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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), EcoDecision, 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 first quarter of Fiscal Year 2020 (FY2020), NIWS implemented the shift to focus on aligning efforts across our technical components to deliver results with priority clients. This shift, developed with USAID during the July 2020 Pause & Reflect workshop, and incorporated throughout our FY2020 work plan, has permitted a significant enhancement of focus and alignment across the NIWS team. Coupled with the foundational relationships and planning carried out in the first two years of the project, it has allowed NIWS to begin to deliver important contributions this quarter that will focus, accelerate, scale, and improve the impact of natural infrastructure interventions.

For example, SEDAPAL formally approved its first investment in natural infrastructure, with a resolution approving the Expediente Técnico for a USD 0.9 M project to restore the Carampoma wetlands at Milloc, a milestone achieved in close collaboration with NIWS and which represents our first investment mobilized for natural infrastructure. Additionally, by the end of the quarter 11 firms developing of Integrated Plans for Reconstrucción con Cambios were utilizing results of NIWS' Rapid-Focus Tool to identify and justify natural infrastructure projects for inclusion, filling a critical information and capacity gap that may be the key to ensuring that natural infrastructure projects are at all included in these plans. And during this quarter, MINAM formally approved guidelines for using IOARR--an implementation mechanism for public funds that allows investments for the optimization, marginal expansion, replacement and rehabilitation of existing investments without preparing a full public investment project--to natural infrastructure. These guidelines were developed by NIWS with MINAM, and their approval opens the door to accelerating public investment to protect and rehabilitate natural infrastructure throughout the country.

Objective I: Enabling Environment for Improved Natural Infrastructure

This quarter NIWS focused public and political attention on the urgency of accelerating action to protect critical natural infrastructure in the face of serious water and climate risks. We reached over 6 million citizens with this messaging, focusing on the emblematic case of the Carampoma wetlands, and engaged leading authorities from the water, environmental, sanitation, and agricultural sectors at the National Forum on Natural Infrastructure in November 2019 to commit to work together to breakthrough persistent bottlenecks preventing the required action. Policymaker engagement also benefited from the publication of two new briefs in this quarter, which highlighted 1) gender gaps in water and natural infrastructure management, and 2) the potential of amunas -- pre-Incan infiltration canals -- to contribute to Lima's water supply at scale.

Through 2019, NIWS developed analysis of critical bottlenecks and policy recommendations that helped to focus policy makers during the National Forum on Natural Infrastructure on specific opportunities to improve investments in natural infrastructure, and which we also contributed to the OECD Water Policy and Governance Dialogues. During this 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. Next quarter, the OECD report will be shared with Peruvian stakeholders, who will then prepare a roadmap to implement the report's recommendations.

NIWS policy engagement also bore fruit this quarter, with two new regulatory instruments approved with direct NIWS support. In addition to the IOARR guidelines mentioned above, this quarter SUNASS issued a new directive governing MERESE implemented by water utilities. The directive clarifies and streamlines a number of aspects of MERESE project development, incorporating a number of recommendations submitted by CONDESAN and SPDA. It also, notably, is the first regulatory instrument issued by SUNASS that includes a gender focus, as it requires EPS to apply a gender focus in the design of MERESE programs and projects, assuring the participation of women at all stages of design.

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

This quarter, NIWS developed an innovative new tool that allows natural infrastructure project and portfolio developers to rapidly prioritize interventions in Peruvian watersheds based on their potential to mitigate specific water risks. HIRO, the *Herramienta de Identificación Rápida de Oportunidades*, was developed by CONDESAN with SERFOR to identify natural infrastructure interventions suitable for addressing flood and landslide risk in the context of projects being developed under an accelerated timeline for Reconstrucción con Cambios. CONDESAN has automated and run the tool now in over 20 watersheds, providing critical guidance previously unavailable to project developers, portfolio developers, and supervisors in regional and national agencies.

NIWS also worked closely with Resource Partner Kieser & Associates to finalize 6 methodologies to quantify the hydrological benefits of natural infrastructure interventions. The CUBIC (*Cuantificación de Beneficios de Intervenciones en Cuencas*) methodologies fill another 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. NIWS will publish and launch the methods and will begin to apply them to our full portfolio of projects under development in the second quarter.

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

This quarter, NIWS expanded our pipeline of projects under development with NIWS technical support to over USD \$ 44 M total, incorporating new projects under development by local NGOs for SEDAPAL and by engineering firms for Reconstrucción con Cambios. During the quarter, NIWS received and evaluated proposals from organizations active in Lima watersheds to formulate projects for SEDAPAL's MERESE portfolio. Ultimately, NIWS and SEDAPAL selected 9 projects to be developed by 6 organizations; organizations had initiated their project development by the end of the quarter. With Reconstrucción con Cambios, NIWS consolidated our collaboration with MINAGRI in its capacity as supervisor and executor of a large share of the RCC investments, and with MINAGRI we reviewed the progress of natural infrastructure project development in Integrated Plans and began to provide technical assistance to engineering firms.

In coordination with SEDAPAL and MINAGRI, respectively, NIWS developed a capacity-building plan for both the Lima organizations and the engineering firms that will receive technical assistance from NIWS as they develop natural infrastructure projects in the coming months. The practical course covers problem definition, identification of natural infrastructure interventions, benefit conceptualization and quantification, and public investment project formulation.

Among the 46 projects already in our pipeline, 7 were finalized at the project design (profile or *ficha*) stage this quarter. The public investment project developed for SEDAPAL in our Huamantanga learning site was finalized; utilizing the CUBIC methodologies, we found the project to be cost-effective when compared to gray infrastructure projects based on the cost per cubic meter of water available in the dry season. This project will be submitted to SEDAPAL in the next quarter; we are also working with 2030 Water Resources Group to define the most appropriate and efficient legal-institutional arrangement to secure private co-financing for the project.

NIWS also advanced projects in our pipeline toward approval and implementation. As mentioned above, the Carampoma wetland restoration project *expediente técnico* (USD 0.9 M) was approved by SEDAPAL in December 2019, as direct result of NIWS support for its development as well as our direct support to SEDAPAL staff to navigate and secure internal reviews and approvals. As this is the first MERESE project to pass the SEDAPAL approval process, it represents a significant milestone, effectively demonstrating a viable route to implementation for other projects to follow. Beyond the Carampoma project, we also submitted

final *expedientes técnicos* for the Moyobamba project (USD 0.6 M, Mayo watershed)—which will be largely funded by the MERESE tariff of the Moyobamba water utility—and the Puzmallca project (USD 2.1 M, Piura watershed) –which will be funded by Reconstrucción con Cambios through GORE Piura. We expect each of these projects to receive final approvals in the next quarter.

Our private sector engagement strategy is consolidating around specific opportunities with potential to materialize this year. Beyond the Huamantanga case mentioned above, in September, Forest Trends signed an MOU and agreed on a work plan with Anglo-American, with the objective to develop a portfolio of natural infrastructure investments that supports a collaborative, water-sensitive regional development strategy in Moquegua and to catalyze the scaled implementation of that portfolio. To begin these efforts, NIWS applied the HIRO Tool in the Tambo-Moquegua watersheds, adjusting it to prioritize actions to address water supply and erosion risks, and began to design pilot plots for the Tumilaca learning site. By the end of next quarter, NIWS expects to secure Anglo American’s commitment to implement the pilot and to have developed a draft proposal for how lessons from the learning site could scale to inform silvicultural strategies of natural infrastructure investment across the Tambo-Moquegua watershed, in line with interests of funding sources including GORE Moquegua, EPS Moquegua, and potentially other private sector actors in the region.

Gender Strategy

This quarter, Forest Trends completed the synthesis and dissemination of the study, “Gender Gaps in Natural Infrastructure and Water Management in Peru” in Natural Infrastructure and Water Management in Peru, which was presented in a year-end event held with MIMP and 200 participants from institutions including SUNASS, ANA, watershed councils, and the media. Additionally, Forest Trends finalized the Terms of Reference and, in coordination with government counterparts, selected consulting teams to carry out three key sets of activities for the NIWS Gender Strategy: 1) design and implementation of the Women’s Leadership Program, 2) technical assistance for mainstreaming gender focus in ANA, and 3) technical assistance for mainstreaming gender focus in SUNASS. These three consultancies will begin implementation in the second quarter and will go through the end of the fiscal year. Additionally, Forest Trends participated in a process led by MINAM to propose the incorporation of a representative of women’s organizations on the National Climate Change Commission. The result of this process is expected in the next quarter.

ACRONYMS

ALA	Local Water Authority
ANA	National Water Authority
ChiRiLu	Chillon, Rimac and Lurin (watersheds)
CUBIC	Cuantificación de Beneficios de Intervenciones en Cuencas (methodologies)
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
IWRM	Integrated Water Resources Management
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
MVCS	Ministry of Housing, Construction and Sanitation of Peru
NAP	National Adaptation Plan
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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Panel discussion at the “Milestones and Challenges in Gender Equality for Water Security” event in December 2019 organized by the NIWS and the Ministry of Woman. Panelists from left to right: Francy Cárdenas (ANA), Cariño Ramos (MIMP), Sonia Vidalón (SUNASS), Raquel Reynoso (Asociación SER). (Photography: Bruno Bernal, Forest Trends)

Objective 1: 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, and the protagonist role of women in NI

1.1.1. Implement NIWS branding plan and project communications

The visibility of NIWS messaging and efforts continued to grow in the first quarter of FY2020, due to continued strengthening of the NIWS communications strategy, including expanded web presence through social media and NIWS content on Forest Trends’ website.

NIWS has maintained a strong and growing social media presence through Facebook, Twitter, Flickr, and other platforms. In this quarter alone, 615 new photos were added to the Flickr page (<https://www.flickr.com/photos/infraestructuranatural/>). Also in this quarter, Forest Trends, SPDA, and CONDESAN generated 274 posts on our social media platforms, reaching a total of 161,000 new users, nearly doubling our past social media presence and now reaching a total of 389,008 users. This growth was in large part due to the successful media campaigns carried out by the NIWS Consortium around the National Forum on Natural Infrastructure—for example, -the Forum hashtag, #AcuerdosoporelAgua, trended on Twitter, used over 57,700 times. Building on these successful outreach efforts, the team finalized a 2020 NIWS Social Network Strategy which outlines a plan to optimize project reach to priority audiences.

Table 1. Social media engagement on NIWS partner platforms, Q1 FY2020

Platform	Posts	Scope / Impressions / Users	Interaction / Participation / Readers	Shares / Likes / Interactions
Web CONDESAN	6	2,519	-	-
Web Forest Trends	4	1,259	420	-
Web Actualidad Ambiental	4	621	576	1083
Facebook CONDESAN	31	63,347	4,941	4,026
Facebook Forest Trends	22	124,224	2,939	4,266
Facebook SPDA	11	39,717	1,937	887
Twitter CONDESAN	138	105,100	1,880	396
Twitter SPDA	67	49,508	958	88
MailChimp Platform	3	4,589	2,324	2,563

In addition to our social media outreach, NIWS keeps project allies engaged through a consistent NIWS Quarterly Newsletter. Issue 6 of the NIWS Quarterly Newsletter was shared this quarter through

Redinfor, a network of over 38,000 members interested in sustainable development in Peru. We estimate that through this network, the NIWS messaging has reached approximately 12,000 Peruvians. The NIWS minisite, created in FY2019 on the Forest Trends website and accessible through the user-friendly URL, <http://www.infraestructuranatural.pe>, received 1200 visitors in this quarter. The user-friendly link has been added to all project marketing materials for wide dissemination to project counterparts and the public. In the coming quarters, Forest Trends will continue to add content to the site, including the Project Toolbox where tools developed by the Project will be openly available for download and use by project developers and other end-users.

1.1.2 Develop and implement communications strategies for raising public awareness, for national policymakers, and in new sectors

NIWS efforts to raise public and political awareness in support of broader project strategic goals continued this quarter to be implemented through two primary pathways: training communications professionals and journalists and raising public awareness through targeted campaigns.

Trainings for Communications Professionals and Journalists

As a direct product of the NIWS Journalist Fund and workshops held in FY2019, journalists in our network published 10 articles on water security and natural infrastructure in the first quarter of 2020 (see Table 2).

Table 2. Articles on natural infrastructure and water security produced as a result of the NIWS Journalist Fund

Article title	Media	Date published	Author
Will Riparian Buffers be the Last Option?	Diario El Tiempo / Edición impresa	17/09/2019	Anabelen Rivera Campos
Natural Infrastructure, the solution to overflows and floods in Piura.	Walac Noticias / Web	12/10/2019	Milagros Manrique Puestas
Impact of artisanal mining on Natural Infrastructure.	Radio Cutivalú / Reportaje radial	12/07/2019	Alberto Navarro
The water that Cusco drinks	La República – edición Sur / Impreso	12/07/2019	Rufino Motta Huyhua
Water sources for cities of the South are in danger	La República – edición Sur / Impreso	12/08/2019	Melissa Valdivia Romero
Chalhuanca: The heart of Chili that deserves to be protected	Web y video	12/11/2019	Ibon Silvia Machaca Mamani
Huallo Grande: The community of Tarma that plants trees and cultivates water	Portal Clandestino / Web	12/11/2019	Percy Salomé Medina
Miraflores, the rural community of Lima that uses ancestral dikes for the conservation of water	Web	12/11/2019	Jackeline Ruth Cárdenas Ipenza
SPECIAL: Water Guardians	Portal Convoca	12/11/2019	Jackeline Cárdenas Ipenza
The vulnerable heart of the Chili River that Chalhuanca community members protect	Portal El Búho	12/11/2019	Ibon Silvia Machaca Mamani
Who cares for the sources of water in our region?	Diario El Tiempo / Edición impresa	12/12/2019	Anabelen Rivera Campos
The resurrections of peat wetlands that need Lima	La República / Web	13/12/2019	Marjorie Ramos Poma

The authors of the articles listed in Table 2 received technical advice from technical specialists from across the NIWS Consortium and journalistic advice from NIWS partner, the Momhme Foundation. Widely disseminated across newspapers and online, these articles were published in a critical moment, bringing natural infrastructure and water security back into media discussions when national media was largely focused on political agendas leading up to the national congressional elections.

Two journalists from Radio Cutivalu, participants of the Workshop for journalists of FY2018, won the National Water Culture Award in December, in the category of “media and journalistic publications” for their work, “The threat on the manna of Piura: the importance of the conservation of the forests and moors of the Sierra de Piura”, written by Gustavo Guarnizo and “Access to quality water in the urban area of Tambogrande”, written by Darwin Domínguez. Both award recipients mentioned the NIWS support for their articles in their winning speeches which can be heard here: <https://www.radiocutivalu.org/periodistas>.

Campaigns to Raise Public and Political Awareness

This quarter, NIWS focused our efforts on raising public and political awareness on the need to accelerate action on natural infrastructure, accompanying the National Natural Infrastructure Forum in November 2019 (for detail, see Section 1.1.4).

To build awareness with Forum participants on the urgency of addressing water risks and the critical importance of natural infrastructure to do so, NIWS prepared a range of materials, including infographics and videos, which were displayed during the Forum. Of particular note were two models developed by NIWS that demonstrate the functions of two Peru-specific types of natural infrastructure: amunas and bofedales (highland bogs).

NIWS also executed a comprehensive media campaign around the Forum that reached more than 6 million people in Peru, in important media outlets, including: La Republica newspaper, Canal N TV, TV Perú, Expreso and El Peruano newspaper. Many of these media outlets highlighted the main messages of the Forum through special reports that emphasized the urgency of actions to preserve and invest in natural infrastructure; they also drew attention to commitments made by authorities, such as the Environmental Minister, at the event.

Additionally, NIWS supported SEDAPAL’s efforts to begin incorporating natural infrastructure into their public communications. Beginning this quarter, the SEDAPAL communications team, strengthened from the strategic communication workshop led by NIWS in the previous quarter, began developing and publishing content on its social networks about the care of water sources ([Link](#)), implementation of natural infrastructure projects ([Link](#)), ecosystem services ([Link](#)), and posting articles such as Simon Tegel’s piece in Americas Quarterly: [The Use of Ancestral Technologies for Water Supply](#), which includes a reference to NIWS. Furthermore, CONDESAN provided an outline as well as direct technical support to the SEDAPAL Communications Management Team to produce a report on the state of bofedales (high Andean peat bogs) in Carampoma. The report was widely disseminated through print and web by national newspaper, La Republica, and the Momhme. This emphasis on ecosystem services in SEDAPAL’s institutional external communications marks a distinct shift from the company’s history and is attributable at least in part to NIWS’ robust engagement of the company and its communications team in particular.

1.1.3 Develop and deploy communications campaigns for upstream communities

One of the priority activities outlined in the 2020 Communications Plan is a communities-focused communications campaign to clarify how communities can engage in MERESE project development and implementation as well as what kinds of interventions could be proposed for investment under priority MERESE program. In this quarter, NIWS worked toward this goal through direct training of rural communicators in Cusco, the ongoing radio program, “La Hora del Agua,” and the development of an

informational video with FORASAN, a water fund serving the Chira-Piura watersheds.

The final session of the capacity building program with rural communicators in Cusco region was carried out this quarter in partnership with Arariwa Association in Cusco on October 4-5, 2019. In this program, 28 communicators, journalists, and young leaders were trained on natural infrastructure and MERESE. Amongst them were 14 men and 14 women. As a result of this work, the Cusco Communicators Network has been established, which will support the ongoing exchange and dissemination of information related to natural infrastructure ([Read more here](#)).

NIWS has continued to support the local watershed council to broadcast the radio program “La Hora del Agua” on Santa Rosa radio in Lima. In this quarter, 12 episodes aired, sharing water security and natural infrastructure messaging to an estimated 1500 upstream community members. A full list of the 12 episodes with links to listen to each program can be found in Annex 5, and three notable episodes include the following:

1. Dissemination of information on the amunas with Javier Antiporta, NIWS Hydrological Monitoring Coordinator, CONDESAN
2. Themes and results of the National Forum of Natural Infrastructure with Isabel Calle, NIWS Objective I Lead, SPDA
3. Interview with Alonzo Zapata, Director of the Environmental Management and Ecosystem Services Team (EGASE) of SEDAPAL, to present the advances related to MERESE in Lima

In the Chira-Piura watershed, CONDESAN worked with the Chira-Piura Water Resources Council to provide communications support to the FORASAN Water Fund in the elaboration of an information sheet and an informational video explaining the local MERESE program. The video will serve as an important communications tool to promote natural infrastructure interventions in the region and will be strategically disseminated by the Chira-Piura Communicators Network.

NIWS will continue to prioritize these community outreach efforts throughout 2020 with aim to support upstream communities in understanding MERESE opportunities and resources and how to propose interventions that could be funded under their respective program.

1.1.4 Build champions and support informal institutional changes in key sectors

National Forum on Natural Infrastructure

MINAM, MIMPV, SUNASS, ANA, USAID, the Government of Canada, and the NIWS Consortium hosted the National Forum on Natural Infrastructure on November 13-14, 2019, which aimed to clarify and unify the national agenda for natural infrastructure and water security. The event was attended by more than 300 people representing the range of public entities involved in water and natural infrastructure management (including MINAM, ANA, SUNASS, MINAGRI, MEF, watershed councils, and water utilities); communities where interventions in natural infrastructure are being implemented; the private sector; and civil society.

Key high-level authorities participated and provided leadership during the event, including the Minister of the Environment Fabiola Muñoz, Vice Minister of Environment Gabriel Quijandria, Vice Minister of Women Carolina Garces, General Manager of the National Water Authority Jorge Ganoza, President of the Board of Directors of SUNASS Ivan Lucich, Director of the USAID Mission in Lima Jene Thomas, and Brigitte D’Aoust, Associate Director for Canadian Development Programs in Peru and Bolivia of the Canadian Embassy. Expert speakers included in the event included Gonzalo Delacamara, advisor to 2030 Water Resources Group and one of the leading expert advisers to the OECD in the Peruvian Water Policy and Governance Dialogues (for more detail, see Section 1.2.3). NIWS captured the participation and takeaways of 5 of these leaders and others from the Peruvian water sector during the forum via strategic video interviews that were then published on their website and disseminated through NIWS social media

channels, allowing the public to see and appreciate their support for acting urgently on natural infrastructure.

The Forum created a space for dialogue and debate around existing mechanisms and proposals for mobilizing funds for natural infrastructure interventions, informed in particular by a policy brief led by SPDA and distributed to policymakers prior to the Forum (see Section 1.2.3). As a result, we secured consensus on the need to adapt financing and implementation mechanisms in order to expedite natural infrastructure investments and to ensure that they respond to local land user needs, and thus respond to the urgency of addressing the current threats to natural infrastructure that also threaten water security. This consensus was evident in commitments made by leaders during the Forum -- particularly in the specific solutions put forth that could begin to directly address bottlenecks to efficient, effective natural infrastructure investment. Commitments included finalizing the legal guidelines and promoting the use of investments in optimization, marginal expansion, rehabilitation and replacement (IOARR) for natural infrastructure (MINAM; see also Success Story), and facilitating the first true contract for ecosystem services between a water utility and an upstream community within the next year (SUNASS). The Forum also served as a space to reiterate the commitment across sectors to reducing gender gaps in natural infrastructure and water management; to this end, SUNASS also announced that they would soon issue the new MERESE Directive, which was to be the first regulatory instrument by SUNASS that includes a gender focus (see Section 1.3.5).

The programming also fostered cross-sectoral exchanges of experiences in defending Peru's natural infrastructure. The NIWS consortium facilitated bilateral discussions around topics such as bofedal degradation and its impacts on nearby rural community, Santiago de Carampoma. Community representatives from the Piuray micro-watershed and Mayo watershed shared their learnings of implementing natural infrastructure conservation interventions through the MERESE program. ([See event photos here](#))

Gender Forum Publication: Iguales por el Agua

In November 2019, Forest Trends published the Gender Equality and Water Security Forum report, "Iguales por el Agua: Memoria del Foro de Igualdad de Género y Seguridad Hídrica," which is a comprehensive, highly visual, celebratory summary of the stories, data, and commitments shared at the Forum in June 2019. The report was presented and disseminated at the December 20, 2019 launch of the policy brief on the Gender Gaps in Natural Infrastructure and Water Management in Peru study (see next section).



Figure 1. The “#IgualesporelAgua” publication celebrates the stories and commitments of the Gender Equality and Water Security Forum hosted by MINAM, MIMP, MINAGRI, ANA, SUNASS, USAID, Canada and the NIWS Consortium in June 2019.

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

Potential Contributions of Amunas to Andean Water Security

In November 2019, NIWS published the policy brief, “Potential contributions of pre-Incan infrastructure to Andean water security.” ([Link](#)) The brief synthesizes key findings of the academic article published in Nature Sustainability in July 2019, emphasizing the potential for this indigenous technology to significantly reduce the water deficit for Lima and other water users on the dry Peruvian coast.

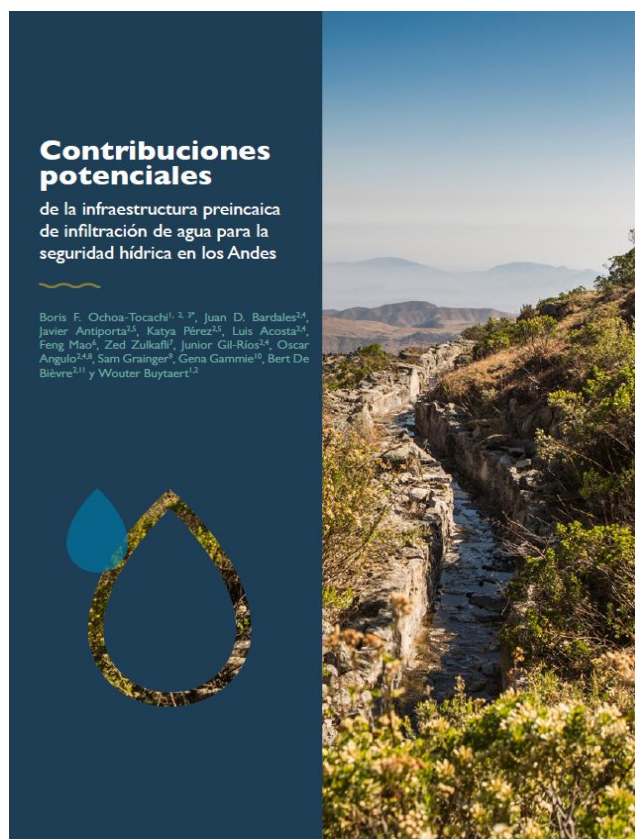


Figure 2. The “Contribuciones potenciales de la infraestructura preincaica de infiltración de agua para la seguridad hídrica en los Andes” publication emphasizing the potential for this indigenous technology to significantly reduce the water deficit for Lima and other water users on the dry Peruvian coast.

The publication of the brief was accompanied by a communications campaign to maximize the reach to targeted audiences. Beyond the educational interactive model displayed at the National Natural Infrastructure Forum, the campaign included an interview with NIWS specialist speaking about publication produced for the Hora del Agua radio program, an educational video produced with Huamantanga students, a NIWS holiday card featuring artwork from a mural developed by the children of Huamantanga where they shared their messages and wishes for their community, and a graphic for social media. Altogether these materials reached over 1 million authorities, public officials, academics, researchers, project managers and citizens, emphasizing the significance of amunas in water security in Peru.

Gender Gaps in Natural Infrastructure and Water Management

In December 2019, NIWS published the policy brief, “Gender Gaps in Natural Infrastructure and Water Management in Peru.” The policy brief presents data and analysis prepared for the full diagnostic, prepared for NIWS in FY2019, organized by 5 key messages prepared for Peruvian policymakers:

1. Women and men both contribute to maintaining natural infrastructure through their actions and knowledge.
2. Certain socio-economic transformations are underway in high-Andean communities that are resulting in women assuming tasks previously reserved for men, representing new responsibilities in addition to their roles in the family.
3. Despite their contributions, women participate less than men in decision-making on natural infrastructure and water.
4. There are significant barriers to the participation of women in decision-making and in benefits related to natural infrastructure and water.
5. There are opportunities that can help to improve the participation of women in natural infrastructure and water management.

The policy brief also includes recommendations for decision-makers in the water sector, in MERESE programs and their supervisory bodies, and in other public entities (for more detail, see Section 4.2).

The brief was launched on December 20, 2019, at an event hosted by NIWS and the Ministry of Women and Vulnerable Populations called, “Milestones and Challenges of Gender Equality for Water Security.” A total of 130 participants (95 women and 35 men) represented Project partners and counterparts responsible for mainstreaming gender into national policies. Key project counterparts such as the Ministry of Women and Vulnerable Populations, SUNASS, ANA and MINAM attended with full participation and provided formal commentary to the final publications; USAID contributed to the opening remarks. The institutions were also celebrated for their advances toward achieving gender equity in water resources and natural infrastructure management in Peru. Finally, institutional alliances and commitments were re-affirmed for moving forward into 2020. ([See event photos here](#))

NIWS also developed a set of communications products to support broad dissemination of the content of the NIWS study, “Gender Gaps in Natural Infrastructure and Water Management in Peru” including a press release, 2 graphics for social networks, and an article on Actualidad Ambiental. Two articles in the news have already shared the results of the study. The campaign will continue into the second quarter of FY2020 and the Communications Team will share results, media interviews and the book, among other communication products with the public and political project allies.

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

1.2.1 Convene and charter Advisory Board

In December 2019, Forest Trends finalized and signed an MOU with MINAM to formalize our collaboration on NIWS and MINAM’s leading role on the NIWS Advisory Board. With the MOU signed, and propelled by discussions and commitments made during the National Forum on Natural Infrastructure, NIWS began coordinating closely with MINAM to support MINAM in convening the next meeting of the Advisory Board. It is anticipated that meeting will be convened in March 2020.

Through the quarter, NIWS continued to promote exchange and collaboration among the NIWS Technical Platform members. In November, a meeting of the Platform was held to present initial findings and receive feedback on the State of Investments in Natural Infrastructure in Peru (see next Section). The Technical Platform's Working Groups also remained active during the quarter. In particular, the Communications Working Group coordinated efforts and materials supporting the campaign around the National Natural Infrastructure Forum, and the Gender Working Group collaborated to hold the presentation of the results of the gender gaps diagnostic at the year-end event (see Section 1.1.5).

On December 17, 2019, NIWS hosted an end-of-the-year reception for Technical Platform and Advisory Board members, to celebrate shared achievements and to confirm commitments across the membership to work together, with urgency, to resolve bottlenecks identified together in 2019. Key partners including Vice Minister of Environment Gabriel Quijandira, General Director of Mainstreaming Gender of the Ministry of Women Maria Pia Molero, SEDAPAL President Francisco Dumler, SUNASS President Ivan Lucich, attended the cocktail and shared their hopes for 2020. During the event, NIWS shared a brief on highlights of the project during 2019.

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

This quarter, Forest Trends completed analysis of the State of Investments in Natural Infrastructure for Water Security in Peru, which seeks to characterize current investments and trends by the public and private sector and to identify challenges and opportunities to increase investments in this area.

According to the study, in 2018 US \$6.3 million (PEN 21.3 million) was invested in natural infrastructure for water security, of which more than 90% came from public investment projects. The private sector accounts for only 6% of investment. Subnational governments are the most active funders of natural infrastructure, with an estimated US \$5.5 million (PEN 18.5 million).

Overall, the study found a veritable “boom” in natural infrastructure investments in recent years: between 2013 and 2018, Peru increased its investment by 30 times in natural infrastructure for water security, primarily looking to ensure the availability of water in the dry season. The increase is partly due to historic laws passed in the early 2010s which created new legal frameworks for channeling public investment, and a movement led by government and civil society that highlighted the opportunity of investing in nature to manage water risks.

The study identifies several challenges that should be addressed to ensure the sustainability of these investments – to avoid a “bust.” First, the study shows that the average time between project idea and implementation is 4.5 years, often resulting in losing the principle opportunity to provide the service for which it was designed at the time. For example, a fragile ecosystem such as a bofedal, can be completely lost by illegal extraction in less than 3 years.

Another finding has been that, despite having numerous indications of the benefits of the interventions, the calculation of the benefits and beneficiaries is not standardized, so that both fluctuate very widely between projects. Standardizing approaches to estimating, monitoring, and evaluating benefits will allow for greater confidence and improved adaptive management of these investments.

Finally, none of the projects evaluated mention the participation of women, suggesting a lack of attention to gender in project design. Since women have different perceptions of the needs that these services must meet, as well as often different skills and knowledge to contribute to project design, a lack of a gender focus suggests a serious current weakness in the field overall.

The publication is currently being finalized, for distribution in the second quarter.

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

This quarter, SPDA worked closely with Forest Trends and other NIWS partners to finalize a policy brief

containing our analysis of governance gaps impacting natural infrastructure investment gaps and resulting recommendations, which built on the draft we submitted to OECD after the first mission of the Water Governance and Policy Dialogues in May 2019. The brief, “Opportunities and tools for the promotion of investments and interventions for the recovery and protection of natural infrastructure for water security,” outlines policy and regulatory proposals organized under the following key messages:

1. Natural infrastructure must be a strategic asset for national water security.
2. Natural infrastructure is in dangerous decline and it is necessary to protect fragile ecosystems
3. Direct contracts as a key tool to channel resources for natural infrastructure and give back to communities
4. Towards an instance that directly executes investments in natural infrastructure
5. Common commitments: the sustainability of water resources is a shared task

The brief was disseminated directly to policymakers ahead of the National Forum Natural Infrastructure and used to inform the communications strategy of the event, in order to build momentum for some of the specific recommendations included in the brief, like the approval of guidelines for applying IOARR to natural infrastructure. The NIWS policy brief was also shared with experts contributing to the OECD Water Governance and Policy Dialogues.

During this 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. Next quarter, the OECD report will be shared with Peruvian stakeholders, who will then prepare a roadmap to implement the report’s recommendations.

IR 1.3 GOP planning instruments incorporate natural infrastructure, including considerations of gender dynamics

1.3.2 Support incorporation of natural infrastructure into priority planning instruments at national level

The NIWS consortium continued collaborations with project counterparts to support the incorporation of natural infrastructure into priority planning instruments. In this quarter, NIWS focused on two main efforts, namely SPDA presented a legal proposal to protect and conserve fragile ecosystems for adoption by SERFOR and MINAM and CONDESAN culminated work with ANA in which they provided technical recommendations for the incorporation of natural infrastructure into the National Plan for Hydrological Resources.

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

This quarter, SPDA began development of legal strategies with competent authorities to address illegal activities threatening priority ecosystems where MERESE seek to provide positive incentives and resources for ecosystem conservation. This activity is taking a two-pronged approach: 1) taking action in the courts to address ongoing illegal extraction of peat in wetlands in the ChiRiLu-Ma watersheds, and 2) clarifying and strengthening the legal framework designed to protect fragile ecosystems.

Judicial complaint

In FY2019, NIWS began to investigate filing a complaint regarding illegal peat extraction in high-Andean wetlands, prompted by concerns of Carampoma community members. SPDA is leading this work and

found two options for filing such a complaint: a) SPDA and/or other civil society organizations could file the complaint as an interested third party, and/or b) NIWS could convince MINAM to take judicial action through their environmental crimes prosecutor. Upon reviewing the case with MINAM, in particular after the National Forum on Natural Infrastructure, MINAM expressed interest in taking on the issue. To support both potential paths of legal action, SPDA then began preparing documentation needed to support judicial action against the illegal activity, working with CONDESAN in particular to collect and document evidence of illegal extraction, to document the extent of the problem – including impacts on wetlands outside of the Carampoma territory – and to justify the importance of acting to address this illegal activity. These efforts will continue in the next quarter.

Legal framework for fragile ecosystems

Also prompted by local community concerns, SPDA found in its research regarding the Carampoma wetlands that the existing legal framework protecting fragile ecosystems is weak and unclear. Based on their analysis, SPDA developed a legal proposal, “Provisions to guarantee the protection and conservation of fragile ecosystems.” The proposal is based on a comprehensive institutional review of inadequacies in the existing legal protection of ecosystems in Peru and aims to address the lack of punitive measures against causing illegal harm to fragile ecosystems, such as bofedales (high-Andean peat bogs), wetlands, jalcas, and high Andean lagoons. The proposal includes proposed conditions of use and restricted activities in fragile ecosystems. It will be presented to MINAM in the next quarter.

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

The Assessment of Gender Gaps in Natural Infrastructure and Water Management published this quarter (see Section 4.2) contributes directly to two priority activities in the Water Resources chapter of Peru’s Action Plan on Gender and Climate Change (PAGCC):

- The identification of barriers that limit the participation of women in the integrated management of water resources (action 1.1)
- The identification of knowledge and practices of women and men associated with their roles in the care of natural infrastructure and useful for the integrated management of water resources in four areas of project intervention (action 2.1)

Forest Trends has also participated in a process led by MINAM to propose the incorporation of a representative of women’s organizations on the National Climate Change Commission (CNCC). Forest Trends supported the design and implementation of the election of that representative, support MINAM to convene a group of women’s organizations. Forest Trends will continue to support this process to select the representative to the CNCC, which is expected to conclude by March 2020.

1.3.3. Support incorporation of natural infrastructure into public investment, focusing on Invierte.Pe gaps and Presupuestos por Resultados

Develop guidance on public investment in natural infrastructure through "investments of optimization, marginal expansion, relocation and rehabilitation" (IOARR)

On December 31, 2019 MINAM [formally approved new guidelines](#) for using IOARR--an implementation mechanism for public funds that allows investments for the optimization, marginal expansion, replacement and rehabilitation of existing investments without preparing a full public investment project--to natural infrastructure. The approval came via Ministerial Resolution 410-2019-MINAM. The IOARR implementation mechanism holds enormous potential to accelerate investment by simplifying the project design and justification process (see also Success Story).

CONDESAN, the Peruvian Society for Environmental Law (SPDA), and Forest Trends provided technical

and strategic support for the IOARR guidelines. A NIWS consultancy carried out through most of 2019 developed the detailed technical content of the guidelines, which were reviewed with our staff and MINAM over more than 10 coordination meetings held in 2019. NIWS supported the Office of Planning and Management of MINAM to incorporate observations made by the MEF on the guidelines, ultimately securing the favorable opinion of the Directorate of Regulations, Methodologies and Training, the General Directorate of Policies and Investments and the General Directorate of Public Investment of the MEF. Finally, NIWS' engagement of MINAM leadership helped to bring the importance of approving these technical guidelines to the fore. IOARR were positioned as a key opportunity during the National Forum on Natural Infrastructure.

Next quarter, NIWS will work with MINAM to publish and disseminate the guidelines, as well as to begin to train project developers on how to use them. NIWS will also review our full portfolio to identify opportunities for applying IOARR in our priority watersheds.

Regulatory framework for implementing MERESE by water utilities

On November 20, 2019, SUNASS approved the new directive regulating MERESE funded by water utilities in Peru, which incorporated significant contributions from NIWS. In particular, specific NIWS contributions are notable in clarifications of implementation mechanisms for MERESE, which should allow more appropriate and agile investments, such as:

- Greater flexibility for some specific requirements in the design stage of the MERESE
- Simplification and clarification for the use of direct contracts of ecosystem service compensation between the utility and the ecosystem service provider (e.g., upstream community), including by distinguishing it from a contract for goods and services, which is maintained as a separate modality

NIWS will work with SUNASS to implement the new framework starting next quarter, with special attention to the direct contracts between ecosystem service payers and providers, which has great potential for MERESE effectiveness, efficiency, and sustainability.

The Directive also includes, for the first time in any regulatory instrument issued by SUNASS, a gender focus, as it requires the "strategic participation of women," beginning in the design stage of the MERESE. This inclusion is the direct result of SUNASS' participation in the Gender Equality and Water Security Forum in June 2019, as well as subsequent direct technical assistance provided by Forest Trends.

Develop simplified project format for public investment in natural infrastructure

In support of the MINAM OPMI team, NIWS has addressed all DGIP-MEF queries and concerns regarding the final proposal of the Simplified Technical Data Sheet for the Recovery of the Water Regulation Service. Concerns were addressed through a series of 6 arduous meetings because MEF officials, and the entire public investment system for that matter, has been built around gray infrastructure development. The Project was able to address the technical and legal concerns of MEF and the Simplified Technical Data Sheet should be approved in the next quarter.

Guidance for identifying priority investment areas under Performance-Based Budget 144

In this quarter, NIWS began new technical assistance to MINAM to help to address areas identified by MEF as requiring clarification for use of the Performance-Based Budget 144, which aligns Peruvian public investments designed to conserve, restore, and sustainably use natural infrastructure. In October, a consultancy began to develop an improved methodology for identifying, categorizing, and prioritizing degraded areas, which effectively represent infrastructure "gaps" that justify public investment under Invierte.pe and Budget Program 144. This activity is being carried out with the technical participation of MINAM, supervision of CONDESAN, and engagement as end-users the Natural Resources Management

and Planning Offices of the Regional Governments of Piura, Lima and Cusco.

Within the framework of this technical assistance, the consulting team hired by NIWS has carried out the field work in the Chira-Piura, ChiRiLuMa and Vilcanota-Urubamba watersheds, which were prioritized for this work. The objective of this field visit was the verification in situ of the sampling points in order to validate the mentioned methodological proposal. Consultants are currently systematizing their findings.

It should be noted that, in each area, work began with a presentation meeting to the Natural Resources Management and Planning Offices of the corresponding Regional Governments (Piura, Lima, and Cusco), to achieve their active participation in the process. In addition, these meetings allowed verifying the interest of the officials and the need for the application of the methodology, since investments in natural infrastructure are programmed oriented towards the recovery gap of degraded ecosystems. The new proposed methodology and results of its application in prioritized watersheds will be presented in workshops with the Regional Governments and other stakeholders of interest for validation in the following quarter.

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.

Optimized Master Plans of EPS

In FY2020, water utility tariffs are under review in a number of NIWS priority watersheds, including critically the utilities serving Lima (SEDAPAL), Arequipa (SEDAPAR), Piura (EPS Grau), Moyobamba (EPS Moyobamba), and Tarapoto (EMAPA San Martin). This quarter CONDESAN led engagement of SUNASS and local water utilities to ensure that tariff review processes were supported technically, institutionally, and strategically to include new and renewed allocations for natural infrastructure investments.

In Lima, NIWS worked with SEDAPAL to prepare for the upcoming PMO review process, preparing in particular for potential criticisms from within the company, its board or supervisors (e.g., Ministry of Housing), or its consumers, that the tariff should not be renewed due to low expenditures in its first period. Therefore, processes to mobilize investment in early projects like Carampoma and Huamantanga (see Section 3.2.1), to develop a robust portfolio of full projects that correspond to funds that have already been assigned (see Section 3.1.5), and to develop a robust communications campaign (see Section 1.1.3) supporting the tariff renewal are key parts of the strategy to support the renewal of the MERESE tariff in SEDAPAL. Additionally, this quarter CONDESAN applied the HIRO Rapid-Focus Tool in ChiRiLuMa watersheds and provided feedback and support to SEDAPAL for the preparation of its internal proposal and justification for renewing the MERESE tariff, with the identification of new project ideas that can be funded with additional funds that would continue to be collected. Next quarter, NIWS will also contribute a review of the proposed cost line items to be included in SEDAPAL's Optimized Master Plan, to ensure that expenditures align with preferred implementation modalities (e.g., public investment projects, IOARRs, or direct contracts), which will be necessary to ensure efficient implementation.

In Arequipa, Piura, and San Martin, NIWS has provided the technical support needed to justify the inclusion of a new MERESE tariff in SEDAPAR's Optimized Master Plan, currently under review. In close coordination with the Quila-Chili watershed council and SEDAPAR, NIWS local partner DESCOSUR developed an updated map of ecosystem service providers (contribuyentes) and developed two project ideas in SUNASS's format, to support the requirements for including the MERESE tariff. In Piura, the Macara-Quiroz project under development (see Section 3.2.1) will justify the lion's share of EPS Grau's new MERESE tariff, and CONDESAN has been facilitating coordination between the water utility, the watershed council, and the regional government to ensure coordination among natural infrastructure investment efforts, especially given large anticipated investments from Reconstrucción con Cambios. Likewise, in San Martin, NIWS has developed the Moyobamba PIP Expediente Tecnico (see Section 3.2.1), which justifies the maintenance of the MERESE tariff for EPS Moyobamba, and is similarly developing the Expediente Tecnico for EMAPA San Martin's natural infrastructure investments. Both tariffs are currently

under review; CONDESAN has also coordinated closely with SUNASS' local representative in San Martin to ensure that these projects meet technical criteria to justify positive decisions on MERESE tariffs in the new plans for these water utilities.

In Arequipa and San Martin, public reviews of the tariff are anticipated to begin in the second or third quarter, pending SUNASS' technical review of the proposed plans. In Piura, public review has already been completed and we are awaiting the final result.

Reconstruccion con Cambios Integrated Plans

During this quarter, NIWS worked closely with MINAGRI and other entities charged with overseeing the development of Integrated Watershed Management Plans for Flood Control and Landslides ("Integrated Plans") to be financed by Reconstruccion con Cambios (RCC), in order to ensure the inclusion of natural infrastructure investments in these plans.

As 9 of the 13 watersheds for which RCC will develop and invest in Integrated Plans are supervised by MINAGRI, MINAGRI became a critical partner for NIWS during this quarter. The partnership began with the development of the HIRO Rapid-Focus Tool (see also Section 2.2.1), which also allowed NIWS and MINAGRI, through its technical focal point SERFOR, to agree on the technical approach that should guide evaluation of natural infrastructure investments included in the Integrated Plans. Without the tool, neither MINAGRI nor the consulting firms had clear frameworks to use to justify the inclusion or exclusion of any specific natural infrastructure investment in the Integrated Plans.

Building on the relationship developed with MINAGRI, NIWS secured the Ministry's buy-in to convene the firms contracted by develop the Integrated Plans for a workshop focused on identifying natural infrastructure investments. This workshop took place on December 11-12, 2019, convened by MINAGRI with NIWS support in Lima. 64 of participants, 22 women and 42 men, representing 11 firms participated in the workshop representing projects in 13 of the 18 watersheds prioritized by RCC. During both days of the workshop NIWS provided technical assistance in the use of the HIRO tool and provided Formulator Companies with cartographic information (GIS), guidance through the process of identifying natural infrastructure opportunities in their respective watersheds and ad hoc guidance in the formulation of projects for each watershed.

While this engagement was later than we had originally hoped, it was not possible to engage the companies sooner as MINAGRI had been renegotiating several contracts and managing significant administrative problems that had complicated their relationships with the firms. This negotiation also resulted, opportunely, in extensions for final submission and approvals of the plans to approximately April 2020. The extensions give NIWS a wide enough window to build on the relationships now established and ensure the inclusion of robust, well-designed investments in these plans.

CONDESAN also began to provide direct technical assistance to select firms in their selection and design of natural infrastructure investments. Between this direct technical assistance and that provided during the workshop, the HIRO tool has been used by 7 firms in the development of Integrated Watershed Plans. Eleven firms have received the results of the HIRO tool for their watershed(s).

At the workshop and through the direct technical assistance provided, the NIWS team discerned that, although the Terms of Reference indicated that all Integrated Plans should include natural infrastructure investments, only one of 13 watersheds had any advanced proposal for natural infrastructure investments in December 2019, when most Plans were originally due to be delivered. In at least one case, firms had interpreted the Terms of Reference to suggest that natural infrastructure was not a required component and could be replaced by an early warning system. Our technical assistance has been enthusiastically received by both MINAGRI and the consulting firms, confirming that NIWS technical support to this process has been needed and strategic, perhaps making the difference to ensure that the inclusion of

natural infrastructure is one of the “cambios” accompanying this reconstruction effort.

NIWS worked closely with MINAGRI and its RCC team to align goals and establish a workflow for advancing the incorporation of natural infrastructure based solutions in the Integrated Plans. Following the December workshop, Forest Trends and MINAGRI agreed that NIWS would provide technical assistance and supervision for the formulation of pre-investment studies of projects related to natural infrastructure in the framework of Integrated Watershed Plans for flood and landslides control in watersheds prioritized by RCC with the objective of:

1. Strengthening the capacities of the Technical Teams of the Formulator Companies that prepare pre-investment studies of public investment projects related to natural infrastructure and through the RCC framework
2. Providing technical assistance for project formulation, taking care of the technical quality and application requirements established by Formulator and Technical Areas Unit
3. Establishing guidelines for the formulation of natural infrastructure pre-investment studies

By the end of the quarter, NIWS had developed a comprehensive plan for providing technical assistance to natural infrastructure investment development in 9 watersheds, including Terms of Reference for a dedicated team to provide input and review to work that will be led by the consulting firms hired by MINAGRI and by regional governments supervised through local teams. Through this process, we expect to be able to secure approximately USD \$15-20 M in new natural infrastructure investment allocations to be approved in the Integrated Plans in the third quarter.

A Memorandum of Understanding between MINAGRI and NIWS is currently being prepared to reflect the above as well as strengthening to MINAGRI’s executing units, like AgroRural and Sierra Azul, which are likely to ultimately implement a number of the natural infrastructure investments prioritized Integrated Plans.

Watershed Management Plans

This quarter, NIWS worked with watershed councils to develop and evaluate portfolios of natural infrastructure investments that should be included in watershed management plans (discussed in Section 3.1.4). CONDESAN also led coordination with watershed councils to support the mobilization of projects that had been prioritized in existing watershed management plans, as was the case for the Chancay-Huaral PIP, for which NIWS is developing the Expediente Tecnico to support mobilization (see Section 3.2.1), and for projects that NIWS is helping to develop and/or facilitate inclusion in the Integrated Plan for Reconstrucción con Cambios investment in the Piura watershed.

1.3.5 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 very closely with SEDAPAL to strengthen their environmental management team, as well as coordination with other key departments in the institution, to allow for the effective management and execution of natural infrastructure investments by the utility. At the beginning of the quarter, Forest Trends reviewed again the existing SEDAPAL portfolio with our technical focal point in the company, EGASE director Alonzo Zapata. We developed a plan for taking each of the projects in SEDAPAL’s portfolio to implementation, and we have seconded consultant Gilmer Medina to support specific analytical and coordination tasks for advancing this portfolio that cannot be completed with the existing EGASE team alone. This support facilitated the rapid, significant advances in portfolio development and the mobilization of the Carampoma project reported in Sections 3.1.5 and 3.2.1. Additionally,

EcoDecision and Forest Trends worked with SEDAPAL and experts in Quito, Ecuador, to plan an exchange between SEDAPAL managers and Quito's water utility, EPMAPS, and water fund, FONAG, which took place in January 2020.

Additionally, recognizing the inherent limitations and risks that will continue to challenge MERESE implementation within SEDAPAL, NIWS prepared analysis to support the transference of MERESE resources to a third party legally-authorized to administer public funds (i.e., PROFONANPE or FONAM). SPDA prepared the brief, "Execution of Remuneration Mechanisms for Water Ecosystem Services under the modalities of administration and execution agreements or contracts" which develops the legal analysis on the scope and the process of execution of this modality under the regulatory framework for MERESE established by SUNASS, and updated in the November 2019 Directive. This document allows to identify the main weaknesses of the norm that hinders its implementation and the mobilization of financial reserves for the design and execution of these compensation schemes. Next quarter, this analysis will be developed into a roadmap specific to SEDAPAL, as well as a legal study recommending actions to be taken after the first bid to transfer funds, which was unsuccessfully carried out by SEDAPAL in 2019.

SUNASS Institutional Strengthening for MERESE Technical Assistance and Oversight

This quarter, Forest Trends initiated institutional capacity-building to support SUNASS' role in providing technical assistance to water utilities for the design and implementation of MERESE. SUNASS' Directorate for Water Provisioning (Dirección Ámbito de la Prestación), as the focal point for this effort, began by carrying out a self-assessment of institutional capacity using the methodology developed by NIWS in FY2019. As a result of the assessment, 6 competencies were prioritized for strengthening. Forest Trends will develop an action plan and begin technical assistance to strengthen these areas beginning next quarter.

Watershed councils

Similarly, NIWS initiated institutional strengthening efforts with the Vilcanota-Urubamba watershed council in Cusco this quarter. The watershed council is currently in the development of the Integrated Water Resources Management Plan, which must define projects, programs, including natural infrastructure, and financing mechanisms for its implementation; as this is a new council, the assessment seeks to identify areas that require strengthening to support this process. The self-assessment instrument was applied with a focus on the role and competencies of the watershed council's technical secretariat, which had been identified as the focal point for this effort. In January we will have the results of the assessment and a proposed action plan for addressing priority areas.

Mainstreaming Gender in Water Sector Institutions

Following commitments and initial assessments carried out in FY2019, this year NIWS will develop action plans for mainstreaming gender in Peru's leading water institutions, ANA and SUNASS. This quarter, NIWS provided direct technical assistance to both institutions to support this process, worked with them and MIMPV to scope the specific approach to mainstreaming gender in these institutions, and identified the consulting teams that will lead the development of each gender action plan.

Institutional Diagnostics and Action Plans

During this period, the calls were launched and the consulting teams were selected to develop technical assistance for mainstreaming the gender approach in the National Water Authority (ANA) and the National Superintendence of Sanitation Services (SUNASS). The winners were Gabriela Paliza and Talent and Potential Consultants, respectively.

The terms of reference of both consultancies stipulate that the mainstreaming process includes the development of a set of activities and delivery of products oriented to the identification of priority areas for mainstreaming the gender approach, the design of a mainstreaming plan and advice on its

implementation The main deliverables of these consultancies will be institutional gender assessments, gender mainstreaming plans, and two technical assistance reports in the implementation of the gender mainstreaming plan in each entity.

Both consultancies will begin in January 2020.

Training for ANA Staff on Gender Equality

Direct technical assistance to ANA this quarter included a Forest Trends technical support and participation in a training led by the ANA for their staff on the gender approach, which was held on November 29, 2019. The training, “Gender Equality and Water Security,” was coordinated by the ANA Office of Human Resources, which had participated in NIWS’ 2019 Forum on Gender Equality and Water Security. It addressed why gender equality and water security are important to talk about, the gender gaps that exist in water management, and challenges and opportunities for gender equality and water security. The event also featured an exhibition of activities carried out in 2019 by the Water Users Organizations Directorate to support gender equality.



Photo: Recognizing the need to deconstruct hegemonic masculinity as part of the effort to address gender inequality, during the training participants were shown the aprons used in the “Men for Equality” campaign led by MIMPV in 2019. Here, 5 participants from ANA staff volunteer to use the apron. Photo: ANA.

Increasing women’s participation in water user associations

Working to amplify the National Water Authority’s (ANA) efforts to strengthen and expand the role of women in Water User Boards, NIWS strategically participated in two Water User Board meetings this quarter, the First Meeting of Women of the Local Water Authority of the Middle and Lower Piura, held on November 22, 2019, and the XIV Meeting of Water Users of the Chancay-Lambayeque Valley, held on December 5-6, 2019.

Led by the General Directorate of Water Users Boards, the meetings aimed to advance the gender equity commitments made by ANA during the Gender Equality and Water Security Forum in June 2019 by strengthening the capacities of women belonging to Water User Boards. The General Directorate is opening spaces for the participation of women in water resource management, positioning women’s

agendas and securing decision making positions in the Board agendas.

The First Regional Meeting of Women Water Users in Piura followed the format successfully developed and executed by women in the Chancay-Lambayeque Water Users Board. Since 2001, the Chancay Lambayeque women water users held 14 regional meetings, exchanging experiences, improving their organizational knowledge, and strengthening their capacities to improve their participation and performance in water resource management. The Project presented on gender and women's participation in water governance, in which approximately 70 women were present.

During the XIV Meeting of Users of the Chancay Lambayeque Valley, called "Sowing water in the watershed we reap life: the role of women users" approximately 120-150 women participated representing the User Commissions of Chongoyape, Ferreñafe, Pítipo, Capote, Reque, Monsefú, Chiclayo, Lambayeque, Mochumí, Muy Finca, Túcume and Mórrope. NIWS participated in this event via a presentation called "Gender gaps in natural infrastructure and water security and challenges for equality." The presentation outlined regionally relevant findings from the NIWS study, "Gender Gaps in Natural Infrastructure and Water Management in Peru" that can directly inform targeted gender equity in strategies in Chancay-Lambayeque. While Chancay-Lambayeque is not a priority watershed of the Project, NIWS participated in this meeting because, as mentioned above, the successes of the Chancay Lambayeque Women Water Users over the past 15 years serve as a case study and success model that can inform planning and organization toward gender equity in Water User Boards in other regions. This XIV Meeting of Users of the Chancay Lambayeque Valley was highlighted on the Chancay Lambayeque Water User Board website: http://juchl.org.pe/noticia_detalle.php?id=61



Pedro Ríos from Huamantanga Community downloads precipitation data in December 2019 supporting hydrological monitoring in his watershed (Photography: Javier Antiporta, 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 related agenda for research, tool development, and capacity building.

This quarter, CONDESAN led 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.

On November 11-12, 2019, CONDESAN participated in and facilitated a field trip to the Huamantanga learning site of the Water Sowing and Harvesting Network, which brings together researchers from Chile, Colombia, Bolivia, Ecuador, Spain, Mexico and Peru to exchange knowledge and experience on the contributions of these rustic practices to sustainable water management. As SUNASS serves as the Water Sowing and Harvesting Network country contact for Peru, they hosted the event; NIWS coordinated the field trip to the Huamantanga learning site, where participants learned about the pre-Incan to modern day water sowing and harvesting practices employed in Lima's watersheds. Beyond the valuable knowledge sharing at the event, the participants re-evaluated techniques and approaches and MERESE was amongst the approaches under review.

NIWS also participated in and supported the development of the Peruvian Network for Ecosystem Restoration (RedPER) during the Second National Symposium on Ecosystem Restoration held on November 5-6, 2019 in Lima. RedPER is a working group led by SERFOR that aims to serve as a space for inter-institutional participation for the positioning and visibility of ecosystem restoration initiatives in Peru and the achievement of national and international goals assumed as a country. CONDESAN worked with other network members to develop the RedPER Organization and Operation Protocol. In the coming quarter, the network will develop a work plan.

Led by CONDESAN, NIWS also continued to support the dynamic Technical Group on Peatlands in Peru, led by MINAM, INAIGEM, IIAP. NIWS organized two workshops to support the Technical Group on Peatlands this quarter, which were held on November 14, 2019, and December 6, 2019, with a total of 25 researchers and specialists. The objective of the workshop was to define the role and importance of peatlands, including high-Andean peat bogs (*bofedales*), in securing water and mitigating the effects of climate change. Participants contributed their research results and provided feedback, and workshop outcomes will feed into the Technical Group's development of a national legal framework on peatlands. In the coming months, NIWS will contribute further to this effort with a meta-analysis on the contributions of peatlands to water security (see Section 2.1.4).

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

NIWS has hired a consultant to analyze the change in land use between 2001-2018 in order to better understand the state of natural infrastructure in the Quiroz and Macará watersheds, where we are developing a public investment project for EPS Grau in Piura (see Section 3.2.1). The analysis used Landsat and WorldView satellite images to create maps of vegetation cover for year 2001 and for 2018. Based on the trends of change in vegetation cover, NIWS developed a degradation matrix in order to establish the degree of degradation. The final map of the level of degradation in the Quiroz and Macará watersheds was completed in this quarter. NIWS will repeat this methodological process for the upper part of the Piura river watershed.

As part of the collection of baseline information in prioritized watersheds and learning sites, NIWS hired a consultant in October to perform a multitemporal analysis of changes in land cover in the periods 2000-2010 and 2010-2018 in the Project priority watersheds. The consultancy is in development and, according to the work schedule, it would culminate in March 2020. Two products were already delivered in this quarter, namely the collection of information and the generation of geodatabases. In the next quarter the consultant will generate land cover maps as well as provide analysis of the found land coverage changes. This work will support activity 3.3.2.

In the coming quarter, NIWS will continue to move these initiatives forward as well as begin work to prepare inventories of high-Andean peatlands in priority watersheds. In this quarter, NIWS signed an MOU with INAIGEM and defined a work plan that includes the development of a methodology for mapping and conducting inventories of high-Andean peatlands. The work will begin in the second quarter of FY2020.

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

As part of our efforts to strengthen and expand the iMHEA monitoring network, this quarter NIWS supported the development and launch of its first standalone website (www.imhea.org). The site highlights important network information such as their mission, vision, information sheet of monitoring sites, data generated, publications, and more. This version still needs to be complemented and improved, so for the next quarter the necessary improvements will be developed so that it serves as an articulation tool for partners and public interested in the hydrology of mountain ecosystems.

NIWS launched the update to the hydrological monitoring protocol of the Regional Andean Ecosystem Hydrological Monitoring Initiative was initiated, which is being developed by iMHEA Coordinator Bert De Bievre in coordination with the CONDESAN technical team and Imperial College; a first version will be delivered in January 2020. Once reviewed, this protocol will be shared with all the iMHEA experts for their contributions and review for final validation during the iMHEA Assembly in June 2020.

At the local level, CONDESAN scoped research utilizing the tracer methodology shared with the iMHEA network during the July 2019 training, to evaluate eco-hydrological benefits of peatlands generated from the recovery of ecosystem services provided by bofedales through natural infrastructure interventions in Milloc-Carampoma. This research, like tracer experiments also underway led by CONDESAN in the Lurin watershed on amunas, will contribute to a new, emerging field of knowledge on groundwater dynamics linked to the restoration of natural infrastructure and rustic practices, which iMHEA is helping to develop.

Finally, with NIWS support, local iMHEA partner Nature and Culture International (NCI) carried out a comprehensive analysis of years of monitored data from 6 paired micro-watersheds in the upper Quiroz watershed in Piura. The analysis included data cleaning and quality control, processing, and analysis, for the period of 2016-2019. Likewise, hydrological indices related to regulation and water performance were

calculated, which confirmed that micro-watersheds that have a lower degree of land use change have greater capacity to regulate precipitation.

NCI also secured an agreement with the Provincial Municipality of Ayabaca for the maintenance and care of the hydrological monitoring equipment installed in each of the 6 micro-watersheds. As part of this agreement, the municipality through the technical office, Sub-division of Agricultural Development and Environment (SDAMA) will designate a technician to accompany the data download process.

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

Meta-Analyses

NIWS partnered with SNAPP Water Flow Impact Group ([See more here](#)), to contribute to SNAPP's global review of existing research on the impact of natural infrastructure on water flow. NIWS hired two consultants to review and organize articles in a coded database. Once completed, the database will be available to the NIWS team for future processing, analysis and publications that will improve the natural infrastructure knowledge base in Peru and other Spanish-speaking countries.

NIWS developed and circulated the Terms of Reference to hire a consultant to perform a systematic review and meta-analysis of the hydrological impacts of Andean grasslands. MINAM estimates that the natural grasslands of the Puna, dry and wet, jalca and paramo, cover a little more than 18 million hectares of the Peruvian Andean region. That represents 14% of the national territory and the dominance of Andean natural grasslands over this enormous geographical extension highlights the need and importance of this study. It is expected to begin in the next quarter.

Research Grant Program

With the design of the comprehensive research grant program still underway, NIWS has continued to support targeted research in support of meeting Project information needs and to support improved natural infrastructure management. This quarter CONDESAN launched a call for proposals to conduct research on water regulation contributions of amunas in San Andrés de Tupicocha, the site-level hydrological impacts of dry Puna restoration in Huamantanga, an analysis of cattle relocation strategies from middle-low Huamantanga, identification of the water destination of the Can-can and Cusiqocha streams of the Piuray micro-watershed, and hydrograph units in the iMHEA micro-watersheds.

The results obtained will contribute to the generation of knowledge about these high-Andean ecosystems and their potential impact of being replicated at other scales will be estimated.

The design of the full research grant program is still set for the next quarter, at which time the program will be launched with a call for proposals followed by a review and selection of theses to support, and finally with grant disbursement in the final quarter of FY2020.

INAIGEM High Mountain Glaciers and Ecosystems Symposium

NIWS specialists presented at the INAIGEM High Mountain Glaciers and Ecosystems Symposium, "The Mountains, Our Future," in Cusco on December 10-12, 2019. The symposium brought together experts in mountain ecosystems and tropical glaciers and aimed to share the knowledge generated on the subject through the latest research developed. NIWS specialists from CONDESAN managed a Mountain Ecosystems work table, presented a NIWS publication, "The contribution of systematic reviews in promoting the conservation and restoration of ancestral ecosystems and practices in Peru," and presented a scientific poster titled, "The importance of water sowing and harvesting systems for water security."

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

This quarter, NIWS developed an innovative new tool that allows natural infrastructure project and portfolio developers to rapidly prioritize interventions in Peruvian watersheds based on their potential to mitigate specific water risks. HIRO, the *Herramienta de Identificación Rápida de Oportunidades* (in English, tool for rapid identification of opportunities), was developed by CONDESAN to identify natural infrastructure interventions suitable for addressing flood and landslide risk in the context of projects being developed under an accelerated timeline for Reconstrucción con Cambios.

The HIRO Tool organizes available GIS information in a logical process that allows technical specialists and decision-makers to filter out areas that are not relevant to addressing their prioritized water risks, ending with a set of priority areas for natural infrastructure conservation and restoration (see Figure 2). The filtering-out process works through three phases:

- Phase 1. Identify the problem (risk conditions): delimitation of scope, identification of population and infrastructure at risk
- Phase 2. Identify the causes: identification of degraded areas where a loss of ecosystem services is likely contributing to the increased risk
- Phase 3. Identification of solutions: Integration of information on zoning, precipitation, and permeability with decision-tree offers recommendations on appropriate interventions in priority areas

The tool currently utilizes nationally available, official information from entities such as the National Statistics and Information Institute (INEI), ANA, SERFOR, MINAM, Ministry of Education, SENAMHI, the Mining and Engineering Geological Institute (INGEMMET), and regional governments, to respond to the criteria of each of the phases outlined above. With this data, CONDESAN has automated and run the tool now in over 20 watersheds, providing critical guidance previously unavailable to project developers, portfolio developers, and supervisors in regional and national agencies.

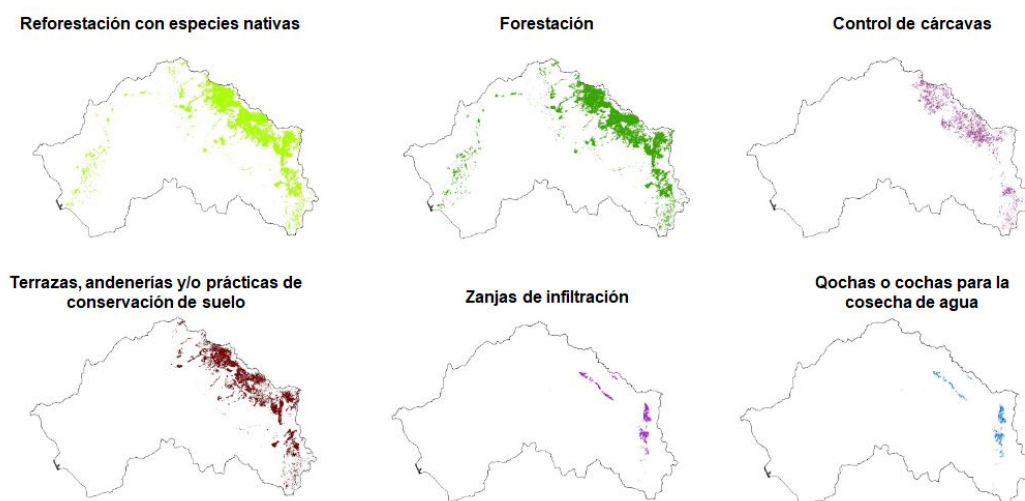


Figure 3. Results of the HIRO Rapid-Focus Tool in the Piura watershed, disaggregated by interventions

To support the application of the tool and its institutionalization, NIWS also developed two guides for the tool this quarter: one describing the tool's methodology and use for planning, oriented toward decision-makers, and one describing how to build and apply the tool using available information, for GIS specialists. The guides are currently in final review to be co-published by MINAGRI and NIWS. CONDESAN has also begun to adapt the tool for other water risks, like drought and sedimentation (see also Section 3.1.4); that further development will also continue next quarter.

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 conducted two webinars aimed at training portfolio designers and project developers in quantifying the benefits of natural infrastructure. As part of the Natural Infrastructure Webinar Series, NIWS facilitated a webinar for 84 participants, 42 men and 42 women, on October 30th, 2019 on the potential protection of ecosystem services of artificial bofedales (peat wetlands). The webinar aims to socialize results from research regarding artificial bofedales and their relationship with ecosystem services. A second webinar was held on the advances in the conservation and management of high Andean and bofedales forests. This webinar took place on November 27th, 2019 and shared the conservation status of the high Andean bofedales with 55 participants, 26 men and 29 women.

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

In FY2019, Imperial College London initiated a collaboration with Kathmandu Living Labs (KLL) for the development of a web platform where NIWS and partners can visualize and manage field sensor observations. In this quarter, KLL, funded by external sources, developed an architectural framework for the web platform, and Imperial reviewed their advances to ensure that it implements relevant functionality (eg, hydrometeorological time series analysis and visualization) and interoperability (eg, data exchange using Application Programming Interfaces of the Open Geospatial Consortium). The framework will be delivered in January 2020. Throughout FY2020, a full hydrological data management platform will be developed on top of this framework. This data management platform will be available for the Project Learning Sites and for use by the iMHEA network.

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.

NIWS also worked closely this quarter with Resource Partner Kieser & Associates to finalize 6 methodologies to quantify the hydrological benefits of natural infrastructure interventions. The CUBIC (*Cuantificación de Beneficios de Intervenciones en Cuencas*) methodologies fill another 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.

In October, Kieser & Associates staff Mark Kieser and Mike Foster visited Lima in October in order to socialize and validate existing quantification methodologies with relevant agencies, technical experts, and potential users and to coordinate next steps with the local team for finalizing the draft primers they had prepared in FY2019. NIWS held a workshop during this visit in which five of the quantification methodologies were presented to 41 technical participants (12 women and 29 men) from agencies such as SUNASS, ANA, MINAGRI, and watershed councils, as well as several NGOs.

By the end of the quarter, 5 methodologies had been finalized, with the sixth under final technical review. NIWS will publish and launch the methods and will begin to apply them to our full portfolio of projects

under development in the second quarter. A seventh CUBIC methodology, which will evaluate the impacts of riparian buffers on reducing nutrient contamination, will also be finalized and published next quarter (see Figure 3).

Intervention	Increased base flow	Reduced sediments	Reduced nutrients
1 Qochas	✓	✓	
2 Mamanteo (amuna)	✓		
3 Reforestation or Forest conservation	✓	✓	✓
4 Restoration or conservation of grasslands	✓	✓	✓
5 Restoration or conservation of wetlands	✓	✓	✓
6 Riparian buffers		✓	✓

Legend

✓ NI Intervention may apply to targeted Benefit

○ CUBIC Methodology available, January 2020

Figure 4. CUBIC Methodologies Developed by NIWS, by Intervention and Benefit Indicator

In another development that will support the use of the CUBIC methodologies, in this quarter CONDESAN and Kieser & Associates began to develop proposals for a curve number table for Andean ecosystems. The CUBIC methodologies utilize curve numbers, which have at times been criticized because they were developed in the United States and have not been validated in Andean ecosystems. Utilizing data from the iMHEA monitoring network, academic literature, and other sources, NIWS aims to propose an alternative reference of curve number tailored for the Andean context. Once tailored to Peruvian ecosystems, the curve number will provide more accurate modeling in Peruvian ecosystem research.

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

The implementation of the Leadership Program will be carried out through a specialized service that has been selected through a public call. In this case, two calls were made, of which, the first one was declared void because of a lack of qualified applicants, and a second one was launched that allowed to select a competitive proposal that will be implemented from January 2020.

The winning proposal corresponds to the consortium integrated by the Ecumenical Center for Promotion and Social Action North (CEDEPAS NORTE), the Center for Development Studies and Promotion (DESCO), and the Master in Water Resources Management of the Postgraduate School of the Pontifical Catholic University of Peru.

CEDEPAS NORTE and DESCO are non-governmental development organizations with a trajectory of 35 and 54 years respectively. These institutions participate and lead groups related to the sustainable management of water resources, execute projects related to the integral management of water resources, family agriculture, food security, citizenship and democracy, territorial development, climate change and gender equality; capacity building of women living in the rural area for the development of their leadership

and empowerment, among others. They have an institutional policy with a gender focus and are developing efforts to deepen the mainstreaming of the gender approach in their projects and institutional culture. They participate in various research groups and consortia and environmental networks.

The Masters program in Water Resources Management of the Pontificia Universidad Católica del Perú (PUCP) trains professionals with skills to propose solutions to problems related to water management towards sustainable and equitable use, providing an interdisciplinary perspective on water management, in which the engineering sciences and social sciences converge.

The proposal presented by the Consortium, in addition to being the only one that has explicit support from a prestigious academic institution that integrates the consortium, offers a strategy and methodology that combines a diversity of modalities and serves the diversity of the target audience, which implies a challenge for such a program. Beginning in January 2020 NIWS will work with the consortium led by CEDEPAS to prepare the detailed program design for the Women's Leadership Program.



NIWS staff demonstrates natural infrastructure hydrological functions to students at Huamantanga School at a Science Festival in December 2019. (Photography: Zarela Estabridis, 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 the fourth quarter of FY2019. The learning sites are Piuray-Ccorimarca in the Vilcanota-Urubamba watershed in Piura, Huamantanga in the Chillón-Rímac-Lurín watershed in Lima, Samanga in the Chira-Piura watershed in Piura, Chalhuanca in the Quilca-Chili watershed in Arequipa, Rumiayacu-Misquiyacu-Almendra in the Mayo watershed in San Martín, and Tumulaca in the Tambo-Moquegua watershed in Moquegua.

Huamantanga Learning Site, ChiRiLu Watershed

The Huamantanga learning site serves as a model project design for investment in natural infrastructure and a place where policymakers, journalists, project developers, and others interested in MERESE and ancestral technologies for water management can visit to see efforts in action. Combined, these contributions will inform and fuel portfolio development and implementation for SEDAPAL's MERESE program and other natural infrastructure investments for Lima's water security.

In FY2019, NIWS reviewed the Huamantanga project with local community members, resulting in a significant expansion of project activities, both in terms of conservation of puna grasslands and in terms of investment in the community's alternative production practices. The revamped Huamantanga project (valued now at USD 3.3 M) will restore 10 pre-incan amunas and over 2000 hectares of puna grassland. This quarter, NIWS carried out a final review of the project, including a cost-effectiveness analysis to ensure it was in line with NIWS criteria. The result of the analysis shows that the Huamantanga investment is indeed cost-effective compared to gray infrastructure constructed to increase water availability in the dry season. With this design finalized, the project profile was also finalized for presentation to SEDAPAL (see also Section 3.2.1). Next quarter, CONDESAN will lead the presentation of this project to the Huamantanga community, in order to secure the community's approval for the project, before officially submitting the profile to SEDAPAL for its approval and advancement to the *Expediente Técnico* stage.

NIWS also began developing a proposal for executing private investment in coordination with public investment in Huamantanga, while assuring that the public sector (SEDAPAL) would still assume responsibility for the operation and maintenance of the natural infrastructure restored by private investment. For more detail see Section 3.2.2.

Finally, Huamantanga continued to provide opportunities for applied learning this quarter, as it received an evaluation team from Canada's Global Affairs Office in November to inform their review of Canada's development portfolio in Peru and members of the global Water Sowing and Harvesting Network, hosted by SUNASS during an event in November.

Tumilaca Learning Site, Tambo-Moquegua Watershed

The Tumilaca learning site will serve as a pilot and seed bank for scaled natural infrastructure restoration in the Tambo-Moquegua watersheds led by the Regional Government of Moquegua and Anglo American, with contributions also by EPS Moquegua.

In FY2019, NIWS analyzed Anglo American's initial plan for investing in Tumilaca, which we found to be unviable due to the large amount of irrigation that the exotic species selected would have required. In Q1 FY2020, CONDESAN confirmed that the Tumilaca sub-watershed covers the ecological range for the majority natural infrastructure investment priorities (see Section 3.1.4), and NIWS hired a forestry specialist to redesign the pilot reforestation project in Tumilaca, ensuring that the proposed design would meet our criteria for hydrological, ecological, and economic viability. The design of a set of pilots covering the ecological range of the Tumilaca micro-watershed has been prepared, as well as a review of local plant nurseries to evaluate the availability of species to support reforestation efforts in Tumilaca and at scale in Tambo-Moquegua. NIWS has advised Anglo American that the installed capacity of plant nurseries in Moquegua will not suffice to cover future demand for native and/or exotic species for afforestation interventions in the Tambo-Moquegua watershed. Therefore, this quarter NIWS will present Anglo American and local community leaders with a revised proposal for their pilot investment, which will include investment in a nursery that could service needs in Tumilaca and elsewhere in the watershed, providing an additional development opportunity to the Tumilaca population. If approved, we anticipate that pilot implementation could begin by the third quarter, which would provide important momentum to work with Anglo American, the Regional Government of Moquegua, and EPS Moquegua to develop a portfolio of investments at the watershed scale (see Section 3.1.4).

Samanga Learning Site - Chira-Piura Watershed

This quarter, CONDESAN worked with EPS Grau to incorporate the natural infrastructure project, "Recovery of the Ecosystem Service of Water Regulation in 7 Conservation Areas in the Quiroz and Macará sub-watershed, of the Ayabaca, Paimas and Pacaipampa Districts, Province of Ayabaca, Department of Piura," (in short, the "Macara-Quiroz project") into their proposed Optimized Master Plan. Once approved, anticipated for next quarter, this will secure project financing through future MERESE reserves. Also this quarter, NIWS provided financial and technical support to local partner, Nature and Culture International (NCI) to complete the Technical Data Sheet for the Macara-Quiroz project with the review and input of community members. With these advancements underway, NIWS expects that NIWS will finalize the Technical Data Sheet by March, 2020 and the Expediente Técnico by September, 2020.

Also in this quarter, NIWS completed the design of the Field School in Samanga. The school design was based on the diagnosis of existing local capacities and for the training of specialized promoters with SINEACE certification, in three modules: i) Water culture promoter, ii) Technified irrigation promoter and operator, iii) Promoter in production, planting and silvicultural management of forest plantations. More details about the Field School can be found below in 3.3.2.

Rumiyacu-Misquiyacu-Almendra Learning Site, Mayo Watershed

The Rumiyacu-Misquiyacu-Almendra Learning Site is home to the first tariff-funded MERESE program in the country, therefore serving as a national and even regional reference. Because of the lack of an active public investment project and a lack of local capacities in the water utility to develop one, the site had not received any new investment in the last several years. Conservation agreements that had been made with local land users had not been compensated by any investment by Moyobamba water users, as had been the intention.

For that reason, the support that NIWS has provided to EPS Moyobamba since FY2019 to develop the *Expediente Técnico* for a new, tariff-funded public investment project in the Rumiyacu, Mishkiyaku and

Almendra micro-watersheds, has been key. This quarter, NIWS concluded the project development and submitted the Expediente Técnico to EPS Moyobamba for review. The project represents an investment of USD \$702,238 and will implement investments in reforestation and conservation-compatible, gender-sensitive economic activities to support sustained conservation. The project will also fund awareness-raising and monitoring, both of landholder compliance with existing conservation agreements and of the hydrological impacts of project interventions. Next quarter, CONDESAN will continue engagement of local authorities to secure approval of the project and will begin design of complementary learning site activities.

Finally, the Moyobamba learning site served as a reference for Amazonian MERESE projects this quarter as it hosted a field visit by participants of the Amazonian Macro-Regional Workshop (see Section 3.1.3).

Piuray-Ccorimarca Learning Site - Vilcanota-Urubamba Watershed

This quarter, we re-established our working relationships now with new leadership in our main counterparts in the Lake Piuray learning site, the local communities led by the Piuray-Ccorimarca micro-watershed Management Committee and SEDACUSCO, the water utility that supplies Cusco, which had both experienced changes in leadership in mid-2019. We had several good conversations with representatives of both during the National Forum on Natural Infrastructure in November. The conversations also pointed to some sensitive areas in the management of relationships that required us to “reboot” with SEDACUSCO in particular. NIWS was able to successfully re-establish trust to work with SEDACUSCO through meetings held in November. While that review was happening, NIWS held off on continuing activities in Piuray. By the end of the quarter, NIWS had drafted new scopes of collaboration with both SEDACUSCO and the Comité de Gestión de Piuray-Ccorimarca that will be finalized via MOUs to be signed in the second quarter and permit productive, continued collaboration among the parties.

Chalhuanca Learning Site - Quilca-Chili Watersheds

The Chalhuanca learning site in Arequipa is home to extraordinary leadership and knowledge of local community leaders who have implemented innovative practices to maintain natural infrastructure, like bofedales, and efficiently manage scarce water resources. Upon a detailed review with potential ecosystem service payers Arequipa, however, NIWS has found that there is less interest in beginning investments in this area of the watershed, which is perceived to be in relatively good condition and under little threat, compared to other areas. Therefore, NIWS’ strategy for the Chalhuanca learning site has shifted, to focus on the contributions that this site can offer through targeted research to better understand and quantify the contributions of natural infrastructure practices implemented there, as well as to recognize, certify, and leverage local knowledge to propel action in other parts of the watershed, as part of a broader strategy coordinated by the Quilca-Chili watershed council (see Section 3.1.4).

A key part of this strategy will be the implementation of a field school (see also Section 3.3.2), which will certify local knowledge via a program led by SINEACE, in the areas of grassland management and alpaca management (see also Section 3.2.5). Beginning next quarter, NIWS will prepare for the implementation of these field schools and will connect this strategy to the watershed-scale portfolio, identifying the channels through which Chalhuanca leaders can lead the rural “workforce development” that will be needed to implement sustainable practices in other Quilca-Chili communities.

Also this quarter, NIWS’ local partner, DESCOSUR, secured project financing for two projects from international sources that will invest in good practices in Chalhuanca and in San Antonio de Chuca. These proposals were not funded by NIWS but were made possible by the training in which they participated in throughout the project. In both projects they have included the implementation of measures in natural infrastructure such as reforestation with native species, water sowing and harvesting, repopulation with native pastures, and exclusion zones for regeneration, among others.

One of the projects is called Management and Management of Natural Resources for Water Security in the Alta Quilca-Chili watershed, of 270,000 euros for three years, is financed by AURUBIS and the German Peruvian Chamber of Commerce and the other is called dedicated High Andean Villagers to the raising of camelids in an organized way they implement strategies and practices against the vulnerability of their habitat in a context of climate change, with active participation of women, of US \$ 450,000, for three years, financed by Bread for the World, which has almost half of the budget allocated to measures in natural infrastructure. Since local potential investors in ecosystem services are not prioritizing investment in Chalhuanca in the short term, this complementary funding is key to maintaining momentum in this site. The new projects will begin their implementation, via DESCOSUR, in the second quarter.

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

This quarter, results of the gender gaps diagnostic (see Section 4.2) were presented to the residents of the Piuray-Ccorimarca, Samanga and Chalhuanca Learning Sites. During those meetings, comments and suggestions were received, which they will be taken into account for the elaboration of action plans next quarter. The presentation of results in Huamantanga will be completed in February 2020.

NIWS carried out a systematization of the information produced in the learning sites this quarter. The results and indicators then informed the design of the learning site hydrological and socio-economic monitoring and evaluation system. The monitoring and evaluation systems for ChiRiLuMa, Chira-Piura, Quilca-Chili, Vilcanota - Urubamba and Mayo learning sites have all been validated and the remaining watersheds will be validated next quarter for future application.

Piuray

The Piuray- Ccorimarca Micro-watershed Integrated Monitoring Plan was completed this quarter. The plan outlines the implementation of 4 weirs and 10 rain gauges to be distributed in 4 paired micro-watersheds within the Piuray-Ccorimarca micro-watershed where natural infrastructure measures are being implemented as part of SEDACUSCO's MERESE program in the Piuray catchment. This plan was socialized and validated with the Management Committee of the Piuray-Ccorimarca micro-watershed, with the NGOs that work in this area, and with INAIGEM, which had been contracted by SEDACUSCO in early 2019 to lead their hydrological monitoring efforts.

However, the new SEDACUSCO administration, which assumed leadership mid-2019, determined as we were finalizing the Monitoring Plan, that they were not satisfied with INAIGEM's performance and wished to instead contract SENAMHI to manage their hydrological monitoring plan. The installation of a new team will require time next quarter to review monitoring objectives and approaches and to agree on the appropriate methodological approach. We expect that our efforts to develop an Integrated Monitoring Plan will help to expedite the process, but unfortunately this institutional change means that weir and rain gauge installation are likely delayed until the third quarter.

Samanga

NIWS conducted an assessment of monitoring equipment in the Samanga Learning Site of the Quiroz watershed in Piura, and required maintenance was executed.

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

Amazonian Macro-Regional Workshop

On October 22-25, 2019, NIWS and SUNASS hosted a macro-regional workshop in Moyobamba, San Martin. The event aimed to build capacity and strengthen institutions in order to support the effective design and implementation of MERESE in Amazonian ecosystems, with an emphasis on governance,

bottlenecks for the design and implementation of MERESE in the amazon, and generation of information for decision making. A total of 136 participants (87 men, 49 women) from San Martín, Loreto, Ucayali, Junín, Cajamarca, Cusco and Madre de Dios attended. The workshop sessions were complemented by a field visit to “La Ruta de La Miel,” a touristic hike established in the Rumiayaku watershed, focal area for the Public Investment Project NIWS has helped to develop for financing by the Moyobamba water utility (see Section 3.2.1). The route allowed participants to see one of the first MERESE efforts in the country, as well as complementary economic strategies (apiculture and tourism) that support the sustainability of the public investment. As a final product of the workshop, participating utilities proposed a 2020 roadmap for effective implementation of MERESE.

Short Course on Public Investment Project Formulation

In support of intensive project development efforts underway this year, particularly to support priority client SEDAPAL, NIWS designed a short course for organizations developing projects with NIWS. The course, titled “Identification and Formulation of Recovery Projects of the Ecosystem Service for Water Regulation,” has a total of 32 participants (19 men and 13 women) representing 11 non-governmental organizations (primarily Lima NGOs developing projects for SEDAPAL, but also including project partners DESCOSUR and NCI, for example). SEDAPAL’s environmental management team also participated in the course. The course links gender mainstreaming in PIP design, technical assistance from NIWS and project design. The first sessions were held in Q1 and the course will continue through the second quarter. A variation of this course has also been designed to offer to consulting firms preparing natural infrastructure projects for RCC Integrated Plans.

ENAP Course on public investment project design and management

In this quarter, NIWS participated in 4 working meetings with MINAM and ENAP to update the curriculum developed with MINAM and SUNASS. During these meetings, the Technical Platform Capacity-Building Working Group identified an economist and a forest engineer to facilitate the course and an expert curriculum developer to design the course. Both are experts in investments and in the formulation of natural infrastructure projects and will support the ENAP, MINAM, and NIWS in the formulation of the course contents, participant modules, and teacher guides. This first phase of design is planned for the first half of the 2020, estimating the execution of the course to launch in June 2020. The course will be co-taught with MINAM, guaranteeing its sustainability beyond the project and the continued training of professionals in the formulation of natural infrastructure projects.

ENAP has very rigid internal procedures and schedules that position the course launch for sometime after June 2020. In order to promptly address project implementer capacity needs and to move the PIP project formulation forward, NIWS will offer a short course in the third quarter for a group of approximately 30 professionals. For this, it is planned to work with an accredited university and it is expected to achieve the formulation of at least 5 profiles or project data sheets.

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.” This quarter, the guide has undergone a review process of its contents, based on pilot applications in Carampoma in Lima and in Moyobamba in San Martín. Each of the sub-dimensions has been defined and the evaluation scale specified. The guide will be finalized and published next quarter; next quarter, NIWS will also begin systematic application of its “checklists” to all investments supported by the Project.

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

Chancay-Lambayeque Lessons Learned

With the Chancay-Lambayeque application of the Decision-Tree Framework methodology, this quarter NIWS began to share the results of that approach, compare the results to simpler approaches, and systematize lessons for informing future modelling exercises.

After the submission of final reports by RTI International (contracted by Forest Trends) and Deltares (contracted by World Bank) in FY2019, this quarter CONDESAN carried out sensitivity analyses using different analytical tools. CONDESAN applied our HIRO Rapid-Focus tool to review the priority scenarios for natural infrastructure conservation and restoration evaluated in the study, and we estimated the hydrological benefit of these scenarios using SWAT, a different hydrological modelling tool than that applied by RTI in their analysis. The results of each of these analyses, as well as the results of SUNASS' original Rapid Hydrological Diagnostic, were presented and discussed with the Chancay-Lambayeque watershed council in order to inform the technical support to the updated watershed management plan there. They were also presented and discussed at the NIWS-hosted seminar during ExpoAgua held in Lima on October 18, 2019, "Tools for the Identification and Prioritization of Natural Infrastructure for Water Security," which was attended by 44 technical specialists, 24 women and 20 men, from agencies such as SUNASS, ANA, SENAMHI, as well as regional governments, academia, and civil society.

The ExpoAgua event allowed for a preliminary synthesis of lessons learned from the application of the Decision-Tree Methodology, compared to a range of other prioritization tools, in Chancay-Lambayeque. One of the clearest conclusions of the application of this approach is that it did not permit a detailed assessment of how to optimize natural infrastructure investments and did not allow for a clear communication to decision-makers of the value of natural infrastructure investments, because of the way that investment options were grouped and final scenarios were presented. We also noted that the hydrological models available for evaluating natural infrastructure are inherently limited in their ability to predict how natural infrastructure will respond under future climate variability that diverges significantly from what has been observed historically. As a result, it is not clear that running the model through hundreds of climate scenarios really provides improved information for decision-making. Compared to some of the simpler (and quicker, less expensive) methods, like the HIRO Rapid-Focus Tool, it was not clear that the Decision-Tree Method offered greater value of information to decision-makers needing to identify and prioritize investments in natural infrastructure for action in the short-term. We believe that these lessons will be valuable to practitioners within and beyond Peru, and so during this quarter we prepared Terms of Reference for a senior expert to work with the NIWS team to capture the lessons in a form that can be of use to senior technical specialists throughout Peru as well as in key institutions promoting similar approaches – e.g., World Bank, Inter-American Development Bank, Association for Global Water Adaptation. We will begin preparing the lessons learned next quarter and anticipate publication by the end of Q3.

Tambo-Moquegua

While NIWS worked with Anglo American to redesign their natural infrastructure investment pilot in Tumilaca (as described in Section 3.1.1), we also began to work with the company and the Regional Government of Moquegua to develop a watershed-scale portfolio of natural infrastructure investments that will meet their demands. CONDESAN initiated these efforts by applying the HIRO Rapid-Focus Tool to identify priority natural infrastructure conservation and restoration areas and interventions. For this case, the HIRO Tool was adjusted to prioritize interventions for water supply risks, prioritizing hydrological regulation and erosion control. We presented this initial identification of opportunities to Anglo American's biodiversity, social development and property teams to allow for better informed decisions on where to develop future projects and to fine tune the Tumilaca project areas; the prioritization will also be presented and validated with the Regional Government of Moquegua and EPS Moquegua in Q2 FY2020.

In parallel, NIWS met with the Regional Government of Moquegua this quarter to review their natural

infrastructure investment priorities, many of which they plan to implement with funds generated by Anglo American but implemented by the Regional Government. In Q2 CONDESAN will lead a detailed review of the regional government's potential projects, and that of EPS Moquegua, which began to collect funds from its MERESE water tariff in 2019, and will compare these priorities to the prioritization developed as we move toward developing a proposal for a watershed-scale portfolio of NI investments using committed funds, which we expect to be valued at approximately USD 10 M.

Quilca-Chili

This quarter, NIWS began working closely with the Quilca-Chili watershed council technical secretariat to develop and justify a proposal for a new Program for the Conservation and Restoration of Natural Infrastructure for Water Security in the Salinas Aguada Blanca National Reserve. In October, NIWS contracted hydrologist Javier Zuñiga to support data collection, processing, and hydrological modelling for the proposal, working closely with the watershed council in Arequipa. Likewise, NIWS local partner DESCOSUR has begun to develop the program of proposed interventions in the Reserve, based on recommendations generated by the modelling exercise. This analysis and proposal will be finalized in the second quarter and will also generate content needed to present an investment case to targeted ecosystem service payers in the region, in particular Cerro Verde mining company.

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 23 projects as outlined in Table 3 below.

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

N°	Project Name	Watershed	Targeted NI Investor	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 - Junín	ChiRiLuMa	SEDAPAL	\$ 3,851,393
2	Recovery of high Andean wetlands and peat wetland ecosystems in SEDAPAL Marca IV project scope, Santa Barbara De Carhuacayan district, Junín province, the state of Junín and Huayllay district, Pasco province - Pasco	ChiRiLuMa	SEDAPAL	\$ 1,072,909
3	Fortalecimiento de capacidades 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 Huarochirí, región Lima	ChiRiLuMa	SEDAPAL	\$ 140,157
4	Cosecha de agua para la recuperación de los servicios ecosistémicos de regulación hídrica en torno a la laguna del caserío de quipacancha, distrito de laraos, provincia de huarochirí, región Lima	ChiRiLuMa	SEDAPAL	\$ 207,521
5	Recuperación de los servicios ecosistémicos de regulación hídrica a través del manejo de pastos altoandinos y bofedales en la cabecera de la quebrada pucullo, microcuenca río blanco, comunidad campesina de Chocna, distrito de San Mateo, provincia de huarochirí, región Lima	ChiRiLuMa	SEDAPAL	\$ 272,727
6	Restauración de los servicios ecosistémicos en la microcuenca de la quebrada Huayca, distrito de san mateo, provincia huarochirí, departamento de Lima	ChiRiLuMa	SEDAPAL	\$ 576,116

7	Recuperación de los servicios ecosistémicos de regulación hídrica microcuenca de huitama, distrito de san pedro de casta, provincia de Huarochirí, región Lima	ChiRiLuMa	SEDAPAL	\$ 376,563
8	Recuperación de los servicios ecosistémicos de regulación hídrica con cosecha de agua en laguna para la recarga hídrica en la microcuenca Masaypata, comunidad campesina de ayas, distrito de Surco, provincia de Huarochirí, región Lima	ChiRiLuMa	SEDAPAL	\$ 267,923
9	Recuperación y conservación de los servicios ecosistémicos hídricos de los bofedales y pastos alto andinos de la cuenca alta del Río Blanco para el aseguramiento hídrico de la represa Yuracmayo	ChiRiLuMa	SEDAPAL	\$ 1,072,909
10	Recuperación de los servicios ecosistémicos de regulación hídrica a través del manejo de pastos naturales y bofedales en la cabecera de la microcuenca Ararac, comunidad campesina de san antonio, distrito de San Mateo, provincia de Huarochirí, región Lima	ChiRiLuMa	SEDAPAL	\$ 341,191
11	PIP Salitral Watershed, Alto Bigote	Chira-Piura	Reconstrucción con Cambios	\$ 5,412,727
12	Natural infrastructure investments in the Integrated Watershed Plan for Flood Control and Landslide of the Matagente River Watershed	Matagente - Ica	Reconstrucción con Cambios	\$ 6,969,696
13	Protection of drinking water and sanitation networks in the torrent crossing area, Arequipa	Quilca-Chili	SEDAPAR	\$ 606,203
14	Reforestación de los taludes de la represa de Aguada Blanca	Quilca-Chili	SEDAPAR	\$ 303,030
15	Recovery of water regulation ecosystem service in San Antonio de Chuca	Quilca-Chili	Cerro Verde	\$ 4,846,820
16	Tolares repopulation in Tambo Cañiagua - Yanaguara District	Quilca-Chili	Cerro Verde	\$1,000,000
17	Intervention in the Chilligua Zone	Tambo - Moquegua	EPS Moquegua	\$ 181,818
18	Recuperación y conservación de los servicios ecosistémicos hídricos de la cuenca Quilca -Chili, zona no regulada, para mejorar el servicio de agua de consumo poblacional brindado por EPS SEDAPAR S.A en Arequipa Metropolitana	Quilca-Chili	SEDAPAR	\$ 1,530,377
19	Recovery of the water regulation ecosystem service in the micro-watershed of Lanchurán - Los Molinos, Ayabaca District - Piura	Chira-Piura	GOLO Ayabaca	\$ 787,272
20	Recovery of the water regulation ecosystem service in the micro-watershed of Chames, Pacaipampa District, province of Ayabaca, Piura	Chira-Piura	GOLO Paicapampa	\$ 545,454
21	2 Potential Projects in the Chilot Reserve, Carumas and Logen District, Distrito de San Cristóbal District, Provincia de Mariscal Nieto	Tambo-Moquegua	GORE Moquegua	\$10,000,000
22	Recovery of the water regulation ecosystem service in the upper, middle and lower watershed of the Fortaleza and Santa rivers, in the provinces of Recuay and Bolognesi - Ancash	Valle de Fortaleza	Mancomunidad Valle Fortaleza	\$ 3,636,204
23	Recovery of the water regulation ecosystem service in Northern Yauyos Cochas	Tanta/ Cañete	CELEPSA	\$ 651,515
Total estimated investment for all project ideas or projects under development				\$ 45,126,269

SEDAPAL Portfolio

This quarter, NIWS ramped-up our strategy to aggressively develop a robust portfolio of investment projects for SEDAPAL's MERESE portfolio, doing so through a two-pronged strategy of working with Lima organizations and with consulting firms. To carry out this strategy, NIWS staff and consultants worked hand-in-hand with SEDAPAL's Environmental Management Team (EGASE), led by NIWS counterpart Alonzo Zapata.

Beginning in October, NIWS held a call for proposals to formulate projects for SEDAPAL's MERESE portfolio, encouraging NGOs committed to work in the areas of natural infrastructure project implementation were encouraged to apply. NIWS received and evaluated 17 proposals from 11 organizations. SEDAPAL representatives participated in the project review and selection process and, together, SEDAPAL and NIWS approved 9 projects submitted by 6 organizations: Caritas Chosica/Global Water Partnership, Caritas del Peru, Alternativa, The Mountain Institute, Aquafondo, and UTEC. Organizations had developed their work plans and initiated project development by the end of the quarter.

One of the objectives of this work is to strengthen the capacities of local organizations to provide similar project development services to SEDAPAL in the future; in order to meet this objective and ensure the quality of proposals developed during the process, NIWS initiated a specialized short course on project development for these organizations, described in Section 3.1.3.

NIWS also initiated new processes to develop additional projects in Laraos and areas critical to new inter-watershed transfer projects under development in the upper Mantaro watershed. This support includes a collaboration initiated with Swiss cooperation and SEDAPAL this quarter to develop a MERESE project that includes investment in rural sanitation (both drinking water and sewage) systems in the Marcapomacocha community. During the quarter, NIWS coordinated a site visit to Marcapomacocha with SDC's technical team to scope potential interventions.

NIWS' efforts have been recognized by SEDAPAL as absolutely critical to meeting their MERESE targets. In November 2019, Francisco Dumler, President of SEDAPAL, wrote, *"The truth is that without your support it would have been very difficult to bring up the issue of natural infrastructure for SEDAPAL and the upper watershed communities of CHIRILÚ. They are the ones who have huge expectations regarding our intervention. I believe that the fact of having placed SEDAPAL as a "second floor", with you acting as "facilitators" in this process and having a critical mass of specialized operators who have gone through a competitive selection process with transparent and agile mechanisms, show the enormous benefits of this alliance with the consortium led by Forest Trends ... I congratulate you for it. You have my recognition and that of the full board for this management."*

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 three proposals selected during the first NIWS Incubator call are now in full implementation or in their final stages.

The main advances this quarter of the 3 projects selected during the first NIWS Incubator call are as follows:

1. **Territorial Management in the Ica - Huancavelica Watershed (MINAM)**: This project aims to optimize natural infrastructure investments in the Ica-Huancavelica watershed. In the fourth quarter of FY2019, NIWS determined the most appropriate area, with prioritization to the most degraded areas, for the intervention. This quarter, NIWS used this diagnosis to inform a comprehensive proposal for the recovery and improvement of natural infrastructure in the upper regions of the Alto

Pampas and Alto Ica watersheds. The proposal identifies the necessary measures for the optimization of investments in the upper watershed in an environmentally efficient territorial management context. The consultant executing this work is currently calculating an accurate cost estimate for the implementation of the outlined measures and, in the next quarter, NIWS plans to present the proposal to the Regional Government of Huancavelica as well as to potential natural infrastructure investors such as the Ica Water User Council.

In coordination with the the Huancavelica Regional Government, NIWS proposed a “Comprehensive Program for the Recovery, Conservation and Sustainable Use of Degraded Ecosystems in the Alto Pampas Watersheds.” The program, based on the set of degraded ecosystems and the outlined measures, includes 8 community sub-programs and 26 multifamily projects. Of the 26 multi-family projects, this study proposes the prioritization of 9 project ideas that would recover an estimated 2,639 hectares across 8 communities in order to facilitate the adoption and the beginning of the execution of this program.

Finally, at the request of the Ministry of Environment and in coordination with the Regional Government of Huancavelica, this consultancy has been extended until February 2020, without cost, since the presentation of the results of the consultancy has been requested to the communities involved and thus achieve the taking of agreements to promote the recovery or improvement of the natural infrastructure, which are investment opportunities for the implementation of different financial mechanisms, including MERESE.

2. **Design and Implementation of a Hydrological Monitoring System in the Cañete Watershed (MINAM):** This project aims to measure the impact of current and future natural infrastructure interventions in the Cañete watershed in order to demonstrate their effectiveness and leverage future resources.

This quarter, NIWS coordinated with SERNANP, SUNASS and MINAM to establish two paired micro-watersheds as priority areas for the Hydrological Monitoring System. Paired micro-watershed are part of the leading hydrological monitoring methodology designed by Project monitoring partner, iMHEA. The Project, in collaboration with iMHEA, has defined the precise equipment and facilities specifications needed for the implementation of this Hydrological Monitoring System.

3. **Capacity Building and Communications (MINAM):** This activity aims to raise awareness around MERESE amongst taxpayers and natural infrastructure investors to promote contributions and investments in natural infrastructure. NIWS carried out an educational exchange program in November of 2019 for the Quiroz Water Fund and a total of 43 people attended, 15 of them women, representing a variety of sectors such as Water User Boards, agricultural associations, rural communities and various authorities in Piura, Lima, La Libertad, Cajamarca, Ica y Huancavelica, and SERNANP.

During the exchange, participants learned how conservation and sustainable production activities are prioritized and implemented, existing monitoring mechanisms, monitor and evaluate the implementation of the investment plans, management of economic resources to achieve credibility with investors and taxpayers, and the principle of voluntary agreement, which establishes conservation commitments, signing of agreements and other agreements.

In conjunction with the training program, the Project designed a MERESE Communications Kit for MINAM. MINAM financed the production of the KIT promotional materials, including items such as a calendar jacket, flyers, puppet, and more, which will be used to raise public awareness of MERESE.

The main advances this quarter of the 4 projects selected during the 2nd NIWS Incubator call are as follows:

1. **Promotion of Natural Infrastructure (ANA):** The objective of this activity is to strengthen the capacities of the Institutional Promotion, Training and Image Units (UPCII, for its acronym in Spanish)

of water user boards to incorporate the conservation of natural infrastructure into their regular activities. The project hired a consultant to design a Water User Board training program for UPCII specialists in Chancay Lambayeque, Mashcón, Ica and Tarma.

During this quarter, NIWS completed a diagnosis of training needs of UPCII specialists and used this information to develop the first version of the Modular Training Program, which was validated during the realization of four Social Facilitator Training workshops for 75 participants, 44 men and 31 women, from the different ALA, AAA and Water User Boards of the respective cities where these workshops were held attended these workshops. The workshops were aimed at Water Users Boards, focused on natural infrastructure in the cities of Cajamarca, Chiclayo, Ica and Huancayo, and were designed to strengthen training and communication management capacities for the incorporation of an integral view of the river watershed, and incorporating the intercultural, intergenerational and gender approach.

2. **Recovery of the Ecosystem Services of Forests and Natural Grasslands in the Upper Chancay River Watershed - Huaral, Province of Huaral, Lima Region (ANA)**: The objective of this activity to support the Regional Government of Lima in the formulation of a PIP project by specifically supporting in the development of the necessary Expediente Tecnico. This file is required by invierte.pe and once completed will mobilize the investment. To advance the Expediente Tecnico, NIWS held a workshop with 71 participants, 9 women and 62 men, for gathering relevant information from stakeholders for the elaboration of the project technical file. NIWS hired a consultant to formulate the PIP with the Natural Resources and Environmental Management Department of the Regional Government of Lima. During the workshop, NIWS presented the PIP formulation progress and an advanced draft of the project Expediente Tecnico.

3. **Implementation of MERESE of EPS EMAPAB S.A. and EPSSMU S.A. (SUNASS)**: The objective of this activity is to formulate projects for implementation through MERESE, however, despite the fact that the Project worked exhaustively to coordinate with these institutions, the participation of the EPS' remained very limited. Therefore, this initiative has been suspended.

4. **Implementation of Disaster Risk Management Measures that Incorporate the Environmental Component in the Lurín River Watershed (MINAM)**: This activity aims to incorporate natural infrastructure into public investment projects related to disaster risk management. This quarter, NIWS contracted Project partner, ALTERNATIVA to develop training modules to support municipalities in the formulation of projects that include natural infrastructure in their disaster risk management plans in the Lurín river watershed. The modules will be prepared in the coming quarter. NIWS will facilitate workshops to develop a public investment project (simplified technical sheet) for the Municipality of Cieneguilla.

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 specialists to address bottlenecks in PIP approvals in priority watersheds

By the end of this quarter, NIWS had secured financing commitments for natural infrastructure investments totaling over USD 20 million. NIWS technical assistance, facilitation, and strategic support contributed to address bottlenecks affecting 13 projects, advancing these projects towards project implementation (see Table 4 below). To provide this level of support, the Project supplied a team of

investment and hydrology specialists and contracted consulting teams. Experts and consultants provided support through the elaboration of project ideas, simplified Technical Sheets and Technical Files. The Project has been technically assisting in the development of 3 Technical Files (ET).

Of particular note is the resolution issued by SEDAPAL in December 2019 to approve the Expediente Técnico of the Carampoma project (value USD \$907,909), which will seek to recover and protect wetlands in the Carampoma district of the Rimac watershed. This approval marks a major milestone in MERESE investments nationally, as it is the first one to reach mobilization within SEDAPAL. The project still requires final approval of the Community of Carampoma, as several years have passed since the approval they had originally given for the project when it was originally declared “viable” by SEDAPAL. NIWS will continue to support SEDAPAL in its relationship with the Santiago de Carampoma community, for the subscription of the Agreement for the Compensation Mechanism for Water Ecosystem Services, which is an essential requirement for project implementation.

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)	Stage of Project Formulation
Investments Mobilized					
1	Recovery of the Ecosystemic Water Regulation Service of the Milloc micro-watershed, Carampoma District, Huarochiri Province, Lima Region	ChiRiLuMa	SEDAPAL	\$ 907,909	Expediente Técnico approved Pending final community approval and public bid to contract implementation
Sub total Investments Mobilized				\$ 907,909	
Viable Project Profile; Expediente Técnico under development/review					
2	Recovery of the water regulation ecosystem service on the right bank of the Pusmalca micro-watershed, in the Canchaque district, Huancabamba province, Piura	Chira-Piura	Reconstrucción con Cambios	\$ 2,164,275	<i>Expediente Técnico</i> under final revision for approval
3	Recovery of the ecosystem service of water regulation, in the micro-watersheds of Rumiyacu, Mishquiyacu and Almendra, Moyobamba , San Martín region	Mayo	EPS Moyobamba	\$ 702,238	<i>Expediente Técnico</i> under final revision for approval
4	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	\$ 1,227,563	<i>Expediente Técnico</i> under development
5	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	\$ 883,347	<i>Expediente Técnico</i> under development
6	Tumilaca Project - Highland Forestry in Moquegua	Tambo-Moquegua	Anglo American	\$ 606,060	<i>Expediente Técnico</i> under development

7	ET Recovery of Ecosystem Services Natural Forests and Meadows Upper watershed of the Chancay-Huaral River, Lima.	Chancay-Huaral	GORE Lima	\$ 5,942,441	<i>Expediente Técnico</i> under development
Subtotal, Expediente Tecnico under development/review				\$ 11,525,924	
Project Idea accepted by investor; Project Profile under development/review					
8	Recovery of water regulation ecosystem services of the Laraos watershed, Laraos District - Huarochiri-Lima Province	ChiRiLuMa	SEDAPAL	\$ 604,476	Project profile under development
9	Recovery of water regulation ecosystem services of the Chillon watershed, Huamantanga district, Canta Province, Department of Lima	ChiRiLuMa	SEDAPAL	\$ 3,306,774	Project profile under development
10	Start-up of the PTAR Chacaylla (Quebrada) and Salcan and execution of disaster protection works, Cotahuasi district, La Unión, Arequipa	Quilca-Chili	SEDAPAR	\$ 420,909	Project profile under development
11	Recovery and conservation of the water ecosystem services of the Quilca –Chili watershed, regulated area, to improve the population consumption water service provided by EPS SEDAPAR S.A in Arequipa Metropolitana and La Joya.	Quilca-Chili	SEDAPAR	\$ 331,077	Project profile under development
12	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	EPS Grau (Piura)	\$ 3,066,830	Project profile under development
13	Creation of protection services with natural infrastructure for the collection and conduction of the water system of the Ahuashiyacu river district of the Shilcayo Band - province of San Martín - department of San Martín	Mayo	EMAPA San Martín	\$ 669,330	Project profile under development
Subtotal, Project Profile under Development/Review				\$ 8,399,396	
Total Potential Investment Receiving NIWS Support				\$19,013,873	

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

Anglo American

On September 23, 2019 Forest Trends signed an MOU with Anglo American, formalizing our collaboration around the following:

- I. The promotion of natural infrastructure through conservation, restoration and maintenance

measures of natural water sources and their associated assets and other key ecosystems in the integrated management of water resources to achieve economic development and water security of relevant watersheds.

2. The strengthening of integrated water resources management under an economic development and value chain improvement approach for those involved.

To initiate our shared work plan, in Q1 FY2020 NIWS designed Tumulaca pilot activities and assessed the need for investment in a plant nursery in Tumulaca to support local and regional natural infrastructure restoration efforts (as described in 3.1.1). We will present our proposal for Anglo American's investment in the pilot, including a nursery that will serve the region, to the company and local community leaders in Q2. In parallel, we began meeting directly with the Regional Government of Moquegua and EPS Moquegua to review their proposals for natural infrastructure investments and to develop a proposal for a watershed-scale portfolio of NI investments using committed funds from the three local actors, which we expect to be valued at approximately USD 10 M (see also Section 3.1.4).

Antamina

Antamina reached out to NIWS after internal decision-making processes that prevented them from following up on the initial terms agreed for working in San Marcos, Ancash. Antamina manifested a need to re-focus their water management strategy downstream to Valle de Fortaleza, building up on a 5-year value chain development project that is currently in its last year and was co-funded by the Government of Canada. NIWS has made an initial run of its HIRO Rapid-Focus tool for identifying areas for NI interventions and will present these results to Antamina in early Q2FY2020, to then evaluate specific collaboration opportunities and, if we find there to be synergies, to develop a work plan.

Lima-based food and beverage company

Forest Trends, CONDESAN, and SEDAPAL continued to develop the investment opportunity for a major food and beverage company to complement SEDAPAL's investment in Huamantanga. In FY2019, Forest Trends confirmed this company's interest, budget, timeline, and preferred activities for investment in the Huamantanga site. Based on these discussions, NIWS has facilitated coordination with SEDAPAL and, this quarter, divided the investment into two components, with one tranche tailored for the private company, including restoring amunas and qochas, and the other, which involves exclusion of degraded highland puna due to overgrazing and high productivity irrigation plots to compensate for the exclusion, to be funded by SEDAPAL. At present, NIWS is developing the legal framework to execute this public-private investment in order to guarantee confidence for private sector investment. In particular, there is an administrative concern regarding SEDAPAL's ability to assume operation and maintenance costs if they do not carry out the initial investment, and how to make such a commitment explicit given available budgeting mechanisms. We are working closely with the company, SEDAPAL, and 2030 Water Resources Group to finalize the proposal and anticipate bringing it to the private company for a decision in the next quarter.

Water User Boards

Water User Boards are watershed-level organizations of persons who hold water rights granted by the National Water Authority, including agricultural users. Though the Boards are private organizations, some of their functions are supervised by the Water Users Organizations Directorate of the ANA. This quarter, NIWS and the ANA held two workshops directed toward Water User Boards. The workshop objective was to mobilize Water User Board investments in natural infrastructure interventions that would conserve and protect water resources in their respective watersheds. The Project targeted the Water User Boards management document, the Operation, Maintenance and Development Plan of the Hydraulic Infrastructure (POMDIH) as a channel through which funds could be mobilized. As a result of the workshop, NIWS has identified Water User Boards that may be interested in including natural

infrastructure interventions in their investment plans; NIWS will follow-up with these board members in the coming months to identify any specific opportunities for new investments.

Disaster Risk Management Tariffs

The Project continued to provide technical assistance for the mobilization of disaster risk management (GRD, for its Spanish acronym) reserves for projects that include a natural infrastructure approach in two EPS that are prioritized by SUNASS: EMAPA in San Martín and SEDAPAR in Arequipa. This process began in April of 2019 and is expected to be completed in January of 2020.

The technical assistance specifications are detailed below:

GRD – EMAPA San Martín: NIWS hired NGO Practical Action to elaborate the Technical Files for a natural infrastructure intervention project called, “Creation of protection services with natural infrastructure for the collection and conduction line of the water system of the Ahuashiyacu River, La Banda del Shilcayo District, Province and San Martín Region”. NIWS provided direct technical assistance and facilitated a feedback loop with GRD of EPS, EMAPA, in San Martín develop the project Technical File. The estimated value of this intervention is US \$669,330 and this file has already been registered in the Ministry of Finance investment bank and the Simplified Technical Sheet is under review. The next step is to make an impact at the level of the General Management of the EPS to secure funds from the GRD tariff and raise awareness with the population to support the prioritization of this PIP.

GRD SEDAPAR: NIWS supported SEDAPAR in the advancement of 3 projects to the Project Idea stage:

1. Protection of drinking water and sewerage networks in the torrent crossing area. The investment is estimated at \$606,203
2. Start-up of the Chacaylla WWTP (gorge) and Salcan and execution of protection works before disasters, Cotahuasi district, La Unión, Arequipa. The investment is estimated at \$420,909
3. Reforestation of the slopes of the Aguada Blanca dam. The investment is estimated at \$303,030.

SEDAPAR has not yet decided to use the funds, arguing the need for a more detailed study of risks at the regional level. It is known that this entity has a budget of approximately USD \$2.4 M for the financing of projects related to risk management, but this does not only imply actions related to natural infrastructure, therefore, it is critical that the Project supports public and political awareness activities next quarter.

Reconstruction con Cambios

In addition to the efforts described in Section 1.3.4 to partner with MINAGRI and deliver technical assistance to the Ministry as well as to consulting firms hired by MINAGRI to develop RCC Integrated Plans, NIWS worked with the Regional Government of Piura to mobilize investments funded by RCC in that region. NIWS supported the firm working in Piura in the preparation of 2 Expedientes Tecnicos and 1 Technical Data Sheet (see Table 4). These project formulation files will be included in the Piura River Integrated Watershed Plan to mitigate flood and landslides risk. The Technical Files represent two natural infrastructure interventions that are planned for implementation in the Pata and Uchupata micro-watersheds in the El Faique, Pusalca, and Huarmaca district. The Project has also supported firms advancement of project proposals to the Project Idea phase of the formulation process for interventions in erosion control and recovery of ecosystem services development in watersheds such as Chicama, in the Chancay-Lambayeque region and Huaura in the Lima region.

3.2.3 Engage and mobilize lenders and financial investors to provide pre-investment capital

for natural infrastructure project design

To access international lessons and best practices to inform the design of innovative public-private finance models, Forest Trends staff members participated in the Conservation Finance and Environmental Markets Summit in Washington, DC on October 28-30, 2019. At the conference, the Peruvian tariff-funded financing structure was presented and discussed as one of the emerging models for scaled environmental finance outside of the US. A number of contacts with environmental markets specialists were established through the exchange that will enrich NIWS design and finance strategies in the coming quarters and years.

Late in this quarter, NIWS was approached by a previously engaged beverage company with operations in Lima interested in financing project development, in particular for natural infrastructure aimed at water replenishment. As NIWS helps to advance natural infrastructure projects in the SEDAPAL project portfolio, opportunities for next phase project development (expedientes técnicos) will be targeted to be matched with this investor's interests.

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

In relation to Piuray-Ccorimarca, as already reported in Q4FY2019, the Tripartite Interinstitutional Cooperation Agreement signed in 2013 has been fulfilling the role of the Good Governance Platform (PBG). NIWS has been supporting this institutionality, based on the mandate of article 15 of Directive 045, and since November 20, based on Directive 039 where it is indicated in article 9 that the design of the Water MERESE must contain the elements: a) DHR, b) the Intervention Plan c) the Good Governance Platform, d) The characterization of taxpayers e) The Hydrological Monitoring System.

In that sense, work was done to convene the Tripartite in order to initiate the steps to formally establish the PBG, discussing the proposal for internal regulations and organization chart. However, this could not happen because of political reasons, the Tripartite did not meet. In order not to stop the activities of NIWS, based on Article 9 of the above-mentioned directive 039, work was done on advancing with the Hydrological Monitoring System element.

3.2.5 Develop, seed, grow, and capture NI Business Models, linking productive economic activities with NI financing

Capacities for the Restoration Economy

This quarter, NIWS defined strategies for building capacities to support conservation-compatible, gender-sensitive economic activities in learning sites, as part of strategies to scale natural infrastructure investments at watershed scale. This strategy works primarily through two mechanisms: skills certification programs and field schools. The capacity building programs offer training tailored to meet local needs for education and skills for employment in natural infrastructure and water security.

The skills certification program aims to fill a gap in secondary education opportunities in order to ultimately increase employment opportunities for local populations within the learning sites, with a specific emphasis on women. The certificates will strengthen local knowledge and experience in areas that are, or we expect will become, in demand in order to implement scaled natural infrastructure or water management investments. These are the skills of the "restoration economy," such as reforestation, alpaca management, honey production, or hydrological monitoring. The certificate of completion programs will be formally recognized by the National System for the Evaluation and Certification of Educational Quality (SINEACE). NIWS is further exploring the feasibility of training specialists in the regions so that they have the SINEACE authorization to evaluate and provide certificates in the learning sites. SINEACE certifications

are currently offered for the following Project learning-site-relevant occupations:

1. Technified Irrigation Operator: relevant to Samanga learning site
 2. Expert in Family Agriculture Technologies - Yachachiq Productivo: relevant to Piuray learning site
 3. Extensionist in the Productive Management of Domestic Camelids: relevant to Chalhuanca learning site
 4. Extensionist, planting and forestry management of forest plantations: relevant to Samanga learning site
- In addition to the offerings above, the Project has identified a demand for trained Hydrometeorological Operators, so it has developed a proposal for a SINEACE certification opportunity for this occupation in Cusco and Piura.

The program should be developed and approved by SINEACE next quarter.

NIWS made the following advancements in the development of Project learning site Field Schools:

- Chalhuanca Learning Site: NIWS completed the programming of modules, site selection for implementation of practices, number of families involved, curriculum development, modality programming on practices and measures in the IN and schedule. The goals of the Field School for this FY2020 is to train at least 50 people (25 in S. Antonio de Chuca and 25 in Chalhuanca, the minimum gender quota is 30%), in 2 specialties: Prairie management and Management of alpaquero herd. This activity will be carried out through the local partner DESCOSUR, which, in addition to all the experience in these areas, is an institution authorized to certify competencies in all aspects of raising alpacas.
- Samanga Learning Site: NIWS designed the Field School in Samanga based on a diagnosis of existing local capacities. Three modules have been designed for the training of specialized extensionists with SINEACE certification, each with a duration of one semester. The modules are: i) Water culture, ii) Technified irrigation extensionist and operator, iii) Production, plantation and silvicultural management of forest plantations.

Investments in local value chains

In Chalhuanca, technical support has been provided for the formulation of proposals to improve the organization of alpaca fiber and meat producers; as well as artisans. Among the prioritized aspects are the improvement of productivity per site (improved loading capacity and improvement of genetic quality of alpacas), improvement of the price of the products offered in the local market (meat and fiber of alpaca) and a better supply of meat of alpaca for marketing. As a result of this support, this quarter PROCOMPITE accepted, through a public tender, a proposal to strengthen capacities in crafts and equipment techniques for the Association of Artisan Women Weaving Hope the Kollawas de Chalhuanca, composed of 33 women, whose budget is S / 120,632 soles, financed in 20% with contribution from the Association itself.

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

3.3.1 Engage decision makers to scope hydro-economic analyses in coordination with natural infrastructure agenda

This sub-activity is planned for Q2 FY2020, to support new hydro-economic analyses.

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

Hydro-socio-economic assessment in Piuray-Ccorimarca

In this quarter, NIWS Resource Partner, CIFOR, completed the integrative and participatory method for hydro-socio-economic assessment in the Piuray-Ccorimarca micro-watershed. A complete description of this approach can be found in Section 3.3.2 of the FY2019 Year End Report submitted last quarter. The assessment arrives at the following important hydrological conclusions, which were presented and discussed with SEDACUSCO in November 2019:

1. Infiltration ditches significantly reduce runoff and soil loss, while confirming the importance of the conservation and/or restoration of vegetation to further reduce runoff and erosion.
2. Infiltration ditches not only reduce surface runoff and rapid discharge, but they also increase sub-surface flow causing slow discharge and deep percolation.
3. Reforestation results in notably increased evapotranspiration while also contributing to reduced surface runoff compared to the baseline. Evapotranspiration losses reduce subsurface flow and deep percolation.

As for socio-economic results of the assessment, there is a consensus about the positive effects of infiltration ditches and reforestation interventions on erosion reduction, scenic beauty, tourism and microclimate benefits. There is consensus around the planting of native plants alongside infiltration ditches as almost all community members perceive the positive effects of infiltration ditches on grass growth and the positive effects of native plants on runoff and erosion.

The assessment is currently under review by the NIWS technical team, and the full final report will be presented to local stakeholders, published, and disseminated next quarter.



Laraos residents prepare “talking maps” with NIWS to inform the design of a SEDAPAL MERESE project. (Photography: Oscar Angulo, Forest Trends)

Cross-Cutting Strategies and Project Administration

4.1 Monitoring, Evaluation and Learning

4.1.1 Monitoring, Evaluation and Learning Plan

As mentioned in the previous report, an update of the Monitoring, Evaluation and Learning Plan was completed at the end of the last fiscal year. In this quarter, coordination with USAID has been held so that this Project document includes all points of interest and can function as a management tool. Currently, the final version is under review by USAID.

Carampoma site visit with USAID and Canada Mission Directors

On October 21, 2019, NIWS coordinated a site visit with USAID Mission Director Jene Thomas and Canadian Director of Development for Peru and Bolivia Chantal Labelle, to the Carampoma wetlands and community in the upper Rimac watershed. Participants from the American and Canadian embassies also included Michelle Jennings, Director of USAID Peru's Office of Environment and Sustainable Growth; Dirk ten Brink, Climate Adaptation and Water Resources Team Lead; Amelie Geoffrey, First Secretary, Candian Embassy; and Rafael Galvan, advisor to the Canadian Embassy. During the site visit, NIWS staff and local community members shared information on the public investment project under development which would invest USD \$907,910 in the protection and restoration of wetlands in the Carampoma territory. Perhaps even more importantly, this project would be the first of SEDAPAL's MERESE portfolio to be fully approved and mobilized to implementation.

Project Information System

This quarter, emphasis has been placed on the management of the technical information that the Project produces through the different activities and the administrative information required for its operation. To this end, the Project Information System has been designed and implemented, which collects, systematizes and makes available in a timely manner and in a single place the technical administrative information of the Project. In this way, the annual work plan is related to the ToR of the activities to be implemented, the products of each consultancy and their final results, the planned and executed costs, the contribution to the goals, the assignment of tasks to the professionals, which allows to have a better reading of the execution to make a better management of the Project. The operation of this system is based on various processes and procedures to acquire the necessary information and keep it updated, so flows and formats have been designed and training has been carried out for all Project personnel.

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 completed the synthesis and dissemination of the study, Gender Gaps in Natural Infrastructure and Water Management in Peru, which was presented to learning site communities that participated in the study as well as in a year-end event held with MIMPV and 200 participants from

institutions including SUNASS, ANA, watershed councils, and the media. Additionally, Forest Trends finalized the Terms of Reference and, in coordination with government counterparts, selected consulting teams to carry out three key sets of activities for the NIWS Gender Strategy: 1) design and implementation of the Women's Leadership Program, 2) technical assistance for mainstreaming gender focus in ANA, and 3) technical assistance for mainstreaming gender focus in SUNASS. These three consultancies will begin implementation in the second quarter and will go through the end of the fiscal year. Additionally, Forest Trends participated in a process led by MINAM to propose the incorporation of a representative of women's organizations on the National Climate Change Commission (CNCC).

Gender Strategy and Action Plan

In this quarter, observations and contributions to the Gender Strategy and Action Plan received from the Government of Canada were reviewed and are in process of incorporation into a new version of the Strategy. The new Strategy more now aligns directly with NIWS Objectives, rather than following an organization responding to elements of analysis in USAID ADS 205. The strategy will be reviewed with USAID next quarter.

Publication: Gender Gaps in Natural Infrastructure and Water Management

This quarter, NIWS completed synthesis of the gender gaps analysis carried out by the consultant team led by CEDEPAS Norte in FY2019, consolidating the analysis into a full-length publication as well as a policy brief summarizing the analysis. The study aimed to identify gender gaps in the management of natural infrastructure and water, using nationally available statistical information and information collected through local analysis of four Learning Sites: Huamantanga, Samanga, Chalhuanca, and Piuray-Ccorimarca.

The results show significant inequalities in the participation of men and women in decision-making about natural infrastructure and water. Inequalities reflect deep and wide gaps in Peruvian society, however, the diagnosis also identified changing trends and opportunities on which it is possible to influence changes towards greater equality between men and women. The publication and policy brief produced in December 2019 present the assessment's data and analysis organized by 5 key messages prepared for Peruvian policymakers:

1. Women and men both contribute to maintaining natural infrastructure through their actions and knowledge.
2. Certain socio-economic transformations are underway in high-Andean communities that are resulting in women assuming tasks previously reserved for men, representing new responsibilities in addition to their roles in the family.
3. Despite their contributions, women participate less than men in decision-making on natural infrastructure and water. (See Figure 5)
4. There are significant barriers to the participation of women in decision-making and in benefits related to natural infrastructure and water.
5. There are opportunities that can help to improve the participation of women in natural infrastructure and water management.

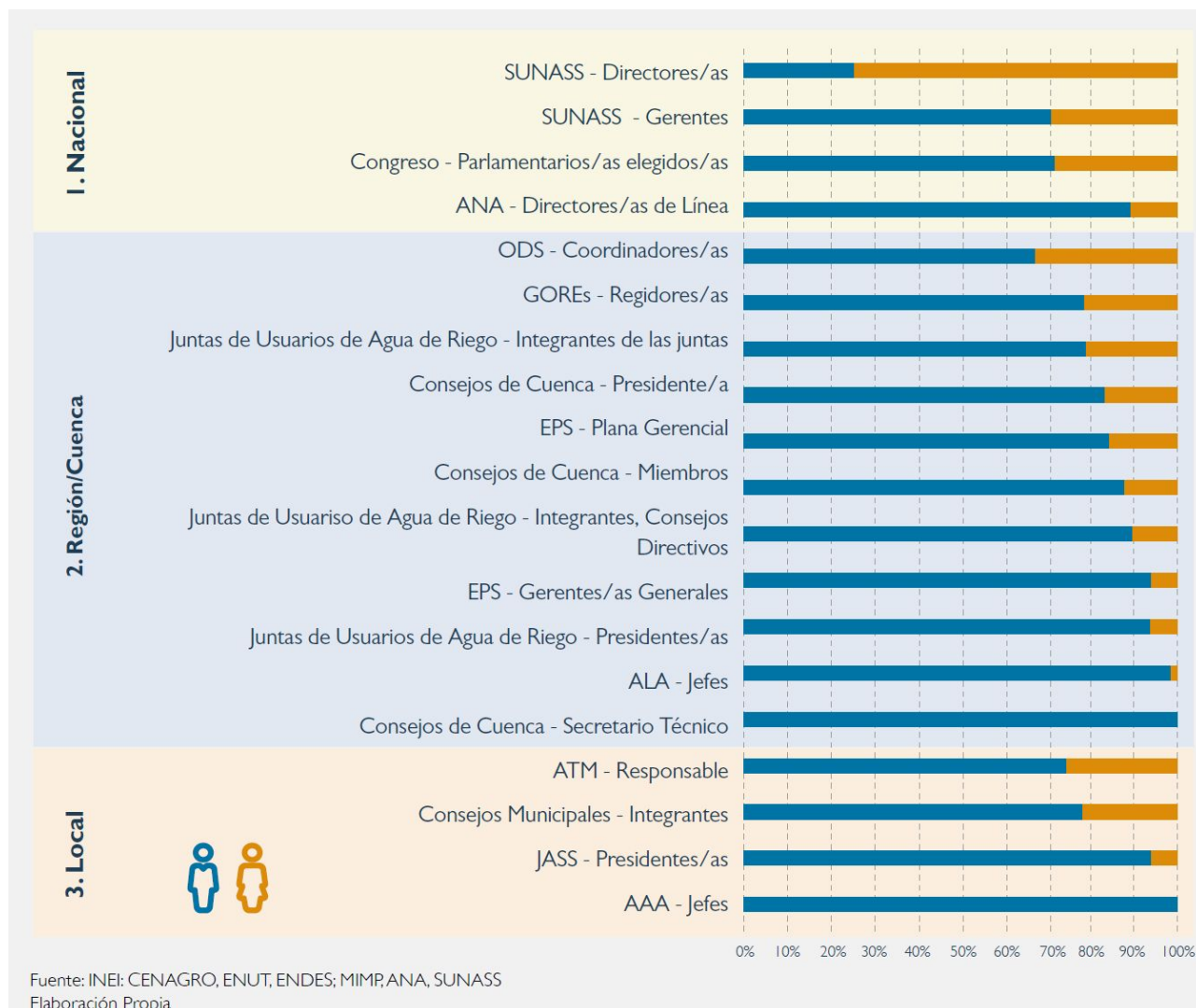


Figure 5: Graphic demonstrating the gender gap in participation in key decision-making spaces on water and natural infrastructure management at local, regional, and national levels, included in the policy brief, “Gender Gaps in Natural Infrastructure and Water Management in Peru,” published by Forest Trends in December 2019.

The publication and policy brief also include the following differentiated recommendations for key actors:

- For decision-makers in the water sector:
 - Value the knowledge of women and men about natural infrastructure and water, especially those that contribute to adapting to climate change.
 - Strengthen the capacities of public authorities, officials and servants to mainstream the gender approach in the water sector.
 - Strengthen women's capacities in water resources management to support their active participation in decision making.
- For developers and supervisors of MERESE programs:
 - Identify and address the barriers that prevent the participation of women in the design, consultation and approval processes of MERESE.
 - Implement mechanisms that guarantee the participation of women in the design, consultation and approval processes of MERESE.
 - Measure benefits and negative impacts on men and women.
- For leaders and officials in other public entities:

- Implement strategies to share care tasks and the provision of services that free women from the burden of unpaid domestic work.
- Promote parity and alternation in organizations of users of water, so that the number of women in management positions, at least, represent them in the same proportion as in the membership.
- Recognize and value the work women do in the reproductive field, as it is essential in the generation and maintenance of the workforce.
- Prevent and punish sexual harassment and gender violence in the home, community, organizations and institutions.

The publication was launched on December 20, 2019, at an event hosted by NIWS and the Ministry of Women and Vulnerable Populations called, “Milestones and Challenges of Gender Equality for Water Security.” A total of 130 participants (95 women and 35 men) represented Project partners and counterparts responsible for mainstreaming gender into national policies. Key project counterparts such as the Ministry of Women and Vulnerable Populations, SUNASS, ANA and MINAM attended with full participation and provided formal commentary to the final publications; USAID contributed to the opening remarks. The institutions were also celebrated for their advances toward achieving gender equity in water resources and natural infrastructure management in Peru. Finally, institutional alliances and commitments were re-affirmed for moving forward into 2020. (See event photos here)

In the same way, and as part of the gender and community relations strategy of the learning sites, 4 events were organized in December to present the results of the gender gap report for communities in Arequipa, Cusco and Piura, with a total of 149 people (81 women and 68 men) attending.

NIWS also developed a set of communications products to support broad dissemination of the content of the NIWS Gender Gaps Study including a press release, 2 graphics for social networks, and an article on *Actualidad Ambiental*. Two articles in the news have already shared the results of the study. The campaign will continue into the second quarter of FY2020 and the Communications Team will share results, media interviews and the book, among other communication products with the public and political project allies.

Women’s Leadership Program

This quarter, Forest Trends held recruited, evaluated, and selected the team that will lead the implementation of the Women’s Leadership Program. The call for proposals took longer than anticipated, as the first round did not result in any proposal of appropriate quality to proceed. The revised call was, in contrast, successful in identifying a team with the appropriate capacities to deliver on the Program’s objectives of strengthening political, technical, and social skills of women leaders at various levels of leadership and in a variety of sectors. The winning proposal was presented by a consortium composed of CEDEPAS Norte, DESCO, and the Masters Program in Water Resources Management of the Pontifical Catholic University of Peru-PUCP. The detailed design of the program led by this team will begin in January 2020.

Mainstreaming Gender in Water Sector Institutions

Following commitments and initial assessments carried out in FY2019, this year NIWS will develop action plans for mainstreaming gender in Peru’s leading water institutions, ANA and SUNASS. This quarter, NIWS provided direct technical assistance to both institutions to support this process, worked with them and MIMPV to scope the specific approach to mainstreaming gender in these institutions, and identified the consulting teams that will lead the development of each gender action plan.

Institutional Diagnostics and Action Plans

During this period, the calls were launched and the consulting teams were selected to develop technical

assistance for mainstreaming the gender approach in the National Water Authority (ANA) and the National Superintendence of Sanitation Services (SUNASS). The winners were Gabriela Paliza and Talent and Potential Consultants, respectively.

The terms of reference of both consultancies stipulate that the mainstreaming process includes the development of a set of activities and delivery of products oriented to the identification of priority areas for mainstreaming the gender approach, the design of a mainstreaming plan and advice on its implementation. The main deliverables of these consultancies will be institutional gender assessments, gender mainstreaming plans, and two technical assistance reports in the implementation of the gender mainstreaming plan in each entity. Both consultancies will begin in January 2020.

Training for ANA Staff on Gender Equality

Direct technical assistance to ANA this quarter included a Forest Trends technical support and participation in a training led by the ANA for their staff on the gender approach, which was held on November 29, 2019. The training, “Gender Equality and Water Security,” was coordinated by the ANA Office of Human Resources, which had participated in NIWS’ 2019 Forum on Gender Equality and Water Security. It addressed why gender equality and water security are important to talk about, the gender gaps that exist in water management, and challenges and opportunities for gender equality and water security. The event also featured an exhibition of activities carried out in 2019 by the Water Users Organizations Directorate to support gender equality.

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

The Assessment of Gender Gaps in Natural Infrastructure and Water Management published this quarter (see Section 4.2) contributes directly to two priority activities in the Water Resources chapter of Peru’s Action Plan on Gender and Climate Change (PAGCC):

- The identification of barriers that limit the participation of women in the integrated management of water resources (action 1.1)
- The identification of knowledge and practices of women and men associated with their roles in the care of natural infrastructure and useful for the integrated management of water resources in four areas of project intervention (action 2.1)

Forest Trends also began participating in a process led by MINAM to propose the incorporation of a representative of women’s organizations on the National Climate Change Commission (CNCC). Forest Trends supported the design and implementation of the election of that representative, support MINAM to convene a group of women’s organizations. Forest Trends will continue to support this process to select the representative to the CNCC, which is expected to conclude by March 2020.

Gender Forum Publication: Iguales por el Agua

In November 2019, Forest Trends published the Gender Equality and Water Security Forum report, “Iguales por el Agua: Memoria del Foro de Igualdad de Género y Seguridad Hídrica,” which is a comprehensive, highly visual, celebratory summary of the stories, data, and commitments shared at the Forum in June 2019. The report was presented and disseminated at the December 20, 2019 launch of the policy brief on the gender gaps diagnostic.

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

In the last quarter of 2020, the Gender Working Group decreased the intensity of its work, but it was reactivated in December for the year-end event presenting the gender gaps diagnostic and Iguales Por el

Agua publication. The group also agreed to meet in January to take stock of 2019 and plan activities for 2020.

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 will be delivered next quarter.

4.4 Administration and Management

Forest Trends incorporated two senior coordinators in the first quarter to support our new focus on aligning efforts across technical components for client-oriented results. Abel Aucasime is the Senior Coordinator for Integrated Solutions, coordinating our work with Reconstruccion con Cambios as well as broader efforts with MINAGRI, and Oscar Angulo is the Senior Coordinator for Sanitation Sector Investments, coordinating our work with SEDAPAL, SUNASS, and other key actors in the sector, like SEDACUSCO. NIWS also reorganized our communications team this quarter; Arlene Villanueva has shifted out of the role of NIWS Communications Coordinator and will be focusing on specific products related to capacity-building and networking among journalists and communications professionals, and Gabriel Rojas joined the NIWS team in January 2020 as the Communications Analyst. Finally, Natalia Aste joined the Objective 2 team as GIS Specialist.

On December 18-19, 2019, NIWS personnel, including 19 women and 10 men from Forest Trends, CONDESAN, and SPDA, participated in a training on USAID Rules and Regulations for Cooperative Agreements. The training was an important opportunity to review our practices and expectations within and across consortium organizations to assure compliance with USAID regulations.

SUCCESS STORY

Peru approves innovative regulation to accelerate investment in natural infrastructure

Gena Gammie, Lucas Benites and Yessica Armas

Peru's Ministry of Environment has approved new guidelines permitting public expenditures to protect and rehabilitate natural infrastructure in the same way the government maintains built infrastructure, opening the door to reducing up to 90% of the time it takes to initiate public expenditures for nature protection and restoration.

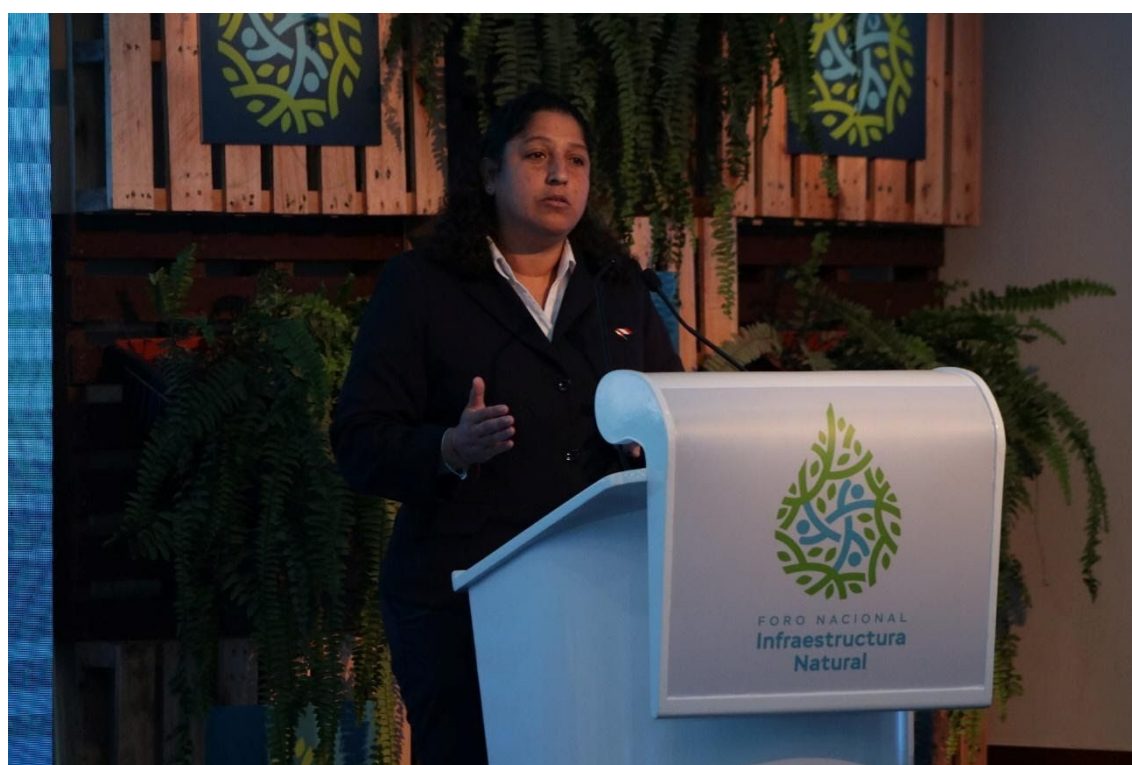


Photo: Minister of Environment Fabiola Muñoz speaking at the 2019 National Forum on Natural Infrastructure in Lima, Peru.

Across the Chillón, Rimac, and Lurín watersheds that supply Lima, Peru, networks of pre-Incan infiltration canals, called *amunas*, hold the potential to significantly reduce the city's water deficit. By channeling water from streams during the rainy season to infiltration areas, the *amunas* have been shown to effectively regulate water, making it available weeks or even months later when it is needed. While early movers have begun to restore these canals in select upstream communities, it is estimated that perhaps 60 more *amuna* canals exist, unrestored, across Lima's watersheds, representing vast, untapped potential.

Under new guidelines [approved by Peru's Ministry of Environment on December 31, 2019](#), public efforts to restore these *amunas* could be dramatically accelerated. The guidelines define how 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—can be applied for natural infrastructure.

The IOARR implementation mechanism holds enormous potential to accelerate investment by simplifying the project design and justification process, even going far beyond restoring the *amunas* that hold so much potential for Lima’s water security. For example, a regional government might utilize IOARR to act rapidly to respond to forest fires and to restore areas affected by such fires. Using IOARR will allow these public agencies to avoid extended bureaucratic analyses and approvals, associated with the alternative public investment project mechanism. IOARR also allow public entities to rapidly acquire or replace monitoring equipment for natural and ancestral infrastructure, including for hydrological monitoring.

Applying IOARR to natural infrastructure represents a significant shift in the conceptualization of nature in public investment in Peru. By defining strategic assets associated with natural and indigenous infrastructure in the new guidelines, the state recognizes that natural assets such as *amunas*, forests, wetlands, *already exist*. They do not need to be constructed, but rather need to be protected, restored, and maintained.

CONDESAN, the Peruvian Society for Environmental Law (SPDA), and Forest Trends provided technical and strategic support for the IOARR guidelines under the Natural Infrastructure for Water Security project (NIWS) in Peru, which is funded by the United States Agency for International Development and the Government of Canada.

Fernando Momiy, NIWS Chief of Party and Director of Forest Trends’ Peru office, said of the innovation, “For natural infrastructure investments that do not require large-scale restoration or expansion of vegetative cover, IOARR will be a much more appropriate and efficient investment instrument than public investment projects. Training project developers and evaluators on the appropriate use of this instrument for natural infrastructure could eliminate months or years between the time that we identify the need to invest and project implementation.”

Acting quickly to respond to threats to ecosystems can make all the difference. Once natural infrastructure like forests and wetlands are degraded or destroyed, it can take decades and enormous sums of investment to restore their original functions – and in many cases, full restoration may not even be possible. Losing these functions have consequences for society, which can include increased risk of drought, flood, fires, landslides, and damage to built infrastructure. Protecting and restoring these ecosystems also contributes directly to achieving Peru’s targets under their National Determined Contributions, including targets on ecosystem restoration, avoided degradation, and carbon sequestration.

The opportunity to accelerate public investment in natural infrastructure through IOARR was one of several solutions highlighted by NIWS at the National Forum on Natural Infrastructure held in November 2019, where Minister of Environment Fabiola Muñoz committed to finalizing the guidelines and recognized the urgency of acting decisively to protect and restore ecosystems that play a critical role in Peru’s water security and resilience to climate change.

“As the Government of Peru, we have made the decision to work with a great sense of urgency, so that everyone understands that we can contribute to protecting natural infrastructure,” said Minister Muñoz during the National Forum on Natural Infrastructure on November 14, 2019. “This is not an issue that just happens to be in fashion, it is a matter of survival. Today we are discussing a topic that ensures the survival of the planet, if we do things right, perhaps we may have the chance to survive.”

MONITORING, EVALUATION AND LEARNING

In the Annex to this report, Table 2 (“Tracking Table”) reports progress on three of the Project’s indicators. 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.

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

Annex I: NIWS Activity Description and Implementation

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
I.1.1.3	Implement Communications Plan	Dissemination products	Lima	National	Yes	Q4 FY2020	20%	---	---	---	On-Track	
I.1.2.4	Training and site visits for journalists	Training	TBD	National	No	Q3 FY2020	0%	---	---	---	Not yet initiated	
I.1.2.6	Implement training for communications professionals in priority watersheds, with a focus on EPS	Training	---	National	No	Q4 FY2020	0%	---	---	---	Not yet initiated	
I.1.2.7	Provide support for journalism on natural infrastructure through the Journalist Fund	Technical Assistance	---	National	No	Q4 FY2020	25%	---	---	---	On-Track	
I.1.2.8	Implement communications plans in priority watersheds	Technical Assistance	---	Regional basin	No	Q4 FY2020	15%	---	---	---	On-Track	
I.1.2.9	Develop and implement communications strategy for SEDAPAL staff, board and ratepayers on the importance of mobilizing MRSE funds	Technical Assistance	ChiRiLuMa	Regional basin	No	Q2 FY2020	10%	---	---	---	On-Track	
I.1.3.2	Produce and disseminate audience-appropriate products for reaching dozens of communities in priority areas for Sembramos Agua (SEDAPAL MRSE)	Dissemination products	ChiRiLuMa	Regional basin	No	Q4 FY2020	15%	---	---	---	On-Track	
I.1.3.3	Implement communications plan in learning sites	Technical Assistance	Prioritized sites	Learning site	Yes	Q4 FY2020	15%	---	---	---	On-Track	
I.1.4.4	National Congress on Natural Infrastructure	Political engagement	Lima	National	No	Q1 FY2020	100%	---	---	---	Completed	
I.1.4.5	Strengthen Peruvian champions for natural infrastructure by disseminating advances at key international Fora (FIAR COP25, World Water Week)	Political engagement	TBD	National	No	Q4 FY2020	0%	---	---	---	Not yet initiated	
I.1.5.1	Develop and implement coordinated communications campaign for Water Week (March) with Advisory Board partners	Dissemination products	TBD	National	Yes	Q2 FY2020	0%	---	---	---	Not yet initiated	
I.1.5.2	Develop products to communicate benefits of natural infrastructure to priority audiences (targeted briefs, web products)	Dissemination products	Lima	National	Yes	Q4 FY2020	5%	---	---	---	On-Track	

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
I.1.5.3	Develop and disseminate targeted products on NIWS advances and insights for international stakeholders	Dissemination products	Lima	International	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
I.1.5.4	Strengthen Reconstrucción con Cambios understanding of the value of natural infrastructure for disaster risk management	Technical assistance	Lima	National	No	Q3 FY2020	20%	---	---	---	On-Track	
I.2.1.3	Continued facilitation of the Advisory Board and its Technical Platform	Political engagement	Lima	National	No	Q4 FY2020	20%	---	---	---	On-Track	
I.2.2.3	Prepare, launch and disseminate State of Natural Infrastructure report	Political engagement	Lima	National	Yes	Q1 FY2020	70%	---	---	---	Delayed	The analysis has been completed; final publication was delayed due to unforeseen staffing disruptions and will be released in February 2020.
I.2.3.3	Develop Common Vision and Roadmap with Advisory Board	Technical Assistance	Lima	National	No	Q3 FY2020	20%	---	---	---	On-Track	
I.3.2.2	Support incorporation of performance-based green infrastructure into the National Adaptation Plan	Technical Assistance	Lima	National	No	Q2 FY2020	0%	---	---	---	Not yet initiated	
I.3.2.3	Support incorporation of performance-based Natural Infrastructure into revision of National Water Resources Plan	Technical Assistance	Lima	National	No	Q2 FY2020	10%	---	---	---	On-Track	
I.3.2.6	Support implementation of the National Gender and Climate Change Action Plan	Technical Assistance	Lima	National	Yes	Q4 FY2020	15%	---	---	---	On-Track	
I.3.2.7	Implement legal protections to address illegal harms to ecosystem supported by MRSE	Technical Assistance	Lima	National	No	Q3 FY2020	10%	---	---	---	On-Track	
I.3.3.5	Develop model contracts and Terms of Reference for formulating and executing public investments in NI	Technical Assistance	Lima	National	No	Q4 FY2020	10%	---	---	---	On-Track	
I.3.4.1	Support the incorporation of natural infrastructure into watershed management plans (coordinate with 3.1.4.4)	Technical Assistance	Prioritized sites	Regional basin	No	Q4 FY2020	10%	---	---	---	On-Track	
I.3.4.2	Support the incorporation of natural infrastructure into EPS PMOs and intervention plans (coordinate with 3.1.4.4)	Technical Assistance	TBD	National	No	Q4 FY2020	60%	---	---	---	On-Track	

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
I.3.4.4	Support incorporation of NI into Reconstrucción con Cambios Integrated Plans to Control Flood Risk	Technical Assistance	TBD	National	No	Q4 FY2020	10%	---	---	---	On-Track	
I.3.5.1	Support ANA and watershed councils in review of institutional and legal roles and priorities, including support to prepare proposals for institutional and normative reforms to strengthen watershed councils and watershed management planning	Technical Assistance	TBD	Regional Basin	No	Q2 FY2020	15%	---	---	---	On-Track	
I.3.5.2	Develop Institutional Capacity-Building Diagnostics and Action Plans in prioritized institutions	Technical Assistance	Lima	National	Yes	Q2 FY2020	70%	---	---	---	On-Track	
I.3.5.4	Provide customized technical assistance and training to prioritized institutions	Technical Assistance	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
I.3.5.5	Provide institutional strengthening support to watershed councils and ANA, including for mainstreaming gender	Technical Assistance	Lima	National	Yes	Q3 FY2020	10%	---	---	---	On-Track	
I.3.5.6	Provide institutional strengthening support to EPS, with emphasis on SEDAPAL, including for mainstreaming gender	Technical Assistance	Lima	Regional basin	Yes	Q3 FY2020	10%	---	---	---	On-Track	
2.1.1.2	Convene a technical group of leading research and knowledge management institutions to prioritize Natural Infrastructure research	Technical assistance	Lima	National	No	Q4 FY2020	40%	---	---	---	On-Track	
2.1.1.5	Develop and publish Natural Infrastructure Research Agenda	Technical assistance	Lima	National	No	Q2 FY2020	80%	---	---	---	On-Track	
2.1.2.2	Map existing data sources to meet information needs (hydrological and socio-economic data sources) identified in 2.1.2.1	Dissemination product	---	National	Yes	Q4 FY2020	80%	---	---	---	On-Track	
2.1.2.5	Prepare wetland inventories in priority watersheds	Dissemination product	---	National	No	Q3 FY2020	30%	---	---	---	On-Track	
2.1.3.1	TRAINING: Monitoring & Evaluation for Performance-Based Natural Infrastructure (In-Person Phase of ADERASA Course)	Training	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
2.1.3.2	Assess minimum baseline hydrological monitoring needed in learning sites to respond to information needs at site and watershed scales (as identified in 2.1.2.1)	Technical assistance	---	Regional basin	No	Q2 FY2020	70%	---	---	---	On-Track	

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
2.1.3.4	Address monitoring equipment needs in existing iMHEA monitoring sites in priority watersheds (ChiRiLu & Piura), and install new hydrological monitoring equipment in learning sites (per needs identified in 2.1.3.2)	Technical assistance	---	Regional basin	No	Q4 FY2020	70%	---	---	---	On-Track	
2.1.3.5	iMHEA workshop and leaders in knowledge management in Natural Infrastructure	Training	Lima	National	Yes	Q3 FY2020	0%	---	---	---	Not yet initiated	
2.1.3.6	Produce and disseminate monitoring protocols	Dissemination product	Lima	National	No	Q2 FY2020	40%	---	---	---	On-Track	
2.1.3.7	Strengthen the iMHEA network institutionally as a network and community of practice, providing technical support to member research efforts	Technical assistance	Lima	National	Yes	Q2 FY2020	40%	---	---	---	On-Track	
2.1.3.8	Convene "State of Science on Natural Infrastructure" event in partnership with iMHEA	Training	Lima	National	Yes	Q3 FY2020	0%	---	---	---	Not yet initiated	
2.1.4.1	Prepare meta-analyses of current state of knowledge in 2 priority research areas	Dissemination product	TBD	Regional basin	No	Q4 FY2020	40%	---	---	---	On-Track	
2.1.4.2	Develop criteria and processes for implementing demand-driven mechanism to address knowledge gaps	Dissemination product	---	National	Yes	Q1 FY2020	80%	---	---	---	On-Track	
2.1.4.3	Implement demand-driven mechanism to support research that contributes to prioritized knowledge gaps	Dissemination product	---	National	Yes	Q4 FY2020	30%	---	---	---	On-Track	
2.2.1.2	Develop and publish guide: Using Hydrological Models to Design Natural Infrastructure in Peru	Dissemination product	Lima	National	No	Q3 FY2020	50%	---	---	---	On-Track	
2.2.1.3	Prepare recommendations on methodologies and models to estimate the Natural Infrastructure gap and to evaluate Natural Infrastructure projects, in terms of relevant Public Investment indicators	Dissemination product	National	Regional basin	No	Q3 FY2020	90%	---	---	---	On-Track	
2.2.1.4	Catalog of natural infrastructure investment	Dissemination product	Lima	National	No	Q4 FY2020	20%	---	---	---	On-Track	

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
2.2.2.2	Webinar series for Community of Practice presenting new tools and guidelines with experts	Dissemination product	Virtual	National	Yes	Q3 FY2020	20%	---	---	---	On-Track	
2.2.3.1	Map and assess existing Information Systems and information flows related to Natural Infrastructure (e.g., SINIA, SNIRH, SNIRH "nodes" in watershed councils, information systems of SUNASS and EPS)	Technical Assistance	Lima	National	No	Q2 FY2020	20%	---	---	---	On-Track	
2.2.3.2	Incorporate natural infrastructure into information systems used by watershed councils	Technical Assistance	Prioritized sites	Regina basin	Yes	Q4 FY2020	40%	---	---	---	On-Track	
2.2.4.1	Develop methodologies to evaluate public investment projects based on hydrological outcomes, linked to water security components (following recommendations in 2.2.1.3)	Technical Assistance	Lima	National	No	Q4 FY2020	20%	---	---	---	On-Track	
2.2.5.1	Design Women's Leadership Program	Technical Assistance	Lima	National	Yes	Q4 FY2020	20%	---	---	---	On-Track	
2.2.5.2	Support women researchers working on key natural infrastructure questions	Technical Assistance	Lima	National	Yes	Q4 FY2020	20%	---	---	---	On-Track	
2.2.5.4	Implement women's leadership program	Technical Assistance	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
3.1.2.1	Define scopes, with upstream and downstream stakeholders of learning sites	Technical Assistance	Prioritized sites	Learning site	No	Q2 FY2020	80%	---	---	---	On-Track	
3.1.2.2	Design and implement hydrological and socio-economic monitoring and evaluation systems in learning sites	Technical Assistance	Prioritized sites	Learning site	Yes	Q3 FY2020	50%	---	---	---	On-Track	
3.1.2.3	Develop local gender gap assessments and action plans	Dissemination products	Prioritized sites	Learning site	Yes	Q4 FY2020	30%	---	---	---	On-Track	
3.1.3.3	Consolidate, publish and maintain Project Design Toolbox in web-accessible, user-friendly database	Technical assistance	Lima	National	Yes	Q4 FY2020	10%	---	---	---	On-Track	
3.1.3.4	Implement diploma in investment project design and management for EPS, GORE, GL	Technical assistance	Lima	National	Yes	Q4 FY2020	10%	---	---	---	On-Track	
3.1.3.5	Develop and implement community of practice for project designers, including learning sites and other MRSE/NI leaders	Technical assistance	Virtual	National	Yes	Q2 FY2020	10%	---	---	---	On-Track	

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
3.1.4.1	Design portfolio-scale monitoring and evaluation system for SEDAPAL MRSE Program (ChiRiLu)	Technical assistance	Lima	Regional basin	Yes	Q2 FY2020	25%	---	---	---	On-Track	
3.1.4.5	Develop multi-sector, performance-based planning framework in Quilca-Chili (coordinate with 1.3.4.2)	Technical assistance	Arequipa	Regional basin	Yes	Q3 FY2020	0%	---	---	---	Not yet initiated	
3.1.4.6	Develop multi-sector, performance-based planning framework in Tambo-Moquegua (coordinate with 1.3.4.2)	Technical assistance	Moquegua	Regional basin	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
3.1.4.7	Develop multi-sector, performance-based planning framework in Vilcanota-Urubamba (coordinate with 1.3.4.2)	Technical assistance	Cusco	Regional basin	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
3.1.5.1	Develop and implement strategy for scaled-up pipeline of projects for implementing SEDAPAL MRSE program	Technical assistance	Lima	Regional basin	No	Q4 FY2020	100%	---	---	---	Completed	
3.1.5.2	Review and match projects in public investment database with potential investors	Technical assistance	Prioritized sites	Regional basin	No	Q4 FY2020	20%	---	---	---	On-Track	
3.1.5.3	Develop effective, sustainable and equitable projects responsive to specific natural infrastructure investors (public and private) and community priorities	Technical assistance	Prioritized sites	Regional basin	Yes	Q4 FY2020	60%	---	---	---	On-Track	
3.1.6.2	Implement demand-driven support to unlock effective, gender-equitable NI investments through Incubator	Technical assistance	Prioritized sites	Regional basin	Yes	Q4 FY2020	70%	---	---	---	On-Track	
3.2.1.2	Provide technical assistance by public investment specialists to address bottlenecks in PIP approvals in priority watersheds	Technical assistance	Prioritized sites	Regional basin	Yes	Q2 FY2020	80%	---	---	---	On-Track	
3.2.1.4	Support development and implementation of pilot MERESE through direct contracts ("modality 2")	Technical assistance	Prioritized sites	Regional basin	Yes	Q4 FY2020	30%	---	---	---	On-Track	
3.2.1.5	Develop guidance on public investment in natural infrastructure through "investments of optimization, marginal expansion, relocation and rehabilitation" (IOARR)	Dissemination products	Lima	National	No	Q2 FY2020	80%	---	---	---	On-Track	
3.2.1.6	Mobilize funds for public investment through IOARR	Technical assistance	TBD	National	Yes	Q3 FY2020	10%	---	---	---	On-Track	

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
3.2.1.7	Provide recommendations for the revision and future application of the simplified technical file ("ficha simplificada") for natural infrastructure investments, with gender focus	Technical assistance	Lima	National	No	Q3 FY2020	60%	---	---	---	On-Track	
3.2.1.8	Mobilize investment for natural infrastructure through public trust fund	Technical assistance	Lima	National	No	Q3 FY2020	10%	---	---	---	On-Track	
3.2.2.3	Develop business case and mobilize private sector funds for natural infrastructure investment	Technical assistance	TBD	National	Yes	Q4 FY2020	20%	---	---	---	On-Track	
3.2.2.4	Mobilize funds from Disaster Risk Management and Climate Change Adaptation tariffs for natural infrastructure project	Technical assistance	TBD	National	Yes	Q4 FY2020	60%	---	---	---	On-Track	
3.2.2.9	Mobilize funds for natural infrastructure through Reconstrucción con Cambios	Technical assistance	TBD	National	No	Q4 FY2020	50%	---	---	---	On-Track	
3.2.3.2	Pilot cross-sector partnership to cover pre-investment finance needs	Technical assistance	TBD	Regional basin	Yes	Q4 FY2020	40%	---	---	---	On-Track	
3.2.4.1	Support/facilitate operationalization of MRSE good governance platforms in priority watersheds	Technical assistance	Prioritized sites	Regional basin	Yes	Q4 FY2020	45%	---	---	---	On-Track	
3.2.5.1	Design and implement action plans for supporting 'conservacion productiva' in learning sites (ID beneficiaries, strategies, roles, outcomes, link to MRSE strategies)	Technical assistance	TBD	National	Yes	Q4 FY2020	30%	---	---	---	On-Track	
3.2.5.2	Develop and implement commercialization strategies and improve market linkages for NI-linked, gender-equitable productive economic activities in priority watersheds	Technical assistance	Prioritized sites	Regional basin	Yes	Q4 FY2020	10%	---	---	---	On-Track	
3.2.5.3	Develop and implement blended finance models for seeding and growing NI-linked productive activities in priority watersheds	Technical assistance	Prioritized sites	Regional basin	Yes	Q3 FY2020	10%	---	---	---	On-Track	
3.2.5.5	Through the Incubator, provide support to develop, seed and grow NI-linked productive activities throughout Peru, in response to demand and opportunity	Technical assistance	TBD	National	Yes	Q4 FY2020	30%	---	---	---	On-Track	

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
3.3.1.2	Scope the interdisciplinary methodological approach to ex ante hydro-economic studies	Technical assistance	TBD	National	Yes	Q2 FY2020	50%	---	---	---	On-Track	
3.3.2.1	Prepare hydro-socioeconomic studies of the sites (positive/negative impacts)	Technical assistance	Prioritized sites	Regional basin	Yes	Q3 FY2020	20%	---	---	---	On-Track	
3.3.2.2	Document learning site conceptual models, results chains, with narrative describing gender-sensitive strategies for NI conservation and baseline data and local gender gap analysis (link to 3.1.2)	Technical assistance	TBD	National	Yes	Q3 FY2020	80%	---	---	---	On-Track	
3.3.2.3	Qualitative documentation of learning site baselines	Technical assistance	Prioritized sites	Learning site	Yes	Q3 FY2019	70%	---	---	---	On-Track	
4.1.1.2	Train team on MEL Plan and data collection	Information management	Prioritized sites	Learning site	Yes	Q4 FY2019	0%	---	---	---	Not yet initiated	
4.1.1.3	Prepare baseline	Information management	Lima	National	Yes	Q1 FY2019	0%	---	---	---	Canceled	There are no previous records or results related to natural infrastructure because it is a new approach
4.1.1.4	Design and implement project information system	Information management	Lima	National	Yes	Q2 FY2019	75%	---	---	---	On-Track	
4.1.1.5	Consolidate information (data, graphics, anecdotes) on the benefits of IN and gender equity in decision-making for use in comms products, informing policies, etc.	Information management	Lima	National	Yes	Q4 FY2019	10%	---	---	---	On-Track	
4.1.1.6	Develop and apply methodology for estimating NIWS projected hydrological benefits	Information management	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
4.1.1.7	Study on the use of information propagated by the project	Information management	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
4.1.1.9	Economic benefits of natural infrastructure study	Information management	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
4.1.1.10	Qualitative study on perception of importance and benefits of natural infrastructure	Information management	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
4.1.1.13	Project Self-Assessment	Information management	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	

Activity code	Activity name	Activity type	Location (district/ province/ region)	Scope (national/ regional/ basin/ learning site)	Gender (Yes/No)	Estimated completion date (Qtr/FY)	% Complete (FY)				Status	Reasons for delayed or cancelled activities
							Q1	Q2	Q3	Q4		
4.1.1.14	Systematization of experiences and lessons learned from the project	Information management	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
4.1.1.15	Collection of indicator data	Information management	Lima	National	Yes	Q4 FY2020	0%	---	---	---	Not yet initiated	
4.1.1.16	Presentation of project reports	Information management	Lima	Lima	Yes	Q4 FY2020	25%	---	---	---	On-Track	
4.2.3.1	Develop and publish gender gap analysis (national and learning site level)	Information management	Prioritized sites	National	Yes	Q1 FY2020	90%	---	---	---	Delayed On-Track	Due to more time was required to make the presentation that validates the information in the study areas
4.2.3.2	Develop Gender Policy for Consortium	Information management	Lima	Lima	Yes	Q4 FY2020	10%	---	---	---	On-Track	

Annex 2. Tracking Table

Note: Per the NIWS Monitoring, Evaluation, and Learning Plan, only indicators XX and XX are updated on a quarterly basis; others are updated annually. Figures updated this quarter in the table below are **highlighted**.

Indicators	Baseline	2018		2019		2020		2021		2022		2023		Total	
		Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
EST-1 - Number of laws, policies, regulations, or standards addressing climate change adaptation formally proposed, adopted, or implemented as supported by USG assistance (EG.11.3)	38 implemented Detail: 4 Laws 5 Plans 29 Regulations 7 national level 31 subnational level	4	1 1 proposed Law	5	3 2 proposed regulations 1 adopted regulations	5	2 adopted	5	---	6	---	8	---	33	6 3 proposed 3 adopted
Sub target: • Number of legal instruments drafted, proposed or adopted with USG assistance designed to promote gender equality or non-discrimination against women or girls at the national or sub-national level (GNDR-1)	TBD	---	0	1	0	3	1	3	---	3	---	3	---	13	1
EST-2: Number of people using climate information or implementing risk-reducing actions to improve resilience to climate change as supported by USG assistance (EG.11-6) <i>Beginning in 2020.</i>	TBD	---	---	---	---	75	---	110	---	105	---	75	---	365	0
Sub target: • Number of women using information or implementing actions <i>Beginning in 2020</i>	TBD	---	---	---	---	15	---	25	---	25	---	25	---	90	0
EST-3: Amount of investment mobilized (in USD) for climate change adaptation as supported by USG assistance (EG. 11-4). <i>Beginning in 2019</i>	1,456,275 USD In projects in "physical execution" FY 2017	---	---	8	0	10	---	10	---	12	---	5	---	45	0
EST-4: Number of hectares of biologically significant areas under improved natural resource management as a result of USG assistance (EG.10-2-2). <i>Beginning in 2019</i>	13.413 has. In projects in physical execution	---	---	2 500	0	4 000	---	4 000	---	5 500	---	7 000	---	23 000	0

Indicators	Baseline	2018		2019		2020		2021		2022		2023		Total	
		Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
EST-5: Number of people with improved economic benefits derived from sustainable natural resource management and/or biodiversity conservation as a result of USG assistance (EG.10.2-3) <i>Beginning in 2020.</i>	TBD	---	---	---	---	TBD	---	TBD	---	TBD	---	---	---	TBD	0
Sub target: • Number of women with improved economic benefits	TBD	---	---	---	---	TBD	---	TBD	---	TBD	---	---	---	TBD	0
• Percentage of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment) (G---D-2) <i>Beginning in 2020.</i>	TBD	---	---	---	---	50%	---	50%	---	50%	---	---	---	50%	0
EST-6: Number of people trained in climate change adaptation supported by USG assistance (EG. 11-1).	110 Women: 42 Men: 68	130	306 M: 207 F: 99	215	619 M: 358 F: 261	330	75 M: 47 F: 28	315	---	595	---	215	---	1800	1000 M: 612 F: 388
Sub target: • Number of women trained	42	---	99	74	261	165	39	157	---	298	---	108	---	900	388
EST-7: Number of institutions with improved capacity to assess or address climate change risks supported by USG assistance (EG.11-2) <i>Beginning in 2020</i>	TBD	---	---	7	0	7	---	5	---	5	---	---	---	7	0
Sub target: • Number of institutions with greater capacity in gender approach <i>Beginning in 2020</i>	TBD	---	---	2	0	2	---	2	---	2	---	---	---	2	0
EST-8: Greenhouse gas (GHG) emissions, estimated in metric tons of CO2 equivalent, reduced, sequestered, or avoided through sustainable landscapes activities supported by USG assistance (EG.13-6). <i>Beginning in 2020</i>	TBD	TBD	---	TBD	TBD	TBD	---	TBD	---	TBD	---	TBD	---	TBD	---

Annex 3: Events

Teamdesk code	Description							Link to NIWS Results Framework and cross-cutting strategies		Participants		
	Name	Type of event	Start Date (dd/mm/yyyy)	End Date (dd/mm/yyyy)	Co-Organizers	Place	N° of hours	Activity code	Explicit Gender Focus (*)	Women	Men	Total
Training events												
EVE - 076	Exchange with the Chira -Quiroz Fund	Training	26/11/2019	28/11/2019	MINAM	Piura	24	3.1.6.2	No	15	28	43
EVE - 081	Course on identification and formulation of recovery projects of the ecosystem service of water regulation (1 st session)	Training	05/12/2019	06/12/2019	SEDAPAL	Lima	16	3.1.6.2	No	13	19	32
Political engagement events												
EVE – 071	National Forum on Natural Infrastructure “Water conservation and natural infrastructure: advances and challenges of integrated and sustainable management”	Political engagement	13/11/2019	14/11/2019	MINAM, SUNASS, ANA, MIMPV	Lima	16	1.1.4.4	Yes	231	77	308
EVE – 083	Milestones and advances in gender equality for water security	Political engagement	20/12/2019	20/12/2019	MIMPV	Lima	2	4.2.3.1	Yes	95	35	130
EVE – 097	Technical Platform Annual Closing Event	Political engagement	17/12/2019	17/12/2019	---	Lima	2	1.2.1.3	Yes	29	14	15
Stakeholder engagement events												
EVE – 090	Information gathering workshop for Chancay-Huaral project technical file development	Stakeholder engagement	15/10/2019	15/10/2019	ANA, CRHC Chancay Huaral	Huaral	4	3.1.5.3	No	9	62	71
EVE - 064	Validation of hydrological quantification of benefits methodologies of Natural Infrastructure	Stakeholder engagement	15/10/2019	15/10/2019	Kiesser & Associates	Lima	8	2.2.4.1	No	12	29	41
EVE – 095	Technical Platform 11th meeting	Stakeholder engagement	04/11/2019	04/11/2019	---	Lima	2	1.2.1.3	No	15	5	10
Awareness raising, and technical assistance events												
EVE-073	Macro Regional Workshop for user boards review of the operation, maintenance and development plan of hydraulic infrastructure and application of SICTA in Lima	Awareness raising & technical assistance	28/10/2019	30/10/2019	ANA	Lima	24	3.1.5.3	No	29	95	124
EVE-074	Macro Regional Workshop for user boards review of the operation, maintenance and development plan of hydraulic infrastructure and application of SICTA in Chiclayo	Awareness raising & technical assistance	4/11/2019	6/11/2019	ANA	Chiclayo	24	3.1.5.3	No	34	108	142
EVE-075	Training workshop for social facilitators in water user organizations with a focus on natural infrastructure (UPCII) in Cajamarca	Technical assistance	21/11/2019	22/11/2019	ANA	Cajamarca	16	3.1.6.2	No	6	10	16

Teamdesk code	Description							Link to NIWS Results Framework and cross-cutting strategies		Participants		
	Name	Type of event	Start Date (dd/mm/yyyy)	End Date (dd/mm/yyyy)	Co-Organizers	Place	N° of hours	Activity code	Explicit Gender Focus (*)	Women	Men	Total
EVE-080	Introductory session of the course in identification and formulation of recovery projects of the Ecosystem Service of Water Regulation	Technical assistance	21/11/2019	22/11/2019	SEDAPAL	Lima	12	3.1.6.2	No	10	16	26
EVE-069	Macro Regional Workshop: Strategies for the effective implementation of MERESE in jungle ecosystems	Awareness raising	22/11/2019	25/11/2019	SUNASS, GORE San Martin	Moyobamba	30	2.1.3.1	No	49	87	136
EVE-077	Training workshop for social facilitators in water user organizations with a focus on natural infrastructure (UPCII) in Chiclayo	Technical assistance	28/11/2019	29/11/2019	ANA	Chiclayo	16	3.1.6.2	No	14	12	26
EVE-078	Training workshop for social facilitators in water user organizations with a focus on natural infrastructure (UPCII) in Ica	Technical assistance	5/12/2019	6/12/2019	ANA	Ica	16	3.1.6.2	No	8	7	15
EVE – 072	Workshop for the development of natural infrastructure projects in the framework of the development of comprehensive plans in RCC (1st session)	Awareness raising and technical assistance	10/12/2019	10/12/2019	MINAGRI, PSI, SERFOR	Lima	8	1.3.4.4	Yes	14	21	35
EVE – 084	Workshop for the development of natural infrastructure projects in the framework of the development of comprehensive plans in RCC (2nd session)	Awareness raising and technical assistance	11/12/2019	11/12/2019	MINAGRI, PSI, SERFOR	Lima	8	1.3.4.4	Yes	8	21	29
EVE-079	Training workshop for social facilitators in water user organizations with a focus on natural infrastructure (UPCII) in Huancayo	Awareness raising and technical assistance	12/12/2019	13/12/2019	ANA	Huancayo	16	3.1.6.2	No	3	15	18
Dissemination events												
EVE – 096	Tools for the identification and prioritization of the Natural Infrastructure for Water Security (EXPO AGUA)	Dissemination events	18/10/2019	18/10/2019	SUNASS	Lima	2	1.3.4.1	No	44	20	24
EVE-084	Webinar: Potential of artificial wetlands for the protection of ecosystem services	Dissemination events	30/10/2019	30/10/2019	---	Virtual	2	2.2.2.2	No	42	42	84
EVE-087	Informative meeting on the integrated monitoring plan of the Piuray-Ccorimarca micro basin	Dissemination events	5/11/2019	5/11/2019	SENAMHI, INAIGEM, SEDACUSCO	Cusco	8	3.2.4.1	No	5	21	26
EVE-085	Webinar: Advances in the conservation and management of high Andean forests and wetlands	Dissemination events	27/11/2019	27/11/2019	---	Virtual	2	2.2.2.2	No	29	26	55
EVE-094	Presentation of the results of Diagnosis of Gender Gaps in Ayabaca	Dissemination events	14/12/2019	14/12/2019	---	Piura	4	4.2.3.1	Yes	13	17	30

Teamdesk code	Description							Link to NIWS Results Framework and cross-cutting strategies		Participants		
	Name	Type of event	Start Date (dd/mm/yyyy)	End Date (dd/mm/yyyy)	Co-Organizers	Place	N° of hours	Activity code	Explicit Gender Focus (*)	Women	Men	Total
EVE-091	Presentation of the results of Diagnosis of Gender Gaps in Caylloma	Dissemination events	18/12/2019	18/12/2019	---	Arequipa	4	4.2.3.1	Yes	30	10	40
EVE-092	Presentation of the results of Diagnosis of Gender Gaps in Piuray	Dissemination events	18/12/2019	18/12/2019	---	Cusco	4	4.2.3.1	Yes	16	9	25
EVE-093	Presentation of the results of Diagnosis of Gender Gaps in Pongobamba	Dissemination events	18/12/2019	18/12/2019	---	Cusco	4	4.2.3.1	Yes	22	32	54
Other events												
EVE - 082	USAID rules and regulations workshop (internal)	Other	18/12/2019	19/12/2019	---	Lima	16	4.4.2.2.	No	19	10	29

(*) All NIWS events consider gender in the composition of speakers and participants. Events with an explicit gender focus also include a significant component of event content on gender

Annex 4. Technical products

N°	Name	Date (dd/mm/yyyy)	Status			Link to NIWS Results Framework and cross-cutting strategies		Dissemination				Link
			In Progress	Finished	Approved	Activity code	Gender	Printed format	N° copies	Platform	Audience	
1	Opportunities and tools for the promotion of investments and interventions for recovery and protection of natural infrastructure for water security	12/11/2019	---	---	x	1.1.4.4.	Yes	Brief	200	Google drive	1	---
2	HIRO: Tool for rapid identification of opportunities in natural infrastructure for disaster risk management	29/11/2019	---	---	x	2.2.1.3	No	Tool	1	CD	Applied to 13 basins	---
3	Brief: Potential Contributions of Pre-Inca Infiltration Infrastructure to Andean Water Security.”	31/11/2019	---	---	x	1.1.1.3	No	Publication	1000	Events Webs	1000	https://www.forest-trends.org/wp-content/uploads/2019/10/BRIEF-AMUNAS-COMPLETO.pdf
4	#IgualesPorEAgu. Gender Equality and Water Security Forum Memory	05/12/2019	---	---	x	4.2.3.1	Yes	Publication	1000	Events Webs	1000	https://www.forest-trends.org/wp-content/uploads/2019/12/Iguales-por-el-Agua-2019.pdf
5	Scientific poster about the reforestation meta-analysis	09/12/2019	---	---	x	2.1.4.1	No	Poster	1	---	---	---
6	Methodological guide for rapid identification of opportunities in natural infrastructure for disaster risk management tool	14/12/2019	---	x	---	2.2.1.3	No	Guide	1	Google drive	1	---
7	Brief: Gender gaps in the management of natural infrastructure and water in Peru	19/12/2019	---	---	x	4.2.3.1	Yes	Publication	200	---	---	https://www.forest-trends.org/wp-content/uploads/2019/12/Brief-Brechas-de-Genero.pdf
8	Integrated hydrometeorological monitoring plan for the Piuray micro basin	20/12/2019	---	x	---	2.1.3.2	No	Plan	1	Google Drive	1	---

Annex 5. Communications products

N°	Name	Type	Date (dd/mm/yyyy)	Status			Link to NIWS Results Framework and cross-cutting strategies		Dissemination				Link
				Finished	Approved	Published	Activity code	Gender	Printed format	N° copies	Platform	Audience	
1	International Day of the Girl	Graphic	11/10/2019	---	---	X	I.1.5.2	Yes	---	---	Social Media	3000	https://www.facebook.com/ForestTrends/photos/a.1544341955837597/2421125838159200/?type=3&theater
2	The Water Hour: Blue certificate - "Hydrological responsible companies"	Radio	14/10/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1 500	https://www.facebook.com/RadioSantaRosaOficial/videos/906855999688712/
3	The Water Hour: The week of Rimac river	Radio	21/10/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1 500	https://www.facebook.com/RadioSantaRosaOficial/videos/930421690691395/
4	The Water Hour: Abner Zavala - technical secretary of ChiRiLu	Radio	28/10/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1 500	https://www.facebook.com/RadioSantaRosaOficial/videos/404657607149293/
5	The Water Hour: Chillón Rímac Lurín Water Observatory	Radio	4/11/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1 500	https://web.facebook.com/RadioSantaRosaOficial/videos/953429205022044/
6	Project mini-site	Web	8/11/2019	---	---	X	I.1.1.3	No	---	---	Web	10 000	www.infraestructuranatural.pe (redirect to Forest Trends website)
7	Huamantanga landscapes	Video	10/11/2019	---	---	X	I.1.3.3	Yes	---	---	Forum – Huamantanga	1 000	https://www.facebook.com/ForestTrends/videos/2515589315205999/
8	Water agreements	Video	10/11/2019	---	---	X	I.1.4.4	Yes	---	---	Forum / social media	300	---
9	Wetlands degradation	Video	10/11/2019	---	---	X	I.1.4.4	No	---	---	Forum / Huamantanga	300	---
10	Graphic social networks for the IN Forum (11)	Graphics	10/11/2019	---	---	X	I.1.4.4	Yes	---	---	Social Media	100 000	---
11	Posters with Information about natural infrastructure (34)	Graphics	10/11/2019	---	---	X	I.1.4.4	Yes	Printed 10	300 (Forum)	---	---	---
12	The Water Hour	Radio	11/11/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1 500	https://web.facebook.com/RadioSantaRosaOficial/videos/2418076735113374/
13	Folder: National Forum on Natural Infrastructure	Brochure	12/11/2019	---	---	X	I.1.4.4	No	Printed	500 (Forum)	---	---	---
14	Amunas model	Model	12/11/2019	---	---	X	I.1.1.3	No	printed	600 (Forum)	---	---	https://flickr.com/photos/infraestructuranatural/49071775257/in/album-72157711798385542/

N°	Name	Type	Date (dd/mm/yyyy)	Status			Link to NIWS Results Framework and cross-cutting strategies		Dissemination				Link
				Finished	Approved	Published	Activity code	Gender	Printed format	N° copies	Platform	Audience	
15	Wetlands model	Model	12/11/2019	---	---	X	I.1.1.3	No	Printed	600 (Forum)	---	---	https://flickr.com/photos/infraestructura_natural/49071156868/in/album-72157711798385542/
16	Video day I summary forum	Video	12/11/2019	---	---	X	I.1.4.4	No	---	---	Social media	---	---
17	Introduction video for Natural Infrastructure Forum	Video	13/11/2019	---	---	X	I.1.4.4	Yes	---	---	Social media	---	https://www.facebook.com/CONDESA_Nandes/videos/470436843568221/
18	Video summary general forum	Video	13/11/2019	---	---	X	I.1.4.4	No	---	---	Social media	2400	https://www.facebook.com/ForestTrends/videos/420588958817831/
19	Video testimony: Gabriel Quijandría	Video	13/11/2019	---	---	X	I.1.4.4	No	---	---	Social media	---	https://www.facebook.com/ForestTrends/videos/45555385097994/
20	Video testimony: Boris Ochoa	Video	13/11/2019	---	---	X	I.1.4.4	No	---	---	Social media	---	---
21	Video testimony: Gonzalo De La Cámara	Video	13/11/2019	---	---	X	I.1.4.4	No	---	---	Social media	---	https://www.facebook.com/ForestTrends/videos/2673357146061289/
22	Video testimony: Fabiola Muñoz	Video	13/11/2019	---	---	X	I.1.4.4	No	---	---	Social media	---	https://www.facebook.com/ForestTrends/videos/3054411538117184/
23	Video testimony: Laura Silva	Video	13/11/2019	---	---	X	I.1.4.4	No	---	---	Social media	---	---
24	The Water Hour: Alonso Zapata - Sedapal (MERESE) and Isabel Calle (National Forum of Natural Infrastructure)	Radio	18/11/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1500	https://web.facebook.com/RadioSantaRosaOficial/videos/424819338167421/
25	The Water Hour: Rimac River Restoration Master Plan	Radio	25/11/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1500	https://web.facebook.com/RadioSantaRosaOficial/videos/2879095952110040/
26	MERESE in the Amazon	Infographic	31/11/2019	x	---	---	I.1.2.8	No	---	---	Email and google drive	1	---
27	The Water Hour: The contribution of environmental volunteering to water care	Radio	2/12/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1500	https://web.facebook.com/RadioSantaRosaOficial/videos/2418076735113374/
28	The Water Hour: Good practices in water resources management	Radio	9/12/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1500	https://web.facebook.com/RadioSantaRosaOficial/videos/2525416991050899/

N°	Name	Type	Date (dd/mm/yyyy)	Status			Link to NIWS Results Framework and cross- cutting strategies		Dissemination				Link
				Finished	Approved	Published	Activity code	Gender	Printed format	N° copies	Platform	Audience	
29	Expanding the common vision for Natural Infrastructure. Milestones 2019	Brochure	15/12/2019	x	---	---	I.1.1.3	Yes	Printed	30	---	---	https://www.forest-trends.org/wp-content/uploads/2019/12/doc2612.pdf?fbclid=IwAR3AyNNmF8r9LqM2M34nRLbmVjLq-c5LEewUU9kk22pDBEJdgHWVvjrtHQ
30	The Water Hour: Water Hour: National Water Culture Award	Radio	16/12/2019	x	---	---	I.1.2.8	No	---	---	Radio social network	1500	https://web.facebook.com/RadioSantaRosaOficial/videos/793143904464303/
31	Huamantanga: This is how we dream you!	Panel	16/12/2019	---	---	X	I.1.3.3	No	Printed	1	Social network	100	https://www.facebook.com/ForestTrends/photos/a.1544341955837597/2490625551209228/?type=3&theater
32	Invitation to the event: The diagnostic gender gaps in natural infrastructure	Graphic	18/12/2019	---	---f	X	4.2.3.1	Yes	---	---	Social media Mailing	3800	https://www.facebook.com/ForestTrends/photos/a.1826664470938676/2484922955112821/?type=3&theater
33	Water Fund Quiroz Internship	Video	18/12/2019	x	---	---	I.1.2.8	No	---	---	Web	1500	---
34	Holiday greetings card	Graphic	23/12/2019	---	---	X	I.1.1.3	No	---	---	Social media	10000	---
35	The Water Hour: Luis Yampufe Morales – Chief of Cañete Fortaleza Administrative Water Authority	Radio	23/12/2019	x	---	---	I.1.2.8	Yes	---	---	Radio social network	1500	https://www.facebook.com/RadioSantaRosaOficial/videos/1350972625084149/
36	The Water Hour: Access to water as a universal human right	Radio	30/12/2019	X	---	---	I.1.2.8	No	---	---	Radio social network	1500	https://www.facebook.com/RadioSantaRosaOficial/videos/809052972870711/

Annex 5: Media reports associated with NIWS activities and outreach

N°	Name	Date (dd/mm/yyyy)	Media			Link
			Name	Type	Audience	
1	Isabel Calle SPDA Natural infrastructure	12/10/2019	La Mula reportajes	Video report	257 000	https://www.youtube.com/watch?v=aq3m1dUdQaw
2	Get financing for natural forest recovery in Huaral.	16/10/2019	Gobierno Regional de Lima	Web	---	https://www.regionlima.gob.pe/index.php/noticias/350-consiguen-financiamiento-para-la-recuperacion-de-los-bosques-naturales-en-la-zona-altoandina-de-huaral
3	The modern Lima is dry. A pre-Inca technology could supply the water you need.	21/10/2019	Americas Quarterly	Web	23 182	https://www.americasquarterly.org/content/lima-water-span
4	MINAM promotes investment in natural infrastructure for the sustainability of water resources in the country	06/11/2019	www.gob.pe	Web	---	https://www.gob.pe/institucion/minam/noticias/68325-minam-promueve-inversion-en-infraestructura-natural-para-la-sostenibilidad-del-recurso-hidrico-en-el-pais
5	Natural infrastructure could reduce up to 80% of the water gap in Lima, according to study	12/11/2019	La Mula	Web	105 543	https://redaccion.lamula.pe/2019/11/12/infraestructura-natural-podria-reducir-hasta-en-un-80-la-brecha-hidrica-que-padece-lima/redaccionmulera/
6	Water gap in Lima could be reduced by 80% with natural infrastructure	12/11/2019	La República	Web	100 000	https://larepublica.pe/sociedad/2019/11/13/brecha-hidrica-en-lima-podria-reducirse-en-un-80-con-el-uso-de-infraestructura-natural/
7	Natural infrastructure could reduce up to 80% of the water gap in Lima	12/11/2019	Perú al Día	Web	---	https://www.perualdia.pe/infraestructura-natural-podria-reducir-hasta-en-un-80-la-brecha-hidrica-que-padece-lima/
8	Natural infrastructure could reduce up to 80% of the water gap in Lima	12/11/2019	Prensarte	Web	---	https://prensarte.com/2019/11/12/infraestructura-natural-podria-reducir-hasta-en-un-80-la-brecha-hidrica-que-padece-lima/
9	Natural infrastructure could reduce up to 80% of the water gap in Lima	12/11/2019	Ser Peruano	Web	150 000	http://www.serperuano.com/2019/11/infraestructura-natural-podria-reducir-hasta-en-un-80-la-brecha-hidrica-que-padece-lima/
10	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Biodiversificar	Web	---	http://biodiversificat.pronaturaleza.org/index.php/2019/11/13/infraestructura-natural-podria-disminuir-hasta-en-80-la-brecha-hidrica-que-aqueja-a-lima/
11	Half of Lima could run out of water	13/11/2019	Expreso	Diario Impreso	88 700	https://www.pressreader.com/peru/diario-expreso-peru/20191113/282037623988459
12	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Itusers	Web	100 000	https://itusers.today/infraestructura-natural-podria-reducir-brecha-hidrica-que-padece-lima/
13	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Perú al Día	Web	---	https://www.ernestojerardo.com/2019/11/infraestructura-natural-podria-reducir-hasta-en-un-80-la-brecha-hidrica-que-padece-lima/
14	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Pressperu	Web	50 000	https://pressperu.com/infraestructura-natural-podria-reducir-hasta-en-un-80-la-brecha-hidrica-que-padece-lima/
15	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Exitosa Diario	Diario Impreso	30 000	https://www.flickr.com/photos/infraestructuranatural/49351024228/in/album-72157680270331488/
16	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Diario UNO	Diario Impreso	20 000	https://www.flickr.com/photos/infraestructuranatural/49351687822/in/album-72157680270331488/

N°	Name	Date (dd/mm/yyyy)	Media			Link
			Name	Type	Audience	
17	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	La Razón	Diario Impreso	20 000	https://www.flickr.com/photos/infraestructuranatural/49351482236/in/album-72157680270331488/
18	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Karibeña	Diario Impreso	130 000	https://www.flickr.com/photos/infraestructuranatural/49351687472/in/album-72157680270331488/
19	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Trome	Diario Impreso	900 000	https://www.flickr.com/photos/infraestructuranatural/49351022338/in/album-72157680270331488/
20	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	El Chino	Diario Impreso	25 700	https://www.flickr.com/photos/infraestructuranatural/49351482696/in/album-72157680270331488/
21	Natural infrastructure could reduce up to 80% of the water gap in Lima	13/11/2019	Ojo	Diario Impreso	180 000	https://www.flickr.com/photos/infraestructuranatural/49351023298/in/album-72157680270331488/
22	Peru advances in natural infrastructure for water security	14/11/2019	Iagua	Web	280 000	https://www.iagua.es/blogs/luis-lujan-cardenas/peru-avanza-infraestructura-natural-seguridad-hidrica
23	Water gap could be reduced in Lima - interview with Cristina Portocarrero	14/11/2019	RCR – “Enlace Regional”	TV - Radio	169 000	https://www.youtube.com/watch?v=2UjkaZsF7AI&feature=emb_logo
24	Natural infrastructure for water security investment in Peru has increased 30 times, between 2013 and 2018, according to a study presented at the National Forum on Natural Infrastructure	14/11/2019	Agencia Órbita	Web	155 000	https://agenciaorbita.org/inversion-en-infraestructura-natural-para-la-seguridad-hidrica-en-peru-ha-aumentado-en-30-veces-entre-el-2013-y-2018-segun-estudio-presentado-en-el-foro-nacional-sobre-infraestructura-natural/
25	General Manager of EPS SEDAM HUANCAYO S.A. participates in National Forum of National Infrastructure	14/11/2019	EPS SEDAM HUANCAYO	Web	---	http://www.sedamhuancayo.com.pe/site/2019/11/14/gerente-general-de-la-eps-sedam-huancayo-s-a-participa-en-foro-nacional-de-infraestructura-nacional/
26	National Forum of National Infrastructure	14/11/2019	Cuenta Artes	Web	---	https://www.cuentaartes.com/2019/11/foro-nacional-de-infraestructura-natural.html
27	Water gap in Lima could be reduced by 80% with natural infrastructure	14/11/2019	La República	Web	100 000	https://larepublica.pe/sociedad/2019/11/13/brecha-hidrica-en-lima-podria-reducirse-en-un-80-con-el-uso-de-infraestructura-natural/
28	Natural infrastructure for water security investment in Peru has increased 30 times, between 2013 and 2018, according to a study presented at the National Forum on Natural Infrastructure	14/11/2019	Lima al Día	Web	---	https://limaaldia.pe/2019/11/14/inversion-en-infraestructura-natural-para-la-seguridad-hidrica-en-peru-ha-aumentado-en-30-veces-entre-el-2013-y-2018-segun-estudio-presentado-en-el-foro-nacional-sobre-infraestructura-natural/
29	Natural infrastructure for water security investment in Peru has increased 30 times	14/11/2019	Perú al Día	Web	---	https://www.perualdia.pe/inversion-en-infraestructura-natural-para-la-seguridad-hidrica-en-peru-ha-aumentado-en-30-veces/
30	Nor does 2% reach regional and local government investment in Natural Infrastructure and ecosystem conservation	14/11/2019	RCR Perú	Radio	169 000	https://www.rcrperu.com/ni-al-2-llega-inversion-de-gobiernos-regionales-y-locales-en-infraestructura-natural-y-conservacion-de-ecosistemas/
31	Nor does 2% reach regional and local government investment in Natural Infrastructure and ecosystem conservation	14/11/2019	RCR Perú	Web	100 000	https://www.rcrperu.com/ni-al-2-llega-inversion-de-gobiernos-regionales-y-locales-en-infraestructura-natural-y-conservacion-de-ecosistemas/
32	Ministry of Environment promotes investment in natural infrastructure	15/11/2019	Andina	Web	100 000	https://andina.pe/agencia/noticia-ministerio-del-ambiente-promueve-inversion-infraestructura-natural-774121.aspx
33	Natural infrastructure for water security investment in Peru	15/11/2019	Itusers	Web	---	https://itusers.today/inversion-en-infraestructura-natural-para-la-seguridad-hidrica-en-peru/

N°	Name	Date (dd/mm/yyyy)	Media			Link
			Name	Type	Audience	
34	Interview with Gena Gammie, deputy chief of NIWS project	15/11/2019	Canal N	TV	200 000	http://plataforma.ipnoticias.com/Landing?i=8rjVc38QlfmON9n3eazhjw%3d%3d&cac=FzGj9IMTcTRO6fMAVwzSxg%3d%3d&c=o34qPiHs6wL8YB6R27ASl%2b%2fdFrHjKl3Mcr24%2flvrytk%3d&utm_source=alerta&utm_medium=correo&utm_content=video&utm_campaign=videomail
35	Natural infrastructure for water security	16/11/2019	Expreso	Diario Impreso	88 700	https://www.pressreader.com/peru/diario-expreso-peru/20191116/28219653779594
36	Will riparian buffers be the last option? (*)	17/11/2019	Diario El Tiempo	Diario Impreso	15 000	https://es.scribd.com/document/439677967/Defensas-riberenas-seran-definitivas
37	Lima water deficit could be covered with the 'water harvest'	18/11/2019	La República	Web	336 000	https://larepublica.pe/society/2019/11/18/cambio-climatico-deficit-hidrico-de-lima-se-podria-cubrir-con-la-cosecha-del-agua-rio-chillon/
38	Amunas: the ancestral technique that could help cover the water deficit in Lima and Callao	18/11/2019	La República	Web	100 000	https://larepublica.pe/sociedad/2019/11/12/amunas-la-tecnica-milenaria-que-podria-ayudar-a-cubrir-el-deficit-hidrico-en-lima-y-callao-fotos-video/
39	Cutivalú journalists are finalists in the "Water Culture" National Prize	29/11/2019	Radio Cutivalú	Web	100 000	https://www.radiocutivalu.org/periodistas-de-cutivalu-son-finalistas-en-el-premio-nacional-cultura-del-agua/
40	Natural infrastructure could prevent Lima from running out of water in 2050	01/12/2019	Inforegión	Web	100 00	http://www.inforegion.pe/266305/infraestructura-natural-podria-evitar-que-lima-se-quede-sin-agua-el-2050/
41	Natural Infrastructure, the solution to overflows and floods in Piura (*)	01/12/2019	Walac Noticias	Web	100 00	https://walac.pe/infraestructura-natural-la-solucion-a-los-desbordes-e-inundaciones-en-piura/
42	The water that Cusco drinks (*)	07/12/2019	La República – edición sur	Diario Impreso	15 000	https://es.scribd.com/document/439680004/Como-cuida-Cusco-el-agua-que-toma
43	Impact of artisanal mining on natural infrastructure (*)	07/12/2019	Radio Cutivalú	Radio	200 000	https://soundcloud.com/user-866272670/infraestructura-natural
44	XIV Meeting Chancay Lambayeque Valley woman users called: "Sowing water in the basin we harvest life. Role of the woman user"	08/12/2019	Juchl	Web	---	http://www.juchl.org.pe/noticia_detalle.php?id=61
45	Water sources for southern cities are in danger (*)	08/12/2019	La República – edición sur	Diario Impreso	15 000	https://es.scribd.com/document/439680182/Fuentes-de-agua-para-ciudades-del-sur-estan-en-peligro
46	Amuna: ancestral technique for water scarcity	08/12/2019	TV Perú Noticias	TV	861 000	https://www.youtube.com/watch?v=TyOmb2vJTr8
47	Water sources for southern cities are in danger	09/12/2019	Cosmotelevisión	Web	---	http://www.cosmotelevision.com.pe/regional/7205-fuentes-de-agua-para-ciudades-del-sur-estan-en-peligro
48	SEDAPAL will approve the first package of ecosystem projects this month	09/12/2019	Proactivo	Web	---	https://proactivo.com.pe/sedapal-aprobara-el-primer-paquete-de-proyectos-ecosismaticos-este-mes/
49	In 2020 SEDAPAL will execute works on natural infrastructure that provide water to Lima and Callao	09/12/2019	Revista Perú Construye	Web	---	https://peruconstruye.net/2019/12/09/en-el-2020-sedapal-ejecutara-obras-en-infraestructura-natural-de-ecosistemas-que-proveen-agua-a-lima-y-callao/

N°	Name	Date (dd/mm/yyyy)	Media			Link
			Name	Type	Audience	
50	Natural Infrastructure works will be executed to recover and conserve the ecosystems that provide water to Lima and Callao	10/12/2019	Anepssa Perú	Web	---	https://anepssaperu.com.pe/2019/12/10/se-ejecutara-obras-en-infraestructura-natural-para-recuperar-y-conservar-los-ecosistemas-que-proveen-agua-a-lima-y-callao/
51	Huallquín grande: The community of Tarma that plants trees and harvests water and development (*)	11/12/2019	Clandestino	Web	---	https://clandestino.pe/2019/12/11/cuidadores-de-agua-huallquin-grande-la-comunidad-de-tarma-que-siembra-arboles-y-cosecha-agua-y-desarrollo/
52	Miraflores, the rural community of Lima that uses ancestral dikes for the conservation of water (*)	11/12/2019	Convoca	Web	27 000	http://convoca.pe/agenda-propia/miraflores-la-comunidad-rural-de-lima-que-utiliza-diques-ancestrales-para-conservar
53	Special: water guardians (*)	11/12/2019	Portal Convoca	Web	---	https://convoca.pe/cuidadoresdelagua/
54	The vulnerable heart of the Chili River that Chalhuanca community members protect (*)	11/12/2019	Portal El Búho	Web	-	https://elbuho.pe/2019/12/corazon-vulnerable-del-rio-chili-protogen-comuneros-chalhuanca-frente-cambio-climatico/
55	Chalhuanca: The heart of Chili that deserves to be protected (*)	11/12/2019	Portal El Búho	Web & video	-	https://www.youtube.com/watch?v=MttQFVef0nI&feature=emb_logo
56	Who cares of the sources of water in our region? (*)	12/12/2019	Diario El Tiempo	Printed	15 000	https://es.scribd.com/document/439678422/Quien-cuida-las-fuentes-de-agua-de-nuestra-region
57	The resurrection of peat wetlands that need Lima (*)	13/12/2019	La República	Daily & Web	336 000	https://larepublica.pe/sociedad/2019/12/13/la-resurreccion-de-los-bofedales-que-necesita-lima-sedapal/
55	Rural women, source of the Circular Economy	22/12/2019	Panorámica	Web	---	https://www.panoramical.eu/america-latina-y-caribe/52719/
56	The resurrection of peat wetlands that need Lima	28/12/2019	La República	Printed	336 000	https://www.pressreader.com/peru/peru-la-republica/20191228/282037624078196
57	Peruvian women claim 50% of power	26/12/2019	lagua	Web	280 000	https://www.iagua.es/blogs/luis-lujan-cardenas/peruanas-reclaman-50-poder

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