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FY2020 Q2 REPORT

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This document was prepared by Forest Trends, implementing partner of the Natural Infrastructure for Water Security Project (NIWS), with contributions from our partners, including CONDESAN, the Peruvian Society of Environmental Law (SPDA), EcoDecisión, and researchers from Imperial College London. For clarification or follow-up to this report, please contact Fernando Momiy, Chief of Party, at fmomiy@forest-trends.org.

EXECUTIVE SUMMARY

In the second quarter of FY2020, NIWS deepened collaboration with priority clients defined for FY2020, as we are now supporting the development of more than \$20M in investments that we anticipate mobilizing with funds from these actors in the next 3 to 18 months. On the shorter-term horizon, in addition to the USD 0.9 M Carampoma wetland restoration project that was approved by SEDAPAL at the close of 2019 and reported last quarter, we have a portfolio of 6 additional projects in final stages of design and approval, representing over USD 10 M that we expect to mobilize by the end of the fiscal year (pending COVID-19 impacts).

We are developing these portfolios by engaging and building the capacity of project developers – e.g., engineering firms, NGOs – who will be the ecosystem service providers in a future Peruvian ecosystem services market. This quarter, we marked a key milestone in building broad capacities for designing effective natural infrastructure investments with the publication of the first set of CUBHIC (*Cuantificación de Beneficios Hídricos de Intervenciones en Cuencas*) methodologies. CUBHIC fill a critical gap in Peru, offering simple, site-level methods for generating quantified estimates of benefits in terms of dry season flow and reduced sedimentation for the most common natural infrastructure interventions. No such methodologies were previously available in Peru for assessing rapidly interventions at the site level.

As we hit this stride, we were forced to pause and shift our approach due to the global pandemic caused by a novel coronavirus that causes the disease COVID-19. As of this writing, the world has registered over 215,000 deaths from COVID-19. Peru has recorded over 31,000 cases and over 850 deaths to date.¹ On March 15, 2020, Peruvian President Martin Vizcarra declared a national state of emergency, closing international borders and effectively instituting a national stay-at-home order for non-essential workers.² As of this writing, the quarantine is in effect in Peru through May 10, 2020.³ The NIWS Consortium has continued to work from home during this period, as have a number of our contractors and counterparts. As a result of current restrictions and restrictions we can expect to be in place, to some degree, for at least the remainder of the fiscal year, NIWS has reviewed and proposed to USAID an adjusted work plan in the interest doing our best to protect our community, supporting public health efforts, and minimizing continued disruption to our strategy.

Objective I: Enabling Environment for Improved Natural Infrastructure

This quarter, NIWS received the draft report by OECD on recommendations to improve water policy and governance in Peru, which, as noted in our QI report, includes significant emphasis on natural infrastructure as well as specifically a number of recommendations offered by NIWS in 2019. In response to the raft report, we prepared a detailed review and response. NIWS analysis and recommendations to the draft report focus on: 1) updating and improving the framework for payments for ecosystem services in the report and in Peru's governance; 2) strengthening the gender focus in the report and in Peru's water governance; and 3) improving multi-sector governance of water in Peru

¹ https://es.wikipedia.org/wiki/Pandemia_de_enfermedad_por_coronavirus_de_2020_en_Per%C3%BA

² <https://www.dw.com/es/per%C3%BA-decreta-estado-de-emergencia/a-52788395>

³

<https://depor.com/off-side/coronavirus-peru-se-amplia-la-cuarentena-hasta-el-10-de-mayo-segun-el-presidente-martin-vizcarra-estado-de-emergencia-noticia/>

through specific institutional and policy changes. This analysis is under review with MINAM and will be formally presented to the commission coordinating the Peruvian Government's efforts in this arena, as well as to the OECD, next quarter.

As this longer-term strategy to build a common vision on natural infrastructure for water security progresses through the Water Governance and Policy Dialogues, NIWS is also working with government counterparts to build consensus around strategies and solutions that can be implemented in the short term to improve natural infrastructure and water governance. In this line, this quarter NIWS developed a roadmap for understanding the requirements for archeological certifications for natural infrastructure investments, which turns out to be an important bottleneck in finalizing and implementing projects, as well as a legal and technical analysis supporting enhanced action to protect threatened natural infrastructure against activities like peat extraction from Andean wetlands. Both analyses are being socialized with NIWS counterparts and will result in formal regulatory proposals next quarter. Additionally, this quarter, NIWS facilitated exchange and learning on natural infrastructure advances and solutions among public counterparts through the NIWS Technical Platform, with presentations ranging from IOARR guidelines to CUBHIC methodologies to the gender gaps publication.

Finally, this quarter NIWS worked to strengthen institutional capacity with SUNASS, ANA, and SEDAPAL, including through an exchange with SEDAPAL and Latin America's leading water utility investing in natural infrastructure (Quito's EPMAPS and FONAG water fund), technical support for proposals to address personnel needs and transfer funds to a third-party administrator, and coordination with SUNASS to support smooth preparation of SEDAPAL's new Optimized Master Plan.

Objective 2: Information Management Improved for Decision-Making on Natural Infrastructure

This quarter's launch of the CUBHIC methods marked an important advance for natural infrastructure in Peru. In addition to finalizing and publishing 5 methods, NIWS presented and disseminated the methods to NI project developers, project evaluators, and policymakers. The methods were launched via a webinar and meetings and technical workshops with NIWS partners – including MINAM, ANA, SERFOR, SUNASS, SEDAPAL, and natural infrastructure project developers in February. In addition, NIWS began applying the methods broadly to the projects in our portfolio under development, to prepare quantitative estimates of NI benefits to inform decision-making. The first 5 CUBHIC methods have been published and are available on the NIWS mini-site (infraestructuranatural.pe), corresponding to the following natural infrastructure interventions:

- Forestation and forest protection
- Wetland restoration and protection
- Andean grassland restoration and conservation
- Infiltration trenches
- Qochas

This quarter, NIWS expanded the application of the HIRO Rapid-Focus Tool, which was developed in QI to support the rapid prioritization of potential natural infrastructure investments under Reconstrucción Con Cambios (RCC). The tool in its original version, focused on disaster risk

management (“HIRO-GRD”), has now produced priority investments for all 19 watersheds prioritized by RCC, which collectively are home to 8.1 million people. NIWS prepared a publication capturing the technical protocol for the HIRO-GRD methodology for specialists and decision makers, which will be published next quarter, and developed a beta version of the tool, called HIRO-MERERE, which focuses on prioritizing investment for enhancing hydrological regulation and erosion control.

Additionally, this quarter NIWS advanced meta-analyses on the hydrological impacts of highland Andean grasslands, the impacts of natural infrastructure on disaster risk management, the practices and impacts of infiltration trenches and other rustic practices, and the impacts generally of natural infrastructure on water flow. These meta-analyses will contribute to the construction of the Natural Infrastructure Research Agenda, which will be fully drafted next quarter, in coordination with the iMHEA hydrological monitoring network’s annual assembly, which will now be held virtually in the June-July timeframe, an adjustment made this quarter due to COVID-19 related restrictions.

Objective 3: Portfolios of NI Projects Designed, Financed, and Implemented

During this quarter, NIWS continued to advance a pipeline of over \$58M in potential natural infrastructure investments toward mobilization. Of these, approximately \$40M in investment is in the stage of project development, and about \$18M are in the final stages of detailed work planning, certifications, and approvals that we expect to lead to mobilization in the near term, pending COVID-19 impacts on these processes.

Our portfolio under development for SEDAPAL is one of the largest and highest-profile, and it was the portfolio that managed to reach the milestone of “mobilization” soonest, with the approval of the Carampoma (Milloc) wetland restoration project (USD \$0.9M) Expediente Tecnico in December 2019. NIWS continued to support SEDAPAL to bring this project to implementation this quarter, while also finalizing project designs for the next projects scheduled for implementation in this portfolio, Huamantanga puna and amuna restoration (USD \$3.1M) and Laraos ecosystem restoration (USD \$0.6M). Additionally, NIWS’ strategy for developing a scaled project portfolio, while building capacities for a future ecosystem service market among environmental NGOs, got well underway this quarter, with 6 NGOs receiving training and carrying out fieldwork and community meetings to inform 9 project diagnostics and intervention proposals.

Likewise, our partnership with MINAGRI and Reconstruccion Con Cambios matured this quarter, as our technical assistance continued to support consulting firms developing Integrated Plans to direct RCC investment to apply the HIRO rapid-focus tool to identify opportunities for natural infrastructure investment, and also expanded to support the next stage of project formulation. NIWS experts also began working with firms to quantify the benefits of proposed NI investments for reducing flood and landslide risk using hydrological modelling. This technical assistance has been converted into a virtual course offered on the new [Natural Infrastructure Virtual Classroom](#) that has secured active participation of over 100 specialists from engineering firms and supervisory entities directly involved in developing these plans in 17 watersheds throughout the country. We expect to have profiles drafted for natural infrastructure investment by Reconstruccion con Cambios totaling over USD 15 million by the end of next quarter, and that these profiles will be included in Integrated Plans presented for implementation with RCC funds, in at least 9 watersheds.

NIWS also marked important advances toward mobilizing investments in several other projects that are very close to hitting this milestone:

- Chancay-Huaral reforestation project, Lima (GORE Lima, USD \$5.9M): This quarter, NIWS finalized this Expediente Tecnico and submitted it to GORE Lima for final review and approval. It is expected to be approved by the end of next quarter, pending COVID-19 impacts.
- Puzmalca reforestation project, Piura (Reconstruccion Con Cambios / GORE Piura, USD \$2.2M): this quarter, NIWS finalized this Expediente Tecnico and helped to expedite environmental certifications by facilitation coordination between the regional government and MINAM.
- Moyobamba reforestation project, San Martin (EPS Moyobamba, USD \$0.7M): This quarter, NIWS received and addressed comments on the Expediente Tecnico from the Municipality of Moyobamba. The project had already been approved by EPS Moyobamba and is in final stages of approval. Meetings to finally approve the project's Expediente Tecnico for implementation are expected to resume and conclude soon after COVID-19 related restrictions are lifted.
- Tumulaca reforestation project, Moquegua (Anglo American, USD \$0.25M): In coordination with Anglo American, NIWS prepared detailed pilot plot designs and plans for installing a nursery to support scaled restoration efforts in Moquegua. Anglo American is reviewing the final Terms of Reference for implementing the pilot project, which are expected to be procured by Anglo American, and therefore mobilized, next quarter.

Gender Strategy

This quarter, Forest Trends published and disseminated, with a comprehensive communications orchestra, the full *Gender Gaps in Natural Infrastructure and Water Management in Peru* publication, following the launch and dissemination of the policy brief by the same name last quarter. We also worked closely with the Ministry of Women and Vulnerable Populations (MIMP), SUNASS, and ANA to ratify institutional commitments to address these gender gaps in the water sector by mainstreaming the gender approach in each leading water sector institution, and our technical work led by expert consultant teams commenced in both SUNASS and ANA. The Women's Leadership Program was designed, and then redesigned to respond to current and anticipated restrictions related to COVID-19. Finally, all of these actions were coordinated closely with the Gender Working Group of the NIWS Technical Platform, where MIMP, MINAM, SUNASS, ANA, and Canada actively collaborate to achieve shared goals.

ACRONYMS

ANA	National Water Authority
ChiRiLu	Chillon, Rimac and Lurin (watersheds)
CUBHIC	Cuantificación de Beneficios Hidrológicos de Intervenciones en Cuencas
EPS	Water utilities
FONAM	National Environmental Fund (“Fondo Nacional del Ambiente”)
GOP	Government of Peru
GORE	Regional government
GOLO	Local government
HIRO	Herramienta para Identificación Rápida de Oportunidades (NIWS Rapid-Focus GIS Tool)
IOARR	Investments in Optimization, Marginal Expansion, Rehabilitation and Repositioning
MEF	Ministry of Economy and Finance
MIMP	Ministry of Women and Vulnerable Populations
MINAGRI	Ministry of Agriculture and Irrigation
MINAM	Ministry of Environment
MERESE	Mecanismos de Retribución por Servicios Ecosistémicos
NGO	Non-governmental organization
NI	Natural infrastructure
NIWS	Natural infrastructure for Water Security Project
ODS	Decentralized Offices of SUNASS
OECD	Organización para la Cooperación y el Desarrollo Económicos
PAGCC	Action Plan on Gender and Climate Change
PIP	Public Investment Project
PMO	Optimized Master Plan (of water utilities)
PPR	Budgets by results (“Presupuestos por Resultados”)

PROFONANPE	Peruvian Fund for the Promotion of Natural Protected Areas (“Fondo de Promoción de las Áreas Naturales Protegidas del Perú”)
RCC	National Authority for Reconstruction with Changes (“Reconstrucción Con Cambios”)
SEDACUSCO	Water utility servicing Cusco (“Servicio de Agua Potable y Alcantarillado de Cusco”)
SEDAPAL	Water utility servicing Lima (“Servicio de Agua Potable y Alcantarillado de Lima”)
SEDAPAR	Water utility servicing Arequipa (“Servicio de Agua Potable y Alcantarillado de Arequipa”)
SENAMHI	National Hydrology and Meteorology Service
SPDA	Peruvian Society of Environmental Law
SUNASS	National Superintendence of Water and Sanitation Services
UPCII	Institutional Promotion, Training and Image Units
USAID	United States Agency for International Development

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The extraction of peat, which constitutes an illegal action, is one of the main threats that threaten the conservation of strategic fragile ecosystems for water regulation such as wetlands. (Photography: CONDESAN)

Objective I: Enabling Environment for Natural Infrastructure Improved

IR 1.1: Political and public awareness increased on the effectiveness of NI to secure water supply and increase resilience and the need for NI investments

1.1.1 Implement NIWS branding plan and project communications

The NIWS Project visibility has continued to grow in this period, with NIWS outreach now estimated at over 600,000 people through regular outreach on Consortium platforms (see Table 1).

NIWS' revised social networking strategy came into effect this period, allowing greater and better content flow to our priority audiences. As a result, NIWS registered significant growth through Facebook, Twitter, and Flickr. Forest Trends, SPDA, and CONDESAN generated 105 posts on Facebook and Twitter, with a total reach of 560,395 users (171,387 new for the quarter). In a period that did not have large events, as in the previous quarter, this figure suggests that the new digital strategy is performing well.

The Flickr webpage (<https://www.flickr.com/photos/infraestructuranatural/>) has 176 new photographs this quarter (2473 in total). Institutional partners such as Sedapal and MIMP have started to make use of NIWS photographs in their social networking, communications, and events.

Table 1. Social media and web engagement on NIWS partner platforms, Q2 FY2020

Platform	Posts	Audience Reached	Interactions
Web CONDESAN	4	1,906	-
Web Forest Trends	12	4,064	-
Web Actualidad Ambiental (SPDA)	7	12,617	14,906
Facebook CONDESAN	17	55,614	4,256
Facebook Forest Trends	20	233,569	12,665
Facebook SPDA	17	167,573	14,676
Twitter CONDESAN	15	24,030	728
Twitter SPDA	43	67,329	1,637
Twitter Forest Trends	10	12,280	295
MailChimp (mailings)	2	541	94
TOTAL	147	579,523	49,257

In addition to our social media outreach, NIWS keeps project allies engaged through a consistent NIWS Quarterly Newsletter. Issue 7 of the NIWS Quarterly Newsletter was shared in January through Redinfor, a network of over 38,000 members interested in sustainable development in Peru. This quarter, NIWS revised our mailing list to include individuals maintained in different databases of the project, thereby increasing the reach for our April newsletter by more than 300% (for a total of 2,298 contacts).

I.1.2 Develop and implement communications strategies for raising public awareness, for national policymakers, and in new sectors.

Gender Orchestra

This quarter, NIWS efforts to raise public and political awareness focused on gender equality and water, disseminating the Gender Gaps in Water and Natural Infrastructure Management publication and calling attention to commitments by the Peruvian government to address these gaps, through a “communications orchestra” that reached over 150,000 people through 27 posts on social media and articles in the press. The orchestra included publication on social media of a series of video profiles featuring some of the “Women of Water ” who were recognized at the 2019 Public Forum on Gender Equality and Water Security -- Carmen Málaga, Daysi Colla and Elsa Fung. In total, these videos have been viewed over 17,000 times. Currently 5 additional videos of this type are in production and will be published next quarter.

Priorities for the new Congress

NIWS public-facing media efforts this quarter also highlighted the environmental issues that the new Congress should focus on, through an article and press release published by SPDA, as well as interviews given by SPDA with media outlets. Among the issues highlighted by SPDA in these pieces are: a) Defense and protection of fragile ecosystems; b) Natural Infrastructure; and c) Modifications to the penal code to protect peatlands and wetlands. This content, disseminated through our social networks, generated the interest of a correspondent for the France Press news agency, who conducted an interview with Isabel Calle, Director of SPDA and NIWS Objective I Lead, about the water problem in Lima.

MERESE Video produced with MINAM

In alliance with the MINAM, the animated video [“Learning about Compensation Mechanisms for Ecosystem Services - MERESE”](#), was produced and published, which is being disseminated through social networks. The purpose of this video is to clarify for the general public, especially current and potential ecosystem service payers and providers, how MERESE work, the benefits of the same and what role they play within this mechanism. This video has been viewed 8507 times.

Enhance political and public awareness in priority watersheds

During this quarter, six installations of the radio program, “The Water Hour” were produced, continuing our collaboration with the ChiRiLu watershed council. Together, these programs have had an audience of 9,000 listeners and 4,819 views of the program posted on Facebook. One of the programs

highlighted the importance for political parties to prioritize natural infrastructure actions in their electoral proposals, regarding the congressional elections of that month.

Additionally, NIWS produced Our Lord of Huamantanga Educational Institution the "Participatory Video Workshop in Huamantanga" which shows the educational process of the students regarding their own natural infrastructure. It was published in January and it is available on the CONDESAN YouTube page.

In Piura, NIWS finalized a brochure on FORASAN, the water fund for Chira-Piura watershed, which seeks to carry out actions for conservation and recovery in the natural infrastructure of the Piura region. The brochure was approved, printed and it has been disseminated in the Chira-Piura Watershed Council's activities. On January 3, 2020, an article titled "From the paramo to the sea" was published in the newspaper El Tiempo de Piura, which highlights the role of the paramos that provide water to Piura, based on the experience of participating in the exchange carried out by the NIWS Project, through the Incubator in collaboration with the Quiroz water fund, in the first quarter. Additionally, an infographic called "From the paramos to your house" was developed, in alliance with the CRHC Chira Piura and the Network of Water Communicators trained by the NIWS project. This product seeks to raise awareness about the importance of the conservation of the paramos and its direct relationship with the availability of water in the city; it is currently under review.

In Cusco, NIWS prepared a series of messaging for radio and television spots, as well as a "Women of Water" photographic exhibition, in anticipation of the World Water Day campaign. This preparation was carried out with the Technical Group of Environmental Education of Cusco, an initiative that brings together communicators from various institutions promoted by the Regional Government and the network of communicators in Cusco. Unfortunately, these activities have been suspended in order to comply with the national emergency related to COVID-19. NIWS is evaluating when we will be able to use the material generated after the emergency has passed.

Journalist trainings

Finally, planning continued for training for journalists and communications professionals this quarter, incorporating adjustments to hold the training mostly virtually, in light of COVID-19 related restrictions.

Provide support for journalism on natural infrastructure through the journalist fund

Building on the training provided to journalists with partner the Mohme Foundation in 2019, on January 11, the Gustavo Mohme Llona Foundation and La República newspaper published the online multimedia special, "Natural Infrastructure to Recover Water Sources." The special includes the following three articles of journalists supported by the Fund to address the management of water resources and the care of the natural infrastructure in the watershed headwaters:

- [The resurrection of the peatland bogs that Lima needs](#), by Marjorie Ramos Poma.
- [How does Cusco care for the water it drinks?](#), by Elmer Mamani, Melissa Valdivia and Rufino Motta.
- [Water sources for Southern cities in danger](#), by Elmer Mamani, Melissa Valdivia and Rufino Motta.

Additionally, NIWS provided technical support to Diario La República in their published report, which addresses the need to consider the restoration and conservation of natural infrastructure in the process of Reconstrucción con Cambios, the report is called “Call for attention to Water Supply Ecosystems in Piura” (“Piden atención a ecosistemas proveedores de agua en Piura”), and highlights the importance of ecosystem services in the water provision for that region.

Messaging strategy in the context of COVID-19

In late March, after the announcement of the national emergency related to COVID-19 and coordination with USAID regarding review of potentially politically-sensitive messaging in this time, NIWS developed a communications strategy to guide messaging under the project in this context. The communications strategy will reinforce a message of calm and solidarity during the crisis, while raising awareness about specific solutions (i.e., investment proposals) and tools that decision-makers and professionals can utilize to bring society out of the crisis while building resilience needed to confront future crises (e.g., water and sanitation as fundamental to public health). Communications at the local/watershed level will need to be much more targeted to specific decision-makers and/or delivered in virtual format, given that they will not be able to take place in public fora. The strategy also includes a programming of virtual content, with a particular emphasis on a more active webinar series. We will ensure close coordination with USAID on communications, recognizing the particularly sensitive nature of the current climate.

1.1.3 Develop and deploy communications campaigns for upstream communities

Upstream communications this quarter focused on supporting the final stages of project design and approval in the Huamantanga learning site, Chillón watershed. For the Huamantanga community, NIWS developed a brochure which summarized key information about the SEDAPAL-funded MERESE project developed for implementation in Huamantanga. NIWS worked closely with SEDAPAL to develop and validate the materials before finalizing and disseminating them in Huamantanga. The brochures were disseminated to community members at meetings held in February and March to review the project design (for more information, see Section 3.1.1). NIWS also developed a map of the investment cycle, which shows the progress that has been made to date and what are the next steps to follow to achieve the implementation of the MERESE Project with Sedapal. The map is being displayed in the Municipality of Huamantanga.

Following questions received from the community in the course of meetings held in March and subsequent communications, NIWS is developing an additional brochure to clearly respond to questions and doubts about the project and MERESE in general.

1.1.4 Build champions and support informal institutional changes in key sectors

This quarter, Forest Trends and CONDESAN submitted several proposals for events and posters to be featured at the 2020 World Water Week in Stockholm. Several proposals were accepted and would have allowed the project to engage and strengthen new champions from Peru leading in key areas for NI investment mobilization (e.g., SEDAPAL, MINAGRI, Reconstrucción Con Cambios), as well as to share advances in tools and information for decision-making on natural infrastructure. However, unfortunately,

World Water Week has been cancelled this year due to COVID-19, as has all NIWS engagement in international conferences for the remainder of the fiscal year.

1.1.5 Strategically communicate benefits of natural infrastructure to priority audiences (briefs, web products).

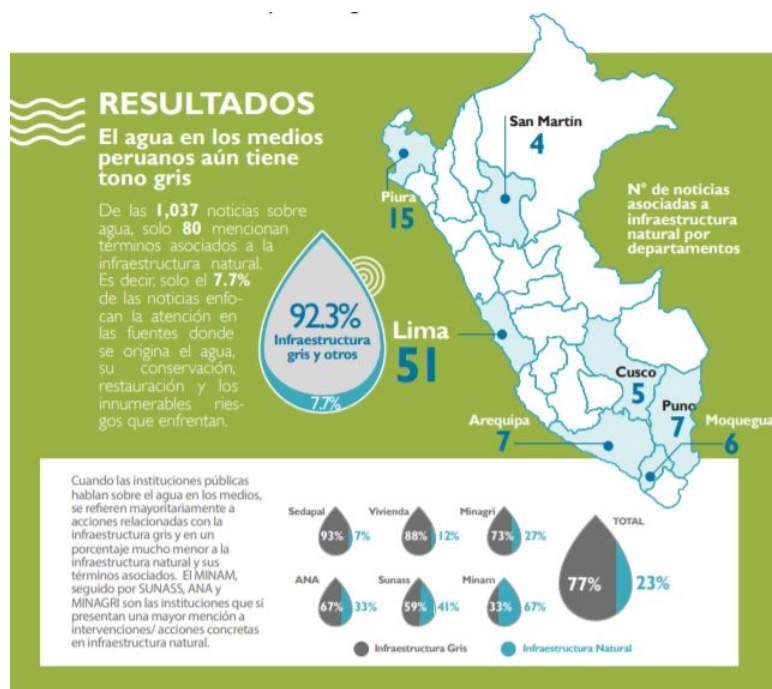
National Water Congress

In March, NIWS participated in the National Water Congress, organized by UTEC, with a stand that presented the CUBHIC and HIRO tools, as well as the two models demonstrating wetlands and amunas. There was a specialized public, mainly researchers, academics and water specialists; however, the attendance of people was also affected by the pandemic, as the Congress took place just before quarantine orders were issued.

Infographic: Natural Infrastructure in the Peruvian press

NIWS also produced and disseminated this quarter an infographic highlighting treatment of natural infrastructure in the Peruvian press. Produced as part of a series of analyses initiated in 2019 by NIWS to capture public and stakeholder perceptions on natural infrastructure in order to establish a baseline, the infographic summarizes the results of the study of perceptions of natural infrastructure in 5 of the main newspapers with national circulation for the period June 2017 - June 2018. It is oriented to communicators and journalists and seeks to generate debate and a greater commitment to the water issue and encourage journalists to improve and increase coverage of the issue and is intended to be distributed via social networks.

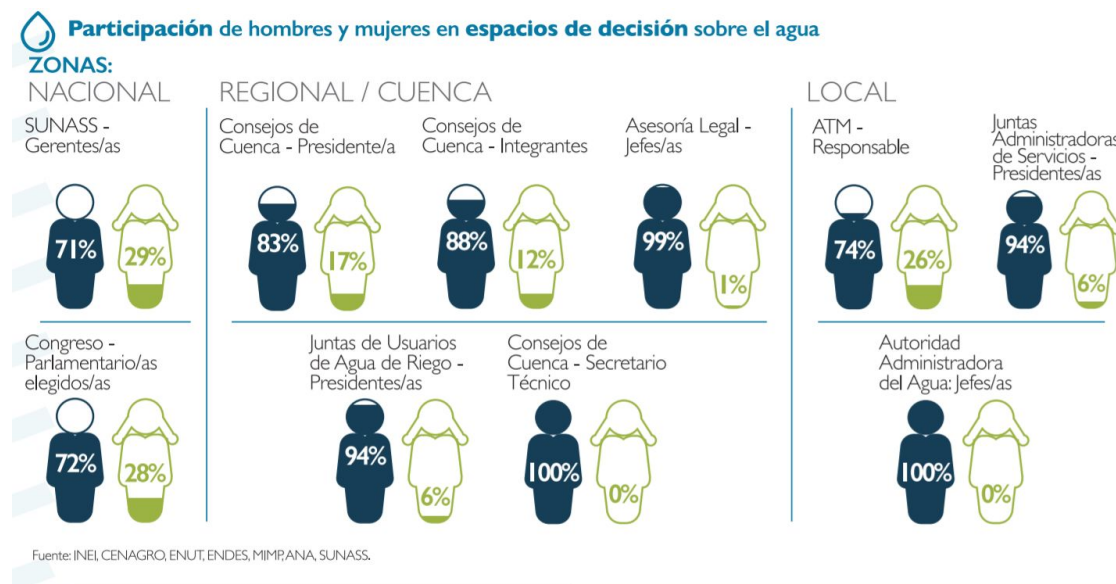
Graphic 1. Excerpt of the Natural Infrastructure in the Peruvian press infographic



Communications Packet: Gender Gaps in Water and Natural Infrastructure Management

NIWS prepared for delivery to a targeted group of public officials and decision-makers, a packet of communications materials highlighting the findings of our publications, Gender Gaps in Water and Natural Infrastructure Management. The materials included an infographic and a 2020 planner that highlight key results of the study. The packet also included the Gender Forum publication Iguales por el Agua and the policy brief on the gender gaps study. All of them were packed in a box with the message “Join the effort for Gender Equality in Water Management”. After the social restrictions are over, they will be sent to 500 relevant institutions.

Graphic 2. Excerpt from the infographic capturing key results of the gender gaps study



World Water Day Campaign (Cancelled due to COVID-19)

Another central event planned for the quarter was the celebration of World Water Day which included the elaboration of a strategy in collaboration with the Communications Working Group of the NIWS Technical Platform. NIWS prepared a coordinated messaging strategy and activities with partner institutions MINAM, ANA, SUNASS, and MIMP, that positioned natural infrastructure as a key opportunity in the context of the global theme “Water and Climate.” In addition, with the Communications Working Group NIWS prepared a “Women of Water” photographic exhibition that would have started its tour on March 13 at the National Library of Peru (Lima headquarters). However, the National Library offered its space for the “Women of Water” exhibition after the emergency, and NIWS has already prepared the structures and photographs selected in collaboration with partner institutions.

IR 1.2: High level roadmap to optimize use of natural infrastructure in Peru developed

1.2.1 Convene and charter Advisory Board

NIWS continued to promote exchange and collaboration among the NIWS Technical Platform members, with two meetings of the platform held this quarter. During the meetings, the following range of items were presented and discussed with Technical Platform members MINAM, MIMP, SUNASS, SERFOR, ANA, the Ministry of Agriculture, USAID and Canada:

- MINAM presented the Guidelines for Optimization Investments, Marginal Expansion, Rehabilitation and Replacement (IOARR) that were approved in December 2019. These guidelines will be applied to priority watersheds and learning sites and this approach will be defined at the next Technical Platform meeting.
- NIWS Resource Partner Keiser & Associates presented the CUBHIC methodologies. The presentation was given by Mark Kaiser and Mike Foster, authors of these methodologies on behalf of the Project. The presentation included explanations on the theoretical and methodological foundations and an exercise was performed with the data from the Technical File developed for Carampoma to estimate the water benefit for the recovery of degraded peatlands.
- Forest Trends presented the results of the study, Gender Gaps in Natural Infrastructure and Water Management. Copies of the publication and a summary infographic were also distributed to members of the Platform.
- CONDESAN presented the proposal for the State of Science in Natural Infrastructure 2020 event "Building bridges between science, politics and community," which was to be held in July. The participation of MINAM, MINAGRI, SERFOR, SUNASS and MIMP in the organizing committee of the event was confirmed, and in the group discussed the content of the concept note and the event's agenda during an initial meeting. However, this event has since been cancelled due to the global state of emergency related to COVID-19.
- Forest Trends presented the proposal from the Communications Working Group of the Technical Platform for the campaign for World Water Day, including a messaging strategy focusing on the opportunity for natural infrastructure in the context of the global theme, "Water and Climate." Forest Trends received valuable input from the Platform for the messaging; however, World Water Day activities and the messaging strategy were also cancelled due to COVID-19.

1.2.2 Develop, publish and launch State of Natural Infrastructure in Peru (2019) report

The State of Investments in Natural Infrastructure in Peru report was drafted; it will be finalized and published next quarter.

I.2.3 Develop, publish and launch Common Vision on Natural infrastructure report

As noted in our last report, at the end of last quarter the OECD shared their draft report of recommendations to improve water policy and governance in Peru. The OECD report includes a number of NIWS key messages and recommendations, including an emphasis on the need to conserve upper watersheds, the key opportunity for investment in amunas, and the need to operationalize MERESE implementation mechanisms. This quarter, MINAM shared the full draft report with NIWS, which is currently under review by Peruvian stakeholders before OECD will move to finalize it. In order to inform this process, this quarter NIWS prepared a detailed review and response to the draft report, with a focus on the following recommendations:

- Update and clarify the framework used for payments for ecosystem services, in order to support the effectiveness, sustainability, and equity of the mechanism
- Include a gender focus on the report and, more broadly, throughout water governance in Peru
- Strengthen the participation of the representative from the community of water users in the watershed council. Currently, the EPS, the Ministry of Housing or OTASS are participating in some cases. It is important to reinforce that EPS must participate. The participation of the EPS is essential in the CRHC because it allows the EPS Water Management Plan to be financed through the PMP of EPS
- Strengthen the autonomy of the ANA. It is necessary to reinforce the role of the ANA according to all users and not only farmers
- Review the procedure of Invierte.pe to have a differentiated process to finance natural infrastructure
- Channeling mechanisms that allow communities to have real and tangible benefits to protect ecosystems that provide ecosystem services
- Consider natural infrastructure as an asset
- Create simplification regimes within the framework of environmental certification and cultural certification

As we proceed with the development of this detailed report and the subsequent Roadmap, we are also identifying shorter-term opportunities for aligning efforts across governmental counterparts to resolve bottlenecks or gaps and thereby support more efficient, effective, and sustainable actions for natural infrastructure conservation. To this end, this quarter SPDA identified the need of a “Roadmap for Optimized Management of Archaeological Remains” to support NIWS project counterparts and project formulators, such as SEDAPAL, in obtaining the necessary certifications in the execution of investment projects in natural infrastructure so that projects comply with the environmental and cultural obligations required by the State. The roadmap was prepared based on the analysis of the current state of the regulatory framework from authorizations such as Clearance Certificate of an Area Free From Archeological Remains (CIRA), Archeological Monitoring Plan (PMA) and Archeological Investigation Project (PIAR), which responded to the legal assistance request from SEDAPAL. This quarter, SPDA concluded a legal report on archaeological certifications that develops the general aspects of these procedures presents findings on the main obstacles that delay its approval and proposes recommendations for its optimization as well as the “ABCs for the management of archaeological

remains in natural infrastructure projects”. The final product in this line will be a regulatory proposal to simplify the CIRA issuance and PMA authorization procedures in order to obtain them in less time and to exclude certain natural infrastructure interventions from their scope, which will be prepared next quarter.

IR 1.3 GOP Planning Instruments Incorporate Natural Infrastructure

I.3.2 Support incorporation of natural infrastructure into priority planning instruments at national level

Implement Legal Protections to Address Illegal Harms to Ecosystems Supported by MERESE

As described in our QI report, SPDA continued to lead this quarter on two strategies to strengthen legal protections for ecosystems supported by MERESE, with a focus on high-Andean wetlands, or peatlands, in response to increasing pressure, particularly due to the unlawful extraction of peat:

- *Judicial complaint:* This quarter, SPDA collaborated with CONDESAN to prepare a criminal complaint against the illegal extraction of peat in the Carampoma wetlands, prompted by complaints filed by members of the Carampoma community in 2019. The complaint was finalized and presented to the Office of MINAM’s Attorney General. The Attorney General’s Office is expected to present this complaint to the Lima Office of Specialized Prosecutor for Environmental Matters in order to initiate the corresponding preliminary investigations, identify those who are responsible and establish a judicial precedent.
- *Legal framework for fragile ecosystems:* SPDA prepared this quarter the regulatory proposal “General Dispositions for Protection and Defense of Wetlands,” which proposes changes to the penal code to fill the gaps that prevent effective attention to these threats so that they do not obstruct the implementation of natural infrastructure investment projects. The proposal, with technical supporting documentation prepared with CONDESAN, was socialized with and submitted to MINAM this quarter. Next quarter, SPDA will work with MINAM to socialize the proposal further with SERFOR, the other competent authority on these issues; if successful, the proposal may be pre-published on its way to approval next quarter.

Develop a Roadmap for the Implementation of the National Gender and Climate Change Action Plan

As noted in the QI report, Forest Trends has supported MINAM to prepare the Internal Regulations of the National Interest Group “Women and Climate Change,” which defines its structure and functions, being the most important: i) promote the mainstreaming of the gender approach in the National Commission on Climate Change, and ii) promote mechanisms to represent women in the National Commission on Climate Change. The Regulation was approved this quarter and establishes the mechanisms for electing the titular and alternate representatives before the National Commission on

Climate Change, and the functions that these representatives must fulfill, including promoting gender analysis and the incorporation of a gender approach in the National Commission on Climate Change.

The process of electing a representative of women's organizations before the National Commission on Climate Change has been suspended due to the health crisis; Forest Trends is working with MINAM to explore the possibility of virtual meetings during this time that may continue to guarantee the representation of women in the Commission's work.

Securing Recognition of Amunas as National Heritage

With the aim of promoting investments on ancestral infrastructure such as amunas or pre-Hispanic canals restoration, the SPDA developed a strategy for the revaluation of the practice of mamanteo in order for it to be recognized as Intangible Cultural Heritage of Humanity. After evaluating the options of communities with whom this initiative would be promoted, it was determined that the Tupicocha (Lurin watershed) community will be allies to present the proposal to the Ministry of Culture. To start this procedure, MINCUL must present this statement to the means and collect their comments first hand, which has been postponed until the health emergency passes.

1.3.3 Support incorporation of Natural Infrastructure into public investment, focusing on Invierte.pe gaps and Presupuestos por Resultados.

Provide recommendations for the revision and future application of the simplified technical file (“ficha simplificada”) for natural infrastructure investment, with gender focus

The Simplified Technical Data Sheet (“Ficha Tecnica Simplificada”) for the Recovery of the Water Regulation Service was approved with RM N° 066-2020-MINAM, on February 28, 2020. NIWS contributed to the development and approval of this important project development tool by reviewing the proposal, giving comments and contributions that were incorporated, and supporting the MINAM technical team in responding to questions raised by the Ministry of Economy and Finance. This is an important step because there is now a specific instrument to design and evaluate public investment projects for natural infrastructure investments. The contents of this sheet are adapted to ecosystem services for water regulation, while the General Sheet that the MEF provides was developed for gray infrastructure projects.

Guidance for identifying priority investment areas under Performance-Based Budget I44

This quarter, NIWS finalized and validated the methodological design of a tool created with MINAM to identify, categorize, and prioritize degraded areas for investments in natural infrastructure. The tool, developed by a consulting team led by Raul Tupayachi with NIWS technical and financial support, will help regional governments and other actors to target and justify investments under Budget Program I44, Conservation and sustainable use of ecosystems for the provision of ecosystem services, logically following the development of the National Map of Degraded Areas. The methodological validation in the field was carried out in the Chira-Piura, ChiRiLuMa and Vilcanota-Urubamba watersheds. A workshop was held in February to validate the results with MINAM and potential users, primarily in regional governments from Piura, Lima, Junin, and Cusco. Additionally, NIWS worked with MINAM to clarify

how this tool can strengthen and complement the HIRO prioritization tool, specifically by offering more precise identification of degraded areas, which serves as one of the layers HIRO uses to identify investments targeted to achieve certain ecosystem service benefits. The two tools will be differentiated and presented together in the NIWS Project Design Toolbox, which will be launched next quarter (see section 3.1.3).

Additionally, next quarter the tool will also be applied in Quilca-Chili, Tambo-Moquegua, and Mayo watersheds, starting off the nation-wide application that MINAM will then lead. These results will be published on MINAM's geoserver. The Guide laying out the methodology and tool will also be finalized, designed, published, and disseminated.

1.3.4 Facilitate coordinated natural infrastructure implementation for water security at the landscape level through approval of Natural Infrastructure in GIRH plans, EPS PMOs, and local/regional development plans.

Reconstruction con Cambios

This quarter, NIWS built on the partnership established with MINAGRI in QI to provide technical assistance directly to consulting firms developing Integrated Plans that will channel hundreds of millions in investment in 19 watersheds throughout the country. NIWS contracted the support of a specialized team of consultants led by Nancy Zapata to provide direct technical support to these firms and to the supervisory entities charged with reviewing the validity of natural infrastructure investment proposals presented for investment with Reconstruccion Con Cambios funds (see section 3.2.2 for details).

Additionally, NIWS continued to provide technical assistance to firms in their selection and design of natural infrastructure investments, using the HIRO-GRD tool presented in the QI report. This quarter, consulting firms developing plans for the Piura, Tumbes, Zaña, Virú, Casma and Mala watersheds were directly advised on the use of HIRO to site and design interventions. In the particular case of the Casma and Mala basins, there has been an exchange of information, in which the companies have provided the results of detailed risk analysis studies to be incorporated into the tool. Based on this, the results of the tool have been updated so that companies can support the intervention proposals.

To complement this targeting tool, CONDESAN identified and validated the potential of applying the KINEROS hydrological model to estimate the impact of natural infrastructure on reducing peak flows and erosion associated with heavy rainfall events. In the process of technical assistance to these basins, the application of this modeling tool is expected to increase in order to have quantitative estimates of the expected effect of the IN on disaster risk management. KINEROS is being applied directly by CONDESAN; results are expected to be finalized next quarter and included with the presentation of the Integrated Plans to justify the inclusion of natural infrastructure investments.

I.3.5 Build institutional capacity, with a focus on local and watershed level institutions, to increase women's participation in decision-making on natural infrastructure and water resources

SEDAPAL Institutional Capacity-Building

This quarter, NIWS worked closely with Alonzo Zapata, director of SEDAPAL's environmental management team, EGASE, to strengthen SEDAPAL's institutional capacity through an exchange with the region's leading water utility investing in natural infrastructure, technical support for proposals to address personnel needs and transfer funds to a third-party administrator, and coordination with SUNASS to support smooth preparation of SEDAPAL's new Optimized Master Plan. These activities all complemented NIWS' support to SEDAPAL for the development of a portfolio of MERESE projects, which is detailed in section 3.1.5.

In January, NIWS facilitated an exchange between SEDAPAL and Quito's water utility, EPMAPS. The exchange, organized by EcoDecision and Forest Trends, hosted 6 managerial staff from 3 departments in SEDAPAL that need to be coordinated in order for the MERESE portfolio to advance: for example, participants included Fredy Gomez Ospina, Manager of the Project and Investments Office, Alonzo Zapata, Director of the Environmental Management and Ecosystem Services Team, among others. In Ecuador, SEDAPAL staff met with EPMAPS Planning Manager, Environmental Manager, Commercial Manager and the Communications Director, as well as Technical Secretary and technical managers of FONAG, Quito's water fund which is primarily funded by EPMAPS. This process has contributed to raising awareness of other areas of SEDAPAL that were unaware of the importance of natural infrastructure prior to the exchange. As a result of the exchange, EGASE and NIWS staff have noted a marked shift in work with other areas; evidently, the exchange provoked a reflection on how to optimize and/or modify internal procedures of SEDAPAL that allow a faster execution of the MERESE projects.

During the visit, SEDAPAL officials identified a critical step is to search for solutions to improve the processes and procedures that currently present obstacles, such as investment bottlenecks. They also highlighted the fact that because these projects require time and inter-institutional coordination, it is necessary to start their mobilization as soon as possible. Lastly, they agreed that conservation agreements are necessary, because working with the local populations is vital for the success of water utility companies and the relationship between the actors should focus on long-term, mutually beneficial relationships, including conservation agreements.

"Now the ideas I had regarding that the involvement of local communities must be carried out from the beginning, that the private sector can also be incorporated into a healthy relationship, combining ancient knowledge, sustainable productive activities and the natural infrastructure, are much clearer," said Alonzo Zapata, Director EGASE-SEDAPAL.

This quarter, NIWS also prepared a proposal for FONAFE, the supervisory entity that considers proposals for hiring new full-time staff in SEDAPAL, on the technical-financial requirement for staff who

will support MERESE program management, accompanied by a document detailing the organizational structure, functions, and capacities of the proposed EGASE staff. NIWS also supported SEDAPAL to meet shorter term personnel needs by preparing a Terms of Reference for a company that SEDAPAL would hire to provide personnel services.

Additionally, recognizing the inherent limitations and risks that will continue to challenge MERESE implementation within SEDAPAL, NIWS prepared analysis to support the transfer of MERESE resources to a third party legally-authorized to administer public funds (i.e., PROFONANPE). NIWS plans to further conduct a legal analysis of the current regulatory framework to outline main weaknesses and gaps that might hinder its implementation.

Moreover, Forest Trends prepared a proposed scope for USAID for collaborating in this area with USAID's PES and Public Financial Management Project, which is under review by USAID.

Finally, NIWS supported SEDAPAL to prepare the justification for inclusion of new MERESE investments in their 2020-2025 Optimized Master Plan, and facilitated close coordination with the relevant team in SUNASS to support technical reviews. The Optimized Master Plan is scheduled to be finalized and presented in the public in the July-August timeframe; NIWS will continue to provide technical assistance, communications support, and institutional coordination for this process.

SUNASS Institutional Strengthening for MERESE Technical Assistance and Oversight

This quarter, Forest Trends continued our collaboration with SUNASS to strengthen their institutional capacities to provide technical assistance to water utilities for the design and implementation of MERESE. The institutional diagnostic has been completed, and a preliminary action plan has been developed to respond to the 5 priority areas for institutional strengthening: i) Standardization of technical assistance management processes, ii) Strengthening of professional team capacities, iii) Improvement of the information system, iv) Mainstreaming of development approaches, v) Improvement of technologies for risk assessment.

Based on these results, during the months of January and February (01/28 and 02/04), 02 training workshops were held with the Sunass national office team on the topics of educational action design and the incorporation of intercultural, intergenerational and gender approaches. This workshop identified opportunities such as the development of a guide for technical assistance in MERESE and Disaster Risk Management, the mainstreaming of the gender approach in training and technical assistance actions with ODS and EPS, in gender incorporation in Rapid Hydrological Diagnosis - DHR, in GRD training, among others. Currently, given the process of social isolation, we are waiting to resume working with Sunass.

Mainstreaming Gender in Water Sector Institutions

Following through on high-level political commitments made in 2019, this quarter Forest Trends partnered with the Ministry of Women and Vulnerable Populations to ratify and disseminate these commitments in SUNASS and ANA, with the participation of multiple ministers and vice ministers. On Thursday, February 20, 2020, with NIWS support, the Ministry of Women and Vulnerable Populations hosted a high-level meeting, "Ratification of commitments to mainstreaming gender in public entities

linked to water resources management.” The event was led by Minister of Women and Vulnerable Populations Gloria Montenegro and Vice Minister of Women Carolina Garces; participants included Minister of the Environment Fabiola Muñoz, Vice Minister of Strategic Development of Natural Resources (MINAM) Gabriel Quijandría, Vice Minister of Agricultural Policies (MINAGRI) Paula Carrión, Vice Minister Culture Angela Acevedo, Vice Minister Development and Social Inclusion Claudia Benavides, President of the Board of SUNASS Ivan Lucich, Ani Zamgochian from USAID and Brigitte D’aoust from the Canadian embassy.

During the event, leaders presented their institutional progress toward mainstreaming the gender approach in their own institutions and ratified the commitment to continue their articulated work to reduce institutional barriers that hinder gender equity in the public and private spheres related to water resource management, guaranteeing the exercise of women's rights. The ratification demonstrated continued high-level commitment to mainstreaming gender in SUNASS while also highlighting a lack of similar commitment in ANA, after a series of changes in institutional leadership took place there in late 2019. To this end, the event served as an opportunity to engage MINAGRI leadership, in particular Vice Minister Carrion, to renew institutional commitment within the ANA and assure that the gender mainstreaming process initiated this quarter has the support needed. By the end of this quarter, we had secured that commitment from ANA’s general manager, the director of the Directorate of Water User Organizations, the Director of ANA’s administration, the coordinator of the Water Culture team, and the director of Human Resources at a dedicated meeting held on March 10. As a result of this meeting, ANA issued a formal extension for their Commission for Gender Equality, updated the composition of its members, and designated the formal counterpart for the technical assistance for gender mainstreaming provided by NIWS.

On March 9, in the framework of the commemoration of International Women's Day, in an institutional act with the presence of the President of the Board of SUNASS, managers, specialists, the General Director of Mainstreaming of the Gender Approach of the MIMP and her team, as well as the NIWS Project Director, SUNASS held the public launch of their gender mainstreaming process.

Dedicated NIWS technical assistance for mainstreaming gender in ANA and SUNASS commenced this quarter, after the ratification of institutional commitments and the approval by NIWS, MIMP, and counterpart institutions of work plans prepared by specialized consulting teams selected in December. Consulting teams have finalized the methodology for the institutional assessments, including questionnaires and guidance for holding focus groups, and begun documentary analysis to contribute to that assessment, which will be carried out next quarter.



Hydrological monitoring equipment installed in the upper Quiroz watershed, Piura, which will allow us to learn more about the role of natural route infrastructure in enhancing hydrological regulation in the Andes. (Photography: CONDESAN)

Objective 2: Information Management Improved for Decision Making on Natural infrastructure

IR 2.1 Information generation for decision-making on natural infrastructure improved

2.1.1 Develop coordinated prioritized agenda for research, tool development, and capacity building

Throughout this quarter, CONDESAN continued to lead NIWS engagement with three technical groups that are supporting information and knowledge exchange for decision-making on natural infrastructure: the Water Sowing and Harvesting (*Siembra y Cosecha de Agua*) Network, the Peruvian Network for Ecosystem Restoration (RedPER), and the Technical Group on Peatlands. The participation and promotion of these inter-institutional working groups is an activity that allows for strengthening ties of collaboration, the exchange of information and the achievement of common and relevant objectives for the country. NIWS facilitates such technical interaction by financing some key consultancies and holding meetings to discuss relevant information for the conservation and restoration of ecosystems, associated traditional knowledge, and water ecosystem services.

In this quarter, the Technical Group on Peatlands completed the planned meta-analysis on the contributions of peatlands to water security, an effort that furthered their earlier development of a national legal framework on peatlands. The meta-analysis included a systematic literature review of research focused on peatland ecosystems in order to develop a conceptual definition that could be adopted by all sectors within Peru. In January, NIWS, INAIGEM and MINAM made observations on the draft which was then sent to the Technical Group (eg CIFOR, IIAP, SWAMP) for their final contributions and comments. In February, with all the comments incorporated, the final report was sent to MINAM with the proposed definitions and a guide for the identification of peatland ecosystems in Peru and MINAM began work with other sectors to elaborate the official definitions of peatland ecosystems in Peru. NIWS will continue to support this process by publishing and disseminating the final product next quarter. The definitions of the peatland guide will be used by SPDA and NIWS to inform the proposed change to the penal code to enhance the protection of wetlands (see section 1.3.2).

2.1.2 Systematize relevant hydrometeorological datasets and socio-economic datasets and process for use in NIWS analyses

This quarter, NIWS advanced multitemporal land use analyses in priority watersheds, as well as a deeper dive systematization of the role and coverage of wetlands and peatlands in our priority watersheds.

The multitemporal land use analyses presented in the Q1 report, in the Macará-Quiroz and upper Piura watersheds, have been concluded. A similar analysis was initiated in the Piuray microwatershed and Vilcanota-Urubamba watershed, which is scheduled to conclude next quarter. These analyses will inform proposals for portfolios of natural infrastructure investments and hydro-economic studies, helping to contextualize and prioritize, as well as establish a baseline and reasonable counterfactual scenario, for natural infrastructure investments.

In parallel, NIWS deepened our focus on peatlands and wetlands through this activity this quarter. Imperial College London prepared an internal discussion note to guide the inventory, research, and management of wetland areas. The note gives a concise overview of the state of scientific knowledge on wetland processes, the way that they impact ecosystem services, and the type of management practices that can be implemented to control and enhance these ecosystem services. This document will guide the wetland inventories, the identification of relevant ecosystem services and their management, as well as gaps in scientific knowledge that need to be prioritized as part of the project's research agenda.

Complementing this concept note, CONDESAN produced a preliminary mapping of peatlands and wetlands in NIWS priority watersheds, utilizing the HIRO tool and with the use of the National Map of Ecosystems prepared by MINAM in 2019. We also confirmed this quarter the importance of complementing the national map with local and ground-truthed data: upon comparing the results of the national tool to a higher resolution vegetation cover map made by SEDAPAL, we found a difference of 25,000 ha in the bofedales class. With that potential scale of error in mind, these inventories will inform natural infrastructure portfolios in priority watersheds, considering the current and potential contributions of peatlands as well as their current state of degradation as part of the effort to focus efforts for natural infrastructure restoration and conservation.

2.1.3 Strengthen, expand, and facilitate hydrological and socio-economic monitoring network

State of the Science Forum

This quarter, NIWS developed the concept note and preliminary institutional and logistical coordination for the 2020 State of the Science on Natural Infrastructure Forum, which was to be held in June 2020 at the University of Engineering and Technology (UTEC). A full concept note was developed and shared with the NIWS Technical Platform, and an organizing committee composed of MINAM, SERFOR, SUNASS, MIMP, and USAID was held. However, the co-organizers agreed that the Forum must be cancelled in light of the current health emergency, as it would not be possible to hold such an event in person, or effectively hold it virtually, under the current circumstances. However, NIWS is coordinating with counterparts to hold activities related to the Forum, such as the iMHEA Assembly and the development of the Natural Infrastructure Research Agenda, virtually.

iMHEA Annual Assembly

NIWS prepared the concept note for the iMHEA Annual Assembly 2020: *A Decade of Hydrological Monitoring in the Andes*, and reviewed the concept note with iMHEA leadership. NIWS also worked with the University of Engineering and Technology (UTEC) to secure the venue for the workshop. The

dates set for the assembly were set for June 16-17; however, as a result of the limitations presented by the current health emergency, iMHEA and NIWS have decided to hold the Assembly virtually over a period of weeks in the June-July timeframe. Preparations are now underway to shift the meeting to virtual platforms.

Hydrological Monitoring Protocols

To strengthen monitoring protocols and specifically to strengthen iMHEA, the Project conducted a review of the adequacy of hydrological measurement protocols for Andean ecosystems. This analysis revealed the need for particular protocols for monitoring flows, precipitation, isotopy, sediments, and water quality. A consultant will be hired through a call for proposals process in the coming quarter to support iMHEA and NIWS in the articulation of these protocols. During the iMHEA assembly, NIWS plans to present, seeking the support and input of iMHEA experts in the evaluation and validation.

Local Hydrological Monitoring

Maintenance, data downloading, and processing continued for hydrological monitoring equipment installed in NIWS priority watersheds. Specifically, local partner Nature and Culture International (NCI) processed the meteorological data downloaded throughout the quarter in the upper Quiroz watershed (Chira-Piura), and CONDESAN maintained, downloaded, and processed data collected from the ChiRiLu watersheds.

NIWS purchased 6 water level sensors, 10 rain gauges, 1 semi-analytical balance and the respective accessories and spare parts during this quarter, and during the next quarter, this equipment will be installed in the new monitoring site in the Tupicocha Rural Community, located in the upper watershed of the Lurín River. Three of the rain gauges will allow NIWS to measure the precipitation, temperature and the isotopic mark of water in the region. The isotopic mark is like the DNA of the rain that falls in the container of the equipment, which is then compared to the isotopic mark of water found in streams, amunas and springs lower in the watershed, which will allow us to learn more about the route water takes in the watershed and the respective roles of natural and ancestral infrastructures in that route. Implementation of some monitoring systems will be delayed due to restrictions in travel related to COVID-19.

2.1.4. Facilitate active learning, knowledge management and capacity-building with natural infrastructure agenda partners.

This quarter, NIWS advanced meta-analyses on the hydrological impacts of highland Andean grasslands, the impacts of natural infrastructure on disaster risk management, the practices and impacts of infiltration trenches and other rustic practices, and the impacts generally of natural infrastructure on water flow. These meta-analyses will contribute to the construction of the Natural Infrastructure Research Agenda, which will be fully drafted next quarter.

EcoDecisión developed the terms of reference for the research consultant to conduct a systematic review of the Hydrological Impacts of the Andean Grasslands. NIWS selected the proposal led by G. Mosquera of the University of Cuenca, and the administrative process got underway during this quarter.

In the systematic review and meta-analysis on natural infrastructure and disaster risk management, currently being done by the University of Lovaine on behalf of NIWS, the collection of published and gray literature was completed, having reviewed so far a total of 88 scientific articles that cover issues of regulation of extreme events such as mass movements and flooding, and erosion control, in this case laminar erosion, canyon erosion and sedimentation. Preliminary results of this review have been systematized by Imperial and socialized within NIWS for use in our strategies related to disaster risk management, for example with Reconstruccion Con Cambios.

NIWS Resource Partner CIFOR developed a first draft of a policy brief for the meta-analysis on infiltration ditches. NIWS began a thorough review of the brief and their results will be shared back to CIFOR for their integration into the brief and a final publication is expected in the following quarter.

In the systematic review and meta-analysis on the hydrological impacts of rustic practices of water and soil management, executed by NIWS consultant Aqua Andes Innovation (lead investigator: Bram Willems), NIWS decided to have a strategy differentiated by types of interventions, mainly because the different types of terraces have a different influence on hydrology and that a slope without terraces can have better infiltration than certain types of terraces. An important result found is that abandoned terraces in the Mediterranean region (without agricultural use) have a strong effect on the generation of surface runoff and erosion (mass movement). This is of great interest, given that around 90% of the terraces in Peru are abandoned. This would be the first policy brief published by the consulting group. NIWS continued the systematization process of academic articles related to qochas and amunas, through the quarter, although the collection of academic articles at the global level is finished. Review of theses at Peruvian and Andean universities showed that there was little usable material. It is expected in the following quarter to obtain results like those obtained from those of the terraces.

NIWS concluded its contribution to the SNAPP Water Flow Impact Group ([See more here](#)), which was a global literature review of existing research on the impact of natural infrastructure on water flow. The SNAPP lead scientists will process the literature review and share back a comprehensive report of the hydrological impacts of various nature based solutions. The database is now available for use by the project and can support exhaustive analysis of various types of natural infrastructure on water quantity and quality. The SNAPP group is expected to finalize their findings next quarter.

IR 2.2: Information sharing to support decision-making on GI improved

2.2.1 Build and deploy tools and capacities for rapid assessments of natural infrastructure priorities performance-based frameworks, including systems integrations to access critical data

HIRO Rapid-Focus Tool for Natural Infrastructure Interventions for Disaster Risk Management (HIRO-GRD)

This quarter, CONDESAN expanded the application of the HIRO Rapid-Focus Tool, which was developed in QI to support the rapid prioritization of potential natural infrastructure investments under

Reconstrucción Con Cambios (RCC). The tool in its original version, focused on disaster risk management (“HIRO-GRD”), has now produced priority investments for all 19 watersheds prioritized by RCC, which collectively are home to 8.1 million people. The results produced by HIRO show that 68% of the surface of these watersheds is at risk of landslides and 6% at risk for flooding, with a total of 2.6 million people and 13,000 km of electric lines and highways exposed to these dangers. Likewise, 1.8 M ha (30% of the total area of the 19 basins) are identified in areas of danger of mass movement and / or flooding that require urgent attention for natural infrastructure restoration. These priority areas for restoration involve various ecosystems and types of vegetation cover, the most important being the humid puna grassland (46%), agricultural areas with high slopes (40%), Andean scrub (10%), and dry forest (2%) (see Graphic 3).

Graphic 3. Priority degraded areas for restoration in areas at risk of landslides and flooding, in 19 watersheds prioritized under Reconstrucción Con Cambios. Results generated by NIWS’ HIRO-GRD Tool.



The HIRO-GRD results also point to practical solutions, which can inform investment planning and policymaking. Opportunities for the implementation of natural infrastructure measures are presented in these areas, such as reforestation, revegetation and / or afforestation (100%), terraces (67%), infiltration ditches (14%), qochas (10%) and dykes for the control of gullies (9%). On the other hand, the existence of 5,824 ha of National Protected Areas is recognized (9% of the total area) in the 19 basins of the RCC, which due to their state of conservation already play an important role in mitigating risks that should be recognized and repowered in comprehensive plans.

This quarter, NIWS prepared a publication capturing the technical protocol for the HIRO-GRD methodology for specialists and decision makers. As of the end of the quarter, the publication was being diagrammed for publication in institutional coordination with MINAGRI, PSI, and SERFOR. Likewise, it is

expected to produce a policy brief soon with the methodology and global results of the application of HIRO-GRD, in order to allow greater visibility and applicability of the tool.

HIRO Rapid-Focus Tool for Natural Infrastructure Interventions for Hydrological Regulation and Erosion Control (HIRO-MERESSE)

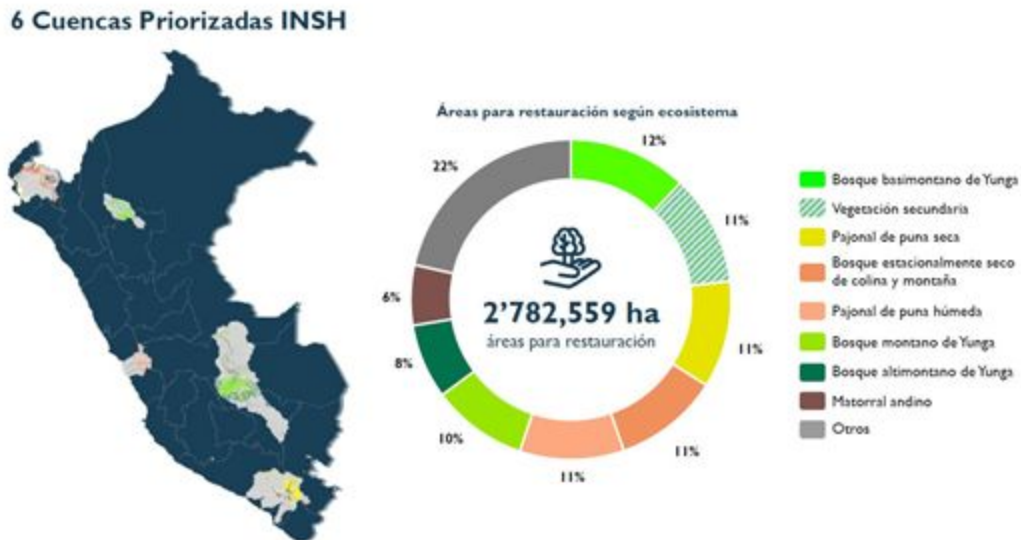
Building on the positive reception to HIRO-GRD, CONDESAN developed the “beta” version of the HIRO-MERESSE tool was developed, in which potential areas to restore and conserve are identified and prioritized according to their contribution in terms of supply of water ecosystem services for water regulation and erosion control. HIRO-MERESSE was developed for the ChiRiLuMa basin as a pilot and later, the tool was run in the 6 basins prioritized by NIWS and the statistical and geospatial results were systematized.

For the 6 prioritized basins, it has been calculated that there are 2.8 million ha (21% of the total area of the 6 basins) of potential areas to restore and conserve, of which 465 thousand ha are of very high priority for water regulation and 115 thousand ha very high priority for erosion control. In addition, it is identified that a large part of these areas corresponds to ecosystems such as dry and grass forests of wet and dry puna on the western slope, and yunga forests on the eastern slope of the Andes.

Like the results of the HIRO-GRD tool, the HIRO-MERESSE application across NIWS’ priority watersheds point to important policy and strategic considerations for MERESSE development. For example, 28% and 19% of the priority areas for water regulation and erosion control, respectively, correspond to Natural Protected Areas; in some watersheds, these figures are over 80%. Some 35% and 29% of the priority areas for water regulation and erosion control, respectively, correspond to campesino and native communities. Finally, this analysis shows that 57% and 46% of the priority areas for water regulation and erosion control, respectively, have at least 45-60% of the population with Unsatisfied Basic Needs. NIWS has used these results to argue for prioritizing equity in policy considerations for MERESSE, in the feedback we prepared this quarter to OECD’s Draft Recommendations for Water Governance in Peru.

From the development of the HIRO-MERESSE Tool, information is being generated on prioritized basins that will form part of the narratives that guide investment priorities based on the identification of gaps in the degradation of ecosystems and hydrological services.

Graphic 4. Priority Ecosystems for Restoration, for Improving Hydrological Regulation and Erosion Control. Preliminary results generated by NIWS' HIRO-MERESE Tool.



HIRO-MERESE has been socialized with different actors, including MINAM, SUNASS, CRHC Vilcanota-Urubamba and Quilca-Chili, and representatives of regional governments of Lima, Junín, Piura, Moquegua and Cusco. The reception of the tool has been positive and points of improvement and synergy have been identified, such as with MINAM and the product of the consultancy to update degraded areas as part of Budget Program No. 144. Version 2 is currently being developed. This involves a series of methodological changes such as the selection and processing of variables, assignment of weights to variables, format of processing files, among others.

Catalogue of Natural Infrastructure Measures

This quarter, NIWS developed the backbone of the Catalogue of Natural Infrastructure Measures. In its current form, the catalogue is a categorized list of measures related to conservation, restoration, and maintenance of natural infrastructure and rustic practices for water security (e.g., reforestation, agroforestry, revegetation, rotational grazing, construction of qochas, infiltration ditches). The measures are grouped into interventions for ecosystem restoration (forests, grasslands, wetlands) and sustainable water and soil management practices (qochas, ditches, terraces, etc). The catalogue has been shared with MINAM and is currently under review. Once validated, NIWS will collect and/or develop technical specifications, monitoring protocols, and other guidance for each measure, and these will be made available in the NIWS Project Design Toolbox (see section 3.1.3). Experience in places like the United States suggests that such a catalogue will significantly streamline project development and approvals, reducing uncertainty across the board regarding expectations and performance standards associated with specific interventions.

2.2.2 Train portfolio designers and project developers on appropriate use of existing models and tools for quantifying the benefits of natural infrastructure, including consideration of risks and uncertainties.

During this quarter, NIWS held a webinar to share results of the analysis on gender gaps in natural infrastructure and water management. As part of the Natural Infrastructure Webinar Series, NIWS facilitated this webinar for 362 participants, 108 men and 254 women, from at least seven countries, on March 31st, 2020.

2.2.3 Support systems integration and capacity-building for accessing data for qualitative and quantitative assessments of natural infrastructure

Imperial College London completed an interview template for use in "data producers" and "data users" interviews with relevant Project counterparts. During a visit in this quarter, ICL provided training to the CONDESAN in the use of the template. CONDESAN will conduct these interviews during the next quarter in order to collect information on the current state of data generation, processing, curation practices and needs for information related to natural infrastructure.

The ICL team will produce recommendations for improvements in data management and information systems based on the interview results. The results will also inform the development of Terms of Reference for the further development of the Anaconda 2.0 platform to fill any current gaps in data management infrastructure.

2.2.4 Build new models and methods to address assessment needs; adjust existing models to reflect learning from monitoring network and natural infrastructure agenda

This quarter's launch of the CUBHIC methods marked an important milestone. In addition to finalizing and publishing 5 methods, NIWS Consortium and our Resource Partner Kieser & Associates, which led the development of the methods, presented and disseminated the methods to NI project developers, project evaluators, and policymakers. The methods were launched via a webinar and meetings and technical workshops with NIWS partners – including MINAM, ANA, SERFOR, SUNASS, SEDAPAL, and natural infrastructure project developers in February. In addition, NIWS began applying the methods broadly to the projects in our portfolio under development, to prepare quantitative estimates of NI benefits to inform decision-making. The first 5 CUBHIC methods have been published and are available on the NIWS mini-site (infraestructuranatural.pe), corresponding to the following natural infrastructure interventions:

- Forestation and forest protection
- Wetland restoration and protection
- Andean grassland restoration and conservation
- Infiltration trenches
- Qochas

In addition to these published methods, NIWS continued to develop two remaining CUBHIC methodologies: Amuna Restoration and Riparian Buffers. CONDESAN carried out a comprehensive review of the original Amuna Restoration methodological document and accompanying excel workbook.

The communications team prepared the methodology for publication and the final document is under review.

CONDESAN also completed a full review of the CUBHIC Methodology on Restoration and Protection of Riparian Buffer Strips initially developed by Kieser and Associates. Next quarter, NIWS will include updates and adjustments to the methodology and prepare the documents for publication.

2.2.5 Build a network/cadre of new women leaders and champions for NI through Women in NI Leadership Program

Women's Leadership Program

The team dedicated to designing and implementing the women's leadership program was contracted in December and developed the detailed design and work plan of the leadership program in January. While the design was approved in February, with the selection of program participants scheduled to take place in April, the program has had to be redesigned and delayed due to restrictions in place related to COVID-19. The program has now been redesigned with two major adjustments. On one hand, the program is planned to continue with minimal disruption after this initial delay by moving the call for candidates, selection, and capacity-building modules to online formats. On the other hand, this move will prevent NIWS from effectively engaging local women leaders -- one of the priority audiences in the leadership program -- since it is often very difficult or impossible for these women to consistently access programming online. Therefore, NIWS plans to proceed with the Leadership Program focusing on the other priority audiences this fiscal year, and then to hold a program specifically designed for local leaders once restrictions are lifted to allow for this engagement. Identification of potential participants is now scheduled for May with selection scheduled for June and the beginning of program activities in July.

Support for Women Researchers

NIWS developed a framework to promote the engagement of women researchers focused on water security and natural infrastructure. This quarter, NIWS supported Samanta Onocuica (UNALM) to conduct her research, "Characterization of the hydrological function of ecosystems in two peer micro-basins of the rural community Huamantanga - Lima" and Ida Vilca (UNALM) to conduct her research on the "Influence of the landscape structure on water regulation: case of the Apacheta sub-watershed, Cachi watershed, Ayacucho, period 2000 to 2018".



The "Participatory Video Workshop in Huamantanga" shows the educational process of the students regarding their own natural infrastructure, at Huamantanga School (Photography: CONDESAN)

Objective 3: Natural Infrastructure Projects are Designed, Financed, and Implemented in Vulnerable Watersheds

IR 3.1 Portfolio of Natural Infrastructure Projects Designed

3.1.1 Rapid stock-take, needs assessment, and refinement of priority watershed milestones and identification of learning sites with local counterparts

NIWS completed the Project learning site selection process in Q4 in FY2019. For more detailed information about the learning site selection, see the NIWS Quarter I Fiscal Year 2020 report. The following activities were carried out by the project over the quarter:

Huamantanga Learning Site, ChiRiLu Watershed

As noted in last quarter's report, at the end of Q1 NIWS confirmed the cost-effectiveness of the expanded proposed PIP for Huamantanga (the revamped Huamantanga project, valued at USD 3.3 M, will restore 10 pre-incan amunas and over 2000 hectares of puna grassland), after a number of new activities requested by the Huamantanga community in meetings carried out by the project development team in 2019. The final, revised project profile was submitted to SEDAPAL for review by its project formulation unit in February. Based on comments received from EGASE and the formulating unit, NIWS has prepared the final project profile ready for consideration for "viability" (approval), which we estimate will happen in June. NIWS is also coordinating with SEDAPAL to prepare components of the Terms of Reference for the next stage of Expediente Tecnico development and project implementation, so as to reduce the amount of time between project viability and implementation.

In parallel, this quarter NIWS partnered with SEDAPAL to present the final project to the Huamantanga community, in order to secure the community's approval prior to officially processing the project for viability and advancement to the Expediente Tecnico stage. In early February, CONDESAN participated in assemblies hosted by each neighborhood in Huamantanga (Shigual and Anduy), in which they presented information on the scope and benefits of the Huamantanga project, as well as the map of the investment cycle to clarify the process of project approval and implementation (materials described in 1.1.3).

A full assembly with members of both neighborhoods of Huamantanga was held on March 1st to review the project and consider signing the MERESE agreement between Huamantanga and SEDAPAL. While the expanded PIP incorporated all major requests from the community and a majority of the community members in Huamantanga expressed support for the project during the February and March meetings,

some community members expressed doubts and prevented the community from signing an agreement with SEDAPAL. The doubts are related to uncertainties around the commitments and benefits that will be generated through the MERESE agreement, as well as the distribution of benefits in the community proposed in the PIP design. The distribution of benefits is complicated by a historical rift between the two neighborhoods in Huamantanga (Shigual and Anduy).

As a result of these meetings, NIWS and SEDAPAL have identified the need to work with community leadership to resolve these questions using a community relations strategy that explicitly recognizes the impacts that this historical rift has on land use in the community and, therefore, negotiation of the MERESE project. These are important questions, and addressing them will also allow NIWS and SEDAPAL to generate content and protocols that will support other MERESE projects. CONDESAN is in the process of systematizing and preparing responses to the questions raised by community members and has prepared a strategy to support the community and SEDAPAL to transform this disagreement and create an opportunity to strengthen relations between all the actors. CONDESAN, on behalf of the NIWS Project, maintains constant direct communication, by telephone, with representatives of both neighborhoods, the town, and political and municipal authorities. In this way, the process will continue, with meetings anticipated to resume it as soon as the travel restrictions are lifted.

Piuray-Ccorimarca Learning Site - Vilcanota-Urubamba Watershed

This quarter, Forest Trends finalized MOUs with SEDACUSCO and with the Comité de Gestión de Piuray-Ccorimarca to establish shared objectives and scopes of work for NIWS with each entity. This agreement comes after NIWS navigated the establishment of relationships with new leadership was appointed or elected in each entity in 2019. Both MOUs were signed on February 24, 2020, after detailed reviews internally, with partners, and by USAID. While the kickoff meeting for each scope of work was scheduled for March 18, they have been postponed due to restrictions related to COVID-19. NIWS is revising work plans in order to advance on analyses and technical reviews that can be carried out at a distance, and will work closely with SEDACUSCO and the Comité de Gestión de Piuray-Ccorimarca to re-establish coordination once the quarantine is lifted.

Tumilaca Learning Site, Tambo-Moquegua Watershed

NIWS completed field studies to secure the commitment of Anglo American Quellaveco (AAQ) to fund implementation of activities, a nursery, and local capacity-building at the Tumilaca learning site. This quarter, the forestry specialist consultant hired by NIWS finalized the design of the Moquegua reforestation pilot in Tumilaca. The HIRO tool helped to inform decisions regarding optimal areas for the installation of two AAQ nurseries for native species, and AAQ decided to install the nurseries in the middle part of the Tumilaca sub-watershed. After a series of coordination meetings in Lima and Moquegua, where NIWS presented the results of the studies carried out to the corporate Anglo American socio-economic development team from London, AAQ expressed their willingness to commit USD 250,000 to build these nurseries as afforestation pilot projects. The goal is that this intervention will be a project of hydrologically sustainable development with the communities that allows them to achieve economic income that serve as an incentive to care for the natural infrastructure in the Tumilaca sub-watershed. The forestry specialist hired by NIWS is currently finalizing their last product, which will

report the ex ante water and economic benefits of the afforestation to be implemented, and whose results will begin to be validated with the pilots. Thereafter, NIWS will collaborate with AAQ in formulating the terms of reference for AAQ to tender the construction of nurseries and installation of pilots as soon as the conditions are guaranteed for the execution in the field (post-confinement COVID-19). In this regard, AAQ has stated that the period of confinement due to COVID-19 can be used to advance the administrative procedures necessary for the publication of the tender.

Samanga Learning Site - Chira-Piura Watershed

The “Recovery of the Water Regulation Ecosystem Service in 07 Conservation Areas in the Quiroz and Macará Sub-watersheds, of the Ayabaca, Paimas and Pacaipampa Districts, Province of Ayabaca, Department of Piura” project has been included in the EPS Grau intervention plan to inform the analysis to determine the value of the MERESE reserves for the next five-year period (pending approval by SUNASS). On February 20th, NIWS presented the Technical Data Sheet of the PIP to demonstrate progress to the MERESE Driving Group made up of EPS Grau, CRHC CHIRA PIURA, IRAGER, AAA JEQUETEPEQUE ZARUMILLA, GORE PIURA and SUNASS. The submission of the paperwork to the Gore Piura to obtain viability is pending once the restrictions of the state of emergency are lifted.

Rumiyacu-Misquiyacu-Almendra Learning Site, Mayo Watershed

This quarter, NIWS finalized the Expediente Tecnico that we have been developing to support implementation of the MERESE tariff collected by the EPS Moyobamba, in San Martin, responding to questions and comments by the Municipality of Moyobamba. The Management Committee of the Micro-watersheds of Mishiquiyacu, Rumiyacu and Almendra have demonstrated broad participation and support of the PIP Moyobamba (ET) during the working meetings with the Provincial Municipality of Moyobamba and in their willingness to participate in monitoring, supervision and social control of the execution of the PIP. The PIP presentation was set for April, but has been postponed due to the current health crisis.

3.1.2 Design and implement M&E programs in learning sites in priority watersheds

Piuray-Ccorimarca Learning Site - Vilcanota-Urubamba Watershed

This quarter, NIWS held a meeting to present the Vilcanota-Urubamba watershed Hydrological Monitoring Design to the General Manager and the Managers of each office of SEDACUSCO, who will finance long-term monitoring. Given the interest of the participants, it was agreed that the Project will prepare a 6-month work plan, where the presentation of the most specific design for validation or redesign is considered, counting on SEDACUSCO officials during the process.

The agreement signed with SEDACUSCO included "Complement projects of interest so that they have a component for measuring hydro-economic and socio-economic results, including contributions in the design and execution of the hydrological monitoring system." A detailed work plan will be prepared to start work, an activity that is expected to resume after social restrictions.

Huamantanga Learning Site, ChiRiLu Watershed

Hydrological monitoring of the 2 micro-watersheds located in the upper watershed region of the Chillón river continued this quarter. CONDESAN is directly responsible for the operation and maintenance of the monitoring equipment and they are currently processing the meteorological data downloaded this quarter. The next download of data generated by the installed equipment is scheduled for the next quarter, and during the next quarter, these equipment will be installed in the new monitoring site in the Tupicocha Rural Community, located in the upper basin of the Lurín River, and in the other monitoring sites.

Samanga Learning Site - Chira-Piura Watershed

This quarter, NIWS continued with the hydrological monitoring of the 6 micro-watershed located in the upper watershed of the Quiroz river. Nonprofit group, NCI, is working on the operation and maintenance of the monitoring equipment and processing the meteorological data download. The next download of data generated by the installed equipment will take place next semester.

3.1.3. Consolidate Project Design Toolbox and deploy broad capacity-building for project designers and evaluators in priority watersheds

Short Course and Community of Practice on Public Investment Project Formulation for NGOs

Continuing the short course initiated and reported in Q1 to strengthen the capacities of Lima NGOs contracted to develop projects for SEDAPAL, on February 12-14, 2020, NIWS held the second session of the “Identification and Formulation of Recovery Projects of the Ecosystem Service of Water Regulation” course. 52 participants from 6 Lima organizations participated, as well as EGASE-SEDAPAL and local NGOs DESCOSUR, Arariwa and NCI. Cross-cutting issues such as how to ensure a diagnostic adequately informs project design, what the requirements are for representing natural infrastructure interventions in public investment project formats, and the requirements by the Ministry of Culture for project development were reviewed. NIWS Resource Partner Kieser & Associates also presented the CUBHIC methodologies and taught participants to estimate water benefits of various natural infrastructure interventions during the Course.

During this quarter, NIWS designed and initiated a Community of Practice to accompany project developers from NGOs who participated in the short course workshop in February. UTEC and DESCO were recruited to help activate the group through various publications generated in the project formulation process. Currently, a group has been implemented on Facebook, which will be the tool that will allow group interaction; active facilitation of the community of practice will begin next quarter through this digital strategy.

Course on public investment project design and management for Local Government, Regional Government, and EPS officials

As reported in the previous report, anticipating delays in the start of the Course with ENAP, the Project decided to launch a short version of the investment course for a group of 30 project formulators from regional governments, local governments, and EPS from Cusco, Lambayeque, Moquegua and Piura. During the month of February, a public tender was made for the implementation of the course that allowed selecting the consortium formed by JS Consultores and UTEC University.

Coordination with the selected Consortium began on March 9, and under this coordination a curricular proposal and overall work plan has been prepared. Due to COVID-19 related restrictions, the original proposal has had to be reviewed, as it was envisioned to be a largely face-to-face course, with remote monitoring processes. The changes focus on: i) Virtualization of Modules 1, 2 and part of 3 (based on the experience of UTEC); ii) Incorporation of a tutor for the virtual part that will fulfill the facilitating role also in the face-to-face phase; iii) On-site technical assistance in each of the areas to be involved (trips of the technical assistance team to the area) and iv) Changes in the execution schedule.

This course is now anticipated to start in May, going through September. The planned training modules are as follows:

- Module 1: General Framework of INVIERTE.PE in the environmental sector
- Module 2: Sectoral tools and criteria for investments in natural infrastructure
- Module 3: Project identification
- Module 4: Project formulation and evaluation
- Module 5: Execution and operation of investments

Guidance on Designing Projects for Sustainability, Effectiveness and Equity

In FY2019, NIWS prepared guidance on designing natural infrastructure investments called the “Sustainability, Effectiveness and Equity Scale (SEE) for the Evaluation of Natural Infrastructure Projects.” The SEE Scale guide is currently being used by the NIWS consortium as part of a larger project Evaluation Pack to carry out the ex ante technical evaluation of public investment projects at the Technical Data Sheet or technical file level. This quarter, Forest Trends developed the Methodological Guide to the Scale of Effectiveness, Equity and Sustainability to evaluate interventions in natural infrastructure as well as a brief to accompany the tool so that Project counterparts could also use the tool. Both are currently in the editing and graphic design phase and are expected to be published in May.

Project Design Toolbox

The Project Design Toolbox is a virtual repository of technical and scientific tools developed by the NIWS consortium and Project counterparts. The toolbox is a resource center for the elaboration of public or private investment projects that will operate on the Forest Trends website. This quarter NIWS designed the database, structured the repository, designed the user experience, constructed the

webpage and began testing. Tools developed by the project and Project counterparts will be uploaded to the toolbox; the toolbox will launch next quarter.

3.1.4 Develop a multi-sector, performance-based framework and baseline for Natural Infrastructure in priority watersheds

Chancay-Lambayeque Lessons Learned

Building on the sensitivity analyses and preliminary lessons learned identified in Q1, this quarter NIWS began to prepare a publication documenting the lessons learned from various hydrological modelling exercises, including the application of the Decision-Tree Framework, in Chancay-Lambayeque. This quarter, CONDESAN, Forest Trends, and Imperial College London prepared the conceptual approach and outline for the report, and we have contracted Dr. Kate Brauman of the University of Minnesota to support the analysis and systematization that will contribute to the report. We are on-track for that report to be finalized and published in Q3.

SEDAPAL Monitoring & Evaluation System

This quarter, NIWS began development of a watershed-scale monitoring and evaluation system for SEDAPAL's MERESE program, Sembramos Agua. The system uniquely incorporates hydrological and biophysical monitoring at multiple scales to evaluate progress against the MERESE program's eco-hydrological objectives while also improving the calibration of models used to predict the performance of natural infrastructure interventions and generating lessons to inform adaptive management of natural infrastructure projects. The monitoring system will include flow monitoring, rainfall data generated by SENAMHI-Pisco, targeted areas with HIRO and SEDAPAL tools, as well as hydrological modeling with SWAT and KINEROS for the quantification of flows and expected hydrological benefits. The system should be fully designed and presented next quarter to SEDAPAL, SUNASS, and other actors for review and validation. NIWS is documenting each development stage of the monitoring system so that the ChiRiLuMa watershed can serve as a pilot study to inform the development of monitoring programs in other Project priority watersheds.

Tambo-Moquegua

This quarter, NIWS built on the HIRO analysis prepared for Tambo-Moquegua in Q1 to socialize and begin to map out the development of a multi-sectoral portfolio for natural infrastructure investments in Moquegua. Results of HIRO were presented this quarter to the Regional Government of Moquegua and to EPS Moquegua, and NIWS reviewed with these actors their interests and plans for potential natural infrastructure investments in the region. Additionally, NIWS began to design the market study of the Restoration Economy, in which the Moquegua basin communities would organize to manage community plant nurseries and supply native species to a growing demand for projects to restore degraded areas with potential impact on the water sources management, identified through HIRO. These project ideas and the results of HIRO will be evaluated for hydrological and economic benefits next quarter in order to inform a multi-sectoral vision for natural infrastructure in the region.

Quilca-Chili

This quarter, NIWS continued the technical support to the Quilca-Chili watershed council, as local actors seek to consolidate a portfolio of natural infrastructure investments to secure water supply from the Reserva Nacional Salinas Aguada Blanca. The hydrological modelling of the portfolio identified continued this quarter. Activities were interrupted during this quarter when Ronal Fernandez, an important local champion, left his role as Technical Secretariat of the watershed council. Activities resumed and the proposal of natural infrastructure interventions, with quantification of benefits, will be finalized and presented to local actors for validation next quarter (pending viability of virtual meetings, given COVID-19 related restrictions).

Mayo

NIWS coordinated this quarter with a representative of the TYPESA consortium, the entity contracted to prepare the Water Resources Management Plan for the Mayo Sub-watershed Committee. NIWS agreed to provide the methodology and results of the targeting of HIRO MERESE and GRD investments, as well as the generation of spaces for integration with native and indigenous communities to better articulate their interests and socioeconomic dynamics. Next quarter, a working meeting will be coordinated with representatives in Lima, pending availability given COVID-19 restrictions.

3.1.5 Leverage local capacity and technical tools to produce a "bottom-up" pipeline of performance-based projects

During this quarter, NIWS continued to manage a pipeline of project ideas under development to respond to the interests of natural infrastructure investors and needs in vulnerable watersheds. As of this quarter, NIWS is supporting the development of 24 projects, representing an estimated \$40M in NI investments, as outlined in Table 3 below.⁴

Table 3. Pipeline of project ideas under development with NIWS support

N°	Project Name	Watershed	Targeted Investor	IN	Estimated Investment Value (USD)
1	Recovery of high Andean wetlands and peat wetland ecosystems in SEDAPAL Marca II and Marca V project scopes, Marcapomacocha district, Yauli province - Junin	ChiRiLuMa	SEDAPAL		US\$3,851,393

⁴ The difference between total estimated investments reported last quarter and this quarter, approximately \$5MM USD, is due to the fact that the Private Investment Team paused coordination on two investments with the private sector (reducing total by around US \$ 4.6 MM) and a project was better defined with the GORE Moquegua (reducing the total by about \$1.4 MM USD), and 2 new investment projects were added to the table (adding about US \$ 1.4 MM). For the Reconstruction con Cambios investments, and in particular in the case of investments that are part of the Matagente Integrated Watershed Management Plan in the Ica department, the identification of the intervention areas has been carried out and for the next quarter the formulation of the project ideas that will form part of the Plan is expected. As for the Salitral-Bigote Investment Project, it is expected to have the technical sheet prepared for the following quarter.

2	Recovery of high Andean wetlands and peat wetland ecosystems in SEDAPAL Marca IV project scope, Santa Barbara De Carhuacayan district, Junin province, the state of Junin and Huayllay district, Pasco province - Pasco	ChiRiLuMa	SEDAPAL	US\$1,274,242
3	Recuperation and conservation of the ecosystem services of the peatlands and high Andean grasslands of the Río Blanco for water security of the Yuracmayo dam	ChiRiLuMa	SEDAPAL	US\$1,072,909
4	Restoration of the ecosystem servicios in the micro-watershed of the Huayco creek, San Mateo district, Huarochiri province - Lima	ChiRiLuMa	SEDAPAL	US\$576,116
5	Recuperation of the ecosystem services for water security in the Huitama micro-watershed, San Pedro de Casta district, Huarochiri province - Lima	ChiRiLuMa	SEDAPAL	US\$376,563
6	Recuperation of the ecosystem services for water security through the management of natural grasses and peatland bogs in the head of the Ararac micro-watershed in the rural community of San Antonio, San Mateo district, Huarochiri province - Lima	ChiRiLuMa	SEDAPAL	US\$341,191
7	Recuperation of the ecosystem services for water security through the management of natural grasses and peatland bogs in the head of the Pucullo creek, Chocna micro-watershed, San Mateo district, Huarochiri province - Lima	ChiRiLuMa	SEDAPAL	US\$274,511
8	Recuperation of ecosystems of hydrological interest in the Yamecoto sub-watershed to increase water availability during the dry season	ChiRiLuMa	SEDAPAL	US\$272,727
9	Recuperation of the water regulation ecosystem services of with "siembra y cosecha" (sowing and harvesting) of water in the Masaypata watershed and Ayas rural community in the Surco district, Huarochiri province - Lima	ChiRiLuMa	SEDAPAL	US\$267,923
10	Water harvesting for the recuperation of water regulating ecosystem services in thea Quipacancha village lake, Laraos district, Huarochiri province - Lima	ChiRiLuMa	SEDAPAL	US\$207,521
11	Capacity Building a los comuneros de Laraos para la recuperación de los servicios ecosistémicos y regulación hídrica en la microcuenca de Poccrococha, distrito de Laraos, provincia de Huarochiri, región Lima	ChiRiLuMa	SEDAPAL	US\$140,157
12	Natural infrastructure investments in the Integrated Watershed Plan for Flood Control and Landslide of the Matagente River Watershed	Matagente – Ica	Reconstrucción con Cambios	US\$6,969,696
13	PIP Salitral Watershed, Alto Bigote	Chira - Piura	Reconstrucción con Cambios	US\$5,412,727
14	Recuperation and conservation of the hydrological ecosystem services of the Quilca-Chili watershed, Non-regulated zone, to improve the service of drinking water for the population, provided by EPS SEDAPAR S.A in metropolitan Arequipa	Quilca-Chili	SEDAPAR	US\$1,530,377

15	Protection of drinking water and sanitation networks in the torrent crossing area, Arequipa	Quilca-Chili	SEDAPAR	US\$606,203
16	Slope reforestation around the Aguada Blanca dam	Quilca-Chili	SEDAPAR	US\$303,030
17	Recuperation of water regulation ecosystem service in San Antonio de Chuca	Quilca-Chili	Cerro Verde	US\$4,846,820
18	Intervention in the Chilligua Zone	Tambo Moquegua	- EPS Moquegua	US\$181,818
19	Building the blueprint and capacity for a scaled, community-based restoration economy in Moquegua, Peru	Tambo Moquegua	- Mitsubishi (Fondo Concursable)	US\$1,376,311
20	Recovery of the water regulation ecosystem service in Northern Yauyos Cochas	Tanta/ Cañete	CELEPSA	US\$651,515
21	Recuperation of forest ecosystems in the Sánchez Cerro and Mariscal Nieto provinces	Tambo Moquegua	- Gore Moquegua	US\$8,484,848
22	Recovery of the water regulation ecosystem service in the micro-watershed of Chames, Pacaipampa District, province de Ayabaca, Piura	Chira-Piura	Gobierno Distrital de Pacaipampa	US\$545,454
23	Recovery of the water regulation ecosystem service in the micro-watershed of Lanchurán - Los Molinos, Ayabaca District - Piura	Chira-Piura	Gobierno Provincial de Ayabaca	US\$787,272
24	Strengthen local capacities and production of plantations, agroforestry and forest systems in the Ayabaca province - Piura	Chira-Piura	Fondo Concursable	US\$121,063
Total estimated investment for all project ideas or projects under development				US\$40,472,400

SEDAPAL Portfolio

This quarter NIWS continued our two-pronged approach to developing a portfolio of projects for MERESE investment by SEDAPAL, working through a set of NGOs as well as consulting firms.

Project development by NGOs

In the first quarter, NIWS selected and contracted 6 NGOs to develop 9 projects that were approved by our technical team and by SEDAPAL that address NI priorities in the Rimac and Chillón watersheds, and we initiated a short course to build project development capacities with these organizations. At the beginning of this quarter, NIWS and SEDAPAL reviewed and approved work plans for project development. This quarter, the fieldwork and analysis to inform project development began in earnest, with organizations preparing the assessments of local problems and potential interventions, which will form the technical basis of project design. All but one organization was able to carry out requisite fieldwork for the diagnostic before the national quarantine, although some activities were delayed due to

weather. Next quarter, we expect all remaining 8 diagnostics to be completed, with approval of SEDAPAL, and for all of these projects to have investment proposals drafted.

By developing these projects through local NGOs, NIWS aims to not only increase public investment but also to strengthen these organizations and leave installed capacity to develop future project proposals. Our capacity-building continued in this quarter through the continuation of the short course initiated in Q1 (see detail in section 3.1.3), as well as with targeted review and support from a specialized team of public investment specialists hired by NIWS (JS Consultores), which is complementing and supporting the review of the NIWS technical team.

Project development by consulting firms

NIWS worked with Multiservicios Betancourt consulting company to prepare the pre-investment study report which was presented to 27 community members (11 women and 16 men) in the Laraos community in the upper Santa Eulalia subwatershed, Rimac watershed, on January 27. This community meeting is a required step for all public investment projects within the framework of MERESE, and critical data was gathered for the preparation of the assessment of local problems and potential solutions during the meeting. After the community feedback was incorporated into the report, EGASE-SEDAPAL reviewed and approved the assessment. Next quarter the NIWS will work with the consultant to deliver the Simplified Technical Sheet for their review.

The project that had been planned to develop for Marcapomacocha, in coordination with Swiss cooperation, was put on hold due to COVID-19 restrictions.

In support of project development led by both NGOs and consulting firms for Lima, this quarter NIWS developed and tested a protocol for carrying out due diligence on legal and social aspects of project development during its diagnostic phase. The protocol was developed in response to NIWS experience of finding obstacles later on in the project development process, such as the overlapping of rights in the same territory where the natural infrastructure was expected to intervene, or formalities that must be fulfilled such as those referred to the organization of the communities that were required as part of the technical file. To allow the team to identify these kinds of obstacles earlier on in the process, SPDA developed a framework and protocol for carrying out due diligence for natural infrastructure investment projects, to i) prioritize the formulation of investment projects ii) anticipate possible contingencies in advance. The Due Diligence is a verification format which allows to review and obtain quick information on: a) environmental certification, b) certification of archaeological remains, c) organization and communal property d) presence of internal conflicts or historical conflicts between the community and SEDAPAL, and, d) pre-existing rights (mining, electrical, hydrocarbon, transportation, forest). SPDA initiated the due diligence for three projects under development for SEDAPAL this quarter and will continue to refine, and expand application of, the tool next quarter.

3.1.6 Unlock funds for effective, gender-equitable NI investments through targeted support through

The NIWS Incubator is a technical financial mechanism of the Project to promote public, private or corporate investments by solving bottlenecks to projects with design underway. In FY2019, NIWS held

two calls for project proposals and the proposals selected are now in full implementation or in their final stages. The main advances this quarter of the projects selected are as follows:

Recovery of the Ecosystem Services of Forests and Natural Grasslands in the Upper Chancay River Watershed - Huaral, Lima Region (ANA)

This quarter, NIWS finalized and submitted the Expediente Técnico (ET) for this PIP, which aims to reduce erosion and landslides through reforestation in the upper Chancay-Huaral watershed, in line with the Water Resources Management Plan approved by the Chancay-Huaral watershed council. The investment is valued at PEN 15.2 million and will reforest 2315 hectares.

The consulting team contracted by NIWS evaluated the intervention area condition, an overview of productive activities, reforestation history, water sources, and carried out fieldwork to define the location of the interventions proposed by this project.

This work was presented during the event: "Investment Opportunities in Natural Infrastructure", organized by the Regional Government of Lima, through its Natural Resources and Environmental Management, in alliance with the NIWS project, which aimed to train and guide in the identification, formulation and programming of investments related to ecosystem projects, to the Formulating Units officials, OPMI, and specialists from the district and provincial municipalities of the Lima Region.

Next quarter, we anticipate that GORE Lima will approve the ET and that the Chancay-Huaral watershed council will close the validation process with a workshop with stakeholders, giving the necessary governance and sustainability to the process.

Territorial Management in the Ica - Huancavelica Watershed (MINAM)

During this period, NIWS carried out a valuation study based on the design of the "Comprehensive Program for the Recovery, Conservation and Sustainable Use of Degraded Ecosystems in the Alto Pampas - Alto Ica Basins (RECUPERD HVCA-APAI)" which contains interventions for natural infrastructure recovery. The study determines in monetary terms, the value of ecosystem goods and services. The comparative analysis of the valuation of degraded natural infrastructure versus the recovered one goes from 623.9 to 1,442 soles / has.

Finally, the presentation of results of this study, as well as the Technical Sheets with the project ideas delivered, to the Regional Government of Huancavelica and to the beneficiary peasant communities, was scheduled for the second week of March, but they have been postponed due to COVID-19 related restrictions.

Design and Implementation of a Hydrological Monitoring System in the Cañete Watershed (MINAM)

In coordination with MINAM, the implementation of the Hydrological Monitoring System in the Cañete Basin was postponed to July 2020. This change is due to the fact that MINAM, through the

MERESE-FIDA project, has programmed resources to build weirs which will be ready in June, after that, the Project will proceed to support the corresponding training.

Capacity Building and Communications (MINAM)

During this quarter, NIWS finalized the video of the Quiroz Chira Water Fund exchange held in Q1, which shows this successful experience and testimonies of the participants. NIWS also concluded the designs of the communication materials that are part of the Communication Kit. In total there are 26 communication pieces, which have the approval of MINAM. Both MINAM and NIWS, have all the graphics (including sources, images, links) necessary to implement the MERESE communication strategy in these basins or adapting these materials to other basins located on national territory.

Promotion of Natural Infrastructure (ANA)

NIWS completed the preparation of the Modular Training Program, the objective of which is to strengthen the capacities of UPCII specialists from water user organizations, incorporating in their actions an comprehensive view of the hydrographic basin and the development and/or strengthening capacities by incorporating the intercultural, intergenerational and gender approach. Next quarter, we expect ANA to validate the training methodology and program.

Implementation of MERESE of EPS EMAPAB S.A. and EPSSMU S.A. (SUNASS)

Unfortunately, a consistent lack of response from the counterpart water utilities in the case of this proposal has demonstrated that the necessary counterpart commitment was not present to continue the activity. EMAPAB S.A and EPSSMU S.A were informed that, due to the limited interest and participation shown, this activity would be canceled.

IR 3.2: Diverse and gender-equitable financial mechanisms and incentives (public and private) for investment in Natural Infrastructure mobilized

3.2.1 Assure early implementation of MERESE tariffs through SNIP, Invierte.Pe, and direct contracts

Provide technical assistance by public investment specialist to address bottlenecks in PIP approvals in priority watersheds

By the end of this quarter, NIWS was providing technical assistance to mobilizing mature investments totaling over USD 18 million (see Table 4). These projects all have the commitment of their respective payer, have advanced at least to a full draft of the project profile, and need just the final support to ensure they receive final approval by payer and local communities, in order to reach implementation. Depending on the project, this last-stage facilitation may require facilitating negotiations, estimating detailed project costs to inform implementation terms of reference, preparing the detailed work plan

(Expediente Tecnico), and facilitating approvals by actors in water utilities, local governments, regional governments, or private companies. In some cases, where the original project design carried out before NIWS support was unclear (e.g., inadequate identification of ecosystem services), this stage requires deeper technical support. Often, this process is the first time each institution has gone through for a natural infrastructure investment, and so the facilitation can be complex and nonlinear. Of the 10 projects receiving direct NIWS support for this last-stage facilitation, this quarter we saw important advances in seven:

- Carampoma (Milloc) wetland restoration project, Lima (SEDAPAL, USD \$0.9M): As noted in the first quarter report, the Expediente Tecnico for this project was formally approved by SEDAPAL in December 2019. This investment has been “mobilized,” per the NIWS Monitoring, Evaluation and Learning Plan. SEDAPAL is in the process of preparing the Terms of Reference for the implementation of the project and confirming agreements with the Carampoma community required to begin implementation.
- Chancay-Huaral reforestation project, Lima (GORE Lima, USD \$5.9M): This quarter, NIWS finalized this Expediente Tecnico and submitted it to GORE Lima for final review and approval. It is expected to be approved by the end of next quarter, pending COVID-19 impacts. For more details, see section 3.1.6.
- Pusalca reforestation project, Piura (Reconstrucción Con Cambios / GORE Piura, USD \$2.2M): this quarter, NIWS finalized this Expediente Tecnico and it is ready for final review and approval. NIWS supported the regional government in sharing an important document with MINAM that relinquished the PIP Pusalca project from requiring an environmental certification, eliminating several steps and expediting the process. It is expected to be approved by the end of next quarter, pending COVID-19 impacts.
- Moyobamba reforestation project, San Martin (EPS Moyobamba, USD \$0.7M): This quarter, NIWS received and addressed comments on the Expediente Tecnico from the Municipality of Moyobamba. The project had already been approved by EPS Moyobamba and is in final stages of approval. Meetings to finally approve the project’s Expediente Tecnico for implementation were impeded by COVID-19 related restrictions but are expected to resume once restrictions are lifted.
- Tumulaca reforestation project, Moquegua (Anglo American, USD \$0.25M): In coordination with Anglo American, NIWS prepared detailed pilot plot designs and plans for installing a nursery to support scaled restoration efforts in Moquegua. Anglo American is reviewing the final Terms of Reference for implementing the pilot project, which are expected to be procured by Anglo American, and therefore mobilized, next quarter.
- Huamantanga puna and amuna restoration project, Lima (SEDAPAL, USD \$3.1M): The final PIP profile was submitted to SEDAPAL in February and is under internal review for granting viability. Preparations for issuing a joint call for preparing the Expediente Tecnico and implementing the project, as well as final review of the project with the Huamantanga community, began this quarter and will continue next quarter.

Table 4. Projects receiving direct NIWS technical and financial support to advance to implementation

N°	Project Name	Watershed	Natural Infrastructure Investor	Estimated investment value (USD)
Investments Mobilized				
1	Recovery of the Ecosystemic Water Regulation Service of the Milloc micro-watershed, Carampoma District, Huarochirí Province, Lima Region	ChiRiLuMa	SEDAPAL	US\$907,910
Sub total Investments Mobilized				US\$907,910
Expediente Tecnico pending review				
2	ET Recovery of Ecosystem Services Natural Forests and Meadows Upper watershed of the Chancay-Huaral River, Lima.	Chancay-Huaral	GORE Lima	US\$5,942,442
3	Recovery of the water regulation ecosystem service on the right bank of the Pusalca micro-watershed, in the Canchaque district, Huancabamba province, Piura	Chira-Piura	Reconstrucción con Cambios	US\$2,164,276
4	Recovery of the ecosystem service of water regulation, in the micro-watersheds of Rumiayacu, Mishquiyacu and Almendra, Moyobamba, San Martín region	Mayo	EPS Moyobamba	US\$702,238
Subtotal, Expediente Tecnico pending review				US\$8,808,956
Viable Project Profile; Expediente Tecnico under development				
5	Recovery of the Water Regulation Service in the Pata and Uchupata micro-watershed of the San Miguel de El Faique district - Huancabamba - Piura	Chira-Piura	Reconstrucción con Cambios	US\$1,227,563
6	Recovery of the ecosystem erosion control service of soils in the Cachiyacu micro-watershed and in the operational units of Lamas, San José de Sisa and Bellavista, contribution areas of EMAPA San Martín S.A., of the department of San Martín	Mayo	EMAPA San Martín	US\$883,347
7	Pilot Phase. Tumilaca Project - Highland Forestry in Moquegua	Tambo-Moquegua	Anglo American	US\$250,000
Subtotal, Expediente Tecnico under development				US\$2,360,910
Project Idea accepted by investor; Project Profile under development/review				
8	Recovery of water regulation ecosystem services of the Chillón watershed, Huamantanga district, Canta Province, Department of Lima	ChiRiLuMa	SEDAPAL	US\$3,137,374
9	Recovery of water regulation ecosystem services of the Laraos watershed, Laraos District - Huarochirí-Lima Province	ChiRiLuMa	SEDAPAL	US\$604,476

10	Recovery of the Water Regulation Ecosystem Service in 07 Conservation Areas in the Quiroz and Macará Sub-watersheds, of the Ayabaca, Paimas and Pacaipampa Districts, Province of Ayabaca, Department of Piura	Chira-Piura	Reconstrucción con Cambios	US\$3,066,830
Subtotal, Project Profile under Development/Review				US \$6,808,680
Total Investment Receiving NIWS Support to be Mobilized				US \$18,886,45

3.2.2 Develop and operationalize new mechanisms for channeling Natural Infrastructure funds (eg private sector, ProInversion) and coordination across sectors (eg trusts)

Private Sector Engagement

This quarter, private sector engagement focused heavily on consolidating the technical proposal for the pilot reforestation project in Tumilaca, Moquegua, and securing the solid financial commitment from Anglo American to fund and implement the project this year. After a series of coordination meetings in Lima and Moquegua, in which NIWS presented HIRO results and proposed pilot activities to Anglo American officials, including members of their London-based team, the company expressed their commitment to implement a pilot reforestation, sustainable supply chain, and plant nursery implementation project in the Tumilaca microwatershed. In the next quarter NIWS will be coordinating to finalize the design and begin implementation of this project.

Relations with Antamina are on hold as NIWS awaits their reaction to the preliminary prioritization of potential NI investments we carried out using HIRO last quarter. Likewise, negotiations with the Lima-based beverage company are on hold pending approval by the Huamantanga community of the proposed public investment project (for detail, see section 3.1.1).

Reconstruction con Cambios

In addition to the work described in section 1.3.4 to support consulting firms contracted to develop Integrated Plans for directing funds for Reconstrucción Con Cambios to site and quantify the benefits of natural infrastructure interventions, technical assistance deepened and broadened this quarter to support the appropriate formulation of project profiles for natural infrastructure investment. This quarter, NIWS contracted the support of a specialized team of consultants led by Nancy Zapata to provide direct technical support to these firms and to the supervisory entities charged with reviewing the validity of natural infrastructure investment proposals presented for investment with Reconstrucción Con Cambios funds, including in some cases natural infrastructure activities included in gray infrastructure focused projects.

The technical assistance this quarter began with two workshops in Piura, which aimed to train participants on project formulation in IN with an emphasis on disaster risk management. The formulating companies, supervisors and contracting entities of the RCC Plans of 12 watersheds were trained.

The interest of all of them was collected but 9 watersheds were prioritized: Mala, Casma, Cañete, Matagente, Huaura, Huarmey, in Lima; Chicama, Virú and Zaña in the North of Peru.

While the technical support to consulting firms was originally envisioned to take place through a series of workshops beginning in mid-March, COVID-19 related restrictions prevented NIWS from holding these workshops. Instead, technical assistance continued bilaterally using virtual platforms in March and early April, while NIWS and the consulting team prepared online course materials suitable for delivering all of the training content remotely. The course, Formulating Natural Infrastructure Investments for Disaster Risk Management, launched in mid-April on NIWS' new [Natural Infrastructure Virtual Classroom](#), using the virtual learning platform Moodle. The online course has secured participation of over 100 specialists from engineering firms and supervisory entities directly involved in developing these plans in 17 watersheds throughout the country.

Additionally, support has been provided to the Piura watershed, specifically with technical-financial assistance for the design of 2 Technical Files (Pata-Uchupata Micro-watersheds in the El Faique district and Pusmalca Micro-watersheds in the Huarmaca district), whose articulation to the Plan RCC of the Piura watershed has been done with the GORE Piura. The Technical File from Pusmalca micro-watershed is already finalized, while the Technical File from el Faique is still being developed. In addition, technical assistance has been provided in person and virtually for the Tumbes, Chancay Lambayeque and Olmos watersheds.

Mobilize funds for public investment through IOARR

As noted in the QI report, in December 2019 MINAM formally approved new guidelines that allow the IOARR implementation mechanism for public funds—which stands for Investments for Optimization, Marginal Expansion, Replacement, and Rehabilitation and is widely applied to gray infrastructure—to be applied for natural infrastructure. This quarter, NIWS worked with MINAM and other partners to identify 4 opportunities for piloting the guidelines this year, which are:

1. Rehabilitation of an ecosystem affected by a forest fire in the province of Ayabaca - Piura (it is being coordinated with GORE Piura),
2. Rehabilitation of an ecosystem affected by forest fire in the Historic Sanctuary of Pomac Forest located in the Chancay Lambayeque basin (it is being coordinated with SERNANP),
3. Rehabilitation of amunas in the Lurín basin in the Tupicocha district (it being coordinated with local authorities and GORE Lima), and
4. Replacement of hydrometeorological stations in an iMHEA monitoring system by GORE Lima.

These proposals were submitted in March to MINAM for its technical opinion; next quarter, two of these proposals will be selected for full development of IOARR pilots.

Mobilize investment for natural infrastructure through public trust fund

SPDA and Forest Trends began coordination with MINAM, Profonampe and SEDAPAL this quarter in order to articulate efforts towards common objectives regarding the operationalization of MERESE implementation through the public trust fund modality. (While previous reports had acknowledged that

this modality could be implemented through either PROFONANPE or FONAM, this quarter FONAM was dissolved, and so the only remaining viable option is PROFONANPE.) We prepared Terms of Reference for a legal analysis to support the transfer of funds, which will evaluate the current applicable regulatory framework, respond to the main weaknesses and gaps in the regulation that has hindered its implementation (identified in the synthesis document on the “MERESE Execution under the modality of agreements or administration and execution contracts” prepared in Q1), and propose a road map for the implementation of funds using this mechanism. The consultancy will begin next quarter. Additionally, Forest Trends worked with USAID to propose a scope of work for how USAID’s PES and Public Financial Management could contribute to this effort, supporting the design of an even more efficient and flexible implementation mechanism utilizing PROFONANPE.

Disaster Risk Management Tariffs

This quarter, NIWS consolidated proposals for utilizing disaster risk management tariffs for natural infrastructure investments by two water utilities, EMAPA San Martín (Tarapoto) and SEDAPAR (Arequipa). The proposals were developed by consultants Practical Action, with the utilities and technical supervision of CONDESAN. The following results were obtained:

- EMAPA San Martín: 01 Idea Sheet and 01 Project Technical Sheet “Creation of protection services with natural infrastructure from gather and conduction line of the Ahuashiyacu river water system, Banda de Shilcayo district, San Martín province and San Martín department”. It has an investment amount of S/. 1,740,465. The EPS has registered in invierte.pe with Idea code N° 91796 and Unique Investment Code N° 2472558, despite not having yet the financing by the EPS itself.
- SEDAPAR Arequipa: 03 Idea Sheets: i) Protection of drinking water and sewerage networks in the torrent crossing area (S/.2,000 473); ii) Start-up of the PTAR Chacaylla (hillside) and Salcan, and execution of disaster protection works, Cotahuasi district, La Unión, Arequipa (S/.1,389,000); and iii) Reforestation of the Aguada Blanca dam slopes (S/.1,000,000). To date, EPS have not registered them as it considers that a more detailed risk study needs to be carried out at the regional level.

There are important lessons to be learned and shared from this experience, as it has demonstrated a different view of how to use natural infrastructure to manage disaster risks. In the next quarter NIWS will present the consolidated risk analyses and proposals, as well as lessons learned and recommendations to each water utility as well as to SUNASS in Lima. In the course of these presentations, NIWS will seek opportunities to secure funding from the water utilities or other actors, such as Regional Governments, for the proposals developed. Additionally, NIWS is reviewing these experiences vis a vis others that connect natural infrastructure to disaster risk management (Reconstrucción Con Cambios, project development in Lurin under the Incubator), to consolidate a clear conceptual framework for project developers and policymakers.

3.2.4 Design and facilitate implementation of financing mechanisms, governance platforms, and coordination bodies addressing key gaps

ChiRiLuMa Watershed

In ChiRiLuMa, the Water Resource Council held its first Natural Infrastructure and Water Conservation Working Group meeting of 2020 on March 5, 2020. NIWS consortium members attended the meeting with the objective of supporting in the presentation of the SEDAPAL proposal to incorporate into the functions of the GT INCA the functions of the Good Governance Platform (PBG) of the SEDAPAL MERESE. The proposal was accepted by the council members and the PBG was formed. As a first action, the Council secured the following:

- Formalization of the PBG by signing the Act
- GT INCA assumes the functions of the PBG
- Modification of the regulation of the GT INCA to incorporate the functions of the PBG
- Promotion of the involvement of the taxpayers and actors of Canta and Huarochiri in the GT INCA
- The PBG structure will include several committees: MERESE projects, research, communication, training, financing and monitoring and follow-up

There is still a great deal of work to do to incorporate the local actors of the watershed in the PBG. NIWS plans to continue supporting the council in growing PBG participation in the watershed.

Chira-Piura Watershed

In the Chira-Piura watershed, NIWS supported collaborations between the Water Resources Council, the regional government of Piura and the ANA in the formulation processes of the PIP Pusmalca (ET) and PIP El Faique (ET). NIWS also worked with these regional stakeholders on the formulation of an additional PIP, PIP Quiroz (FT) with added participation of EPS Grau.

The Water Resources Council has also been promoting the incorporation of the Pusmalca and El Faique PIPs in the Piura Integrated Watershed Management Plan through the Reconstruction with Changes funding mechanism, and during a meeting held on January 24, they established that the PIPs will be executed by the regional government of Piura or PEIHAP and that operation and maintenance will be controlled by local governments.

Mayo Watershed

The approval process of the Technical File of the PIP Moyobamba has had the broad participation and support of the Management Committee of the Micro-watersheds of Mishiquiyacu, Rumiyacu and Almendra, as the platform of good governance is called, both in the work meetings with the Municipality Provincial of Moyobamba as in the disposition to participate in the monitoring, supervision and social control of the execution of the PIP.

Considering that it is opportune to evaluate opportunities to link our watershed strategy with native and indigenous communities and climate financing, on March 11, NIWS participated in the workshop "Reduction of emissions, payment for results, indigenous climate contribution and equitable benefits in San Martín", convened by: CODEPISAM (Coordinator of Development and Defense of Indigenous Peoples of the San Martín Region). A meeting was held after the workshop with federation presidents indigenous peoples to discuss the links with the investments NIWS have in formulation / approval with the EPS Moyobamba, EMAPA and EPS Rioja (to be defined); agreeing: i) to exchange information

regarding the areas to be intervened with the projects and those occupied by the native and indigenous communities; and ii) promote spaces for more active participation in the Mayo Sub-watershed Committee.

IR 3.3: Improvement of the evidence base of the hydrological and socioeconomic impacts of green infrastructure interventions

3.3.2 Document learning sites and produce an ex ante hydro-economic analyses

This quarter, NIWS defined an approach to systematically evaluating and quantifying ex ante projections of natural infrastructure benefits across all of the projects we support, which we call the “evaluation pack.” The “evaluation packs” will be developed for each project, including:

1. Application of focalization tool (e.g., HIRO), showing why the project makes sense to address targeted water risks in this watershed
2. Quantified projections for:
 - a. Hectares conserved or restored
 - b. Hydrological benefits produced (e.g., m³ dry season flow, tons sediment reduced)
 - c. Carbon emissions reduced, applying AFOLU Carbon Calculator
 - d. Men and women benefiting economically
3. Cost-effectiveness assessment, using quantification of hydrological benefits produced.
4. SEE Scale evaluation: qualitative assessment of where the project design stands in terms of its addressing effectiveness, equity, and sustainability

While ex ante projections of hydrological benefits are not currently required for public investments in natural infrastructure in Peru, counterparts are finding the estimates to be extremely useful for making the case for natural infrastructure investments in a variety of contexts. Internally, the evaluation packs will also serve as a tool for assuring quality of proposals developed by NIWS and will feed into our reporting to USAID under our Monitoring, Evaluation, and Learning Plan. Moreover, the broad applications of the tools by our own team serve as additional opportunities to test and refine tools that we ultimately are offering to the broader field.

In order to begin this evaluating hydrological benefits process in this quarter, NIWS hired the services of a consultant with the objective of carrying out the ex-ante technical evaluation of 18 public investment projects at a Technical sheet level - FT or technical file - ET. The ex ante evaluations are utilizing, critically, new tools that have been produced by NIWS, including especially CUBHIC and HIRO. Next quarter there will be a report on the process followed to evaluate the PIPs and the recommendations derived from their evaluation.



Ministra Gloria Montenegro (MIMP) talking about the significance of the institutional commitment to address these gender gaps in the water sector. (Photography: Forest Trends)

Cross-Cutting Strategies and Project Administration

4.1: Monitoring, Evaluation and Learning

4.1.1 Monitoring Evaluation and Learning Plan

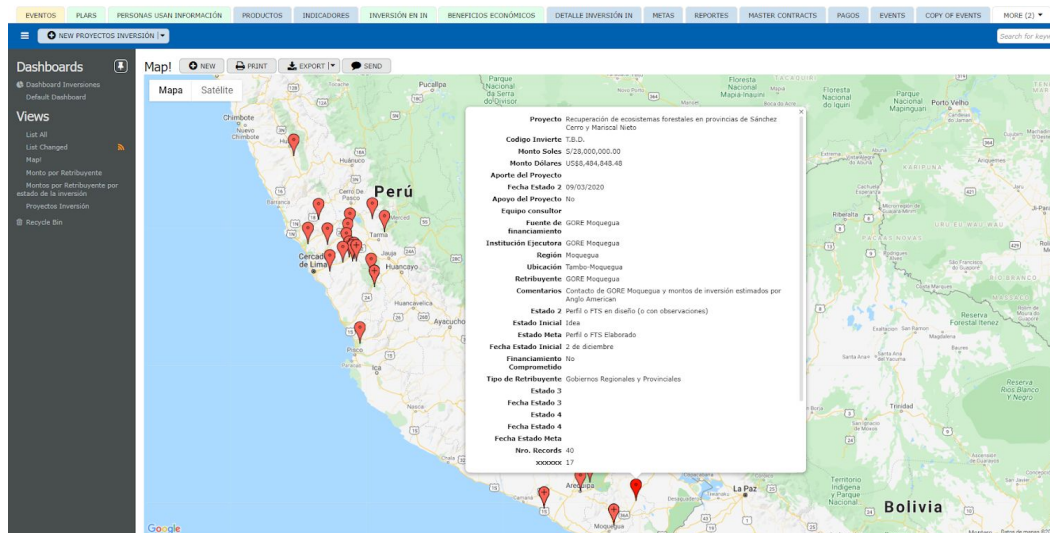
Forest Trends submitted an update of the NIWS Monitoring, Evaluation and Learning Plan in FY2019, which was further reviewed with USAID in the first and second quarter of this year. In February, the final version was approved by USAID.

Project Information System

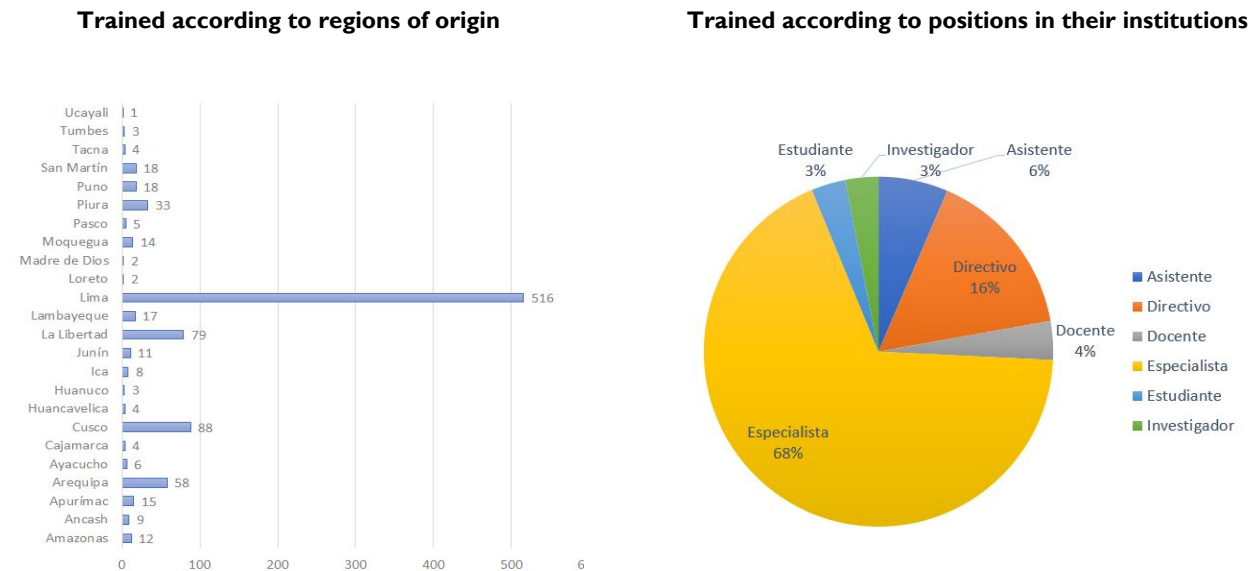
This quarter, NIWS designed and implemented new functionalities of the Project Information System. The system collects and systematizes the technical administrative information of the Project so that it is available in a timely manner and in one place.

One of these new features is the monitoring of investment projects, which is based on a web-based database updated by each person in charge of the project, a dashboard that graphics the progress, and a repository to save the documents that support the progress. This improves the monitoring and reporting of investment amount indicators and number of hectares, recording and ordering central data such as geolocation, evolution of amounts over time, access to documents of each investment. Next quarter it will go into full operation.

Graphic 5. Screenshot of the web-based NIWS project database, part of the revised Project Information System



NIWS carried out the analysis of participants in training and webinars, which gives tables like the ones shown below. Annex 7 shows the Report on participation in training and webinars with the results, discussions and conclusions that will lead to fine-tuning the capacity development strategy starting next quarter.



4.1.2 Capacity-Building Strategy and Action Plan

As described in other parts of the report, various capacity-building processes are in development or implementation, both institutional and individual. Among capacity-building processes focused on individual capacities, there are varying degrees of overlap in audiences and content shared among these efforts. The cross-cutting capacity-building strategy supports and coordinates these efforts across the project to ensure coherence, quality, and synergy among these various efforts. Moreover, this quarter, NIWS began a concerted effort to move nearly all of our capacity-building material online, in the interest of offering a robust set of training opportunities in the context of severe restrictions under the current health emergency due to COVID-19. The development of online content across these various activities creates an even more important opportunity for synergy that we are actively coordinating to achieve.

Capacity-building processes completed this quarter include:

1. Course in Identification and Formulation of Restoration Projects of the Ecosystem Service of Water Regulation in the framework of the work with Sedapal

The range of capacity-building processes currently in development are:

2. Course on Investment Formulation related to Natural Infrastructure and Disaster Risk Management (with MINAGRI/PSI, in context of Reconstrucción Con Cambios)
3. Course on Specialization in Identification and Formulation of Public Investment Projects in Natural Infrastructure

4. Course on Specialization in Identification and Formulation of Public Investment Projects in Natural Infrastructure (with ENAP)
5. Introductory course to natural infrastructure in the agricultural sector in the face of climate change (Agrorural)
6. Massive Open Online Course (MOOC) course on natural infrastructure with ENAP (New)
7. Introduction to natural infrastructure for water security MOOC
8. Journalists course in IN

Annex 8 details for all five courses in preparation: counterparts, dates, training modules, cross topics and intensity of training.

4.2 Gender

In addition to reporting on activities listed under the heading 4.2 in our Annual Work Plan, this section summarizes gender-related activities across the Project in this quarter.

This quarter, Forest Trends published and disseminated, with a comprehensive communications orchestra, the full *Gender Gaps in Natural Infrastructure and Water Management in Peru* publication, following the launch and dissemination of the policy brief by the same name last quarter. We also worked closely with the Ministry of Women and Vulnerable Populations (MIMP), SUNASS, and ANA to ratify institutional commitments to address these gender gaps in the water sector by mainstreaming the gender approach in each leading water sector institution, and our technical work led by expert consultant teams commenced in both SUNASS and ANA. The Women's Leadership Program was designed, and then redesigned to respond to current and anticipated restrictions related to COVID-19. Finally, all of these actions were coordinated closely with the Gender Working Group of the NIWS Technical Platform, where MIMP, MINAM, SUNASS, ANA, and Canada actively collaborate to achieve shared goals.

Mainstreaming Gender in Water Sector Institutions

Following through on high-level political commitments made in 2019, this quarter Forest Trends partnered with the Ministry of Women and Vulnerable Populations to ratify and disseminate these commitments in SUNASS and ANA, with the participation of multiple ministers and vice ministers. On Thursday, February 20, 2020, with NIWS support, the Ministry of Women and Vulnerable Populations hosted a high-level meeting, "Ratification of commitments to mainstreaming gender in public entities linked to water resources management." The event was led by Minister of Women and Vulnerable Populations Gloria Montenegro and Vice Minister of Women Carolina Garces; participants included Minister of the Environment Fabiola Muñoz, Vice Minister of Strategic Development of Natural Resources (MINAM) Gabriel Quijandría, Vice Minister of Agricultural Policies (MINAGRI) Paula Carrión, Vice Minister Culture Angela Acevedo, Vice Minister Development and Social Inclusion Claudia

Benavides, President of the Board of SUNASS Ivan Lucich, Ani Zamgochian from USAID and Brigitte D'aoust from the Canadian embassy.

During the event, leaders presented their institutional progress toward mainstreaming the gender approach in their own institutions and ratified the commitment to continue their articulated work to reduce institutional barriers that hinder gender equity in the public and private spheres related to water resource management, guaranteeing the exercise of women's rights. The ratification demonstrated continued high-level commitment to mainstreaming gender in SUNASS while also highlighting a lack of similar commitment in ANA, after a series of changes in institutional leadership took place there in late 2019. To this end, the event served as an opportunity to engage MINAGRI leadership, in particular Vice Minister Carrion, to renew institutional commitment within the ANA and assure that the gender mainstreaming process initiated this quarter has the support needed. By the end of this quarter, we had secured that commitment from ANA's general manager, the director of the Directorate of Water User Organizations, the Director of ANA's administration, the coordinator of the Water Culture team, and the director of Human Resources at a dedicated meeting held on March 10. As a result of this meeting, ANA issued a formal extension for their Commission for Gender Equality, updated the composition of its members, and designated the formal counterpart for the technical assistance for gender mainstreaming provided by NIWS.

On March 9, in the framework of the commemoration of International Women's Day, in an institutional act with the presence of the President of the Board of SUNASS, managers, specialists, the General Director of Mainstreaming of the Gender Approach of the MIMP and her team, as well as the NIWS Project Director, SUNASS held the public launch of their gender mainstreaming process.

Dedicated NIWS technical assistance for mainstreaming gender in ANA and SUNASS commenced this quarter, after the ratification of institutional commitments and the approval by NIWS, MIMP, and counterpart institutions of work plans prepared by specialized consulting teams selected in December. Consulting teams have finalized the methodology for the institutional assessments, including questionnaires and guidance for holding focus groups, and begun documentary analysis to contribute to that assessment, which will be carried out next quarter.

Publication and Communications Orchestra: Gender Gaps in Natural Infrastructure and Water Management

This quarter, Forest Trends published and disseminated the full Gender Gaps in Natural Infrastructure and Water Management in Peru publication, following the launch and dissemination of the policy brief by the same name last quarter. Over 1000 copies of the policy brief was disseminated to decision-makers and staff in targeted institutions, and the publication launch was accompanied by a diverse communications "orchestra" on social media to highlight both the significant gaps found in the analysis, and the exceptional leadership demonstrated by women in the water sector, at all levels. The orchestra included publication on social media of a series of video profiles featuring some of the "Women of Water " who were recognized at the 2019 Public Forum on Gender Equality and Water Security --

Carmen Málaga, Daysi Colla and Elsa Fung. In total, these videos have been viewed over 17,000 times. Currently 5 additional videos of this type are in production and will be published next quarter.

The document analyzes gender gaps in education, in the use of time and global workload, the gender division of labor in activities of conservation, restoration and maintenance of natural infrastructure, access to land and agricultural production, participation in decision-making spaces on natural infrastructure and water management, and gender violence.

Women's Leadership Program

The team dedicated to designing and implementing the women's leadership program was contracted in December and developed the detailed design and work plan of the leadership program in January. While the design was approved in February, with the selection of program participants scheduled to take place in April, the program has had to be redesigned and delayed due to restrictions in place related to COVID-19. The program has now been redesigned with two major adjustments. On one hand, the program is planned to continue with minimal disruption after this initial delay by moving the call for candidates, selection, and capacity-building modules to online formats. On the other hand, this move will prevent NIWS from effectively engaging local women leaders -- one of the priority audiences in the leadership program – since it is often very difficult or impossible for these women to consistently access programming online. Therefore, NIWS plans to proceed with the Leadership Program focusing on the other priority audiences this fiscal year, and then to hold a program specifically designed for local leaders once restrictions are lifted to allow for this engagement. Identification of potential participants is now scheduled for May with selection scheduled for June and the beginning of program activities in July.

Gender approach incorporation in Public Investment Projects

Building on the guidelines for considering gender equality in project design developed in the Sustainability, Effectiveness, and Equity Scale publication in 2019, this quarter Forest Trends contracted dedicated technical assistance to review the inclusion of gender in project designs supported by NIWS. To begin, this quarter the consultant has developed more detailed guidelines specifically for the incorporation of gender into public investment projects for natural infrastructure and has begun to meet with project developers and NIWS technical experts to provide guidance and feedback on the incorporation of gender into project design. In late June, the consultancy will result in: i) 20 public investment projects in different stages of progress with an incorporated gender focus, ii) a document with guidelines to incorporate gender approach in investment projects in natural infrastructure for water security, and iii) 30 project designers with improved capacities for incorporating a gender approach in the design of investment projects in natural infrastructure in water security. Later, as the other PIPs are designed, more of them will be incorporated.

Support the Implementation of the National Gender and Climate Change Action Plan

The NIWS helps MINAM in redaction, discussion and sustentation to approve the Internal Regulations of the National Interest Group "Women and Climate Change" (GIMUCC), which defines its structure and functions, being the most important i) promoting the mainstreaming of the gender approach in the

National Commission on Climate Change, and ii) promoting mechanisms for the representation of women in the National Commission on Climate Change. The approval was made on February 26.

Likewise, this Regulation establishes the mechanisms for electing the titular and alternate representatives before the National Commission on Climate Change, and the functions that these representatives must fulfill, among which are:

1. Attend the meetings of the National Commission on Climate Change, bringing the proposals and the agenda of the GIMUCC.
2. Inform the General Assembly and the Coordinating Committee about the agenda and debates in the National Commission on Climate Change.
3. Promote gender analysis and the incorporation of a gender approach in the National Commission on Climate Change and in the execution of the functions of the GIMUCC.
4. Accountability to the GIMUCC on transparency in decision-making in the National Commission on Climate Change.

The process of electing a representative of women's organizations before the National Commission on Climate Change has been suspended due to the health crisis, the suspension of face-to-face work in public entities, the social isolation decreed by the government and the prohibition of meetings.

Support women researchers working on key natural infrastructure questions

As part of refining the design of the Natural Infrastructure Research Fund, scheduled to be launched by the end of the fiscal year, this quarter NIWS reviewed the design of the Fund with a view to how it could help to reduce gender gaps in academic leadership and knowledge creation regarding natural infrastructure. Feedback on how to consider gender in the selection of recipients and the type of research supported by the fund, was provided this quarter.

Facilitation of the NIWS Technical Platform's Working Group on Gender

In this quarter the Gender Working Group held three meetings: i) to carry out the balance and lessons learned 2019 and prioritization of actions 2020, ii) to coordinate on the Working Breakfast for the ratification of the commitments of the institutions to mainstream the gender approach, and iii) to plan the Group's priorities for 2020. Participants in the Working Group include representatives from Forest Trends, MIMP, MINAM, SUNASS, and ANA.

At the first meeting, Gender Working Group members arrived at the following evaluation of the work achieved together in 2019:

1. The Gender Working Group has been a space for articulation, direct information on the actions of its entities and training for representatives
2. The Gender Working Group has made it possible to energize the Committees or Gender Working Groups of the entities

3. The Public Forum on Gender Equality and Water Security has been the most important milestone in Gender Working Group's work
4. Changes in the heads of institutions influence the validity of commitments with a gender perspective
5. The diagnosis of gender gaps provides information for the work of the institutions that form the Gender Working Group

The members of the Gender Working Group established the following priorities for work in 2020:

1. Mainstream the gender focus in ANA and SUNASS.
2. Support the process to elect a representative of women's organizations in the National Commission on Climate Change
3. Promote the participation and leadership of women in Integrated Water Resources Management in Peru
4. For MINAM, articulate the gender approach with the NDCs, and how each entity is contributing to the NDCs
5. For ANA, continue the Plan for Equal Opportunities between Men and Women in Water Resources Management and implement, with the NIWS Incubator, the program of women leaders for women leading at the local level
6. For SUNASS, create a gender policy in the framework of the modernization processes and strengthen the capacities of the MERESE team to implement the gender focus required under the new regulation issued in November 2019.

Gender Strategy and Action Plan

In the first quarter, the Gender Strategy and Action Plan was revised. Presentation and review of the revised Gender Strategy and Action Plan with USAID and the Government of Canada were delayed this quarter due to coronavirus-related schedule restrictions. NIWS looks forward to reviewing the strategy when schedules permit.

4.3 Planning, Reporting & Environmental Compliance

In October, USAID approved the modification to the cooperative agreement, requested by Forest Trends, to allow small constructions in order to allow for necessary hydrological monitoring of natural infrastructure interventions. Based on this and our FY2020 work plan, in November Forest Trends sent an updated Environmental Mitigation and Management Plan (EMMP) to USAID, taking into account the technical specifications of these constructions, their location, and their effects on the environment in which they will be installed. In December 2019, USAID issued comments on this document and requested more information regarding complementary issues. Forest Trends reviewed these comments with our AOR; the final version of the EMMP which responds to all comments was delivered in the first quarter of the FY2020 and after a series of comments it was sent and approved by USAID in Perú in this quarter and sent to Washington DC to continue the approval process.

SUCCESS STORY

Women artisans ‘Las Kollawas’ win PROCOMPITE funding

Written by Lucas Benites

The public fund PROCOMPITE awarded funding for the Business Plan of the Association of Artisan Women Weaving Hope Las Kollawas de Chalhuanca - Yanque, Arequipa, which will improve the quality, economic benefits and women empowerment, as well as the recognition of the contribution of natural infrastructure in this value chain.



Photo: Member of the Association of Women Artisans ‘Las Kollawas’ knits an alpaca wool scarf in Arequipa, Peru

In the heights of Arequipa, wetlands and grasslands quietly capture and regulate scarce precipitation that falls in the arid region, supporting many livelihoods of the populations settled below. This natural infrastructure is also the first link in the value chains supporting the livelihoods of local populations, among which alpaca wool is one of the most important.

This activity is almost entirely led by women, from grazing to the transformation of wool into beautiful products, to their sale in local and regional markets.

DESCOSUR, a local non-governmental organization, has been working for more than 30 years promoting the environmental culture that encourage social well-being and, thanks to the contract with the Natural Infrastructure Project for Water Security, the specialists of this institution were able to update their knowledge on the ecosystem services provided by the natural infrastructure and, as a result, have been able to secure funding for activities that ensure these ecosystems continue to support local livelihoods and regional water security.

“Natural infrastructure as such is a new concept and all that it entails and implies as well, so in the new environment, social and changing context in which we live it has been extremely important to update ourselves. We have always carried out activities such as planting and harvesting water, however, it is important to be aware of what is happening worldwide”, said Delmy Poma, President of DESCOSUR.

The result from this is that DESCOSUR has rethought the approach of presenting its proposals to its donors, from an approach to improve the camelids production towards its complementation with the inclusion of the natural infrastructure benefits.

Thus, after more than two years of having conversations with the German copper company AURUBIS for the financing of productive projects, they made a productive proposal with an emphasis on water security and natural infrastructure in the upper basin, an advance with which it was possible to have financing of just over \$ 300,000 U.S. for three years.

Furthermore, DESCOSUR has a long-standing relationship with the Bread for the World association, to which they also presented a new proposal and identified the need of the importance of natural infrastructure for water security, obtaining financing of around \$ 500,000 U.S. for five years.

In addition to strengthening the capacities of this local partner, this contract aimed to prepare proposals for productive conservation projects to different sources, focusing on generating greater profitability for the population through natural infrastructure intervention.

Within this framework, DESCOSUR designed and won a PROCOMPITE project together with a lifelong partner, the Association of Artisan Women Weaving Hope Las Kollawas de Chalhuanca - Yanque, this project aim to improve the quality of alpaca wool products through the training of the 33 artisan women and their staff, improving the production process so that it is more efficient.

In addition to the economic benefits that this project pursues, it obviously seeks to empower women, by making the production process more efficient, increasing resource productivity and thus making the product viable and sustainable. The design process of this project has not been easy, the artisan women had to be introduced little by little to the approach, they have been trained, there were exchanges to learn about practices for managing natural infrastructure, the relationship of ecosystem services with the productive activity, all this with financing from the Association itself, DESCOSUR and other sources such as the Municipality of the Centro Poblado Menor of Chalhuanca.

All this allowed the design, support and achievement of the project, including exposing the associates themselves to defend the proposal before the qualifying jury, providing a conceptualization of the entire value chain starting from ecosystems to sale.

"The relationship with the NIWS Project has served to energize project management processes and the achievement of resources by training our own organization and the partners with whom we work, taking natural infrastructure as a pillar of sustainable development," said Delmy Poma, President of DESCOSUR.

MONITORING, EVALUATION AND LEARNING

In the Annexes to this report, Table 2 “Tracking Table” reports the progress on three of the Project’s indicators (it is worth noting that, for information purposes, we include indicator updates that are usually reported only once a year). Table 3 details the training events that were held during the quarter, Table 4 and 5 detail the technical and communication products that have been developed by the project; and the Table 6 shows the appearance in news media related to the intervention of the project. The Annex 7 shows an analysis of participation in the training events and webinars organized by the project, and finally, Annex 8 details the specifications of the courses that have been organized.

ANNEXES

1. NIWS Activity Description and Implementation
2. Tracking Table
3. Training events
4. Technical products
5. Communicational products
6. Media reports associated with NIWS activities and outreach
7. Report on participation in training and webinars
8. Courses specifications