2023

VERSION 2.0 | COMPANY | AGRICULTURAL CHALLAPAMPA S.A.C. / LOS OLIVOS DE VILLACURÍ S.A.C.
HEADQUARTERS | CHALLAPAMPA – LAS CASUARINAS – LAURELES – EL ARENAL

Sustainable Hydric Management Manual

ALLIANCE FOR WATER STEWARDSHIP

Vanguard Group™
International

Presentation

Manuel Yzaga
CEO – Vanguard Group International

This manual has been prepared by Vanguard Group in Peru with the purpose of implementing a water management standard that contributes to the conservation of our water source, the Villacurí aquifer, which is located in the city of Ica and whose current situation is a risk that we consider challenging, but full of opportunities.

As a company, we recognize the great value of water resources in our operation and its reality has allowed us to internalize, through the AWS Standard, about the impacts that it can bring to our collaborators, users, and the general population, if we do not take some action on it.

We are aware that this means a great challenge as a team and as a company. Therefore, we will develop actions that allow us to achieve this.

Our action plan contains goals that we undertake to complain, which will be communicated at all levels of the organization, by inviting each of our collaborators to join the commitment.

This is the third year since we began this journey, which required a change in the company's policies and priorities, as we are convinced that our leadership is key to achieving our goal of ensuring sustainability and good water governance.

> *We are convinced that leadership is key to achieving our objective, which is to ensure sustainability and good water governance.*

Vanguard Group
International

Backgrounds

On October 15, 2019, we had the first meeting to discuss the implementation and subsequent certification of Standard AWS.

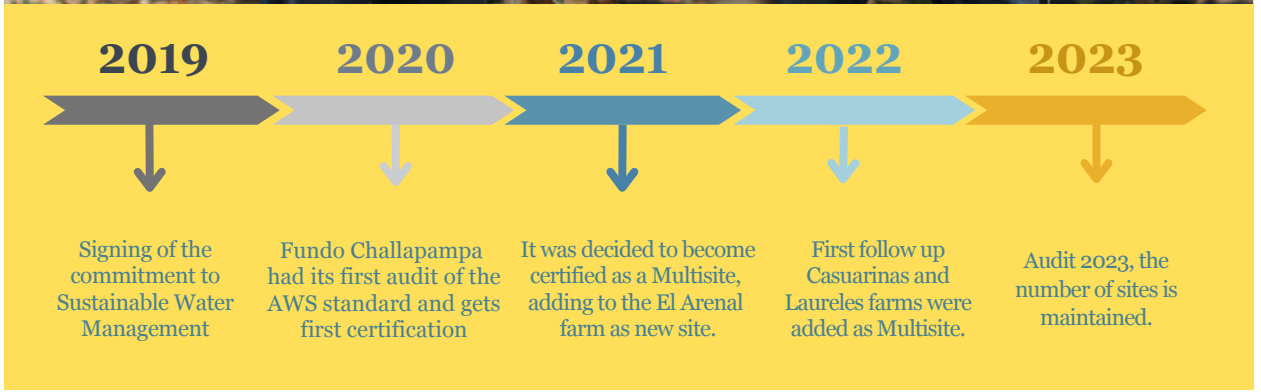
On December 05, 2019, Eng. Manuel Yzaga Dibós, CEO of Vanguard Group International, signed the commitment to Sustainable Water Management, with the participation of representatives of other agroexporters and representatives of the Alliance for Water Stewardship.

On November 15th, 2020. The Challapampa Fund passed its first audit of the AWS Standard developed by SGS, obtaining its first certification on December 17, 2020.

For 2021, the decision was taken to certify as Multisite, adding as a new site the Arenal Fund, owned by the company Los Olivos Villacurí S.A.C.; the audit was carried out on December 20, 2021, obtaining the certification on March 31, 2022, which is valid until March 2025.

In 2022, the first follow-up audit was carried out as a Multisite, adding two new sites, the Casuarinas and Laureles farms, both owned by the company Los Olivos de Villacurí S.A.C.

For the audit corresponding to the year 2023, the number of sites is maintained.



Step 1: Collect & understand

1.1. Collect information to define the physical scope of the site for sustainable water management purposes.

Including its operational limits, the water fountain from which it extracts the site, the places to which the site returns its discharges, watershed it affects and depends on.

1.1.1 Map the physical scope of the site. Considering the area of interest and the regulatory landscape of stakeholders, including:

Physical reach

The scope covers three (3) headquarters of the company Los Olivos de Villacuri S.A.C. and one (1) headquarter belonging to the company Agrícola Challapampa S.A.C., which are named below:

- Agrícola Challapampa S.A.C., site: Challapampa fund, located on Panamericana Sur Km 284.5, Salas - Ica - Ica.
- Los Olivos de Villacurí S.A.C., sites: Los Laureles fund, El Arenal and Casuarinas, located on the Panamericana Sur, at kilometers 280 and 284 respectively, in the district of Salas Guadalupe - Ica, where they develop productive activities in the Pampa de Villacurí, which is supplied by groundwater from the Villacurí Aquifer (see indicator 1.5.3) Interbasin of Río Seco.

The following table shows the total area of each site and its productive or cultivated hectares:

Fund	Total Area	Productive Area
Challapampa	319.7	287.69
Casuarinas	310.81	280.39
El Arenal	100	89.85
Los Laureles	210.47	134.29

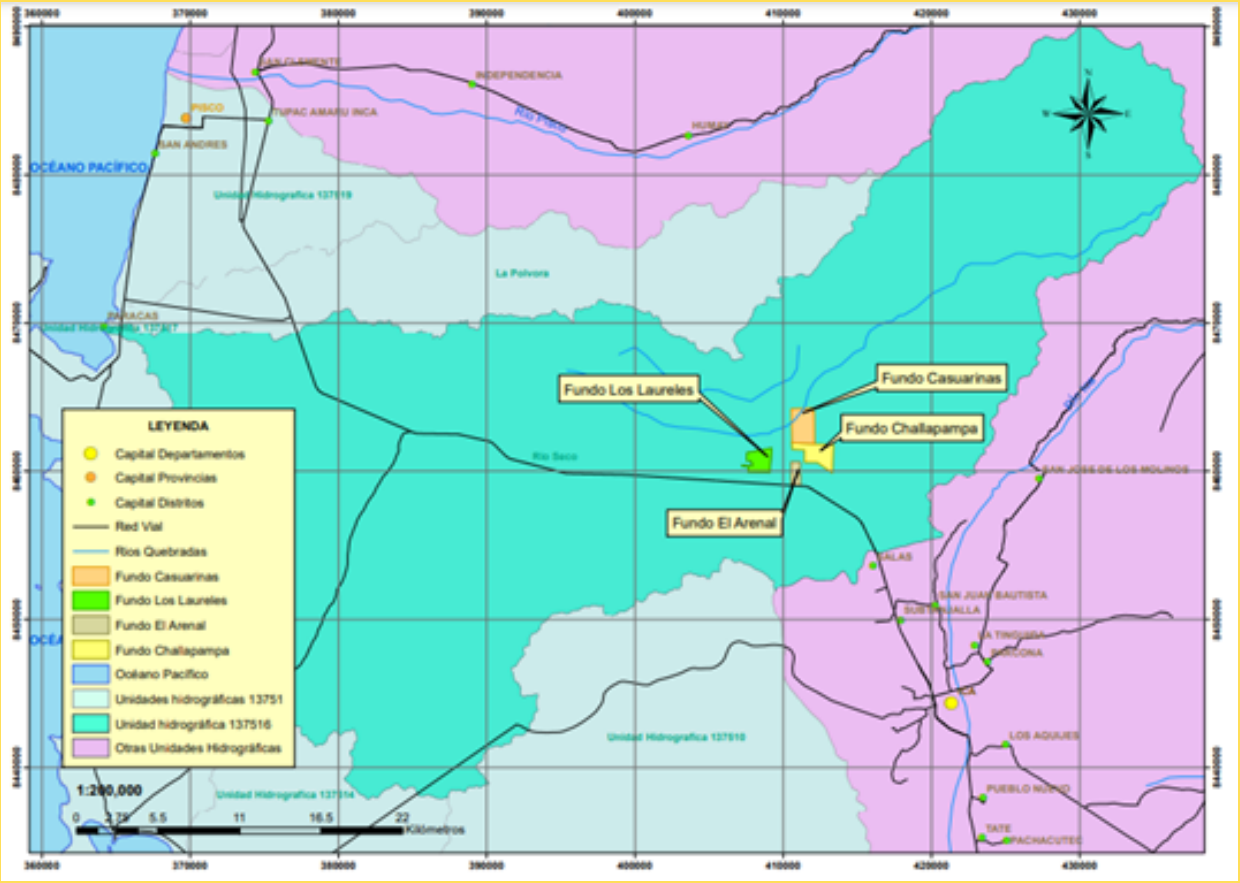


Chart No. 1. Location of the Fundos Challapampa, Arenal, Casuarinas and Laureles.

Operational limits

The following plans and maps are available:

- Location and accessibility map (see annex N°1).
- Perimetric and KMZ plans (see annex N° 2).
- SS. HH location plans (see annex N° 3).
- Water use permit certificates (see annex N° 4).
- Location maps of operating wells by property (see annex N° 5).
- Map of inoperative wells in Challapampa fund (see annex N° 6).
- Plans of the drip irrigation system (see annex N° 7).
- Map of neighboring fundos (see annex N° 8).

1.2. Understand relevant stakeholders, their water-related challenges, and influence skills of the site beyond their limits.

1.2.1. Identify the stakeholders and their water-related challenges, the process used for stakeholder identification should be identified, this process should:

- Include all relevant stakeholder groups, including vulnerable groups, women, minorities, and indigenous peoples.
- Consider the identified physical scope, including stakeholders, representatives of the final source of water of the site, and the final receiving water body or bodies.
- Provide evidence of stakeholders' consultation of water-related interests and challenges.
- Consider that the ability and/or willingness of stakeholders to participate may vary among relevant stakeholder groups.
- Identify the stakeholder engagement degree based on their level of interest and influence.

Development:

A list of relevant stakeholders was made, depending on the dependence, influence, or impact on the site and viceversa, also considering neutral stakeholders.

Nowadays, no indigenous populations have been identified near the site. Granted that, a minority of the mountains and jungle natives from Peru have migrated to the coast, this is already habituated to the place. On the other hand, a vulnerable group has been identified, which consists of children who are part of the shelter “Casa hogar Santa María de Guadalupe”, located in the district of Salas Guadalupe, where some of them live only from Monday to Friday, and on Saturdays they return home.

With the aim of approaching the communities and proposing improvements based on individual and group interests, as well as the challenges we will face – it was proposed to hold meetings with competent authorities, neighbors, representatives of the populations surrounding the site and collaborators.

For the determination of women as a fundamental part of interest, the information collected from the growth and distribution of the population in 2017 was used (see annex No. 9), which determines that in the department of Ica there is a population of 893,292 inhabitants, comprising 49.6% of men and 50.4% of women. Further, it was considered that the population censuses only in Salas Guadalupe were 25,767 people, and it could be concluded that, in that district, there are 12,987 women.

On the other hand, it is estimated that, in the Santa Cruz of Villacurí population, there are approximately 800 families who lack de basic services like drinking water; for this reason, a large percentage of them do not have their own bathroom in their home. However, they have a PTAR that is currently not in use due to the poor condition in which they are.

In the population of Expansión and Guadalupe, there are approximately 2000 families in Nueva Esperanza, who have one hour of water every two days.

During 2023, activities were held at the “Casa hogar Santa María de Guadalupe”. One of the most outstanding and emotionally impacting children of the shelter was the event called "Godfathers and Godmothers Vanguard Group", which aimed to create memorable experiences among the Vanguard Group in Peru staff, their families and children of the home, through the connection of affective bonds and moments of joy. This event was held in December as a pre-Christmas celebration, where the godparents gave gifts to the children of the home, creating an unforgettable moment in their lives.

Meeting with the neighbors of the same basin and another basin:

Initially, the approach with the neighbors was made through a group of companies that formed a committee called Comité Sur (today XynergICA), which was made up of 14 agroexporting companies committed to the efficient use of water resources, which unified efforts to propose actions within their sites and the basin.

These proposals were set out in a document called "water roadmap" (see annex No. 10), where they propose possible solutions according to the current reality.

Although this document can serve as a guide, it has not yet been fully validated by the corresponding authorities, and annex No. 63, includes a description of the projects implemented and in progress through the document called "XynergICA - Water Projects".

The roadmap mentions the artificial recharge project in the "Golda Meir" park, which was initiated after the visit of the Spanish hydrogeologist Dr. Enrique Fernandez, in his consultancy financed by the XynergICA on water balance and management.

Companies that made up the southern committee (XynergICA)

Vanguard Group International

Sun Fruits Exports S.A.

El Pedregal S.A.

Agrícola Chapi S.A.

La Portada S.A.C

Campos del Sur S.A. | Casursa

Procesos Agroindustriales S.A.

Agrícola Don Ricardo S.A.C

Campo Andino S.A.C

Sociedad Agrícola 3P S.A.C

Agrícola Riachuelo S.A.C

Uvica S.A.C

Agrícola Huarmey S.A.C

Agrícola Andrea S.A.C

Sociedad Agrícola Don Luis S.A.

On October 15, 2019, the first meeting was held to propose the implementation and subsequent certification of the AWS Standard, from which a minute was generated (see Annex No. 11).

At this important meeting attended representatives of the following companies:

- Exportadora Safco Perú
- PROAGRO
- Santiago Queirolo
- Vanguard Group International
- Brenda Salas: coordinator of XynergICA.
- AWS Consultant, Juan Luis Camere.

Manuel Yzaga Dibós, CEO of International Vanguard Group in Peru, signed the commitment to sustainable water management on December 5, 2019.

Since then, he has reinforced this commitment by participating in various events, such as EXPO AGUA Y SOSTENIBILIDAD held in 2022, AWS Forum 2023, CONGRESO INTERNACIONAL ALADYR PERÚ 2023, among others.

The commitment to Sustainable Water Management and the letter of appreciation can be seen in the annex No. 12.

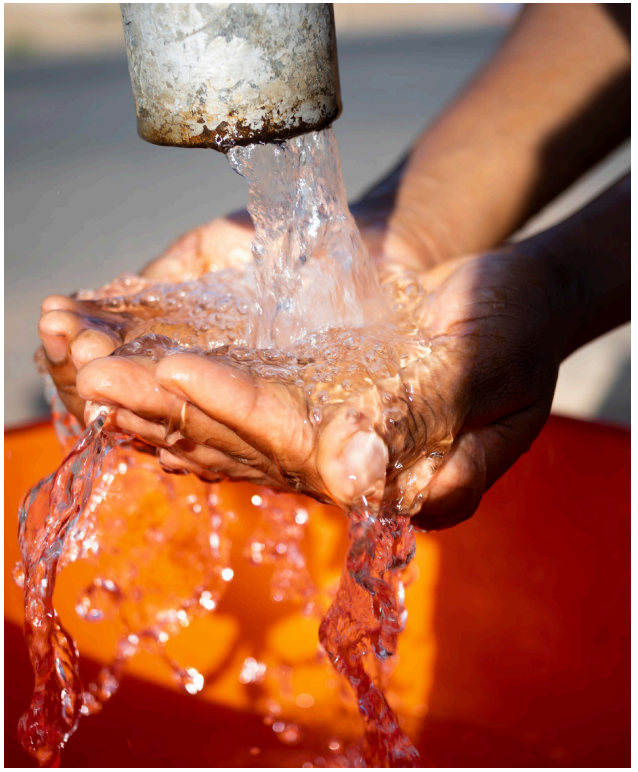
We are the 'mothership' that paves the way for sustainable water management.

On May 17, 2021, the podcast called "Leadership and innovation for water and sanitation for all" was held where Eng. Manuel Yzaga Dibos (CEO of Vanguard Group International) was interviewed.

This interview aimed to share experiences of leading organizations contributing to sustainable development goal 6, which is to ensure the availability and sustainable management of water and sanitation for all.

You can listen to this participation by clicking on the following link:

https://open.spotify.com/episode/5TIkkwaAkQfwjKq6HQuUh8



The objective of sustainable development is to ensure the availability and sustainable management of water and sanitation for all.

Once we define our involvement in the implementation of the AWS standard, we started with the identification of the stakeholders, making a matrix where we determined the power and influence of these stakeholders on a scale from low to high.

The following table separates the stakeholders according to their degree of influence on the site and viceversa.

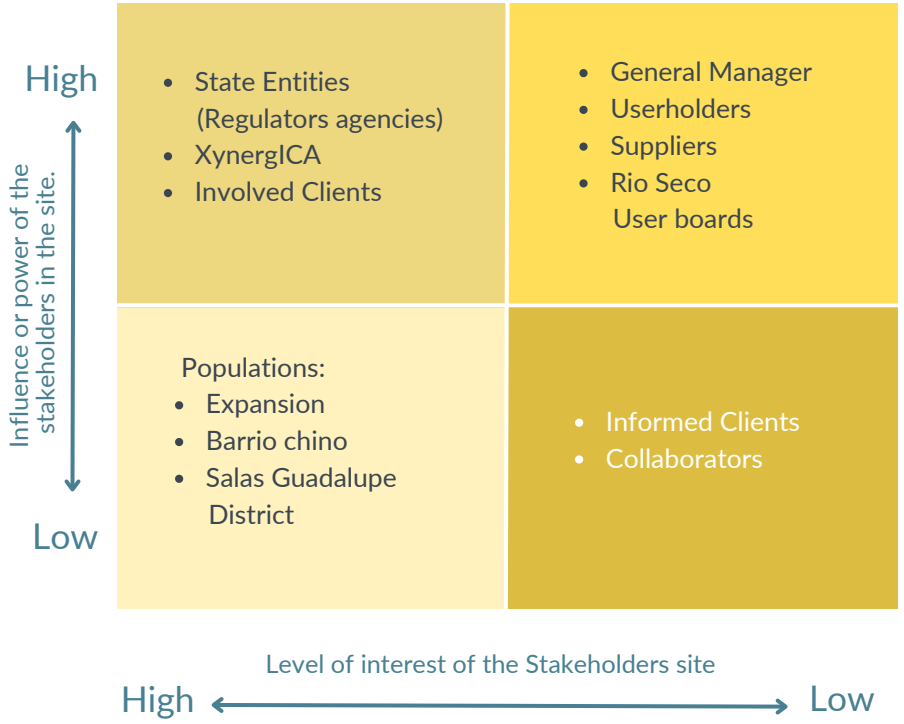


Table No. 1: Interested Stakeholders Matrix.

1.2.2 Identify the current and potential level of influence between the site and stakeholders within the basin, considering the final source of water from the site and the final receiving water bodies of wastewater.

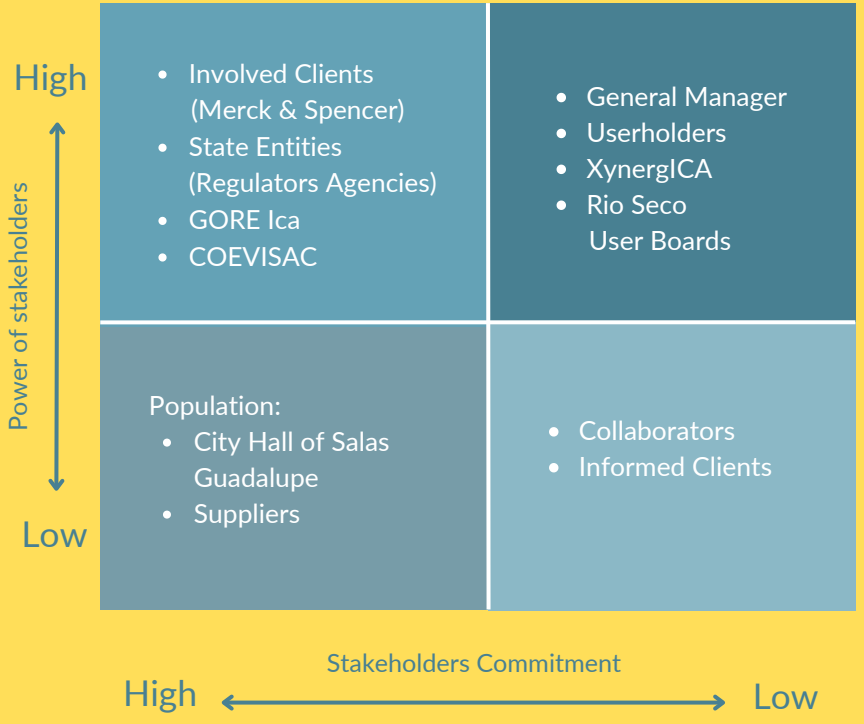


Table No. 2. Matrix from stakeholders influence or power.

1.3. Collect water-related data for the site

Including hydric balance, water quality, important areas related to water, water governance, WASH, water-related costs, income, and shared value creation.

1.3.1. Identify existing water-related incident response plans.

what are the following:

- Mitigation of water imbalance through an infiltration puddle of 14 ha in Golda Meier Park, southeast of Villacurí, next to the Ica Valley.
- Search for new infiltration areas that decrease the effects of the river flow reduction caused by climate change.
- Chunchanga Canal project with waters of the Pisco River, expanding the recharge zone.
- El Niño southern oscilation is a water incident that is repeated every certain quantity of years, with irregular intervals during summer, coinciding with grape. This climatic anomaly is accompanied by extreme temperatures and unusual rains no foreseen in the normal weather of Villacurí.

A contingency plan has been designed consisting of:

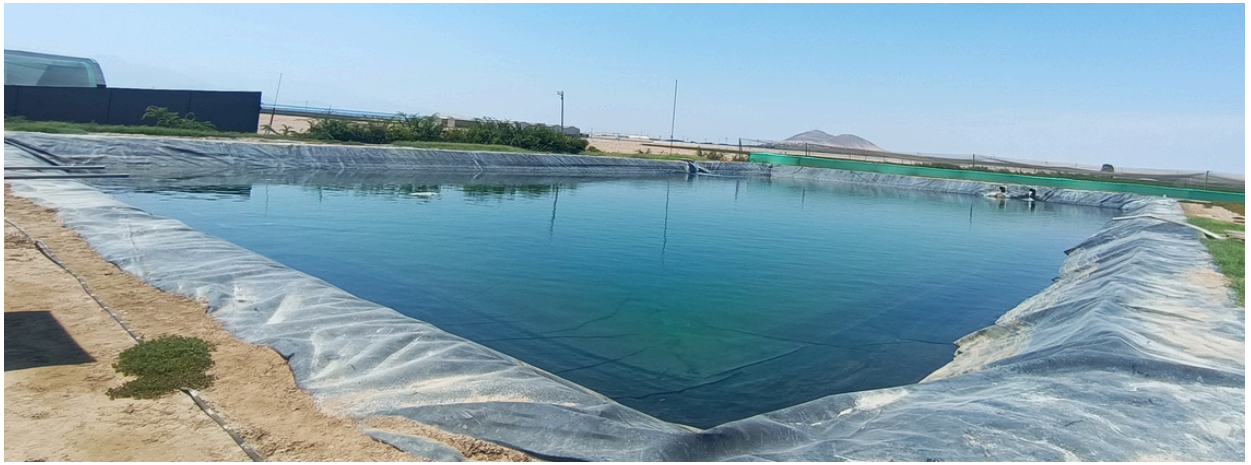
- Buy plastic blankets.
- Move the plastic blankets into the fields.
- Stack grapes soaps harvested in large groups.
- Cover them with plastic blankets.
- Move the soap, as soon as it is possible, from the field into the plant.

In case an earthquake happens, which could affect the structures of wells, limiting their use or damaging the pump to the point of any collapse (unlikely case) would not cause incidents since currently all headquarters have reservoirs where water is concentrated from all wells, therefore, the response to this event would be immediately as it would not limit the distribution of water in all its lines.

1.3.2. Identify and map of the site water balance, including entrances, losses, storage and outputs.

The water supply for all activities at the Challapampa fund is provided by eight subway tube wells; the Casuarinas, El Arenal, and Los Laureles farms have five, two, and four tube wells, respectively.

It is worth mentioning that each of these sites has a reservoir where the water of all wells is centralized. Extraction is measured by flowmeters installed in each one of them, taking as reference these measurements the water balances for 2022 and 2023 have been prepared for each headquarters that is today part of the certification (see annex No. 13).



Water consumption Vanguard Group funds in Peru

Code	Grant Date	Coordinates East	Coordinates North	Resolution	Denomination	M3/Year/Well 2021	M3/Year/Well 2022	M3/Year/Well 2023	Total Consumption (M3/Year)
IRHS 78	09/09/2016	410616	8461921	0327-2016-ANA-AAA-CH.CH.	Well A	249,870.50	167,686.29	424,699.31	
IRHS 843	23/07/2009	412750	8462194	RA N° 089-2009-MINAG-ANA/ALA-RS	Well B	355,301.97	367,204.95	304,071.24	
IRHS 639	22/03/2017	411577	8460619	0177-2017-ANA-AAA-CH.CH.	Well C	358,244.12	280,444.15	475,692.91	2,716,247.69 (2021)
IRHS 634	22/03/2017	412036	8460605	0179-2017-ANA-AAA-CH.CH.	Well D	282,913.88	333,147.44	362,831.75	3,105,811.83 (2022)
IRHS 921	05/01/2010	413592	8462130	RA N° 003-2010-ANA/ALA-RS	Well E	394,809.32	577,229.56	560,834.04	3,545,396.34 (2023)
IRHS 845	08/04/2009	413457	8461430	RA N° 034-2009-ANA/ALA-RS	Well F	473,733.66	607,595.03	564,576.34	
IRHS 844	08/04/2009	413349	8460877	RA N° 053-2009-ANA/ALA-RS	Well G	400,707.60	609,347.44	575,637.96	
IRHS 1208	22/03/2017	411231	8461522	0178-ANA-AAA-CH.CH.	Well H	200,666.66	163,156.97	277,052.80	

Table No. 3. Water Consumption 2021 - 2022 – 2023 Challapampa fund

Code	Grant Date	Coordinates East	Coordinates North	Resolution	Denomination	M3/Year/Well 2021	M3/Year/Well 2022	M3/Year/Well 2023	Total Consumption (M3/Year)
IRHS 900	22/03/2019	410612	8460287	0013-2019-ANA-AAA-CH.CH.	Well 1	378,763.08	421,959.46	520,773.42	**807,490.68** (2021)
IRHS 662	22/03/2019	410645	8459660	0013-2019-ANA-AAA-CH.CH.	Well 2	428,727.60	340,401.24	0.00	**762,360.70** (2022) **520,773.42** (2023)

Table No. 4. Water Consumption 2021 - 2022 – 2023 Arenal fund

Water consumption Vanguard Group funds in Peru

Code	Grant Date	Coordinates East	Coordinates North	Resolution	Denomination	M3/Year/Well 2021	M3/Year/Well 2022	M3/Year/Well 2023	Total Consumption (M3/Year)
IRHS 1047	08/01/2021	411372	8463566	0001-2021-ANA-AAA-CH.CH.	Well 1	602,964.00	744,836.40	425,995.20	2,519,511.90 (2021)
IRHS 1048	08/01/2021	411384	8463092	0002-2021-ANA-AAA-CH.CH.	Well 2	672,210.00	634,471.20	613,699.20	
IRHS 1187	08/01/2021	411399	8462518	0003-2021-ANA-AAA-CH.CH.	Well 3	855,180.00	815,191.20	847,393.20	2,617,484.28 (2022)
IRHS 1407	08/01/2021	411731	8463036	0004-2021-ANA-AAA-CH.CH.	Well 4	267,347.40	310,784.28	211,287.60	2,099,375.20 (2023)
IRHS 1406	08/01/2021	410997	8462770	0005-2021-ANA-AAA-CH.CH.	Well 5	121,810.50	112,201.20	0.00	

Table N° 5. Water Consumption 2021 - 2022 – 2023 Casuarinas fund

Code	Grant Date	Coordinates East	Coordinates North	Resolution	Denomination	M3/Year/Well 2021	M3/Year/Well 2022	M3/Year/Well 2023	Total Consumption (M3/Year)
IRHS 95	02/11/2017	407851	8460741	0585-2017-ANA-AAA-CH.CH.	Well 2	345,869.98	401,403.15	419,802.73	**1,318,624.27** (2021)
IRHS 97	02/11/2017	408718	8460319	0585-2017-ANA-AAA-CH.CH.	Well 3	186,410.00	75,402.45	0.00	**1,176,964.81** (2022)
IRHS 1409	09/10/2019	408424	8461387	0029-2019-ANA-AAA-CH.CH.	Well 4	442,892.16	403,760.00	441,190.00	
IRHS 814	02/11/2017	408890	8461153	0586-2017-ANA-AAA-CH.CH.	Well 5	343,452.13	296,399.22	253,639.00	**1,113,631.73** (2023)

Table N° 6. Water Consumption 2021 – 2022 - 2023 Los Laureles fund

- The annual volume extracted from wells of the Challapampa fund during 2021 was 2,716,247.69 m3/year. In the year 2022, 3,105,811.83 m3/year was extracted and in the year 2023, 3,545,396.34 m3/year was used, these volumes being lower than allowed by the authority.
- The annual volume extracted during the year 2021 from “El Arenal” fund wells was 807,490.68 m3/year. In the year 2022, 762,360.70 m3/year was extracted and in the year 2023, 520,773.42 m3/year was used, these volumes being lower than what is allowed by the authority.
- The annual volume extracted during the year 2021 from Casuarinas Fund wells was 2,519,11.90 m3/year. In the year 2022, 2,617,484.28 m3/year was extracted and in the year 2023, 2,099,375.20 m3/year was used, these volumes being lower than allowed by the authority.
- The annual volume extracted during the year 2021 from “Los Laureles” Fund wells was 1,318,624.27 m3/year. In the year 2022, 1,176,964.81 m3/year was extracted and in the year 2023, 1,113,631.73 m3/year was used, these volumes being lower than allowed by the authority.

To see the list of wells and permits, it is detailed the annual volume permitted by the National Water Authority is detailed (see annex No.14)

1.3.3. Quantify the water balance of the site: the entrances, losses, storage, and, outputs, including the indication of the annual variation rates of the water uses. When there is a related challenge, which poses a threat to the good hydric balance of people or the environment, an indication of maximum and minimum annual variations will be quantified.

With the purpose of making good use of the existing water resource, control measures for aquifer water consumption have been implemented, as follows:

- Technician drip irrigation system.
- Water dosing for the agrochemical application.
- Weather Station.
- Well-periodic maintenance.
- Optimized handling of soil moisture. From the Challapampa irrigation report (see annex N° 15).

Based on the information described, it has been recognized entrances, outputs, losses, and underground water consumption during the table grape production process and its quantification.

Entrances: Volume of water used for fertigation and sanitary applications and irrigation by drip.

Outputs: Evapotranspiration, structural water (85% water contained in fruit).

Next information has been used for the quantification:

Entrances:
Annual volume for fertilization, water volume per application, and monthly groundwater extraction reports (see annex N° 16).

Outputs:

- **Evapotranspiration:** Information obtained from the weather station.
- **Structural water:** Table grape production, 2021 - 2022 and 2022 - 2023 campaigns and % of water per kilo of grapes.

Losses: Meteorological data record 2023 (see annex N° 17)

Company	Crop	Campaign production 2021-2022 (Kg)	% Water/Kg Grapes	Structural water M3
Agricultural Challapampa S.A.C. Challapampa fund	Table grapes	12,541,720.00	85%	9,657.79
Los Olivos de Villacurí S.A.C. Arenal fund	Table grapes	4,517,392.00	85%	3,331.54
Los Olivos de Villacurí S.A.C. Casuarinas fund	Table grapes	10,522,790.00	85%	6,653.66
Los Olivos de Villacurí S.A.C. Los laureles fund	Table grapes	6,243,250.00	85%	5,350.17

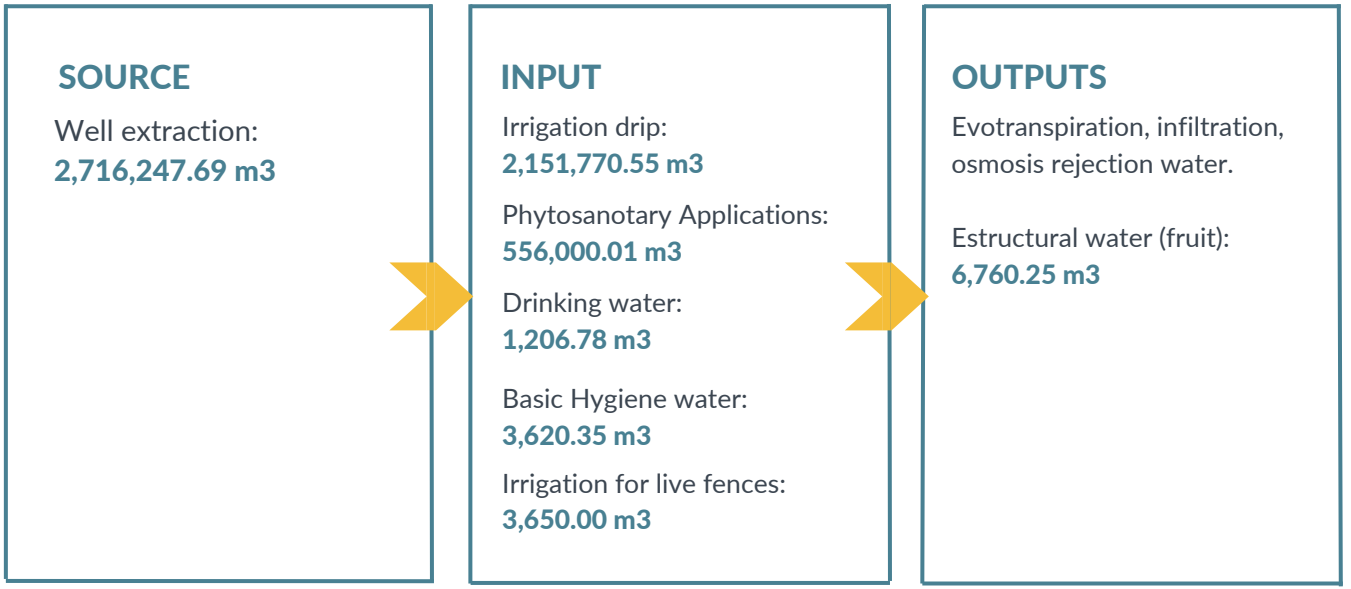
Table No.7 Structural Water Quantification 2021 - 2022

Company	Crop	Campaign production 2021-2022 (Kg)	% Water/Kg Grapes	Structural water M3
Agricultural Challapampa S.A.C. Challapampa fund	Table grapes	12,541,720.00	85%	10,660.46
Los Olivos de Villacurí S.A.C. Arenal fund	Table grapes	4,517,392.00	85%	3,839.70
Los Olivos de Villacurí S.A.C. Casuarinas fund	Table grapes	10,522,790.00	85%	8,944.37
Los Olivos de Villacurí S.A.C. Los laureles fund	Table grapes	6,243,250.00	85%	5,306.76

Table No.8 Structural Water Quantification 2022 - 2023

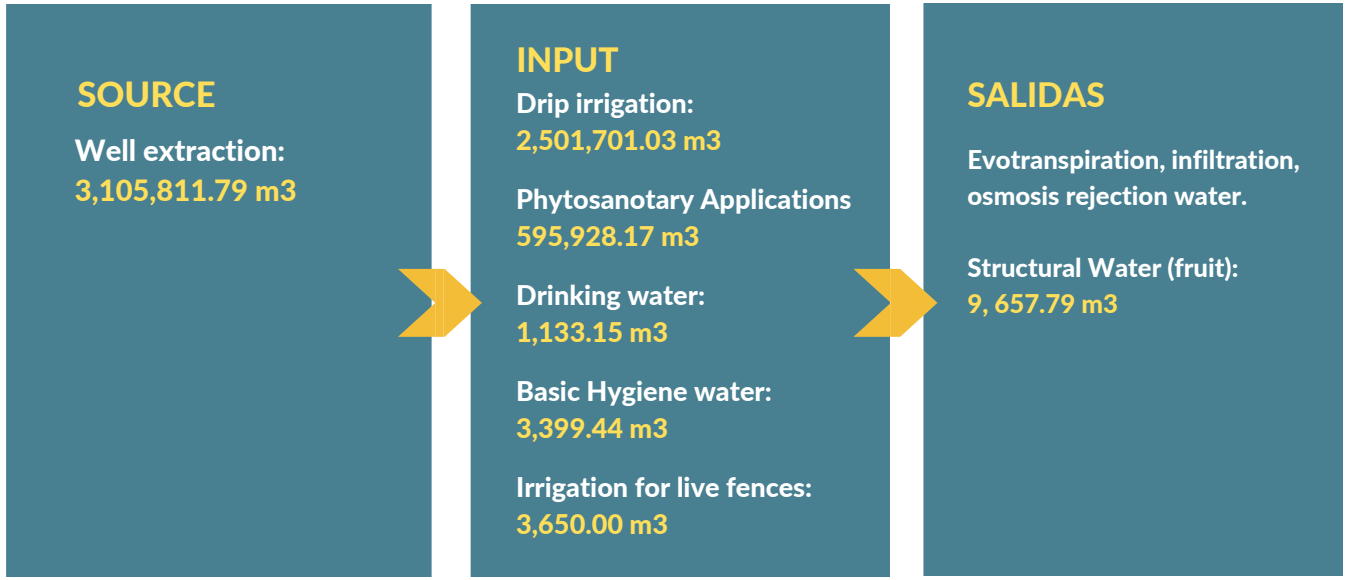
Quantification of water inflows and outflows Challapampa fund 2021

Graphic N° 1



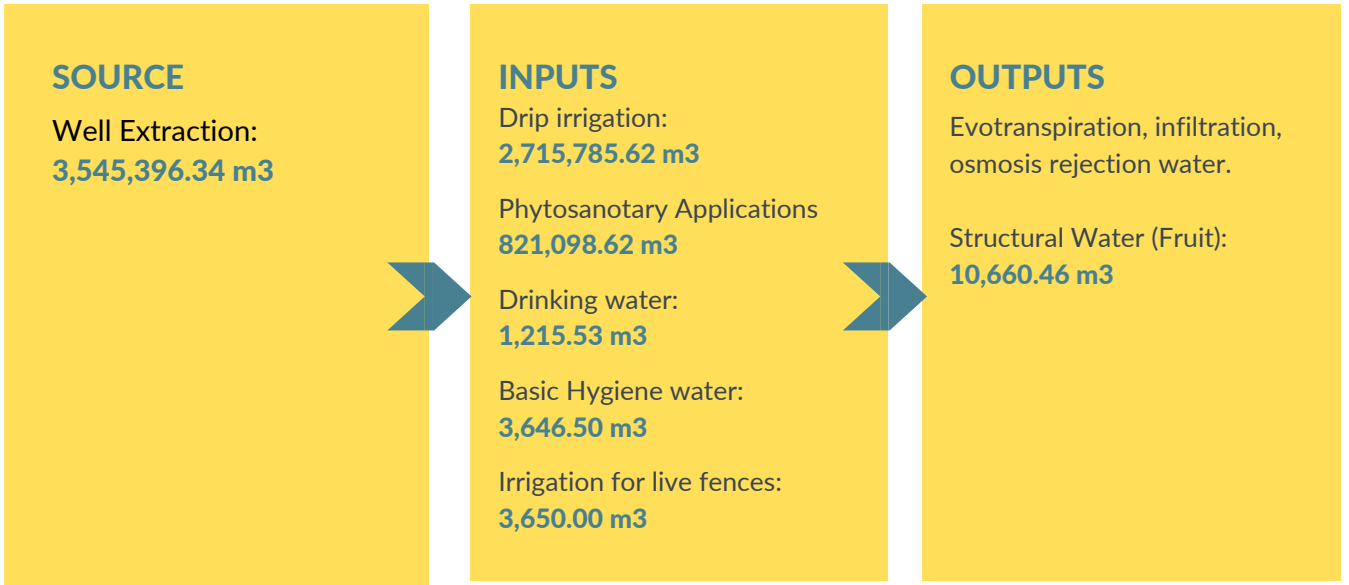
Quantification of water inflows and outflows Challapampa Fund 2022

Graphic N° 2



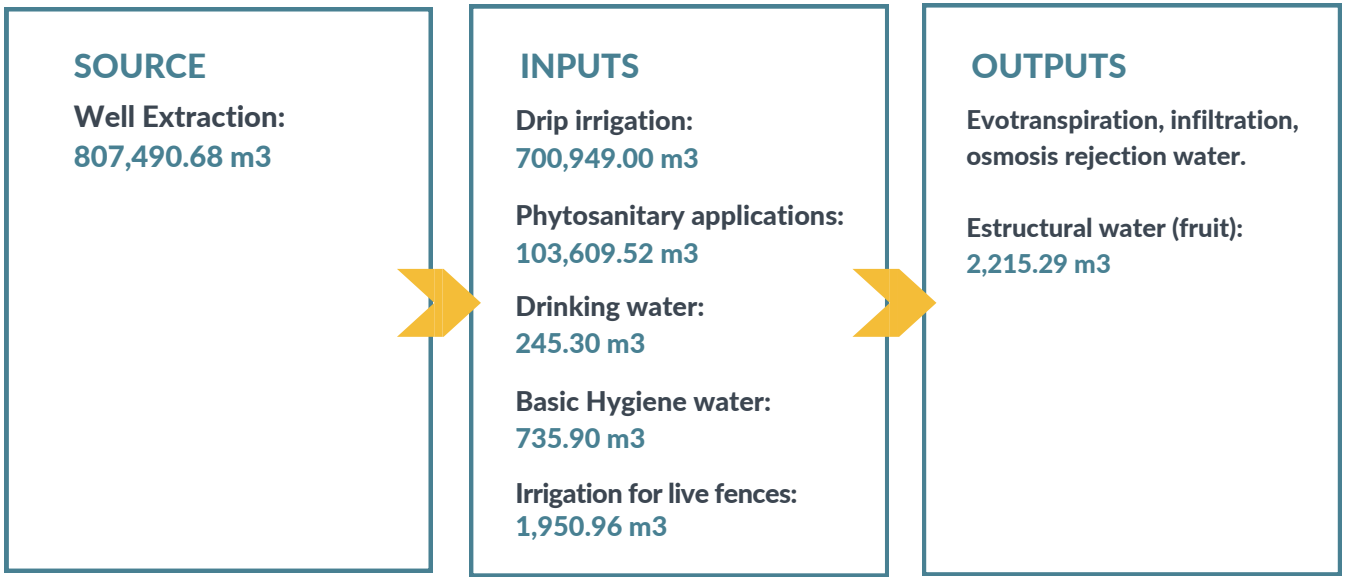
Quantification of water inflows and outflows Challapampa Fund 2023

Graphic N° 3



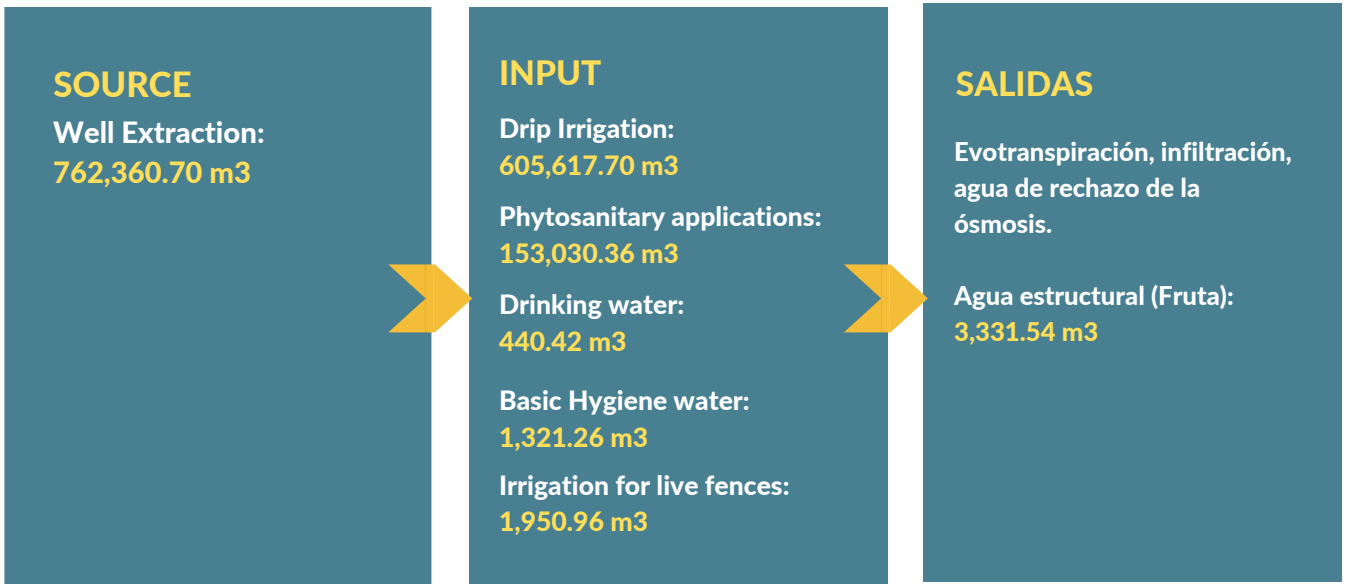
Quantification of water inflows and outflows Arenal Fund 2021.

Graphic N° 4



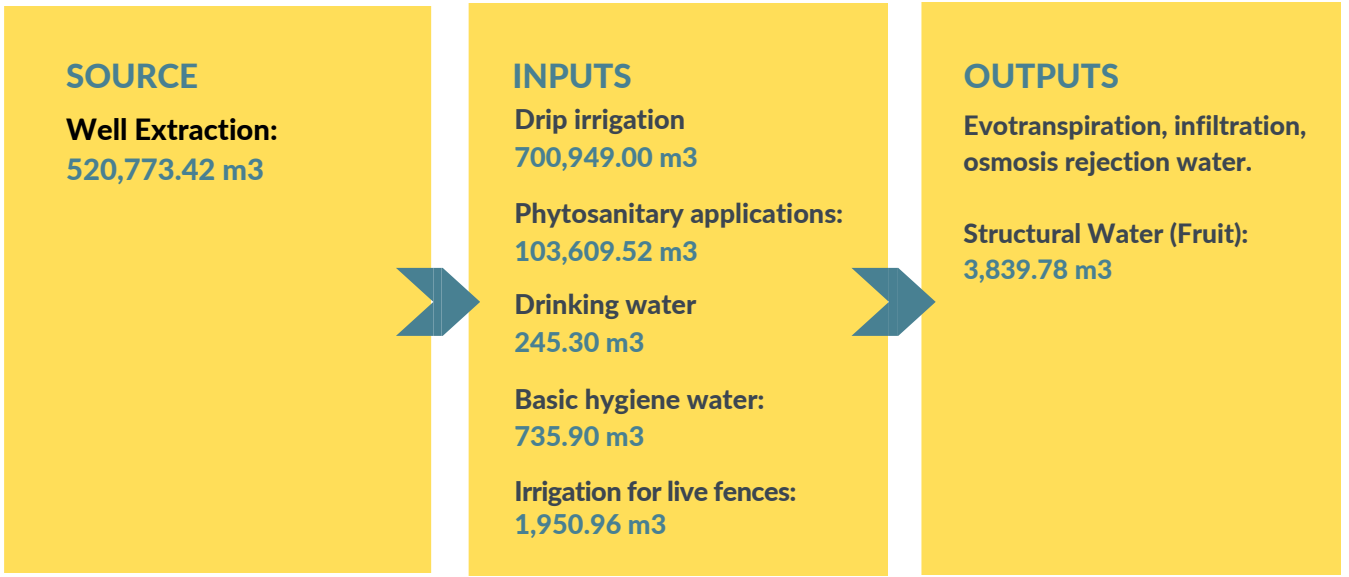
Quantification of water inflows and outflows Arenal Fund 2022.

Graphic N° 5



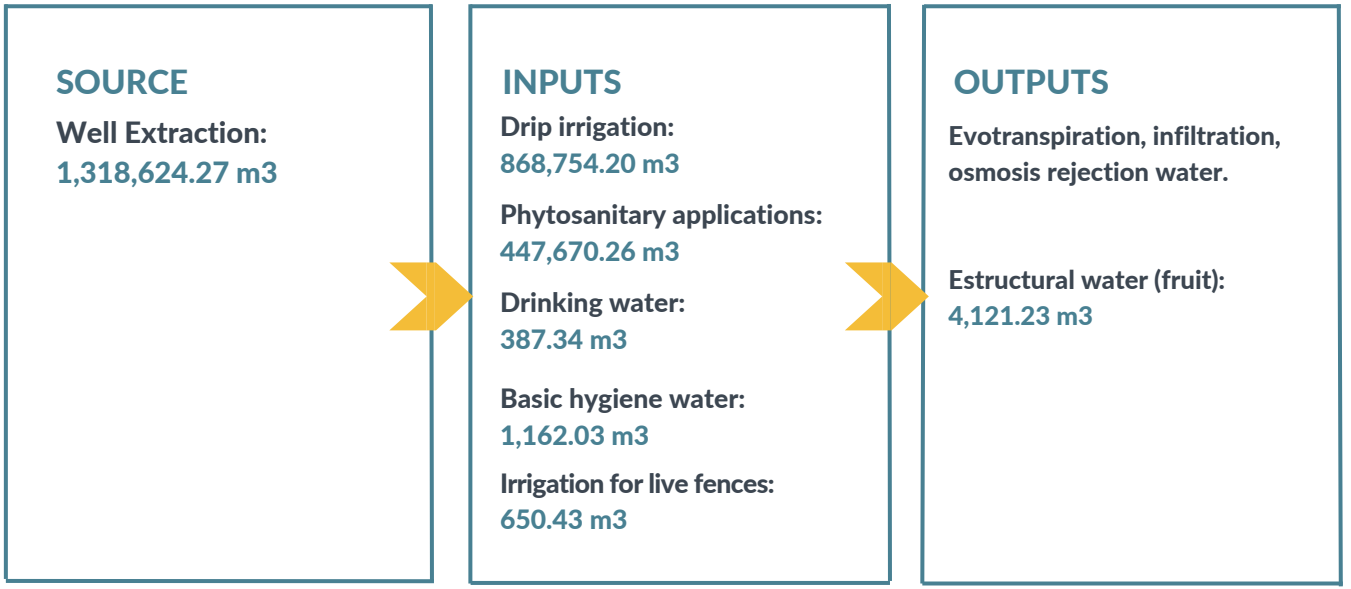
Quantification of water inflows and outflows Arenal Fund 2023.

Graphic N° 6



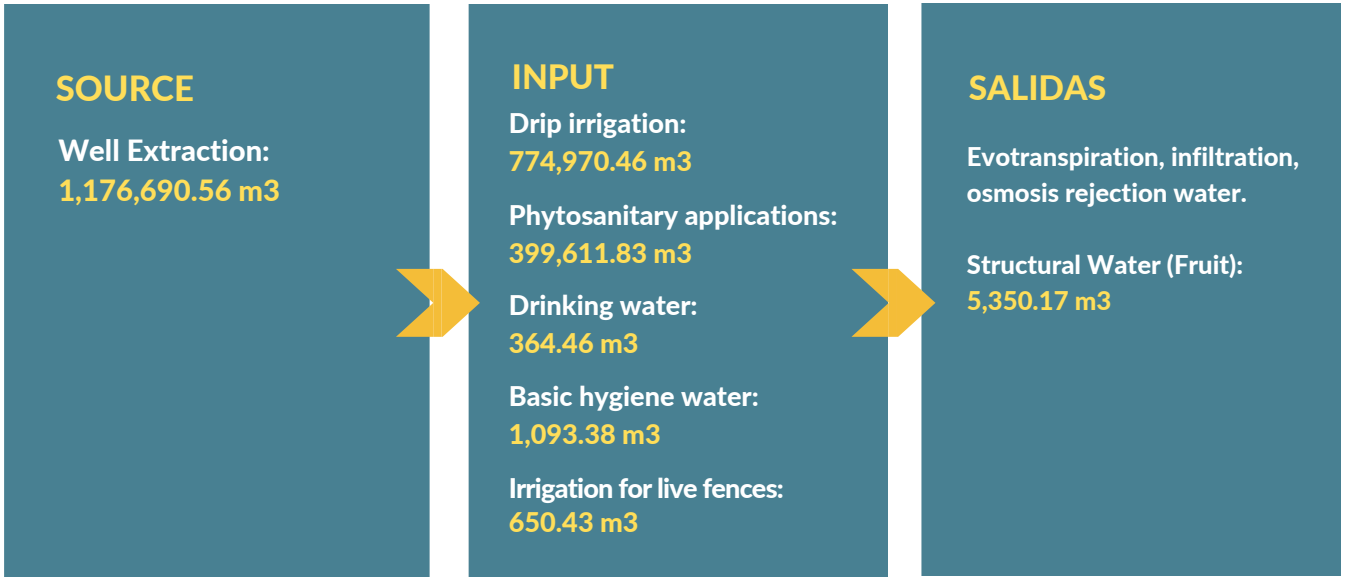
Quantification of water inflows and outflows Laureles Fund 2021

Graphic N° 7



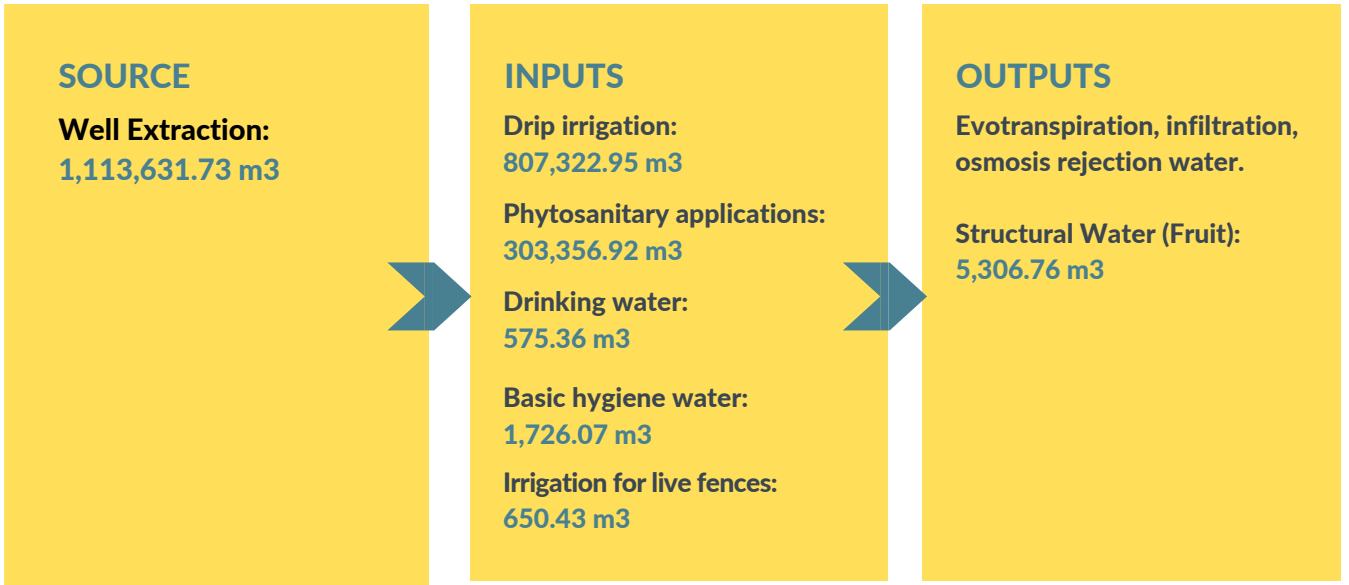
Quantification of water inflows and outflows Laureles Fund 2022

Graphic N° 8



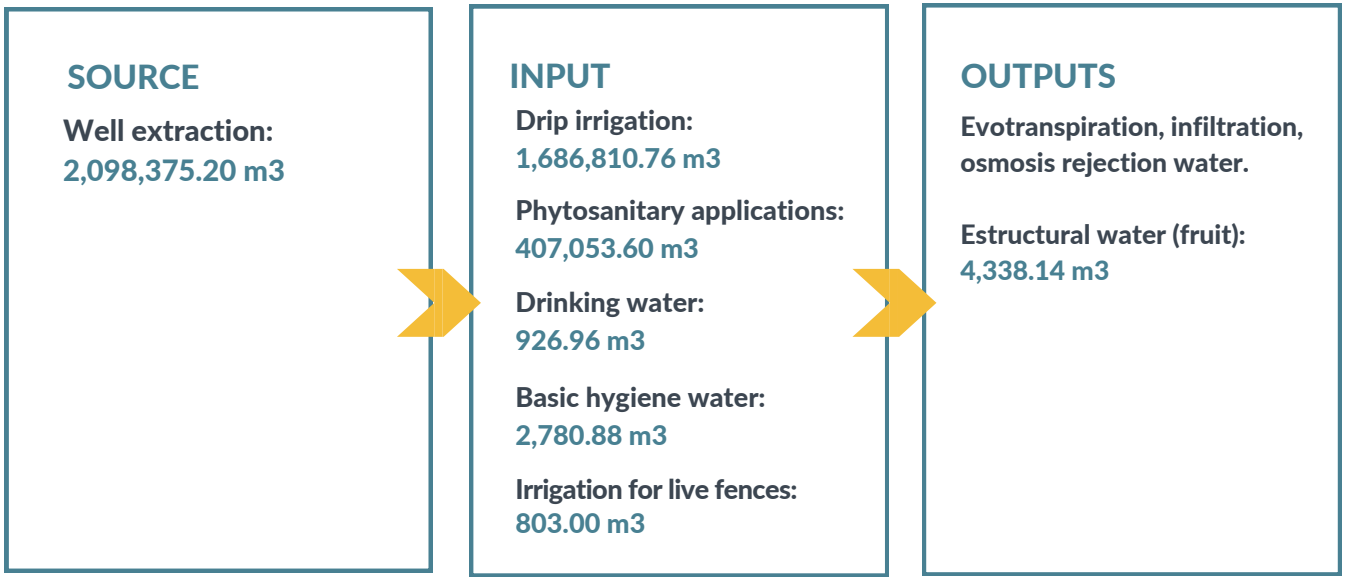
Quantification of water inflows and outflows Laureles Fund 2023

Graphic N° 9



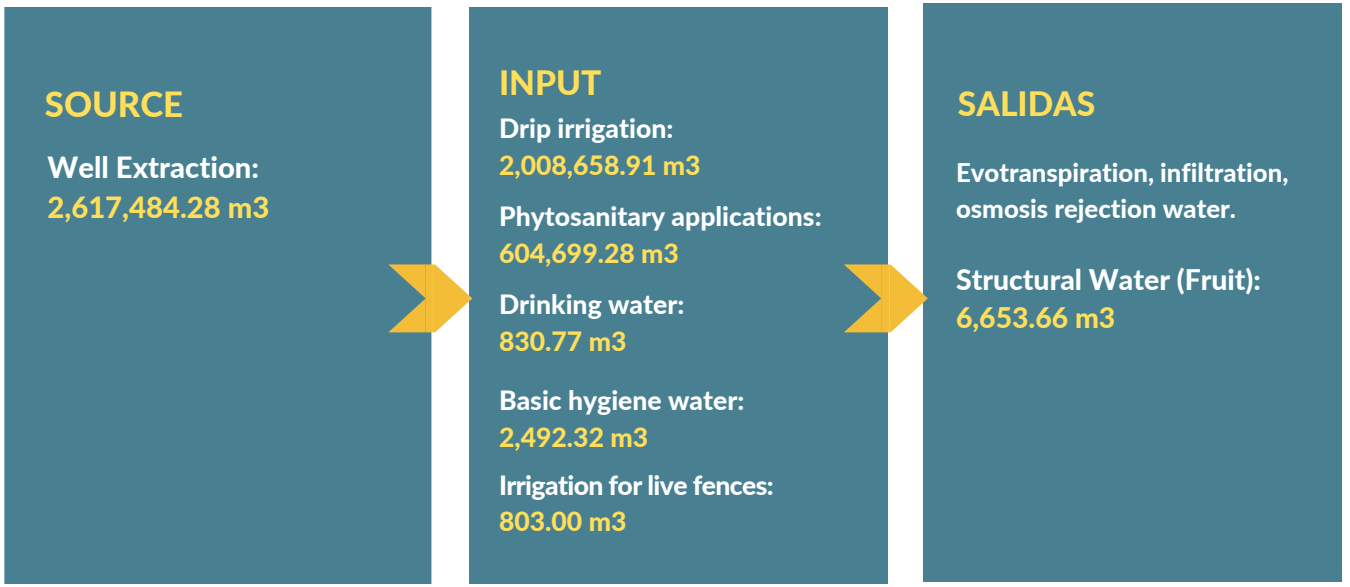
Quantification of water inflows and outflows Casuarinas Fund 2021

Graphic N° 10



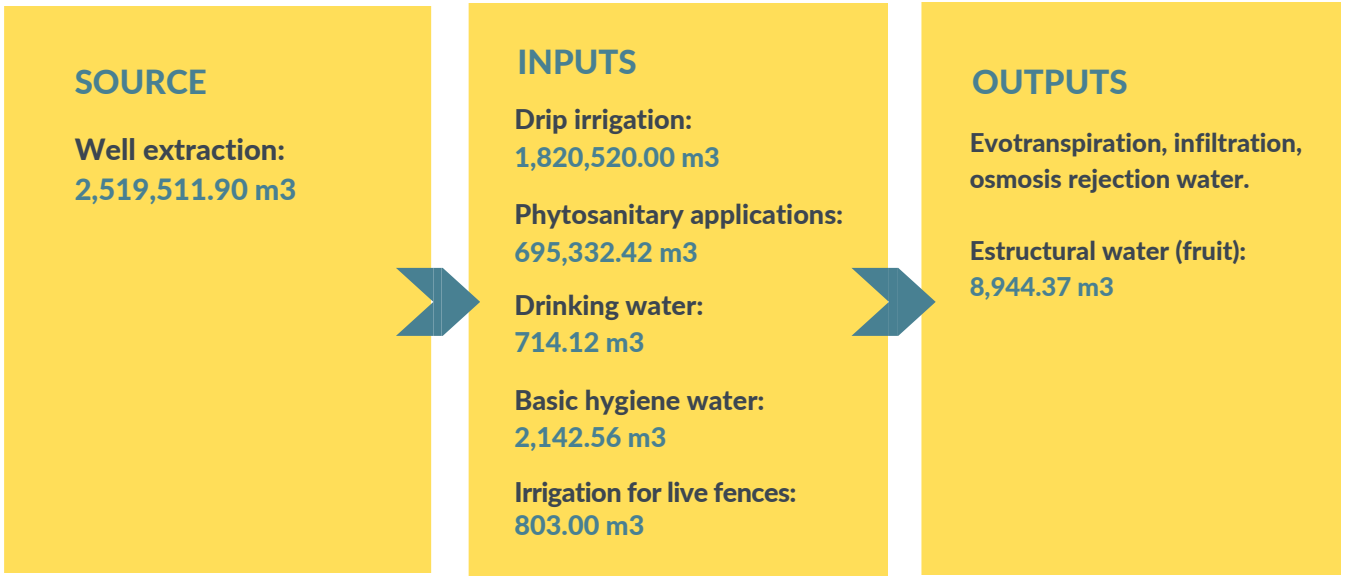
Quantification of water inflows and outflows Casuarinas Fund 2022

Graphic N° 11



Quantification of water inflows and outflows Casuarinas Fund 2022

Graphic N° 12

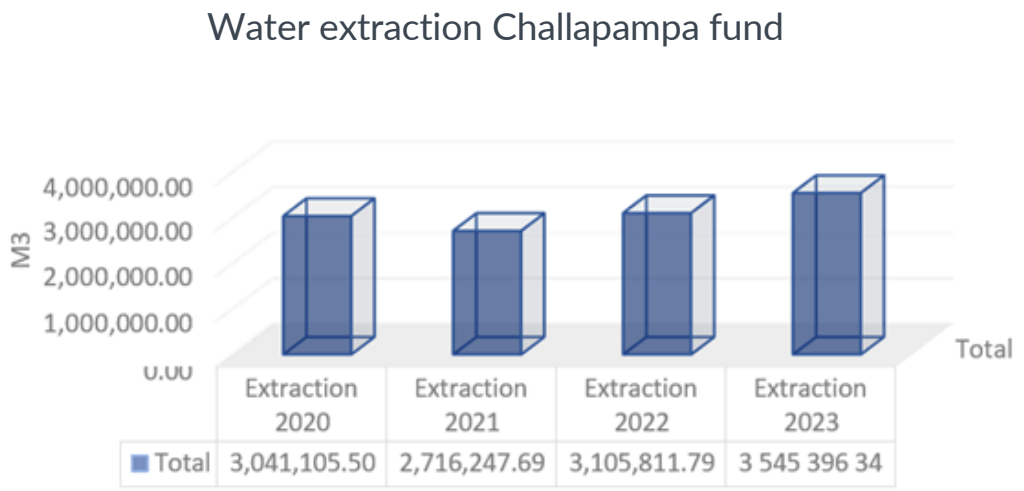


Water extraction

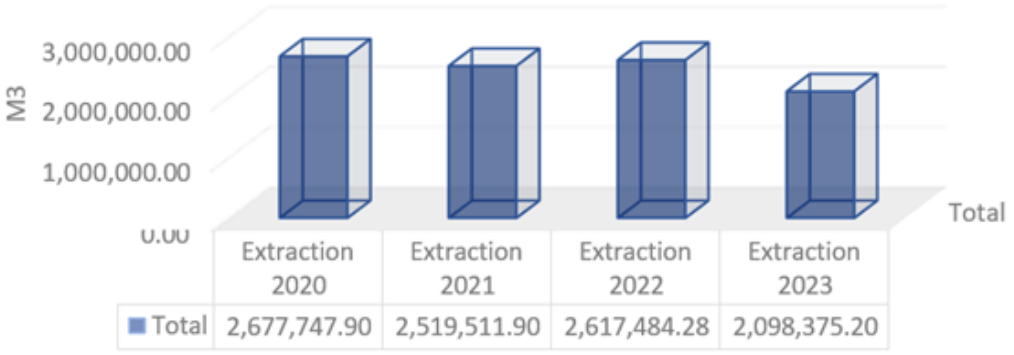
The preceding charts, with the exception of chart No.7, show the water consumption per season, taking as reference the two last campaigns. These charts were elaborated in order to determine the water consumption per productive season and the water savings, due to improvements in automated irrigation and the cultivation of varieties that consume less water, which would imply the maximum water efficiency has possibly been reached

In the graph No. 15, shows a slight increase in extraction between 2020 and 2021, since, during the first two months of 2020, no water was extracted from well IRHS 900, and no water was extracted in February of the same year from well IRHS 662.

Graphic N° 13. Water extraction 2020-2021-2022-2023 Challapampa Fund



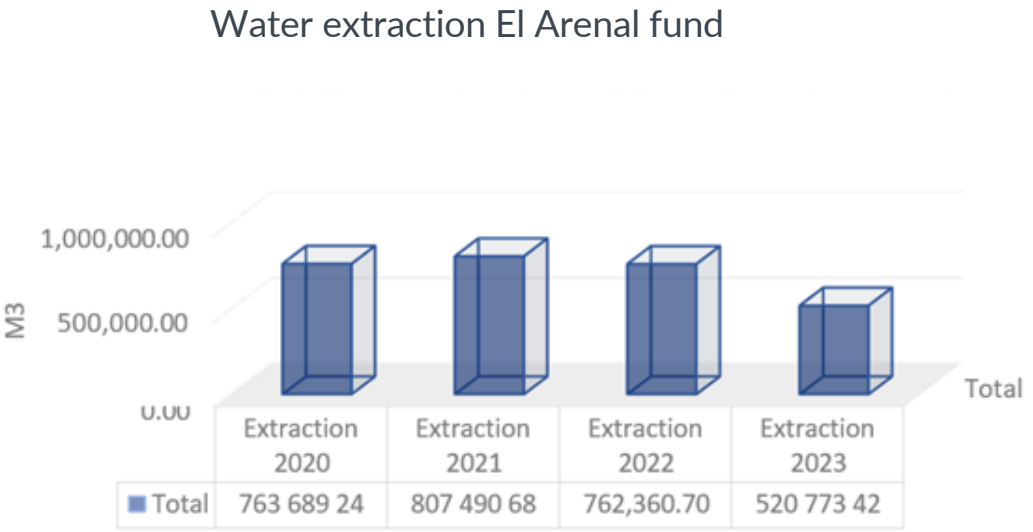
Graphic N° 13. Water extraction 2020-2021-2022-2023 Casuarinas Fund



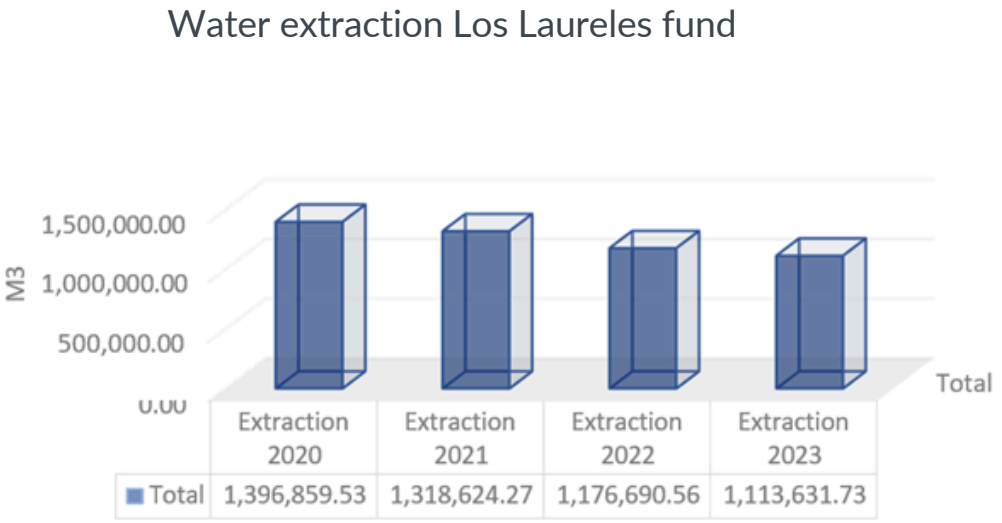
1.3.4. Quantify the quality of the water resource from the water fountains of the site, as well as the waters, waste discharges, and receiving bodies of water. If there is a related challenge that supposes a threat to the good quality of the water designated to people or the environment, an estimated annual high and low variations should be. In its case, seasonal.

To determine water quality is extracted for the execution of all the activities during the production process, and water analysis of all supplying tubular wells is done. The parameters cover microbiological, physicochemical, and heavy metals analysis. The results can be viewed in the year 2023 Water Analysis Report (see annex N° 18)

Graphic N° 15. Water extraction 2020-2021-2022-2023 El Arenal Fund.



Graphic N° 16. Water extraction 2020-2021-2022-2023 Laureles Fund.



1.3.5. Identify and map possible sources of pollution, including chemical substances used in storage or on the site.

Next pollution sources were determined:

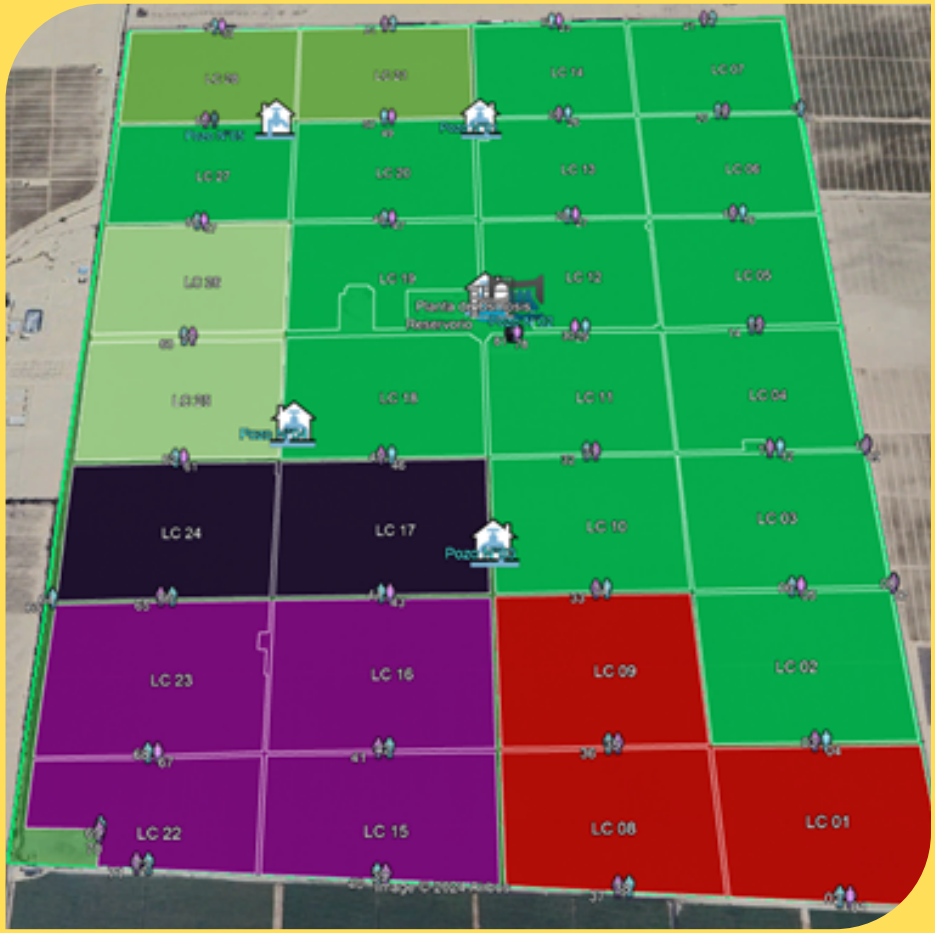
- Agrochemical storage.
- Mixing preparation points.
- Biochemistry.
- Evaporation well.
- Temporary storage of solid waste.
- Maintenance of agricultural machinery.
- Latrines.
- Fuel warehouse. It has a raised tank and a pump inside a warehouse, which has a waterproof cement floor and an operator who is responsible for supplying. Likewise, the process to obtain the direct consumer registration granted by OSINERGMIN will be initiated.

In the following annexes shows pollution sources:

- Risk Point location maps (see annex N° 19).
- Maps of the location of solid waste storage facilities (see annex N° 20).

Location of Hygienic Services

Casuarinas fund



Los Laureles fund

Location of Hygienic Services

El Arenal fund

Challapampa fund

Item	Description	Partial cost
1	Investment of structures.	S/ 2,724,005.28
2	equipment and Investment by purchase of flowmeters.	S/ 3,070.16
3	Costs per payment to the user board 2019 – June 2020	S/ 46,625.52
4	Costs per payment to COELVISAC 2019 – June 2020	S/ 919,946.17
5	Well maintenance costs 2019.	S/ 10,446.10
6	Costs for drinking water analysis.	S/ 10,000.00
7	Costs per worker salary per year.	S/ 89,280.00
8	Costs for the implementation of an osmosis plant and the installation of the drinking water distribution system Challapampa fund.	S/ 87,302.76
9	Costs for the implementation of an osmosis plant and the installation of the drinking water distribution system El Arenal fund.	S/ 59,193.97
10	Costs for implementation of two (two) biocams Challapampa fund.	S/ 22,661.57

Item	Description	Partial cost
11	Costs for implementation of one (01) biocams El Arenal fund.	S/ 11,330.83
12	Costs for manufacturing and installation of latrines Challapampa fund.	S/ 24,320.57
13	Costs for the manufacture and installation of latrines El Arenal fund.	S/ 25,920.36
14	Costs by construction of a central dining room Challapampa fund.	S/ 65,283.28
15	Costs by construction of a central dining room El Arenal fund.	S/ 40,312.28
16	Costs for the habilitation of the machine washing area.	S/ 8,852.17
17	Costs for the purchase of huarangos to be planted in the forest “Los Laureles de Villacurí”.	S/ 10,032.02
18	Costs for the habilitation of the evaporation pond Challapampa fund.	S/ 3,830.07
19	Costs for the implementation of a biodigester El Arenal fund.	S/ 5,203.40
20	Costs for payment to the user board, maintenance of wells, purchase of flowmeters 2021 - 2022.	S/ 580.076.44

Item	Description	Partial cost
21	Drinking water analysis Challapampa fund 2022 – 2023.	S/15,410.00
22	Drinking water analysis Las Casuarinas fund 2022 – 2023.	S/12,290.00
23	Drinking water analysis Laureles fund 2022 – 2023.	S/11,250.00
24	Drinking water analysis El Arenal fund 2022 - 2023	S/9,170.00
25	Well maintenance Challapampa fund 2022 - 2023	S/253,620.00
26	Well maintenance Las Casuarinas fund 2022 – 2023	S/157,080.00
27	Well maintenance Laureles fund 2022 – 2023.	S/130,900.00
28	Well maintenance El Arenal fund 2022 - 2023.	S/78,540.00
29	Payment to JIHS 2022 – 2023.	S/58,666.17
30	Payment to COELVISAC 2022 - 2023.	S/6,987,107.90
	TOTAL COST	**S/ 12,443,727.02**

Table N° 9. Hydric Costs Challapampa Fund. (2018 – 2019 – 2020 – 2021 – 2022 – 2023).

- **NOTE 1:** Maintenance for each well has an average cost of US$ 7,000.00 + I.G.V.
- **NOTE 2:** Only during the 2022 – 2023 campaign, S/ 650,260.00 was allocated for the maintenance of wells and repumps, as well as for the analysis of drinking wáter and irrigation.

1.3.6. Identify and map important water-related areas at the site, including a description of their status, as well as indigenous cultural values.

There is an important water-related area in the site, which corresponds to the forestation of 12 ha with huarango plants in Los Laureles fund. This project began on December 13, 2021 with the planting of 7 ha. Since that moment, it has been a rising activity, with the objective of meeting our goal of having 12 ha of forest with native plants.

1.3.7. Identify the annual costs and revenues related to the water resource, as well as a description and quantification of the water-related social, cultural, environmental or economic value generated by the site, which is used to inform the evaluation of the plan in section 4.1.2.

The details of the water costs are shown in the broad outline in annex No. 21. To date, there is no annual water-related income.

Social value: The Vanguard Group in Peru maintains a close relationship with the nearest communities and those that are outside its radius of action, which has allowed the company to be part of a series of actions in conjunction with local authorities, to improve the current conditions of the nearby communities, intervening in the following projects:

- Orientation and creation of Community Dining Halls..
- House of Culture.
- Citizen Security
- Titling of houses, orientation, and community facilitation of water and sanitation.
- Home Santa María Guadalupe.
- Education and Sports.
- Educating healthy children.
- Runners.
- Internet for students.
- Choral Symphony.
- Neighborhood gardens.
- Environmental Brigades at Fe y Alegría school.
- Community Support Activities (Community Police, Pension 65 - MDSG, youth pastoral Our Lady of Guadalupe, PRONOEIS - fences and shadows, serenazgo Salas-Villacurí, Caritas Ica - Inkafarma - milk formula, reopening of the regional museum).
- Participation in the YAKU program of ANA.

For the development of these projects, agreements were obtained with important actors for their consolidation (See annex No. 22).

Environmental value: This value is reflected in the implementation of an automatized system of irrigation by drip, which allows us to optimize the consumption of this resource for its conservation and compliance with the volume authorized by the competent authority, this can be verified in the Water Balances; there is also an environmental management instrument called the Environmental Declaration of Ongoing Activities (DAAC) for each headquarters, in which the environmental measures that we have taken as a company are described, such as: Environmental monitoring, solid waste management, effluent management, among other actions.

It is also worth mentioning that we are members of two projects to recharge water to the aquifer called: "Artificial water recharge in Golda Meir Park" and "Infiltration ditches at the head basin - Huaytará", both routed through XynergICA.

In the following images, you can see that the Golda Meier artificial recharge project is located on the ANA institutional portal.

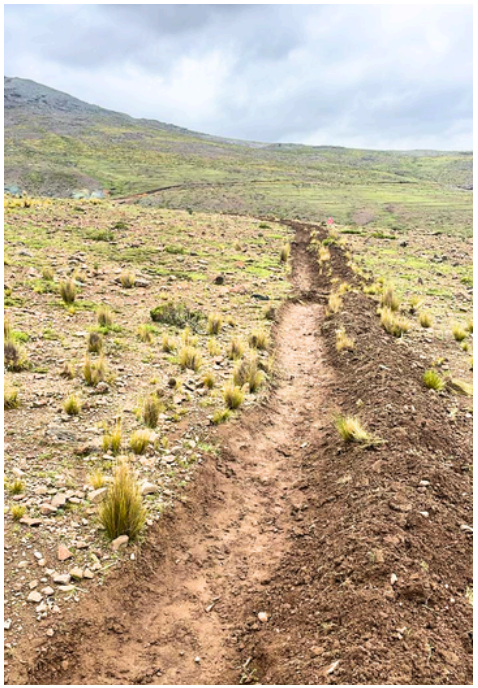
The following images correspond to the project "Infiltration ditches in the headwaters of the Huaytará watershed".

Another project that leaves a great environmental value is the "Afforestation project with native plants" carried out at the Los Laureles fund.

Likewise, when developing some projects of social value, they also generate an environmental value due to the impact they leave, these are mentioned below:

- Titling of houses and community orientation and facilitation of water and sanitation.
- Neighborhood gardens.
- Environmental brigades at the Fe y Alegría school.
- Participation in ANA's YAKU program, the work plan is yet to be defined.

It is accurate to mention that on 30/12/23, the National Association of Journalists of Peru granted a recognition to Vanguard for its permanent concern in the defense of the environment, the sustainable use of water resources and the constant support for children and the most vulnerable populations (see Annex 23).



Economic value: The development of external social and environmental projects has implied the allocation of economic resources, leaving a great satisfaction of the investment made since the impact on the community exceeds what was expected; the investment during the year 2021 for the execution of these projects amounts to an amount of 90,214.55 USD.

1.3.8. Identify the access level and water suitability, sanitation, and, hygiene (WASH) at the site

a. Description of drinking water supply:

The supply of drinking water is made through fifteen (15) distribution points strategically located throughout the Challapampa farm, nine (09) for the Arenal farm, ten (10) for Laureles, and thirteen (13) in Casuarinas. The water that will be distributed is treated in the reverse osmosis plant that has been implemented to finally be sent by a piping system to each point. (See annex N° 24).

The wells that supply the osmosis plant are as follows:

1. **Challapampa fund:** IRHS 78 (well A) and IRHS 1208 (pozo H).
2. **Arenal fund:** IRHS 900 (well 1) and IRHS 662 (well 2).
3. **Los Laureles Fund:** Rebumping.
4. **Casuarinas Fund:** IRHS 1048 (well 3).

b. Description of the effluent treatment system: The sanitary facilities consist of a septic tank and three percolator wells, which are enabled and comply with the technical specifications established by Peruvian I.S. 020. These facilities receive effluents from hygienic services of the administrative area, which are treated primarily in septic tanks, and then derived and finally arranged in the percolation wells.

- **Septic tanks.** Are units used for the treatment of wastewater in zones where there is no public sewerage network, like in our company. These devices combine sedimentation and anaerobic digestion processes into sludge. They sediment the solids preventing them from being dragged with the effluent, since it still has a high content of dissolved organic matter, it requires a subsequent treatment, for which drainage systems are used by percolator wells.

- **Physical features of the septic tank.** Has two chambers, and sanitary networks for the conduction of sewage liquids by gravity with inspection boxes, in accordance with the National Building Regulations (RNE).

- **Fat tramp.** It is for the treatment of effluents from the dining room, which holds and separates organic waste from fat.

- **Removal and disposal of sludge.** Sludge extraction is carried out by third parties, specifically by a solid waste operator (EO-RS), registered with MINAM. It uses a vacuum tanker truck, equipped with a pump to suck the accumulated mud from septic tanks.

- **Percolators wells.** These receive domestic effluents treated by infiltration in the ground. After the construction of this facility, a percolation test was performed to measure the time of infiltration of the liquid as established by I.S. 020.

We already have the sanitary authorizations issued by DIGESA - General Directorate of Environmental Health (See annex 25).

c. Hygiene: There are the next sanitary and hygiene facilities for all the collaborators of the Arenal, Challapampa, Casuarinas, Los Laureles funds.

- Toilets in the general administrative services (toilet and lavatory).
- Lavatory locates in the food preparation area.
- Toilets in the production offices (toilet and lavatory

- Toilets in the meeting room (toilet and lavatory).
- Toilets for women (toilet and lavatory).
- Toilets in the storage (toilet, lavatory, and shower).
- Toilets for applicators and tractor drivers (toilet, urinals, shower, and lavatory).
- Latrines strategically distributed in the agricultural field.

For each kind of installation, there are handle procedures, which are detailed:

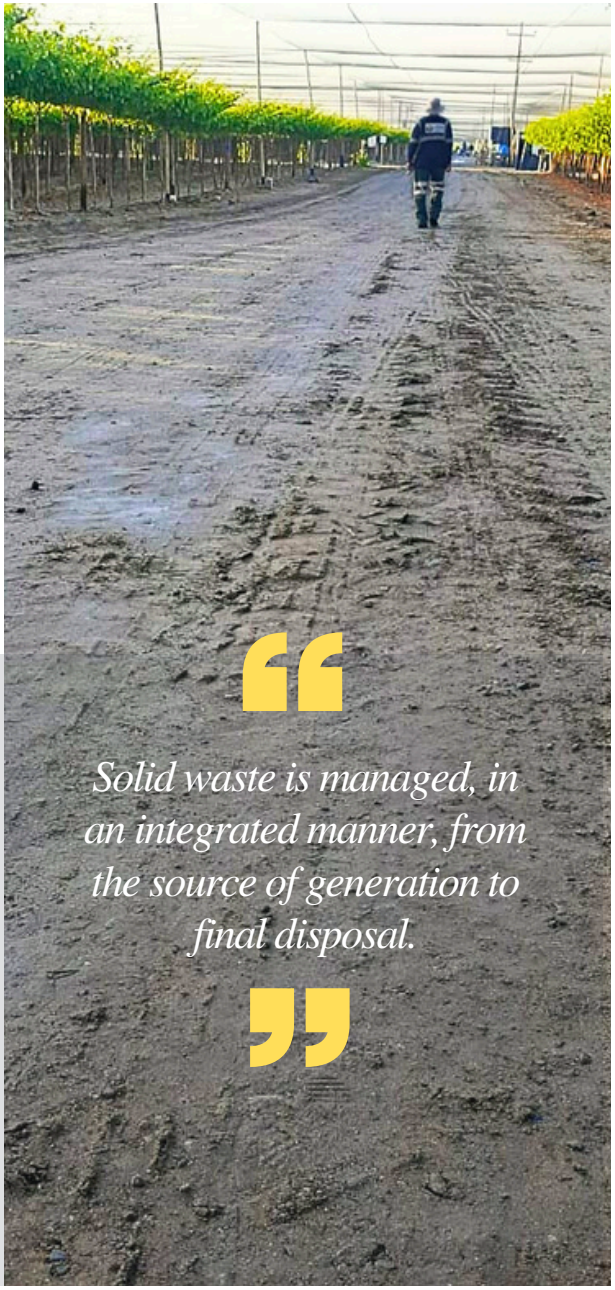
- **Toilets, showers, and lavatories cleaning.** Has the general administrative services as a responsible area. They have trained staff and specific personal protective equipment to comply with the office cleaning procedure and hygiene services (see annex No. 25).

- **For the maintenance of the septic tanks, percolate wells, and sludge disposal,** the company has an operation and maintenance manual for sanitary facilities, which details the maintenance procedure to the final disposal of sludge. Annex No.26 shows that sludge suction has been carried out with an authorized EORS.

Cleaning of latrines located in the agricultural field: This is done daily by trained personnel belonging to the agricultural general services area. Part of the procedure is that, once the cleaning is completed, lime is added to the pit where the organic matter is derived. This is detailed in more detail in the cleaning procedure for field sanitary services (see annex No. 27)

.

Solid waste is managed, in an integrated manner, from the source of generation to final disposal, in accordance with current environmental regulations and our integrated solid waste management procedure (see annex. No. 28).



1.4. Collect data about the indirect use of water from the site.

Including its primary inputs, the use of virtual water in its production, the state of the waters at the origin of the inputs – where they can be identified – and the water used in subcontracted services related to the water resource.

1.4.1. Identify the virtual water uses in primary inputs, including the quantity, quality, and risk level of water within the site´s basin.

None of the primary inputs are produced in the basin, therefore, this mapping does not apply, however, like following is a list of the most relevant inputs for the production process:

Manures and fertilizers. are bought from suppliers who produce outside the Villacurí basin.

Fertilizers

- Organic fertilizers
- Biostimulants
- Foliar fertilizer
- Single-celled algae
- Growth regulators
- Humic acids
- Agricultural amendments
- Attractive
- Adherents
- Complex corrector

Agrochemicals

- Acaricides
- Agricultural oils
- Adjuvant
- Fungicides
- Insecticides
- Quality improver
- Sulfur
- Agricultural detergents
- Scarring
- Herbicides
- Nematicides
- Vegetable extracts
- Pest repellents

Fuels and lubricants

- Gasoline
- Oil
- Lubricants
- Gas
- Additives
- Fat

Various teams

- Irrigation equipment

Agricultural facilities.

- Anti-bird mesh
- Pine poles
- Concrete blocks
- Galvanized wires

1.4.2. Identify the use of virtual water from subcontracted services, to quantify inside the site basin.

One of the external services that contract the company is the employer´s transport, which must comply with the disinfection procedure of personnel transportation units (see annex N° 29).

It should be mentioned that the following values are estimates, based on reports from suppliers.

VEHICLES WASHING						
Type	Annual average of vehicles per site				Lt/vehicle	Total (m3)
	Casuarinas	Challapampa	Arenal	Laureles		
Bus	30	40	14	11	1000	95
Couster	19	32	11	26	500	44
Minibus	25	34	13	12	700	58.8
Combi/Van	7	15	4	10	300	10.8

Table No. 10. Water Consumption by washing and disinfection of personnel carriers.

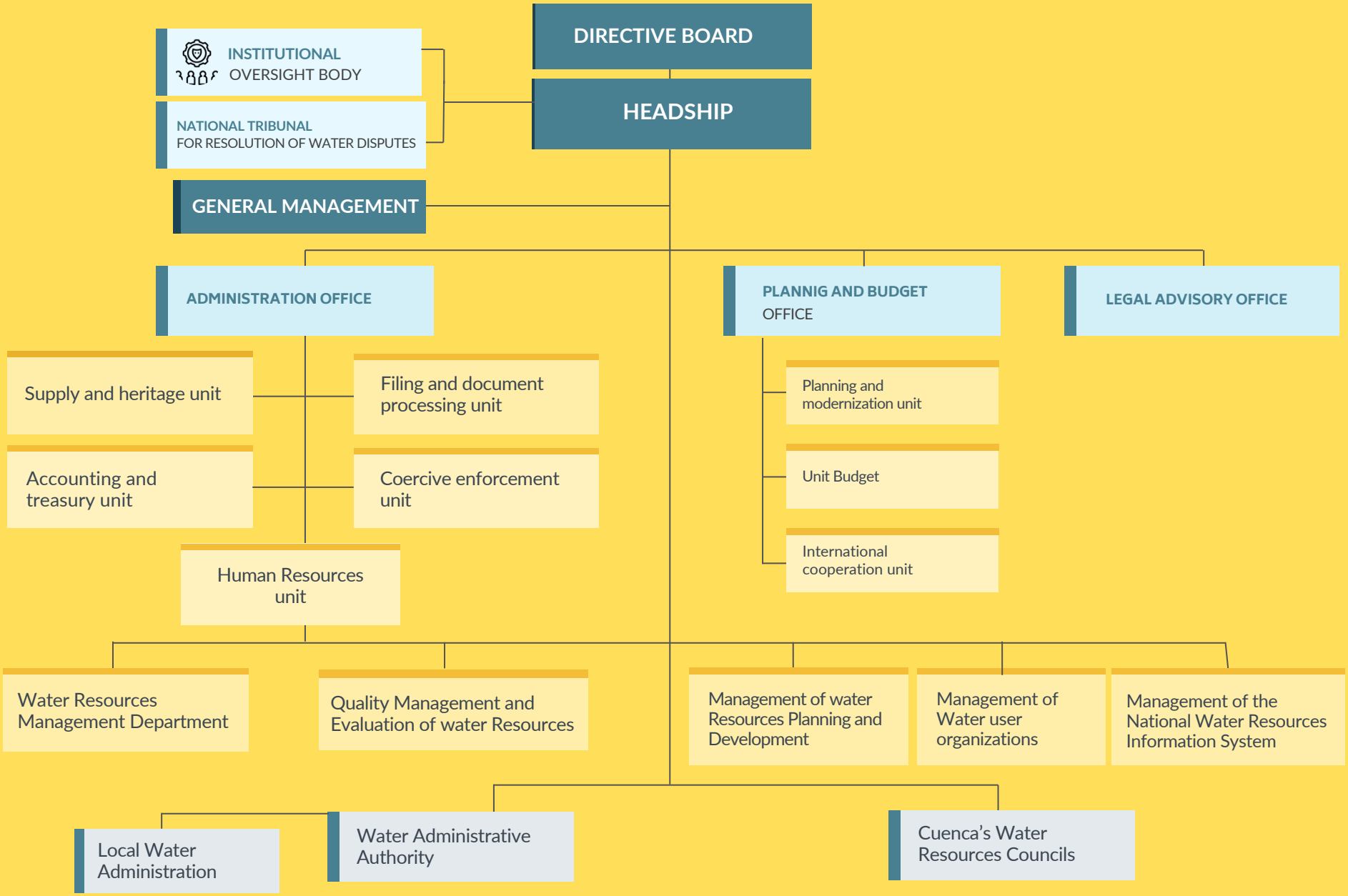
1.5. Collect data related to water for the basin.

Including water governance, the hydric balance, the quality of water, and important areas related to water, infrastructure and hygiene (WASH).

1.5.1. Identify water governance initiatives, including basin plans or plan, water-related public policies, major ongoing public initiatives, and relevant objectives to inform the site of potential collective action opportunities for sustainable water management.

Governance:
The Water Resources Law No. 29338 (see annex No. 30) details the organizational structure of the National Water Authority (ANA), the governing body and highest technical-normative authority of the national water resources management system.

Organizacional Structure



Public plans and policies:
The GORE Ica, with the participation of local governments, SUNASS, EPS and other sectors involved seek to develop the Regional Sanitation Plan 2018-2021 of the Ica region, in order to establish the strategic guidelines in relation to water and integral sanitation of the territory, aiming at sustainable and quality access to sanitation services for the population of the Ica region. On December 21, 2022, RER N°399 - 2022 - GORE - ICA/GR was issued, approving the Regional Sanitation Plan 2022-2026 of the Ica region.

Water Plans:
The ongoing projects by XynergICA are the following:

- Golda Meir project.
- Irrigation through Chunchanga cannel.
- Water sowing and harvesting of Huaytará.
- Pilot project on the improvement of drinking water and sanitation in the district of Pueblo Nuevo. For this project the following information was taken into account: It consisted of the municipality of Pueblo Nuevo implementing the AWS Standard, considering a possible treatment of waste-water and closure of water gaps, including the participation of the private sector.

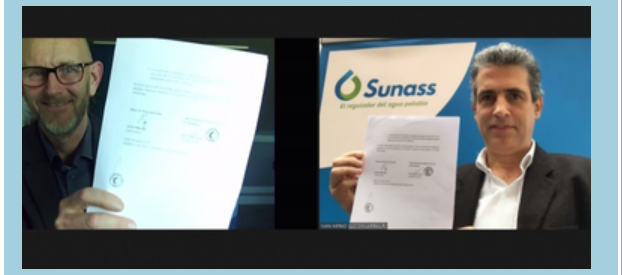
Description	Evidence
The tariff Study from EMAPICA includes part of a special mention of the importance of the Pueblo Nuevo area, for the water availability of the basin.	**Tariff Study Emapica (see annex N° 31).**
Rapid Hydric Diagnosis.	DHR SUNASS (see annex N° 32).
Information about the hydric balance of water and sanitation.	BH WASH (see annex No. 33).
Memoranda of understanding signature with SUNASS Video – Pueblo Nuevo Pilot. 	https://bit.ly/2GopsOK Press release: https://bit.ly/3jlN8BD

Table No. 11. Initial activities of the project in Pueblo Nuevo.

Recommended actions in Rapid Hydric Diagnosis

Actions to prioritize, for attending to the de problematic described before, must be oriented to increase the state of coverage in Rio Ica basin, such as the training and awareness of the agricultural sector in the Ica Valley, for the care of water quality and its rationale.

- Implement measures to improve the infiltration of rains into fissured aquifers in the middle and upper part of the Ica River basin. Measures include restoration and conservation of personal coverage and reforestation of highly degraded areas with native species.
- Implement a sensitization program for the farmers who live in Ica Valley, in themes settled farmers in Valle de Ica (Ica Valley), in sustainable groundwater management issues.
- Training in sustainable agriculture, covering topics ranging from the rational use of water, to the proper management of inputs such as pesticides.
- Monitoring the water table (phreatic) in the wells used by the EPS.
- Implement a monitoring system on the basin header.
- Coordinate with the community to prioritize conservation actions together.

At the local and regional levels, plans are as follows:

- The management plan for the aquifer of the Ica Valley, Pampas de Villacurí and Lanchas, was drawn up by ANA (see annex No. 34).

- Regional Sanitation Plan Ica 2022-2026, prepared by GORE Ica (see annex No.35).

- Management plan for the Ica aquifer and the process of formalization-regularization of wells (see Annex No. 36).

In Addition, it is worth mentioning that on December 7 in 2022, the "Working meeting with elected was held: water, sanitation, and solid waste", with the participation of district mayors of Ica, OEFA, XynergICA and agroexport companies, one of them Vanguard Group International; in order to make an initial recognition of the deficiencies in drinking water, sanitation, and solid waste in Ica, for this call letters were sent to each district mayor.
(see annex No. 37)

IInfiltration ditches project in Tambo district:

Project started in 2023 co-financed by the international cooperative. Faced with the growing problem of water scarcity in Ica.

A group of agro-industrial companies has started water planting and harvesting work in Huaytará, Huancavelica, where the Pisco and Ica rier heads are located. The aim is to increase the water supply of high-altitude communities during the dry season and to strengthen the aquifers of the lower part of the basin.

You can learn more about this project:

https://www.youtube.com/watch?v=3PPTAtrFYIE&t=5s

> *The objective of this project is to increase the water supply of high-altitude communities during the dry season and to strengthen the aquifers of the lower part of the basin.*

1.5.2. Identify legal and regulatory requirements related to water, including customary water rights, legally defined and verified by stakeholders.

The list of Legal requirements for Water Resources (annex No. 38), describes the current regulatory requirements.

1.5.3. Quantify the hydric balance of the basin and when scarcity proceeds with an indication of annual or seasonal variance.

Annual balances are not usual in Aquifer Villacurí-Lanchas because are difficult to make. It is a basin in which revenue, outputs, and storage come from the subsoil (see annex No. 33)

Rainfall is minimal or zero and there is no surface water source.

The organizations involved may be the Local Water Authority (ALA), user boards and others, such as the Regional Office of Natural Resources, which do not perform annual balances, only some authorities, such as the National Water Authority (ANA), in distant periods of time.

On the other hand, all the incomes and outputs of water to the Pampas de Villacurí are underground, so it is very difficult to establish annual and seasonal variances.

Dr. Emilio Custodio's research study indicates that the estimates of aquifer reserves appear to be excessively small as a drainable porosity has been used that is equal to the storage coefficient obtained in pumping tests (interference with observation piezometer). As estimated figures, reserves of about 4 km3 in the Ica Valley and 8 km3 in Villacurí – Lanchas can be expected. Even if the sustained decline in aquifer levels is real, decades of exploitation must pass for depletion (see annex No. 39).

Technical assistance on integrated hydric management and artificial in Ica Aquifer – Villacurí – Lanchas, indicates that Aquifer from Ica has a geological connection of about 6km to the Villacurí Aquifer, so, by way of level difference, the Ica Aquifer drains water to the Villacurí Aquifer. This is approximately 70 million m3 included in the 86.7 million m3 total recharge established by ANA in its 2017 study (see annex No. 40).

The aquifer of Ica is set by Ica River and its tributary, which was established in a 2017 ANA report, which indicates the existence of 2,116 authorized water wells.

The total estimated water reserves in the Aquifer de Ica are 1861,02 million m3.

The ANA report indicates that there are 231,57 million m3 extracted annually from this aquifer.

In addition, its average annual recharge is 179.4 million m3 per year, showing the recharge of the Aquifer Ica-Villacurí at 266,10 million m3 per year.

The total estimated water reserves in the Aquifer de Ica are 1861.02 million of m3. The ANA report indicates that there are 231.57 million m3 extracted annually from this aquifer; in addition, its average annual recharge is 179.4 million m3 per year, showing the recharge of the Aquifer Ica-Villacurí at 266.10 million m3 per year. In Annexes 41 and 42 detail the wells identified in Villacurí and Lanchas.

- Inventory of wells Lanchas 2018 (see annex. No. 41).
- Inventory of wells Villacurí 2018 (see annex No. 42).

The water balance of the Villacurí basin describes the studies and conclusions of the balances that have been carried out on Villacurí and Lanchas (see annex No. 43).

1.5.4 Identify and quantify water quality, including the physical, chemical, and biological condition of the basin. In the event of a water-related challenge, which poses a threat to its quality and impacts people or the environment, an indication of high, low, and, where appropriate, seasonal annual variations must be identified.

For this indicator, information on water quality in some districts of Ica was collected from the Villacurí Water Quality Report (see annex No. 44).

Table N° 9,10 Potability Summary

Zone	IRHS N°	District	POTABILITY		
			Good	Mediocre	Bad
I	11/01/09-	Los Molinos	1, 6, 29, 33, 36, 42, 65		
	11/01/02-	La Tinguiña	18, 24, 44, 60, 63, 81, 111, 116		
	11/01/08-	Guadalupe	6, 20, 24, 49, 59		
	11/01/10-	San Juan Bautista	1, 11, 20, 21, 64		
	11/01/12-	Subtanjalla	3, 15, 41		
II	11/01/06-	Parcona	6, 3, 16, 49		
	11/01/13-	Tate	8, 13		
	11/01/07-	Pueblo Nuevo	104, 110	37	
	11/01/03-	Los Aquijes	10, 25, 31, 111	84	
	11/01/05	Pachacutec	1, 34, 47		24
	11/01/01-	Ica	16, 65, 73, 105, 108, 142, 150	202	
			213, 214, 234		
III	11/01/11-	Santiago	28, 81, 121, 209, 456		85, 105, 144, 152, 182, 192, 198, 203, 204, 212, 235, 251, 265, 287, 297, 329, 332, 373, 410, 451, 457, 462, 470,
	11/01/04-	Ocucaje	188	67	32, 46, 74, 162
IV	11/01/14-	Yauca del Rosario	30, 33		
TOTAL			61	4	30

Table No. 12 Potability of groundwater in the Ica Valley - 2017 / Source: " "Hydrogeological Study of the Ica Aquifer" ANA.

1.5.5. Identify where appropriate, map important water-related areas, where it must be evaluated the status of water, including threats to people or the environment, using scientific information and stakeholders involvement.

- **Cause of Río Seco:** Cause of unsafe riverbanks since there is no forestation; with the 2017 landslide, the cause suffered damage to the cultivated areas.

- Golda Meir.
- Macacona and Mauricia Canals: Historical canals due to their importance for the recharge of water to the aquifer.

1.5.6. Identify existing and planned water-related infrastructure, including its status and potential exposure to extreme event.

In the department of ICA Disaster Risk Prevention and Reduction Plan 2022 – 2024, elaborated by the Regional Government, the critical areas of the ICA department have been identified, as can be seen in the following table, also, 77 critical points have been determined for floods in the ICA department, of which 2 are located in the Salas district. In the same document, 6 strategic objectives have been established to mitigate the risks identified. This information can be found in Annex 57 to this manual.

Gobierno Regional de Ica

Cuadro N° 36

ZONAS CRITICAS DEL DEPARTAMENTO DE ICA

Provincia	Distrito	Lugar	X	Y	Tipo Peligro
Chincha	Alto Laran	Carretera Chincha-Capillas, tramo Culebrillas-Huancor	396822	8512232	Erosión fluvial, flujos de detritos
	Alto Laran	Quebrada Santa Catalina-Poblado de Huachinga	408375	8521310	Flujo de detritos (huaicos)
Palpa	Palpa	Entre el sector de Quemado y Saramarca	489264	8397814	Flujo de detritos (huaicos)
	Palpa	Panamericana Sur, sector de Río Grande-Palpa-Llipata	479525	8393356	Inundaciones y erosión fluvial
	Tibillo	Carretera Palcamarca-Tibillo	479752	8433828	Flujos de detritos
Pisco	Paracas	Playa Las Salinas / Extremo Sur de Playa Yumaque	362701	8455755	Derrumbes
	Humay	Carretera Libertadores Wari, entre Huancano y Cacahuase	439787	8496691	Flujo de detritos (huaicos)
Ica	San José de los Molinos	Trapiche-Los molinos	427663	8459939	Inundaciones, flujos de detritos
	La Tinguiña	La Tinguiña-Chachajalla	424943	8448425	Inundación fluvial, flujos de detritos y lodo
	Tate, Santiago	Tate, Santiago	423024	8434966	Inundación fluvial
	Santiago	Panamericana Sur, Tramo Ocucaje-Palpa	455988	8400879	Flujo de detritos (huaicos)
Nazca	Nazca	Orcona-Nazca	511554	8362634	Inundación fluvial
	Nazca	Carretera Nazca-Abancay, tramo Nazca-Mina Sol de Oro	517219	8361500	Flujo de detritos (huaicos)

FUENTE: INGEMMET

FUENTE: SIGRID – INGEMMET

1.5.7. Identify the suitability of WASH services available within the basin.

To address this indicator, the Regional Plan for Drinking Water and Sanitation 2022-2026-GORE Ica has been taken as a reference (see annex No. 35). This plan shows targets that have been drawn by the regional government of Ica regarding coverage in terms of drinking water supply, wastewater treatment, among others, as shown in the following table.

Table 1. Access and quality goals.

Coverage		2021	2022	2023	2024	2025	2026
Drinking water	Urban	95.0%	95.2%	95.0%	95.9%	96.2%	96.4%
	Rural	82.8%	86.7%	82.8%	94.8%	98.9%	99.0%
	Total	94.1%	94.7%	94.1%	95.8%	96.3%	96.6%
Sewerage/Sanitary disposal of excreta	Urban	90.7%	90.7%	90.8%	90.8%	90.9%	90.9%
	Rural	42.3%	45.7%	49.1%	52.6%	56.2%	59.8%
	Total	87.4%	87.8%	88.1%	88.5%	88.8%	89.1%
Wastewater treatment	Urban	79.1%	77.9%	76.8%	75.7%	74.7%	84.5%
	Rural	31.7%	34.2%	36.7%	39.2%	41.7%	44.2%
	Total	77.5%	76.5%	75.5%	74.6%	73.7%	83.3%
Continuity	Urban	24.3%	26.3%	28.2%	29.9%	31.7%	33.3%
	Rural	7.0%	10.0%	13.1%	16.2%	19.5%	19.7%
	Total	23.4%	25.5%	27.4%	29.3%	31.2%	32.7%
Quality	Urban	17.9%	20.0%	22.1%	24.0%	25.8%	27.6%
	Rural	2.8%	5.7%	8.8%	11.9%	15.1%	15.2%
	Total	17.2%	19.3%	21.4%	23.5%	25.4%	27.1%
Safely managed water, SDG 6.1.1	Urban	17.9%	20.0%	22.1%	24.0%	25.8%	27.6%
	Rural	2.8%	5.7%	8.8%	11.9%	15.1%	15.2%
	Total	17.2%	19.3%	21.4%	23.5%	25.4%	27.1%
Safely managed sanitation, SDG 6.2.1	Urban	S.I.	S.I.	S.I.	S.I.	S.I.	S.I.
	Rural	S.I.	S.I.	S.I.	S.I.	S.I.	S.I.
	Total	S.I.	S.I.	S.I.	S.I.	S.I.	S.I.

Source: ENAPRES 2021/DRVCS ICA. Own elaboration

1.6. Understand the shared challenges and future water challenges in the basin.

Linking stakeholder-identified challenges to site water challenges.

1.6.1. Identify and prioritize the shared challenges with water,

from the compiled information.

It detailed the shared risks related to water (see annex No. 45).

From annex No 45 the following priority list was determined in order of importance:

- Seek and obtain new sources of water for Villacurí.
- Integrate the Huaytará sub-basin into Villacuri´s sustainability.
- Technification of the user´s board.
- Set a deadline for the closure of Villacurí and Lanchas.
- Improve the drinking and sanitation water situation of neighboring communities.
- Reduce the possibility of the existence of illegal wells and disseminate water information with transparency.
- Increase water recharge for Villacurí

1.6.2. Identify the initiatives to address shared water challenges.

It is detailed in the document entitled Shared challenges and initiatives of shared water challenges in Villacurí (See Annex No.45).

1.7. Understand the risks and opportunities of water on site

Assess and prioritize water risks and opportunities affecting the site based on its state, existing risk management plans, future risk problems, and trends identified in section 1.6.

1.7.1 Identify and prioritize the water risks facing the site, including the likelihood and severity of impact within a given period, potential costs, and business impact.

The identified risks are detailed in the risk matrix (see annex No. 51).

1.7.2 Identify water-related opportunities, including how the site can participate, assessment, and prioritization of potential savings and business opportunities.

The following table details the opportunities identified on the site:

- One of them is the installation of a domestic wastewater treatment plant through an aerobic system with MBR technology, disinfection and sludge drying.

This imple-mentation comprises an investment of S/. 190,000,00.

- Pretreatment with fine sieve.
- Primary treatment with anaerobic and mixed stage.
- Secondary treatment with nitrification and denitrification stage.
- Tertiary treatment with MBR system and disinfection.
- Drying of sludge.

Treated water will comply with the parameters set out in DS-004 2017 ECA 3 Category D1.1.

(See Annex No. 47. Profile Project (PTARD).

The following table details the opportunities identified on the site:

Internal / External	Component		Description
On the site	Waste water	OPPORTUNITIES	Installation, operation and maintenance of a PTARD.
			Ensure the quality of treated water through of MBR technology.
	Waste water		Actively support projects promoted by the municipality.
	Drinking water		Support in the development of a project related to the supply of drinking water for the people of Expansión, Guadalupe and Pueblo Nuevo, promoted by their local governments.
External to site	Hygiene		Promote clean-up campaigns in conjunction with the municipality.
			Increase the capacities of the people of the basin for waste management, recycling, efficient use of water and its correct re-use.
	Others		Restoration of Golda Meir Park.
			Aquifer recharge through infiltration projects.

Table No.13. Water related opportunities..

1.8. Understand best practices to achieve standard results AWS

The determination of sectoral best practices of relevance to the basin at the local, regional, or national level.

1.8.1. Identify the best practices relevant to water governance in the basin.

- Total transparency in the extraction of water from the basin and its efficient use of water.
- Transparency in public water management.
- Promote sectoral meetings to discuss water-related improvement actions, and projects among others.
- Technological Innovation (Example: com-post generation).

1.8.2. Identify best practices for water balance in relevant sectors and basins, through water efficiency or reduced total water use.

- Restore the extraction of water with an artificial recharge in areas such as Golda Meier and Canal Chunchanga, among others. In annex No. 48 you can see how it works.

- **Golda Meir Project.** Annex 49 shows the following: The area of Golda Meir, is located politically, in the region and province of Ica, district of Salas Guadalupe of the La Mauricia sector, geographically located at the coordinates UTM WGS 84 Zone 18: 417 817.30 E and 8 455 316.21 N, at an altitude of 495 meters at the beginning and 490.5 meters at the end being the estimated area for recharge of 28.2 ha., with water surplus waters of the Ica River, conducted the right bank by the bypass channel called La Macacona and the first order channel La Mauricia, in the district of Salas Guadalupe. The recharge consists of the storage of part of the water surplus of the surface waters of the Ica River in the Golda Meir Park area, with two storage pools being considered for this purpose in the aforementioned area.

- To proceed with the recharge of the Villacurí aquifer, in the Golda Meir area, preparatory work was carried out in compliance with agreements signed with GORE Ica, and JUSH Ica, which were programmed in the POMDIHs 2022 and 2023, such as: The construction of the perimeter fence in the Golda Meir Ecological Park, of

212 meters and 2.50 meters high, demanded by the Regional Government of Ica in order to authorize the recharge in the park, the services of the company COPRECOM were contracted, who began the work on November 22, 2022, concluding it on November 29 of the same year, whose cost amounted to the sum of **S/36,120.00**.

Artificial recharge of the Villacurí aquifer in 2023.

During 2023, water was applied to the recharge pools in Golda Meir, in order for the Villacurí aquifer to be recharged through infiltration. Testing for recharging began on 31 December 2022 by applying water for 16 hours at an average flow rate of 300 l/s. The application of water to the pools in that time period was carried out intermittently, from December 31, 2022 to April 24, 2023. It is clear from the flow register that the minimum flow rate collected was 100 l/s, the maximum flow rate was 1650 l/s, and the average flow rate applied was 517 l/s. In the period of time of recharge, water evaporation has also been monitored, and the area occupied by the captured water, whose data are presented in the following tables.

Conditioning of the Macacona's channel and its side La Mauricia 1.

Evaporation in the recharge area

	UNIT.	DEC. 22	JAN. 23	FEB. 23	MAR. 23	APR. 23	MAY. 23	JUN. 23	JUL. 23
Days per month	day/month	31	31	28	31	30	31	30	31
ET0	mm/day	4.90%	4.70%	6.07%	5.60%	5.05%	3.30%	2.66%	2.62%
ET0	mm/month	151.90%	145.70%	169.88%	173.60%	151.48%	102.44%	79.87%	81.23%

Fuente:

	Referential evapotranspiration atlas SENAMHI 2013.
	Data recorded at JUSH Río Seco station (sector Villacurí)

Table No. 14. Evaporation in the surcharge area

Month	N° days of water aplication	Applied Volume (l)	Surface area of the pond (m2)	Applied depth (mm)	Evaporated depth (mm)	Infiltrated depth (mm)	Recharge Volume (m3)
Dec. (1 día)	1	17,280	10,000	1,728	4.9	1,723	17,231
January	10	110,448,000	20000	5.522	145.70	5,377	107,534
February	27	944,100,000	80000	11,801	169.88	11,631	930,510
March	30	1,391,040,000	120000	11,592	173.60	11,418	1,370,208
April	24	1,541,160,000	80000	19,265	151.48	19,113	1,529,042
Mayo			70000	0	102	-102	-7,171
June			20000	0	80	-80	-1,597
July (15 días)			50	0	39	-39	-2
		4,004,028,000		**400,403**	**867,1748387**		**3,945,754**

Table No. 15. Water balance and determination of the recharge volume.

Conclusions

- The total cost of conditioning and execution of the recharge of the Villacurí aquifer in 2023 amounted to the sum S/ 124,412.63 soles, which means that the cost of the recharge water is S/ 0.031 soles per m3.
- The Golda Meir Park represents an important area for the artificial recharge of the Villacurí aquifer, recharging a volume of water of 3.95 hm3.
- The recharge of the Villacurí aquifer in the Golda Meir area positively impacts the wells of population water supply in the Salas and Expansion sectors of the Salas district, increasing water availability.
- **Infiltration ditches in Huaytará:** A possible source of new water for recharge is the Huaytará sub-basin. Through an agreement of mutual benefit between the Rural Community of Huaytará, Pro-vincial Council of Huaytará and XynergICA began work rehabilitation and maintenance of infiltration ditches. The work is carried out in three micro-basins of the sector called Huaytupampa, district and province of Huaytará department of Huancavelica at 4,400 meters of altitude.

Objectives:

- Increase water infiltration capacity in the upper part of Tambo and water capacity in the lower part of the Ica region.
- Improving the sustainability of livelihoods in upstream communities in Tambo.
- Monitor and evaluate the effects of interventions in the basin and their impact on the river basin's hydrological cycle.
- Validate project results using a local water management approach (in Ica and Tambo).
- Establish a locally verified and data-driven water management plan to integrate landscape- and local-nature-based interventions.

Costs:

The project has been subsidized by contributors from private companies through XynergICA, one of them is Vanguard Peru which through its monthly contributions supports the administrative and management activities of XynergICA for the execution of water related projects. Monthly contribution of **S/ 2,500.00**.

N°	Activity	Real cost in S/	Real Cost in €	Projected cost in €
1	**Objective 1:** Increase water infiltration capacity in the upper part of Tambo and water capacity in the lower part of the Ica region.	**S/52,004.80**	**€ 14,763.77**	**€ 10,685**
1.1	**Description activity:** Inplementation of landscape interventions / water catchment practices: excavation of infiltration ditches, tree planting, reservoir.	**S/52,004.80**	**€ 14,764**	**€ 10,685**
1.1.1	**Personal**	**S/31,780.00**	**€ 7,945**	**€ 2,414**
	Local technical consultant	S/19,180.00	€ 4,795	€ 1,020
	Technical coordination	S/12,600.00	€ 3,150	€ 1,394
1.1.2	**Travel and accommodation**		**€ 1,763**	**€ 664**
	Towards and in the field	S/4,807.00	€ 1,202	€ 623
	General field expenses	S/2,243.27	€ 561	€ 41
1.1.3	**Equipment (XynergIca)**	**S/8,064.40**	**€ 2016**	**€ 3050**
	Infiltration trenches (Objective: 44 ha, aprox. 63 km)	S/6,464.40	€ 1616	€ 1909
	Tree planting (Objective: 900 seedlings)	S/1600.00	€ 400	€ 440
	Reservoirs 500 m3			€ 440
	Livestock fence (45 ha)			€ 262
1.1.4	**Other project costs**	S/12,160.00	€ 3,040	€ 4,558
	Evaluation	S/4,000.00	€ 1,000	€ 1,700
	Local Administration	S/8,160.40	€ 2,040	€ 2,858

2	**Objective 1:** Improving the sustainability of livelihoods in upstream communities in Tambo.	**S/11,826.00**	**€ 2,956.50**	**€ 3,400**
2.1	**Activity Description:** Create capacity with community stakeholders on land (and water) management alongside restoration strategies and practices, which support livelihoods (livestock and agriculture) while generating outcomes in the watershed, such as flood control and erosion alongside the direct livelihood benefits of the nature-based solution of objective 1. Infiltration trenches and tree planting.	**S/3,942.00**	**€ 986**	**€ 1,020**
2.1.1	**Personal**	S/3,942.00	€ 986	€ 1,020
	Local co-leadership to co-design and co-implement workshops with rural communities located in the micro-channels where the interventions are carried out.	S/3,942.00	€ 986	€ 1,020
2.2	**Activity Description:** Co-develop a feasible and bankable plan for community land management and restoration activity in the Tambo region.	**S/3,942.00**	**€ 986**	**€ 1,190**
2.2.1	**Personal**	**S/3,942.00**	**€ 986**	**€ 1,190**
	Co-liderazgo local para co-diseñar y co-implementar talleres con las comunidades rurales ubicadas en las micro cuencas donde se realizan las intervenciones (XynergIca)	S/3,942.00	€ 986	€ 1,190
2.3	**Activity Description:** Generate pilot activity by community members for land management and restoration. Activities focus on improving livelihoods, using sustainable rural socio-economic development, for example: Market improvement.	**S/3,942.00**	**€ 986**	**€ 1,190**
2.3.1	**Personal**	**S/3,942.00**	**€ 986**	**€ 1,190**
	Local co-leadership to co-design and co-implement workshops with rural communities located in the micro-channels where the interventions are carried out (XynergICA).	S/3,942.00	€ 986	€ 1,190
	Total Activities	**S/63,830.80**	**€ 17,720.27**	**€ 14,085**

Table No. 16. Real and estimated project costs.

1.8.3 Identify best practices for water quality in the relevant sectors or basins, including justification of the data source.

- Concrete and permanent support to the user board in the hydrochemical monitoring in the control network once they are programmed.

In relation to the aforementioned, it should be noted that in 2022 JUSH RIO SECO carried out groundwater monitoring (Annex No. 50), whose objectives were:

- To determine the current morphology of the piezometric surface of the Villacurí y Lanchas aquifer.
- To know the behavior of the water levels of the wells of the piezometric network from 1998 to 2022.
- To evaluate the behavior of the parameters of the groundwater quality of the Villacurí and Lanchas aquifer from 1998 to 2022.

Execution period: It was one (01) month with the participation of two field technicians.

Location: The study area comprises the lower and middle part of the hydrographic unit of Rio Seco, is located on the south coast of the country approximately 285 km from the city of Lima, having delimited a monitoring area of 1022 km2.

Location of the study area – Pampas de Villacurí and Lanchas.

Source: Monitoring and evaluation of the Pampas de Villacurí y Lanchas aquifer.

Aquifer	zone	District	Sector
Pampas of Villacurí	I	Salas	Fdo. Miranda, Fdo. Pro Agro, Fdo. Don Pepe, Fdo. Los Médanos, Fdo. Ormeño, Fdo. Despertar (Agrovictoria)
	II	Salas	Fdo. Almudana, Fdo. El Mayoral, Fdo. Florisert, Fdo. Casuarinas, Fdo. Chanchamayo
	III	Salas	Fdo. La Pampa, Fdo. El Arenal, CC.PP. Santa Cruz de Villacurí, Fdo. La Rinconada
	IV	Salas	Fdo. Miranda, Fdo. Pro Agro, Fdo. Don Pepe, Fdo. Los Médanos, Fdo. Ormeño, Fdo. Despertar (Agrovictoria)
	V	Salas	Fdo. Santa Rufina, Fdo. Pampeano, Fdo. La Ponderosa, Fdo. Nivama, Fdo. Los Baguales
	VI	Salas	Fdo. Valery, Fdo. José Quincho, Fdo. Marisel.
	VII	Salas	Fdo. Comunidad Garcilaso, Fdo. Huarmey, Fdo. El Almendral, Fdo. Villaluz, Fdo. Casablanca
	VIII	Salas - Humay	Fdo. Don Joaquín, Qda. Rio seco, Qda. La Rinconada, Qda. El Huarangal, Qda. Larga
Pampas of Lanchas	I	Paracas	Qda. La Pólvora, Pampa de California, Fdo. Valle y Pampa, Fdo. Las Lomas.
	II	Paracas - San Andrés	Pozo Santo, Ganadera Santa Elena
	III	Paracas - San Andrés	El Sapo, Alamein, Santa Cruz, Las Antillas
	IV	Paracas	Santo Domingo, El Chaco
	V	Paracas - San Andrés	Loberías, Las Antillas, Aceros Arequipa, Las Palmeras.
	VI	San Andrés	Santa Fé de Lanchas y Santa Cruz
	VII	San Andrés - Humay	Santa Fé de Lanchas, Luis negreiros Vega, Fdo. Santa Martha, Fdo. Monasterio, Nueva California.

Table No. 17. Aquifer Zoning – Pampas de Villacuri and Lanchas. Source: Monitoring and evaluation of the Pampas de Villacuri and Lanchas aquifer

Wells of the Piezometric Network	zona I		zone II		zone III		zone IV		zone V		zone VI		zone VII		zone VIII		Subtotal	
	N°	%	N°	%	N°	%	N°	%	N°	%	N°	%	N°	%	N°	%	N°	%
Monitored wells	10	38.46	10	34.48	11	39.29	17	54.84	17	65.38	3	50.00	4	36.36	5	35.71	77	45.03
No Monitored wells	16	61.54	19	65.52	17	60.71	14	45.16	9	34.62	3	50.00	7	63.64	9	64.29	94	54.97
Total	26	15.20	29	16.95	28	16.37	31	18.13	26	15.20	6	3.51	11	6.43	14	8.18	171	100

Table 18. Wells of the piezometric network of the Villacurí Aquifer *Source: Monitoring and evaluation of the Pampas de Villacurí and Lanchas aquifer*

From the above table, it is evident that for the Villacurí aquifer, **45.03%** of the piezometric well control network provided technical data to the 2022 dredging season. Also, indicate that **54.97%** of the piezometer wells did not provide data to this report, due to various reasons, such as: Buried wells, dry wells, sealed wells, wells that are in operation or that the well could not be accessed (they did not allow the owner to enter the property).

Static level depth

The depth of the piezometric surface was evaluated based on the iso depth map, from this we can derive the following table:

Zones	Districts	Depths and piezometric levels - 2022	
		2° Campaign	
		Minimum (m)	Maximum (m)
Pampas of Villacurí			
I	Salas	43.70	91.40
II	Salas	33.01	115.15
III	Salas	11.83	105.80
IV	Salas	9.03	53.89
V	Salas	2.04	22.50
VI	Salas	2.47	32.03
VII	Salas	22.56	43.15
VIII	Humay Salas	52.00	81.20
Pampas of Lanchas			
I	Paracas	3.33	5.04
II	Paracas - San Andrés	33.01	28.84
III	Paracas - San Andrés	2.58	16.80
IV	Paracas	2.65	11.04
V	Paracas - San Andrés	3.54	15.90
VI	San Andrés	2.32	24.00
VII	San Andrés - Humay	3.13	77.38

Table 19. Wells of the piezometric network of the Villacurí Aquifer
Source: Monitoring and evaluation of the Pampas de Villacurí and Lanchas aquifer

As a conclusion, it has to be concluded that in zone II is located the Casuarinas Fund, one of the headquarters that is part of this certification, in which it is indicated that in this zone the depth of the water table presents variations of 33.01 to 115.15 m, with influence of the groundwater coming from the Rio Seco gorge and the hydraulic interconnection.

Hydrogeochemical:

The analysis of groundwater was carried out in situ, taking as a general criterion that the well is pumping water, except for those wells that are not equipped, from which the water is extracted through the use of a probe and a container, 127 wells have been carried out in Villacurí.

- **Electrical conductivity (Zone II):** The values are in the range of 4 to 6 dS/m, which represents 50% of the monitored wells and which correspond to values of very high salinity and in a lower proportion the classification of C3-C4.

- **Hydrogen potential (pH):** The pH values range from 7.09 to 9.26, which corresponds to alkaline quality waters.

Participation and technical expertise in water and sanitation projects driven by public entities and/or propose solutions that can be implemented by these entities.

1.8.4. Identify relevant catchment best practices for the maintenance of important water-related areas sites.

- Expansion of the Los Laureles Forest area as a climate change mitigation action.

- **Reforestation project in the headwaters of the Rio Seco riverbed,** several meetings were held with SERFOR, ALA RIO SECO, and the Board of users of Rio Seco; the meetings were held in the following order and the points discussed are detailed below:

- **First meeting** with SERFOR to explain the idea of the project, SERFOR agreed to map the area where the project would possibly be developed, and determine of species to be planted, and their distribution.

- **Second meeting** with SERFOR, they already had the location map of the project, having been distributed in three polygons or blocks, and determined four species to be planted (Huarango, hawthorn, willow, and tara).

- **Third meeting:** at this meeting, the RIO SECO ALA was also invited to present the project and received a favorable response and participation, which would lead to the identification of possible water sources for irrigation, as well as the participation of water resources specialists hired by Vanguard Group in Peru, who would oversee of preparing the project's descriptive report.

- Subsequently, meetings were held with all of the aforementioned entities, with the addition of the Rio Seco users' board, where the main topic was the source of water for irrigation, with the following options: Use of surplus water from a farm near the project area (rejected because the current national legislation does not establish the procedure to follow); drilling a well with the corresponding permits (not accepted because we are in a closed zone and there is no legal way for ANA to grant the permit); drilling a well outside the closed zone (not accepted because the permit had to be given to the owner of the land, being state land it could not be channeled).

- After discussing the options, it was decided to request a meeting with the AAA so that this entity could indicate the way forward without prejudice to compliance with national legislation on water resources, concluding that there is no legal way to continue with the formulation of the project.

- Because it could not find a legal way to determine the source of water for irrigation, the project could not move forward, and the meetings came to a standstill; after a few months the project was resumed, evaluating the possibility of joining the project with a mining company that is located outside the closed zone and possibly had water use permits, so that its surplus water could be diverted to the project area; three of them were identified, of which only one had activities in progress; however, after an evaluation by SERFOR it was found that they did not have any water use permits.

- The vegetation mitigates the effects of erosion and also serves as a natural riparian defense (see annex No. 51).

- Despite the efforts made to carry out this project, it was not possible due to the legal path for its development.

Expansion of the Macacona canal:
Desilting and cleaning of the canal to make it wider so that the water can reach small farmers.

Infiltración en Golda Meir
through sluice gates: To divert surplus water to the park in order to recharge the Villacurí aquifer.

- This project has been resumed this year, with the use session granted by GORE ICA for a term of 04 months (November 2022 - March 2023).

Rio Seco project proposal: It consists of making levees or retaining walls, declaring the upper area of Rio Seco as intangible, because of the risks presented as a result of the activation of streams. The execution of this project could benefit the population of Santa Cruz de Villacurí and Expansión since the wells from which water is extracted for human consump-tion would directly benefit, it would also generate greater jobs and if the afforestation is carried out, this area could be used as a recreational space (See Annex No. 52).

It is worth mentioning that this project has been promoted by the Vanguard Group and by Peru

Mejor a non-profit entity, who sent a letter to the National Water Authority on August 18, 2023, requesting that the proposal be evaluated and implemented (See annex N° 52).

1.8.5. Identify relevant industry and basin best practices for the provision of equitable and appropriate on-site WASH services.

- Accessible, suitable and permanent evaluation supply so that drinking water is not lacking.
- Water supply for human consumption for the site through a distribution system.
- Implementation of new latrines.
- Installation of a domestic water treatment plant at the Los Laureles farm, which will treat 120 m3/day through MBR technology.

Strokes

Activation zone of rio seco

Step 2:
Commit & plan

2.1. Committing to sustainable water management

By having the most senior manager in charge of water at the site, or if necessary, a suitable individual within the organization's head office, sign and publicly disclose a commitment to sustainable water management, the implementation of the AWS Standard, and the achievement of its five outcomes, as well as the allocation of the required resources.

2.1.1. Identifying a signed and publicly disclosed site statement or a document on the organization. The statement or document includes the following commitments:

- That the site implemented and publicized the progress of sustainable water resource management plans to achieve improvements in the sustainable water management outcomes of the AWS Standard.
- That the site's implementation was aligned with the support of existing watershed sustainability plans.
- That the stakeholders from the site were openly and transparently engaged.
- That the site allocated resources to implement the AWS Standard.

In response to the request in this indicator, we account with the following documents:

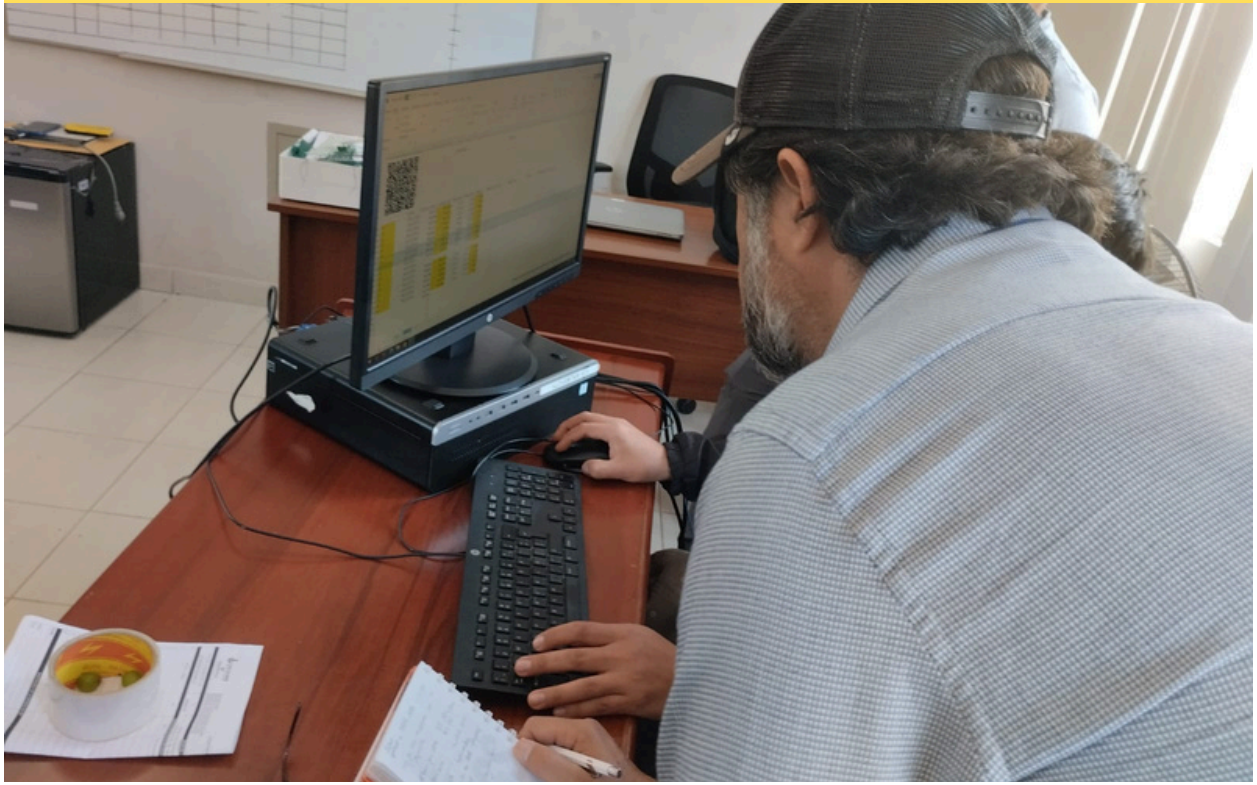
- The Standard AWS Commitment was signed by the General Management on December 5, 2019 (see annex No.12)

- Environmental Management Policy was made, which was made and disseminated publicly by the area of Communications (see annex. No. 53).

2.2. Develop and document for the achieving maintaining legal and regulatory compliance.

2.2.1 Identify the system for maintaining compliance with water resource and wastewater management obligations, including:

- Identifications of responsible persons or positions within the organizational structure of the institution.



RESPONSIBILITIES FOR WATER MANAGEMENT		
	General Manager/Agricultural Manager **Manuel Yzaga / Josué Molina / Christian Stammer**	• Decision making. • Resource disposal. • Proposal to improve management.
	Responsible for Sustainable Water Management Plan **Giancarlo Luna / Mayra Casas**	Manage water resources in terms of implementation, execution, supervision and evaluation through continuous improvement.
	Fertigation and Plant Nutrition Manager **Orlando Tito**	• Responsible for the treatment and distribution of drinking water, for managing preventive and corrective maintenance of irrigation and fertilization equipment, as well as the evaluation of the automated irrigation system. • Program the evaluations of the irrigation system, flow rates, uniformity coefficient, and execution of fertilization.
	Hidraulic and Well Services Manager **Juan Pacheco**	Responsible for well infrastructure.
	Head of General Corporative Services **Raquel Garcia**	Responsible for the water supply for hygiene and sanitation of the sanitary services of the administrative area and field, as well as the management of the general system, control, and documentation of the fund's wells.

Table No.20 Water Management Responsabilities

2.3. Create an strategy and a plan for sustainable water management

That this includes addressing the risks, to and from the site, the shared water challenges of the basin, as well as the opportunities.

The shared water challenges of the basin have been determined, as well as the initiatives carried out so far (See Annex N° 45), where the SWOT analysis of the Rio Seco Board can also be visualized.

STRENGTHS	OPPORTUNITIES
• An organization recognized by the national water authority (ana) to monitor and manage groundwater management. • Participates in multisectoral management and Sustainable use of water resources.	• It can lead to the hydrogeological know-how of the basin and become an important reference to rationally manage the aquifer. • Present and propose medium and long-term management plans to ANA. • To put in command of the Board a directive committed to the challenges of the basin. • Offer relevant water information to its users, environmental NGOs, banks, and importers. • Carry out annual water balances, a necessary and important document for the authorities and the sustainability of the food chain.
WEAKNESSES	**THREATS**
• Technical expertise needs to be strengthened hydrogeological. • It has an irrigation advisory service to standardize water use efficiency. • Research for economic distribution is lacking in actions for better underground aquifer.	• To become an organization without sustainability achievements, without medium and long-term management plans, and maintaining the adverse status and situation of the aquifer. • To become an organization with little service to its associates.

Table No.21. SOWT of the Board of Rio Seco

The sustainable water management plan has been prepared, reviewed, and approved by senior management and will be published for the information of stakeholders and external parties (see annex No. 54).

2.3.1 Identify a sustainable water plan strategy that defines the organization's mission, vision, and overall objectives in good sustainable water management in line with the AWS Standard.

a) Scope

The implementation of the AWS Standard-Water Sustainability, covers four (04) sites (Challapampa, El Arenal, Casuarinas, and Los Laureles) in its entirety, including the production process of table grapes until harvest and delivery of the fruit at the plant.

b) Vision

To be recognized as a company that plans, coordinates, and satisfies the demand for environmental and water resources, which is committed to sustainability and the management of the good use and destination of water.

c) Mission

Towards the sustainability of water resources, the environment, and people, therefore, we will provide value-added solutions for them, through sustainable development to optimize and maximize the use of our natural resources, managing them with responsibility, efficiency, and quality, in turn, we will promote awareness of good use, reuse and care of water to achieve water sustainability in order to efficiently value a vital resource for our existence.

d) Objectives:

- Work with three relevant stakeholders to identify possible actions in support of drinking water or sanitation for the nearest population.
- Work with local and/or regional authorities on two water efficiency projects.
- 100% of our effluents will have a treatment system before being disposed of.
- Train 100% of personnel in the efficient use of water resources.
- 100% improvement of the hygiene and sanitation conditions within the organization.
- Optimize 100% of our irrigation system to manage water resources with responsibility and efficiency.
- 100% guarantee the continuous availability of water within our company.

Based on the mentioned objectives above, the sustainable water management plan for the site has been prepared, revised, and published for the knowledge of internal and external stakeholders (see annex No. 54).

2.3.2. Identify a sustainable water management plan, including each objective:

- How it is measured and supervised.
- Measures to achieve and maintain it or exceed it.
- Expected timeframes to achieve.
- Financial budgets allocated to the actions.
- Positions of those responsible for actions and the achievement of objectives.
- When It is possible to take note of the relationship between the objective and the achievement of the best practice to help address the shared challenges with water and the AWS Standard outcomes.

This indicator is addressed through the Sustainable Water Management Plan (Annex 54).

2.3.3. Advanced Indicator: identify and describe the association/ site's sustainable water management activities with others, within the same watershed that may or may not be under the same ownership of the organization.

watershed that may or may not be under the same ownership of the organization.

Construction of the water roadmap (see annex. No.10) and actions in the recharge of the aquifer through Golda Meier in joint activities with the South committee, now XynergICA, and with the competent authorities.

The initial actions of the project can be seen in Technical Inform No. 001-2020-CI/RNV, about the Project for Artificial recharge in the aquifer in the Golda Meier sector (see annex. 55).

During 2022 and 2023, actions were carried out in coordination with GORE Ica and the dry river user board to resume the recharge of the aquifer, where GORE Ica grants the concession for 4 months for the realization of this project (see annex No. 56), Concession of the Golda Meir project).

The project update is mentioned in the indicator 1.8.2.

2.4. Demonstrate the capacity to respond and resilience of the site to address the water-related hazards

2.4.1 Identify a plan to mitigate and adapt to the identified water risks, developed in coordination with relevant public sector and infra-structure agencies.

Control measures for the identified risks have been developed and are detailed in our risk matrix, see Annex 46.

Step 3:
Implement

3.1. implement a plan to participate positively in the governance of the basin.

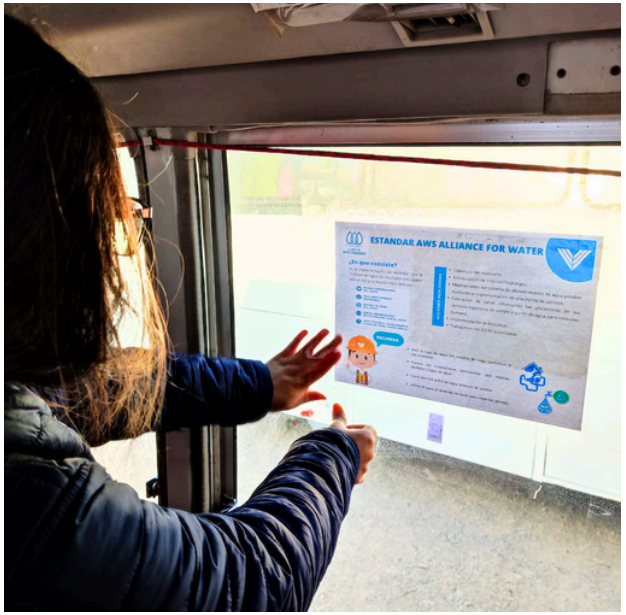
3.1.1. Identify the evidence that the site has supported the government of the basin.

List the following documents that prove our participation in the support of good governance in the basin:

- Construction of the water roadmap: Images of the meetings for the elaboration of the roadmap (see annex No. 58).
- Water Roadmap (see annex No. 10).
- Images of the meetings with the heads of GO-RE Ica- Loan Golda Meir (see annex No. 59).
- Images of the board meetings with users and GORE Ica (see annex No. 60).
- Images of the functioning of Golda Meir Project (see annex No. 61).
- Report No. 001-2020-CI/RNV, about the artificial recharge project in the aquifer in the Golda Meier sector (see annex No. 55).
- Information from wells XynergICA. (see annex No. 62).
- Rio Seco riverbed reforestation project (see annex N°51)

3.1.2. Implement identified measures to res-pect the rights of the water of other people, including indigenous that is not part of 3.2.

Funds: Challapampa, Casuarinas, El Arenal and Los Laureles have their water use rights legally authorized by the National Water Authority, therefore, it does not affect the water rights of nearby communities. It should also be noted that there are no indigenous populations in Villacurí.



3.2. Implement a system to comply with legal and regulatory requirements related to water and respect water rights.

3.2.1. Implement a process to verify full legal and regulatory compliance.

All the administrative compliance aligned to the hydric resource is managed by the Corporate General Services Area with the support of the legal area, represented by the attorney Patricia Uribe and the environmental area is responsible for the care of the environmental components, of them being the water resource, being responsible for the following: Manage the well control system (licenses, certificates, reports, among others).

- Manage the well control system (licenses, certificates, reports, among others).

- Review and submission of relevant documentation to the regulatory authorities.
- Perform the water analysis and validate the results with the parameters allowed by the current legislation.

3.2.2. In cases where water resource rights are part of legal and regulatory requirements, measures identified to respect the water rights of others will be implemented, including those indigenous peoples.

In no case does the company impact or affect the use of water rights of third parties or vulnerable populations as is evidenced in the well location map for each site.

3.3. implement a plan to comply site's water balance objectives.

3.3.1. Identify the state of the advance to comply with the objectives of hydric balance established in the sustainable water management plan.

It has already started the Sustainable Water Management Plan, in the following lines it will be described the goal, the advance, and the current state.

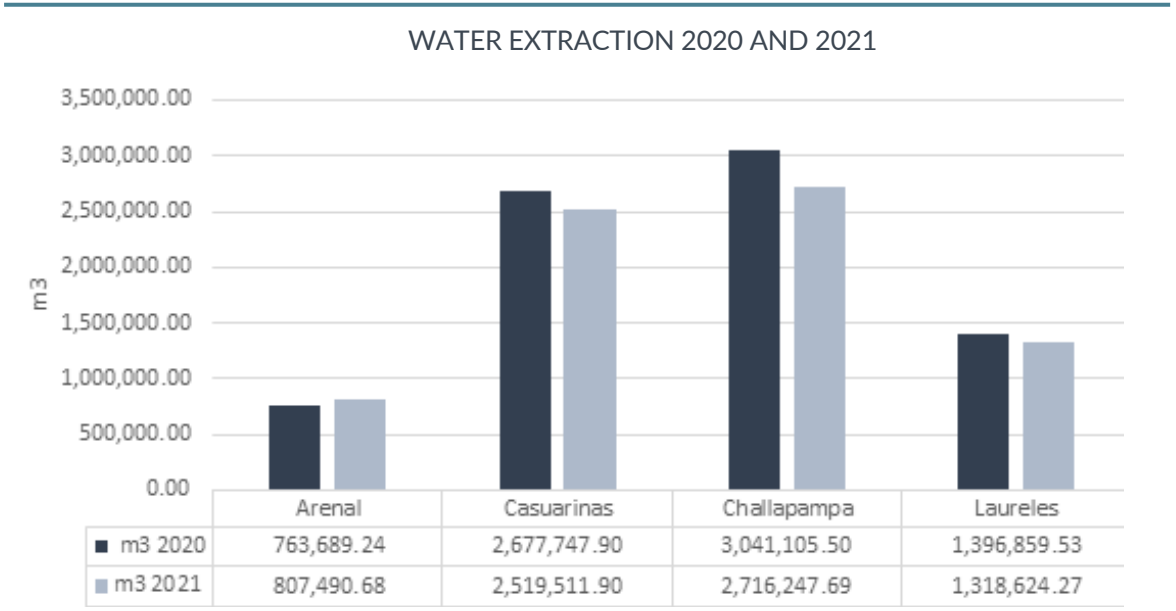
Goals	Actions	Status
Resume the Golda Meier artificial recharge project.	Actions are being carried out in coordination with GORE Ica and the board of users of Río Seco to recharge the aquifer, where GORE Ica granted the concession for 4 months to carry out this project and subsequently achieve the infiltration of 3,945,754 m3 in the period from December 2022 to July 2023.	Executed
Update the technical study on the water balanced use of the Challapampa irrigation system and replied for the other sites.	This study was prepared by a specialist.	Executed
Construction of a reservoir and centralization of the filtering and fertigation house in Challapampa.	The reservoir construction was completed.	Executed (completed in December 12, 2022)
Place a cover on the reservoir of El Arenal Fund with a practical method, in order to avoid water loss for evaporation.	Projected to be executed in July 2023.	To be executed

Table No. 22: Status of compliance with water balance objectives.

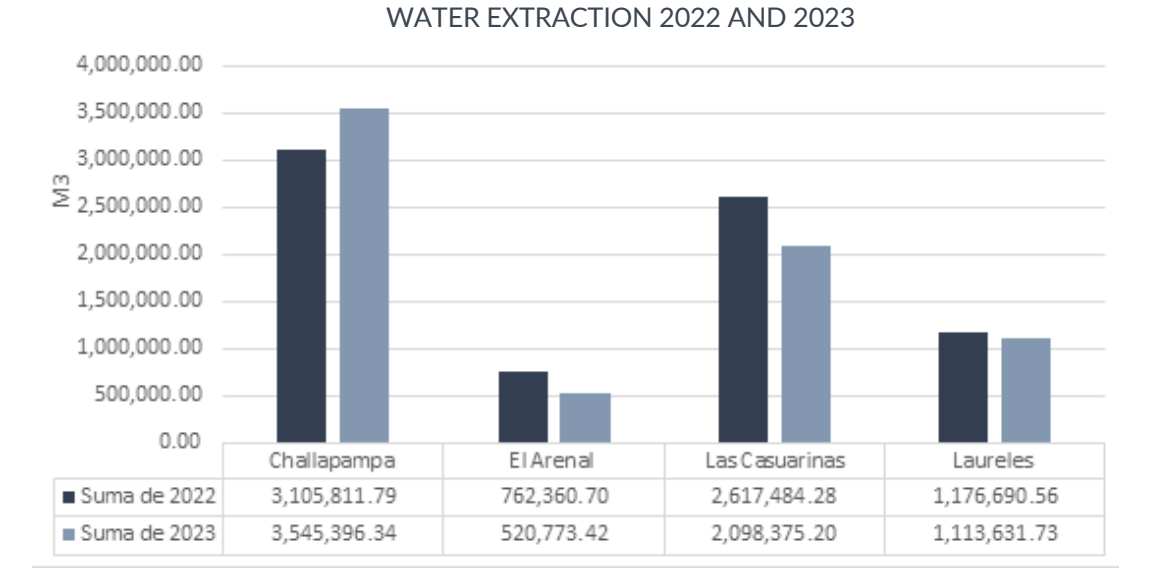
3.3.2. Implement annual targets to improve site water use efficiency or, if practical and applicable, to reduce total volumetric use, where water scarcity is a shared challenge.

The irrigation report details the technology used for fertigation, which is also applied by the other farms (see annex N°15).

With reference to the volumes extracted during the years 2022 and 2023 it is shown that there is a reduction of 19.79% in Casuarinas, 31.69% in El Arenal, 5.38% in Los Laureles and there is an increase of 12.39% in Challapampa.



Graphic No. 17. Water Extraction 2020-2021



Graphic No. 18. Water Extraction 2022-2023

3.3.3. Identify legally binding documents, if applicable, for the reallocation of water for social, cultural, or environmental needs.

Not applicable since the sites do not reallocate water.

3.4. Implement a plan to achieve the site's water quality objectives.

3.4.1. Identify the status of progress towards meeting the water quality objectives established in the sustainable water management program.

Goal	Actions	Status
Ensure that the quality of drinking water complies with the parameters established in national legislation.	Drinking water analysis has been carried out, verifying that the quality complies with current national standards.	Executed

Table No. 23. Status of compliance with water quality goals.

Images of the reservoir construction built at Challapampa Fund.

The following table shows the results of the analysis of each site in comparison with the DS N° 031-2010-SA.

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Microbiological and Parasitological	Numbering Total Coliforms	0 (*)	≤ 1.8/100ml	NMP/100ml	< 1.1	< 1.1	< 1.1	< 1.1	CUMPLIES
	Numbering E.Coli.	0 (*)	≤ 1.8/100ml	NMP/100ml	< 1.1	< 1.1	< 1.1	< 1.1	CUMPLIES
	Thermotolerant or Fecal Coliforms Numbering	0 (*)	≤ 1.8/100ml	NMP/100ml	< 1.1	< 1.1	< 1.1	< 1.1	CUMPLIES
	Numbering of Heterotrophs	500	UFC/mL a 35°C	UFC/mL	< 1	< 1	< 1	< 1	CUMPLIES
	Determination of Parasites (Helminth Eggs, Parasitic Forms), Giardia duodenalis, helminth larvae, Qistes and Ooquistes).	0	0	Huevos/litro	0	0	< 1	0	CUMPLIES
	Viruses	0	UFC/mL	UFC/mL	0	0	< 1	0	
	Agencies Free-living (protozoan algae, copepods, rotifers)	0	N° org/L	N° org/L	0	0	< 1	0	CUMPLIES

CFU= Colony Forming Unit

(*) In case of analysis by MPN technique by multiple tubes = < 1.8 /100 ml.

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Organoleptic quality	Odor	Aceptable	---	---	Característico (1)	Característico (1)	Aceptable	Característico (1)	
	Flavor	Aceptable	---	---	Tolerable (1)	Tolerable (2)	Aceptable	Característico (1)	
	Colour	15	UC	UC	< 1.0	< 1.0	< 1.0	< 0.6	COMPLIES
	Turbidity	5	NTU	NTU	0.9	0.5	< 0.5	1.0	COMPLIES
	pH	6,5 a 8,5	Valor de pH	---	6.97	7.27	6.58	6.88	COMPLIES
	Conductivity (25°C)	1500	µmho/cm	uS/cm	37.80	17.40	101.8	236.10	COMPLIES
	Total dissolved solids	1000	mg/L	mg/L	22	10	64	140	COMPLIES
	Chlorides	250	mg/L	mg/L	6.158	2.651	19.49	49.937	COMPLIES
	Sulfates	250	mg/L	mg/L	0.43	0.31	1.349	5.49	COMPLIES
	Total hardness	500	mg CaCO3 L-1	mg CaCO3 L	1.4	0.6	4.60	42.1	COMPLIES
	Amoniac	1.5	mg /L	mg /L	0.012	0.024	0.047	0.014	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Organoleptic quality	Iron	0,3	mg/L	mg/L	0.0073	0.0085	0.0321	0.0153	COMPLIES
	Manganes	0,4	mg/L	mg/L	0.00034	<0.00003	<0.0002	<0.00003	COMPLIES
	Aluminum	0,2	mg/L	mg/L	<0.001	<0.001	<0.003	<0.001	COMPLIES
	Copper	2,0	mg/L	mg/L	0.00024	0.0003	<0.0003	<0.00003	COMPLIES
	Zinc	3,0	mg/L	mg/L	0.0044	0.0062	<0.008	<0.0070	COMPLIES
	Sodium	200	mg/L	mg/L	6.651	3.954	18.07	26.438	COMPLIES
	TCU= True Color Unit								

NTU = Nephelometric Unit of Turbidity

Parameters LMP	Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
		Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
		Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
		Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
		LMP	UM	Results	Results	Results	Results	
Inorganics	NTU = Nephelometric Unit of Turbidity							
	Antimony	0,020	mg/L	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	COMPLIES
	Total arsenic (nota 1)	0,010	mg/L	mg/L	<0.00003	<0.00083	<0.0001	<0.00078	COMPLIES
	Barium	0,700	mg/L	mg/L	0.0002	<0.0001	<0.0006	0.0017	COMPLIES
	Borum	1,500	mg/L	mg/L	0.002	0.133	0.128	<0.002	COMPLIES
	Cadmium	0,003	mg/L	mg/L	<0.00001	<0.00001	<0.000010	<0.00001	COMPLIES
	Cyanide	0,070	mg/L	mg/L	<0.0003	<0.0003	<0.001	<0.0003	COMPLIES
	Chlorine (note 2)	5	mg/L	mg/L	0.6	1.5	0.40	0.8	COMPLIES
	Chlorite	0,7	mg/L	mg/L	<0.013	<0.013	<0.015	<0.013	COMPLIES
	Chlorate	0,7	mg/L	mg/L	<0.012	0.116	0.752	<0.012	COMPLIES
	Total Chromium	0,050	mg/L	mg/L	0.0006	<0.0001	<0.0007	<0.0001	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Inorgánicos	Fluorine	1,000	mg/L	mg/L	<0.002	0.017	<0.002	<0.002	COMPLIES
	Mercury	0,001	mg/L	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	COMPLIES
	Nickel	0,020	mg/L	mg/L	0.0012	<0.00003	<0.0002	<0.0002	COMPLIES
	Nitrates	50,00	mg/L	mg/L	5.509	0.438	14.65	13.036	COMPLIES
	Nitrites	3,00 Exposición corta 0,20 Exposición larga	mg/L	mg/L mg/L	<0.011	<0.011	<0.015	<0.003	COMPLIES
	Lead	0,010	mg/L	mg/L	0.0014	<0.0002	<0.0002	0.0005	COMPLIES
	Selenium	0,010	mg/L	mg/L	<0.0004	<0.0004	<0.0006	<0.0005	COMPLIES
	Molybdenum	0,07	mg/L	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	COMPLIES
	Uranium	0,015	mg/L	mg/L	<0.000003	<0.000003	<0.0002	0.000015	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Organics	Total trihalomethanes (note 3)	<1	mg/L	mg/L	<1	<1	<0.80000	<1	COMPLIES
	Dissolved or emulsified hydrocarbon, mineral oil	<0,003	mg/L	mg/L	<0.003	<0.003	<0.002	<0.003	COMPLIES
	Oils and fat	<0,5	mg/L	mg/L	<0.2	<0.2	--	<0.2	COMPLIES
	Alachlor	0,020	mg/L	mg/L	<0.0016	<0.0016	--	<0.0016	COMPLIES
	Alicarb	0,010	mg/L	mg/L	<0.00010	<0.00003	<0.000013	<0.00003	COMPLIES
	Aldrin and dieldrin	0,00003	mg/L	mg/L	<0.000001	<0.000001	<0,000006	<0.000001	COMPLIES
	Benzene	0,010	mg/L	mg/L	<0.0001	<0.0001	<0.001	<0.0001	COMPLIES
	Chlordane (total isomers)	0,0002	ug/L	mg/L	<0.00001	<0.00001	<0.00007	<0.00001	COMPLIES
	DDT (Total isomers)	0,001	ug/L	ug/L	<0.000003	<0.000003	<0.000006	<0.000003	COMPLIES
	Endrin	0,0006	ug/L	ug/L	<0.0000010	<0.0000010	<0.00004	<0.0000010	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Organics	Hexachlorobenzene	0,001	ug/L	mg/L	<0.0002	<0.0002	<0.0003	<0.0002	COMPLIES
	Heptachlor and heptachloroepoxide	0,00003	ug/L	mg/L	<0.000001	<0.000001	<0.000006	<0.000001	COMPLIES
	Methoxychlor	0,020	ug/L	mg/L	<0.000001	<0.000001	<0.000003	<0.000001	COMPLIES
	Pentachlorophenol	0,009	mg/L	mg/L	<0.0001	<0.0001	<0.00003	<0.0001	COMPLIES
	2,4-D	0,030	mg/L	mg/L	<0.003	<0.003	<0.00003	<0.003	COMPLIES
	Acrylamide	0,0005	mg/L	mg/L	<0.0001	<0.0001	--	<0.0001	COMPLIES
	Epichlorohydrin	0,0004	mg/L	mg/L	<0.0001	<0.0001	--	<0.0001	COMPLIES
	Vinyl Chloride	0,0003	mg/L	mg/L	<0.0001	<0.0001	--	<0.0001	COMPLIES
	Benzopyrene	0,0007	mg/L	mg/L	<0.0001	<0.0001	<0,000011	<0.0001	COMPLIES
	1,2-dichloroethane	0,03	mg/L	mg/L	<0.0001	<0.0001	<0,00066	<0.0001	COMPLIES
	Tetrachloroethene	0,04	mg/L	mg/L	<0.0001	<0.0001	<0.00050	<0.0001	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Organics	Monochloramine	3	mg/L	mg/L	<0.10	<0.10	--	<0.10	COMPLIES
	Trichloroethene	0,07	mg/L	mg/L	<0.0001	<0.0001	<0,00088	<0.0001	COMPLIES
	Carbon Tetrachloride	0,004	mg/L	mg/L	<0.0001	<0.0001	<0.00060	<0.0001	COMPLIES
	Di Phtalate (2-ethylexyl)	0,008	mg/L	mg/L	<0.0002	<0.0002	<0.00003	<0.0002	COMPLIES
	1,2-Dichlorobenzene	1	mg/L	mg/L	<0.0001	<0.0001	<0,00003	<0.0001	COMPLIES
	1,4-Dichlorobenzene	0,3	mg/L	mg/L	<0.0001	<0.0001	<0.00003	<0.0001	COMPLIES
	1,1-Dochloroethene	0,03	mg/L	mg/L	<0.0001	<0.0001	<0.00050	<0.0001	COMPLIES
	1,2- Dichloroethene	0,05	mg/L	mg/L	<0.0001	<0.0001	<0.00066	<0.0001	COMPLIES
	Dichloromethane	0,02	mg/L	mg/L	<0.0013	<0.003	--	<0.003	COMPLIES
	Acetic Acid (EDTA)	0,6	mg/L	mg/L	<0.004	<0.004	--	<0.004	COMPLIES
	Ethylbenzene	0,3	mg/L	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	COMPLIES
	Hexachlorobutadiene	0,0006	mg/L	mg/L	<0.0001	<0.0001	<0.00003	<0.0001	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Organics	Nitrilotriacetic acid	0,2	mg/L	mg/L	<0.004	<0.004	--	<0.004	COMPLIES
	Styrene	0,02	mg/L	mg/L	<0.0001	<0.0001	<0,00072	<0.0001	COMPLIES
	Toluene	0,7	mg/L	mg/L	<0.0001	<0.0002	<0,001	<0.0001	COMPLIES
	Xilene	0,5	mg/L	mg/L	<0.0002	<0.0002	<0,001	<0.0002	COMPLIES
	Atrazine	0,002	mg/L	mg/L	<0.0003	<0.0010	--	<0.0003	COMPLIES
	Carbofuran	0,07	mg/L	mg/L	<0.0002	<0.0005	--	<0.0002	COMPLIES
	Chlorotoluron	0,03	mg/L	mg/L	<0.0003	<0.0010	--	<0.0003	COMPLIES
	Cyanazine	0,0006	mg/L	mg/L	<0.0002	<0.0005	--	<0.0002	COMPLIES
	2,4- DB	0,09	mg/L	mg/L	<0.003	<0.003	--	<0.003	COMPLIES
	1,2- Dibromo-3-Cloprophane	0,001	mg/L	mg/L	<0.0001	<0.0001	--	<0.000	COMPLIES
	1,2- Dibromethane	0,0004	mg/L	mg/L	<0.0001	<0.0001	<0,00085	<0.0001	COMPLIES
	1,2- Diclopropane (1,2- DCP)	0,04	mg/L	mg/L	<0.0001	<0.0001	<0,00063	<0.0001	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Organics	1,3-Diclhopropane	0,02	mg/L	mg/L	<0.0001	<0.0001	<0.00072	<0.0001	COMPLIES
	Dichloroprop	0,1	mg/L	mg/L	<0.003	<0.003	--	<0.003	COMPLIES
	Dimethate	0,006	mg/L	mg/L	<0.0006	<0.0006	--	<0.0006	COMPLIES
	Fenoprop	0,009	mg/L	mg/L	<0.002	<0.002	--	<0.002	COMPLIES
	Isoproturon	0,009	mg/L	mg/L	<0.0003	<0.0003	--	<0.0003	COMPLIES
	MCPA	0,002	mg/L	mg/L	<0.0003	<0.0003	--	<0.0003	COMPLIES
	Mecoprop	0,01	mg/L	mg/L	<0.002	<0.002	--	<0.002	COMPLIES
	Metolachlor	0,01	mg/L	mg/L	<0.0003	<0.0003	--	<0.0003	COMPLIES
	Molinate	0,006	mg/L	mg/L	<0.00016	<0.00016	--	<0.00016	COMPLIES
	Pendimethaline	0,02	mg/L	mg/L	<0.0006	<0.0006	--	<0.0006	COMPLIES
	Simazine	0,002	mg/L	mg/L	<0.0003	<0.0003	--	<0.0003	COMPLIES
	2,4,5- T	0,009	mg/L	mg/L	<0.002	<0.002	<0,00003	<0.002	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Organics	Terbuthylizine	0,007	mg/L	mg/L	<0.0003	<0.0003	--	<0.0003	COMPLIES
	Trifuralin	0,02	mg/L	mg/L	<0.0002	<0.0002	--	<0.0002	COMPLIES
	Chlorpyrifos	0,03	mg/L	mg/L	<0.0002	<0.0002	..	<0.0002	COMPLIES
	Pyriproxifen	0,3	mg/L	mg/L	<0.0001	--	<0.0001	<0.0004	COMPLIES
	Microcystine LR	0,001	mg/L	mg/L	<0.0003	<0.0003	--	<0.0008	COMPLIES
	Bromate	0,01	mg/L	mg/L	<0.002	<0.002	--	<0.002	COMPLIES
	Bromodichloromethane	0,06	mg/L	mg/L	<0.0013	<0.0003	<0.00075	<0.0016	COMPLIES
	Bromoform	0,1	mg/L	mg/L	0.0001	<0.0001	<0.00053	0.0009	COMPLIES
	Chloral hydrate (trichloroacetaldehyde)	0,01	mg/L	mg/L	0.0005	0.0005	--	0.0005	COMPLIES
	Chloroform	0,2	mg/L	mg/L	<0.0024	<0.0035	<0,00075	<0.0004	COMPLIES
	Cyanogen chloride (as CN)	0,07	mg/L	mg/L	<0.01	<0.01	--	<0.01	COMPLIES
	Dibromoacetonitrile	0,07	mg/L	mg/L	<0.0005	<0.0005	--	<0.0005	COMPLIES

Parameters LMP		Water quality Regulation for DS Bo. 031-2010-SA Human Consumption	Station Code		Tank N° 9 Challapampa	Tank N° 10 Casuarinas	Tank N° 8 El Arenal	Tank N° 7 Los Laureles	Conclusion
			Technical Report N°		391501/ 808374	391501/ 808419	--	391501/ 808421	
			Essay Report N°		O/L AFL/AP 228799-1001	O/L AFL/AP 228799-1002	MA2232751, CO2215183	O/L AFL/AP 228799-1004	
			Date of sampling		22/09/2023	22/09/2023	7/09/2023	18/08/2022	
			LMP	UM	Results	Results	Results	Results	
Orgánicos	Dibromocloromethane	0,1	mg/L	mg/L	<0.0006	<0.0001	<0.00075	<0.0025	COMPLIES
	Dichlorocetate	0,05	mg/L	mg/L	0.0012	0.0085	--	0.0050	COMPLIES
	Dichloroacetonitrile	0,02	mg/L	mg/L	<0.0005	<0.0005	--	<0.0005	COMPLIES
	Formadehyde	0,9	mg/L	mg/L	<0.004	<0.004	--	<0.004	COMPLIES
	Monochloroacetate	0,02	mg/L	mg/L	<0.0019	<0.0291	--	<0.0094	COMPLIES
	Trichlorocetate	0,2	mg/L	mg/L	0.0014	0.0285	--	0.0200	COMPLIES
	2,4,6- Trichorphenol	0,2	mg/L	mg/L	<0.0001	<0.0001	<0.00003	<0.0001	COMPLIES

Note 1: In the case of existing systems, the deadline for achieving the maximum allowable limit for arsenic of 0.010 mgL-1 shall be established in the Sanitary Adjustment Plans.

Note 2: For effective disinfection in distribution networks, the free residual concentration of chlorine should not be less than 0.5 mgL-1.

Note 3: The sum of the ratios of the concentration of each of the parameters (Chloroform, Dibromochloromethane, Bromodichloromethane and Bromoform) with respect to their maximum permissible limits shall not exceed the value of 1.00 according to the following formula:

$$\frac{\mathbf{C}\ \text{chloroform}}{\mathbf{LMP}\text{chloroform}} + \frac{\mathbf{C}\ \text{Dibromochlorometane}}{\mathbf{LMP}\text{Dibromochlorometane}} + \frac{\mathbf{C}\ \text{Bromodichlorometane}}{\mathbf{LMPB}\text{romodichlorometane}} + \frac{\mathbf{C}\ \text{Bromoform}}{\mathbf{LMP}\text{Bromoform}} \leq 1$$

Where, **C**: concentration in mg/, and LMP (Spanish abbreviation): maximum allowable limit in mg/L

Table No. 17 Comparison of the results of water analysis for human Consumption.

3.4.2. In these cases where the water quality is a shared challenge, identify quantification of continues improvement to achieve best practice in relation to side wasted water.

We currently have two sanitary systems for the management of domestic effluents; in the agriculture field, we have dry pit latrines and in the administrative area we have septic tank and percolation wells.

Regarding latrines, it is worth mentioning that the water table of the aquifer is more than two meters deeper than the average depth of the ventilated dry pit latrines. Information was sought from the ANA - Water Observatory SNIRH (https://bit.ly/3Ylc83z), which includes the wells located at the national level, as well as their technical characteristics, measurements, and volumes of exploitation of each one of them.

Therefore, to obtain the static level; the well IRHS 97 owned by Los Laureles Fund was taken as a reference, and It was verified that the table level is 66.04 m.

In the annex N° 63 you can see the technical report on the use of dry pit latrines prepared by an environmental consultant and signed by an environmental and sanitary engineer.

In addition to these two operations, the Los Laureles fund will treat wastewater by means of a compact plant, using MBR technology with a capacity of 120 m3/day, which will allow the reuse of this resource by 95%.

3.5. mplement a plan to maintain or improve the important water-related areas to the site and the watershed.

3.5.1. Implement the established practices in sustainable water management and improve the important water-related areas of the site.

Goals	Actions	Status
Ensure that the forested area (7 ha) located in Los Laureles Villacurí recieves proper irrigation and maintenance so the huarango plants prosper thrive.	The planting of 130 huarango plants distributed in 10 lines, of which 68 are growing and 62 did not thrive, was carried out, then the plantation of 2640 huarangos distributed in the 7-ha proposed. Plants are developing satis-factorily, due to the continuous care and maintenance.	Executed
Expansion of 5 ha of huarangos or other native plants.	The expansion will take place during the second and third quarters of 2024.	In execution.

Table No.25: Status of Compliance with Objectives on important water-related areas

3.6. Implement a plan to provide access to drinking water, effective sanitation, and protective hygiene (wash) for all workers at all facilities under site control.

3.6.1. Identify, if applicable, the quantification of the test that the site has adequate access to potable water, effective sanitation, and protective hygiene (WASH) for all workers on the site.

Aware of the need to improve the supply of potable water supply, a better system has been implemented, and is being executed correctly. It consists of collecting water in a reverse osmosis plant to be treated by removing the components that could cause health complications, then necessary chlorination is made, giving the due conditions for human consumption. (see annex No. 64).

We also have different facilities for residual water treatment. With respect to domestic effluents management, we have a septic tank and percolates, which are inspected to determine whether sludge suction should be requested, as a result of these inspections the suction of sludge was carried out in 2021 in the fundos.

With respect to the wasted water generated by the handling of agrochemicals during their preparation, effluents generated when changing products, and subsequent cleaning of the tank cleaning, we have two facilities, the first is an evaporation pool, which is located in Challacalpa Fund and receives water from the washing of agrochemical application tanks, the treatment is primary and consists in evaporating the liquid, since It is an open facility. The solids which are the remains of phytosanitary products will be collected and stored until they are finally disposed of in a secure landfill. The second is biobeds which are in Challapampa and in El Arenal in quan-tities of 2 and 1 respectively, and these consist of the biological treatment of the effluents generated during the preparation of agrochemicals with water to be applied to the crop.

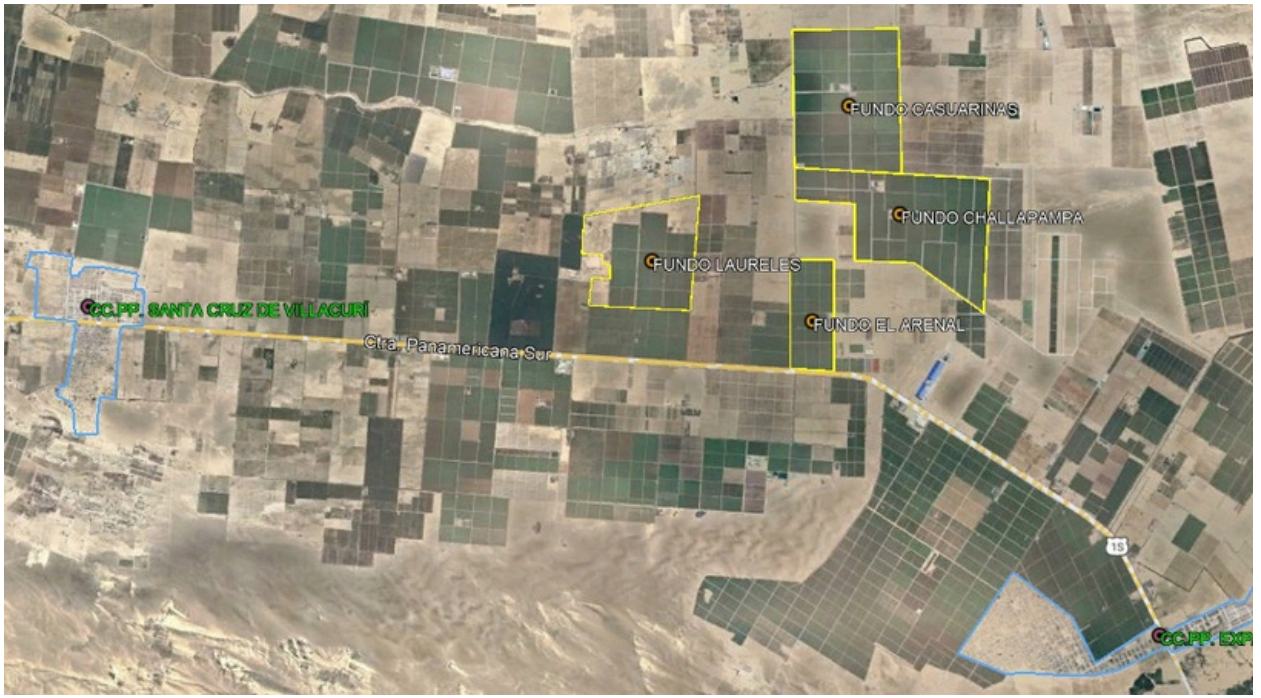
Technical Reports No. 391501/808374, No. 391501/808419, No. 391501/808421 and No. 87093/2023-1 issued by SGS and ALS laboratories, can confirm that treated water from osmosis plants complies with the PML established in D.S. No. 031-2020-SA (see annex No. 65).

Due to the need of the personnel working in the agricultural field to have hygienic services at their disposal, dry pit latrines located in strategic places have been improved. These type of facilities for areas that do not have sewage system is regulated by Peruvian sanitary regulations R.M. No. 200-2021-Tr, the determination of the number of latrines to be implemented.

With regard to drinking water supply points, the location plans of the drinking fountains for each fund have been prepared, which can be seen in Annex 54, these location plans will be installed in the second quarter of 2024.

3.6.2. Evidence that the site is not affecting the human right to drinking water and the sanitation of communities through its operations, that the traditional access rights of indigenous communities are respected, and the corrective and effective mesures are taken when this is the case.

The following image shows that our wells are 6.67 km away from the population center known as “La Expansion” and to 9 Km from the population center known as “Barrio Chino”, with not impact on the wells that supply the nearby populations to Santa Cruz de Villacuri and Expansion.



3.7. Implement a plan to maintain or improve the indirect water use within the basin.

3.7.1. Quantify evidencie that indirect water use targets established in the sustainable water management plan have been met, as appropiate.

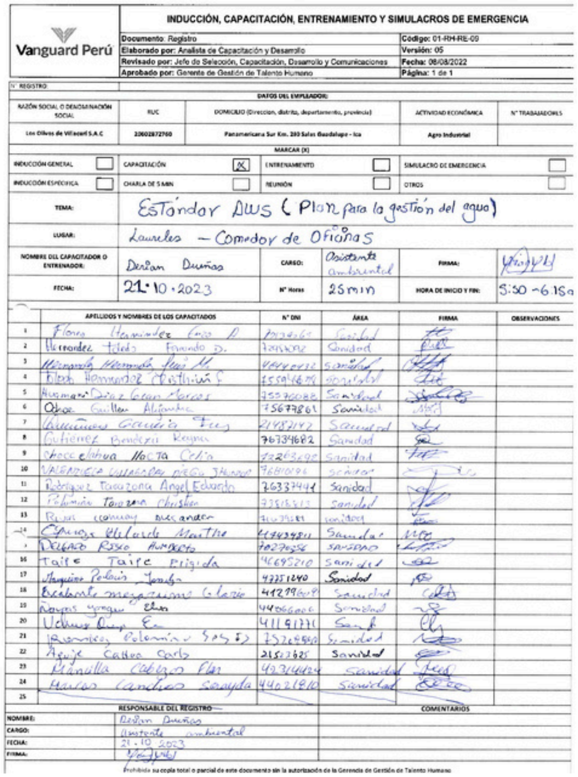
Not calculated due to primary inputs being produced outside of Villacurí watershed.

3.7.2. Identify evidence of engagement with suppliers and service providers, as well as, where applicable, actions they have taken in the watershed as a result of the site's commitment to indirect water use.

Recognizing that indirect water use is consumed through various inputs and services, it was determined that the service with the greatest impact is the transportation of personnel, because the service is provided throughout the year and increases during high season, so two main activities have been carried out to raise awareness of water management in Vanguard Group in Peru, these are described below:

- Trainings on AWS standard, Sustainable Water Management Plan and environmental management of the organization externally.

Trainings on AWS standard



Vanguard Perú	INDUCCIÓN, CAPACITACIÓN, ENTRENAMIENTO Y SIMULACROS DE EMERGENCIA	
	Documento: Registro	Código: 01-RH-RE-09
	Elaborado por: Analista de Capacitación y Desarrollo	Versión: 05
	Revisado por: Jefe de Selección, Capacitación, Desarrollo y Comunicaciones	Fecha: 08/08/2022
	Aprobado por: Gerente de Gestión de Talento Humano	Página: 1 de 1

N° REGISTRO:

DATOS DEL EMPLEADOR:

RAZÓN SOCIAL O DENOMINACIÓN SOCIAL	RUC	DOMICILIO (Direccion, distrito, departamento, provincia)	ACTIVIDAD ECONÓMICA	N° TRABAJADORES
Los Olivos de Villacuri S.A.C	20602872760	Panamericana Sur Km. 280 Salas Guadalupe - Ica	Agro Industrial	

MARCAR (X)

INDUCCIÓN GENERAL	☐	CAPACITACIÓN	☒	ENTRENAMIENTO	☐	SIMULACRO DE EMERGENCIA	☐
INDUCCIÓN ESPECÍFICA	☐	CHARLA DE 5 MIN	☐	REUNIÓN	☐	OTROS	☐

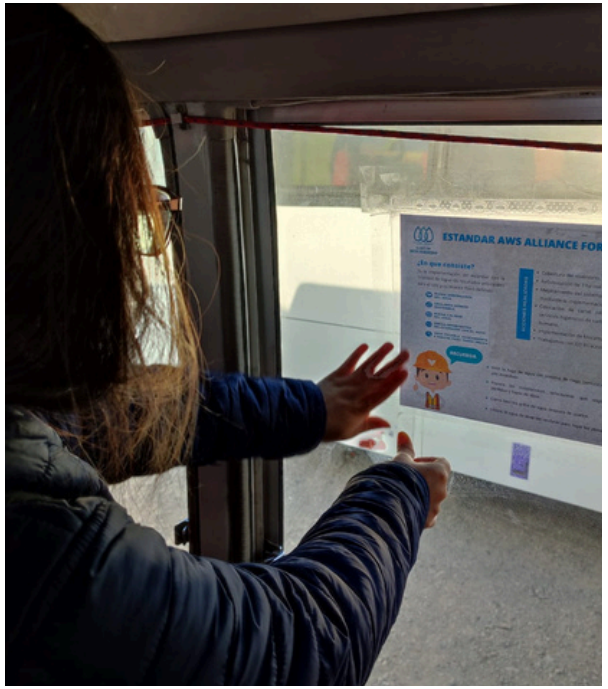
TEMA:	Estándar AWS (Plan para la gestión del agua)				
LUGAR:	Laureles – Comedor de Oficinas				
NOMBRE DEL CAPACITADOR O ENTRENADOR:	Derian Dueñas	CARGO:	Asistente ambiental	FIRMA:	[signature]
FECHA:	21.10.2023	N° Horas	25 min	HORA DE INICIO Y FIN:	5:50 - 6:15

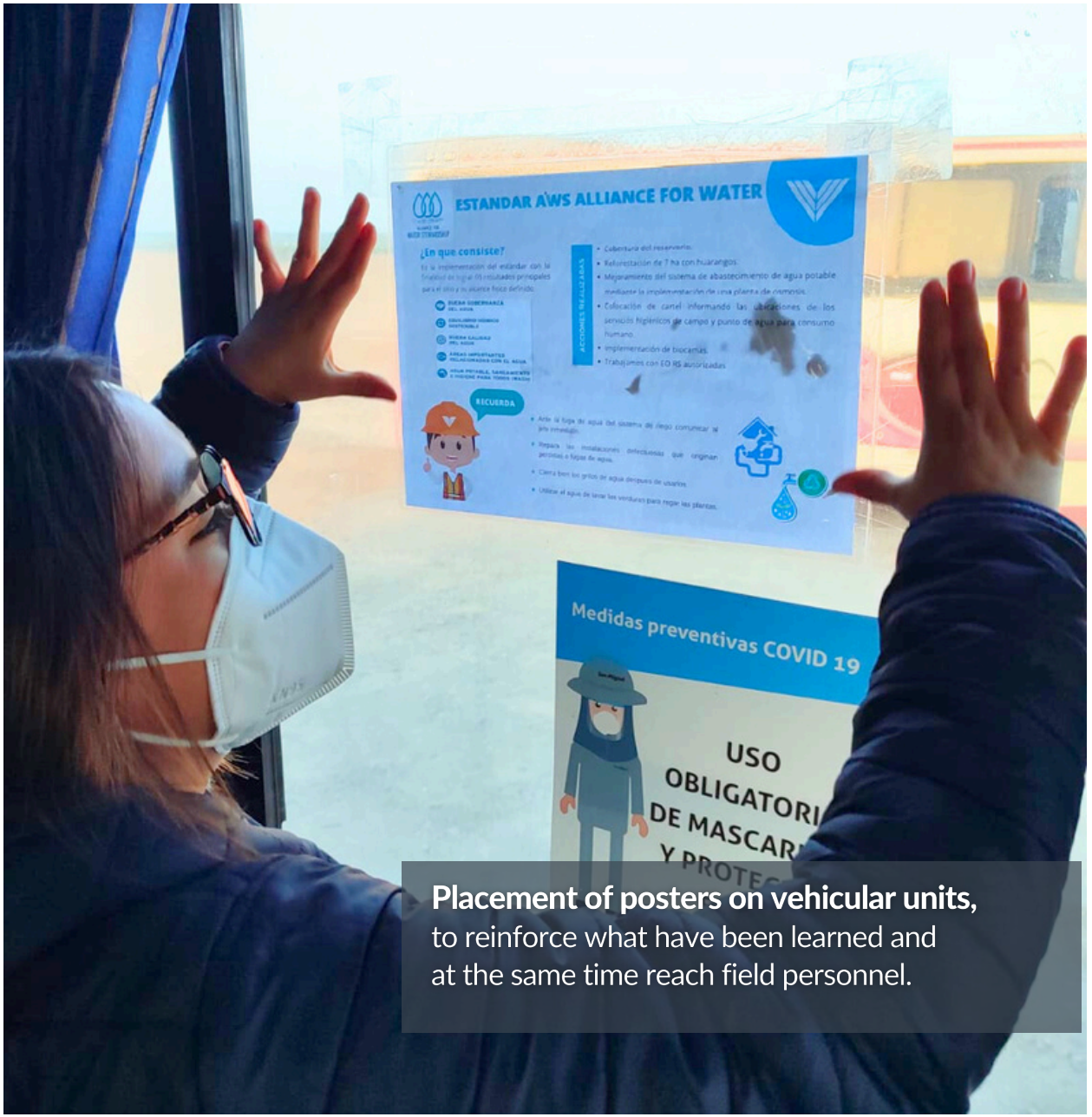
	APELLIDOS Y NOMBRES DE LOS CAPACITADOS	N° DNI	ÁREA	FIRMA	OBSERVACIONES
1–25	[illegible]	[illegible]	Sanidad	[signatures]	

RESPONSABLE DEL REGISTRO

		COMENTARIOS
NOMBRE:	Derian Dueñas	
CARGO:	Asistente ambiental	
FECHA:	21-10-2023	
FIRMA:	[signature]	

Prohibida su copia total o parcial de este documento sin la autorización de la Gerencia de Gestión de Talento Humano





Placement of posters on vehicular units, to reinforce what have been learned and at the same time reach field personnel.

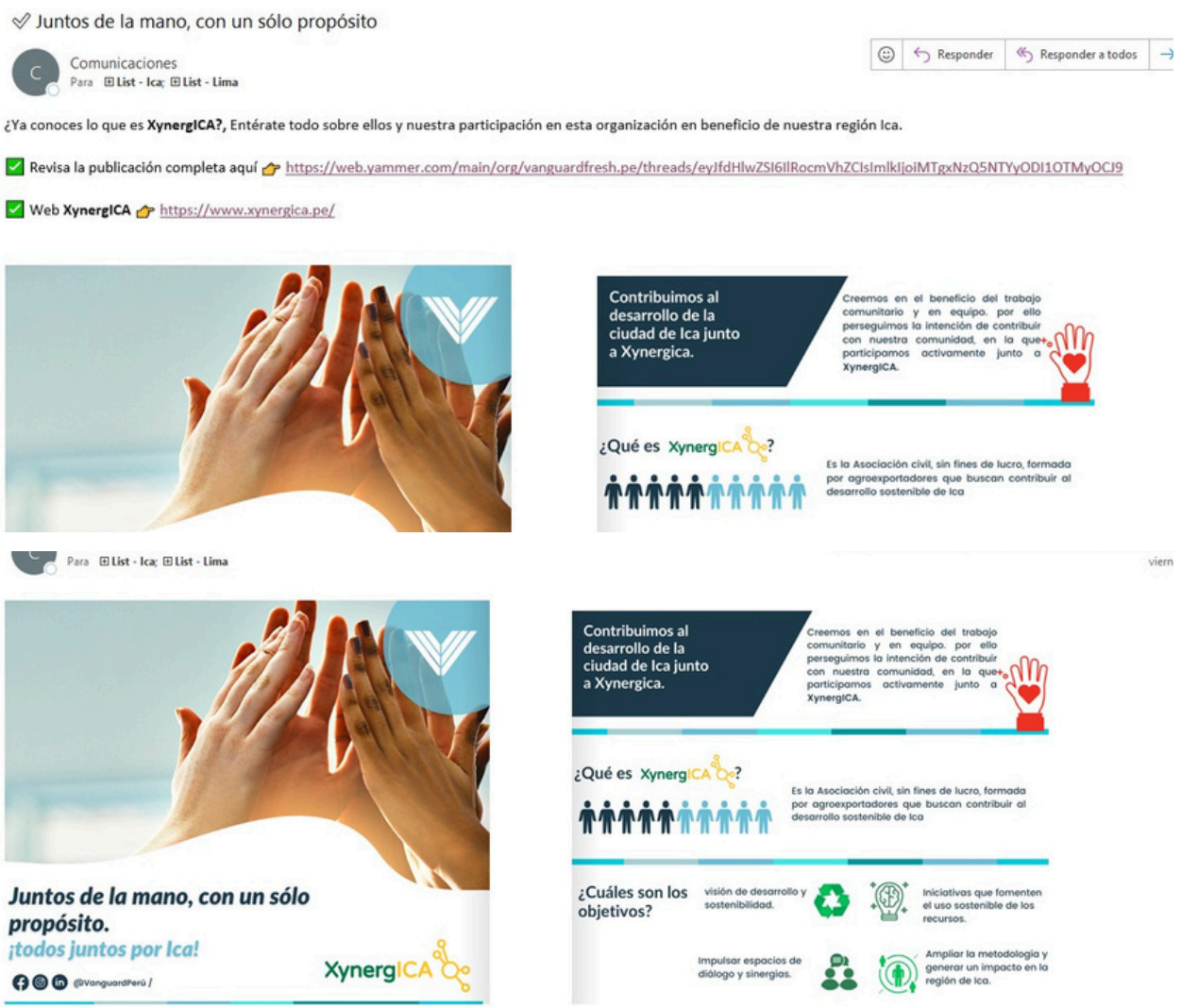
3.8. Implement a plan to involve and notify the owners of any water related shared infrastructure, close to any situation that may exist in the site.

3.8.1. Identify the commitments proofs and key messages of acknowledgment of receipt.

The Vanguard Group in Peru as part of XynergICA has been able to actively participate in water related projects, pormoting the care and preservation of shared infraestructures in Villacurí, since thanks to them the transfer of surface water can be infiltrated to the aquifer, among them we have: the main intake to Mamacona Canal and the directional intake to Golda Meier Park, as well as the installled pipelines.

XynergICA website shows the list of companies that are part of it, one of them being The Vanguard Group International: https://www.xynergica.pe/quienes-somos/

Likewise, through company´s communications area all the collaborators were informed about being part of the NGO and its importance.



3.9. Implement actions to achieve the best practices toward the results of AWS standar.

improvement toward the achievement of sectorial best practices to have local, regional and national relevance of the basin.

3.9.1. Implement actions to achieve the best practices, related with the water governance, as appropiate.

Description	Status
Full transparency in the extraction of water from the basin and its efficient use.	In Process
Transparency in water governance.	In Process
Promote sectoral meetings to discuss water-related improvement actions, projects, among others.	In Process
Technological innovation.	Pending

Table No. 26: Best practices related with water gove nance.

3.9.2. Implement actions to achieve best practices, related with objectives in terms of water balance.

Description	Status
Artificial recharge of the Villacurí aquifer in the Golda Meir area.	Executed
Enabling and maintaining infiltration trenches in Huaytará.	Executed

Table No. 27: Best practices related with water balance.

3.9.3. Implement actions to achieve the best practices, related with objectives in terms of water quality.

Description	Status
Concrete and permanent support to the user board in the hydrochemical monitoring in the control network once they are programmed.	Executed
Technical and technical participation in water and sanitation projects promoted by public entities and/or propose solutions that can be implemented by these entities.	In coordination

3.9.4. Implement actions to improve best practices, related with objectives in terms of maintenance of the site of important water related areas.

Description	Status
Expansion of the Los Laureles forest area as a climate change mitigation action.	In execution
Project proposal for reforestation in the head of Rio Seco	In Process.
Expansion of the Macacona canal: decapulation and cleaning of the canal, in order to give it width so that the water reaches small farmers.	In coordination.
Infiltration in Golda Meir through floodgates: Derive surplus to the park, in order to recharge the Villacurí aquifer.	Executed
Rio Seco project proposal: It consists of making dams or retaining walls, declaring the upper area of Rio Seco as intangible, because of the risks that arise as a result of the activation of streams.	In coordination.

Table No. 29: Best practices related to important water-related areas.

3.9.5.Implement actions to achieve the best practices related to objectives in water issues, sanitation and hygene (WASH).

Description	Status
Accessible, suitable and permanent evaluation supply so that drinking water is not lacking.	In execution
Water supply for human consumption for the site through a distribution system.	In progress
Implementation of new latrines.	In progress
Installation of a domestic water treatment plant at the Los Laureles farm, which will treat 120 m3/day through MBR technology.	In progress

Table No. 30. Best practice related to WASH.

Step 4:
Evaluate

4.1. Evaluate the site performance

In relation to the actions and objectives of its sustainable water management plan and demonstrate its contribution to the achievement of sustainable water resource management results.

4.1.1. Evaluate the performance of the site´s sustainable water management and the contribution to the achievement of the sustainable water management results.

The evaluation of the sustainable water management plan will be carried out every four months, verifying the progress of each objective based on the five outcomes of the WSA Standard.

After each evaluation will be carried out an advances report.

Then, after the first evaluation, the progress of each goal set forth in the plan is detailed below.

AWS RESULTS: Good Governance of Water.

Objective to address transparency issues in water management.

GOAL	PERFORMANCE
To make responsability management known internally and externally.	100%
Formalize the south committee with the formal conformation of XynergICA.	100%

Table No.31: Advances and goals on water governance.

AWS RESULTS: Sustainable Water balance.

Objective: To regulate the site's water balance, by reducing losses in the water operation.

GOAL	PERFORMANCE
Actualize the technical study on the balanced use of the irrigation system of Challapampa and replicate to the other sites. It is updated in Challapampa.	100%
Construction of a reservoir and centralization of the filtering and fertigation house in Challapampa.	100%
Place a cover in the reservoir of El Arenal fund with a practical method, to avoid water loss for evaporation.	0%

Cuadro N° 32. Avances de metas sobre calidad de agua.

AWS RESULTS: important water related water

Objective: Enlarge the forest area of native plants.

GOAL	PERFORMANCE
Ensure that the forested area (7 ha) located in Los Laureles de Villacurí receives proper irrigation and maintenance so that the huarango plants thrive. **Progress**: Gravity irrigation was implemented, using the wastewater generated by the osmosis plant, and huarango was selected as the species to be planted, thus proceeding with the acquisition, and transplanting of 130 huarango plants in the first stage, of which 68 plants have thrived. Table N° 33. Advances of goals about water-related. Planting of 2640 huarango plants, distributed in 7 ha was carried out.	100%

Table N° 33. Advances of goals about water-related

AWS OUTCOME: Drinking water, sanitation and hygene for all (wash)

Objective: improve the well-being of site employees and suppport the drinking water and sanitation management.

GOAL	PERFORMANCE
Implementation of an osmosis plant to treat and distribution of drinking water to all the employees.	100%
Communicate the exact locations of drinking water and sanitation points through an information poster.	100%
Improve the water supply for hygiene through a piping system that allows water to reach all the installed drinking fountains. **Advance:** Work has begun on contracting a specialist company to design and execute the project.	10%
Optimize the hygene and safety conditions for personnel involved in the premixing of agrochemicals. **Advance:** the infraestructure improvement of the premixing zones was carried out.	100%
Carried out the final disposal of sludge in a correct and safe manner.	100%
Implementation of a domestic wastewater treatment plant (WWTP). It was planned to install the WWTP during 2024, since during 2023 it was bidding in order to choose the profile of the WWTP and the company that will install it.	50%

Table No.34. Goal Advances about WASH.

4.1.2. Evaluate the value creation resulting from the sustainable water management plan. By allocating economic resources to implement the various targets set out in the sustainable water management plan, better working conditions, health and sanitation, as well as control in the management of extracted water, as well as an environmental value regarding the care of a natural resource and developing a sustainable development objective facing climate change are achieved.

4.1.3. Identify and quantify the benefits of shared value in the basin.

Impact of water recharge from the Golda Meir project: The Golda Meir park represents an important area for the artificial recharge of the Villacurí aquifer, having recharged a volume of water of 3.95 hm3 (cubic hectometers) during 2023, which would cover in 4.9% of water, part of the annual deficit of the Villacurí aquifer (78.2 hm3). Information obtained from the 2023 Technical Report "Golda Meir Project" (see annex No. 49).

4.2. Assessing the impacts of water-related emergency incidents

Including the extreme events, if any, to determine the effectiveness of corrective and preventive measures.

4.2.1. Prepare an annual written review and root cause analysis of the year´s emergency incident or incidents, to assess the site´s responds to the incident (s). In addition, identify proposed preventive and corrective actions, as well as the measures to mitigate future incidents.

In 2023, there have been no water-related incidents or accidents, however, a project has been proposed to the National Water Authority (ANA), which consists of making dams or retaining walls along the dry river[FJPA1] , which will allow the diversion of the water course.

STROKES

1.Blue line, 10.9 km route, highest point 688 masl, lowest point 450 masl, generating a height difference of 238 meters.

2. Red line, 11.4 km route, highest point 450 masl, lowest point 348 masl. It goes to the town center Santa Cruz de Villacurí.

3. Green line, 10.8 km route, highest point 450 masl, lowest point 427 masl, It goes to the town center Expansión Guadalupe.

4.Yellow line, is the area intended for canal cleaning.

4.3. Evaluate feedback from stakeholder consultations on the site's sustainable water management performance.

Including the effectiveness of the site's participation process.

4.3.1. Identify the consultative efforts with stakeholders on sustainable water management performance at the site.

All implementations and improvement actions regarding water resources are reported on the company's digital pages and are available to all interested parties so that they can provide their comments.

In addition, our Sustainable Water Management Plan was announced to two communities in August 2023 (Expansion and Santa Cruz de Villacuri) and surveys were also carried out, which can be seen in annex No. 66.

4.4. Evaluate and update the site´s sustainable water management plan.

Incorporating the information obtained from the evaluation process within the context of continuous improvement.

4.4.1. Modify and adapt the site´s sustainable management water plan to incorporate all relevant information and lessons learned from assessments at this stage, thus identifying such change.

The sustainable water management plan was updated for the presentation of this manual, according to the progress of implementation of each target (see Annex No. 54).

Step 5:
Communicate & disseminate

5.1. Disclose internal water-related governance of site management.

Including positions of those responsible for compliance with local water-related laws and regulations.

5.1.1. Disclose the internal water-related governance, including the positions of those responsible for compliance with local water-related laws and regulations.

The authority and responsability chain and the water management was stipulated as described in section 2.2.1 and was disseminates through Vanguard Group in Peru communication area to the entire organization and Facebook, and posters of the organization chart of those responsible for water management were also posted, which are maintained to date in a good condition.

5.2. Communicate the sustainable water management plan to relevants stakeholders.

5.2.1. Communicate to relevants stakeholders the sustainable water management plan, including how it contributes to the outcomes of the AWS Standard, to relevant stakeholders.

Communication on the implementation of the sustainable water management plan has been carried out through the organization's communications area and Facebook, whose corporate name reaches workers and public and private entities.

5.3. Disseminates the annual summary of the site's sustainable water management plan

Including relevant information on the site's annual sustainable water management performance and results in relation to the site's objectives.

5.3.1. Disclose once a year a summary of the site's sustainable water management performance, including quantified results in relation with objectives.

The progress of the sustainable water management plan is inside this document, which is published and disclose on the organization´s social networks and externally through Facebook.

5.4. Disseminating efforts to collectively address shared water challenges

Including positions of those responsible for compliance with local water-related laws and regulations.

During 2023, the Vanguard Group in Peru, through its leaders, announced the activities and projects related to water and the AWS standard at some events, such as:

- Expoagua & Sustainability 2023: Our assistant manager of Quality Assurance and Environment, Giancarlo Luna, participated in the Water & Sustainability Expo 2023 to publicize the various works carried out for the proper and sustainable use of water resources, projects implemented in the community and our organization, which allowed us to know and exchange ideas for a better Peru. In Annex No. 67, you can see the entities that participated in this event:

- El Amazonas S.A. BIC. textile
- San Miguel Fruits Peru S.A.
- Shahuindo S.A.C.
- UNACEM Perú S.A.
- Coimolache Mining Company.
- Huaura Power Group S.A.
- Union de Cervecerías Backus y Johnston S.A.A.
- SGS Peru
- VON HUMBOLT School

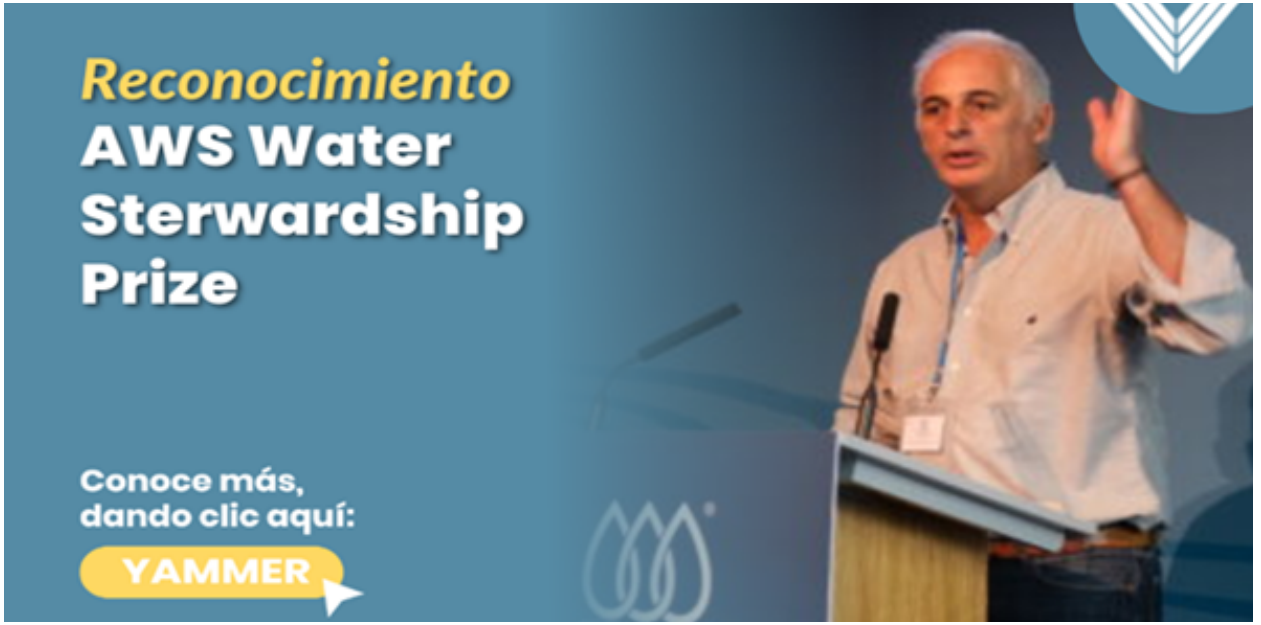
- Exhibition at the webinar "custody of water" organized by AWS:

Giancarlo Luna, Assistant Manager of Quality Assurance and Environment of the Vanguard Group in Peru, presented the techniques and projects developed by the company in this field. This activity was organized by AGAP.

- Recognition AWS Water Sterwardship Prize:

Through our General Manager - Manuel Yzaga Dibós, he received the AWS Water Sterwardship Prize for his leadership, commitment and innovation in the responsible use of water, complying with the standards of the Alliance for Water Stewardship (AWS) and allowing the sustainable development of the organization, the community and the country.

To learn more about this award, through an interview conducted by the AWS to our Manager 👉 https://bit.ly/3os5IQG



ALLIANCE FOR WATER STEWARDSHIP

5.4.1. Disclose site´s water-related shared challenges and the efforts to address these challenges.

XinergICA, which we are part has prepared a list detailing the actions to be carried out, as well as a description of the challenges to be shared in each of the proposed projects (see annex No. 10).

5.4.2. Identify the efforts mad by the site and involve stakeholders to coordinate and support to the organizations of public sector agencies.

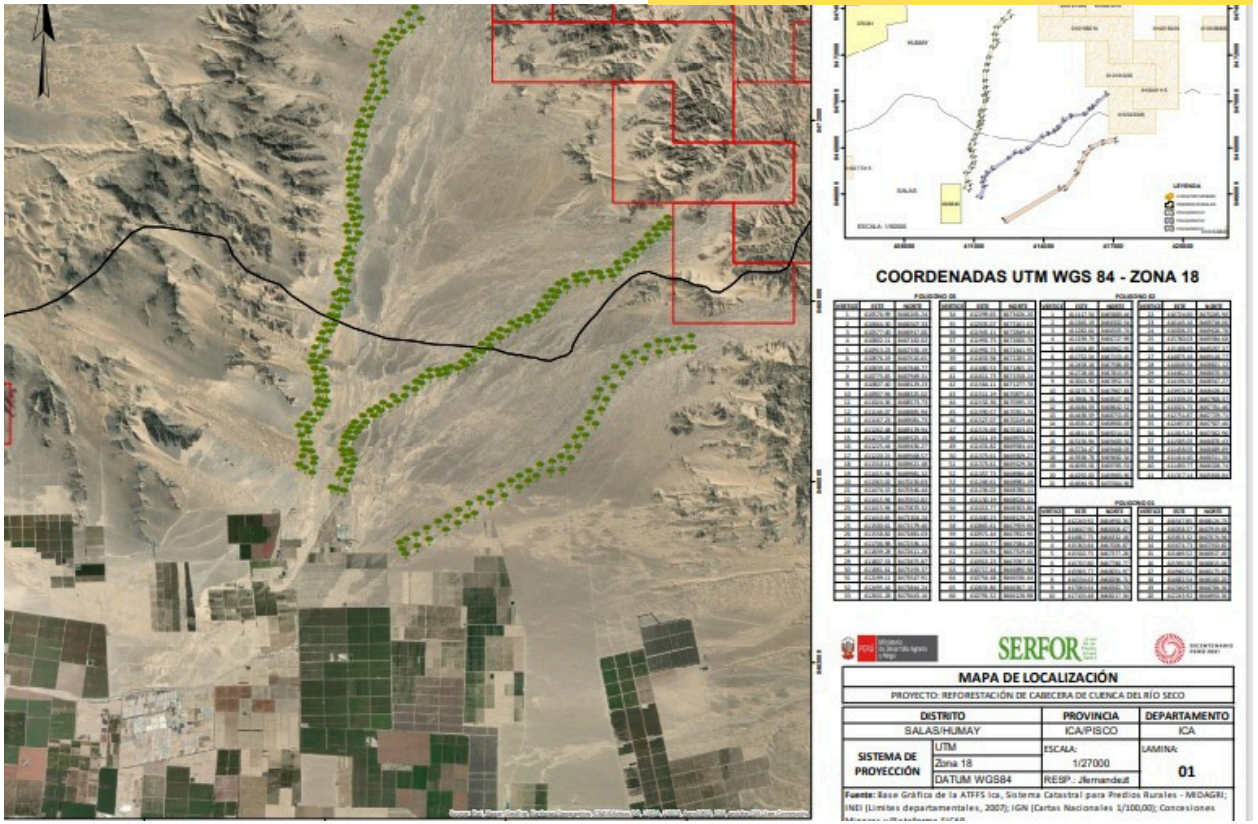
- **Artificial Recharge Project in Golda Meier Park**, the description of this project can be found in Annex No. 55.

- **Project for the installation of infiltration ditches in Huaytará**, see Annex N° 68. XynergICA - Water projects. It is worth mentioning that the same project is being implemented in the tambo district.

- **Reforestation project at the headwaters of the dry riverbed:** This project involves the planting of native species and others in the upper part of the dry riverbed, with the objective of restoring a certain area of the dry river, taking as reference the regulations that mention the Gaps of the Agricultural and Irrigation Sector for the process of Multiannual Programming of Investments 2022-2024, approved by Ministerial Resolution No. 338-2020-MIDAGRI.

- **Proposal for the Rio Seco project,** which consists of placing retaining walls and declaring it an intangible zone, see annex No. 52.

Map No. 3. Project location.



5.5. Communicate transparency in the compliance of the water-related regulations

Make available to anyone who requests it, any violation in the compliance with the rules related to water at the site, as well as any corrective measures taken by the site to avoid a repetition in the future.

5.5.1. Disclose any violations related to site water compliance and corrections.

Not applicable, because there have been no infractions; however, it is worth mentioning that we have the charges we receive for submitting groundwater extraction reports, visit documents, notices or information regarding water resources.

Annexes

- Annex No. 1. Location and accessibility Map.
- Annex No. 2. Perimeter drawings and KMZ.
- Annex No. 3. Location Drawings of toilet facilities.
- Annex No.4 Proofs of water use permits.
- Annex No 5. Location Maps of Wells.
- Annex No. 6. Map of inoperative wells in Fundo Challapampa.
- Annex No. 7. Drawings of the drip irrigation system.
- Annex No. 8. Maps of neighboring funds.
- Annex No. 9. Population growth and distribution 2017.
- Annex No. 10. Water Roadmap.
- Annex N° 11. Minutes of the meeting on the AWS standard.
- Annex No. 12. Commitment to Sustainable Water Management and the EXPO AGUA thank you letter.
- Annex No.13. Water Balances 2022 and 2023.
- Annex No. 14. List of wells and permits.
- Annex No.15. Irrigation Report.
- Annex No. 16. Monthly groundwater extraction reports 2022 and 2023.
- Annex. No. 17. Weather data record 2023.
- Annex No. 18. Irrigation water analysis test reports 2023.
- Annex No.19: Location Maps of risk points.
- Annex No. 20. Location maps of solid waste storage facilities.

Annexes

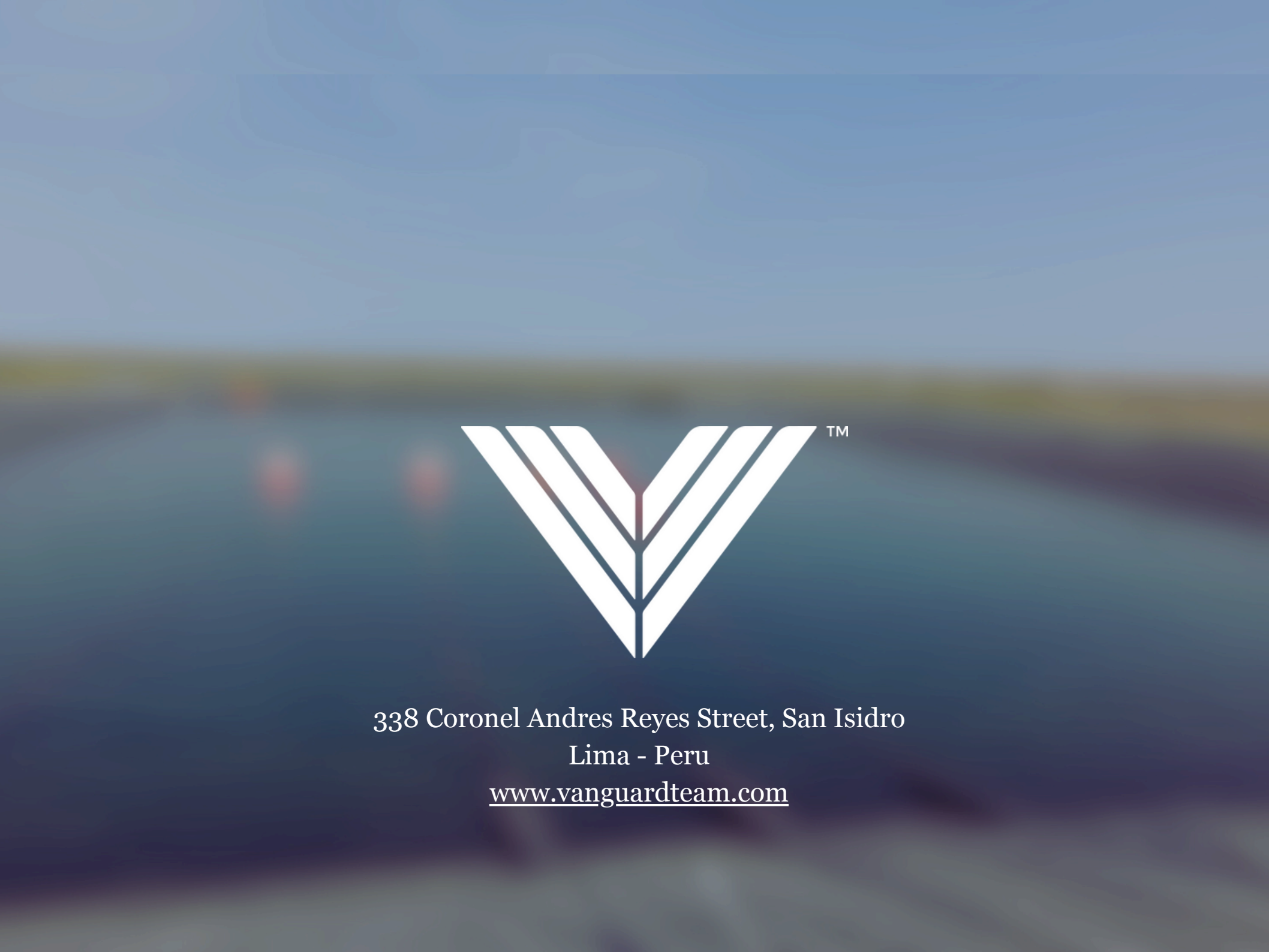
- Annex No. 21. Hydric Costs
- Annex No. 22. Agreements with external stakeholders.
- Annex No.23. Recognition granted by the ANP.
- Annex No. 24. Access points to drinking water.
- Annex No. 25. Health Authorizations by DIGESA.
- Annex N° 26. Office cleaning procedure and hygiene services.
- Annex N° 27. Cleaning Procedure for Hygienic Services in the Field.
- Annex N° 28. Integral Solid Waste Management Procedure.
- Annex No. 29. Procedure for disinfection of personnel transportation units.
- Annex No. 30. Water Resources Law No. 29338.
- Annex No. 31. EMAPICA tariff study.
- Annex No. 32. DHR SUNASS
- Annex No. 33. BH WASH
- Annex No. 34. Management Plan for aquifer of Ica Valley, Villacurí pampas and Lanchas prepared by ANA.
- Annex No. 35. Ica Regional Sanitation Plan 2022 - 2026, prepared by GORE.
- Annex No. 36. Management plan for the Ica aquifer and the process of formalization - regularization of wells.
- Annex No. 37. Letters addressed to district mayors.
- Annex No.38 List of legal requirements on water resources.
- Annex No. 39. Research study by Dr. Emilio Custodio.
- Annex No. 40. Technical assistance on integrated water management and artificial recharge in the Ica - Villacurí - Lanchas aquifer.

Annexes

- Annex No 41. Inventory of wells Lanchas 2018.
- Annex No. 42. Inventory of wells Villacurí 2018.
- Annex No. 43. Water balance of the Villacurí watershed.
- Annex No.44. Water quality Report in Villacuri.
- Annex No. 45. Water-related shared challenges and initiatives.
- Annex No. 46. Risk Matrix.
- Annex No. 47. Profile Project PTARD.
- Annex No. 48. Golda Meier Video.
- Annex No. 49. Technical Report 2023 “Golda Meir Project”.
- Annex No. 50. Monitoring and evaluation of the Pampas de Villacurí and Lanchas aquifer.
- Annex. No. 51. Descriptive memory of the reforestation project at the head of the channel Rio Seco.
- Annex No. 52. Rio Seco project proposal.
- Annex No. 53. 01-GA-PO-01 Environmental Management.
- Annex No. 54. Sustainable water management plan.
- Annex No. 55. Technical report No. 001-2020-CI.RNV, on artificial recharge in the aquifer in the Golda Meir sector.
- Annex No. 56. Concession of the infiltration project in Golda Meir.
- Annex No.57. ICA Disaster Risk Prevention and Reduction Plan.
- Annex No 58. Construction of the water road map: Images of the meetings for the development of the road map.
- Annex No 59. Images of meetings with GORE Ica – Golda Meir Loan officials.
- Annex No 60. Images of the meetings with the user board and GORE Ica.

Annexes

- Annex No 61. Images of the operation of the Golda Meir Project.
- Annex No 62. Information Wells XynergICA.
- Annex No. 63. Technical report on the implementation of Laureles latrines. Annex No 64. Osmosis plant report.
- Annex No 65. Water analysis reports for drinking-water.
- Annex No 66. Dissemination of the Sustainable Water Management Plan.
- Annex N° 67. EXPOAGUA & SUSTAINABILITY PROGRAM 2023.
- Annex N°68. “XynergICA - Water projects”.



338 Coronel Andres Reyes Street, San Isidro
Lima - Peru
www.vanguardteam.com