly; however, MoITFE has not moved further on this. The Speaker said it would be very important to have such

		legislation in the province and that he would see why work had not yet begun.
PTC (USAID, WECS, Paani, other GON agencies)	February 18	WECS assured Paani and the rest of the participants that it will incorporate aquatic biodiversity conservation in the upcoming National Water Resource Policy and use information produced by Paani in its River Basin Master Plans and Hydropower Master Plan.
DNPWC, IUCN, CODEFUND,	February 23	Paani participated in the second PTC meeting of the IUCN Development of Rara Ramsar Site Management Plan Development. The PTC decided to conduct the second field visit to Rara Lake from March 1 – 6, revise the log frame by incorporating suggestions and addressing the comments made by the PTC members, and to start the IEE process immediately after the draft of the Rara Ramsar Site Management Plan is ready.
WECS/World Bank/Tractebel	March 6	Paani and WWF shared data and information on aquatic biodiversity with the WECS/World Bank river basin planning project being implemented by Tractebel. This information will support the project's preparation of a Hydropower Master Plan and Strategic Environmental and Social Assessment (SESA) for the major rivers of Nepal. The Tractebel team said that Paani's data and information will be a key resource for the preparation of an environmental baseline for their assessments. During the meeting, Paani formally requested approval from WECS to exchange data between the project and Tractebel.
Dullu Municipality, Middle Karnali Watershed	March 9	RBTL (Karnali) and Sr. EPLE met with the Mayor of Dullu Municipality in Middle Karnali Watershed. He briefed Paani on the initiatives and projects that the Municipality has been taking. One of the most important initiatives is the establishment of an Agriculture College. The Federal Environment Protection Act 2019 empowers the local governments to approve the brief or concise environmental assessment or IIE report relating to any development work or project that is under the jurisdiction of the local government. For this purpose, the local government first needs to enact the law. The Mayor requested technical support from Paani to develop an environment protection bill to support their role in approving IEEs and deal with challenges posed by infrastructure development. The Municipality plans to develop the Bill and submit it in the budget session of the municipal assembly in late June or early July for enactment.
Minister, Ministry for Land Management, Agriculture and Cooperatives; Ministry of Internal Affairs and Law; and Ministry of	March 10	Paani continued to support the Karnali Province to revise draft legislation on aquatic animal conservation. The provincial Ministers for the Ministry of Land Management, Agriculture and

Industry, Tourism, Forest and Environment, Surkhet		Cooperatives (MoLMAC), Ministry of Internal Affairs and Law, and Ministry of Industry, Tourism, Forest and Environment (MoITFE) and their Law Officers reviewed sections of the Aquatic Animal and Biodiversity Conservation Bill (AABCB), which they revised with Paani in this meeting. The Bill is now more consistent with the Province's Environment Protection Bill.
Department of Hydrology and Meteorology (DHM)	Mar 10	CTS, GIS Specialist and IWRMS attended flood hazard mapping presentation meeting by NC and provided feedback maps to be finalized. These will be disseminated to 10 watersheds to support local planning.

CROSS CUTTING ISSUES

GENDER EQUALITY AND SOCIAL INCLUSION (GESI)

In Y4 Q3, the GESI team conducted/contributed to the following trainings: GESI mainstreaming in fresh water biodiversity and river resource management; climate smart best management; co-operative formation and leadership; technical and social aspects of watershed management; river stretch co-management and fish post-harvest TOT; home stay management; bioengineering; community based flood early warning systems; and collaborative leadership and advocacy skills development. This quarter, the percentage of training participants who agreed that men and women should have equal access to resources and opportunities (GNDR 4) increased to 78.3 % from 63.6 % in last quarter. In addition, 69 % of leadership positions in community based groups are filled by women and people from marginalized communities, and income has increased for poor fishers, vulnerable, women, and marginalized people through alternative livelihood interventions such as training on white water rafting guiding and environment friendly agriculture and technologies (see Figure 13). Paani continued to track GESI in project interventions in Y4 Q3, showing participation of different groups in interventions as follows: women, 44%; Adivasi Janajati, fisher groups, Dalits and other marginalized groups, 50%; and BCTS, 50%. Key GESI integrated activities for the quarter can be found in Figure 13.

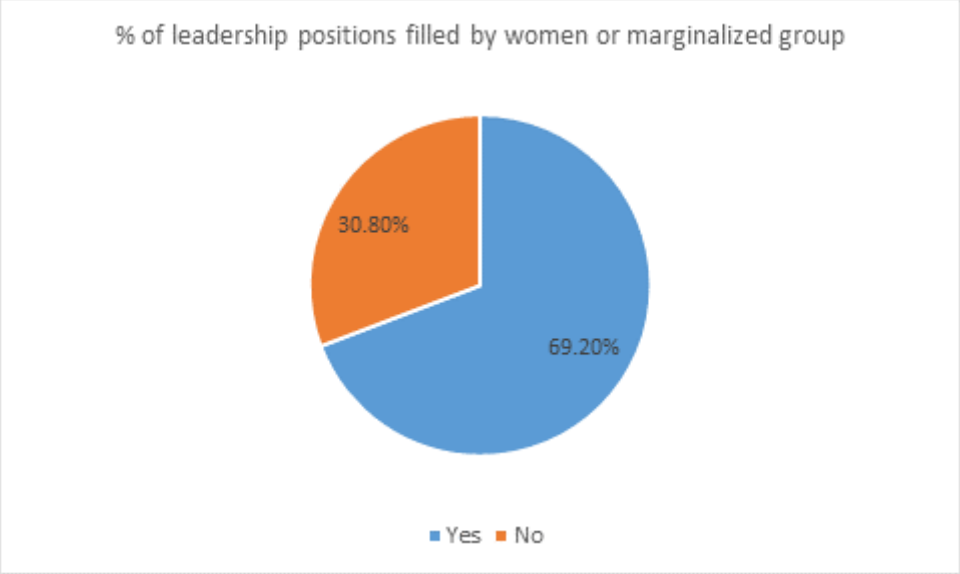


Figure 13: Percentage of women/marginalized groups in leadership positions

GENDER EQUALITY AND SOCIAL INCLUSION MAINSTREAMING TRAINING:

Based on recommendations in Paani's GESI study, Paani has worked to integrate GESI into technical grant activities, e.g., Women Act and Sonaha Bikas Samaj. Women Act developed training content and a manual on GESI mainstreaming in fresh water biodiversity and water resources management in Nepali to make it more accessible to partners. They also delivered GESI mainstreaming training to CAACGs, Water Users Groups (WUGs), and CFUGs, in 4 watersheds (MK, LK, JK, MR) in Y4 Q3.

Women Act completed the three day training, "GESI Mainstreaming in Freshwater Biodiversity Conservation" on Jan. 3-5 in Dang. Twenty participants from CAACGs in Jhimruk and Middle Rapti watershed attended the training. The main objective was to enhance the GESI capacity of CAACGs in freshwater biodiversity conservation and river resource management. Topics included: sex and gender; equality and equity; strategic actions for gender role transformation; social exclusion and inclusion; sectoral policies and provisions; GESI provisions of the AABCA; GESI integration in water resource management and access to water resources; impact of drying water resources; climate change and disaster risk to women; marginalized communities; GESI in EFRC; gravel mining and its effect on women and marginalized groups; advocacy on sustainable hydropower, and solid waste management.

"I am so glad that I could join this training on GESI mainstreaming in freshwater biodiversity as a Chief Guest. The local government cannot tackle all the issues alone. I am very pleased that community level groups have been formed and are working for the conservation of fish and freshwater. As a local level representative, I am happy to support this program – three levels of government are equally responsible for working in collaboration on this."
- Sita Sigdel Neupane, Deputy Mayor of Ghorahi Sub-Metropolitan City Dang remarked

IMMEDIATE OUTCOMES

- Increased knowledge and capacity of participants, including women, poor and marginalized Tharu, Kumal, Sonaha, Raji, Badi, Dalits from CAACGs, CFUGs, water user and river groups on GESI mainstreaming into freshwater biodiversity conservation and river resources management by 28% (Pre-test scoring 36%, Post-test scoring 64%).
- Aathabisa Municipality allocated NRs. 20,000,000 to specific freshwater biodiversity conservation in the coming fiscal year. The budget will be approved after a series of meetings with Rakam Karnali CAACG, Paani, the grantee, and the municipality. CAACG member Mr. Navaraj Majhi, who represents the fisher community, contributed in lobbying and advocating to allocate the budget.

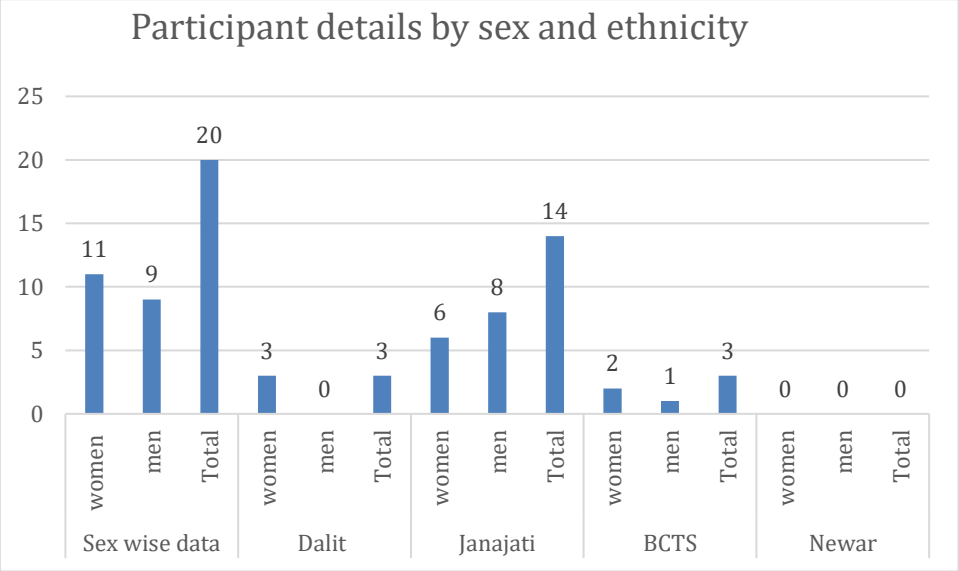


Figure 14: Three days GESI mainstreaming training

COLLABORATIVE LEADERSHIP AND ADVOCACY SKILLS DEVELOPMENT TRAINING IN FRESHWATER BIODIVERSITY CONSERVATION AND RIVER RESOURCE MANAGEMENT

In Y4 Q3, GESI grant partner Women Act developed a training manual on collaborative leadership and advocacy skills development in freshwater biodiversity conservation and river resources management. The main contents cover enhancing groups' strengths to overcome barriers to collaborate, using tools and techniques for effective collaboration, building strategies and developing advocacy skills, resources mapping, and networking skills.

Based on the manual, Women Act organized two trainings on Collaborative Leadership and Advocacy Skill Development in freshwater biodiversity and river resource management in Nepalgunj (Feb. 27-28) and Ghorahi (Mar. 2-3). Thirty participants from 23 CAACGs of Lower Karnali and Middle Karnali Watersheds attended the training, and 20 participants of 19 CAACGs of Jhimruk and Middle Rapti watershed attended. The main objective of the training was to improve collaboration among local groups, local government and relevant government line agencies through enhancing leadership and advocacy skills.

IMMEDIATE OUTCOMES:

- Women Act trained 50 participants to develop collaborative advocacy action plans. Training participants developed 6 GESI integrated Collaborative Advocacy Action Plans containing six different issues, i.e. river water pollution, unmanaged gravel mining, women and marginalized groups lack of access to local resources, unsustainable fishing practices, lack of financial resources for CAACG sustainability, and drying water resources.
- Increased knowledge and capacity of participants, including women, poor and marginalized Tharu, Kumal, Sonaha, Raji, Badi, Dalits from CAACGs, CFUGs, NRM groups, water user and river groups by 33% (pre-test score: 40% and post-test score: 73%) in Nepalgunj and by 26% (pre-test score: 63% and post-test score: 89%) in Dang.
- Local government representative (Ms. Pabitra GC, Vice Chairperson, Jhimruk RM) initiated and registered a new CAACG (Gudgude Jalchar Samrakshyan Samuha) in Jhimruk RM ward no. 5 as per their Collaborative Action Plan developed during the training.
- New CAACG (Kachali Jalchar Samrackshyan Samuha) registered in Mohanyal RM ward no. 7, Kailali on Mar. 15 after training. Participant Ms. Radhika Majhi advocated the importance of CAACG registration and took the lead role in the registration process.
- Ms. Seu Kumari Chaudhary led Rawa CAACG, Gadhawa RM ward no. 7 to patrol against destructive fishing practices after the training. As a result, the community discovered two electro fishing practitioners. The CAACG immediately reported this to the RM, who coordinated with police officers to take them into custody. They were later released after agreeing not to repeat these practices.

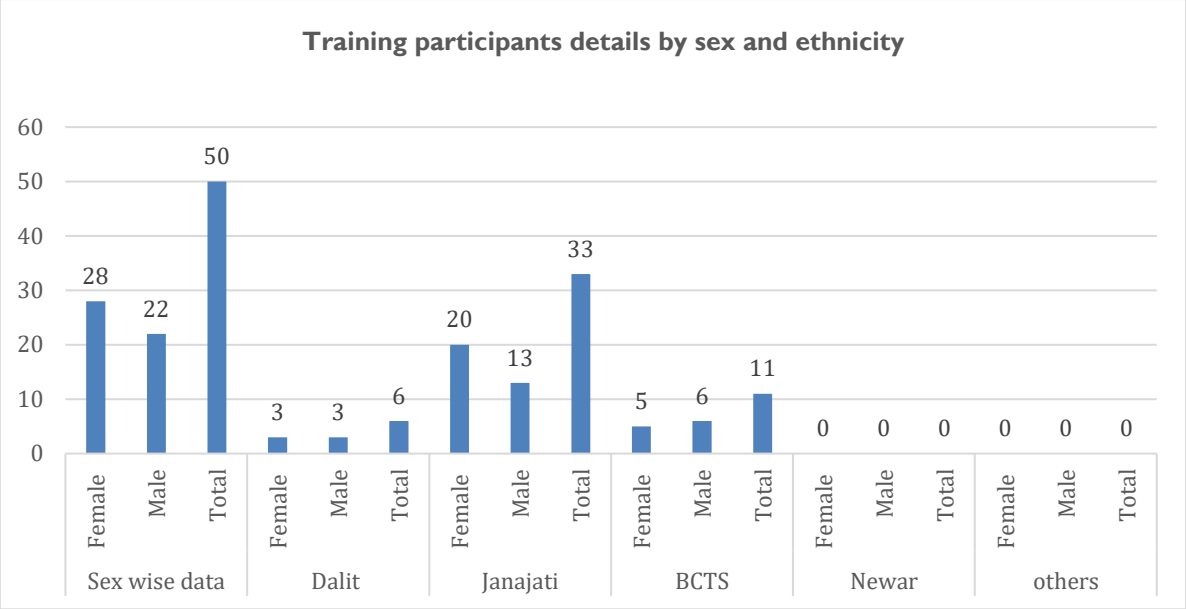


Figure 15: Two days collaborative leadership and advocacy skill development training

DESK REVIEW

In Y4 Q3, Women Act conducted a rapid desk review of RM/M level GESI responsive policies, programming and budget allocation for freshwater biodiversity and river resources management for Lower Karnali, Middle Karnali, Jhimruk and Middle Rapti Watershed. Major findings of the review were presented and shared with participants during the training so that CAACGs could develop collaborative action plans related to advocacy on the major issues identified and by aligning with/leveraging local government resources. Out of 25 local governments in 4 watersheds (MK, LK, MR, JK), 10 have allocated gender responsive budget. Aathabisa Municipality has allocated NRs. 25 lakhs specifically on freshwater biodiversity conservation. The other 10 local governments have allocated budgets to DRR, forest and environment, climate change mitigation, drinking water projects, solid waste management, bio-diversity & natural resources management, EFRC, cooperative management support, and aquaculture support. The findings of this review will be used to prioritize issues and focus on areas and gaps to include in a GESI mainstreaming training program for local elected members. This training will focus on policy gaps and GESI integration into fresh water biodiversity and river resources. The training will guide CAACGs to develop a budget action plan (see major findings of the desk review in Annex, Exhibit A6).

COORDINATION WITH THE MUNICIPALITY ASSOCIATION OF NEPAL

As per the MoU signed between Women Act and the Municipal Association of Nepal (MuAN) in 2019, Women Act will support MuAN in all of its GESI related capacity building programs. Women Act and MuAN have decided to organize meetings with the Deputy Mayor/Vice Chairperson of 25 M/RM in Nepalgunj to discuss the training content before holding it.

CELEBRATION OF INTERNATIONAL WOMEN DAY

Paani commemorated International Women's Day 2020 by participating in the #EachforEqual theme on social media. In all, 50 CAACG representatives, 36 Paani team members, and 5 grant partner representatives took photos in groups to represent the theme, which was shared on Paani's and DAI Global's social media channels.

GNDR4 ASSESSMENT

'In Y4 Q3, Paani integrated GESI sessions into the project's trainings to discuss equal access of men and women to social, economic and political resources, as described in the summary paragraph of this section. GNDR 4 is a standard indicator to measure the attitudes on equal access by men and women on resources and opportunities in social, political and economic spheres. Paani is measuring this indicator in a training setting through a pre and post-test approach. The participants with an agreement that men and women should have equal access has increased to 78.3% in this quarter from 63.6% in the last quarter.'

Table 4: Y4 Q3 - GESI Integrated Major Activities/Outcomes

S.N.	ACTIVITIES	LOCATION	NARRATIVE	OUTCOME
1	Vulnerability and Capacity Assessment (VCA)	Chure and Mahonyal RM	ECC facilitated the process to design two LDCRPs in Chure and Mohanyal RMs, Thuligaad Watershed. Vulnerability and capacity assessment (VCA) in the project area is one of the major activities for this purpose. ECC completed a VCA to identify disaster risks and prepare plans to minimize the risk.	30 cluster level VCAs 132 males and 94 females engaged Findings of the VCA will be addressed through LDCRPs to reduce DRR- related problems and social vulnerability.
2	Recharge pond construction	Naraharinath RM	KIRDRAC supported construction of recharge ponds in Kanneripata and Mehel Khola of Naraharinath RM.	Naraharinath RM allocated NRs. 150,000 to construct two recharge ponds coordinated by user committees. Successful implementation of Jalkachari recharge pond by the Kanneripata and Mehel Khola User Committee led by women. Both user committees have 7 female members out of 9.
3	Training on community-based flood early warning systems to flood affected communities	Lower Karnali, Madhuwan and Thakurbaba Municipality	CARE Nepal and Paani jointly organized 2 two-day EWS trainings in Madhuwan and Thakurbaba Municipality on Jan. 6-7 and 8-9, respectively. Major discussion points included EWS and the importance of inclusion of vulnerable people (i.e. women, elderly, pregnant women, lactating women, children, disabled) in DRR.	46 females and 36 males trained with increased awareness of flood risks and EWS
4	Basic homestay and hospitality training	Middle Rapti, Dang	HWEPC conducted a 2 day training on basic hospitality and homestay management to support homestays and to motivate fisher group members to develop homestay and	12 participants from marginalized communities, including 9 females and 3 males

			link tourism activities with recreational fishing, catch-and-release and promote eco-tourism.	built capacity on hospitality and homestay management as an alternative livelihood.
5	Vocational training to vulnerable communities in coordination with CTEVT	Jhimruk Watershed Pyuthan-8 Damti	KDCN initiated two events of vocational trainings in collaboration with Jhimruk Skill Development and Vocational Education Pvt. Ltd: 1) Gabion box weaving training for 10 CAACG members and 2) fisheries training for 10 CAACG members.	Total 20 CAACG members from vulnerable communities, e.g., Kumal community whose traditional occupation is fishing and pottery.
6	Regular meeting of farmers group	Middle Rapti, Dang	MRC Nepal formed 8 farmer groups, whose capacity was strengthened in different trainings. MRC Nepal also supported the groups to register with the agriculture service center, regularly guiding them through the process.	8 farmers' groups have held a total of 24 monthly meetings on their own initiative. The groups have started to share information regarding services and resources provided by the local government. Farmers' groups now have increased access to services and resources provided by the Agriculture Service Center. The groups are producing/selling vegetables such as cucumbers.
7	Support plastic tunnel and drip irrigation sets for marginalized CAACGs to support alternative livelihoods.	Middle Rapti Watershed, Ghadawa RM, Dang	MRC Nepal constructed 20 plastic tunnel houses with drip irrigation to adopt environment friendly technologies/practices to improve their agricultural practices and productivity, as part of climate change adaptation efforts.	20 CAACG members from marginalized communities, including 7 males and 13 females constructed plastic tunnel and installed drip irrigation sets in Middle Rapti. CAACG members have grown/begun selling off-seasonal vegetables such as cucumber.
8	Support plastic tunnel and drip irrigation sets for marginalized CAACGs to support alternative livelihoods.	Lower Mahakali Watershed, Mahakali Municipality Ward no # 7, Kanchanpur.	CIS, Kanchanpur constructed 20 plastic tunnel houses with solar drip irrigation to adopt environment friendly technologies/practices to improve their agricultural practices and productivity, as part of climate change adaptation efforts.	Rampure Tapu CAACG and Mahakali Municipality Ward no # 7 earned total sales revenue of NRs. 16, 000.00 (USD 100) cultivating tomatoes and capsicum in their tunnel houses. Rampure Tapu CAACG constructed one permanent nursery tunnel shed with financial support from Mahakali Municipality Ward no # 7 of NRs. 82,800. 2nd cycle of off-season vegetables in all 5 tunnel houses.

9	Homestay training and homestay management committee formed in Ringmo Village, Shey Phoksundo RM, Dolpa District.	Shey Phoksundo Watershed, Dolpa Ringmo village	With technical support from WMS, Shey Phoksundo RM conducted 3-day home-stay training. The training is one of the outcomes of a NEFEJ town hall meeting Action Plan. The main objective of the training was to establish home stays to improve the livelihood of marginalized communities through promoting eco-tourism.	50 marginalized women out of 61 trained in homestay through the Shey Phoksundo RM's budget of NRs. 400,000 with Paani's technical support. Phoksundo Community Homestay Management Committee formed and registered under RM. The committee is composed of 55% women. MoITFE and Division Forest Office, Dolpa allocated Rs. 30 lakhs for newly registered Phoksundo Community homestay for its management and promotion of eco-tourism.
10	Fish Farm Support Activities to Sonaha CAACG and fishery communities at Lower Mahakali.	Lower Mahakali Watershed, Kanchanpur	CIS, Kanchanpur conducted a one-day orientation on aquaculture, five days' exposure visits on fish farming and fish market management to enhance their skills and knowledge for creating alternative livelihoods options at Lower Mahakali, Kanchanpur.	i). Sonaha CAACG leased one aquaculture pond, installed a boring machine and filled up the pond with fresh water. ii). Sonaha CAACG submitted a proposal for a total of NRs. 10,00,000 jointly with local fish farmers in Bhimdutta Municipality, Kanchanpur to expand their fish farming.
11	Cooperative Account Management Training, Account Keeping Training to Sonaha Fish Cooperative.	Lower Mahakali watershed, Kanchanpur	CIS, Kanchanpur supported Sonaha CAACG in the registration process of the Sonaha Fish Cooperative under Bhimdatta Municipality; conducted Cooperative management and leadership development training; account keeping training etc.	Built the capacity of 17 females and 8 males from Sonaha CAACG on cooperative formation process and leadership skills. ii). Sonaha CAACG processed registration for Sonaha Fish Cooperative under Bhimdatta Municipality. iii) Participants' knowledge and skills on cooperative management increased by 30.80%, iv) Gender perception change increased to 96% using GNDR 4 indicator assessment tool. v) Participants developed 3 Years Cooperative Business Plan. vii). Sonaha Fish Cooperative Revolving Fund is established with NRs. 45,000. Project supported with seed fund of NRs. 37,500 and cooperative cash contribution of NRs. 7,500.
12	River Guide Training to youth from fisher communities.	Lower Karnali Watershed, Jamu, Surkhet.	FEDEWASUN completed 14 days River Guide Training on Jan. 2	i). Out of 20 river guide training graduates, 19 (4 Raji young women and 15 young men) completed the process for their river guide license. ii). Out of them, 8 participants are employed by the Karnali Rafting and Adventure Pvt. Ltd.

				Company as Assistant River Guides, Inc. one female. iii). As an economic benefit, they earned a total of NRs. 175,300 this quarter. iv) Two training graduates are managing the Raji Museum building construction site fund that was supported with NRs. 1,000,000 by the Federal Govt, Archeology Department. The museum will target tourists along the Bheri-Karnali rafting route.

In Y4 Q3 Paani formed 54 local groups in three river basins, including Apex Body, CBAPU, CAACG, saving and credit groups, cooperatives, user groups and water user groups. Among them, 41 CAACGs were formed with inclusive leadership: approximately 69% women and marginalized groups occupied key leadership roles and decision-making positions.

COMMUNICATIONS

This quarter, Foundations for Development Management (FDM) completed a survey on Paani's communications activities with 426 households in 4 watersheds in the Tarai, mid-hills and high mountain watersheds (Middle Karnali, Lower Mahakali, Middle Rapti and West Seti). Results showed that these activities (96 TV shows, 96 radio programs, 69 town hall meetings, 840 watershed-related articles hakihakionline.com, and hoarding boards with conservation messages in the project's 12 priority watersheds) implemented from early 2017 to the end of 2019 played a significant role in raising awareness and changing behavior related to aquatic biodiversity conservation. For example, 84.9% of those exposed to Paani's communications activities engaged in conservation activities vs. 49.1% of those not exposed. Of those who were exposed, 80.3% of those who watched the TV show reported engaging in conservation activities, along with 86.8% of radio listeners, and a remarkable 96% of those who attended the town hall meetings. In terms of reach, approximately 330,000 people listened to the radio show and 180,000 watched the TV show in the watersheds surveyed. Survey participants reported that the project's communications activities helped them become more aware about pressing issues in their communities, such as destructive fishing practices, river conservation, local water management, and the importance of protecting aquatic biodiversity. Based on this, along with other Paani interventions, they decided to form committees to work on various aspects of conservation, participate in public awareness campaigns, and collaborate with their local governments, among other actions. These findings demonstrate the key role that a robust, multi-faceted communications campaign can play in helping communities conserve the aquatic resources upon which their livelihoods depend.

FDM's full report can be found here.

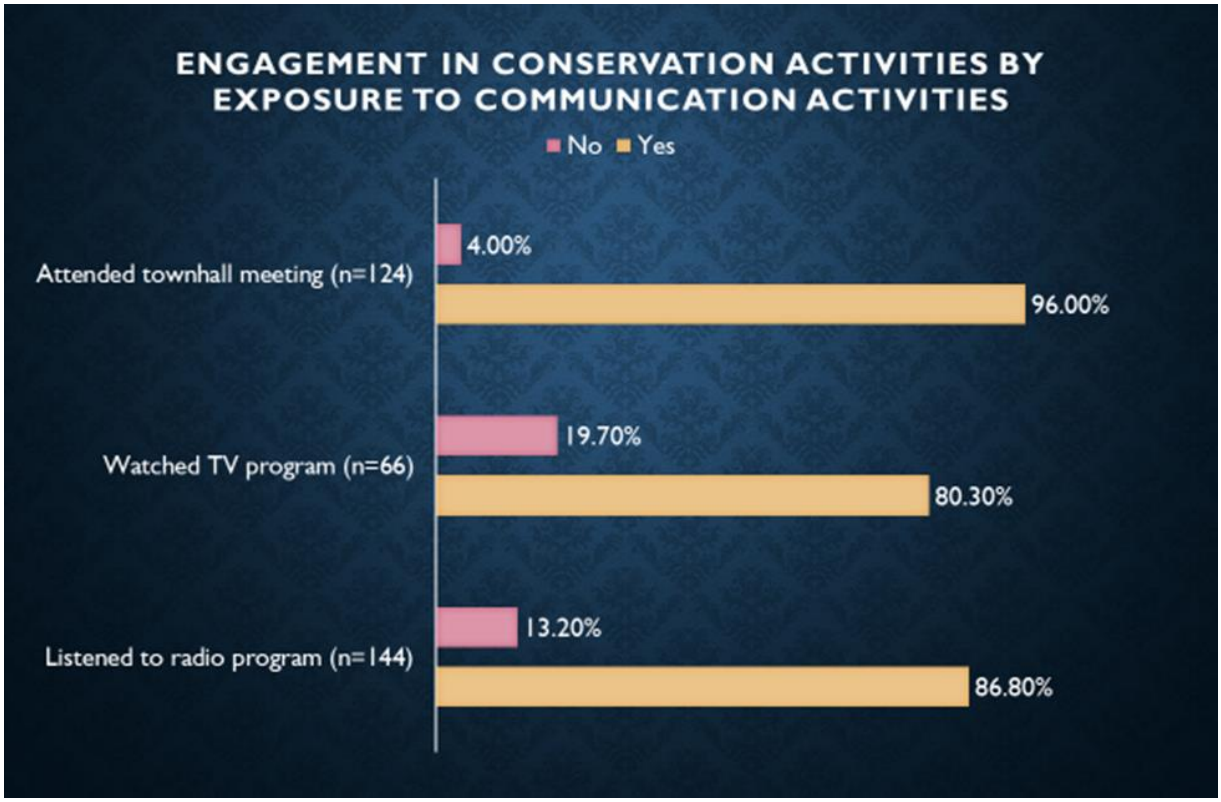


Figure 16: Engagement in Conservation Activities Based on Exposure

Paani also completed and released two new videos in Y4 Q3. The project's third impact video profiles local champion Pateshwori Prasad Chaudhary, a former practitioner of destructive fishing practices, who now leads the Baikha CAACG and campaigns for the conservation of fish and against destructive fishing to communities in Middle Rapti Watershed. His group works closely with the local government to manage river stretches and enforce aquatic resources protection through the introduction of a local AABCA. The video reached 6,500 people and garnered 2,500 views on the Paani Facebook page, along with 86 reactions/shares. USAID/Nepal also shared the video; its analytics showed that the video received 573,000 views, 6800 reactions and 270 shares – more than Paani's previous two impact videos. Paani also created a new learning video that covers the project's river stretch co-management (RSC) process. The video, used in one RSC training this quarter, is used to guide new CAACGs as they advocate in their communities or pass legislation, as well as other USAID IPs, programs, or community groups wishing to implement similar activities in other watersheds.

Pateshwori Chaudary campaigning against destructive fishing practices in his community in Paani's 4th impact video. Photo credit: Aura Creations

In terms of media coverage, USAID's Biodiversity Results and Integrated Development Gains Enhanced (BRIDGE) Project published a case study on the successes and challenges of Paani's integrated approach to IWRM on Medium.com. Paani has also seen its work profiled in a variety of local and national news outlets this quarter. For example, SetoPati.com covered penalties for catching juvenile fish in the Karnali River; News24Nepal covered Paani's approach to conservation in West Seti Watershed; HimalKhabar.com covered plans being developed for the conservation of Rara Lake through support from Paani; and BBC's Nepal News Service aired a radio story on indigenous river-dependent communities in western Nepal on working aquatic animal conservation.

As mentioned under SA 1C, SWN conducted 15 Information Education and Communication (IEC) awareness campaigns (in tandem with workshops on EFRC guidelines) in Jhimruk, Middle Karnali and West Seti Watersheds from Dec. 28, 2019 to Jan. 21, 2020, distributing/providing overviews on posters, brochures and flipcharts for more than 450 participants. As a result, local governments offered to share the products on their websites and print/distribute calendars with the EFRC messages. Kalika Development Center Nepal (KDCN) also conducted an awareness campaign on aquatic animal biodiversity conservation for the Nawajwoti CAACG in Pyuthan Municipality, Middle Rapti Watershed in early March. The CAACG members and other community members shared conservation messages on placards and posters with the community at large. HWEPC also installed 8 hoarding boards in Middle Rapti Watershed in destructive fishing-prevalent areas of the Rapti River in mid-March.

This quarter, Paani met with CDES-TU a number of times to move forward on establishing the online Freshwater Center of Excellence (FCOE). At the request for a more robust sustainability plan, CDES-TU proposed that one of the top students in the department could serve as curator for the site and that the site could be housed at TU's central IT department (as opposed to CDES). Paani then met with CDES-TU's central IT department to assess the existing IT infrastructure and needs. Paani has developed a draft program description for an in-kind grant for the FCOE, which will be finalized once the project receives more detailed information on the IT system and requirements

from CDES-TU after restrictions on non-essential business are lifted by GON (more details under SA 2a, Task 2.3.4).

Finally, Paani initiated widespread dissemination of its knowledge products, distributing hard copies of 240 watershed profiles, 660 health reports, 1800 profile briefers and 120 profile posters in all 12 priority watersheds to local government, community groups, grantees and civil society organizations (CSOs). As a result, three municipalities/RMs in two watersheds shared Paani's watershed profiles and health reports in English and Nepali on their websites, thereby taking ownership of these products and making them more widely available to the public (more details under SA 2a, Task 2.3.4).

SECTION IV: ADMINISTRATION AND MANAGEMENT

Administration and management of Paani is based on five main modalities of Paani's technical and financial resources, which mutually reinforce each other:

- Research,
- Training,
- Technical Assistance (well-targeted, through a mix of Nepali and international long-term and short-term specialists),
- Events (workshops, conferences, public education events, and working groups), and
- Grants.

This quarter, Paani resumed grant activities that were put on hold last quarter due to communication that our contract may not be fully obligated. Paani faced a few challenges, as grantees had to adjust to their new scopes of work and budgets; however, grant activities resumed after these adjustments were made.

This quarter we received a "yellow light" to proceed with two additional grants. One grant to Tribhuvan University (TU) will create a knowledge hub for freshwater biodiversity called the "Freshwater Center for Excellence." This will be publicly accessible and will inform Nepali policymakers and planners about freshwater biodiversity. Another grant to Balchaur Forest and Environment Resource Development Center (BAFER) will reduce impacts of unregulated and unsustainable mining practices by supporting local governments to regulate gravel mining through reviewing issues and challenges of gravel mining in Lower Karnali and Lower Mahakali Watersheds.

During the quarter, Paani faced several issues finalizing the grant to the International Water Management Institute (IWMI). Initially, this award was supposed to be a subcontract; however, because of their PIO status, Paani had to change the mechanism to a grant. Paani worked with IWMI to revise their SOW, timeline and budget; however, there were still issues with the methodology. Eventually, with USAID's input, Paani decided not to move forward on this activity due to the time constraint posed by completing the activity within the proposed five months. On April 21, Paani sent a formal rejection notification to IWMI. DAI/Paani also sent a formal request to USAID withdrawing the grant approval request (# G-KAT-073) that was submitted on January 29, 2020.[7]

On March 23, the GON issued a national lockdown in Nepal due to the global pandemic, COVID-19. The GON restricted all gatherings, international and domestic travel, and eventually all movement within the country. On March 23, Paani received a "Stop Work Order" from the USAID Contracting Officer. Paani was ordered to stop all new activities until further notice. Paani immediately notified all grantees and partners to stop work on new activities and to submit a telework policy and individual work plans for approval if they were able to finish activities and work

[7] Note that this occurred after the reporting period but before this report was submitted to USAID. Paani believed that it was important to share this update now.

remotely from home. In addition, Paani developed a Business Continuity Plan (BCP) for the project. The latest version was submitted on April 17, 2020.

Due to the restrictions around COVID-19 and the Stop Work order that was extended until May 15, 2020[8], some of Paani's activities have been significantly delayed and/or the project has missed/will miss other seasonal activities altogether. Paani will need to provide some grantees with a no cost extension (NCE) to complete their activities. The team is currently conducting an analysis on how this will affect the project's overall indicators and targets going forward.

This quarter, the Paani Operations team facilitated implementation of the following procurements to support technical requirements as follows:

- Establish and mobilize a Karnali River Basin Conservation Fund (KRBCF)
- River Stretch Co-Management and Post-Harvest Fisheries Training Services
- Environment Friendly Rural Road Construction Support Activity
- Survey on Paani Communications Activities
- Feasibility study for aquaculture and culture-based fisheries in mountain areas of Karnali Province
- Development of Rara Lake Ramsar Site Management Plan
- Paani Program Videos on Improving Local Management of Capture Fisheries
- Flood Hazard Mapping Service for DHM
- Development and commissioning of water mower in Bhagraiya Lake and other Oxbow Lakes in Lower Karnali watershed
- Ecotourism Visitors' Survey Across High Value Sites in Karnali River Basin (on hold due to COVID-19)
- Nepal Sustainable Hydropower Advocacy Alliance (on hold due to COVID-19)

Key administrative and management tasks completed from January 1 – March 31, 2020 are presented in Table 5.

Table 5: Key administrative and management tasks completed during Y4 Q3

Y4 Q3 KEY ADMINISTRATIVE & MANAGEMENT TASKS	
TASKS	COMPLETED BY
Freshwater Fisheries Specialist participated in the International Masheer Conference in Chiang Mai, Thailand on Feb. 11-15	Feb. 2020
Obtained Tax clearance of DAI Global LLC	Feb. 2020
Paani's Capacity Building and Higher Education Specialist and Gender and Social Inclusion (GESI) Officer attended the pilot "International Seminar on Community Resilience" organized by the United States Forest Service (USFS) in Atlanta, Georgia.	Feb. 23-Mar. 6, 2020

[8] Note that this occurred after the reporting period but before this report was submitted to USAID. Paani believed that it was important to share this update now.

Obtained VAT refund of NRs. 5,272,557.21 from Inland Revenue Office for the period of July to December 2019	Mar. 2020
Due to COVID-19 outbreak, the entire country is under a government ordered lock down. USAID issued a Stop Work Order. Paani then issued a Stop Work Order to its Grantees, Subcontractors, and STTAs at the field level. All Paani staff began to work from home as per approved telework plans.	Mar. 2020

CONSTRAINTS AND PROPOSED REMEDIES

Last quarter, Paani identified four issues confronting the project. Three have been addressed, as summarized in the below table. One issue remains, and the team identified four additional issues during the current quarter, all of which are described below.

Table 6: Addressed constraints from the Y4/Q2 quarterly report

ADDRESSED CONSTRAINTS FROM Y4 Q2	
Y4 Q2 ISSUE	STATUS
Issue 1: Limited ownership of Paani's knowledge products and tools for decision making by WECS	**Further progress made[9].** Paani previously reported difficulty getting WECS to take ownership of the program's knowledge products, largely due to high staff turnover. For example, in program year 3, the designated point of contact (POC)/Acting POC at WECS changed three times. Although turnover is still a reality, Paani saw more of a commitment from Joint Secretary Sagar Rai last quarter. In addition to the joint field visit conducted by WECS and Paani in Y4 Q2, WECS requested Paani to organize another field trip this quarter, which would include more of Paani's GON PTC members. WECS also facilitated another meeting with USAID, Paani, WB and WB-funded Tractabel river basin planning project this quarter to discuss how to collaborate and share data. Due to Tractebel's limited time period, they will not be able to collect the volume of required data to develop nationwide river basin plans and will therefore rely heavily on Paani's data on aquatic biodiversity. These steps demonstrate an even stronger commitment from WECS. In addition, three municipalities/RMs elected to share Paani's watershed profiles and health reports on their websites, thereby taking more ownership of these products.
Issue 2: Reduced budget ceiling and impact on grants program.	**Resolved.** Last quarter, Paani had to make an approximately 25% cut to its grant program, technical activities and targets when USAID informed DAI that the program would likely not be funded to its contract ceiling. This posed some challenges for grantees, as they had to adjust their scopes of work and budgets, but Paani guided them throughout the process. Ultimately, the reduction was not as extreme as originally anticipated; thus, many grant activities put on hold last quarter resumed in Y4 Q3.
Issue 3: Lack of clarity on implementing international staff visas.	**Resolved.** Last quarter, GON informed USAID/Nepal and its projects of new regulations and procedures for acquiring visas for international staff and their dependents. Paani tried

[9] This was an issue cited in the Y4 Q1 report. While we have made further progress, we don't yet consider it resolved and will continue to report on this constraint in the upcoming report.

	to follow the new procedures; however, regulations were ambiguous. The project paid a penalty for purported violations, i.e., new long-term staff working while on a tourist visa (even though other options for entering the country and starting in their roles did not appear to exist). As all international staff now have proper working visas, this is not an issue at this time. Paani learned at USAID's all IP meeting in Nov. 2019 that GON was planning on adjusting/making the procedures clearer. Paani has not learned of any new information since that time but will seek clarify when it is time to renew visas for its international staff.
Issue 4: Lack of clarity and staff dissatisfaction with Nepali's new social security fund (SSF) scheme.	**Resolved.** As required by law, DAI/Paani registered its employees to contribute to SSF by the initial deadline of Oct. 2019. Staff were initially unhappy with the expectation that they would contribute 20% of their salaries to this fund. In response to their questions, DAI/Paani sought legal advice around this issue from three law firms. Two provided written guidance stating that we must comply with the law or face penalties. On Jan. 16, Paani arranged a Q&A session with SSF representatives for all staff to encourage dialogue and understanding about this new legal requirement. Although the scheme is still a work in progress nationally, Paani staff has accepted the new reality, and DAI/Paani is in compliance with the national law. DAI/Paani will continue to seek clarity with GON as the law evolves.

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ISSUE 1: PROGRAMMATIC IMPACTS DUE TO COVID-19 VIRUS

COVID-19 heavily affected Paani's programs, as it became a global pandemic this quarter. In coordination with USAID, Paani began following restrictions put in place by GON. Beginning in early March, GON entities at the municipal-level placed restrictions on holding in-person gatherings, including workshops, trainings and other events. In the meantime, the U.S. and other countries also began placing restrictions on gatherings and travel. As a result, many organizations in the U.S. prohibited their staff from traveling internationally, including WWF, who cancelled their planned field trip to Nepal in mid-March, along with other international study team members. In Nepal, the GON restricted domestic travel, leading to the cancellation of USAID's and Paani PTC members planned joint monitoring visit to Rara Khaptyad and Middle Karnali watersheds in mid-March. Other seasonal activities, such as an ecotourism consumer demand survey, migratory bird monitoring in Rara, and the fish catch assessment surveys will now be delayed. On March 22, USAID issued a "stop work order" for Paani through April 3, i.e., the project should only proceed with activities that can be done through telework and should not initiate any new activities. The USAID stop work order has been extended twice since the March 22 announcement, until April 30, in alignment with GON's lock down and national and international travel restrictions[10]. By the end of the March, Nepal was in "lock down," with the majority of the population instructed to stay at home and only essential businesses allowed to remain open. As a result, Paani will not be able to meet certain targets set for this quarter or next. In addition, some grantees and sub-contractors will likely request cost and no-cost extensions.

[10] This occurred beyond the reporting period but before submission of this report to USAID. Activites ongoing and delayed during the stop work order are available here.

Remedy: Paani has continually adjusted to the situation as it has evolved. For example, it moved some activities online (e.g., webinar to share initial HCVR, EOA and SSP findings rather than a workshop). The project also developed a business continuity plan (available here), shared its telework policy with USAID, and contacted grantees and sub-contractors to explain the stop work order and how it affected them. Paani prepared a list of activities delayed or canceled due to COVID-19, as well as weekly plans for activities under each SA, which have been shared with USAID. Paani has also received telework policies and action plans from all grantees and sub-contractors, which will be revised as the situation evolves.

ISSUE 2: STAFF RESIGNATIONS AS PROJECT ENTERS FINAL YEAR

Paani staff have gradually begun to resign and look for other employment as Paani enters its final year. For example, two WMS submitted their resignations this quarter, and one has already left his position. This affects programming, especially at the watershed level, as there is no Paani presence in that area once that person leaves, and no one to liaise with the local government or support local grantees on a regular basis. It is also difficult to replace staff when Paani can only offer contracts of less than one year through the end of the project in mid-December.

Remedy: Paani is actively recruiting for short-term replacements for WMS who have resigned, in particular targeting people who are already familiar with Paani, such as grantee staff and local community members. Paani has also looked into how WMSs can share watersheds and seek more support from RBTLs, if workloads permit. Finally, Paani is exploring other ways to incentivize staff to stay until the end of project, which would be put in place next quarter.

ISSUE 3: DIFFICULTY GETTING PERMISSION LETTER FROM SHEY PHOKSUNDO NATIONAL PARK (SPNP) AND THE DEPARTMENT OF NATIONAL PARKS AND WILDLIFE CONSERVATION (DNPWC)

This quarter, grantees FECOFUN and WUDAN faced difficulties obtaining permission letters from SPNP and DNPWC to implement activities in Phoksundo Suligaad watershed. With support from Paani's technical team and WMS, both grantees prepared permission letters as per instructions from DNPWC. However, after preparation of those letters, DNPWC advised the grantees that they would also need permission from SPNP and/or its Buffer Zone Management Committee (BZMC). After meetings and phone calls with representatives from both SPNP and DNPWC in which they received verbal confirmation, the grantees prepared new letters. However, even after SPNP provided permission to WUDAN on Jan. 27 to begin work, SNPN withdrew the letter and instructed WUDAN to work through DNPWC. FECOFUN faced the same situation. The grantees, with support from the WMS, continued to liaise with both agencies throughout February, during which time DNPWC continually asked for more documentation. This contradictory guidance and lack of clarity around the process of getting permission to operate in SPNP, coupled with restrictions put in place due to COVID-19 in March, has delayed these grant activities, including demonstration of climate smart agricultural practices, cooperative formation, a solar water uplift project, and more. This select GON resistance to NGO activity is particularly surprising in the case of FECOFUN, for example, which is a very well-established large federation in Nepal.

Remedy: Paani has learned that all appropriate GON agencies should be involved from the start of grant design so that they are aware of grantees' plans and so that grantees understand exactly what permission are required to begin working. BCN and IUCN, for example, presented their projects early on to DNPWC and were able to get permission quickly. Paani will share this success with

other grantees and facilitate their coordination with DNPWC and the related national park as required.

ISSUE 4: DELAY IN SUPPORTING GON AND IMWI TO PROMOTE E-FLOW ADOPTION (TASK 2.2.1)

To execute this task, Paani was dependent on e-flow values for the KRB from IWMI's Digo Jal Bikas' (DJB) project, which were not provided as expected, ultimately delaying the task and incurring additional costs for Paani. Last quarter, Paani released a tender to find a firm to calculate the values. IWMI was then selected as the most qualified firm and submitted a proposal outlining their methodology and approach. Paani facilitated a meeting at the end of Feb. to allow IWMI an opportunity to present their methodology directly to USAID. This was helpful; however, USAID has requested more information and clarity on IWMI's methodology and approach (e.g., data collection, training and targets), which IWMI has not yet fully provided. As such, the proposal was not finalized or approved by the end of Y4 Q3, as anticipated

Remedy: Although this activity has also been impacted by COVID-19, Paani is in communication with IWMI regarding USAID's requests for information. IMWI has submitted a proposal with a very tight deadline of five months with a start date from July 2020, which Paani sees as a major challenge for implementation of this project that requires extensive field data collection to validate the IWMI e-flow calculator/tool. Another limitation Paani has noted in the revised proposal is that field data collection, a key component of the grant activity, makes up only 10% of the proposed total budget. Paani has rejected this grant, see footnote seven for more details.

ISSUE 5: REORIENTATION OF ACTIVITIES BASED ON A NEW GOVERNMENT SYSTEM

Government engagement during a period of political and institutional restructuring continues to be a challenge for Paani. The biggest challenge related to this issue is the lack of human resources and capacity, especially in the areas of local government where Paani works, and knowing who to engage with, especially at the municipal and provincial levels that are still not yet sufficiently staffed. In fact, municipalities still have not been given permission to hire their own staff. Those local leadership roles which are filled still lack capacity because their offices are short-staffed, and resources remain scarce. Thus, they are overburdened and unable to adequately engage with Paani in implementation of activities in their jurisdictions.

As explained in detail last quarter, this lack of policy and legal and institutional arrangements has also impacted Paani's ability to move forward on select tasks, including development of a white paper analyzing institutional options and opportunities for holistic and integrated water management to support policy development (Task 3.1.2, dropped) and formation of river basin platforms (Task 3.2.1, adjusted to watershed level).

Remedy: Paani will continue to proactively engage with newly elected officials in areas where Paani works and will continue to seek support from WECS as early as possible. As mentioned in the resolved issues above, Paani saw promising signals when WECS requested a second joint field visit this quarter, including PTC members. Unfortunately, the trip had to be canceled due to COVID-19, but Paani hopes to reschedule this once travel restrictions are lifted. Paani will continue to explore effective ways to engage various levels of government. For example, WMSs and RBTLs are building relationships with newly elected local provincial and municipality/RM government leaders, who have supported the development of five municipality/RM watershed platforms thus far. Paani engages

these leaders at every opportunity and provides direct capacity building and support in the development of the local government plans and policies.

PERSONNEL UPDATES

Individuals who joined or supported Paani between January 1 – March 31, 2019 are presented in Table 7.

Table 7: Paani personnel updates Y4 Q3

PAANI PERSONNEL UPDATES	
NAME	ROLE
LTTA	
Prativa Tamang, January 1, 2020	Promoted from Front Office Associate to Administrative and Logistic Officer
Sanjog Sriwastav, January 1, 2020	Promoted from Grants Manager to Grants and Sub-Contracts Manager
Pushkar Khanal, February 1, 2020	Promoted from Communication Officer to Communication Manager
Resignation of Jagadish Bhatta effective from Feb. 26, 2020	Watershed Management Specialist
Resignation of Laxmi Bhatt on March 12, 2020, effective from April 10, 2020	Watershed Management Specialist
STTA	
Anju Pandit, Jan. 10 – June 30, 2020	Data Analysis Manager
Ashutosh Shukla, March 11 – April 15, 2020	Political Economic Analysis Specialist
Marjo Curgus – Sept. 15, 2019- May 31, 2020	Sustainable Hydropower Advocacy Specialist - LOE Increase and POP Extension
Ram Devi Tachamo Shah, March 20- July 31, 2020	Fish Catch Assessment National Consultant
Bhidan Rajbhandari, April 3 - November 30, 2020	Graphic Designer - STTA
Arthur Neiland, Martin Van Brakel, and Madhav Shrestha, SNV, March 16 - August 30, 2020	Business Case Development on Nepal's Fisheries
Robin Young, June 20, 2019- December 16, 2020	Investment Specialist - POP Extension
Marjorie Huang, SNV, April 1- December 16, 2020	Compliance and Monitoring Manager
Annapurna Sthapit, SNV, Janaury 14, 2019- December16, 2020	HR Officer – LOE Increase

GRANTS - COMPLETED, ONGOING, CANCELED AND MODIFICATION

Table 8: Closed and completed Paani grants as of Y4 Q3

CLOSED AND COMPLETED GRANTS					
GRANT NO/ TYPE	GRANTEE	GRANT TITLE	AMT (USD)	DISBURSED (USD)	STATUS
G-KAT-001 Fixed Amount Award (FAA)	Dali NGO Federation (DNF)	Strengthening Capacity of Nepal's Water Users to Adapt to Climate Change at the Central and Grassroots Levels - Dalit Members Watershed: Tila	[redacted]		Closed
G-KAT-002 Fixed Amount Award (FAA)	Federation of Community Forest Users Nepal (FECOFUN)	Strengthening Capacity of Nepal's Water Users to Adapt to Climate Change at the Central and Grassroots Levels - Forest Users Watersheds: Middle Karnali and Phoksundo Suligaad			Closed

CLOSED AND COMPLETED GRANTS				
G-KAT-003 Standard Grant	Himalayan Grassroots Women's Natural Resource Management Association (HIMAWANTI)	Strengthening Capacity of Nepal's Water Users to Adapt to Climate Change at the Central and Grassroots Levels - Himalayan Grassroots Women's Natural Resource Management Association (HIMAWANTI) Nepal Watershed: West Seti	[redacted]	Closed
G-KAT-004 FAA	Federation of Drinking Water and Sanitation Users Nepal (FEDWASUN)	Strengthening Capacity of Nepal's Water Users to Adapt to Climate Change at the Central and Grassroots Levels - Drinking Water and Sanitation Users Watersheds: Lower Karnali, Jhimruk, Mugu Karnali		Closed
G-KAT-005 FAA	National Federation of Irrigation Water Users Association Nepal (NFIWUAN)	Strengthening Capacity of Nepal's Water Users to Adapt to Climate Change at the Central and Grassroots Levels - Irrigation Water Users Watersheds: Seti Nadi, Thuli Gaad, Rangun Khola		Closed
G-KAT-006 FAA	Nepal Federation of Indigenous Nationalities (NEFIN)	Strengthening Capacity of Nepal's Water Users to Adapt to Climate Change at the Central and Grassroots Levels - Indigenous Nationalities Watersheds: Lower Mahakali, Middle Rapti,		Closed
G-KAT-007 Standard Grant	Nepal Forum of Environmental Journalists (NEFEJ)	Strengthening knowledge and partnerships on healthy watersheds		Closed
G-KAT-008 Standard Grant	Midwestern University (MWU) Surkhet	Advancing Freshwater Biodiversity, Climate Change Adaption and integrated Water Resources Management through Community Based and Advance Academic Education at Mid-Western University		Closed
G.KAT-009 In-Kind Grant	Water and Energy Commission Secretariat (WECS)	Strengthening Institutional Capacity of Nepal's Waters and Energy Commission Secretariat (WECS)		Closed
G-KAT-010 In-Kind Grant	Nepal Forum of Environmental Journalists (NEFEJ)	Strengthening Knowledge of Nepal's Citizens on Healthy Watersheds and Healthy River Basins Through Media Channels, Technologies and Platforms		Closed
G-KAT-011 In-Kind Grant	Nepal National Committee on Irrigation and Drainage (NENCID)	Strengthening Institutional Capacity- Supporting Nepal National Committee on Irrigation and Drainage (NENCID) in organizing the 8th Asian Regional Conference (ARC) on Irrigation in Support of an Evergreen Revolution (2-4 May 2018, Kathmandu, Nepal).		Closed
G-KAT-012	Center for Molecular Dynamics-Nepal (CMDN)	A Multi-Disciplinary Assessment of Biodiversity and Socio-Economic Status of the Karnali River of Nepal		Closed
G-KAT-013	Kathmandu University (KU)	River Health and Biodiversity Profiling in the Karnali and West Rapti Watersheds: Implications to Basin Planning and Sustainable Water Resource Management in the Western Nepal		Closed
G-KAT-014 FAA	Youth Alliance for Environment (YAE)	Mapping and Assessing Pollution Stresses on Water Resources in four Watershed (Jhimruk, Middle Karnali, Thuligaad and		Closed

CLOSED AND COMPLETED GRANTS				
		Rangun) of Midwestern and Far western, Nepal		
G-KAT-015 FAA	Institute for Social and Environmental Transition-Nepal (ISET-Nepal)	Political Economy Analysis to Identify Champions for Freshwater Policy Change and Conservation of Aquatic Biodiversity	[redacted]	Completed
G-KAT-016 FAA	Balchaur Forest and Environment Resource Development Center, Nepal (BAFER-Nepal)	Aquatic Biodiversity Conservation Project (ABC)		Closed
G-KAT-017 FAA	Center of Research for Environment Energy and Water (CREEW)	Climate Smart Watershed Management at the Selected Sub-Watersheds of Thuligaad Watershed		Completed
G-KAT-018 FAA	Eco Agro DRM	Development/update of DRR Harmonized Local Adaptation Plans for Action (LAPA) in Thuligaad Watershed, Doti		Closed
G-KAT-019 FAA	Federation of community Forestry Users' Nepal (FECOFUN)	Promoting Environment Friendly Roads and Climate Smart Watershed Management Practices to Increase the Climate Resilience of Community through Grassroots Capacity Building.		Closed
G-KAT-020 Standard Grant	Human Welfare and Environment Protection Center (HWEPC)	Sustainable Economic Growth through Freshwater Biodiversity Conservation in Rapti River.		Closed
G-KAT-021 FAA	Karnali Integrated Rural Development and Research Center (KIRDARC)	JAL KACHAHARI: A Multi-Stakeholder Process for Resilient Water Resources Management in Karnali Basin		Closed
G-KAT-022 Standard Grant	Mallarani Rural Development Concern Center (MRDCC)	Jhimruk Watershed Management Project		Closed
G-KAT-023 FAA	National Environment and Equity Development Society (NEEDS)	Community Based Watershed Management Initiatives of the Lower Mahakali Watershed		Closed
G-KAT-024 FAA	Nepal National Social Welfare Association (NNSWA)	Strengthening Community Resilience in Rangun Khola and Lower Mahakali Watersheds		Closed
G-KAT-025 FAA	Nepal River Conservation Trust (NRCT)	Karnali River Corridor Management Project		Completed
G-KAT-026 FAA	People's Help Group (PHG)	Effective and Efficient Water Use Techniques to Combat Climate Change		Closed
G-KAT-027 In-Kind Grant - Gov	Nepal Agriculture Research Council (NARC)	Strengthening Institutional Capacity of Nepal Agriculture Research Council on Molecular Biology Studies		Closed
G-KAT-028 FAA	Research and Development Center Nepal (RDC Nepal)	Increasing Adaptive Capacity of Communities in Upper Rangun-Khola Sub-watershed through Improved Water Resources Management		Closed
G-KAT-029 FAA	Resources Himalaya	FISH (Fostering Indigenous Sustainable Harvest) for Climate Resilient Livelihoods		Closed

CLOSED AND COMPLETED GRANTS				
	Foundation (RHF)	in Middle Karnali Watershed of Karnali River Basin		
G-KAT-031 FAA	Samudayik Sarathi	Increasing Community Resilience and Freshwater Biodiversity Conservation in Lower Karnali River basin, Nepal	[redacted]	Closed
G-KAT-041 FAA	Forest Action Nepal	Assessment of the conservation status of aquatic biodiversity in Karnali and Mahakali River Basins		Completed
G-KAT-045 Standard Grant	Nepal Forum of Environmental Journalists (NEFEJ)	Strengthening Knowledge on Healthy Watersheds		Closed
G-KAT-046 In-Kind Grant	Nepal Forum of Environmental Journalists (NEFEJ)	Strengthening Knowledge on Healthy Watersheds		Closed
	TOTAL			

Table 9: Ongoing Paani grants as of Y4 Q3

ONGOING GRANTS					
GRANT NO/ TYPE	GRANTEE	GRANT TITLE	AMT	DISBURSED	STATUS
G-KAT-032 FAA	Dolphin Conservation Center (DCC)	Action to Establish Dolphin Science Through Institutional Development and Community Learning in the Lower Karnali Watershed	[redacted]		On going
G-KAT-033 FAA	Rural Development Center (RUDEC)	Improve dry water resources in Badikedar, Boktan and Chaukune Rural Municipality, in Bogatan Lagam Karnali watershed			On going
G-KAT-034 FAA	Sustainable Agriculture or Environment & Water Source Conservation Center (SAEWCC)	Action to support aquatic biodiversity conservation through promoting river stretch co-management practices in Middle Karnali Watershed.			On going
G-KAT-035 FAA	Multi-Dimensional Resource Center (MRC)	Strengthening Actions for Fostering Community Resilience through Integrated Water Management and Disaster Risk Reduction in the Gadhawa Rural Municipality of Middle West-Rapti Watershed (SAFoR)			On going
G-KAT-036 FAA	Federation of Drinking Water Supply and Sanitation Nepal (FEDWASUN)	Actions for capacity enhancement of local users aligning with aquatic biodiversity conservation and climate change adaptation practices (ACACA) in Jhimruk and Lower Karnali watershed			On going
G-KAT-037 FAA	Kalika Development Center Nepal (KDCN)	Reducing vulnerability through local water management and livelihood improvements			On going
G-KAT-038 FAA	Creation of Innovative Society (CIS)	Increasing Community Capacity for Climate Adaptation and Fisheries Co-Management			On going

ONGOING GRANTS				
G-KAT-039 FAA	Fulvari Integrated Rural Development Organization (FIRDO)	Community mobilization for sustainable management of Middle Rapti and Jhimruk watershed	[redacted]	On going
G-KAT-040 In-Kind Grant	Department of Hydrology and Meteorology (DHM)	Strengthening DHM Hydro-Met Stations and Flood Risk Warning in Paani Watersheds	[redacted]	On going
G-KAT-042 FAA	Environment Coordination Committee (ECC)	Support local governments and fishing communities to reduce threats to aquatic biodiversity in Thuligaad watershed	[redacted]	On going
G-KAT-043 FAA	Conservation Development Foundation (CODEFUND)	Enhancing communities ability to manage watersheds for reducing threats to freshwater ecosystem in West Rapti River Basin, Nepal	[redacted]	On going
G-KAT-044 Standard Grant	Independent Power Producers' Association, Nepal (IPPAN)	Sustainable Hydropower Development	[redacted]	On going
G-KAT-047 FAA	Mallarani Rural Development Concern Center (MRDCC)	Jhimruk Khola Watershed Management Project II	[redacted]	On going
G-KAT-048 FAA	Human Welfare and Environment Protection Center (HWEPC)	Sustainable economic growth through freshwater biodiversity conservation in Rapti river.	[redacted]	On going
G-KAT-048 FAA	Resources Himalaya Foundation (RHF)	SuChaK: Surface Water Change and Knowledge Enhancement: An Indicator Assessment of Aquatic Biodiversity, Habitat Disturbances and Conservation Options in West Seti River Watershed, Nepal	[redacted]	On going
G-KAT-050 FAA	Women Act	Empowering Women and Marginalized Groups in Freshwater Biodiversity Conservation and River Resources Management	[redacted]	On going
G-KAT-051 FAA	National Federation of Irrigation Water Users Association Nepal (NFIWUAN)	Enhancing local capacity of Water User Associations (WUAS) to improve irrigation systems and water source protections through community engagement	[redacted]	On going
G-KAT-054 FAA	Sonaha Bikash Samaj (SBS)	Strengthening community capacity for river stretch co-management	[redacted]	On going
G-KAT-055 FAA	Sundar Nepal Sanstha	Promoting community based aquatic biodiversity conservation initiatives in Lower Karnali watershed	[redacted]	On going
G-KAT-056 FAA	Karnali Integrated Rural Development and Research Center (KIRDARC)	JAL KACHAHARI: Dialogue for Water and Life	[redacted]	On going

ONGOING GRANTS				
G-KAT-057 FAA	Sahara Nepal	Raising awareness and capacity building of local communities for conservation and sustainable use of aquatic biodiversity in West Seti Watershed	[redacted]	On going
G-KAT-058 FAA	Rural Community Development Centre (RCDC)	Resilience through Ecological Restoration of Sub-Watersheds through Community Engagement		On going
G-KAT-059 FAA	Multipurpose Development Society (MPDS)	Building Community Resilience for the Management of Rangun Watershed in Alital Rural Municipality of Dadeldhura District		On going
G-KAT-061 FAA	Karnali Community Development Centre (KCDC)	Action to support capacity building of local institutions towards biodiversity conservation and solid waste management in Rara Khatyad Watershed		On going
G-KAT-062 FAA	Rural Situation Nepal (RSN)	Freshwater Biodiversity Improvement Thorough Co-Management Practices in Tila Karnali Watershed		On going
G-KAT-063 FAA	Western upland development association Nepal (WUDAN)	Promoting native fish farming and increasing park/people coordination, Community resilience to climate change through increasing capacity and established good governance		On going
G-KAT-064 FAA	Integrated Development Society (IDeS)	Enhancing community capacity for collaborative management of Thuligaad watershed		On going
G-KAT-067 FAA	Research and Development Center Nepal (RDC Nepal)	Increasing Adaptive Capacity of Communities through Improved Water Resources Management (Second Grant)		On going
G-KAT-069 FAA	Federation of Community Forestry Users Nepal (FECOFUN)	Promoting Climate Smart Watershed Management Practices to Increase the Community Resilience to Climate Change through Increasing Capacity, Livelihood Promotion and Establishing Good Governance		On going
G-KAT-070 FAA	Bird Conservation Nepal (BCN)	Ornithological Survey to Understand Migratory Behavior and Threats to Birds in Phoksundo and Rara Lake		On going
G-KAT-071 In-Kind Grant	Federation of Drinking Water Supply and Sanitation Nepal (FEDWASUN)	Actions for capacity enhancement of local users aligning with aquatic biodiversity conservation and climate change adaptation practices (ACACA) in Jhimruk and Lower Karnali watershed		On going
G-KAT-072 In-Kind Grant	Shey Phoksundo RM	Strengthen Shey Phoksundo Rural Municipality on Climate Smart Watershed Management Practices to Increase the Community Resilience to Climate Change through Increasing Capacity, Livelihood Promotion and Establishing Good Governance		On going
		TOTAL		
		GRAND TOTAL	[redacted]	

Table 10: Paani grants canceled as of Y4 Q3

CANCELLED GRANTS				
NO	ORGANIZATION	PROPOSAL TITLE	ESTIMATED AMT (USD)	DESCRIPTION
G-KAT-049 FAA	Central Department of Environmental Science, Tribhuvan University (CDES-TU)	SuChaK: Surface Water Change and Knowledge Enhancement: An Indicator Assessment of Aquatic Biodiversity, Habitat Disturbances and Conservation Options in West Seti River Watershed, Nepal	[redacted]	Submitted to USAID, received feedback regarding legal entity of CDES-TU, which is categorized as government-owned entity. Paani replaced TU with RHF with reduced scope and budget.
G-KAT-052 FAA	United National Development Forum (UNDF)	Community Capacity Enhancement for Sustainable Freshwater Biodiversity Conservation and Watershed Management		Canceled
G-KAT-053 FAA	Working for Access and Creation Nepal (WAC)	Increase community resilience through climate change adaptation and local water management, and strengthen local government and communities on implementing environment friendly rural road construction in Middle Karnali watershed		Canceled
G-KAT-065 SG	Mid-Western University - 2nd Grant	Advancing Freshwater Biodiversity, Climate Change Adaption and integrated Water Resources Management through Community Based and Advance Academic Education at Mid-Western University (Second Grant)		Canceled
G-KAT-066 InKind Grant	Mid-Western University - 2nd Grant	Advancing Freshwater Biodiversity, Climate Change Adaption and integrated Water Resources Management through Community Based and Advance Academic Education at Mid-Western University (Second Grant)		Canceled
		TOTAL		

Table 11: Paani grants modification as of Y4 Q3

MODIFIED GRANTS					
GRANT NO/ TYPE	GRANTEE	GRANT TITLE	AMT (USD)	REVISED (USD)	STATUS
G-KAT-032 FAA	Dolphin Conservation Center (DCC)	Action to Establish Dolphin Science Through Institutional Development and Community Learning in the Lower Karnali Watershed	[redacted]		On going
G-KAT-034 FAA	Sustainable Agriculture or Environment & Water Source Conservation	Action to support aquatic biodiversity conservation through promoting river stretch co-management practices in Middle Karnali Watershed.			On going

MODIFIED GRANTS				
	Center (SAEWCC)			
G-KAT-035 FAA	Multi-Dimensional Resource Center (MRC)	Strengthening Actions for Fostering Community Resilience through Integrated Water Management and Disaster Risk Reduction in the Gadhawa Rural Municipality of Middle West-Rapti Watershed (SAFoR)	[redacted]	On going
G-KAT-036 FAA	Federation of Drinking Water Supply and Sanitation Nepal (FEDWASUN)	Actions for capacity enhancement of local users aligning with aquatic biodiversity conservation and climate change adaptation practices (ACACA) in Jhimruk and Lower Karnali watershed		On going
G-KAT-037 FAA	Kalika Development Center Nepal (KDCN)	Reducing vulnerability through local water management and livelihood improvements		On going
G-KAT-039 FAA	Fulvari Integrated Rural Development Organization (FIRDO)	Community mobilization for sustainable management of Middle Rapti and Jhimruk watershed		On going
G-KAT-042 FAA	Environment Coordination Committee (ECC)	Support local governments and fishing communities to reduce threats to aquatic biodiversity in Thuligaad watershed		On going
G-KAT-047 FAA	Mallarani Rural Development Concern Center (MRDCC)	Jhimruk Khola Watershed Management Project II		On going
G-KAT-048 FAA	Human Welfare and Environment Protection Center (HWEPC)	Sustainable economic growth through freshwater biodiversity conservation in Rapti river.		On going
G-KAT-050 FAA	Women Act	Empowering Women and Marginalized Groups in Freshwater Biodiversity Conservation and River Resources Management		On going
G-KAT-051 FAA	National Federation of Irrigation Water Users Association Nepal (NFIWUAN)	Enhancing local capacity of Water User Associations (WUAS) to improve irrigation systems and water source protections through community engagement		On going
G-KAT-054 FAA	Sonaha Bikash Samaj (SBS)	Strengthening community capacity for river stretch co-management		On going
G-KAT-055 FAA	Sundar Nepal Sanstha	Promoting community based aquatic biodiversity conservation initiatives in Lower Karnali watershed		On going
G-KAT-056 FAA	Karnali Integrated Rural Development and Research Center (KIRDARC)	JAL KACHAHARI: Dialogue for Water and Life		On going

MODIFIED GRANTS				
G-KAT-058 FAA	Rural Community Development Centre (RCDC)	Resilience through Ecological Restoration of Sub-Watersheds through Community Engagement	[redacted]	On going
G-KAT-059 FAA	Multipurpose Development Society (MPDS)	Building Community Resilience for the Management of Rangun Watershed in Alital Rural Municipality of Dadeldhura District		On going
G-KAT-061 FAA	Karnali Community Development Centre (KCDC)	Action to support capacity building of local institutions towards biodiversity conservation and solid waste management in Rara Khatyad Watershed		On going
G-KAT-064 FAA	Integrated Development Society (IDeS)	Enhancing community capacity for collaborative management of Thuligaad watershed		On going
G-KAT-070 FAA	Bird Conservation Nepal (BCN)	Ornithological Survey to Understand Migratory Behavior and Threats to Birds in Phoksundo and Rara Lake		On going
		TOTAL		

SECTION V: LEARNING

Data Quality Assessment

Paani conducted an internal Data Quality Assessment (DQA) exercise on four key indicators in Jan. 2020. [11] As the last Paani DQA was completed in Nov. 2017, the project wanted to complete a second DQA prior to the end of the project to be in line with ADS requirements to conduct DQAs every three years. The main purpose of the Jan. 2020 DQA was to review, learn and provide guidance on overall data management, including collecting, storing and processing issues for these indicators. While the DQA was focused on the four key indicators, Paani also will apply the learning to other remaining indicators as relevant. Some overall recommendations provided through the internal DQA exercise, which are applicable to all of Paani's standard and custom indicators, include:

- Further define the indicators, particularly in relation to the significant areas and biophysical improvements;
- Revisit sub indicators and tools to measure biophysical improvements;
- Use community informed scoring criteria for a perception survey; and
- Improve the existing data collection (tools and methods), storage, mapping and calculation protocols with more disintegration.

Based on the above, Paani will revise its MEL Action Plan (Year 5, July - December, 2020) according to recommendations from the internal DQA exercise in Jan. 2020; field level activities and results specified in Paani's Contract and annual work plans, which include four levels of orders of results; Paani Project's Theory of Chain (TOC), and Paani's Focus Initiatives (Big Wins) (Action Plan available here). Paani has mapped contractual outcomes related to the four orders of results with the Paani TOC outcomes and tasks (available here). To prepare the MEL - action plan, a thorough review of the order of results was conducted to relate them with contributing activities. Based on this integration, Paani is developing "change" measurement tools for each indicator. Once development of all tools are complete, Paani plans to test the newly developed tools in the field. Paani will collect and compile existing and new evidence to inform the MEL plan in its final and fifth year. In multiple cases, the same activity is found to contribute to more than one standard or custom indicator; for example, biological/biophysical improvement, management improvement and economic benefits that can happen sequentially during a timeframe.

Assessment of Paani Communications Program

[11] These indicators were; E.G 10.2-1: Number of hectares of biologically significant areas showing improved biophysical conditions as a result of USG assistance; E.G 10.2-2: Number of hectares of biologically significant areas under improved natural resource management as a result of USG assistance; EG 10.2-3: Number of people with increased economic benefits derived from sustainable NRM and conservation as a result of U.S. assistance; and 1.4.1-2: Number of policies/ regulations/ administrative procedures in each of the following stages of development as a result of U.S. assistance in each case: Stage 1: Analyzed; Stage 2: Drafted and presented for public/stakeholder consultation; Stage 3: Presented for legislation/decree; Stage 4: Passed/ approved; Stage 5: Passed for which implementation has begun.

As covered in the Communications section, FDM's survey on Paani's communications activities with more than 400 HHs in four watersheds showed that these activities played a significant role in raising awareness and changing behavior related to aquatic biodiversity conservation. These activities, along with other Paani interventions, inspired people to form committees to work on various aspects of conservation, participate in public awareness campaigns, and collaborate with their local governments, among other actions. With these successes, some key recommendations also emerged. For example, although those who were exposed to the TV and radio programs generally found them engaging, more extensive promotional activities could have helped generate more interest and thus reach more people. Participants also reported an interest in "infotainment" style shows, which could be more accessible to audiences not accustomed to listening to/watching documentary or news style features. The town hall meetings proved to be quite effective in fostering dialogue among stakeholders and in influencing local governments to make public commitments to aquatic biodiversity conservation, in particular the follow up town hall meetings that checked the status of commitments previously made. Regularly scheduled follow up town hall meetings could prove effective as a mechanism to affirm local governments' commitments. In addition, local organizations could serve as co-facilitators along with a grantee like NEFEJ to ensure sustainability. Interestingly, the findings showed that the majority of the audience of the radio and TV programs and town hall meetings was under the age of 30; therefore, youth could be specifically targeted in future communications campaigns, with a heavier emphasis on disseminating messages through social media (more details in FDM's full report available here). These findings demonstrate the key role that a robust communications campaign can play in helping communities conserve aquatic resources, and how a future campaign could be designed for an even stronger impact.

LESSONS LEARNED AND HOW THEY ARE USED TO INFORM PROGRAM PERFORMANCE

- **Operational plan needed for mechanical cleaning of invasive plants from wetlands.** Paani supported the procurement of a water mower to control invasive plant species for Bhagaraiya Lake to be managed by the Bhagaraiya Lake Management Committee (BLMC), Lower Karnali Watershed. Paani learned that funds are limited to continue operating the water mower needed to regularly clear invasive plants. As such, next quarter, Paani, through grantee FEDWASUN, will support BLMC and the local government to prepare a water mower operation plan that includes fund generating activities through alternative uses of the mower raft, e.g., recreational boating during periods of limited invasive plant growth.

- **Further support required to revise regulations/guidelines to manage/regulate exotic fish species.** Extensive review of invasive plants and animals in Nepal have shown that many exotic invasive fish species of commercial interest are increasingly being used in aquaculture in Lower Karnali, Lower Mahakali and Middle Rapti Watershed. The review also indicated that the introduction, trade and rampant use of exotic fish would have a more severe impact than invasive plant species. There are multiple cases of invasive fish escaping from aquaculture facilities into natural waters of these watersheds that could pose threats to the native fish, although their direct impact has not yet been well studied. To control the spread of alien invasive fish species and their impact, there is an urgent need to develop appropriate regulations/guidelines to regulate the introduction, trade and farming practices of aquaculture species (plant and/or animal). In Y4 Q4, Paani will organize a consultation workshop with local and national level stakeholders to share major findings of the review and collect feedback to further assess the need for developing these regulations/guidelines.

- **Institutional strengthening of CAACGs is essential.** Paani has been supporting the formulation and enactment the AABCA and subsequent registration and hand over of river stretches to CAACGs since June 2018. Altogether 55 CAACGs have been formed and 31 registered in accordance with the Act. The remaining CAACGs will be registered by the end of Y4 Q4. In addition, 24 RMs and municipalities have enacted the AABCA; 36 total will have enacted it by the end of Y4 Q4. However, neither the representatives of local governments nor the members of CAACGs are cognizant of most of the provisions of the Act. Further, members of CAACGs are not fully aware of the requirements of their individual statutes and are unable to effectively organize for conservation of aquatic biodiversity, for their collective benefit. As Paani has limited time left, it should focus its support on influencing local government and building the institutional capacity of CAACGs. Focus over the next six months will be critical to ensure the CAACGs' effectiveness beyond the life of the project.

- **Development of AABCB is a dynamic process**. Since June 2018, Paani began providing technical support to develop the AABCB, first to governments in Middle Karnali Watershed. Since then, it has provided technical support to 36 RMs and municipalities in 8 watersheds. The contents and scope of the Bill have improved and expanded over time and in watersheds. For example, the AABCB developed in Middle Rapti contained two new sections and different subsections. One of the most important new provisions related to declaring a fish conservation zone. In the AABCB developed with local governments in Jhimruk Watershed in June 2019, Paani included criteria related to identifying households that should get CAACG membership. Finally, while revising the AABCB through consultations with stakeholders in Thuligaad and Bogatan Lagam Watershed, Paani included six new sections related to formation of a RM/M level Aquatic Animal and Aquatic Biodiversity Conservation Committee, and in Thuligaad, a watershed level Aquatic Animal and Aquatic Biodiversity Coordination Council. These later Acts contain 60 sections compared to 43 in the first AABCB. In summary, Paani has learned how to better incorporate feedback from local government, CSOs and NGOs to develop a more representative, comprehensive Bill.

SECTION VI: MAJOR ACTIVITIES PLANNED FOR NEXT QUARTER

Table 12 presents the major activities planned for the period of April 1 – June 31, 2020. In consistency with Paani's Y4 AWP, the activities are prepared according to strategic approaches.

Table 12: Major activities planned for next quarter

STRATEGIC APPROACH 1a: Improve local management for capture fisheries ***SA Lead: Freshwater Fisheries Specialist (Suresh Wagle)***									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION (Watershed/River Basin/National)**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5 Q1**
Biological & socioeconomic information available for commercial and CC impacts (Greater understanding of impact of destructive fishing and CC)	1.1.1: Assess capture fisheries	C 1.1.1.1 Prepare fisheries and biodiversity inventories	Continue to assess biodiversity through research grants (RHF). Linked with SA 4A will inform and fill the knowledge gap on fish inventory and inform capture fisheries management.	West Seti River	Conservation governance framework available (Report)	X	X	X	X
			Conduct catch assessment survey (CAS) in selected river stretches (STTA service) (Linked with SA 4a)	Middle and Lower Karnali Watersheds	CAS methodology and survey Report	X	X	X	X
			Conduct feasibility study of aquaculture and culture-based fisheries in Karnali Pradesh	Karnali Province	Feasibility study report	X	X	X	
		C.1.1.1-2 Build capacity of fisher community to engage in alternative business enterprises	Develop business case study of capture fisheries ((STTA/Vender Service received)	National	3 reports on business cases developed	X	X	X	X

Sustainable capture fisheries management guidelines developed with municipalities/RM and communities-GESI aware	1.1.2 Build capacity for fisheries co-management	C1.1.2.2. Facilitate participatory development of sustainable capture fisheries and Co-management guidelines	Conduct consultative MSC workshop to draft sustainable capture fisheries and Co-management guidelines, 2 workshops (Local APS, Paani)	Lower Karnali, Tila	2 guidelines developed		X	X	
River group formed-GESI aware		C 1.1.2-3 Support to form Community Aquatic Animal Conservation Groups (CAACG)	Conduct meetings to form and register CAACG groups, (Local APS)	Lower Karnali, Tila, West Seti Watersheds	23 CAACG groups Registered in municipality to undertake conservation activities.	X	X	X	
		P1.1.2.5 Organize & develop operational plans for community groups	Support monthly meetings of CAACG and quarterly meetings of CC (Local APS)	Middle Karnali, Jhimruk. Middle Rapti, Thuligaad, Lower Karnali, Mid-West Seti	45 meetings conducted	X	X	X	
			Conduct meetings to develop TOR and form MSC Coordination Committee (Local APS)	Lower Karnali, Tila, Mid-West Seti	3 coordination committees formed	X	X	X	
		C 1.1.2-6 Facilitate community & municipality/rural municipality process to operationalize guidelines	Support the delineation of river stretches for CAACGs (Local APS) to implement fisheries act and guideline provision.	Middle Rapti, Jhimruk, Thuligaad,	3 river stretches delineated	X	X	X	

		C 1.1.2.7 Training for community fishing groups (CAACG)	Conduct trainings for CAACGs on leadership and communication skills (Local APS)	Tila, Lower Karnali,	At least 2 trainings conducted	X	X	X	
			Conduct ToT for CAACG and local grantee on river stretch co-management and fish post harvest (ISET Nepal-vendor)	Karnali and Mahakali River Basin	At least 2 trainings conducted		X	X	
		C1.1.2-8 Training on resource monitoring	Conduct trainings and support CAACG members on resource monitoring and maintenance of Community Biodiversity Register – CBR (Local APS)	Tila, Lower Karnali, Thuligaad	At least 3 trainings conducted	X	X	X	
	1.1.4 Support extension type continuing education programs	1.1.4.1 Provide technical expertise to MoA fisheries extension program on sustainable fisheries & aquaculture	Participate in MoALD fisheries research and extension program in Paani/Grantee technical events	10 persons participated in technical events	National	X	X	X	X

STRATEGIC APPROACH 1b: Improve local capacity for Local Water Management *SA Lead: Integrated Water Resources Management Specialist (Bhawani S Dongol)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION (Watershed/River Basin/National)**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5 Q1**
Participatory (GESI aware) adaptation plans (LAPAs, CAPAs and WUMPs) are developed and endorsed (plan development) DDC/VDCs implement adaptation plans through participatory processes (plan implementation)	1.3.1 Develop/update watershed/sub watershed management plans (WMPs)	C1.3.1-2 Harmonize with master plans, basin strategic plans, and catchment management plans.	RDCC will prepare watershed management action plan based on existing plans in Bogatan Lagam watershed	Bogatan Lagam Watershed	Watershed management action plan	X	X	X	
	1.3.2 Facilitate the preparation of CAPAs, LAPAs, and WUMPs.	C1.3.2-4 Support plan implementation and assess effectiveness of learning and adaptive management.	Sahara Nepal will prepare one LDCRP ECC will prepare two LDCRPs FECOFUN will prepare 2 CAPAs KIRDARC will conduct workshop to integrate Paani actions into local plans	West Seti watershed Thuligaad watershed Phoksundo Suligaad watershed	# of local plans	X	X	X	X

Better (GESI aware) local level land and water management practices implemented	1.2.3 Develop and promote climate-smart best management practices	C1.2.3-2 Promote best practices through existing mechanisms (NGOs, etc.)	- RDC will upscale climate smart watershed management best practices (spring source protection, recharge ponds, bioengineering and plantation).	Rangun watershed	Scaling and promotion of best practices	X	X	X	X
			- MPDS will promote best practices (water source protection, recharge pond for water recharge, slope stabilization, bioengineering and plantation).	Rangun watershed					
			- CIS will promote climate smart agriculture and vegetable farming	Lower Mahakali watershed					
			- MRDCC will implement climate smart watershed best practices (water source and catchment protection, recharge pond and bioengineering)	Jhimruk watershed					
			- FIRDO will implement best practices (spring protection and bio engineering)	Jhimruk watershed					
			- FEDWASUN will promote micro watershed management activities	Jhimruk watershed					
			- MRC Nepal will promote best practices (source protection, recharge ponds, bioengineering, plantation)	Middle Rapti watershed					
			- RCDC will implement best practices (rainwater harvesting, water recharge and conservation, bioengineering)	Bogatan Lagam watershed					

			- FECOFUN will establish demo site of climate smart agriculture - KIRDARC will implement spring source conservation activities	Phoksundo watershed Tila watershed					

Communities have equitable access to skills and resources to implement appropriate climate smart and watershed management activities. (5) (implementation)	1.2.2 Training and support for watershed management activities (implementation)	C1.2.2-2 Training on reforestation, etc.	MPDS will conduct trainings on climate smart best practices (water/spring source protection, recharge pond, climate smart technologies and watershed management)	Rangun watershed	# of communities/ participants trained in climate smart best practices	X	X	X	X
			CIS will conduct capacity building trainings on climate change adaptation and Climate Friendly Agriculture Technologies to Community Members	Lower Mahakali watershed					
			FIRDO will conduct trainings on best practices	Jhimruk watershed					
			NFIWUAN will conduct trainings on best (micro irrigation, climate smart agriculture)	Bogatan Lagam watershed					
			WUDAN will conduct trainings on climate change adaptation	Phoksundo watershed					
			FECOFUN will conduct trainings on water management	Phoksundo watershed					
			KIRDARC will conduct trainings on best practices	Tila watershed					

STRATEGIC APPROACH 1C: Improve local capacity for regulation and management of roads and mining *SA Lead: IWRM Specialist (Bhawani Dongol)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5 Q1**
User groups advocate for better road construction and LU and settlement planning	1.2.1 Climate-smart road construction and environmentally-friendly (EF) gravel mining	C 1.2.1-1 Raise awareness of community road building/maintenance groups and local elected bodies of better road construction (link to 4.1.9 outreach)	Follow up on awareness raising programs using IEC materials Share and disseminate Tutorial video on EFRC	Jhimruk, Middle Karnali, West Seti watersheds	# of user groups advocate	X	X	X	X
Municipalities/rural municipalities prioritize funds for roads with EF designs	1.2.1 Climate-smart road construction and environmentally-friendly (EF) gravel mining	C 1.2.1-4: Assist municipalities/rural municipalities/local elected bodies in developing criteria (Construction guidelines) for prioritizing funding and assuring contracts that includes environmental clauses (Link to 1.3.3: EFLG)	Follow up with the local governments in endorsing EFRC guidelines Follow up with the local governments in implementing EFRC guideline in their road construction	Jhimruk, Middle Karnali, West Seti watersheds	# of EFRC Guidelines prepared/endorsed and applied	X	X X	X X	X X
Road user groups develop better designs of roads	1.2.1 Climate-smart road construction and environmentally-friendly (EF) gravel mining	C 1.2.1-5: Develop IEC materials for capacity building of municipalities/rural municipalities and contracting engineers on better road construction (potentially add training). C 1.2.1-6 Build capacity of road management	Finalize and share tutorial video on EFRC	Jhimruk, Middle Karnali, West Seti watersheds	# tutorial video # awareness campaigns	X	X X	X	X

STRATEGIC APPROACH 1C: Improve local capacity for regulation and management of roads and mining *SA Lead: IWRM Specialist (Bhawani Dongol)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5 Q1**
		user groups to monitor EF road construction (Check SNRTP work)							
Sustainable aggregate mining guidelines in place	1.2.1 Climate-smart road construction and environmentally-friendly (EF) gravel mining	C 1.2.1-10: Provide TA to miners (individuals and companies) on better practices C 1.2.1-11: Raise awareness of communities of impacts of gravel mining and regulations (linked 4.1.9: outreach) C 1.2.1-12: Provide TA to rural municipalities on monitoring activities in compliance with IEEs	Provide grant to BAFER to support local government and communities in sustainable mining practices Follow up implementation	Lower Karnali and Lower Mahakali watersheds			X	X	X

STRATEGIC APPROACH 1D: Improve local capacity for managing invasive species *SA Lead: Freshwater Fisheries Specialist (Suresh Wagle)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5 Q1**
Community groups understand and select the aquatic invasive plant control measures	1.1.1: Assess capture fisheries	C1.1.3-10 Provide training and/or technology transfer on	Conduct training on control of invasive and operation of water mower [FEDWASUN]	Lower Karnali Watershed	Training report		X	X	

Reduced populations of non-native fish species (sustainable aquaculture policy/guidelines developed by GoN		proven methods							
		C1.1.3-2 Support GoN to develop policy/regulations for fish farmers	Consultation workshop in Lower Karnali Watershed for sharing invasive review and feedback for assessing need of regulation/guideline for all categories of fish farmers.	Lower Karnali	Report & draft guideline		X	X	

STRATEGIC APPROACH 2A: Improve river basin planning ***SA Lead: Senior Communications Specialist (Sarah Gray)***									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5 Q1**
Basin-level groups convened with representatives on priority topics	2.3.2 Organize distinguished speaker series	C2.3.2.-1 Conceptualize and develop plans for distinguished speaker series	Meet with IFC to discuss upcoming opportunities for partnering, including a training for banks on ESRM guidelines	National			X		
		Conduct speaker series	Conduct a training for banks on ESRM guidelines (IFC may present/facilitate some sessions) (Links with SA 3b, Task 3.2.3)	National	1 workshop held # of speaker series # of participants			X	X

STRATEGIC APPROACH 2A: Improve river basin planning *SA Lead: Senior Communications Specialist (Sarah Gray)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5 Q1**
	2.3.3 Hold series of roundtable discussions at rural mun/mun (and basin) levels	C2.3.3-1 Convene roundtable discussions	Conduct Jalkachahari Conceptualize river basin round table discussions, if required	JK, LK, TG, RK, MK, BL, T KRB RRB	# Jalkachahari 2 basin level roundtable discussions		X	X	X
	2.3.1 Create Integrated River Basin Management Platforms (IRBMPs)	C2.3.1-1 Convene and engage stakeholders	Convene platform members at municipal level Convene platform members at watershed level	JK, LK, LM, TG, MR, RK, MK, BL KRB, RRB	Platform members convened # of platforms		X	X	X
		C2.3.1-2 Stakeholder mapping							
IWRMPs supported with best available biodiversity and climate info	2.3.4 Provide biodiversity and climate information for basin level planning	C2.3.4-1 Share Paani research information	Develop in-kind grant for Freshwater Center of Excellence (FCOE) at CDES-TU Hire vendor to develop FCOE Widespread dissemination of Paani knowledge products through FCOE Identify more local governments willing to adopt and share Paani knowledge products	National	Watershed profiles, health reports and other research shared with partners in soft and hard copy		X X	 X X	 X
NRBCF designed	2.1.2 Explore development of Nepal River Basin Conservation Fund (NRBCF)	C2.1.2-1 Prepare feasibility and design study	KRBCF office set up in Surkhet Initial investments identified/secured Hold KRBCF Launch		KRBCF office set up		X X X	 X	 X

STRATEGIC APPROACH 2A: Improve river basin planning *SA Lead: Senior Communications Specialist (Sarah Gray)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5 Q1**
		C2.1.2-3 Provide technical support to NRBCF operations	Ongoing support to KRBCF				X	X	X

STRATEGIC APPROACH 2C: Support Sustainable Hydropower *SA Lead: Sustainable Hydropower Specialist (Pradip Gautam)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						April	**May**	**June**	**Y5 Q1**
The profile of sustainable hydropower development is raised in Nepal	2.1.1 Organize an international seminar on sustainable hydropower development to raise the profile of sustainable hydro.	C2.1.1-1 Organize a seminar	Preparation of conference agenda and call for abstract through a half day workshop STTA SOW prepared and hired for facilitation of the workshop and preparation of Seminar Agenda finalized and call for abstract floated WWF led three studies: • Data collection and compilation through WWF LTTA • Data analysis and modelling by the International team	National, Karnali Basin	Conference agenda and call for abstract with potential grantee/ Paani procurement STTA hired Informational meetings held	X	X X X		X

STRATEGIC APPROACH 2C: Support Sustainable Hydropower *SA Lead: Sustainable Hydropower Specialist (Pradip Gautam)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						April	**May**	**June**	**Y5 Q1**
			• Advisory group meetings and data gathering Work group meetings in Kathmandu, consultation and initial results dissemination in Surkhet-Karnali.		Advisory meetings are organized Meetings with stakeholders for data collection Participants list	X	X	X X	X
Private (IPP) and govt hydropower operators (NEA) have greater capacity to use hydro met information and modelling for operations	2.1.3 Build hydropower operator capacity to use hydro-meteorological information and modeling	C2.1.3-1 Conduct needs assessment of hydropower operation	Through IPPAN grant develop Program Plan & run Training Program for Enhancing Sustainable Hydropower Development through Improved Understanding on Compliance with Environmental and Social Safeguards With following topics in 3-day training • E-flow Management • Catchment Area Protection • Fish friendly Hydropower Design [Fish ladder, fish passage, and hatchery] One half day workshop on Basin Hazard Assessment with DHM	National, Karnali Basin	1 Program Plan and 1 Training Manual # of workshops		X X	X X X	

STRATEGIC APPROACH 2C: Support Sustainable Hydropower *SA Lead: Sustainable Hydropower Specialist (Pradip Gautam)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						April	**May**	**June**	**Y5 Q1**
			Rewarding good practices on Sustainable Hydropower Project development					X	
Improved capacity to monitor compliance with Environmental and Social safeguards	2.1.4 Develop monitoring procedure and track compliance with Environmental and Social safeguards	C2.1.4-1 Train national, DCC, and rural municipalities to monitor compliance C2.1.4-2 Build capacity of CSOs and community groups as watchdogs C2.1.4-3 Develop tools and checklists to track environmental and social safeguards	Together with NESS, at the province level, Paani will conduct at least one debrief on the use of the tool to inform relevant provincial ministries and other relevant stakeholders of its effectiveness in safeguarding social and environment interests. Together with NESS, Conduct one interdisciplinary monitoring demonstration to evaluate water quality, ecosystem health, community impacts, disaster risk, and fisheries	Karnali, Rapti and Mahakali River Basin Rapti/Jhimruk Watershed	1 event in the respective province 1 event in the respective watershed		X	X	

STRATEGIC APPROACH 2C: Support Sustainable Hydropower *SA Lead: Sustainable Hydropower Specialist (Pradip Gautam)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						April	**May**	**June**	**Y5 Q1**
E-flow requirements understood and identified for each basin based on all proposed projects and for each project	2.2.1 Support the Nepali Government and IWMI to promote e-flow adoption	C2.2.1-1 Guidelines for e-flows design C2.2.1-2 Guidelines for e-flows implementation	Liaise with IWMI for E-Flow products and design guidelines Review e-flow requirements of products A roundtable discussion with e-flow users on methodologies and practices in Nepal	Karnali River Basin, National	Paani has rejected this grant, see footnote seven for more details.				
The profile of sustainable hydropower development is raised in Nepal	2.1.1 Organize an international seminar on sustainable hydropower development to raise the profile of sustainable hydro.	C2.1.1-1 Organize a seminar	Preparation of conference agenda and call for abstract through a half day workshop STTA SOW prepared and hired for facilitation of the workshop and preparation of Seminar Agenda finalized and call for abstract floated WWF led three studies: • Data collection and compilation through WWF LTTA • Data analysis and modelling by the International team • Advisory group meetings and data gathering Advisory committee meetings; work group meetings in Kathmandu, consultation and initial results dissemination workshops in Kathmandu and Surkhet-Karnali along with field trips for 3 studies.	National, Karnali Basin	Conference agenda and call for abstract with potential grantee/ Paani procurement STTA hired Informational meetings held 2 Advisory meetings are organized Meetings with stakeholders for data collection Participants list	X X X X	X X X X	 X	 X X

STRATEGIC APPROACH 3A: Strengthen Policy and Planning for IWRM *SA Lead: Environmental Policy and Law Expert (Narayan Belbase)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						April	**May**	**June**	**Y5 Q1**
Develop a network of champions for freshwater policy change	3.1.1: Identify champions for freshwater policy change.	C 3.1.1-1 Conduct Political Economy Assessment	Develop and organize a capacity development training program for the Champions in the policy elements relevant to them (and the development of agenda items to share with their stakeholders)	National	Session Plan for a 3 day training program		X		
		C 3.1.1-1 Conduct Political Economy Assessment	Organize one capacity development training for champions	Basin	Revised han book for the use of champions			X	
White paper on governance / policies issues and opportunities developed	3.1.2 Develop an issues and opportunities white paper	C 3.2.1-1 Prepare white paper to analyze institutional options and opportunities for holistic and integrated water management to support policy development	Dropped						
Local, Provincial and Federal government supported to develop GESI smart laws/policies	3.1.3 Provide support to WECs, national, provincial, and local governments on policies, laws, and plans.	C 3.1.3 -1 Provide support to WECs, national, provincial, and local governments on policies, laws, and plans	Offer support to MOEWRI to review and finalize draft Water Resources Policy and Water Resources Bill (Find and provide inputs in national policies and or laws).	National	Input of local stakeholders on the Bill			X	X
			Support WECS to organize a consultation workshop on draft Water Resources Bill, draft		Input of members of State Assembly and select representatives of		X	X	X

STRATEGIC APPROACH 3A: Strengthen Policy and Planning for IWRM *SA Lead: Environmental Policy and Law Expert (Narayan Belbase)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						April	**May**	**June**	**Y5 Q1**
			Water Resources Policy, and conflict resolution mechanism		local governments on the Bill				
			Provide technical support to Far West Province to develop river conservation bill or aquatic biodiversity conservation bill. Convene a meeting with the Secretary and other officials of the Far West Province's MoITFE to develop the modus operandi for developing the aquatic biodiversity conservation Bill or river conservation Bill and support the Ministry to: - Constitute a Committee to coordinate the development of the Bill - Draft GESI responsive Bill based on the revised outline and present it among the members of the Committee and revise it as per the feedback from the members of the Committee		Draft Bill			X X X X	X X
			Organize trainings for the members of local government, fishers, and CSOs on the different elements of the laws enacted by the Provincial and/or national government					X	X

STRATEGIC APPROACH 3A: Strengthen Policy and Planning for IWRM *SA Lead: Environmental Policy and Law Expert (Narayan Belbase)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						April	**May**	**June**	**Y5 Q1**
			Provide opportunity for adaptive learning, and support advocacy. Support the RMs and MPs to develop statutes (Bidhan) to register and hand over river stretches to community aquatic animal conservation group (CAACG)s.		Penultimate draft of the statues	X	X	X	X
			Organize training program for the members of local government and Executive Committee for properly administering/implementing the provisions of the statutes including compliance with the provisions of the Karnali Province's AACA and/or AABCA				X	X	X
			Assist DNPWC and Rara National Park to formulate Wetland Management Plan of Rara lake - a Ramsar site- including: -Analysis of quantitative data and information; documentation, analysis and synthesis of assessment of threats on ecological characters and functions and their mitigation measures; - Preliminary draft of the Management Plan	National (River Basin)	Draft of the Ramsar Site Management Plan of Rara lake		X	X	X

STRATEGIC APPROACH 3A: Strengthen Policy and Planning for IWRM *SA Lead: Environmental Policy and Law Expert (Narayan Belbase)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						April	**May**	**June**	**Y5 Q1**
		1.2.1 Promotion of environment friendly rural roads construction	Assist at least one municipality to develop environment friendly rural roads guidelines	Watershed	Draft of the Environment Friendly Rural Roads Guidelines – **already completed**				
			Review and revise the EFRR Guidelines based on the comments and suggestions collected by SWN from the representatives and officials of the Municipality, user groups, CACCGs, and NGOs from Jhimruk, Middle Karnali and West Seti watersheds						
Municipalities/rural municipalities' plans developed and implemented through participatory processes		1.3.1. Develop/update local watershed/sub-shed watershed management plans	Dropped						

STRATEGIC APPROACH 4a: Fill Knowledge gaps *Lead: Chief Technical Specialist (Deepak Rijal)*									
Outcomes	**Task**	**Sub-Task**	**Y4 Q4 Action plan**	**Locations**	**Outputs**	**Timeline**			
						Apr	**May**	**Jun**	**Y5 Q1**
Developing Basin scale Integrated water governance Framework using IWRM principle	4.1.1, 4.1.2, 4.1.3 Conduct rapid assessment per steps and component of ILBM: climate vulnerability & biodiversity NRM groups, CAACG Water allocation and riverine issues		Data collection, analysis and draft report preparation Field validation Presentation to the PSC meeting for endorsement Determine component of ILBM for piloting in collaboration with Municipal and local governments and other stakeholders	Rapti River Basin (Jhimruk and Middle Rapti Watersheds)	Quarter 4 narrative report: Draft training manual on water governance Water governance report Report on water management approach		X	X	X X

STRATEGIC APPROACH 4a: Fill Knowledge gaps *Lead: Chief Technical Specialist (Deepak Rijal)*									
Outcomes	**Task**	**Sub-Task**	**Y4 Q4 Action plan**	**Locations**	**Outputs**	**Timeline**			
						Apr	**May**	**Jun**	**Y5 Q1**
Identifying human and climate factors [pollution, floods] sharing up freshwater biodiversity including mitigation measures	4.1.1, 4.1.2: Rapid assessment of freshwater biodiversity, pollution sources, through review of secondary sources and direct field measurement of water quality and surveys		Review of secondary data, field data collection, lab test of water samples, recon surveys for field validation of data drawn from review and analysis of secondary sources	West Seti Watershed and Desk Review	Quarterly report inclusive of: review report based on secondary literature, documents Stakeholders consultation	X	 X	X	X
Developing a standard protocol lays the foundation for data collection and consolidation to declare fish sanctuaries and conservation areas	4.1.3 Identify areas for freshwater fish or biodiversity sanctuaries and protected areas	.	Consolidate preliminary data for possible declaration of fish sanctuary Field validation of the protocol	Field validation of draft protocol in West Seti, Middle Karnali and Thuligaad watershed	Revised fish Sanctuary declaration of protocol based on field validation Maps developed with basic data for potential fish sanctuary areas.		X	X X	X X

STRATEGIC APPROACH 4a: Fill Knowledge gaps *Lead: Chief Technical Specialist (Deepak Rijal)*									
Outcomes	**Task**	**Sub-Task**	**Y4 Q4 Action plan**	**Locations**	**Outputs**	**Timeline**			
						Apr	**May**	**Jun**	**Y5 Q1**
Identifying factors influencing behavior of migratory waterfowls connecting this with ecotourism	4.1.2, 4.1.9 1.1.1: Conduct freshwater inventories – wetland bird conservation		Report based on interviews with 20 experts that worked in wetlands Review and analyze water quality tests carried out by different scholars Revise and finalize training Manual Conduct bird observation and trainings to local bird watchers and nature guides	Rara Lake and catchment of the Lake	Quarterly report inclusive of KII report Water quality report Report on updated list of water birds in Rara Lake Revised training manual Draft I Manuscript on migratory behavior of water birds.	 X X	 X X	X	X
An integrated curriculum developed on hydropower inclusive of Fish ladder vis-à-vis e-	4.1.4 Conduct ecological studies to inform		Assess the impact of damming (hydropower, irrigation, water	Kathmandu Different Hydropower	STTA to develop curriculum on fish ladders to integrate into degree courses on hydropower	X			X

STRATEGIC APPROACH 4a: Fill Knowledge gaps *Lead: Chief Technical Specialist (Deepak Rijal)*									
Outcomes	**Task**	**Sub-Task**	**Y4 Q4 Action plan**	**Locations**	**Outputs**	**Timeline**			
						Apr	**May**	**Jun**	**Y5 Q1**
flow, HCV and SSP	infrastructure Development [Linked to Task 4.2.4].		diversion) on aquatic biodiversity	construction areas	Support STTA to integrate Paani's learning on e-flow, SSP, HCV into curriculum			X	X
Develop analytic report consolidating findings of research and reviews and consultation reports on the status of invasive species and their potential impacts on Nepal's native fish species	4.1.5 linked to SA 1d: Assess impacts of non-native fish species on freshwater biodiversity (Review document)		Support SA lead to finalize the review, status report Support SA lead to design consultative workshop to disseminate results and collect feedback Support SA lead to track exotic and invasive species for HCV and their distribution over water bodies	Kathmandu and Nepalganj	A analytic report on invasive species and their impacts on native fish diversity Support and organize stakeholders Consultation workshop on invasive management Support the development of policy briefs for wider dissemination Develop content to integrate into training manuals designed on NRM especially	X	X	X X	X

STRATEGIC APPROACH 4a: Fill Knowledge gaps *Lead: Chief Technical Specialist (Deepak Rijal)*									
Outcomes	**Task**	**Sub-Task**	**Y4 Q4 Action plan**	**Locations**	**Outputs**	**Timeline**			
						Apr	**May**	**Jun**	**Y5 Q1**
					freshwater biodiversity conservation				
Identify and integrate inclusion issues into training manuals and capacity building package and academic curriculum	4.1.8: Conduct an analysis of gender and caste-based access to and use of water resources.		Support CAACG through WA in strengthening LWM to integrate into CAACG action plan and proposal development Support design capacity building package	Kathmandu and Field	Report tracking on the ways and extent inclusion issues are integrated into technical reports, training manuals (river stretch co-management, water governance, hydropower, political analysis) and curriculums (Green road, fish ladder, hydropower) conservation acts of select municipalities of Karnali and Rapti river basins	X	X	X	X
Develop and disseminate knowledge products to	4.1.9 Conduct outreach to	Work with SA leads and communicat	Support different SA [e.g. 1b, 1d) to develop knowledge sub-products for		Support develop and disseminate knowledge products:				X

STRATEGIC APPROACH 4a: Fill Knowledge gaps *Lead: Chief Technical Specialist (Deepak Rijal)*									
Outcomes	**Task**	**Sub-Task**	**Y4 Q4 Action plan**	**Locations**	**Outputs**	**Timeline**			
						Apr	**May**	**Jun**	**Y5 Q1**
inform i) advocacy for policy and plans ii) strengthen utilization of the knowledge products for wide range of beneficiaries iii) priority setting for Paani grant program iv) capacity building of wider actors engaged in freshwater biodiversity at various levels	Communities.	ion as well as MEL team	wider dissemination and use Support communication to fine tune the dissemination strategy document Coordinate with TU to establish the "center of excellence" in freshwater biodiversity		Fishery conservation framework Gravel Mining Ecotourism Hazard mapping (3 ws) Invasive management	X X X	X	X	

STRATEGIC APPROACH 4B: Integrate into academic and other learning spaces *SA Lead: Capacity Building and Higher Education Specialist (Anjana Shakya)*									
OUTCOME	**TASK**	**SUBTASK**	**Y4/Q4 ACTION PLAN**	**LOCATION**	**OUTPUTS**	**TIMELINE**			
						Apr	**May**	**Jun**	**Y5Q1**
Increase participation of women and disadvantaged groups in freshwater biodiversity conservation and climate resilience	Task 4.2.4: Facilitate international cooperation between nepali and international specialists and students regarding aquatic animal passage issues	C4.2.4-4: Publish Nepal focused engineering guide for designing hydropower project that allow fish passage.	Prepare SOW to hire organization for development of fish passage course						
	Task 4.2.5. Develop and implement workshops and training programs related to freshwater biodiversity conservation and climate resilience		Support ISET to prepare training manual on river stretch co-management	All watersheds	One training manual on river stretch co-management will be prepared	X	X		

STRATEGIC APPROACH 4B: Integrate into academic and other learning spaces *SA Lead: Capacity Building and Higher Education Specialist (Anjana Shakya)*									
	Task 4.2.5. Develop and implement workshops and training programs related to freshwater biodiversity conservation and climate resilience		Support ISET to prepare training manual on post harvest fisheries	All watersheds	One training manual on post harvest fisheries will be prepared	X	X		
	Task 4.2.5. Develop and implement workshops and training programs related to freshwater biodiversity conservation and climate resilience		Support ISET to provide TOT on river stretch co-management	All watersheds	One training on river stretch co-management will be conducted		X	X	X
			Support grantees to conduct training for CAACG on river stretch co-management (linked to SA 1a)	RuDEC-Bogatam Lagam KCDC-Rara ECC, IDES-Thuligad MRDCC, KDCN-Jhimruk	Eleven trainings on river stretch co-management will be conducted			X	X

STRATEGIC APPROACH 4B: Integrate into academic and other learning spaces *SA Lead: Capacity Building and Higher Education Specialist (Anjana Shakya)*									
				HWEPC-Middle Rapti Sonaha Bikas, Sundar Nepal -Lower Karnali -Lower Karnali Sahara Nepal-West Seti RSN-Tila					
			Support grantees to conduct trainings for CAACG on river stretch co-management and post harvest fisheries (linked to SA 1a)	SAEWCC-MK CIS-LM	Two trainings on river stretch co-management and post harvest fisheries will be conducted			X	X
			Support grantee- KIRDARC to conduct training on community based disaster management (linked to SA 2b)	Lower karnali	One training on disaster management will be conducted		X	X	X
			Support RDC to conduct Institutional Capacity Building Training	Rangun	One training on Institutional Capacity Building		X	X	X

STRATEGIC APPROACH 4B: Integrate into academic and other learning spaces *SA Lead: Capacity Building and Higher Education Specialist (Anjana Shakya)*									
			Support RDC to conduct Community Level Sustainable Watershed Management Training	Rangun	One training on Community Level Sustainable Watershed Management		X	X	X
			Support BCN to develop training manual in ornithology		One training manual in ornithology			X	X
			Support CODEFUND/IUCN to develop training manual in freshwater governance		One training manual in freshwater governance			X	X

ANNEXES

EXHIBIT A1: INDICATOR PERFORMANCE TRACKING Y4 Q2

Table 13: Indicator performance tracking table

This table presents Paani's overall performance against targets for Y4 Q3. For consistency with Paani's Y4 AWP, the indicators are presented by Paani's Strategic Approaches, the program's guiding management and implementation framework.

Indicators	Targets / Actuals				Notes
	Year 4/ Quarter 3 (Jan – Mar 2020)		Year 4 (July 2019 – June 2020)		
	Target	Actual	Target	Actual	
Standard indicators					
Number of hectares of biologically significant areas showing improved biophysical conditions as a result of USG assistance (EG 10.2-1)			89,021	-	The target is determined based on ongoing and expected Paani interventions for year 4 that can possibly bring improved biophysical conditions due to Paani interventions in Paani priority watersheds. The area is estimated using GIS and is guided by PIRS.
Number of hectares of biologically significant areas under improved natural resource management as a result of USG assistance (EG 10.2-2)			205,854	-	The target is determined based on ongoing and expected Paani interventions for year 4 that can possibly bring improved management conditions within Paani priority watersheds. The area is estimated using GIS and is guided by PIRS.
Number of people using climate information or implementing risk-reducing actions to improve resilience to climate change as supported by USG assistance (EG 11-6)	1209	620	2509	1069	Q3 breakdown: Male: 370, Female: 250. BCTS: 383, Dalit: 80, Janajati: 157
Number of people with increased economic benefits derived from sustainable NRM and conservation as a result of U.S. assistance (EG 10.2-3).			20000	-	
Number of institutions with improved capacity to assess or address climate change risks supported by USG assistance (EG 11-2)			15	-	
Percentage of participants reporting increased agreement with the concept that men and women should have equal access to social, economic, and political resources and opportunities (GNDR 4)		78%	65%	69%	

Indicators	Targets / Actuals				Notes
	Year 4/ Quarter 3 (Jan – Mar 2020)		Year 4 (July 2019 – June 2020)		
Number of (national level) policies/regulations/administrative procedures in each of the following stages of development as a result of U.S. assistance in each case: Stage 1: Analyzed; Stage 2: Drafted and presented for public/stakeholder consultation; Stage 3: Presented for legislation/decree; Stage 4: Passed/ approved; Stage 5: Passed for which implementation has begun (1.4.1-2,)		3	46	-	The target is based on the policies, bills and acts at different levels: national, provincial and municipal. Q3 updates: Tikapur Municipality in Lower Karnali and Jayprithivi Municipality and Talkot Gaunpaliaka in West Seti enacted the AABCA.
EG.10.2-5 Number of laws, policies, or regulations that address biodiversity conservation and/or other environmental themes officially proposed, adopted, or implemented as a result of USG assistance		3	45	-	The target is based on the policies, bills and acts at different levels: national, provincial and municipal. Q3 updates: Tikapur Municipality in Lower Karnali and Jayprithivi Municipality and Talkot Gaunpaliaka in West Seti enacted the AABCA.
EG.11-3 Number of laws, policies, regulations, or standards addressing climate change adaptation formally proposed, adopted, or implemented as supported by USG assistance			1	1	Environmental protection bill enacted
Number of people trained in climate change adaptation supported by USG assistance (EG 11-1)	178	281	431	678	Q 3 breakdown: 281 Male: 139, Female: 142 BCTS: 139, Dalit: 34, Janajati: 99, Newar: 7, Others: 2
% of leadership positions in USG supported community management entities that are filled by women or member of a vulnerable group (1.3.2-1).		69.2%	85%	74.8	
Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (EG 10.2-4)	654	351	2326	666	Q3 breakdown: Male: 183, Female: 168. BCTS: 147, Dalit: 31, Janajati: 160, Newar: 10, Others: 3
Number of innovations supported through USG assistance (STIR-10)	2	1	7	2	Q2: Community based river ecotourism (River guide) was initiated, which is counted under this indicator. Q3: EFRC guideline. These guidelines were endorsed in Jhimruk and Middle Karnali watersheds.
STRATEGIC APPROACH 1 a: Improve Management Of Capture Fisheries					

Indicators	Targets / Actuals				Notes
	Year 4/ Quarter 3 (Jan – Mar 2020)		Year 4 (July 2019 – June 2020)		
# of fishing groups to which municipalities have given exclusive access rights and the legal authority to manage their river fisheries under agreed guidelines	3	-	10	-	
P/A of guidelines developed through participatory process	2	1	11	3	Q3. One guideline is drafted in Thuligaad
# of municipalities/rural municipalities that have endorsed sustainable fisheries guidelines	2	1	8	4	Parshuram municipality in Rangun watershed endorsed the guideline in Q2. Two were endorsed in Mahakalai and Bhimdatta municipalities in Q1. A total of 3. Q3: One guideline endorsed in Alital municipality in Rangun.
% of observed fishing effort by fishing group members for each fishing group that includes only sustainable fishing practices*, Defined according to the Guidelines for each fishing group	90%		>85%	-	
P/A of sustainable economic opportunities identified with partnership formed for each selected economic opportunity			7	4	Q2: The economic opportunities identified are: eco-tourism (river guide, home stay, nature guide), fish co-operatives, and environment friendly agriculture technologies.
STRATEGIC APPROACH 1 b : Increase Local Knowledge, Engagement and Benefits For Local Water Management					
# of communities and municipalities/rural municipalities in targeted watersheds that have developed and endorsed the local plan (CAPAs, LAPAs, LDCRP, sub watershed management plan)			2	-	
# of target municipalities/rural municipalities that have taken initiative or received funding from a source other than Paani for implementation of an adaptation activity			13	5	Q2: In Lower Mahakali, the municipality has supported worth NRs. 76,000 for tunnel farming.
# of target communities and settlements implementing climate smart watershed management activities (tied to LAPA and CAPA)		-	11	2	
STRATEGIC APPROACH 1c : Improve Local Capacity for Regulation and Management of Roads and Mining					
# of user groups that advocate for environment-friendly road designs	4	5	6	-	
# of municipalities/rural municipalities that prioritize funds for projects with environment-friendly road designs			2	2	These two are from West Seti and Middle Karnali watersheds in the previous quarter.
# of user groups aware of national guidelines and impact of gravel mining			2	-	
# of user groups that advocate for better regulated gravel mining			1	-	
STRATEGIC APPROACH 1 d : Improve Local Capacity For Managing Invasive Species					
# of CFOPs, sub watershed management plans, and buffer zone management plans with invasive control section [with removal targets] in place for affected waterbodies	2		2	-	

Indicators	Targets / Actuals				Notes
	Year 4/ Quarter 3 (Jan – Mar 2020)		Year 4 (July 2019 – June 2020)		
% (#) of community groups meeting removal targets for affected waterbodies	1	1	1	-	Q3. The lake management committee in Bhagraiya used the water mower to remove invasive plants from the lake.
P/A of regulations in place and enforcement of fish farms in targeted affected waterbodies in selected watersheds			1		
STRATEGIC APPROACH 2a: Improved Basin Level Resource Management					
# of platforms established	33	54	120	127	The definition of this indicator was broadened to capture various groups/platforms at different levels. This now includes: CAACG, apex bodies, lake management committees, integrated watershed management platforms, aquatic biodiversity coordination council, management committee, local disaster climate resilience committee and eco clubs, etc. Q3: This includes, CAACGs, WUGs, CBAPUs, and Apex bodies.
# of platforms engaged in advocacy activities	10	2	25	5	Q3 updates: These are the groups (user groups) in Airawati RM – 4, and Athabis Municipality – 6, These groups have begun to do advocacy activities for EFRC roads.
# of platforms that have developed plans of action and demonstrate ongoing activities against those plans	25	-	55		
STRATEGIC APPROACH 2b: Improve Local Capacity For Disaster Risk Reduction					
# of communities that are warned in sufficient time to respond to flooding and other climate hazard			5	-	

Indicators	Targets / Actuals				Notes
	Year 4/ Quarter 3 (Jan – Mar 2020)		Year 4 (July 2019 – June 2020)		
# of IWRMP, LAPAs, CAPAs with disaster response sections that use flood maps developed from hydromet data			1	-	
STRATEGIC APPROACH 2c:Support Sustainable Hydropower					
# of smaller hydropower projects that have hydro-met data and tools (DHM has hydro-met database)			5	-	
# of hydropower developers and operators that have e-flow information			2	-	
STRATEGIC APPROACH 3a: Improve Policy And Planning For IWRM					
Presence or Absence of 'white paper' containing recommendations with champion's inputs.					This indicator was dropped as the institutional arrangements required by the federal governance system is lagging behind. Moreover, the PEA study carried out in 12 watersheds has provided similar information that is likely to come from white paper.
Number of IRBMPs established					To capture various groups/platforms at different levels, this indicator is changed to 'Number of platforms established' and broadened the definition. Please see SA 2a: River Basin Management above.
P/A of effective National Water Resources policy			1	Inputs / comments shared.	
STRATEGIC APPROACH 3b : Support CSOs to Advocate for Transparent and Accountable Hydropower Decision Making					
Number of Civil Society Organizations (CSOs) receiving USG assistance engaged in advocacy interventions (EG 2.4.1-9)			8	-	
# of CSOs that understand sustainable hydropower and have improved capacity for constructive engagement			25	-	
STRATEGIC APPROACH 4a: Knowledge					
# of research initiatives to address the issues of freshwater biodiversity, climate change and water resource management.	4	2	6	2	
Number of peer-reviewed scientific publications resulting from USG support to research and implementation programs (STR-12)	1	-	6	1 (YAE)	
STRATEGIC APPROACH 4b: Learning Spaces : COMPLETED					
% of scholarship recipients who are women or from disadvantaged groups					
# of courses developed in the areas of freshwater biodiversity and sustainable water management					

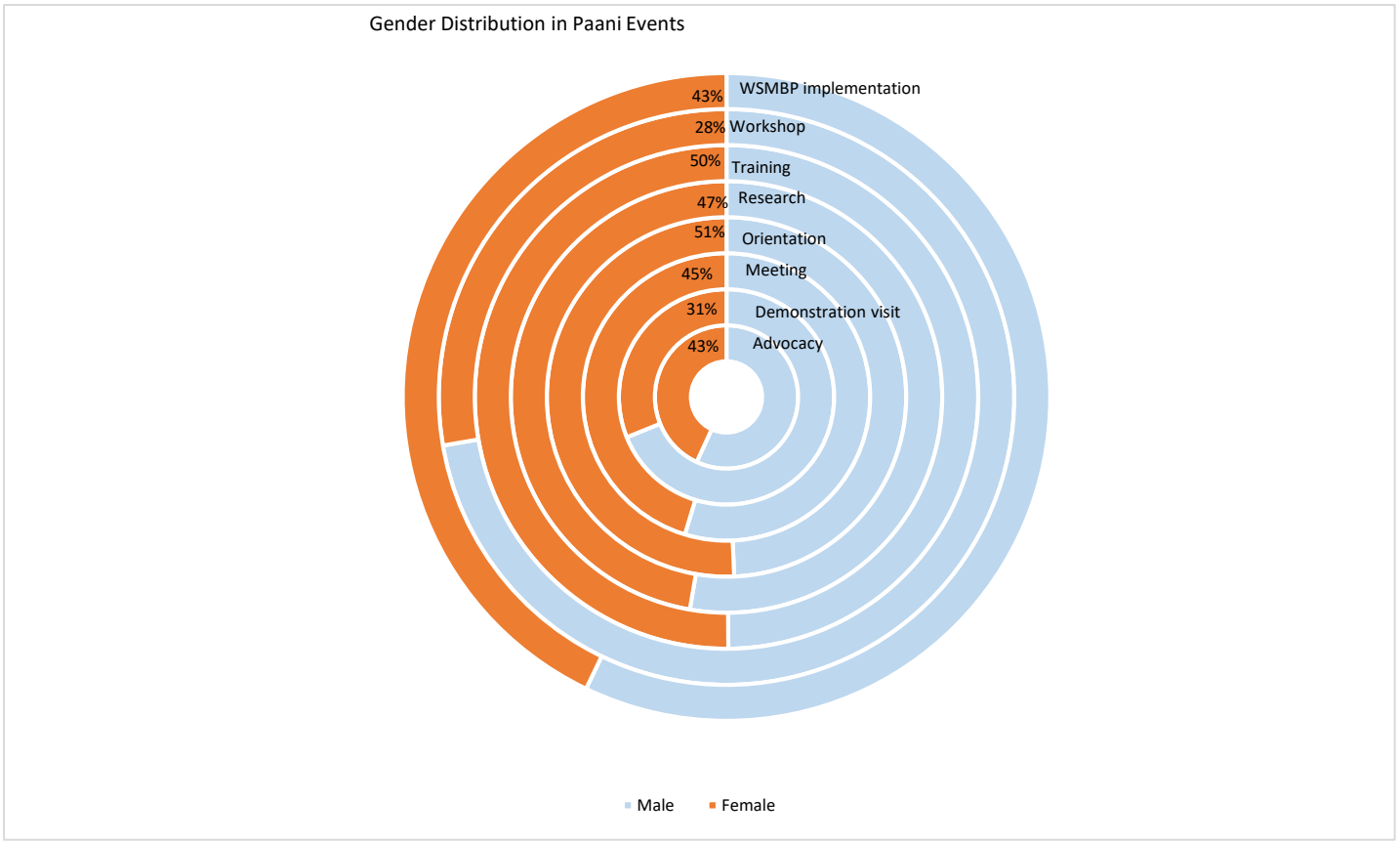
EXHIBIT A2: GESI ANALYTICS FOR PAANI ACTIVITIES

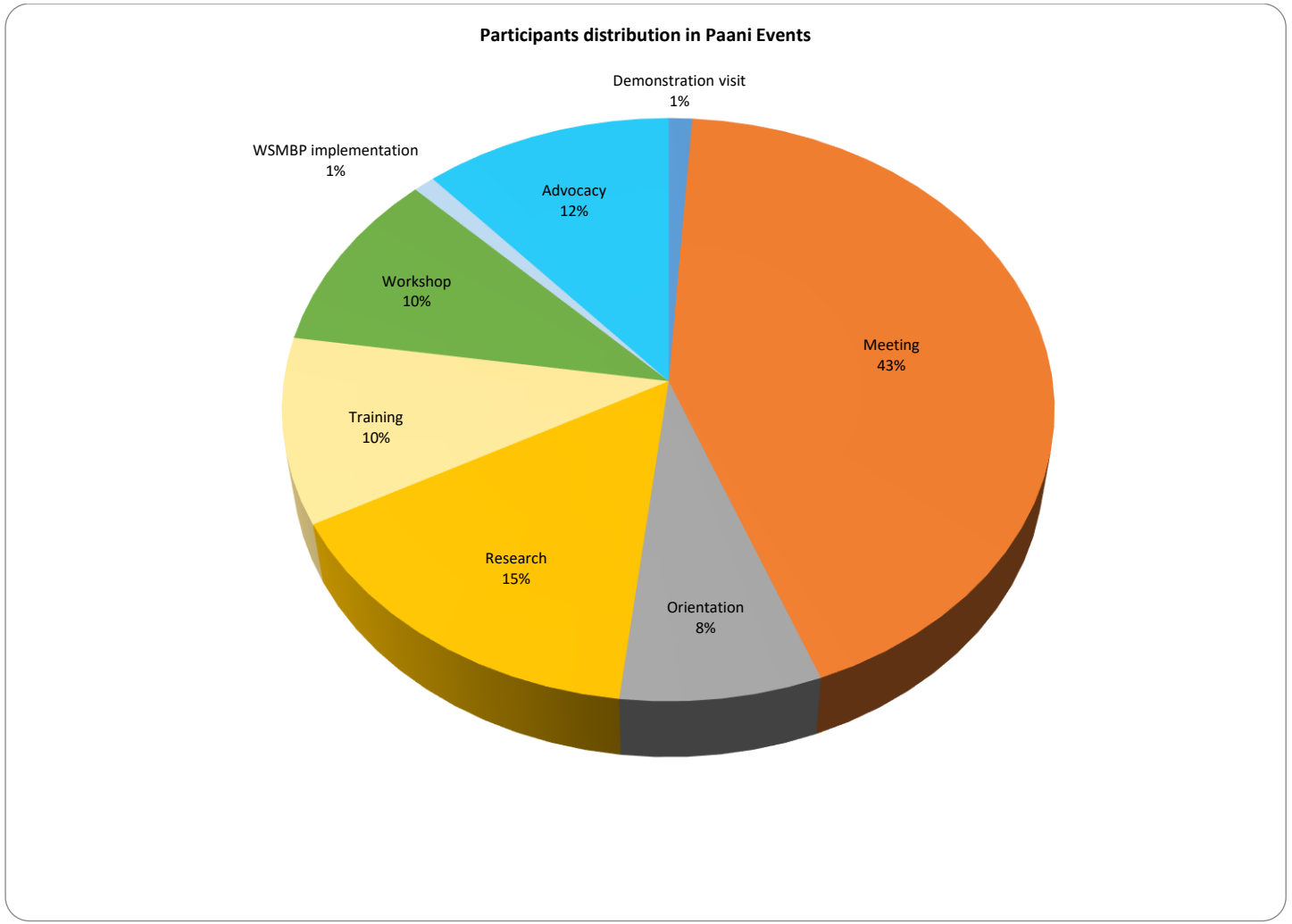
Table 14: Participants in Various Paani Events disaggregated by gender and ethnicity

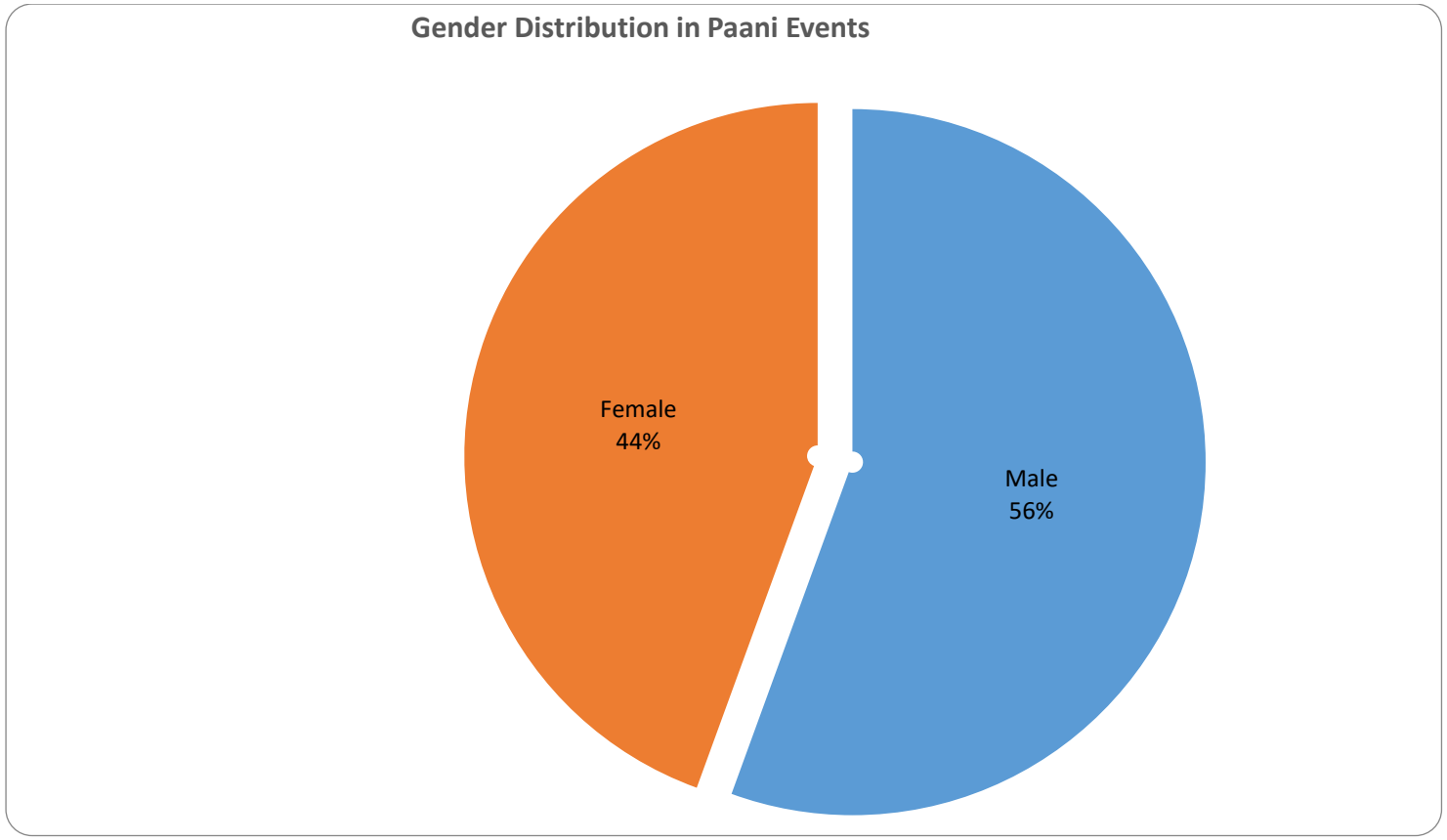
SA/Event	Total	Male	Female	BCTS	Dalit	Janajaati	Newar	Others
CCA/DRR	**628**	**353**	**275**	**357**	**84**	**178**	**7**	**2**
Research	467	273	194	279	69	119		
Training	161	80	81	78	15	59	7	2
Fishery	**2386**	**1234**	**1152**	**1006**	**281**	**1078**	**4**	**17**
Advocacy	51	21	30			51		
Demonstration visit	25	14	11	11		14		
Meeting	1660	898	762	871	254	534		1
Orientation	231	110	121	5	6	220		
Research	267	114	153	92	11	149		15
Training	152	77	75	27	10	110	4	1
LWM	**457**	**262**	**195**	**300**	**64**	**93**		
Meeting	115	62	53	88	19	8		
Orientation	69	44	25	47	15	7		
Training	120	59	61	61	19	40		
Workshop	111	73	38	84	10	17		
WSMBP implementation	42	24	18	20	1	21		
Policy	**236**	**166**	**70**	**156**	**38**	**28**	**12**	**2**
Meeting	39	32	7	18	1	9	11	
Orientation	67	27	40	14	31	19	1	2
Workshop	130	107	23	124	6			
Rural Road	**636**	**398**	**238**	**365**	**108**	**127**	**31**	**5**
Advocacy	431	253	178	206	73	118	29	5
Demonstration visit	20	17	3	10	1	7	2	
Workshop	185	128	57	149	34	2		

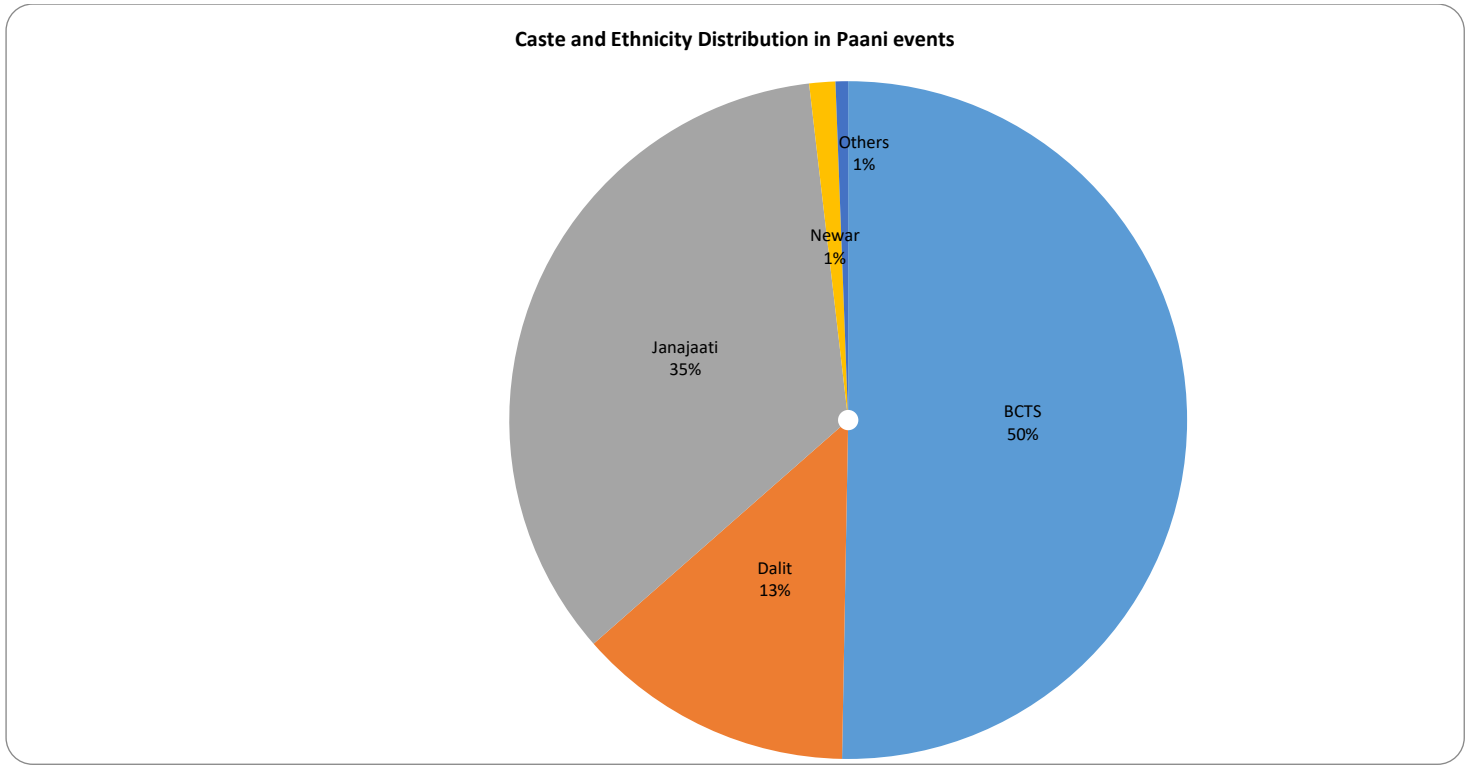
Overall Gender representation in Paani events

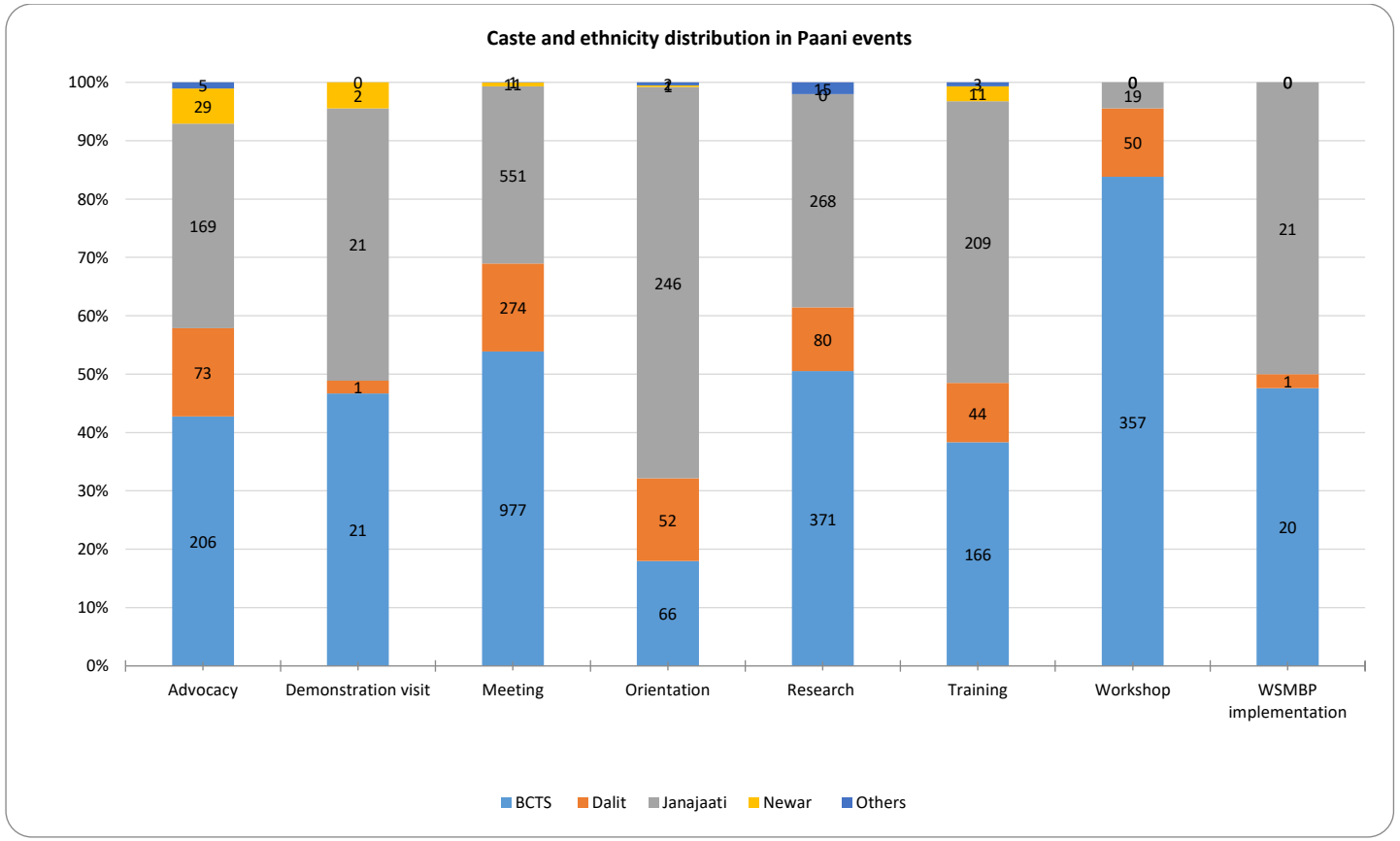
Visual Presentation:




Participants distribution in Paani Events
Demonstration visit
1%
WSMBP implementation
1%
Advocacy
12%
Workshop
10%
Meeting
43%
Training
10%
Research
15%
Orientation
8%


Gender Distribution in Paani Events
Female
44%
Male
56%

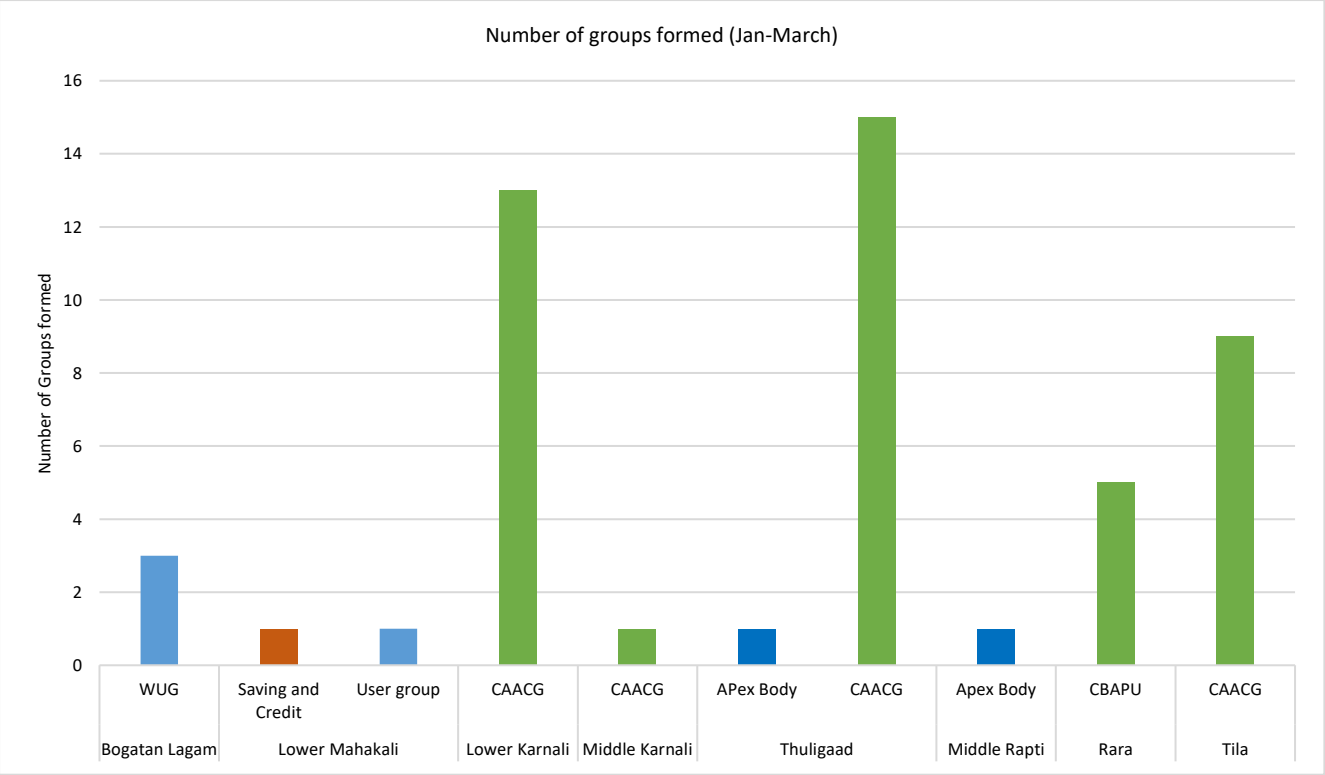

Caste and Ethnicity Distribution in Paani events
Others
1%
Newar
1%
Janajaati
35%
BCTS
50%
Dalit
13%

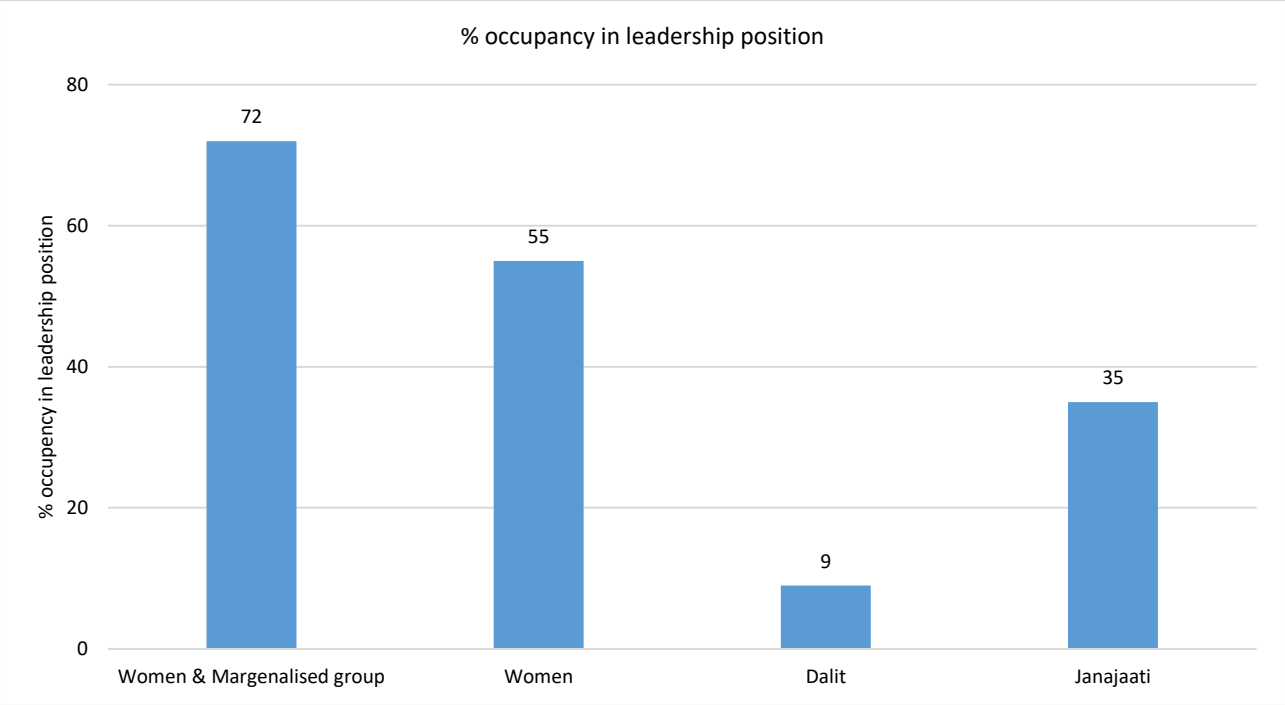

Caste and ethnicity distribution in Paani events
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Advocacy
Demonstration visit
Meeting
Orientation
Research
Training
Workshop
WSMBP implementation
BCTS
Dalit
Janajaati
Newar
Others
206
73
169
29
5
21
1
21
2
0
977
274
551
11
11
66
52
246
1
2
371
80
268
0
15
166
44
209
11
3
357
50
19
0
20
1
21
0

Standard Indicator Reporting		
Indic+A2:C30ator	**Disaggregation**	**Jan- March**
Number of people using climate information or implementing risk-reducing actions to improve resilience to climate change as supported by USG assistance (EG 11-6)	**Total**	**620**
	Male	370
	Female	250
	BCTS	383
	Dalit	80
	Janajaati	157
	Newar	0
	Others	0
Number of people trained in climate change adaptation supported by USG assistance (EG 11-1)	**Total**	**281**
	Male	139
	Female	142
	BCTS	139
	Dalit	38
	Janajaati	115
	Newar	7
	Others	2
Number of people trained in sustainable natural resources management and/or biodiversity conservation as a result of USG assistance (EG 10.2-4)	**Total**	**351**
	Male	183
	Female	168
	BCTS	147
	Dalit	35
	Janajaati	176
	Newar	10
	Others	3
% of leadership positions in USG supported community management entities that are filled by women or member of a vulnerable group (1.3.2-1).	**Women & marginalized group**	**72%**
	Women	55%
	Dalit	9%
	Janajaati	35%

Group formation:

Table: Total number of groups formed in different watersheds in (Jan-March, 2020)				
Groups formed in Watershed	Total groups formed	Headings		
	Grand Total	Cooperative	Fishery	LWM
Bogatan Lagam	**3**			**3**
WUG	3			3
Lower Karnali	**13**		**13**	
CAACG	13		13	
Lower Mahakali	2	1		1
Saving and Credit	1	1		
User group	1			1
Middle Karnali	**1**		**1**	
CAACG	1		1	
Middle Rapti	**1**		**1**	
APex Body	1		1	
Rara	**5**		**5**	
CBAPU	5		5	
Thuligaad	**16**		**16**	
APex Body	1		1	
CAACG	15		15	
Tila	**9**		**9**	
CAACG	9		9	
Grand Total	**50**	**1**	**45**	**4**


Number of groups formed (Jan-March)
Number of Groups formed
16
14
12
10
8
6
4
2
0
WUG
Saving and Credit
User group
CAACG
CAACG
APex Body
CAACG
Apex Body
CBAPU
CAACG
Bogatan Lagam
Lower Mahakali
Lower Karnali
Middle Karnali
Thuligaad
Middle Rapti
Rara
Tila


% occupancy in leadership position
% occupency in leadership position
80
60
40
20
0
72
55
9
35
Women & Margenalised group
Women
Dalit
Janajaati

River basin level Data summary of Paani events

River basin	SA/ Organizer	Number of Activities								
		Advocacy	Demonstration visit	Meeting	Orientation	Research	Training	Workshop	WSMBP implementation	Grand Total
Karnali		**8**		**41**	**8**	**31**	**8**	**17**	**2**	**115**
	CCA/DRR					**17**	**2**			**19**
	ECC					17				17
	Paani & HB						2			2
	Fishery			**38**	**5**	**14**	**2**			**59**
	DCC					14				14
	ECC			1						1
	FEDWASUN						1			1
	IDES			13						13
	RSN			11						11
	Sahara Nepal			1						1
	SBS			7	5					12
	SNS			5						5
	Women Act						1			1
	LWM			**3**	**3**		**4**	**4**	**2**	**16**
	KIRDARC			3					2	5
	NIFUWAN				3					3
	RCDC						1	4		5
	RUDEC						3			3
	Policy							**4**		**4**
	Paani							4		4
	Rural Road	**8**						**9**		**17**
	SWN	8						9		17
Mahakali			**1**				**2**			**3**
	CCA/DRR						**1**			**1**
	MPDS						1			1
	Fishery		**1**				**1**			**2**
	CIS		1				1			2
	NA						**1**			**1**
	CCA/DRR						**1**			**1**
	IPPAN						1			1
Rapti		**16**	**1**	**5**	**5**	**8**	**6**		**5**	**46**

	CCA/DRR						**1**			**1**
	FIRDO						1			1
	Fishery	**4**		**2**		**8**	**4**			**18**
	FIRDO			2						2
	HWEPC	4				8	2			14
	Women Act						2			2
	LWM			**1**			**1**		**5**	**7**
	FIRDO			1						1
	MRC						1			1
	MRDCC								5	5
	Policy			**2**	**5**					**7**
	MRDCC			1	5					6
	Paani			1						1
	Rural Road	**12**	**1**							**13**
	FIRDO	12								12
	SWN		1							1
	Grand Total	**24**	**2**	**46**	**13**	**39**	**17**	**17**	**7**	**165**

EXHIBIT A3: ANNEXES TO SUPPORT SA 1A

Table 15: Unique endemic fish and plant species recorded in Rara Lake, Rara-Khatyad Watershed

SN	Local Name	Scientific Name
	Fish	
1	Rara Snowtrout	*Schizothoraichthys raraensis* (Terashima) 1984
2	Tikhe Asala	*Schizothoraichthys nepalensis* (Terashima) 1984
3	Nepalese snowtrout	*Schizothoraichthys macrophthalmus* (Terashima) 1984
	Aquatic Plant	
1	Common Rid Grass	*Phragmites australis*
2	Juncus	*Juncus* sp,
3	Gufala	*Typha javanica*
4	Sedge	*Carex* sp.
5	Perfoliate pondweed	*Potamogeton* sp.
6	Waterthyme	Hydrilla verticillata
7	Charophyte green algae	*Chara sp.*
8	Coontail	*Ceratophyllum* demersum

Table 16: An updated list of Community Aquatic Animal and Aquatic Biodiversity Conservation Group [CAACG]

Watershed	CAACG formed in Y4Q3	Total number of CAACG	Status of CAACG	Grantee
Rangun	-	6	Registered in Agriculture Section of Parasuram R (3) and AAlital RM (#)	NNSWA
Lower Mahakali	-	2	Registered in Agriculture Section of Bhimdutta R (1) and Mahakali (1)	NEEDS Nepal, CIS
Middle Karnali	-	10	Four CAACG Registered under the provision of AABCA in municipality	RHF, SAEWCC
Thuligad	15	26	Two registered in Chure RM, 24 informal group in the process of registration	ECC, IDES
Bogatan Lagam	3	3	Three CAACG Registered under the provision of AABCA in municipality	RDC
Tila	9	9	In the process of registration	RSN
Lower Karnali	14	14	In the process of registration	SBS
Mid-West Seti	4	4	In the process of registration	Sahara Nepal

Jhimruk	2	16	Four registered in Agriculture Section of municipality, 12 in the process of statute formation and registration	MRDCC, KDCN
Middle Rapti	-	8	Seven registered in Agriculture Section of municipality, one in the process of statute formation and registration	HWEPC
Total	47	90	30 registered and 60 in the process of registration	

Table 17: Status of CAACG monthly saving amounts in Jhimruk and Middle Rapti Watershed

SN	Watershed	Name of CAACG	Cumulative monthly saving (Nrs.)
1	Middle Rapti	Baikha CAACG	22800
2	Middle Rapti	Baam CAACG	14800
3	Middle Rapti	Rawa CAACG	26600
4	Middle Rapti	Raini CAACG	10750
5	Middle Rapti	Sahar CAACG	9000
6	Middle Rapti	Rohu CAACG	16000
7	Middle Rapti	Mangra CAACG	14000
8	Middle Rapti	Kalmuda CAACG	5000
		Sub-total	***118950***
1	Jhimruk	Amilya Raha CAACG	10905
2	Jhimruk	Damti Dovan CAACG	35714

3	Jhimruk	Raksha Raha CAACG	18685
4	Jhimruk	Bange Raha CAACG	16535
5	Jhimruk	Tribeni CAACG	7811
6	Jhimruk	Nayaraha CAACG	8120
7	Jhimruk	Airwati Dovan CAACG	1880
8	Jhimruk	Makre CAACG	3800
9	Jhimruk	Bankala CAACG	7660
10	Jhimruk	Gudgude CAACG	12080
		Sub-total	**123190**
		Grand Total	**242140**

EXHIBIT A4: ANNEXES TO SUPPORT SA 1D

Table 18: Exotic invasive aquatic plant species (AIAPS) in Paani watersheds and Nepal

S.No.	Scientific name	Common name	Country of origin	Year of introduction	Status in LM, LK & MR watersheds	Purpose of introduction
1	*Eichhornia crassipes*	Water hyacinth	South America	1966	Wetland (lake, marshy land, irrigation canal, rife field)	Ornamental
2	Ipomoea carnea	Bush morning glory	Mexico & South America	1966	Lakes, marshy lands, bank of irrigation canal	Not known
3	*Alternanthera philoxeroides*	Alligator weed	South America	1994	Not reported	Ornamental

4	*Myriophyllum aquaticum*	Parrot's feather	South America	-	Not reported	Ornamental
5	*Leersia hexandra*	Southern Cut Grass	-	1820	Not reported	Ornamental
6	*Pistia stratiotes*	Water lettuce	South America	1952	Wetland (lake, marshy land, irrigation canal, rice field)	Ornamental

Table 19: Exotic and invasive fish species in Paani watersheds and Nepal

S.No.	Scientific name	Common name	Country of origin	Year of introduction	**Status in LM, LK & MR watersheds**	Purpose of introduction
1	*Gambusia affinis*	Mosquito Fish	Unknown	1964 (unofficial)	Not reported	Unknown
2	*Ctenopharyngodon idella*	Grass Carp	China	1965/66	Distributed in all watersheds, evidence of escape from fish farms	Aquaculture
3	*Hypophthalmichthys molitrix*	Silver Carp	China	1967/68	Distributed in all watersheds	Aquaculture
4	*Salmo trutta*	Brown Trout	Europe	1969	Technically not feasible	Ranching in river
5	*Aristichthys nobilis*	Bighead Carp	China	1971	Distributed in all watershed	Aquaculture
6	*Onychorynchus mykiss*	Rainbow Trout	Japan	1971, 1988	Technically not feasible	Aquaculture

7	*Onychorynchus rhodurus*	The Biwa Trout	Japan	1975	Technically not feasible	Ranching in river
8	*Cyprinus carpio*	Common carp	Hungary	1979	Distributed in all watersheds, evidence of escape from fish farms	Aquaculture
9	*Oreochromis mossambicus*	Mozambique Tilapia	Unknown	1985 (unofficial)	Distributed in MR watershed, dispersal mechanism not known	Unknown
10	*Oreochromis niloticus*	Nile Tilapia	Thailand	1985	Distributed in all watersheds, evidence of escape from fish farms	Aquaculture
11	*Clarias gariepinus*	African Catfish	India	1996-97 (unofficial)	Distributed in all watersheds, evidence of escape from fish farms	Aquaculture
12	*Pongasinodon hypophthalmus*	Pangas	India, Thailand	2004, 2016	Distributed in all watersheds, evidence of escape from fish farm in MR & LM watersheds.	Aquaculture
13	*Cyclocheilichthys apogon*	Beardless Barb	Indonesia	Unknown (unofficial)	Not reported	Not known
14	*Puntius gonionotus*	Silver Barb	Bangladesh	Unknown	Not reported	Aquaculture
15	*Carassius carassius*	Crucian Carp	Japan	Unknown	Not reported	Aquaculture
16	*Pygocentrus nattereri*	Red belly piranha	India	2008	Distributed in MR watershed, evidence of escape from fish farms	Aquaculture

EXHIBIT A5: ANNEXES TO SA 4A

Code key:

GTS Globally threatened status
NTS Nationally threatened status
OS Occurrence status
NT Near Threatened
CR Critically Endangered
EN Endangered
VU Vulnerable
I Listed in CITES list I
II Listed in CITES list II
III Listed in CITES LIST III
R Resident (all year)
W Winter visitor
S Summer visitor
V Vagrant
? Status Unknown

	English name	Scientific name	स्थउवधि	GTS	NTS	CITES	OS	Ref
	GALLIFORMES							
	Phasianidae							
1.	Hill Partridge	*Arborophila torqueola*	पिउरा					
2.	Chukar	*Alectoris chukar*	चुकर		NT			
3.	Himalayan Monal	*Lophophorus impejanus*	डाँफे		NT	I		
4.	Kalij Pheasant	*Lophura leucomelanos*	कालिज			III		
	ANSERIFORMES							
	Anatidae							

5.	Bar-headed Goose	*Anser indicus*	खोयाहाँस		NT			
6.	Greylag Goose	*Anser anser*	कलहाँस		NT			
7.	Goosander	*Mergus merganser*	मर्णितुण्डक					
8.	Red-crested Pochard	*Netta rufina*	सुनजुरे हाँस					
9.	Common Pochard	*Aythya ferina*	कैलोटाउके हाँस	VU	NT			
10	Tufted Duck	*Aythya fuligula*	कालीजुरे हाँस					
11	Gadwall	*Mareca strepera*	खडखडे हाँस					
12	Mallard	*Anas platyrhynchos*	हरियो टाउके					
	PODICIPEDIFORMES							
	Podicipedidae							
13	Great Crested Grebe	*Podiceps cristatus*	सिउरे डुबुल्कीचरा					
14	Black-necked Grebe	*Podiceps nigricollis*	कालीकण्ठ डुबुल्कीचरा					
	COLUMBIFORMES							
	Columbidae							
15	Rock Dove	*Columba livia*	मलेबा					
16	Snow Pigeon	*Columba leuconota*	हिमाली मलेबा					
17	Oriental Turtle-dove	*Streptopelia orientalis*	तामे डुकुर					
	CAPRIMULGIFORMES							
	Caprimulgidae							
18	Grey Nightjar	*Caprimulgus jotaka*	फुस्रो चैतेचरा					
	GRUIFORMES							
	Rallidae							
19	Common Moorhen	*Gallinula chloropus*	बगाले सिमकुखुरा					
20	Common Coot	*Fulica atra*	मरुल					
	PELECANIFORMES							
	Ardeidae							
21	Black-crowned Night-heron	*Nycticorax*	बाँके बकुल्ला					
	SULIFORMES							
	Phalacrocoracidae							
22	Great Cormorant	*Phalacrocorax carbo*	जलेबा					
	CHARADRIIFORMES							
	Scolopacidae							

23	Common Snipe	*Gallinago gallinago*	पानी चाहा					
24	Common Sandpiper	*Actitis hypoleucos*	चञ्चले सुइसुडिया					
25	Green Sandpiper	*Tringa ochropus*	रुख सुइसुडिया					
26	Common Redshank	*Tringa totanus*	लालखुट्टे टिमटिमा					
	Laridae							
27	Brown-headed Gull	*Larus brunnicephalus*	खैरोटाउके गंगाचील		VU			
28	Pallas's Gull	*Larus ichthyaetus*	राजा गंगाचील					
29	Lesser Black-backed Gull	*Larus fuscus*	कृष्णपंख गंगाचील					
	STRIGIFORMES							
	Strigidae							
30	Mountain Scops-owl	*Otus spilocephalus*	लेकाली उलूक			II		
31	Himalayan Owl	*Strix nivicolum*	कैलो पहाडी उलूक					
	ACCIPITRIFORMES							
	Accipitridae							
32	Bearded Vulture	*Gypaetus barbatus*	हाडफोर		VU	II		
33	Himalayan Griffon	*Gyps himalayensis*	हिमाली गिद्ध	NT	VU	II		
34	Western Marsh-harrier	*Circus aeruginosus*	सिम भुईचील		VU	II		
35	White-tailed Sea-eagle	*Haliaeetus albicilla*	कङ्म चील		CR	I		
36	Black Kite	*Milvus migrans*	कालो चील			II		
37	Himalayan Buzzard	*Buteo refectus*	श्येनबाज			II		
	CORACIIFORMES							
	Alcedinidae							
38	Crested Kingfisher	*Megaceryle lugubris*	ठूलो छिर्बिरे माटीकोरे					
	PICIFORMES							
	Picidae							
39	Scaly-bellied Woodpecker	*Picus squamatus*	ठूलोकत्ले काठफोर					
40	Himalayan Woodpecker	*Dendrocopos himalayensis*	हिमाली काष्ठकूट					
	CARIAMIFORMES							
	Falconidae							
41	Common Kestrel	*Falco tinnunculus*	बौंडाइ			II		
42	Peregrine Falcon	*Falco peregrinus*	शाही बाज			I		
	PASSERIFORMES							

	Vireonidae							
43	Green Shrike-babbler	*Pteruthius xanthochlorus*	हरित भद्राइंग्याकुर					
	Laniidae							
44	Grey-backed Shrike	*Lanius tephronotus*	हिमाली भद्राई					
	Corvidae							
45	Yellow-billed Chough	*Pyrrhocorax graculus*	टेमु					
46	Yellow-billed Blue Magpie	*Urocissa flavirostris*	सुनठुँडे लामपुच्छ					
47	Southern Nutcracker	*Nucifraga hemispila*	बनसर्रा					
48	Large-billed Crow	*Corvus macrorhynchos*	कालो काग					
	Stenostiridae							
49	Yellow-bellied Fairy-fantail	*Chelidorhynx hypoxanthus*	पहेंलो मारुनीचरी					
	Paridae							
50	Coal Tit	*Periparus ater*	सानो फुस्रे चिचिल्कोटे					
51	Grey-crested Tit	*Lophophanes dichrous*	फुस्रोजुरे चिचिल्कोटे					
52	Green-backed Tit	*Parus monticolus*	हरियो चिचिल्कोटे					
53	Great Tit	*Parus major*	चिचिल्कोटे					
	Alaudidae							
54	Oriental Skylark	*Alauda gulgula*	ब्रह्मीचटी					
	Hirundinidae							
55	Barn Swallow	*Hirundo rustica*	घर गौंथली					
56	Eurasian Crag Martin	*Ptyonoprogne rupestris*	नहिकुटी गौंथली					
	Pycnonotidae							
57	Black Bulbul	*Hypsipetes leucocephalus*	बाख्रे जुरेली					
58	Himalayan Bulbul	*Pycnonotus leucogenys*	जुल्फे जुरेली					
	Phylloscopidae							
59	Lemon-rumped Leaf-warbler	*Phylloscopus chloronotus*	पीतकटी फिस्टो					
	Aegithalidae							
60	Red-headed Tit	*Aegithalos iredalei*	कालीकण्ठे राजाचिचिल्कोटे					
61	White-throated Tit	*Aegithalos niveogularis*	सेतोकण्ठे राजाचिचिल्कोटे					
	Sylviidae							

62	White-browed Fulvetta	*Fulvetta vinipectus*	पीतनयन फूलबुट्टा					
	Zosteropidae							
63	Stripe-throated Yuhina	*Yuhina gularis*	थुपलकल्की जुरेचरा					
64	Oriental White-eye	*Zosterops palpebrosus*	कांकीर					
	Leiotrichidae							
65	Spotted Laughingthrush	*Garrulax ocellatus*	मुंदाले तोरीगाँडा					
66	Streaked Laughingthrush	*Trochalopteron lineatum*	छिर्के तोरीगाँडा					
67	Variegated Laughingthrush	*Trochalopteron variegatum*	टिकीयुरी तोरीगाँडा					
68	Chestnut-crowned Laughingthrush	*Trochalopteron erythrocephalum*	कटुसटाउके तोरीगाँडा					
69	Rufous Sibia	*Heterophasia capistrata*	सियिवा					
	Certhiidae							
70	Hodgson's Treecreeper	*Certhia hodgsoni*	सेतोपेटे छेपारेचरी					
	Sittidae							
71	Kashmir Nuthatch	*Sitta cashmirensis*	काश्मीरी मट्टा					
72	White-cheeked Nuthatch	*Sitta leucopsis*	कालोटाउके मट्टा					
73	Wallcreeper	*Tichodroma muraria*	मुरारी पुतलीचरा					
	Troglodytidae							
74	Northern Wren	*Troglodytes troglodytes*	चिवी					
	Cinclidae							
75	Brown Dipper	*Cinclus pallasii*	खैरो बञ्जुल					
	Turdidae							
76	Alpine Thrush	*Zoothera mollissima*	सादाढाडे चाँचर					
77	White-collared Blackbird	*Turdus albocinctus*	कण्ठे चाँचर					
78	Black-throated Thrush	*Turdus atrogularis*	कालोकण्ठे चाँचर					
	Muscicapidae							
79	Rufous-bellied Niltava	*Niltava sundara*	सुन्दर नीलतभा					
80	Himalayan Bush-robin	*Tarsiger rufilatus*	सुन्तलाकोखे रबिन					
81	Spotted Forktail	*Enicurus maculatus*	थोप्ले खोलेधोबिनी					
82	Blue Whistling-thrush	*Myophonus caeruleus*	कल्चौडे					
83	Blue-fronted Redstart	*Phoenicurus frontalis*	नीलटाउके खञ्जरी					
84	Blue-capped Redstart	*Phoenicurus coeruleocephala*	धोबिनी खञ्जरी					

85	White-capped Water-redstart	*Phoenicurus leucocephalus*	सेतोटाउके जलखञ्जर						
86	Plumbeous Water-redstart	*Phoenicurus fuliginosus*	नीलाम्बर जलखञ्जरी						
87	Grey Bushchat	*Saxicola ferreus*	हिमाली झ्याप्सी						
88	Common Stonechat	*Saxicola torquatus*	झेकझेक झ्याप्सी						
	Regulidae								
89	Goldcrest	*Regulus regulus*	स्वर्णचूल फिस्टो						
	Prunellidae								
90	Rufous-breasted Accentor	*Prunella strophiata*	मुसे लेकचरी						
	Passeridae								
91	Russet Sparrow	*Passer cinnamomeus*	कैलो भंगेरा						
92	Eurasian Tree Sparrow	*Passer montanus*	रुख भंगेरा						
	Motacillidae								
93	Tree Pipit	*Anthus trivialis*	बगाले चुइयाँ						
94	Upland Pipit	*Anthus sylvanus*	पहाडी चुइयाँ						
95	White Wagtail	*Motacilla alba*	फुस्रो टिकटिके						
	Fringillidae								
96	Common Chaffinch	*Fringilla coelebs*	चित्रकचरी						
97	White-winged Grosbeak	*Mycerobas carnipes*	धूपी महाँठूँड						
98	Common Rosefinch	*Carpodacus erythrinus*	अमोंगा तितु						
99	Pink-browed Rosefinch	*Carpodacus rodochroa*	रातो झिंबी तितु						
10	Red-headed Bullfinch	*Pyrrhula erythrocephala*	रातोटाउके टिउँटिउँ						
10	Plain Mountain-finch	*Leucosticte nemoricola*	तितुभंगेरा						
10	Yellow-breasted Greenfinch	*Chloris spinoides*	गाजले पीतचरी						
10	Eastern Goldfinch	*Carduelis caniceps*	रक्तमुहार पीतचरी						
10	Red-fronted Serin	*Serinus pusillus*	लालमाथा सिरिन						

EXHIBIT A6: WOMEN'S ACT DESK REVIEW FINDINGS

In **Middle Karnali**,

- **Aathabisa Municipality (M)** has allocated NRs. 25,00000 to aquatic biodiversity conservation and management but not yet to specific activities;
- In **Chamunda Brindrasaini M** has endorsed laws and policies on community aquatic animal preservation, fresh water biodiversity conservation and river resources management but no budget has been allocated to prevention or penalties for violation of the laws;
- **Panchadewal Binayak M** has provided budget on environmental cleanliness and waste management under the heading "Gender Equality and Inclusion" but nothing on freshwater biodiversity conservation;
- In **Turmakhand RM**, there is no specific budget on freshwater biodiversity conservation but the RM has allocated budget to a cleanliness program to create a healthy living environment for Dalits;
- **Thatikand RM** has a separate section for biodiversity conservation and waste management in its plan but with a designated budget. A budget has been assigned to public wetlands, forest, rivers and ponds conservation;
- **Narharinath RM** has endorsed the statutes of CRGs but not allocated budget to them.

In **Lower Karnali**,

- Out of six RM/M, for budget year 2075-76 (2018-2019), **Rajapur M** allocated NRs. 50,000,000 to support target groups, NRs. 40,000,000 for disaster management and NRs. 45,000,000 for combined drinking water and environmental improvement;
- **Thakurbaba M** has budgeted for waste management through the private sector, encouraging Dalit and indigenous groups' traditional skills and jobs, building embankments to control the flow of the Orahi, Babai, Aambas and Khoiraha Rivers, and continuation of the disaster management fund;
- **Geruwa RM** has budgeted NRs. 49,000,000 for women/target groups and NRs. 10,000,000 for DRR but no specific budget on freshwater biodiversity;

- **Tikapur M**, Ward No 9 specifically has budgeted to empower women through various skills development training and climate change related awareness programs. Ward No. 3 has budgeted for leadership development training for women from the Dalit community; and Ward No. 4 has budgeted for awareness training on minimizing gender violence. There is no specific budget allocation for freshwater biodiversity conservation;
- **Panchapuri M** has allocated budget for pond development for aquaculture and planned to designate budget to a GESI related program in road construction and solid waste management. The M is also moving to become a plastic-free municipality, focusing ponds, rivers, riverine and wetland encroachment and pollution, and conservation;
- **Mohanyal RM** has budget of NRs. 20,000,000 under the heading "women, environment and disaster";
- **Janaki RM** has a budget to identify biodiversity hot spots and biodiversity conservation along with sustainable waste management by with a policy/plan to study potential land fill sites;
- **Barahtal RM** has allocated NRs. 59,000,000 to environment and disaster.

In **Middle Rapti,**

- **Lamahi M** has a separate budget for cleanliness and waste management but no budget allocation for freshwater biodiversity conservation;
- **Rapti RM** has allocated NRs. 2,000,000 to conduct water related programs;
- **Gadhawa RM** has allocated NRs. 17,000,000 on disaster reduction per person but nothing on
- nothing on freshwater biodiversity;
- **Rajpur RM** has allocated budget to environment and disaster management;
- Although, these programs are listed in the budgets (i.e., River diversion program, Climate change awareness program, Water resources conservation, Solid waste management, Landfill site construction), there is no specific allocation of money for them.

In **Jhimruk,**

- **Naubahini RM** mentions a budget for biodiversity conservation and solid waste management, disaster management; social inclusion and equality, but has not allocated a specific amount;

- In **Pyuthan M,** Ward No. 1 has allocated budget on the improvement of fish ponds, Ward No. 3 has a budget for management of forest environments and natural disasters, whereas Ward No. 7 has a budget for management of forest environments and natural disaster but nothing on freshwater biodiversity conservation;
- **Airabati RM** has a policy for community users' groups; according to that, at least 33% of community members should be female;
- No relevant budget allocation on biodiversity conservation in **Jhimruk RM**;

Gaumukhi RM has not allocated any budget to natural resources management or environmental conservatio