

Retribution mechanisms for Ecosystem Services (MERESE) Study

for

Resilient Puna

**Ecosystem based
Adaptation for sustainable high
Andean communities and
ecosystems in Peru**

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Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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Abbreviations

EbA	Ecosystem-based adaptation
ANP	Protected natural areas
CIAT	International Centre for Tropical Agriculture
DHR	Rapid Hydrological Diagnosis
D.S.	Supreme Decree
EPS	Water utilities
FVC	Green Climate Fund (GCF)
GIZ	German Development Cooperation
IGA	Environmental Management Instrument
JASS	Sanitation Services Administrative Boards
MERSE	Retribution Mechanisms for Ecosystem Services
MIDAGRI	Ministry of Agrarian Development and Irrigation
MINAM	Ministry of the Environment
MVCS	Ministry of Housing, Construction and Sanitation
NDA	National Designated Authority (NDA)
NDC	Nationally Determined Contributions (NDC)
PP	Budget Programme
PMO	Optimised Master Plan
NGO	Non-governmental organization
SENAMHI	National Service of Protected Natural Areas
SERNANP	National Service of Protected Natural Areas
SUNASS	National Superintendency of Sanitation Services

1. Introduction

The German Cooperation -GIZ has been preparing a financing proposal to be presented to the Green Climate Fund (GCF) in conjunction with the Ministry of Agriculture (MIDAGRI), the project's lead entity, Profonanpe (Environmental Fund of Peru), the National Service of Protected Natural Areas (SERNANP) and the NGO Mountain Institute, for the project "Resilient Puna: Ecosystem based Adaptation for sustainable high Andean communities and ecosystems in Peru".

The project aims to increase the climate resilience of the high Andean ecosystems, communities, and livelihoods of southern Peru (between 3,500-5,000 masl). To this end, it is focusing its implementation on 58 districts with the highest climatic risk of agricultural and livestock droughts, located in the departments of Arequipa, Puno, Cusco, Apurímac and Lima (Yauyos).

The Project contemplates three components, component 1: Resilient ecosystems and communities, component 2: Public and private investments for the scaling of aligned and leveraged EbA measures, and component 3: Multi-level governance of the territory for the incorporation of EbA measures.

To this end, GIZ together with the NDA has requested the support of the GCF through the project preparation facility service, to coordinate the technical activities, complete the feasibility study and the complete project proposal, which includes the baseline, the concept note and the studies.

In this sense, GIZ has signed an agreement with E Co (specialized consultancy) to support them in the development of these activities, who has subcontracted Practical Action to prepare the required studies. Among these studies is the present one referring to state of progress of the water-related Retribution mechanisms for Ecosystem Services (MERESE) led by Companies providing Sanitation Services and opportunities from the Puna Resilient project.

As specified in the support reports that accompany regulatory documents approved by the government of Peru since 2014, the MERESE, as a payment scheme for environmental services, have been designed and promoted as an economic and financial instrument to facilitate public investment. and private in the conservation and sustainable use of biodiversity and ecosystem services, in addition to contributing to making visible the importance of ecosystem services and having resources that ensure the continuity of their benefits. This task has been carried out by the governing entity in matters of environmental management, MINAM.

Thus, the MERESE are defined as "the schemes, tools, instruments and incentives to generate, channel, transfer and invest economic, financial, and non-financial resources, where an agreement is established between contribuyentes and retribuyentes for ecosystem services, oriented to conservation, recovery and sustainable uses of the sources of ecosystem services."

This study seeks to provide inputs for the development of interventions from the Resilient Puna Project that contribute to the leverage of the MERESE, specifically those aimed at the ecosystem services of water regulation for the availability of water for human consumption managed by the water utilities (EPS in spanish), and from which

interventions are developed that contribute to AbE in their watersheds in the high Andean areas.

The study takes into consideration the information collected in different reports, documents, audio-visual records and participation in events related to the implementation of water MERESE led by the water utilities, in particular those that allow progress and challenges to be recorded, such as the *Mechanisms of Water document. Retribution for Hydrological Ecosystem Services: status of progress, bottlenecks and learning from initiatives in Peru*, worked by the Bioversity International Alliance and the International Centre for Tropical Agriculture (CIAT) in collaboration with MINAM and SUNASS, and the Final Report: Situational Analysis and Roadmap of the Consulting service for the preparation of a Roadmap to improve the Execution processes of the MERESE Funds Implemented by the water utilities, contracted by the GIZ.

The study is organized into three sections. The first section gives an account of the current situation of water MERESE; The second contains the main advances developed in the water MERESE led by the water utilities, as well as the identification of challenges that must be overcome to promote their implementation and results; and, finally, the third section identifies improvement proposals, in addition to articulating the barriers identified in the Project, with the challenges of the water MERESE led by water utilities and improvement proposals from the Project components.

2. Current situation of the MERESE of water regulation and its particularities in the water utilities.

The development of the MERESE for water regulation has its antecedents in some initiatives that have been developing in Peru related to the retribution of ecosystem services since 2004. One of them corresponds to the one developed in the San Martín region known as Rumialba, with the promotion and participation of the regional government, civil society, and international cooperation in three micro-basins that supply water to the city of Moyobamba (MINAM, 2022).

Likewise, MINAM with the support of Forest Trends created an incubator through which support was provided to initiatives aimed at water and biodiversity protection, in addition to the conceptualization and development of tools; and the identification of best practices for conservation and recovery of the source of ecosystem services. As part of this work, it is possible to develop the Rapid Hydrological Diagnosis (DHR) tool which allows the identification of the ecosystem services that benefit the water utilities, as well as the actions to ensure the provision of these services, organized in a file as an input for development. of investment projects.

The water utilities "are public, private and mixed entities that provide drinking water, sanitary sewage, wastewater treatment for final disposal or reuse and sanitary disposal of excreta in urban areas."¹; and are regulated by the National Superintendency of Sanitation Services (SUNASS).

¹[https://www.sunass.gob.pe/prestadores/empresas-prestadoras/#:~:text=Las%20empresas%20prestadoras%20\(EP\)%20son,excretas%2C%20en%20las%20zonas%20urbanas.](https://www.sunass.gob.pe/prestadores/empresas-prestadoras/#:~:text=Las%20empresas%20prestadoras%20(EP)%20son,excretas%2C%20en%20las%20zonas%20urbanas.)

These initiatives allowed the generation of technical inputs that facilitated the development of the technical and regulatory instruments that have supported the institutionalisation of the MERESE.

2.1 Regulatory framework

The MERESes were created and regulated in 2014 with the approval of Law No. 30215, Law of Retribution Mechanisms for Ecosystem Services, and its subsequent regulation (DS No.009-2016-MINAM), as well as its amendment in the 2021 (DS No.033-2021-MINAM).

- **Law on Compensation Mechanisms for Ecosystem Services (Law No. 30215).**

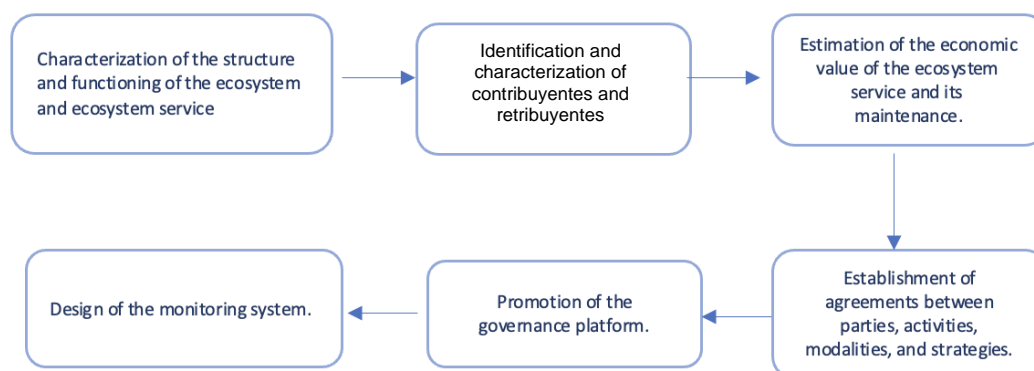
It aims to regulate matters concerning MERESE, defining the different related concepts; Among these, ecosystem services are defined as “the direct and indirect economic, social and environmental benefits that people obtain from the proper functioning of ecosystems.”

In the same way, it defines the retribution mechanisms for ecosystem services, as “the schemes, tools, instruments and incentives to generate, channel, transfer and invest financial and non-financial resources, based on agreements between contribuyentes and retribuyentes, for the conservation, recovery and sustainable use of ecosystem services.” MERESes are created because of voluntary agreements between contribuyentes and retribuyentes.

The regulation considers contribuyentes as those who contribute to the conservation, recovery, and sustainable use of ecosystem services; while the retribuyentes is the one who obtains an economic, social or environmental benefit, and contribuyentes for the ecosystem service. In the case of contribuyentes, it characterizes those who can be recognized as such, among whom are the owners, holders, or holders of land, those who have enabling titles granted by the State for the sustainable use of renewable natural resources, and the holders of ANP contracts and other mechanisms defined by SERNANP.

The regulation creates the MERESE Single Registry, and according to what is established, the design of the retribution mechanisms must contemplate a set of elements that are shown in the Scheme1.

Scheme1 Elements for the design of the MERESE



Source: Based on Law No. 30215, Law on Retribution Mechanisms for Ecosystem Services

- **DS No. 009-2016-MINAM, which approves the Regulation of Law No. 30215, Law of Retribution Mechanisms for Ecosystem Services, approved by Supreme Decree No. 009-2016- MINAM.**

The Regulation specifies the functions of the MINAM in this matter and indicates the ecosystem services that can be part of the MERESE, among which water regulation is considered. In the same way, it details those who can be recognized as contribuyentes and retribuyentes. In the case of contribuyentes, in addition to those indicated in the Law, the SERNANP in the areas of national administration and reserved zones, peasant communities and native communities, indicates those who have enabling titles granted by the State for the use of natural resources. non-renewable, regional governments and local governments, regional and local associations, public entities on ecosystems that are found on the properties they own. In this way, the list of actors that can be recognized as contribuyentes is expanded.

Likewise, the standard details the roles that correspond to contribuyentes and retribuyentes. In addition, it defines the contents of the voluntary Agreements to be concluded between contribuyentes and retribuyentes, such as those concerning the Good Governance Platform, as a governance space for the operationalization of the MERESE.

Likewise, the standard specifies the role of public entities such as regional governments and local governments as promoters and facilitators of MERESE initiatives, being able to assume the role of contribuyentes or retribuyentes.

Indicates what is related to the application of the MERESE in Protected Natural Areas considering that within the framework of the functions that these perform, the MERESE are applied in correspondence with the respective management instruments such as the Master Plan and the guidelines that the MINAM approves for this particular one.

The standard promotes the development of scientific and technological research aimed at the conservation, recovery, and sustainable uses of sources of ecosystem services, including traditional knowledge.

The standard defines the MERESE in water regulation, as "those aimed at generating, maintaining, increasing or improving the quality, quantity and opportunity of the water resource within the parameters required for population use, irrigation, energy generation, among others."

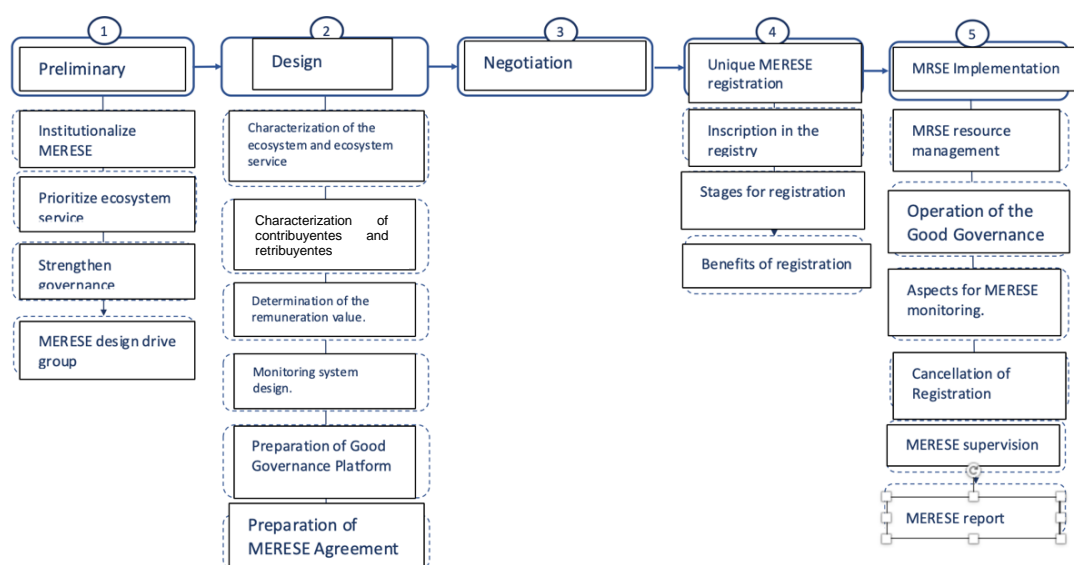
Likewise, it specifies the participation of the water utilities as retribuyentes in the case of the MERESE for water regulation, indicating that through the tariff resolution the conditions for the administration of the collected resources are established; being able to formulate, evaluate, approve, and execute public investment projects, as well as pay operation and maintenance costs.

It defines the single MERESE registry, and presents the procedures and requirements for registration, and its benefits.

- **Ministerial Resolution No. 014-2021-MINAM that approves the Guidelines for the Implementation of Retribution Mechanisms for Ecosystem Services.**

The Guidelines establish the guidelines to guide and implement retribution mechanisms for ecosystem services. The Scheme2 presents the five phases defined for the implementation of the MERESE contained in these Guidelines.

Scheme2 Phases for the implementation of MERESE



Source: Minam (2021).

In relation to the prioritization of the ecosystem service, this requires a preliminary diagnosis that can then be complemented with interviews with the relevant MERESE actors.

The benefits of having a driving group that supports inter-institutional coordination actions for technical support and avoiding duplication of efforts are specified, taking into

account linked organizations that articulate actors for environmental issues and related to water resources at subnational levels.

It is proposed that as a result of the characterization of ecosystems and ecosystem services, direct and indirect actions can be promoted. The first ones consider those that correspond to conservation, recovery, sustainable uses, and traditional practices; while the second could be those related to strengthening capacities in sustainable use, management of interventions, among others.

It is specified that the actions implemented in the MERESE area must consider their alignment with the territorial planning instruments, master plans for protected natural areas, among others.

It indicates the criteria and considerations to identify contribuyentes and retribuyentes, as well as those that would allow the involvement of relevant actors in the MERESE governance process.

The Guidelines meet the criteria to define the retribution modality considering the financing strategy that the retribuyente has. Among the modalities are: (i) Financing of specific actions, direct and indirect, for the conservation and sustainable use of the sources of ecosystem services, (ii) Financing of productive development actions and sustainable basic infrastructure, for the direct benefit of the population involved in the mechanism, (iii) other financing modalities agreed upon by the parties.

In relation to the estimation of retribution for ecosystem services, it is noted that the opportunity costs of contribuyentes must be considered in the costs to maintain the flow of the ecosystem service.

Regarding the collection instrument, it is indicated that additional sources of financing, both national and international, can be identified to complement the implementation of MERESE.

Regarding the administration of the resource, the person in charge of carrying out the execution and operation and maintenance of the actions that are part of the MERESE intervention plan must be identified, who must also be responsible for the conduction, coordination and development of the technical aspects. of the implementation of MERESE. If more than one manager is required, the institutional arrangements must be defined, specifying the corresponding commitments.

It defines types of execution in the form of retribution, among which are: by the entity itself, by a third party, by the contribuyente , and other types of implementations approved by MINAM.

In relation to monitoring, it is noted that the actions will be aimed at recovery, conservation, and sustainable use, as well as the impact on the ecosystem service. Additionally, it is recommended to include social well-being indicators that allow for evaluating the impact on contribuyentes.

The Good Governance Platform monitors agreements and supervises transparency in retribution. It must articulate with existing organizations and groups; However, the scope of action is defined by its members. Organizations that provide advice and/or support can be incorporated into the Platform.

The Guidelines define the elements that are part of the MERESE agreement, as well as the importance of the understanding and validation of the agreements by contribuyentes, who must be informed of the conditions for the execution of public resources.

The guidelines specify that the implementation of the MERESE design has an adaptive nature, that is, they allow adjusting aspects established at the beginning, based on the implementation itself and the lessons learned from other experiences.

- **DS No. 033-2021-MINAM, which modifies the Regulations of Law No. 30215, Law on Retribution Mechanisms for Ecosystem Services, approved by Supreme Decree No. 009=2016- MINAM.**

Among the modifications indicated in the DS, the definition of the MERESE of water regulation is specified as those that, through the management and implementation of conservation, recovery and sustainable use actions and/or traditional practices of ecosystems, generate, increase or improve the amount of water and its opportunity for population, agricultural, energy, aquaculture, industrial use, among others.

Likewise, it points out that in the case of the MERESE implemented by public entities, and in the case of public investment projects, these are executed according to the standards of the National System of Multiannual Programming and Investment Management, National Public Budget System, Guidelines of Public investment policy on the diversity of biological diversity and ecosystem services, Guidelines for the formulation of investment projects in the typologies of ecosystems, species and support for the sustainable uses of Biodiversity, Guidelines for the identification of marginal expansion investments, replacement and rehabilitation that are framed as investments in the typology of ecosystems and other instruments that MINAM approves for these purposes.

Likewise, in relation to the water utilities as retribuyentes, the Regulation indicates that they can pay back in the ecosystems from which they benefit to provide the drinking water service, being able to execute the resources directly or through trusts, they have intangible assets in banks and agreements with entities. private.

2.2 General progress.

At the national level there are 50 water utilities that are distributed in the 24 regions of the country; Of these, 43 have managed to incorporate MERESE funds into their rates. According to MINAM (2022), the process of developing MERESE initiatives in the water utilities begins in 2013, with Sedacusco taking into account the regulations approved in this matter, increasing the number of water utilities with MERESE funds in subsequent years, being the year with a greater registration in 2019, reaching 15water utilities with approved MERESE.

It should be noted that while it is recognized that the water utilities are in a learning process in the implementation of the MERESE, its approval has not necessarily involved compliance with all the requirements, but rather these have been fulfilled progressively and with the technical assistance received.

In the same way, it should be noted that the amounts collected for the implementation of the MERESE correspond to approximately 1% of the amount collected by each water utility.

Likewise, according to the studies, it is identified that the agents who lead the water MERESs developed until 2020, which add up to a total of 54², finding that 76% correspond to initiatives led by public sector institutions, within which 92% oversee water utilities. It should be noted that until 2013, the leadership of the water MERESE was fundamentally in civil society, with the participation of NGOs and international cooperation, with 47%.

It is identified that this progress occurs because of the sectoral regulations that are developed for the implementation of the water MERESE in water utilities. Likewise, this progress has been accompanied by the strengthening of the capacities of the National Superintendency of Sanitation Services (SUNASS) with the installation of Decentralized Sanitation Offices (ODS) in different regions, who have provided the necessary support to the water utilities in the application of this regulation, both in the technical part and in the involvement of social actors.

On the other hand, in relation to the contribuyentes identified until 2022, 23% correspond to peasant communities and 26% to individual owners or possessors, while only 4% correspond to Protected Natural Areas (ANP), making it possible to continue promoting their participation in these mechanisms (MINAM, 2022).

Of the water MERESE initiatives identified in 2020, 39% are in the implementation phase, and of these 7%, that is, 4, meet the four criteria considered for this phase: (i) collection of contributions from remunerating, (ii) execution of funds, (iii) monitoring of agreements signed with contribuyentes, and (iv) monitoring the impact of the implemented interventions. Of these 4 that meet these criteria, 1 is water utilities (MINAM, 2022).

Likewise, 28%, that is, 15 water MERESE initiatives, have completed the preliminary, design, diagnosis, and negotiation phases; Of these, 5 are led by water utilities, pending completion of the criteria for monitoring the impact of their interventions (MINAM, 2022).

In the case of the Puna Resilient Project, which corresponds to the regions of Arequipa, Apurímac, Cusco, Puno and Lima (Yauyos), we can locate a set of 13 water utilities, of which 46% have MERESE funds and the other 54 % no, those water utilities that do not have MERESE are mainly located in the Puno region, while two others are located in the Apurímac and Cusco region. In the case of Apurímac, one of them does have the MERESE fund and the other does not; while in Cusco 3 water utilities have MERESE funds and one does not, we can see what is indicated in the Table 1.

Table 1 Water utilities in the scope of the Project

No.	Water utility	Region	Province	Basin	Availability of MERESE
1	EMUSAP Abancay SA	Apurímac	Abancay	Cachimayo Subbasin, Rontococha, Simpe	Yes
2	EMSAP Chanka SA	Apurímac	Andahuaylas	Contribution basins to Wassipara, Tonlyncco, Huaycco and Plaza de	No

²Considering not only the water MERESE for water for human consumption but also for other needs such as agricultural activity.

				Armas catchments	
3	SEDAPAR SA	Arequipa	Arequipa Caylloma	Quilca, Vitor, Chili Basins	Yes
4	EMAPA Cañete SA	Lima	Yauyos	Cañete Basin	Yes
5	EMPSSAPAL SA	Cusco	Chumbivilcas	Tucuri Basin	Yes
6	EMSAPA Calca SA	Cusco	Decal	Cochocc Basin	Yes
7	SEDACusco SA	Cusco	Canas, Canchis, Melgar, Quispicanchis	Vilcanota Basin	Yes
8	EMAQ SRL	Cusco	Convention	Poromate and Chuyapi Basins	No
9	EPS Nor Puno SA	Puno (Huancané, Lampa, San Antonio de Putina, Carabaya and Sandia0	Azangaro	Lloquecolla Basin	No
10	EMSAPuno SA	Puno	Puno, Key, Desaguadero	Totorani Basin	No
11	SedaJuliaca SA	Puno	Saint Roman	Coata Basin	No
12	EMAPA-Y SRLtda.	Puno	Yunguyo	Choquechaca Basin	No
13	Aguas del Altiplano SRL	Puno	Ayaviri	Punco Punco Basin	No

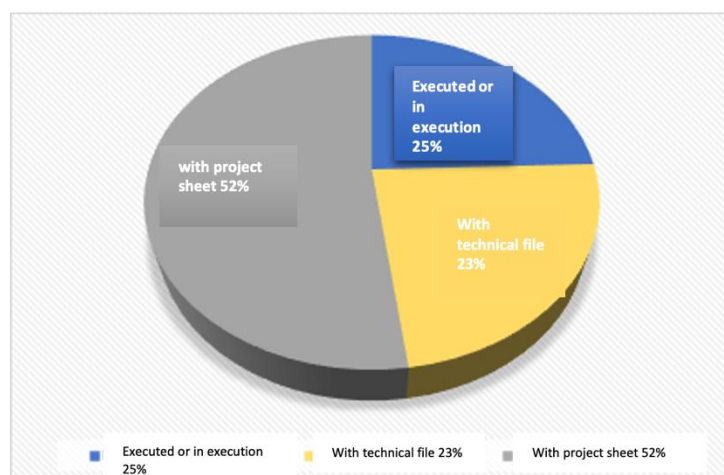
Source: MINAM, SUNASS and GIZ³

Of the 6 water utilities with MERESE funds, two (02) have moved on to the implementation phase, while the others have their Intervention Plan, these correspond to Sedacusco and Emapa Cañete SA. It should be noted that the implementation modalities used by a water utility may vary, year after year, depending on conditions and needs.

According to SUNASS data as of March 2022, in the total water utilities with MERESE, the projects executed represent 44% of the amount collected, which corresponds to S/.138,537, 425. Most of the projects have a project file with 52%, while 25% are in execution status.

Illustration1 Status of MERESE projects in water utilities

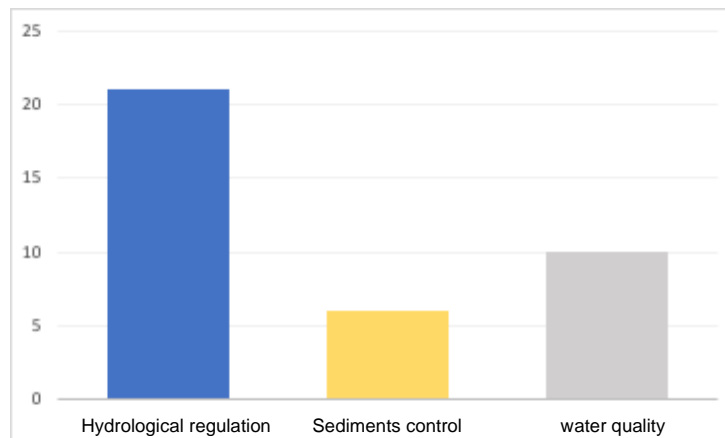
³ <https://www.sunass.gob.pe/wp-content/uploads/2022/06/DIRECTORIO-WATER UTILITIES-A-NIVEL-NACIONAL-junio-2022-para-web.pdf>; SUNASS Puna resilient water utilities Data MRSE_24.02.23 and Final Report: Situation Analysis and Roadmap.



Source: SUNASS. 2022⁴

There are 23 projects executed within the framework of the water MERESE by the water utilities. They are aimed at improving water availability through the conservation and recovery of water sources, as well as improving water quality and sediment control, see the distribution in the Figure 2. These projects are prioritized in the water utilities tariff studies on a five-year basis and are derived from the DHR carried out by each water utilities.

Figure 2 Approaches to MERESE projects of water utilitieswat



Source: SUNASS. 2022⁵

The criteria used to define interventions in ecosystems are based on the importance of the natural resource, the risk of its deterioration, the relationship with water deficit and the possible effect on water quality (MINAM, 2022).

⁴ <https://www.sunass.gob.pe/sunass-en-cifras-5/>

⁵ Ibid.

It should be noted that there are some initiatives that are being developed for the implementation of water MERESE in the Regions of Pasco, San Martín and Amazonas, operated by the Sanitation Services Administrative Boards (JASS), in charge of providing water services and sanitation in populated centres and rural communities.

3. Progress in operation.

3.1 Specific regulatory technical framework for the MERESE of water regulation in the water utilities.

Within the framework of the MERESE regulation promoted by the MINAM, the development of the MERESE for water regulation in the water sector for human consumption is promoted with the development of specific regulations worked on by the governing entity in this matter. In this sense, the MVCS approves Legislative Decree No. 1280 Framework Law for the Management and Provision of Sanitation Services and its regulations, in addition to its amendment (DS No. 001-2019-VIVIENDA).

Legislative Decree No. 1280 Framework Law for the Management and Provision of Sanitation Services in its article 27 expressly refers to MERESE with the purpose of ensuring the permanence of the benefits generated by ecosystems for the provision of water. The rule states that the water utilities must promote and implement the MERESE, instructing the SUNASS to include the corresponding amount in the rate. It specifies that the water utilities are responsible for the administration of resources, including their execution.

Determines that the water utilities are authorized to formulate, evaluate, approve and execute projects, and for operation and maintenance payments, even in cases that have been executed by third parties.

The Regulation of Legislative Decree No. 1280 Framework Law for the Management and Provision of Sanitation Services, approved with Supreme Decree No. 019-2017-VIVIENDA, specifies the modalities of implementation of the MERESE for the water utilities. Likewise, the amendment to the Regulation indicates that the water utilities can request SUNASS to incorporate the amount of the retribution into the rate at any time during the regulatory period.

Regarding the implementation modalities, it is noted that execution can also occur through contracting of goods or services previously defined and approved in the respective Tariff Study.

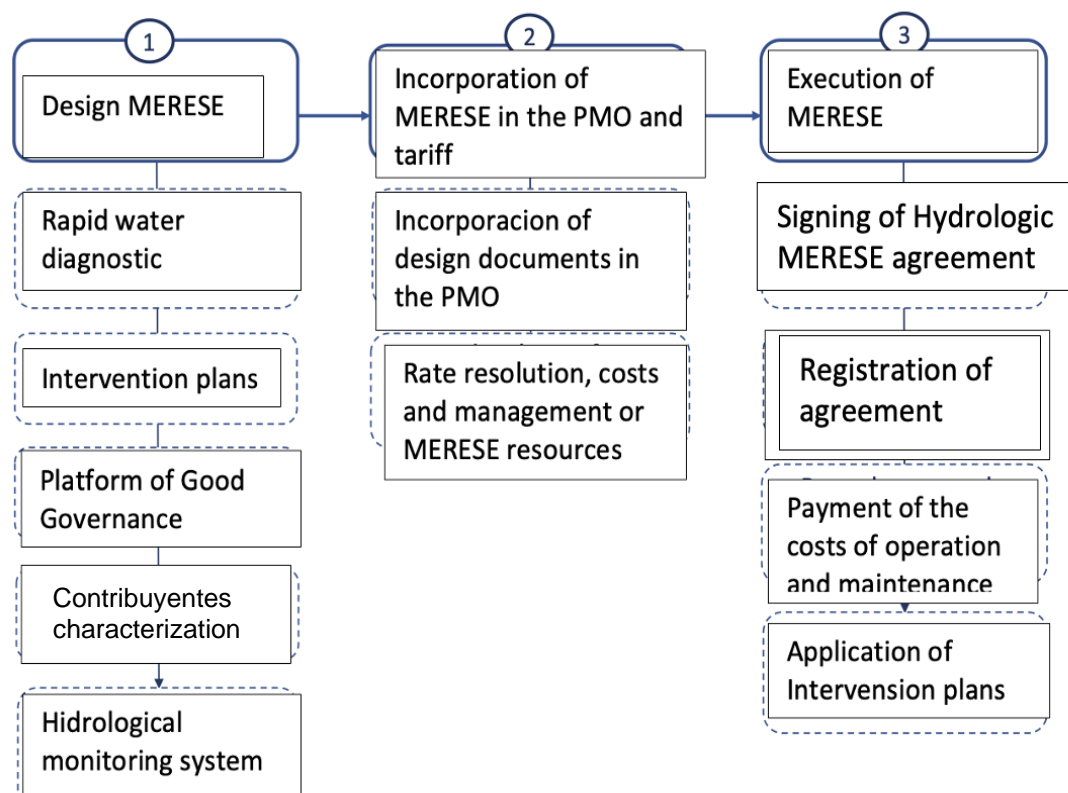
In correspondence, with the aforementioned regulations, SUNASS approves at the time the Resolution of the Board of Directors No. 45-2017-SUNASS-CD, and subsequently with the purpose of specifying elements of the amendment to the Regulation of DL No. 1280 and implementing expeditiously the MERESE, SUNASS prepares and approves the Resolution of the Board of Directors No. 039-2019-SUNASS-CD.

The aforementioned standard establishes the specific procedures that in the case of the water utilities are required to be carried out for the implementation of the MERESE, including the Annex that corresponds to the “Guide for Rapid Water Diagnosis Applied

to Companies Providing Sanitation Services in Peru” also known as DHR. Based on the Resolution of the Board of Directors, stages can be identified that have been organized and presented in the Scheme3. It should be noted that the activities found in each of the three stages do not necessarily have to be completed in their entirety to execute the MERESE.

To date, it has been sufficient, for example, to comply with the DHR, the intervention plan and the characterization of the contribuyentes to move from stage 1 to stage 2 and then to 3. The development of other activities will depend on each case and the water utilities, according to the context, must plan its development.

Scheme3 Stages for the implementation of the MERESE in the water utilities



Source: RCD No. 039-2019-SUNASS-CD

In this standard, ecosystem services are understood as the direct and indirect economic, social and environmental benefits that people obtain from the proper functioning of ecosystems, including those from water regulation in basins (MERESE Law); specifying water ecosystem services as the direct and indirect benefits that water utilities obtain from the proper functioning of ecosystems, such as water regulation, sediment control, among others.

Likewise, the contribuyente is defined as the natural or legal person, public or private, who, through technically viable actions, contributes to the conservation, recovery and sustainable use of the sources of ecosystem services.

In that sense, they can be recognized as such:

- The owners, holders or holders of other forms of land use with respect to the sources of ecosystem services found therein.
- Those who have enabling titles granted by the State for the sustainable use of renewable natural resources that meet the purposes for which they were granted.
- The SERNANP, on the protected natural areas of national administration and reserved zones, under the mechanisms that said entity determines.
- The holders of contracts for the administration of protected natural areas and other mechanisms defined by the National Service of Natural Areas Protected by the State (SERNANP) with respect to the sources of ecosystem services found in them; corresponding to these the executors of contracts.
- The Peasant Communities and Native Communities on the ecosystems that are located on their lands in ownership, possession or transfer in use, or on which they are carrying out the titling procedure.
- Those who have enabling titles granted by the State for the sustainable use of non-renewable natural resources, as long as they generate additional ecosystem services to which they are obliged.
- Regional governments, within the framework of their powers over regional conservation areas, the forests under their administration and the ecosystems located within their property.
- Local governments, over local forests that are under their administration.
- The regional and local associations, on the ecosystems that are within the scope of their jurisdiction.
- Public entities, on the ecosystems located on the properties they own.
- The owners of properties with current recognition as private conservation areas, with obligations registered in the Property Registry of the Real Estate Registry of the National Superintendency of SUNARP.
- Others recognized by the Ministry of the Environment.

The retribuyentes is the natural or legal person, public or private, who obtains an economic, social or environmental benefit, and rewards contribuyente for the ecosystem service received. Likewise, the rule specifies that the water utilities can be retribuyentes for the ecosystem services provided by the hydrographic basin and/or the aquifers in their area and other ecosystems from which they benefit to provide the drinking water service.

To materialize the actions between contribuyentes and retribuyentes, the definition of a water MERESE Agreement is required. The implementation of the water MERESE has four modalities defined in the sanitation sector:

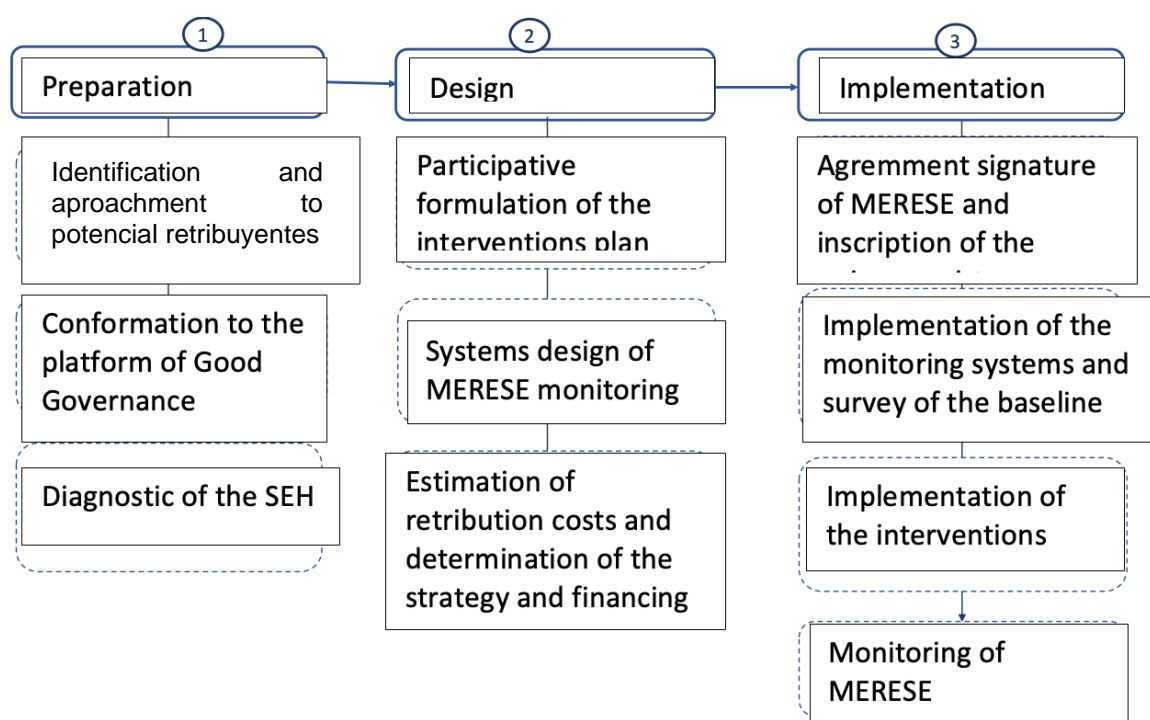
- Execution of investments in accordance with the regulatory framework that regulates the National System of Multiannual Programming and Investment Management.
- Contracting of goods and services.
- Retribution contracts with contribuyentes.

- Agreements or contracts for the administration and/or execution of MERESE water reserves with specialized private entities created by Law for the administration of environmental heritage funds.

On the other hand, within the framework of promoting MERESE's experiences with water utilities, the Guide for the implementation of Retribution Mechanisms for Hydrological Ecosystem Services in Protected Natural Areas (SERNANP) has been developed, which includes the process followed between EMAPA Cañete SA and SERNANP, and the technical elements developed by both institutions. This document allows us to contribute to MERESE's water experiences in water utilities with water sources in Protected Natural Areas. Thus, this Guide has been developed with the participation of MINAM, SUNASS and SERNANP.

In these experiences, the implementation modality used for the MERESE Agreement corresponds to “Retribution Contracts with Contribuyentes”, while the legal stability of SERNANP facilitates the development of processes for the management and development of the investment, added to the experience in managing of ecosystems in an articulated manner with the local population, considering the management and use of natural resources.

Scheme 4 Stages for the implementation of MERESE according to the Guide for the implementation of Retribution Mechanisms for Hydrological Ecosystem Services in Protected Natural Areas



Source: MINAM (2021)

In the MERESE Preparation Stage, SERNANP carries out a mapping of potential retribuyentes with whom awareness-raising actions are carried out to develop interest in the implementation of MERESE. In the same way, it is considered important to involve the different parties in the entire process to contribute to the generation of conditions of trust, in addition to recording the agreements in minutes.

The Guide indicates that, for the full participation of the population, the necessary conditions must be facilitated, especially in diverse cultural contexts.

Regarding the Diagnosis of Hydrological Ecosystem Services, the DHR established by SUNASS is also considered.

The document proposes a period of 5 years as the deadline for the implementation of the intervention plans for the MERESE, considering that they correspond to the same period of the Tariff Studies that regulate MERESE collection. It indicates that the intervention plan can take into account part or all of the Protected Natural Area.

MERESSE interventions are aligned with the management instruments of the ANP, with the support of the ANP Headquarters and the assistance of SERNANP.

For the Design of the Hydrological Monitoring System to evaluate the MERESE, it is proposed to monitor the activities and products in the intervention plan taking into account the defined indicators, which are related to the ANP management documents as identified in its formulation.

The guide proposes that the impact monitoring system consider the following:

1. Monitoring of ecosystem services prioritized by MERESE.
2. Evolution of the conservation status of the ecosystems that provide the services.
3. Variations in ecosystem management practices by the population.

In impact monitoring, contextual conditions such as climate variability are considered. In this regard, it is noted that SERNANP is developing the product “ANP with monitoring of biological diversity and ecosystem services” within the framework of PP 057 “Conservation of biological diversity and sustainable use of natural resources in the protected natural area”, which will allow us to have technical instruments and financing for its implementation.

It is considered important to favour the development of co-benefits as part of the implementation of MERESE and as a mechanism for local appropriation.

As has been indicated in the case of the MERESE Agreement between the water utilities and the SERNANP, these are implemented through the modality of retribution contracts with contribuyente, the transfers enter the planning structure of the SERNANP, in particular PP 057.

Table 2 Products of PP 0057 related to MERESE

Product	Activity
Protected Natural Areas with permanent control and surveillance	Surveillance and control for the protection of ANP
	Infrastructure operation and maintenance
Protected Natural Areas with Participatory Conservation Mechanisms Implemented	Granting and renewal of rights for the use of renewable resources in ANP
	Granting and renewal of rights for the use of the landscape resource
	Participatory natural resource management planning instruments implemented

	Mechanisms and instruments of participatory management of natural resources implemented
	Development of participatory spaces for the conservation of natural resources
Restoration of degraded ANP areas with participatory conservation mechanisms implemented	Reforestation and other strategies for the restoration of degraded areas in ANP
	Evaluation of degraded areas in the restoration process

Source: Minam (2021)

3.2 Technical progress

The technical advances are found in different aspects, both in those enabling conditions that are required for the implementation of the MERESE and in the implementation itself, its results and impacts and the elements that favour its sustainability. In the Table 3 we present the main technical advances identified in the implementation of the MERESE by the water utilities.

Table 3 Main technical advances identified in the implementation of the MERESE by the water utilities

Advancement	Considered aspect	Description
Scope of intervention	Interventions outside the water utilities location area	<p>The conservation and recovery actions that must be implemented as part of the water MERESE consider going beyond where the water utilities and its infrastructure are located, that is, intervening in the contribution basin for the provision of water service.</p> <p>This implies that it is possible for these interventions to be developed in other districts, provinces and/or regions, an aspect that requires coordination with actors involved in water management beyond their scope but also involves a change in the conception of the intervention to the within the water utilities itself, thereby contributing to looking at the scope of the basin and the ecosystem in which it allows providing water services for human consumption.</p>
	MERESE in conservation areas	<p>Of the hydrological MERESes that exist until 2020, 56% are executed in protected natural areas and prioritized conservation areas, generating opportunities to articulate and establish synergies with initiatives that arise in these areas for the conservation and recovery of the ecosystem, based on the implementation of its management instruments such as its Master Plans, allowing to enhance results; as has been shown by the experience of EMAPA Cañete and SERNANP, who have been working in a coordinated manner in Nor Yauyos in the implementation of MERESE, where SERNANP assumes the role of taxpayer, taking advantage of the knowledge and capabilities that the institution has to carry out carry out actions for the conservation and recovery of ecosystems.</p>

Advancement	Considered aspect	Description
	MERESE in the Amazon	Generally, initiatives related to MERESE have been worked on in socio-environmental contexts of high Andean areas. Currently, the water utilities of the Amazon are also working on the approval and implementation of their MERESE, which will make it possible to have learning that responds to other socio-environmental contexts and that will contribute to the development of similar interventions.
Implementation modalities	<ul style="list-style-type: none"> - Public investment. - Contracting of goods and services. 	<p>Implementation modalities⁶The most used correspond to public investment and contracting of goods and services.</p> <p>The development of implementation modalities has allowed the generation of capabilities and learning in the technical, legal and administrative teams to follow the steps as appropriate.</p> <p>The development of public investment projects has made important progress in those cases in which there is support from international cooperation and agreements with specialized entities.</p>

⁶As has been specified in the development of the regulations, they correspond to the mechanisms through which the water utilities can execute the resources that will serve so that the conservation and recovery measures of ecosystems can be implemented as a result of the retribution.

Advancement	Considered aspect	Description
	- Retribution contracts with contribuyentes.	<p>Under this modality there is the case of EMAPA Cañete SA and SERNANP of Nor Yauyos Cochas, with the support of the MERESE-FIDA project. SERNANP is responsible for managing protected natural areas and forests, generating precedents on the possibility of implementing MERESE under this modality with the development of agreements between public entities.</p> <p>SERNANP has been promoting a MERESE initiative in Arequipa, and in other water utilities, supporting the development of experiences and learning under this implementation modality.</p> <p>Likewise, it is known that MINAM has been working on regulations that make possible the allocation of resources to contribuyentes through executing nuclei.⁷, a mechanism used by other social development projects promoted by the State.</p>
Capabilities	New capabilities in the water utilities	<p>The implementation of the water MERESE has allowed water utilities personnel to become involved and interested in what happens prior to collection to guarantee the availability of water for the service they need to provide, improving their understanding of the relationship between this availability and the services. ecosystems, water sources, their flow and quality.</p> <p>To this end, in some cases, they have created instances, units or areas in charge of environmental issues that allow them to assume the tasks that the implementation of the MERESE Agreements require, incorporating professionals such as biologists, forestry engineers, environmental economists, among others.</p>

⁷ ⁷Group of people who reside in the same territory of rural or peri-urban category, with the objective of executing interventions in basic social infrastructure, productive infrastructure, and natural infrastructure. It is temporary in nature and has the legal capacity to intervene in administrative and judicial procedures.

Advancement	Considered aspect	Description
Tools and methodologies	Guide for ecosystem diagnosis.	To facilitate the implementation of the MERESE and the fulfillment of the stages related to its design, SUNASS defined in its RCD (2019) the DHR route as a procedure that facilitates knowledge of the ecosystem in the contributing basin, its conditions and the needs of conservation, recovery and sustainable use of natural resources. This procedure has facilitated and guided the development of interventions carried out by water utilities in ecosystems.
	Natural heritage valuation guide.	The MINAM has made available the “Guide to the Economic Valuation of Natural Heritage” (2016), which proposes a methodology to quantify the contribution of the ecosystem service of water regulation, which has made it possible to help address the technical difficulties that arise regarding of the quantification needs of this contribution required in the proposals for approval of the MERESE in the water utilities.
	Guide for hydrological monitoring.	<p>SUNASS has developed the “Guide to the design of hydrological monitoring systems to evaluate the impact of retribution mechanisms for water ecosystem services” (2022), providing a basic tool for water utilities to develop their hydrological monitoring systems, an aspect that is identified as one of the most important challenges to know the benefits of the implementation of MERESE.</p> <p>In this sense, the Guide addresses elements of interest related to the impact evaluation of the Water MERESE and proposes a practical methodology to work on monitoring at the local level, with an extended monitoring network in a context of limited information, considering the basin. as a unit of analysis. To do this, it considers the quantification of water ecosystem services by defining indicators related to base flow in the dry period, and monitoring hydrological variables related to flow and precipitation.</p>

Advancement	Considered aspect	Description
Follow-up	From national entities	<p>MINAM and SUNASS have a normative and regulatory role respectively; and within the framework of promoting the MERESE processes, they have been assisting the actors involved, particularly the water utilities.</p> <p>As part of their role, they also monitor progress in the implementation of the MERESE, contributing to the promotion and achievement of progress in their implementation.</p>
Operation and maintenance	Mechanisms used	<p>With the progress in the implementation of the MERESE Agreements with water utilities, there has been a need to guarantee the necessary resources for the operation and maintenance of investments, especially in the case of small water utilities.</p> <p>In order to address these needs, they have prioritized some interventions over others to give them sustainability; However, the required resources must be guaranteed by incorporating them into the rates.</p> <p>Likewise, resources have been considered for training and technical assistance to communities in some interventions that do not have maintenance resources.</p>
Positive externalities	Social conditions	<p>The experiences developed, especially those that have sought to enrich the water MERESE processes such as that of IFAD, show that not only the water objectives are recognized in these mechanisms, but also those of a social nature, while it is expected that the MERESE manage to contribute to the improvement of the quality of life of the population that contributes to the provision of the ecosystem service. It should be noted that the approach to MERESE considering these elements is contemplated in the regulations.</p>

Advancement	Considered aspect	Description
	Increased resilience	The implementation of MERESE contributes to increasing the resilience of both contribuyentes and retribuyentes, as well as reducing risk in the context of climate change, given its contribution to strengthening governance related to water security.

3.3 Actors involved and mechanisms for their participation.

- *Contribuyentes and retribuyentes.*

The main actors in the development of MERESE are those who assume the role of contribuyentes and retribuyentes. In this sense, in the hydrological MERESE developed to date, among the contribuyentes to producer associations, Protected Natural Areas, indigenous communities, peasant communities, and individual owners or possessors are identified (MINAM, 2022). The retribuyentes include companies that provide sanitation services, users of water for irrigation, private companies, and providers that are not water utilities.

For the purposes of this study, water utilities as retribuyentes are of special interest. The characteristics of these vary depending on the capacities they have to manage sanitation services and to collect income for their provision, and the number of users. These conditions determine the possibilities they will have to carry out a MERESE implementation process in appropriate terms and conditions.

The contribuyentes, for their part, in the case of peasant organizations located in diverse socio-environmental contexts of the high Andean areas, present particular scenarios and conditions for the MERESE, generating specific capacities, experiences and knowledge in each case.

- *Good Governance Platforms.*

The Good Governance Platforms, recognized in the MERESE regulations, are the spaces to facilitate coordination, agreement between contribuyentes and retribuyentes, and monitor agreements. They have a role of social control, reducing the possibility of inappropriate use of resources intended for the purposes contemplated in the MERESE intervention plan.

Thus, the Good Governance Platforms have made it possible to carry out social surveillance of the MERESE Agreements, and to guide, advise and help in the implementation of the respective intervention plans.

The interaction of the water utilities with contribuyentes, such as the formation of the Good Governance Platform, requires knowledge and management of the social elements that contribute to conducting the processes and achieving the expected results, recognizing the particular contexts in which these are developed as the interests and needs of different groups. In this regard, progress has been made with the assistance and participation of MINAM and SUNASS, which has allowed institutional support to be given to the actions developed.

The formation of the Good Governance Platforms has as a correlation the development of awareness-raising and training actions for those involved to advance in the processes of dialogue and participation, which facilitates the generation of spokespersons within the convened institutions, who transfer information of the actions that are developed within the framework of the implementation of the MERESE (GIZ, 2022).

- *MERESE agreements*

The development of the MERESE Agreements involves reaching an agreement and generating consensus between contribuyentes and retribuyentes on what is expected as part of the retribution and compensation, to implement them. These have been achieved,

to a greater extent in cases in which previous relationships between communities, water utilities, or in cases of participation and support of international cooperation with NGOs who have developed interventions related to ecosystem services are identified.

In this sense, it provides knowledge and understanding of the functioning of the MERESE Agreements in the water utilities, and in the actors who participate in the Steering Committees in the Good Governance Platforms (GIZ, 2022).

3.4 Challenges

Although important advances have been found in the implementation of water MERESes, it can be identified that there are challenges that persist, and others that arise because of this progress.

It should be noted that the context of the COVID 19 pandemic has been a limitation for MERESE initiatives and the progress in their implementation since the priorities during that period have been focused on addressing that situation.

Thus, the challenges presented in this section are an input to propose intervention strategies to support the implementation of the water MERESE.

Table 4 Challenges identified in the implementation of water-related MERESE implemented by water utilities

Considered aspect	Challenge	Description
Scope of intervention	Basin dimensions	The dimensions of the basin present challenges for the governance, management and administration of the MERESE given its extension. In these cases, areas are prioritized according to the state of conservation, water contribution, ease of demonstrating results and collecting data, among other criteria; However, the needs that are noted exceed what can be done specifically from the MERESE.
Implementation modalities	Times in the development of investment projects	Although the modality of MERESE implementation that has been mainly used has been investment projects, difficulties have arisen in their development considering the times required for their design and approval, and the limited capacities available for the development of these tasks.
	Limitations for retribution contracts with contribuyentes	<p>In the case of small water utilities, they fundamentally opt for the contracting of goods and services applying the State Contracting Law; while large water utilities consider investment projects which, as has been indicated, take a significant amount of time to prepare.</p> <p>However, in both cases it is not possible to directly reward the contributing communities with financial resources, which is still a challenge that needs to be addressed.</p> <p>The modality of retribuyentes retribution contracts is not used because the State Contracting Law must be applied under the concept of "single supplier", for which the communities must comply with a series of requirements that they do not have. Added to this is the lack of knowledge and fear of the legal and administrative teams regarding the possibility of making errors in the procedures and being subject to sanctions.</p>

Considered aspect	Challenge	Description
		These limitations affect the relationships that the water utilities have with contribuyentes, since the latter do not have the possibility of directly receiving the financial benefits despite the commitment and demands required by the agreements assumed to guarantee the availability of the ecosystem service of water regulation.
	Modality of agreements with entities	<p>The modality of contracts or agreements with private entities/funds created by Law is also not used due to the interpretation by the legal teams of the water utilities, who refer that the resources collected are public resources, so it is not possible to opt for this modality.</p> <p>One possibility for the application of this modality is PROFONANPE, however, the water utilities consider that the administration costs that the application of this modality would require could be used to establish and equip the environmental/social areas that they require for their strengthening.</p>
	Legal interpretations	<p>The limitations in the implementation of the modalities have occurred not only from the technical part within the water utilities, but also from the legal teams who take time to define the routes to operationalize the selected modalities, as well as the possibility of applying other available modalities.</p> <p>Therefore, the modalities most used in the implementation of MERESE are associated with the interpretation of the regulations on the nature of MERESE resources as public resources, considering their use according to the regulations of Invierte.pe for the development of public investment projects. and the State Contracting Law for contracting goods and services.</p>
Actor involvement	Time required for preparatory actions	The preparatory stage demands a significant amount of time because they are aimed at identifying the key actors and contribuyentes , the process to

Considered aspect	Challenge	Description
		<p>achieve the willingness of the contribuyentes to sign the Agreement, the generation of conditions for the formation of the governance platform, the identification of the natural resource in the ecosystem that needs to be restored or conserved to achieve the expected results.</p> <p>These aspects are strategic to achieve true commitment and participation on the part of contribuyentes throughout the process, and even in what is required for the operation and maintenance of the ecosystem services recovery measures that are carried out; however, the capacities of water utilities in these tasks still need to be strengthened.</p>
	Low involvement of Regional Governments (GORE) and Local Governments (GOLO)	<p>There is limited knowledge on the part of the GORE and GOLO of the MERESE initiatives, their procedures, benefits and importance. Their participation through the Good Governance Platform is low. In the few cases in which their participation has been counted, it has consisted of training or technical assistance, and generated some studies required for the MERESE, such as the GORE Junín with the MERESE Agreement in Marcapomacocha.</p> <p>Although subnational governments carry out some (few) projects related to ecosystem services, these are not linked to the MERESE Agreements, except in the case of GOLO Abancay, which in addition to having an active participation in the Good Governance Platform, articulates local ecosystem services with the MERESE Agreements.</p>
	Weak community participation	<p>A low appropriation of conservation and recovery actions by community groups is identified, as well as their capacities to develop them. This is related to the few benefits they perceive in its implementation.</p> <p>What is indicated is related to the restrictive interpretation of the type of interventions that can be carried out indicated in article 7 of Law No. 30215,</p>

Considered aspect	Challenge	Description
		which states that it is possible to finance development actions from MERESE resources and as retribution. productive and basic sustainable infrastructure.
	Weak participation of women	The organizations that are part of the contribuyentes, in some cases include the participation of women; However, having an important role in the care of the ecosystem, it is required that they can be an active part in the benefits that the water MERESE schemes can generate as well as the decisions that need to be made in the process.
	Weak Good Governance Platform	Who makes up the Good Governance Platforms ⁸ , are unaware of the issue and have few capacities to support the implementation of the MERESE, which requires allocating actions to strengthen these capacities so that they can fulfil their corresponding role, as well as improve the formation of these spaces.
Governance	Low confidence	<p>There is still a lack of knowledge and distrust on the part of contribuyentes in the communities and the population about the MERESE Agreements, in terms of their compliance and the interventions that will be carried out in the ecosystems.</p> <p>The times required for the design and implementation of ecosystem conservation and recovery interventions influence this; but also, the impossibility of directly receiving the financial resources of the retribution.</p>

⁸According to what is established in the standard, Good Governance Platforms must be made up of regional governments, local governments, retribuyentes , contribuyentes and public and private organizations, national or foreign, that can support the design and implementation of the MERESE.

Considered aspect	Challenge	Description
	Weakening of local organizations	<p>The actions aimed at generating the MERESE Agreements become complex as the communities are not organized and strengthened to begin the coordination and negotiation processes.</p> <p>The strengthening of these organizations and leadership must be a prerequisite for the negotiation of the MERESE Agreement and its implementation.</p>
	Identified benefits	<p>The MERESE Agreements are built on the basis of social agreements that allow commitments to be generated beyond context changes as long as the actors remain. This involves knowing, recognizing and demonstrating the individual and collective benefits that these agreements generate.</p> <p>This information is not available and must be generated to continue strengthening governance for the concretion and implementation of the MERESE Agreements, and the sustainability of their results.</p>
Sensitization	Ignorance of MERESE Agreements and their benefits	<p>It is necessary to socialize and disseminate the MERESE Agreements to facilitate their implementation so that those involved are aware of the commitments assumed for their compliance, as well as the benefits they generate.</p> <p>There are difficulties in achieving compliance with community members' commitments, particularly in those cases in which conservation and/or recovery areas need to be fenced to prevent overgrazing. This highlights the need to strengthen participatory decision-making processes.</p> <p>There are difficulties in collecting rates since the population that uses the water service for consumption does not know or perceive the results of the MERESE.</p>

Considered aspect	Challenge	Description
	Low participation of actors	Low participation of other important actors such as regional governments, local governments, the private sector, among others, which prevents the generation of synergies and commitments with complementary interventions for the MERESE Agreements, which involves the financing of other actions that need to be developed in the basin. synergistic way to achieve the conservation and/or recovery of ecosystem services.
Interventions in the ecosystem	Weakness in the identification of conservation and recovery measures	<p>Although important advances are recognized in the application of the DHR, it is necessary to strengthen the knowledge of the technical teams to conveniently identify the measures to be implemented in the ecosystems.</p> <p>The retribution proposals for the ecosystem services of water regulation worked on by the water utilities must be integrated with interventions that generate social well-being through productive development or basic infrastructure, as contemplated in the standard, which requires a holistic and systemic view of the problem that must be addressed.</p>
	Environmental permits	The review of the Environmental Management Instruments related to the natural infrastructure projects necessary to obtain the respective environmental permits, and which are evaluated in the MIDAGRI, takes a significant amount of time that delays their implementation.
Capabilities	Weak analysis of social aspects	Although there is an improvement in knowledge related to MERESE, the technical capacities of specific topics related to the involvement of actors, governance, such as the characterization of ecosystems and their management, remain limited.
	Weaknesses in the development of public investment projects	It is necessary to improve capacities in the formulation of investment projects, particularly those linked to the typology of ecosystem services.

Considered aspect	Challenge	Description
		This difficulty generates delays because even when resources are available to hire these professionals, the supplier market for the development of technical files, required as part of investment projects, is not available.
Methodologies	Lack of knowledge about how to identify the monetary return of water gain	Methodological support is required in determining the water gain in monetary terms for conservation actions in the ecosystem, so that the savings or investment returns made by the water utilities can be evaluated. This must consider the size of the basin and its contribution.
Institutional	Requirement of specialized professionals	Although it is considered that there is progress in institutional strengthening with water utilities that have environmental areas in charge of addressing water MERESE processes, there is still a gap to cover the technical needs of environmental and social professionals who support the processes.
	Staff turnover	The high turnover of water utilities managers generates delays and setbacks in the processes carried out for the implementation of water MERESE. Although staff turnover is not a specific problem of these interventions, it is necessary to consider that it is part of the challenges to be overcome.
	Difficulties in internal coordination	It is necessary to improve the internal coordination mechanisms that facilitate the articulation between the areas (legal and administrative) that affect the processes for the implementation of the MERESE, since there is still a lack of knowledge given the innovative nature of these processes.
	Budget allocation	The budget directed to investment projects in natural infrastructure is lower than that of grey infrastructure projects, which has implications for the priority that formulating units and executing units give to the former over the latter, which extends to management. of the budget.

Considered aspect	Challenge	Description
	Weakness in the management model	The water utilities have not yet managed to incorporate the conservation and recovery of water sources into their policies and organizational culture, which, although it is not the purpose of the MERESE, is part of the transformation that is required to achieve sustainable models, even more so when it comes to of a public service linked to the management of natural resources, in particular a strategic resource such as water.
Financing	Limitations of small WATER UTILITIES	The resource limitations that exist, especially in small water utilities with low financial resources, prevent progress in the installation of environmental areas and studies that the design of the MERESE requires. It should be noted that the financial limitations in the water utilities are related to the low levels of collection.
	Attention to sustainability	It is necessary to allocate funds to water MERESE activities aimed at raising awareness, technical assistance, and financing of Agreements, so that work is done on those elements that will give sustainability to the interventions. So too are the resources required to complement interventions in the ecosystem with those aimed at social well-being.
	Weakness in financial management	There are difficulties and lack of clarity in the financial and accounting management of the resources collected by MERESE. It is unknown what the organizational structure is for making decisions for the management of these MERESE funds.
	Lack of complementary financing	The recovery and conservation needs in the catchment basins are considered higher than those that can be addressed from the water MERESE; For this reason, it is understood that for its financing it is necessary to consider that the proceeds constitute seed funds, in addition

Considered aspect	Challenge	Description
		<p>to contemplating the possibility of diversifying the financing sources that would give sustainability to the interventions that are developed in the ecosystems.</p> <p>There are no incentive mechanisms to induce regional governments to act in a manner complementary to the MERESE Agreements in their jurisdictions.</p> <p>Inter-institutional articulation and synergy to enhance the results of interventions in ecosystems with the MERESE is a pending task.</p>
Monitoring and evaluation	Monitoring weaknesses	There are no studies and evidence that allow us to know the results and impacts of the MERESE studies, as baselines that provide inputs in the design, negotiation and implementation phases, and facilitate the design of a future hydrological monitoring system.
	Indicators to be defined	<p>The main difficulties in the development of evaluation processes are related to the incipient development of result indicators that allow knowing the benefits generated by the implementation of the MERESE Agreements.</p> <p>Likewise, there are no social well-being indicators that allow evaluating the impact on contribuyentes.</p>
	Limited local information	<p>Is required:</p> <ul style="list-style-type: none"> - Information on variables of interest and on the appropriate scale that facilitates monitoring. - Solid and timely short-term information complemented with long-term time series analysis, filling gaps and reducing uncertainties.

Considered aspect	Challenge	Description
		- Complex information generation processes that exceed the capabilities of the water utilities.
Operation and maintenance	Lack of knowledge of mechanisms for assigning resources for operation and maintenance	Lack of clarity on the part of the water utilities teams in relation to the modality that will be used to allocate the necessary resources for the operation and maintenance of interventions within the MERESE framework.
Sustainability	Pending contributions to the quality of life of contribuyentes	The development of conservation and recovery initiatives generate opportunity costs for contribuyentes who are generally part of the population living in poverty. The development of sustainable productive activities that reduce pressure on ecosystems should be an opportunity to contribute to improving the quality of life of this population.
	Missing opportunities in surrounding communities	The benefits generated as part of the recovery of ecosystem services within the MERESE framework can be disseminated in surrounding communities, generating opportunities for their replicability. However, these opportunities have not yet been taken advantage of.

4. Contribution potential of the Resilient Puna Project to the MERESE of water regulation implemented by water utilities

In order to identify the potential contribution of the Resilient Puna Project to the water regulation MERESes implemented by water utilities, the challenges identified in the previous section have been grouped, taking into consideration the elements to be worked on in each case. In this sense, the elements to be worked on are related to those actions that must be implemented to support the water utilities in the application of the regulations that involve the generation of capacities and internal organization necessary to improve the implementation of the water MERESE, collecting the learnings. obtained as part of the experiences developed. What is indicated is presented in the Table 5.

In the same way, it is possible to consider those elements that need to be worked on directly, in support of the water utilities, in the areas in which the water MERESE are implemented, and that involves interaction with the different social groups that are expected to participate in the good governance platform, to facilitate the development of the process and the achievement of results, and its sustainability, which is presented in the Table 6.

Table 5 Elements to work on to overcome the challenges in water utilities for the development of water MERESE

Challenge	Considered aspect	Elements to work	Description
<ul style="list-style-type: none"> • Legal interpretations. • Difficulties in internal coordination • Weakness in financial management 	Capabilities	Improvements in the knowledge of legal, administrative and financial management teams	<p>Guide actions to increase the capabilities of the legal and administrative teams so that an adequate interpretation can be made of the set of implementation modalities of the water MERESE, facilitating their applicability, and developing more efficient processes.</p> <p>In the same way, financial management teams must be clear about how to manage the financial resources generated by the collection of MERESE funds, which facilitates both their implementation and their operation and maintenance.</p> <p>With this, it will be possible to improve the internal coordination actions that need to be carried out between these areas for the execution of the implementation modalities.</p> <p>This orientation can start from the systematization of good practices in the water MERESE, including administrative solutions and legal interpretations, generate casuistry on the legal and administrative procedures related to the implementation modalities, and develop methodological instruments that include the application of the other MERESE implementation modalities that have not been taken advantage of.</p>
<ul style="list-style-type: none"> • Requirement of specialized professionals. • Weakness in the identification of 	Capabilities	Knowledge of elements to consider in the design and implementation of interventions in the ecosystem	The area for the development of conservation, recovery and sustainable use actions must consider as part of the selection criteria those related to the continuity in the availability of the water resource in quantity and quality, taking into consideration the conditions of the territory in terms

Challenge	Considered aspect	Elements to work	Description
conservation and recovery measures.			<p>environmental and social aspects that water utilities technical teams must know.</p> <p>This implies having the necessary capacities to carry out the DHR, a defined methodology for identifying the interventions to be developed in the contributing basins, as well as defining the rate that allows the water utilities to have the necessary resources for the MERESE.</p> <p>In this sense, the technical assistance directed to the technical teams of the water utilities must consider the definition and application of criteria for the selection of the natural resource to recover or conserve in the catchment basin, adequately prepare the intervention plan including the costing of the design. of the intervention, identification of the technical studies required, and those actions that will give sustainability to direct the process. This technical assistance must consider the development of these processes in a participatory manner with contribuyentes, seeking to incorporate ancestral knowledge and revalue it.</p>
<ul style="list-style-type: none"> Weak analysis of social aspects 	Capabilities	Knowledge and analysis of social elements for the implementation of the MERESE processes	<p>The purpose of dialogue with the communities is to generate the MERESE Agreement; for this it is necessary to know the social context and define a work strategy, which requires that the water utilities teams have trained professionals. This dialogue must be transferred to the processes of generating diagnoses and planning interventions.</p> <p>In the same way, it is necessary to generate capacities for the formation of Good Governance Platforms as it implies a process of identification of actors in the given context, which makes it possible to carry out the activities that allow them to achieve their active participation, at the same</p>

Challenge	Considered aspect	Elements to work	Description
			<p>time to open new opportunities for improving the availability of ecosystem services.</p> <p>As long as the MERESE Agreements are implemented, it will be necessary to technically assist the water utilities teams for the organization and development of operation and maintenance actions, which can be incorporated as part of these Agreements considering that the benefits of water regulation will be realized. in the medium and long term, and this will require the sustainability of the interventions carried out.</p>
<ul style="list-style-type: none"> Pending contributions to the quality of life of contribuyentes. 	Capabilities	Incorporation of social benefits	<p>One of the critical aspects related to the sustainability of water MERESE is referred to contemplating the development of profitable and sustainable alternative activities, which make it possible to cover the opportunity costs of the development of conservation and recovery actions, and that reduce the pressure on the ecosystems.</p> <p>This makes it possible to improve the conditions of the high Andean ecosystems of the basins where intervention is carried out and that provide water ecosystem services, but also the living conditions of the participating community and family groups.</p> <p>Proof of this is the successful experience such as that of IFAD, in Nor Yauyos, which allowed generating greater impact in terms of ecosystem conservation and reinforcing the commitment of community groups in the process. To achieve this, the areas that would be recovered or conserved were identified, as well as areas of conservation or sustainable management, with the participation of community groups.</p>

Challenge	Considered aspect	Elements to work	Description
<ul style="list-style-type: none"> Time required for preparatory actions 	Capabilities	Guidelines for strengthening the processes for MERESE Agreements and Good Governance Platforms	Develop guidelines or guidelines for the identification and involvement of contribuyentes aimed at the generation and implementation of the MERESE Agreements and the operation of the Good Governance Platform, considering the conditions and realities that can be found in the regions to intervene. These should include the management of possible conflicts that could arise in the process.
	Capabilities	Agreement flexible enough to adapt to changing contexts	<p>The Agreements must be as least rigid as possible, and obtain approval from the lowest levels, so that everyone, at every level, knows the agreements. In the case of communities, not only the organizations must know the agreements but also the families involved.</p> <p>Likewise, the agreements must allow adaptation to possible changes that may arise in the process.</p>
	Capabilities	Collect learning from previous experiences	<p>There are initiatives linked to the development of project experiences related to the recovery and/or conservation of ecosystems from which lessons learned can be recovered and continue improving the implementation of the MERESE in the water utilities.</p> <p>Collect the learning from those experiences in water MERESE that have been developed by the JASS, which have a closer link with community organizations and can contribute to improving the interaction strategies with the contributors of the water MERESE developed by the water utilities.</p> <p>In the same way, water MERESE initiatives that are managed to be developed by the JASS that are in the area of the basin in which they</p>

Challenge	Considered aspect	Elements to work	Description
			intervene with the water utilities, can mutually enhance each other by generating synergies between them.
<ul style="list-style-type: none"> Lack of complementary financing. Limitations of small WATER UTILITIES Basin dimensions 	Financing	Generation of synergies with similar interventions in ecosystems	<p>The water MERESs contribute to improving the adaptive capacity of ecosystems in the context of climate change, the possibility of generating greater impacts lies in identifying similar processes underway in the intervention basins with which it is possible to generate synergies, while the scale of intervention that can be carried out from the MERESE is limited compared to the needs.</p> <p>In this sense, it is possible to strengthen synergy and complementarity with other actors such as regional and local governments and private companies, water funds, etc. Likewise, evaluating the possibility of developing multipurpose projects that contribute to improving the availability of water for different uses.</p> <p>For this, it is useful to have a mapping of interventions in the basin, linked to ecosystem services, on which it is possible to identify the best way to enhance the expected results.</p>
<ul style="list-style-type: none"> Limitations for retribution contracts with contribuyentes 	Implementation modalities	Modality of execution of retribution contracts with contribuyentes	Develop the necessary efforts from the MINAM, MVCS and SUNASS so that interventions can be carried out under the modality of executing nuclei, which in addition to requiring less time will involve the active and direct participation of contribuyentes.
<ul style="list-style-type: none"> Modality of agreements with entities 	Implementation modalities	Modality agreements with Funds	The possibility of considering the execution of the MERESE through PROFONANPE more widely will depend on the transaction costs given that the available resources are small. Its usefulness could be evaluated in water utilities that do not have environmental areas and that, as part of

Challenge	Considered aspect	Elements to work	Description
			<p>the PROFONANPE process, develop internal capacities in these to give sustainability to MERESE interventions.</p> <p>Likewise, the participation of PROFONANPE could contribute to leveraging resources and complementary initiatives to the MERESE.</p>
<ul style="list-style-type: none"> • Times in the development of investment projects. • Weaknesses in the development of public investment projects 	Implementation modalities	Taking advantage of initiatives to develop investment projects efficiently.	<p>Continue exploring the possibility of having an incubator for ecosystem services projects that can contribute to supporting the implementation of the interventions defined in the water utilities for the MERESE, and thereby take advantage of the opportunities offered by the available investment instruments, as well as the learning generated that allows reducing the time for the development of these investment initiatives.</p> <p>Develop or enhance the availability of a registry of professionals trained for the formulation of projects with this typology, involving the participation of the Ministry of Economy and Finance and MINAM,</p>
<ul style="list-style-type: none"> • Weakness in the management model 	Management model	Transform the management model	<p>The water utilities require incorporating natural infrastructure as part of the strategies to manage sanitation, so that interventions are also carried out in the ecosystems in a complementary way to the MERESE and as part of the needs for sustainability in the provision of water service.</p> <p>The importance of generating institutional capacities for this by having the necessary human resources must be considered. In this sense, it will be an advance that the areas in charge of environmental issues and that have been assuming the tasks of implementing the MERESE are institutionalized and are part of the organic structure of the water utilities.</p>

Challenge	Considered aspect	Elements to work	Description
<ul style="list-style-type: none"> Budget allocation. 	Management model	Transform the management model	The allocation of resources for the execution of the water MERESE in the water utilities through the selected modality or modalities must be part of the set of priorities, so that this does not affect the relationship of trust and agreements established with contribuyentes.
<ul style="list-style-type: none"> Lack of knowledge of mechanisms for assigning resources for operation and maintenance 	Operation and maintenance	Assist in actions aimed at operation and maintenance	<p>Assist and guide the water utilities on the operation and maintenance actions of the water MERESE initiatives to guarantee the sustainability of the measures implemented for conservation, recovery and/or sustainable use developed, being clear about the mechanisms for their financing.</p> <p>These actions must make it possible to guarantee both interventions aimed at water regulation, as well as those that generate social benefits, so that they contribute to the sustainability of the implemented MERESE.</p>
<ul style="list-style-type: none"> Monitoring weaknesses 	Monitoring and tracking	Have online reports	The National Registry of the MERESE in charge of the MINAM, contemplated in the regulations on the matter, and its operation can constitute a system for online reporting of the progress in the MERESE and keeping the information updated.
	Monitoring and tracking	Improve the monitoring of national entities to the water utilities	Continue improving the transparency, monitoring and supervision of the MERESE with the purpose of helping to overcome difficulties, facilitate the conditions for their implementation and reduce the times for their implementation.

Challenge	Considered aspect	Elements to work	Description
			Likewise, monitoring the fulfilment of goals in the Optimized Master Plans (PMO ⁹) by SUNASS, can contribute to increasing the support of decision makers in the water utilities for the water MERESE initiatives.
<ul style="list-style-type: none"> Limited local information 	Monitoring and tracking	Develop monitoring methodologies that range from the simple to the complex	<p>Define practical methodological processes for the generation of information, prioritization of variables and parameters; seeing the possibility of increasing complexity. For this, it is important to know the methodologies and tools that entities that work on similar topics, such as ANA, AGRORURAL, among others, NGOs and international cooperation, can generate meeting spaces that allow collecting and starting from what is already available. and use them according to the needs of each case.</p> <p>This monitoring must include the monitoring of the water regulation service as well as those activities aimed at generating social benefits such as productive development or service infrastructure.</p>
<ul style="list-style-type: none"> Indicators to be defined 	Monitoring and tracking	Have indicators for evaluation	Propose indicators that allow measuring environmental and social results, and carry out initial, mid-term and final evaluations, which serve to know the progress and strengthen decision-making that contribute to the achievement of the expected results.
<ul style="list-style-type: none"> Lack of knowledge about how to identify the monetary 	Monitoring and tracking	Have evaluation methodologies	Develop methodologies for the ex-ante and ex-post evaluation of water MERESE, which consider environmental and social benefits. This will involve foreseeing what is necessary to identify and generate information for measuring impacts and benefits.

⁹water utilities planning instrument.

Challenge	Considered aspect	Elements to work	Description
return of water gain			Likewise, it will be necessary for the MERESE expense calculations to include the costs of monitoring and evaluation studies, which are required to know their results and impacts.

Table 6 Elements to work on to overcome the challenges in the good governance platforms of the water MERESE

Challenge	Considered aspect	Elements to work	Description
<ul style="list-style-type: none"> Low involvement of Regional Governments (GORE) and Local Governments (GOLO) Low participation of actors 	Actor involvement	Incorporation of actors	<p>Possibility of expanding the participants of the Good Governance Platforms, including the set of actors that can be identified according to the mapping of interventions in the basin, with greater willingness to support the water MERESE developed by the water utilities, and take advantage of the strengths of each member to the fulfilment of its objectives.</p> <p>Regional and local governments, together with other actors from the private and public sectors and civil society, can become strategic partners and allies.</p> <p>This would also allow for better articulation of the participation of international technical cooperation in the water MERESE processes of the water utilities.</p>
<ul style="list-style-type: none"> Good Governance Platforms, weak. 	Actor involvement	Strengthening actors for governance	<p>Strengthen the capacities of members of the Good Governance Platforms so that they know the MERESE, how they are implemented and the benefits.</p>

Challenge	Considered aspect	Elements to work	Description
			Consider the incorporation of subnational governments in training processes where not only natural resource areas are involved but also those in charge of addressing basic service requirements.
<ul style="list-style-type: none"> • Weakening of local organizations 	Actor involvement	Strengthening organizations local	<p>The MERESE Agreements such as the Good Governance Platforms require strengthened organizations to guarantee adequate participation, especially of contribuyentes who generally correspond to community organizations. Previous experiences in this sense demonstrate this, which requires efforts to strengthen these organizations, which will result in the generation of relationships of trust between the water utilities and them. This strengthening can count on the support of organizations that are part of the Good Governance Platform and that have experience in this topic.</p> <p>It should be noted that in the case of community organizations, their base is found in families, since it will be important that their strengthening and participation be promoted from them.</p>
<ul style="list-style-type: none"> • Missing opportunities in surrounding communities 	Actor involvement	Joint strengthening	<p>Articulate the Good Governance Platforms with the Water Resources Councils of the Basin, generating spaces for dialogue on topics of interest in the management of the basin, consensus, and commitments, making agreements that can strengthen the expected results of the MERESE. It should be noted that in some cases the Good Governance Platform has been established as a Working Group of the Council of Basin Water Resources.</p>
<ul style="list-style-type: none"> • Weak community participation 	Actor involvement	Strengthen participation the of	<p>Contribute to the construction and strengthening of a horizontal dialogue with the communal assemblies and their leaders, considering the social</p>

Challenge	Considered aspect	Elements to work	Description
		communities as contribuyentes	<p>dynamics and the times they demand. Horizontal dialogue will be built and strengthened based on relationships of trust and respect.</p> <p>Ensure the recognition of contribuyentes needs and demands and their articulation with the objectives of the water MERESE schemes. This requires involving their active participation in the entire process, using tools that facilitate it.</p> <p>The above is critical for the implementation of the water MERESE considering the previous experiences of interventions linked to the sustainable management of natural resources in high Andean areas, experiences implemented from projects with international cooperation that have supported the implementation of the MERESE, as well as the reflections that arise from the spaces generated by those who have participated in these water utilities, NGO, and international cooperation processes.</p> <p>In strengthening this participation, it will be important to consider diverse generational groups.</p>
<ul style="list-style-type: none"> Weak participation of women 	Actor involvement	Improve women's participation	<p>Increase the participation of women in decision-making spaces considering the important role they play in conservation and recovery, since they actively participate in workdays, and in some cases, lead the community group that carries out the recovery and conservation actions.</p> <p>In this sense, criteria can be included to promote the participation of women, incorporating as a weighting factor to finance the recovery and conservation subprojects that are presented in the calls, such as, for</p>

Challenge	Considered aspect	Elements to work	Description
			example, that community groups count on their board. director with at least one woman.
<ul style="list-style-type: none"> • Low confidence • Identified benefits • Ignorance of MERESE Agreements and their benefits • Attention to sustainability 	Actor involvement	Promote awareness and dissemination actions	<p>Raising awareness from the beginning to the community groups and the actors present in the ecosystem to intervene, about the importance of conservation, recovery and sustainable use of resources, as well as the benefits, so that this information is part of the internal reflection and making group agreements in the communities.</p> <p>Thus, it is necessary to enhance the dissemination, communication, and awareness-raising actions of the MERESE agreements and their benefits to the communities, user population, authorities, and private sector, promoting their participation in the Good Governance Platform.</p> <p>Dissemination actions must be developed permanently, and as part of this it is necessary to include mechanisms for accountability aimed at the population and public opinion in general.</p> <p>Knowing the benefits of these interventions will provide support from the different actors in sustainability.</p>

With the information presented, it is possible to specifically propose those activities to be developed in the Puna Resilient Project, which we include directly in the matrix of results, products and activities of the Project in the Table 7. It should be noted that the information contained in tables 5 and 6 also contributes to proposing strategies for the development of these activities proposed for the Project.

Table 7 Proposals for actions in support of the MERESE in the Resilient Puna Project results matrix

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities
1. Puna ecosystems are restored, conserved and better managed through the implementation of EbA measures complemented by CRVC	1.1.EbA measures and climate resilient value chains are implemented at local landscape level	1.1.1 Setting up the basis for financing and implementing EbA measures and climate resilient value chains	1.1.1.1 Inform and identify communities, associations, cooperatives and Non-Governmental Organizations interested in participating in the project	Contribute to awareness-raising actions carried out in the areas of water MERESE, explaining the benefits they bring to local development and the synergy with the Project.
			1.1.1.2 Development of site-specific climate diagnoses and preparation of participatory intervention plans	Contribute to the development of participatory diagnosis and planning process to prioritize EbA interventions in the area of water MERESE.
		1.1.2 Financing and implementing of EbA measures and climate resilient value chains	1.1.2.1 Implementation of Local initiatives financed by the Puna Facility	Local initiatives funded by the project will include EbA measures complementary to the areas of water MERESE..
			1.1.2.2 Implementation of projects financed by MIDAGRI	.

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities
		1.1.3 Technical assistance to implement EbA measures and climate resilient value chains at the local landscape level	1.1.3.1 Technical assistance for the refinement of proposals and implementation of subprojects (including EbA implementation, business development and access to financing) through the Puna Facility.	Contribute to the development of additional studies required to refine technical proposals in the areas of water MERESE.
			1.1.3.2 Technical assistance through MIDAGRI	
			1.1.3.3 Promote market access and economic opportunities for sustainable and climate resilient value chains	
	1.2.The use of EbA knowledge is recovered and disseminated and local monitoring committees and observation systems are implemented.	1.2.1 Recover, innovate and expand ancestral knowledge and practices	1.2.1.1: Capacity building of local experts for the transfer of ancestral and innovative knowledge linked to EbA and climate resilient value chains (CRVC) measures	Promote the recovery and dissemination of local and ancestral knowledge that contributes to the results of the water MERESE.
			1.2.1.2: Production and dissemination of information materials on lessons learned from ancestral practices and innovation in a context of change	Disseminate the lessons learned from ancestral practices among the different actors that contribute and develop synergy with the water MERESE developed by the water utilities.

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities
		1.2.2 Implement community monitoring and observation systems to measure the impact of EbA measures and provide feedback to regional and national policies	1.2.1.3: Knowledge exchange between beneficiary communities with a gender perspective	
			1.2.1.4: Facilitate intergenerational dialogue on ancestral practices and innovation in a changing context	
			1.2.2.1: Training and implementation of Community Monitoring Committees to develop local monitoring systems.	Community monitoring will take into account contributing to water MERESE monitoring system in the cases of Local initiatives inside the areas of water MERESE.
			1.2.2.2: Development and implementation of a local information management system using the innovation of digital technologies	
			1.2.2.3: Analyse collected information on the impact of EbA measures	Generate community monitoring learning that contributes to the water MERESE monitoring systems developed by the water utilities.
2. Public and private financing for EbA	2.1.Financial mechanisms for the implementation of EbA	2.1.1 Establish the Puna Facility for long-term	2.1.1.1 Preparation and continuous improvement of	

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities
measures and climate resilient livelihoods are established and being actively used by vulnerable communities in the Puna ecosystem.	measures and improvement of climate resilient livelihoods in the Puna ecosystem are established	financing of EbA measures and climate resilient value chains	the allocation of resources of the Puna Facility	
			2.1.1.2 Development and implementation of innovative financial mechanisms to mobilize resources from the private sector and different donors	
			2.1.1.3 Promote access and alignment of public investments and other government programs for EbA measures and climate resilient value chains (CRVC) measures	support the development of the necessary coordination mechanisms to articulate implementation of water MERESE with other government programs.
		2.1.2 Strengthen capacities to develop and implement innovative EbA mechanisms in high Andean ecosystems	2.1.2.1 Technical assistance to improve the processes of existing MERERSE-hydrological systems in the project areas	Develop methodological and casuistry guidelines for knowledge and analysis of the social context and define strategies for the involvement of actors. Systematize MERESE initiatives that contribute to the development of EbA initiatives and strengthen technical assistance actions. Generate methodological instruments that

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities
				<p>contribute to improving the implementation of the different phases of the MERESE, including the baseline, such as monitoring actions and evaluation of results.</p> <p>Generate capacities in technical and legal teams of the water utilities for the development of modalities for the implementation of recovery measures for water regulation ecosystem services such as EbA.</p> <p>Develop actions aimed at technical and participatory hydrological monitoring.</p> <p>Provide technical information for the identification of water MERESE interventions.</p> <p>Develop indicators for the identification of social benefits of the implementation of the water MERESE.</p> <p>Generate instruments and support experiences to advance the implementation of</p>

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities
				monitoring systems and evaluations of results of water MERESE.
		2.1.3 Support the greening of microcredit to promote EbA and climate resilient value chains	2.1.3.1 Support to financial institutions in greening microcredits	
			2.1.3.2 Raise awareness on greener microcredit to promote EbA and climate-resilient value chains	
3. EbA and climate resilience are mainstreamed into multi-level landscape governance instruments	3.1. Multilevel landscape governance is improved through strengthening of national capacity, regulatory frameworks and M&E systems	3.1.1 Strengthen capacities for territorial planning and governance processes integrating EbA and climate resilience	3.1.1.1 Strengthen the capacities of relevant national, regional and local government actors for the incorporation of EbA measures and climate resilient value chains, integrating the gender perspective into their processes and interventions in the territory.	<p>Training and awareness-raising for regional and local governments in the development of measures aimed at the recovery of water regulation ecosystem services corresponding to EbA.</p> <p>Identify and raise awareness about the contribution of MERESE to risk reduction in the context of climate change.</p>

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities
			3.1.1.2 Strengthen participatory sectoral and territorial platforms and their action mechanisms for the articulation and scaling of EbA measures and climate resilient value chains in the scope of the project.	<p>Strengthen good governance platforms to implement the MERESE for water regulation in the water utilities.</p> <p>promote the participation of women, youth, adults, older adults.</p> <p>Generate methodological guides that guide the technical teams in the analysis of the social context for the identification of actors and promotion of Good Governance Platforms.</p> <p>Articulation of efforts through dialogue spaces such as Good Governance Platforms.</p> <p>Strengthen the synergy and inter-institutional coordination between the entities that participate in the basins and that can contribute to the achievement of water MERESE objectives.</p>

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities
			3.1.1.3 Integration of EbA measures and climate resilient value chains in territorial planning and management instruments	Strengthen territorial planning watershed approach for the adequate articulation, synergies and alignment of water MERESE, prioritizing spaces to demonstrate results.
	3.1.2 Strengthen regulatory frameworks and M&E systems at the national level	3.1.2.1 Improve national regulatory frameworks linked to EbA measures and climate resilient value chains		Support in the development of regulations that facilitate the implementation of the executing nuclei as a modality of implementation of the water MERESE with the water utilities.
			3.1.2.2 Improve coordination of EbA monitoring and evaluation (M&E) systems at the national level linked to project objectives and NDCs	Articulate MERESE monitoring and evaluation systems to the agricultural and water NDC monitoring and evaluation systems prioritized in the project.

Outcome	Output	Activity	Sub-Activity	Actions proposed to support MERESE in the Sub Activities

5. Conclusions and recommendations.

- There are important advances at the national level in relation to the implementation of water MERESE under the leadership of the water utilities. These advances are fundamentally in the preliminary stages and in the processes of concretizing the MERESE Agreements.
- The specific regulatory framework promoted by the sanitation sector and the regulator (SUNASS), together with the promotion and technical assistance provided by SUNASS and MINAM have been the elements that have favoured these advances. This has allowed the generation of capabilities in the water utilities to meet these new responsibilities.
- There are experiences developed with the support of cooperation in ANP, which have allowed the confluence of factors to achieve progress and results. In the case of the ANPs, they offer as contribuyentes the institutional framework and technical knowledge that facilitates the implementation of water MERESE.
- The experiences developed allow us to know the opportunities and limitations offered by the implementation modalities given the conditions of the contribuyentes, opening the possibility to propose new alternatives that allow more effective and efficient water MERESE processes.
- The role of civil society and international cooperation in the implementation of the MERESE has been strategic to face the difficulties encountered in the processes.
- The progress achieved opens a new range of needs and limitations that must be overcome, including the operationalization and financing of operation and maintenance, and the evaluation of results. These are added to other previous ones that persist.
- Since MERESE resources are insufficient for the recovery needs of ecosystem services, it is necessary to provide for a mechanism that, in administrative and operational terms, facilitates the complementation of resources from various sources.
- It is important to involve and generate trust relationships with contribuyentes throughout the process, knowing and understanding the territorial dynamics that are the expression of the relationship between societies and their natural environment. This will be the basis for proposing an intervention plan that understands not only the needs of the ecosystems but also those who maintain them, thereby guaranteeing their sustainability.
- Although there has been significant progress in the formation of good governance platforms, it is noted that progress is required in the incorporation of other relevant actors in the management of water resources, and committing their participation in conservation, recovery and the sustainable use of resources
- Most of the challenges focus on technical aspects related to capabilities, such as the social management of involvement of actors, especially with contribuyentes.

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