ADEICS

Sustainability Report

2022

ADEICS 2023

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ADEICS

Sustainability Report

2022

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Dear associates and friends

Dear associates and friends:

For the first time, the ASOCIACIÓN DE ESTUDIOS ECOLÓGICOS E INVESTIGACIÓN CIVIL SOSTENIBLE (ASSOCIATION FOR ECOLOGICAL STUDIES AND SUSTAINABLE CIVIL RESEARCH) presents its Sustainability Report. All the information you will find in this document reflects the organic growth of the last five years. When we decided to start new research on the fate of construction and demolition waste from construction sites in the city of Lima in 2014, it was decisive for this undertaking.

Undoubtedly, a board of directors with broad and diverse experience, as well as a work team that has been growing and forming along with our association, have been key pieces to reach the achievements and metrics that will be presented in our research.

In the last 5 years, ADEICS has consolidated its position as a leader in the generation of studies for the treatment of CDW (Lima, Peru), as well as innovating in the cooperative management of carbon credits in coffee plantations (Cajamarca, Peru).

It has also become a strategic partner for local authorities, providing technical advice on procedures related to reserves and rights of use of aquatic areas and prior certifications for the adequacy of initiatives in the Costa Verde sector (Lima, Peru).

The evolution process of the association has generated approximately 100 hectares of new land for public use in the city of Lima (Peru), as well as initiated the certification process of 825 hectares of coffee trees in the city of Chirinos (Peru) under the Verified Carbon Standard.

I have the firm intention that in every project we carry out, in every area we work in and every institution we visit, the main objective is to achieve people's wellbeing.

Finally, I would like to thank each member of the ADEICS team for their dedication, passion and commitment to make our projects a reality.

JOAQUÍN MANTILLA
Chairman

ADEICS

01. About us

ADEICS

1.1. Who are we?

We are a non-profit Civil Association, whose main objective is the research, generation and management of projects related to environmental conservation and sustainable development.

Among our projects we have the Boulevard Costanera, whose main objective is the stabilization, compaction and generation of public spaces in the Costa Verde of San Miguel through an inter-institutional cooperation agreement with the Municipality of San Miguel, Lima. We use engineering techniques and formalize the final disposal of excavation waste.

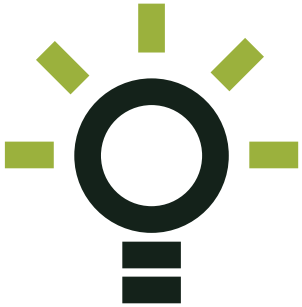
At the same time, work is being done on the preliminary project called Mirador Ecológico Cultural Lurín (Lurin Cultural Ecological Viewpoint). This project has a two-fold objective:

first, to generate sustainable and safe recreational spaces where tourism can be promoted through local cultures and the second objective is to reuse and achieve the controlled final disposal of excavation, demolition and construction waste.

The purpose of both projects is to reuse the material received for other uses or applications, and to produce aggregates for backfill in the construction of infrastructure works in the city of Lima. This raw material meets the technical requirements, which will be obtained in a process of shaking and crushing, ADEICS seeks to innovate the traditional methods for obtaining these aggregates, which are generally obtained in quarries or natural lands, degrading natural spaces on a daily basis.

On the other hand, work is being done on the Carbon Credit Project that certifies the reduction of greenhouse gas emissions in relation to the data determined in the baseline located in the Chirinos district, San Ignacio province, Cajamarca region.

1.2 Culture



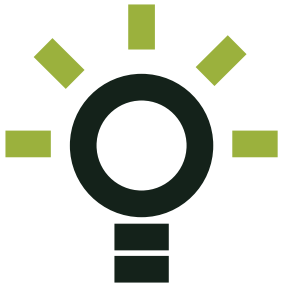
Vision

By 2027 we will consolidate 7 projects, with which ADEICS seeks to position itself as one of the main environmental associations in the country, with participation in the most important projects that are aligned with the Global Sustainable Development Goals, ensuring the improvement of the quality of life and sustainable management of the population's resources.

Mission

The mission of ADEICS is to develop, manage, execute and administer environmentally friendly projects focused on the conservation, recovery and creation of public and private spaces through innovation and sustainability. We strive for our projects to grow with conscience and achieve success within an ethical framework to offer the best environmental services available to the city, in order to contribute to the country's circular economy.

1.3. Association values



Innovation

Ethies

Transparence

Commitment to the protection and preservation of the environment

Community responsability

1.4. Our management bodies

Board of Directors

The Board of Directors is the body in charge of the organization, administration, management and direct control of the Association. It is composed of four members, who are elected at the General Assembly for a term of three years, and may be reelected consecutively and indefinitely. Upon expiration of its term of office, the Board of Directors shall continue in office until its reelection or the next election.

The meetings of the Board of Directors are held on a monthly basis, at which risk, contingency, results and progress of the association are discussed; specific topics per project; establishment of objectives, values and strategy.

The Board of Directors has the powers of management and legal representation necessary for the administration and management of the association within its purpose.

Organization

For the 2020-2023 period, the Board of Directors is composed as follows:

Chairman:
Joaquín Mantilla Huertas
Civil Engineer

Vice chairman:
Teresa Milagros Defilippi Shinzato
Architect

Secretary:
Federico Alexis Dueñas Dávila
Agricultural Engineer

Treasurer:
César Augusto Eyzaguirre Avilés
Attorney

Responsabilities of the Board of Directors

It is in charge of the general administration of the Association through the faithful observance of these bylaws, as well as the resolutions of the general assembly.

Accepts or rejects donations of money or goods, ensuring that the resources from such donations are used for the purposes expressed by the donor.

Approves inter-institutional cooperation agreements with public or private entities.

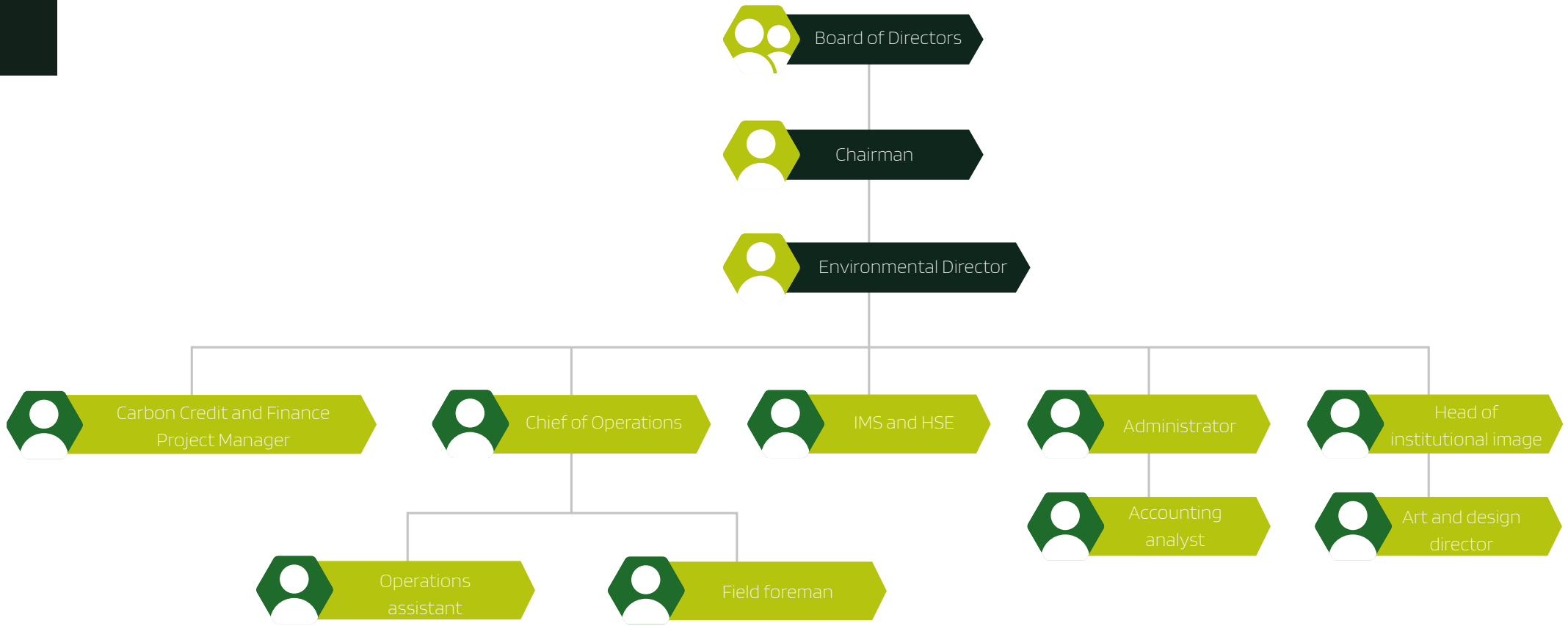
Appoints attorneys-in-fact, granting them specific powers for specific cases.

Convenes and presides over the sessions of the General Assembly, Board of Directors, and call elections. In the event that a motion is to be defended or supported, the Assembly shall be presided over by the Vice Chairman.

Represents the Association with the general and special powers provided for in Articles 74 and 75 of the Code of Civil Procedure.

Directs the administrative and organizational activities of the Association.

1.5. Organizational chart



1.6. Process management system

As an Association we seek to have a better quality in our processes and services, so we are on the way to the implementation of ISO 9001, for which we have the following procedures and formats:

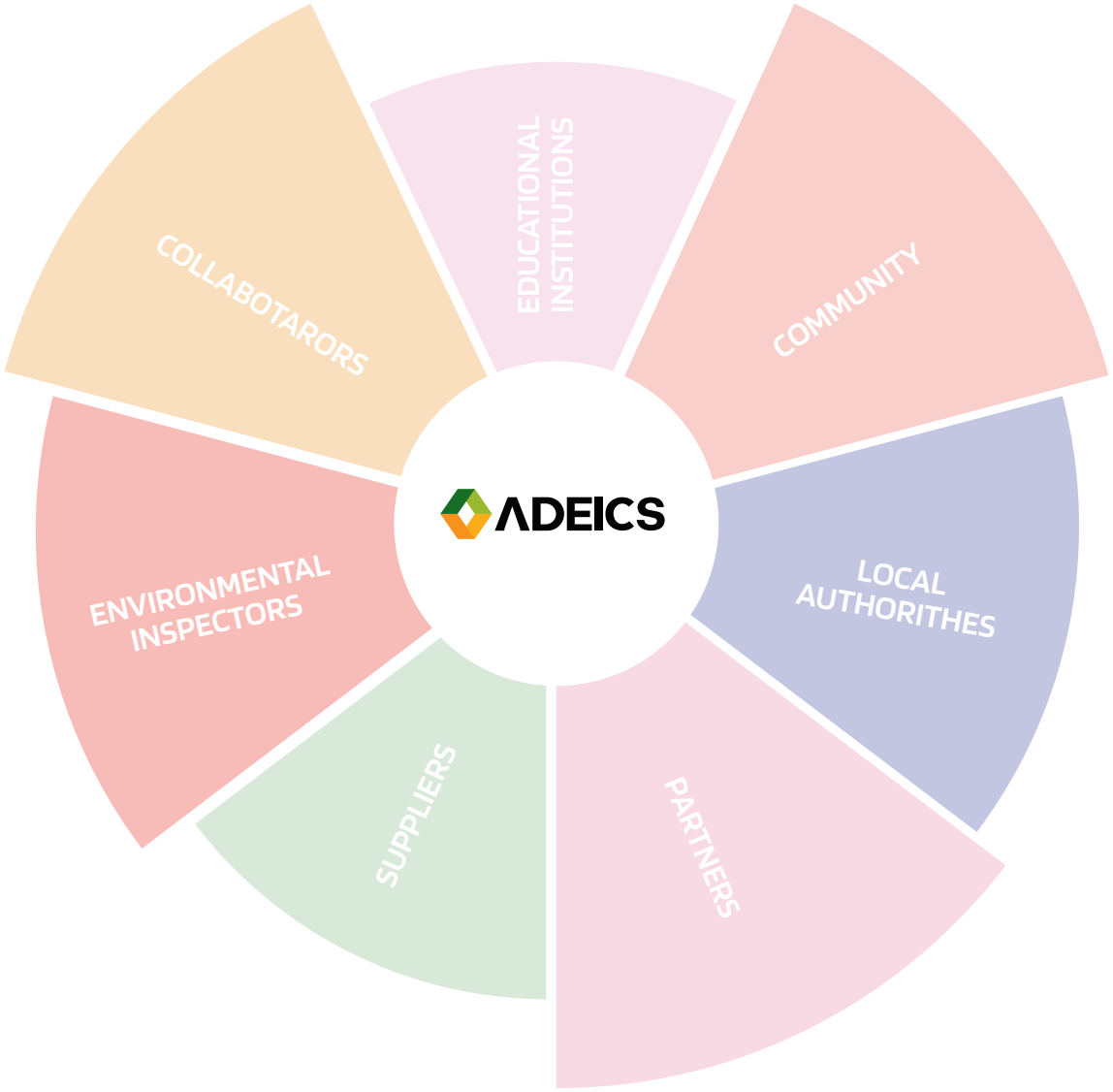
1.7. About our sustainability report

This initiative seeks to present the sustainability report biannually; in this first edition, we will cover the calendar years from 2016 to 2022. This report has been prepared in accordance with the Core option of the GRI (Global Reporting Initiative) Standards.

The Association for Ecological Studies and Sustainable Civil Research seeks to establish a process for identifying the most important issues for the Association and its stakeholders in all areas of sustainability. This materiality process makes it possible to analyze the positive, negative, actual and potential impacts of the Association throughout the value chain and to identify risks and management opportunities.

The actions focused on reaffirming our commitment to sustainability, starting with our implementation of Corporate Social Responsibility, acting in line with our values and principles. Likewise, we continue to strengthen the alignment with the Sustainable Development Goals (SDGs) to identify the level of contribution of the Association and the performance of our business model in an environment with new demands and latent needs.

1.7.1. Stakeholders



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02. Integrity

ADEICS

2.1. Digital transformation

ADEICS aspires to build an effective, transparent and innovative Association that is deeply knowledgeable about its members and provides information to the public. After the health crisis in 2020, offices moved in-house, which led to a digital way of working.

From this, we are moving towards a technological architecture based on smaller and independent components, which will allow us to receive and send information in real time. In this way, we can inform in an efficient and agile way to different users who need information about the work carried out by the Association. In order to accelerate the launch of new services, we promote the adoption of storage technologies in cloud services (OneDrive), business collaboration platforms (SharePoint), issuance and receipt of electronic invoices, digital certificates supported by digital signatures and the sending of account statements to each customer digitally through their email inboxes.

As part of the Association's digital transformation, several processes have been automated in order to perform them

in a faster way, reduce the level of errors and eliminate reprocessing; to this end, algorithms were developed using Visual Basic to record data and generate automated reports for various partners. In addition, with the help of database engines, the information was centralized and structured for easy and agile access by the Association's employees.

The supervision and progress needs of the projects led to the development of Dashboards in Power BI. These control panels summarize in real time the development indicators of each of the Association's projects, helping to optimize the monitoring and control of the activities carried out.

Finally, following the commitments of honesty and transparency in information, the use of digital signatures was implemented to prevent the forgery and alteration of signatures. To this end, ADEICS subscribed to the Tocapu.pe platform, which specializes in providing digital signature services for electronic documentation, developed by Llama.pe and supported by Indecopi.

Technologies used:

ADEICS

2.2. Anti-corruption policy

The Association complies with and promotes respect for human rights in each of its activities and transmits this culture to the entire value chain. We abide by the norms and principles of our country, as well as the Universal Declaration of Human Rights and the International Labor Organization's Declaration on Fundamental Principles and Rights at Work.

Likewise, it follows the recommendations for companies, issued within the framework of the United Nations and the Guiding Principles on Business and Human Rights, established in our commitment to them.

Any action that violates people's dignity is rejected. For this reason, there are specific guidelines to address and ensure compliance. In addition, we foster a friendly, healthy and equitable work environment where any form of discrimination based on gender, race, color, nationality, religion, age or ethnicity is repelled. Freedom of opinion and association are respected, and a fair balance between personal and professional life is sought.

Likewise, the Association is aware of the high percentage of unemployment or underemployment among the economically active population, which reaches up to 65%, and of the undignified income that this group represents. Consequently, knowing that the generation of formal work allows part of the citizenry to enjoy the right to live in dignity, we consider ourselves guarantors and promoters of this basic right.

This is materialized in the creation of jobs for our workers who help in the reception of the material used and in the generation of space in our institutional headquarters.

Finally, according to the guiding principles on business and human rights, the State is the main guarantor of these rights.

However, in a reality such as the Peruvian reality, it is essential to assume an active role in the recognition of these rights, as well as in the construction of conditions that make them accessible to all.

Our goal

Reiterate the commitment of ADEICS to strict compliance with the regulations on prevention and fight against corruption, developing the principles contained in the Code of Ethics and Conduct, and extending its compliance not only to all collaborators, but also to interested parties.

Our commitment

Zero tolerance for any act of corruption. We ensure transparency in our processes and seek to operate under ethical standards, transparent transactions and a relationship model that contributes to sustainable development. The ADEICS Code of Ethics promotes the commitment of our collaborators in the fight against corruption. We also publicly declare our support for the fight against corruption within the legal, international and regional frameworks.

Clarification to collaborators

Our policy is clear: all employees, officers, contractors and others acting on behalf of ADEICS (service providers, customers) may not pay bribes or otherwise attempt to improperly influence any other person - whether in the public or private sector - even if such payment is solicited and its bribe status is denied. This applies whether an improper payment is made directly through an ADEICS collaborator or through a third party.

Disciplinary measures

ADEICS strictly prohibits bribery and corruption of any kind related to the professional activity of the Association. ADEICS employees found to have engaged in bribery or corruption will face disciplinary action up to and including termination of employment, facing sanction

"Likewise, we have included a clause in the contracts by which the strategic partners adhere to the standard human rights policy, so our collaborators work under the same agreement described".

2.3. Integrity system

Among the Association's objectives is to promote values and conduct that comply with the Code of Ethics both within the Association itself and among its stakeholders. Therefore, it is reinforced in the relationship between internal stakeholders (employees and suppliers of services) by means of the work regulations within the Code of Ethics. This document also serves to guide and facilitate the actions of each part of the Association. The group that regulates compliance with the Code of Conduct and handles any type of report or complaint regarding the Association's work environment will be the Ethics Committee, which is comprised of the president and the administrative area. In addition to their main function of supervising the effectiveness of the code, they must also modify it and establish corrective actions for reported faults.

Principles of the code of ethics:

Integrity in reporting and reports

Financial transparency

Bona fide

Respect and equal opportunity

Non-discrimination and inclusion

2.4. Regulatory compliance

We respect and comply with current legislation on environmental and socioeconomic issues. Regulatory compliance applicable to the various projects is presented below:

Before the Ministry of Housing, Construction and Sanitation (MVSC), the National Water Authority (ANA) and the Costa Verde Project Authority (APCV).

National System of Environmental Impact Assessment (SEIA) - Ministry of the Environment
Single text of administrative procedures 2019 - National Water Authority ingle text of administrative procedures (TUPA of the APCV).

2014

First

environmental baseline

2015

2016

First

environmental baseline

2017

February

Pre-certification of initiative adequacy Nº 001 - 2017 APCV - GT

June

R.D. 549 - 2017/VIVENDA/ VMCS-DGAA Environmental Certification Category - Project Day

2018

May

Resolution Nº041-2018-MML-APCV-GT (EXTENSION CPAI 2017)

Environmental Monitoring
Submitted to the DGAA of MVCS

2019

August

R.D. 959 - 2019 - ANA - AAA CAÑETE - FORTALEZA ANA Artisanal well approval

2020

Junio

R.D. CARTA 387 - 2020 / VIVIENDA - VMCS - DGAA (NT 3471 - 2020) Conformity to the Substantiated Technical Report of the 'Boulevard Costanera' Project that incorporates the slope protection component.

2021

April

Pre-certification of initiative adequacy Nº 003 - 2021 APCV - GT

2022

October

R.D. 092 - 2022 VIVIENDA/ VMCS - DGAA Modification of Environmental Impact Statement

Before the Directorate General of Captaincies and Coast Guard – DICAPI

Single Text of Administrative Procedures of the Peruvian Navy: TUPAM- 150 (Issue 2012)

2017

February

R.D. 144-2017-MGP/DGOG
Reservation of Right to Use
Aquatic Area (E01 North)

2018

May

R.D. 553-2018-MGP/DGOG
Reservation of Right to Use
Aquatic Area
(E01 South)

R.D. 585-2018-MGP/DGOG
Extension of E01 North
R.D. 144-2017-MGP/DGCG

June

R.D. 716-2018-MGP/DGOG
Corrects the ownership of
the RD 533-2018-MGP/DGCG
In favor of MDSM

November

R.D. 1554-2018-MGP/DGOG
Extension of the R.D. 553-
2018-MGP/DGOG clarified by
R.D. 716-2018-MGP/DGOG

2019

Jule

R.D. 493-2019-MGP/DGOG
Reservation of Right to Use
Aquatic Area (E02 - COPAL)

August

R.D. 557-2019-MGP/DGOG
Reservation of Right to Use
Aquatic Area (E02 North)

2020

August

R.D. 253-2020-MGP/DGOG
Reservation of Right to Use
Aquatic Area
(E01 South)

2021

April

R.D. 280-2021-MGP/DGOG
Reservation of Right to Use
Aquatic Area
(E01 Sea North)

November

R.D. 805-2021-MGP/DGOG
Modification of the Right
of Use of the Aquatic Area
of the R.D. 557-2019-MGP/
DGOG (E17)

2022

April

R.D. 313-2022-MGP/DGOG
Reservation of Right to Use
Aquatic Area
(E01 South)

R.D. 315-2022-MGP/DGOG
Reservation of Right to Use
Aquatic Area
(E01 Sea North)

Areas of Reservations before the Directorate General of Captaincies and Coast Guard - DICAPI

Reservation of use of Aquatic Area

- E01 Sea North
- E01 South

Right of use of Aquatic Area

- E02 North
- E02 Legacy
- E02 Peruvian Navy theme Park

N

2.5. Public policy

The Code of Ethics establishes that everyone must carry out political activities outside working hours and the workplace.

Advisors may not use their office, position or Association assets for political activities.

The Association is not related to public policy and has the following procedures for dealing with officials:

- Procedure for dealing with audits and inspection visits by the authority.

- Procedure for payment of fines and compliance with corrective measures and conflict of interest policy.

No contributions to political parties or representatives have been made during the entire period of work.

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03. Our projects

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Our project locations

LIMA - SAN MIGUEL

LIMA - LURÍN

CAJAMARCA - CHIRINOS

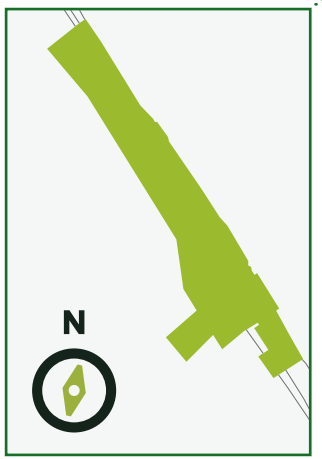
3.1. Costanera Boulevard Project: San Miguel

From the need to integrate with the rest of the districts through a continuous boardwalk, the Boulevard Costanera project was born with a different vision of public-private management and with an environmentally friendly solution, which converts a material that could be considered a disposable good into a productive good for the generation of new land for urban development and use for the city. This is thus transformed into a sociocultural and urban space that generates a sense of belonging of the neighbor to his or her environment.

For this reason, the Municipality of San Miguel proposes the execution of a project of public investment in Boulevard Costanera: Improvement of layers and slopes of the Costa Verde - San Miguel cliffs.
province of Lima - department of Lima" (SNIP Code: 250318) through the aforementioned inter - institutional cooperation agreement with ADEICS, the purpose of which includes the implementation of activities that allow the environmentalization of the current area of the cliff fill in the San Miguel area, in addition to obtaining or recovering public spaces and their use as a social, cultural and recreational space; for this purpose, the slope and embankment must be compacted to convert them into an environmentally sustainable space, reducing the high geodynamic risk or imminent danger of landslides in this area. A strategy of concentration is chosen, which intervenes and conditions specific areas, providing them with greater landscape comfort, thus serving as a regenerative process of the public space that overlooks the sea.

The platform will be covered with green areas and trees, with approximately 1,500 trees, which will form a boulevard that will shelter and shade both the promenade and the sidewalks in summer, structuring the space and beautifying this green pedestrian area throughout the year.

Project location



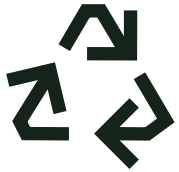
3.1.1. Goals

The main objective of the project is to create public spaces for social, cultural and recreational use in the area in front of Costanera Avenue

Follow up on the topographic and geotechnical conditions of the coastal strip in the San Miguel district and its potential for future uses.

Generate synergies for the improvement and use as public space of the areas created and to be created with the project.

Consolidate the administrative procedures before the governing bodies linked to the Costa Verde, for the continuity and development of existing spaces and new spaces for public use that are achieved in the next municipal period.



Monitor the parameters established in the environmental commitments presented in the Environmental Impact Statement and the project.

3.1.2. Project timeline:

2016

November

Inter-institutional cooperation agreement between the district municipality of San Miguel and ADEICS.

2017

July

Work stoppage due to the entrance of EMAPE for the construction of the Costa Verde road, Escardó - Virú section.

2018

April

Inter-institutional cooperation agreement between the district municipality of San Miguel and the municipal toll administration company of Lima.

December

First addendum to the inter-institutional cooperation agreement between the district municipality of San Miguel and ADEICS.

2019

July

Work stoppage for the Pan American and Parapan American Games Lima 2019

2020

March

Pandemic work stoppage COVID-19

September

Resumption of operations

2021

April

Second addendum to the inter-institutional cooperation agreement between the district municipality of San Miguel and ADEICS.

2022

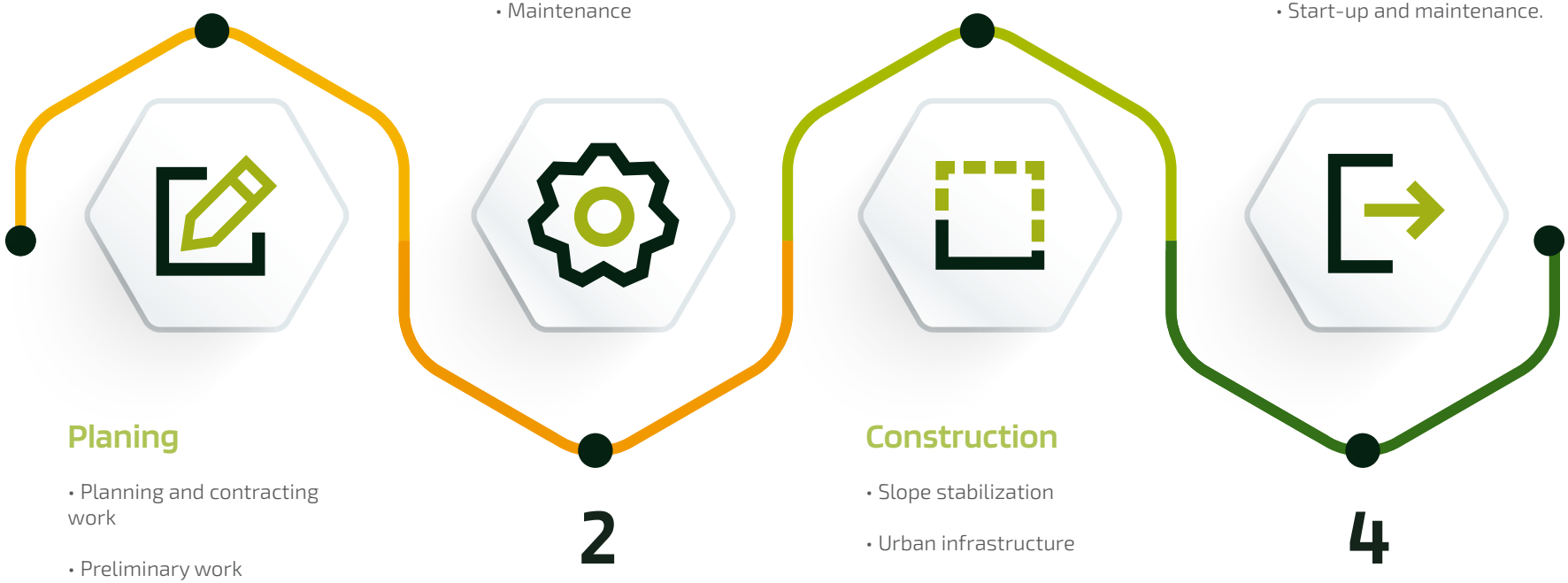
December

Technical support Parque Belén

Centennial Park Border San Miguel - Callao

Technical Meetings APCV - IMP

3.1.3 Project stages:



Planing

- Planning and contracting work
- Preliminary work

Operation and maintenance

- Repair of infrastructure and street furniture
- Maintenance

Construction

- Slope stabilization
- Urban infrastructure
- Lighting
- Recreation area installation
- Installation of green areas

Closing

- Enabling new spaces recovered and generated.
- Start-up and maintenance.

Project operability

Unit fluency

3.2. Ecological Viewpoint Project - Culture: Lurín

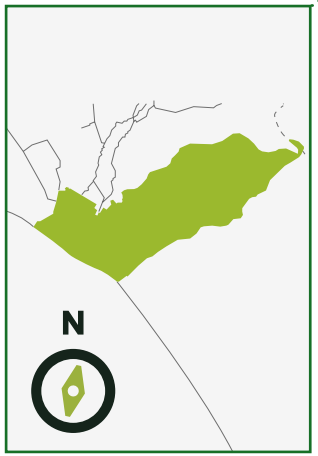
ADEICS has been developing the preliminary project for the "Lurin Ecological-Cultural Viewpoint" in the district of Lurin.

The preliminary project has been carried out in strict accordance with the Regulations for the Management and Handling of Construction and Demolition Waste, Supreme Decree No. 003-2013-VIVIENDA, as amended by Supreme Decree 019-2016-VIVIENDA and modified and repealed by Supreme Decree 002-2022-VIVIENDA, in which "solid waste from construction and demolition is considered to be that which meets the definition of solid waste contained in Law No. 27314, General Waste Law from construction of buildings and infrastructure, which includes new works, expansion, remodeling, demolition, rehabilitation, fencing, minor works, conditioning and refurbishment or others".

This project was carried out on the basis of geological, geodynamic, geophysical, climatological, environmental baseline, hydrological and hydraulic studies carried out for this project, from which the physical and geometric design was estimated and evaluated, as well as the conceptual closure plan for the project based on applicable regulations, engineering criteria and a review of existing literature.

The Lurin Ecological-Cultural Viewpoint project seeks to replicate the guidelines of the Metropolitan Urban Development Plan 2035 (PLAM 2035), prepared by the Metropolitan Municipality of Lima, which aims to develop a proposal for urban and territorial planning of the physical-spatial structure of the city and its functional relationships, in order to improve the quality of life of citizens and people living permanently or temporarily. In it, we plan to develop the guidelines shown in the following images:

Project location



3.2.1. Goals

Create a sustainable and open recreation and leisure area, through architecture that achieves a symbiosis with the natural and cultural environment.

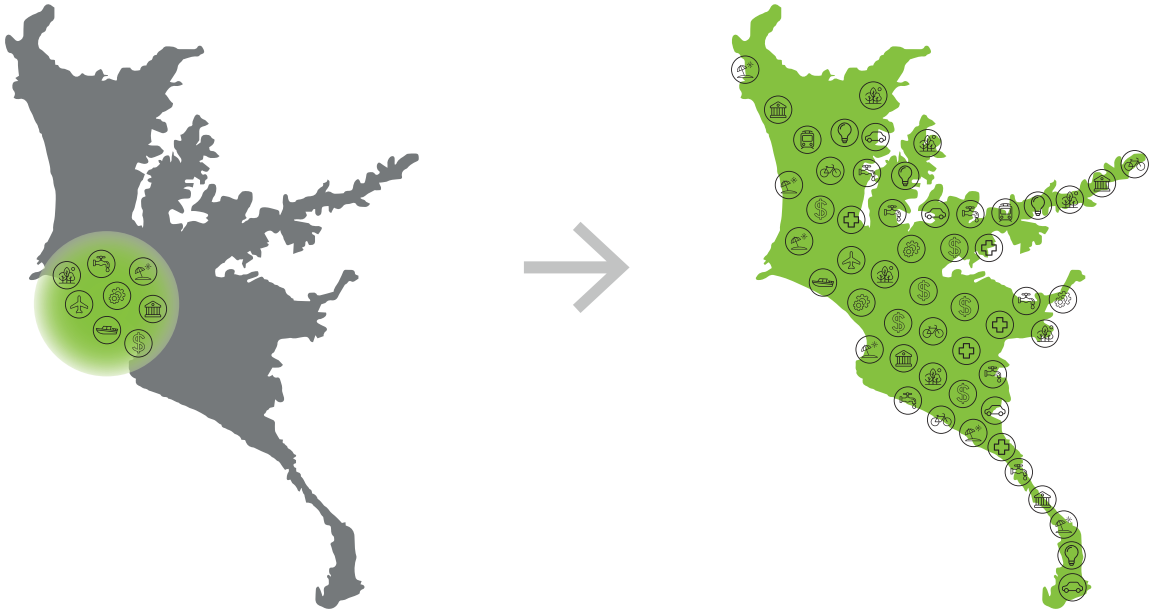
Disseminate and promote local cultures, establishing new strategies in a creative, sustainable, healthy and decentralized manner.

Reuse clean excavation material and construction and demolition waste (CDW) to contribute to the sustainable development of the country.

Improve the landscape in the project area by constructing a controlled fill and placing vegetation, bike paths, pedestrian walkways and complementary furniture in selected areas.

Dispose of non-recyclable/ usable waste or by-products of the reuse process.

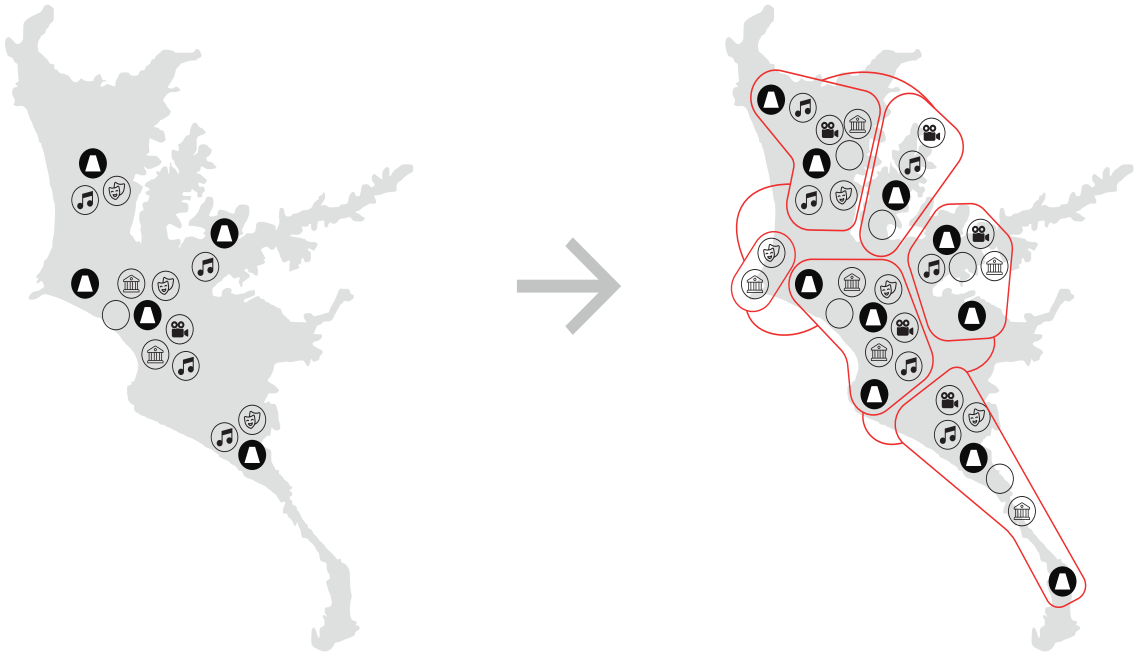
Mitigate geodynamic risks by creating a fill zone to control possible landslides and mudslides in the project's creeks.



Guideline 1:
Fair and inclusive city

According to the PLAM 2035, the urban conditions of each particular territory and space in have a direct impact on the economic-social development processes and their imbalances compromise the entire city as a whole as shown in the following figure, especially in the periphery of the city where habitability conditions are quite precarious. This is evidenced by the lack of service provision, lack of equipment, poor accessibility, insufficient quality public open spaces, vulnerable housing, etc.

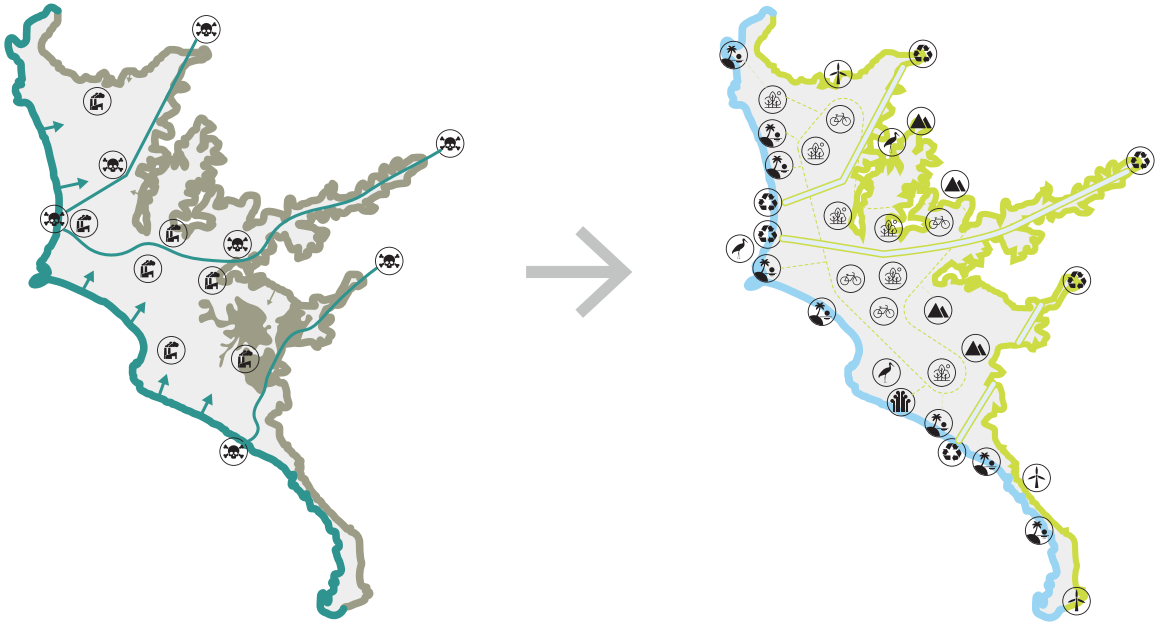
(1) PLAM 2035: The objective of this project is to develop a proposal for urban and territorial planning of the physical-spatial structure of the city and its functional relationships, in order to improve the quality of life of the citizens and the people who live there permanently or temporarily.



Guideline 2: Heritage and recreational City

Lima has several monumental areas and part of its historic center was classified as a World Heritage Site by UNESCO. However, it also has more than 400 pre-Hispanic archaeological sites and more than 990 inventoried monuments from different periods (pre-Hispanic, viceroyalty, republican and contemporary).

Given its diversity and its potential, the PLAM proposes the following strategic actions to implement: recovery and maintenance of the historic center, monumental areas and archaeological and historical monumental assets articulated by a functional heritage network, which in parallel activates sustainable economic, social and environmental development processes; implementation of urban management instruments that make the recovery of cultural assets viable, facilitating the obtaining of the necessary resources to cover the costs involved; implementation of public facilities in those spaces where community initiatives in favor of culture are being developed; and the implementation of centers for cultural development, scientific and technological innovation as a fundamental support for human development and metropolitan territory. (PLAM 2035, 2014, p. 352 y 862).



Guideline 3: Sustainable, healthy and resilient city

According to the PLAM 2035, for a good functioning of the urban environment (in a metropolis that concentrates more than 50% of the national GDP and with the enormous flow of resources that this generates) it is essential to have a good ecological infrastructure. The preservation of vital ecosystem services for the city is a priority.

A livable city requires that its ecological infrastructure includes a strengthened network of urban open spaces, as well as its vulnerability to climate change, among others.

To this end, the main strategic actions to be implemented are the following: preservation and restoration of ecological infrastructure; generation of an expanded and functional network of open spaces for public use; efficient systems for the protection and maintenance of areas of natural environmental value; implementation of projects through a system of wastewater treatment services for the irrigation of green areas in the metropolis, as well as the reuse of waste; updating and generation of regulatory and land use planning instruments to effectively manage urban growth according to the conditions of vulnerability, danger, etc. ; and the implementation of a resilient system of vital city services (PLAM 2035,2014,p.864).

3.2.2. Project timeline

Preparation of technical file

2017

November

First visit to Lurin

2018

August

Confidentiality agreement

December

Environmental monitoring

2019

February

Joint venture agreement

2020

October

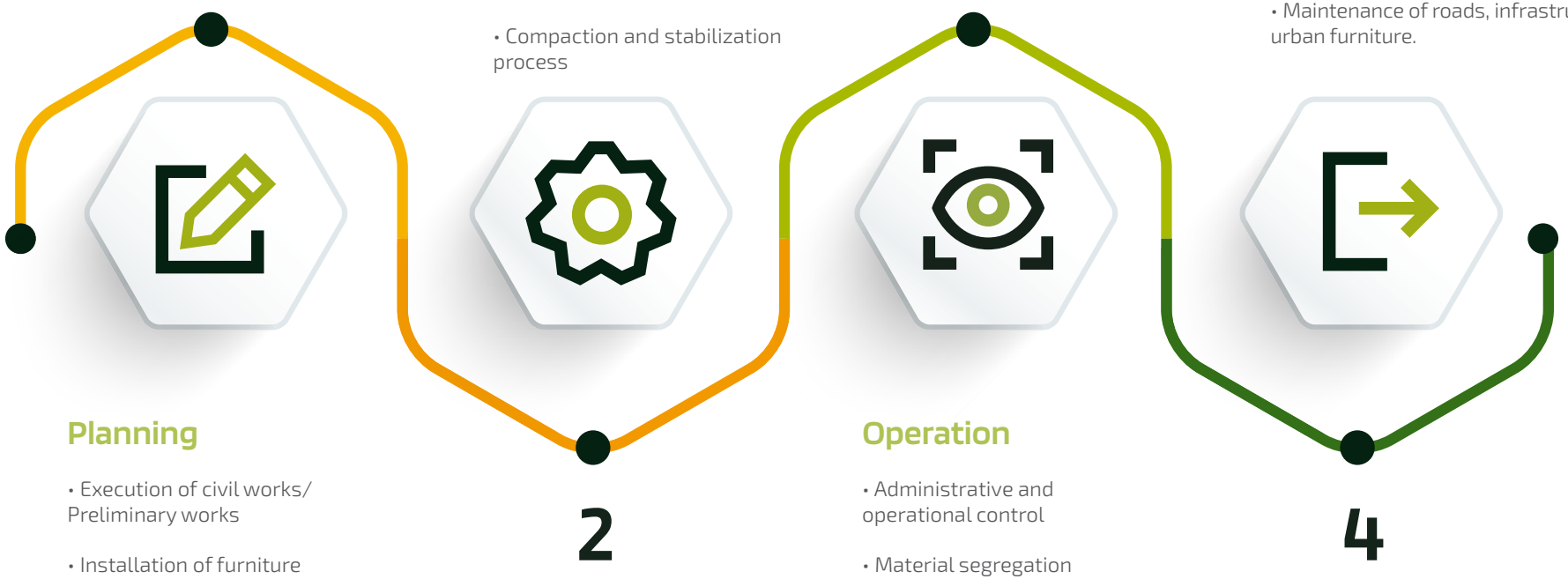
- Geophysical survey
- Hydrological study
- Climatological study
- Geological-geo-dynamic study
- Geometric design and slope stability
- Hydraulic design
- Environmental baseline

2022

December (2019) - January

Joint venture agreement

3.2.3. Project stages



Planning

- Execution of civil works/ Preliminary works
- Installation of furniture
- Mobilization of equipment, machinery and materials.

Construcción

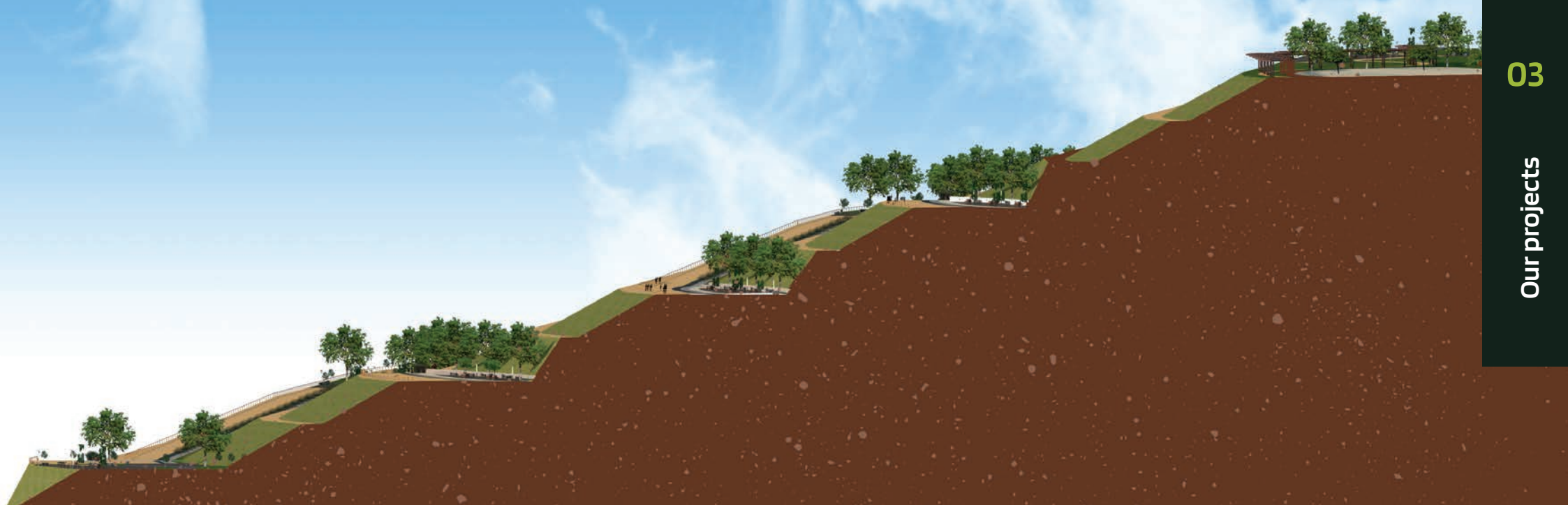
- Land preparation and earthwork
- Construction of facilities and infrastructure
- Compaction and stabilization process

Operation

- Administrative and operational control
- Material segregation process.
- Revegetation of selected areas.

Closing

- Continuous operation and maintenance
- Use of revegetated spaces and generated spaces.
- Maintenance of roads, infrastructure and urban furniture.



3.2.4. Description of spaces

The proposed viewpoints and interpretation centers will be developed within a recreational circuit of approximately 1,600 meters of bicycle paths and pedestrian trails, ideal for walks and experiential tours. The design of the circuits considers adequate slopes for pedestrians, cyclists and people with reduced mobility, who will be able to complete the route without major complexity, thus narrowing the inequality gaps in access to recreational spaces and the lack of equitable distribution in the city.

There will be more than 2,000 square meters of internal forest, where various outdoor recreational and leisure activities can be developed, thus providing the city with recreational spaces in optimal conditions that contribute to the coexistence and development of people's activities and enjoyment of the landscape.

In addition, there will be approximately 130 bicycle parking spaces, which will encourage the use of non-motorized transportation, which in turn will have a positive impact on the reduction of greenhouse gas emissions and the health of users. Continuing with the environmental commitment, for self-sustainability, the gazebo will be illuminated with equipment powered by solar panels, and there will also be approximately 20 fog catchers for the necessary irrigation of the green areas.

3.2.5. Slope Stability

For the geotechnical characterization of the backfill area, the nature of the material to be disposed of and the dumping procedure have been taken into account.

The percentage of each type of waste is undetermined in this design phase, therefore a conservative design criterion will be taken, which will have to be confirmed or modified during the operation of the project.

To characterize the body of the backfill zone for subsequent stability analysis, the materials are divided into two different groups:

Clean excavation material:
It is expected to receive excavated material from the various districts of the city of Lima, especially districts with high activity in the construction sector, requiring certified disposal and located at an adequate distance from the project.

Construction and demolition waste:
The project has been designed to receive non-organic materials from construction and demolition activities, such as metals, plastics, glass, cardboard, drywall, bricks, reinforced concrete, etc.

Annex 3 of the Regulations for the Management and Handling of Construction and Demolition Waste Supreme Decree No. 003-2013-VIVIENDA provides a list of hazardous waste from construction and demolition, such as treated wood, paint containers, grease or paint removers, fluorescent or asbestos-containing fiber cement sheets. These wastes may not be disposed of in the landfill area, as their final disposal requires special treatment as hazardous materials.

3.3 Carbon credits project: La Prosperidad Agrarian Coffee Cooperative (CAC)

The carbon credit project is the result of the joint efforts of ADEICS and the La Prosperidad Agrarian Coffee Cooperative for sustainable development in the agricultural sector, particularly in the coffee production chain.

The project seeks to finance through the future sale of Verified Carbon Units or VCUs, to achieve the improvement of the existing agroforestry systems of the cooperative's members, through solutions to improve densities, production processes and strengthening of composting.

VCUs are the equivalent units of CO2 emission reductions certified by the Verified Carbon Standard by Verra (VCS) and are used for carbon footprint offsetting.

Verra sets the world's leading standards for climate action and sustainable development. It has created standards for activities as diverse as reducing deforestation, improving agricultural practices, dealing with plastic waste and achieving gender equality.

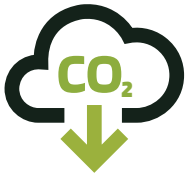
Manages programs to certify that these activities achieve measurable high integrity results. And works with governments, businesses and civil society to promote the use of these standards, including through the development of markets. Verra's global standards and frameworks serve as pillars to obtain a quality carbon credit and ensure a real solution that contributes to environmental conservation efforts.

Find out more about Verra:

Project location

3.3.1. Goals

Promote the sustainable development of coffee agroforestry systems.



Reduce carbon footprint through an offset project.

Laying the groundwork for the development of other GHG offset projects through the VCS

Promote the social development of the community adjacent to the project.

3.3.2. Action plan

The project development scheme starts with the analysis and design of the solution following the guidelines of the VCS (compensation project) for the quantification of possible future results. This design will be validated and approved by the standard and an external auditor.

Through own and external resources, with the validated design, project implementation will begin during the first 3 years, establishing the baseline for the growth of the agroforestry solution.

During the next 40 years of the project's life, continuous monitoring will be carried out, quantifying and verifying the reduction of emissions in 5-year periods. The resulting VCUs will be traded on international voluntary carbon markets with the objective of offsetting the global carbon footprint. For greater detail, the work executed in 2022 could be schematized in a timeline as shown in the following chart:

3.3.3. Project timeline

2021

February

Field data collection

March - September

Partner collection Lagged

May - September

Data correction and cleaning

2022

June - September

Preparation of safeguarding report and application of methodology

September (2021) - September (2022)

Scenario evaluation, analysis and simulation

November

Entry at Verra Registry

Diciembre

Official English translation of all reports

Translated description of Project version 1

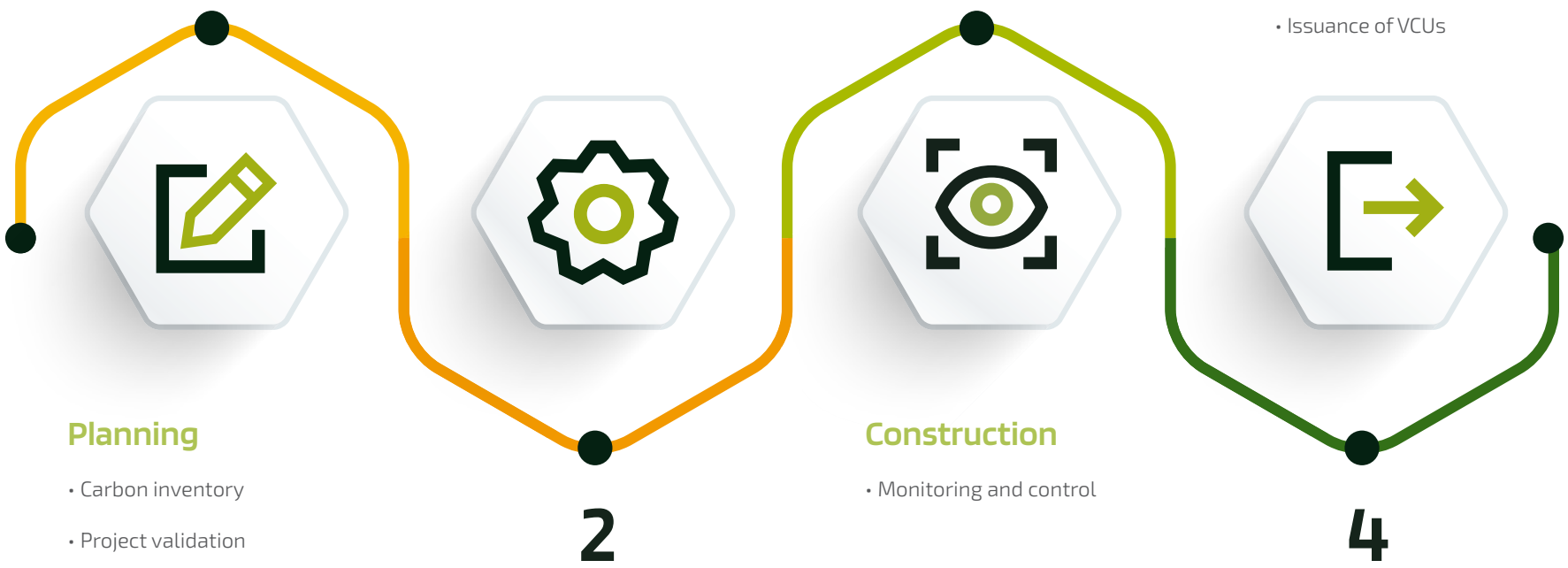
2023

Start of project audit and validation

Start of project implementation

Opening of public consultation

3.3.4. Project stages



3.3.5. Project results:

In the first stage of the project, it was possible to establish the baseline of CO2 capture and emission of the CAC production units. This is the starting point for the design of improvements, such as increasing the density of the agroforestry system, that will mitigate the carbon footprint of the producers and increase their net CO2 capture.

BASE EMISSIONS
3,200 tons of CO_2 per year for 414 associates

BASE DENSITY OF COFFEE TREES
2,500 coffee trees per hectare

PONTETIAL BENEFICIARYY PARTNERS
408

BASE DENSITY OF SHADE TREES FOUND
17 shade trees per hectare

POSSIBLE VCUs TO BE OBTAINED
Between 600,000 y 700,000 VCU (carbon credits)

ESTIMATED MAXIMUM CO_2 CAPTURE
1 5800 tos of CO_2 per year (planned)

ADEICS

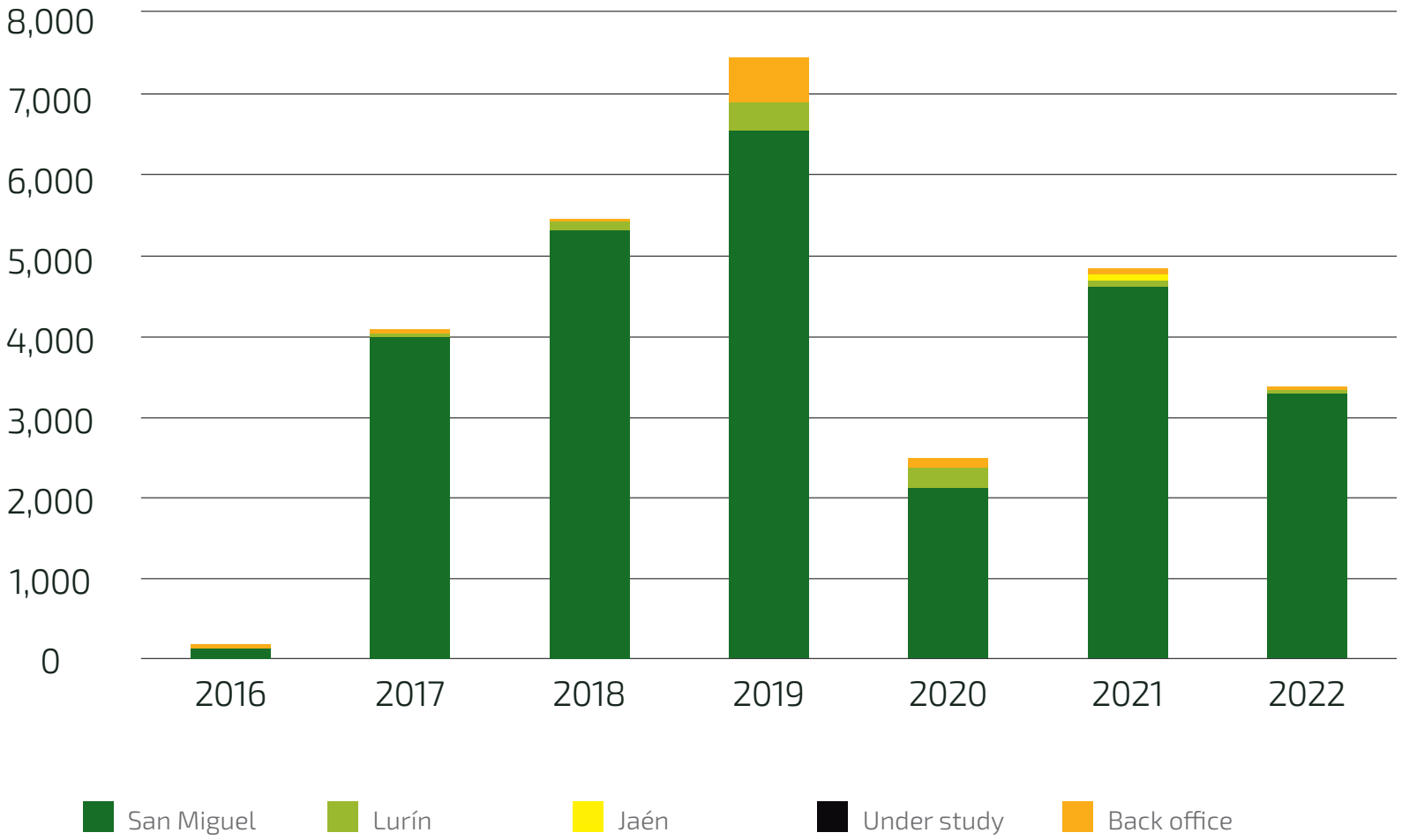
04. Economic performance

ADEICS, being a self-managed institution, has reinvested approximately 27.5MM (PEN), mainly in 3 ongoing projects, Boulevard Costanera: San Miguel (25.9MM), Ecological-Cultural Viewpoint: Lurín (769K) and Carbon Credits Project: La Prosperidad Agrarian Coffee Cooperative (CAC) (58K), as well as projects under study (96K) and back office (918K) for the proper functioning of our institution

INVESTMENT ('000 PEN)	2016	2017	2018	2019	2020	2021	2022*	TOTAL
SAN MIGUEL	81	3,987	5,285	6,541	2,112	4,615	3,343	25,963
LURIN	-	52	93	337	199	77	11	769
JAEN	-	-	-	-	-	56	2	58
UNDER STUDIO	-	-	8	8	-	57	22	96
BACK OFFICE	57	61	30	607	86	56	22	918
GRAND TOTAL	137	4,100	5,415	7,493	2,397	4,862	3,399	27,804

Project investment

(Amounts expressed in '000 PEN)



ADEICS

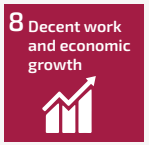
05. Sustainability

5.1. Sustainability policy

We have been implementing a series of good practices of economic, social and environmental sustainability that contribute to the development of the environment. We are very aware of the significant economic, social and environmental impact we generate, and we continue to reinforce sustainability as a transversal commitment of the entire association, which in practice is reflected in our constant work with all our stakeholders.

5.2. ADEICS and its contribution to sustainnability

	STRATEGIC OBJECTIVES OF DEVELOPMENT OBJECTIVES AND PRIORITIZED LINES OF ACTION		PLAN LINES OF ACTION PRIORITIZED AND PROMOTED BY 26K AND ODS
	**Financial** Report investment and expenditure of the activities carried out in the projects.	**Financial** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.	Timely delivery of accounting and financial information for filing with local tax authorities and partners. Apply engineering techniques for space habilitation.
			
	**Partners** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.		Apply engineering techniques for space habilitation.
	**Partners** Disseminate projects through digital media, create agreements with educational and related entities.	**Human Development** Strategic alliance with educational entities to promote research at all levels.	Establish a marketing strategy for timely communication in digital media and related entities/partnerships. Seek communication with educational entities to generate SDG-oriented research initiatives.
			

	STRATEGIC OBJECTIVES OF DEVELOPMENT OBJECTIVES AND PRIORITIZED LINES OF ACTION		PLAN LINES OF ACTION PRIORITIZED AND PROMOTED BY 26K AND ODS
	**Partners** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.		Apply engineering techniques for space habilitation.
	**Partners** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.		Apply engineering techniques for space habilitation.
	**Financial** Report investment and expenditure of the activities carried out in the projects.	**Partners** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.	Timely delivery of accounting and financial information for filing with local tax authorities and partners. Apply engineering techniques for space habilitation.
	**Partners** Disseminate projects through digital media, create agreements with educational and other entities. Improvement, creation and recovery of spaces enabled for different uses through engineering processes.	**Desarrollo Humano** Strategic alliance with educational entities to promote research at all levels.	Establish a marketing strategy for timely communication in digital media and related entities/partnerships. Apply engineering techniques for space habilitation. Seek communication with educational entities to generate SDG-oriented research initiatives.
			
	**Financial** Report investment and expenditure of the activities carried out in the projects.	**Socios** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.	Timely delivery of accounting and financial information for filing with local tax authorities and partners. Apply engineering techniques for space habilitation.

	STRATEGIC OBJECTIVES OF DEVELOPMENT OBJECTIVES AND PRIORITIZED LINES OF ACTION		PLAN LINES OF ACTION PRIORITIZED AND PROMOTED BY 26K AND ODS
	**Financial** Report investment and expenditure of the activities carried out in the projects.	**Partners** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.	Timely delivery of accounting and financial information for filing with local tax authorities and partners. Apply engineering techniques for space habilitation.
	**Financial** Report investment and expenditure of the activities carried out in the projects.	**Partners** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.	Establish a marketing strategy for timely communication in digital media and related entities/cooperations. Apply engineering techniques for space habilitation
			
	**Financial** Report investment and expenditure of the activities carried out in the projects.	**Partners** Improvement, creation and recovery of spaces enabled for different uses through engineering processes.	Timely delivery of accounting and financial information for filing with local tax authorities and partners. Apply engineering techniques for space habilitation.
			
	**Partners** Disseminate projects through digital media, create agreements with educational and related entities. Seek strategic alliance with local, regional or national authorities.	**Desarrollo Humano** Strategic alliance with educational entities to promote research at all levels.	Establish a marketing strategy for timely communication in digital media and related entities/partnerships. Seek communication with entities for the development of pilot projects in specific areas. Seek communication with educational entities to generate SDG-oriented research initiatives.

5.2.1 Water capture through foggers

Fog lamp

300 ml/day approximately

Filtered seawater

Total filtered seawater reused

30'591,000 lts

Equivalent to

12 Olympic swimming pools

40'788,000 lts bottles of water (750 ml)

*Data as of August 2022

5.2.2 Urban bio-gardens

Due to the diversity of the soil type in the city of Lima, farmland has been stockpiled. Being an unusual material from excavations, it has been reused in urban bio-gardens and the following results have been achieved:

Radish sprout

Radish seed were sown which has been irrigated with filtered groundwater from the sea, and has obtained characteristics identical to those of a conventional radish.

Beetroot and aguaymanto sprout

Beet and aguaymanto were sown, the results have the same physical and chemical characteristics as those commonly consumed.

Technified irrigation

Irrigation has been technified in an area of approximately 200 m^2 where tomatoes were transplanted.

5.3. Dialogue with stakeholders

We have managed to meet with various educational institutions, including schools and universities, in order to transmit, communicate and tell the experience that has been achieved in these 06 years in the implementation and management of sustainable projects, working inside and outside the city of Lima, always generating and promoting sustainable development and innovation of clean technologies. Talks and technical visits have been held with the institutions, which are shown in the following images.

5.4. Materiality analysis

Collaborators

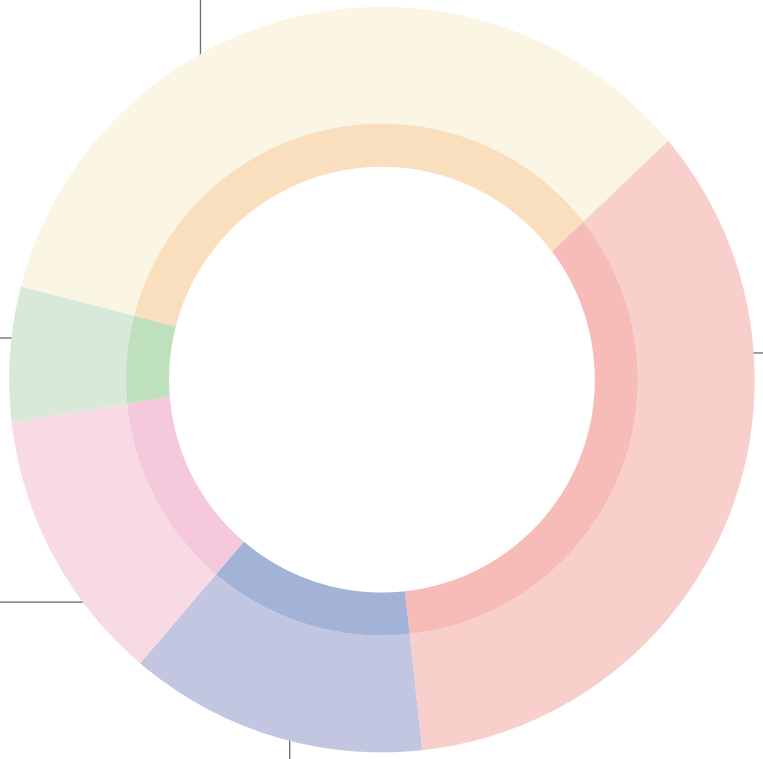
- Job stability.
- Improvement of the work environment.
- Knowledge in research
- Increased expertise in sustainability projects
- Professional growth.

Educational institutions

- Increased expertise in sustainability projects.
- Dissemination of scientific research.
- Financing of research initiatives.

Community

- Revaluation of properties.
- Improvement of landscape quality.
- Larger recreational areas.
- Improved mental health.
- Improvement of urban mobility.
- Improved safety.
- Increased knowledge of sustainable projects.



Local authorities

- Compliance with TUPA (administrative procedures).
- Generate greater confidence in the community.
- Generate more land area that can be used for public/ private purposes.
- Greater participation with the private sector.
- Increased credibility.
- Generate technical support through agreements.
- Promote the application of circular economies.

Partners

- Increase profitability.
- Promote the circular economy.
- Public recognition.
- Increased expertise in sustainability projects.
- Increase in the number of projects under execution.


ADEICS
PERMISOLOGÍA
DICAPI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06. Our partners

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6.1. Quality of service

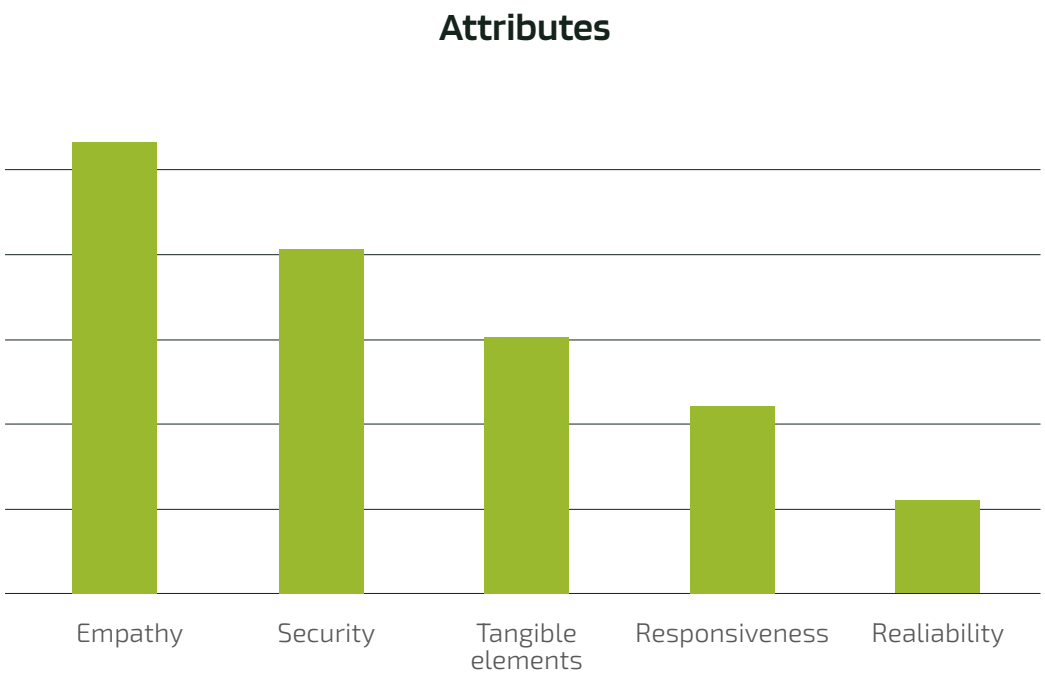
Our partners allow us to maintain and develop as an efficient organization, as well as being a valuable source of information for us to improve day by day. For this reason, it is important to know the quality of service provided, identify disadvantages and translate them into an opportunity for improvement.

ADEICS, paying attention to this, has implemented through the SERVQUAL methodology the measurement of service quality in its projects.

This methodology involves the use of questionnaires as a measurement tool; these questionnaires are structured in five attributes:

- Empathy
- Security
- Tangible elements
- Responsiveness
- Reliability

The following is the result obtained in the research carried out between April and May 2021, which shows a list of negative aspects classified by attribute. This can be considered as an opportunity to improve the service:



Empathy, as the first attribute evaluated, showed a negative trend in terms of the service's ability to understand and respond to users' emotional needs.

Safety, another critical attribute, also revealed unfavorable results. Users expressed concerns about the security of the service.

The tangible elements, which include physical or visible aspects of the service, showed a lack of user satisfaction. This may include elements such as interface design, ease of use and overall appearance of the service.

Responsiveness, an essential attribute in any service, was also identified as an opportunity for improvement. Users expressed frustration at the lack of quick and efficient responses to their queries or problems.

Finally, reliability was another attribute that showed negative results. Users reported frequent problems of malfunction or errors in the service, which affected their confidence in the quality and consistency of the service.

Comparison of the gap by attribute in the two studies carried out

Based on the studies carried out between April and May 2021 and between July and August 2022, a new customer evaluation was conducted, which shows a positive variation, meaning that there is an improvement in the quality of the quality and the gaps between expectations and perceptions, as shown in the graph.

As part of the improvement of the quality of service with clients, meetings were held to discuss the importance of their contribution to the execution of the project, thus generating a better rapprochement in the association-client relationship, achieving loyalty and commitment between both parties.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6.2. Privacy of partner data

We have several privacy filters, including contractual ones, which commit us to respect the guiding principles established in the current personal data protection regulations.

These principles include the principle of legality, consent, purpose, proportionality, quality, security, availability of recourse and adequate level of protection.

It should be noted that there have been no incidents, claims or formal complaints of privacy violations or leaks of information.

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07. Our community

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7.1. Training

The training is a program through which specific knowledge and skills related to the work being done and future sustainability projects can be acquired, developed and enhanced.

Training is conducted both internally and externally.

INTERNAl: collaborators
Talks are given on occupational health and safety and all operating procedures, but the Association also seeks to provide training on topics related to sustainability and environmental care, as well as personal development and financial management, in order to improve not only during working hours, but also outside of them.

EXTERNAl: schools and universities
The Association, in its commitment to the community, provides talks on sustainable development and environmental care, as well as information on the projects.
Training is being provided to the institutions:

- Saco Oliveros School

- Universidad Nacional Federico Villarreal (Federico Villarreal National University)

- Universidad de Ingeniería y Tecnología (University of Engineering and Technology) - UTEC

- Universidad Nacional Agraria La Molina (La Molina National Agrarian University)


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META

7.2. Research support

The Association is in possession of valuable data taken since 2014, such as the following:

- 36 soil tests
- 2 environmental baselines
- 52 environmental monitoring
- 10 semiannual progress reports
- A biological-marine study
- A hydroceanography study

This information has been used as sources for several theses from the following universities:

- Pontificia Universidad Católica del Perú (Pontifical Catholic University of Peru)
- Universidad Nacional Mayor de San Marcos (San Marcos National University)
- Universidad Nacional Federico Villarreal (Federico Villarreal National University)

Support is provided and constant communication is maintained with the Collaboratory of the Universidad de Ingeniería y Tecnología- UTEC, for the development of projects and technical field visits.

The Association, with 3 drones, provides support to the municipality and also to universities such as the Universidad Nacional Agraria La Molina, to carry out research flights and develop vegetation heat maps.


COLABORATORIO

ADEICS

08. Our environment

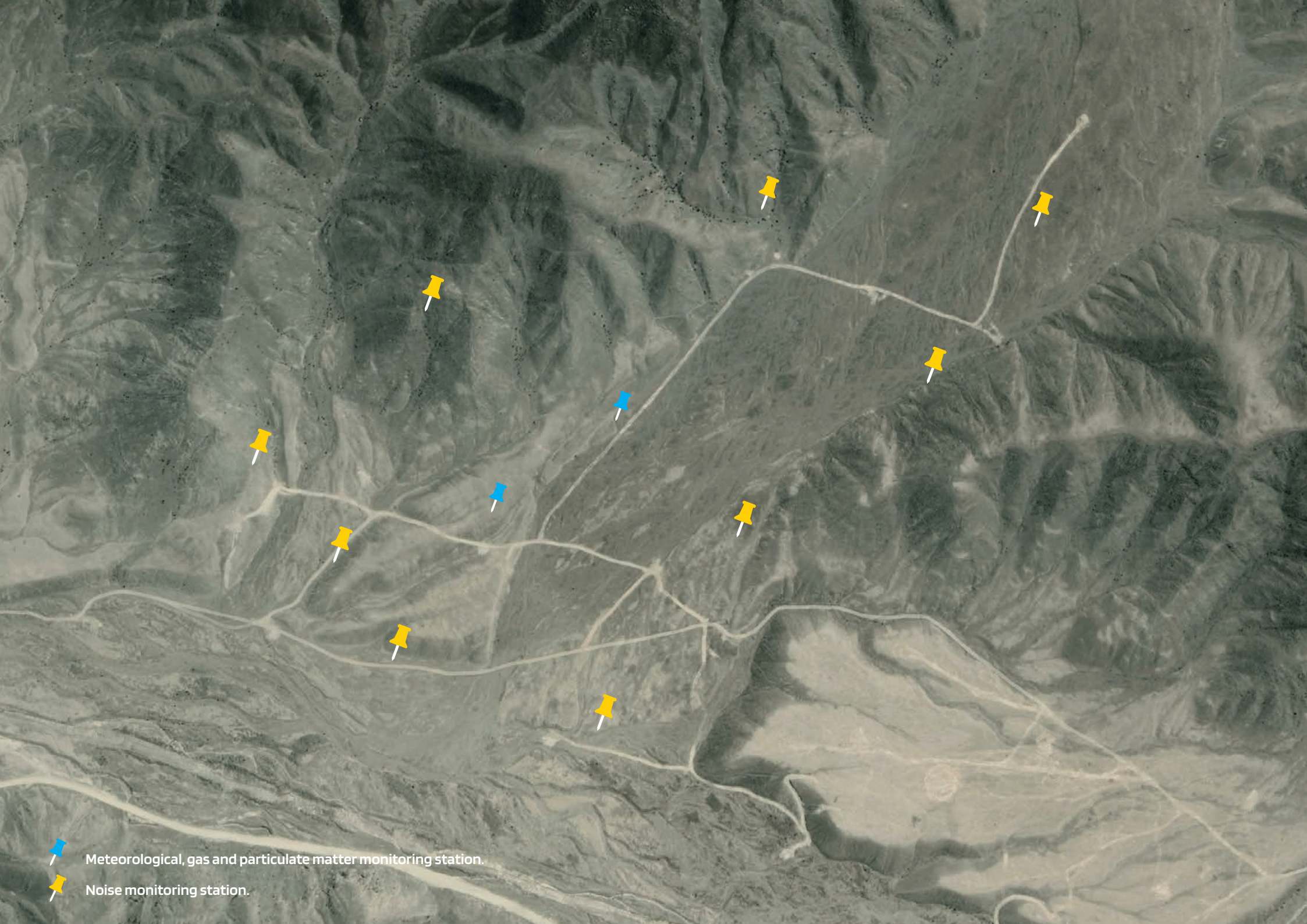
ADEICS

Meteorological, noise, gas and particulate matter monitoring station.

8.1. Boulevard Costanera Project: San Miguel

The Association, reaffirming its commitment to the environment, submits monthly environmental monitoring reports to the General Directorate of Environmental Affairs of the Ministry of Housing for 12 stations in the project area where the following parameters are measured:

- Noise emission monitoring.
- Particulate matter monitoring.
- Carbon monoxide monitoring.
- Hydrogen sulfide monitoring.
- Nitrogen dioxide monitoring.
- Sulfur dioxide monitoring.
- Weather monitoring.


Meteorological, gas and particulate matter monitoring station.
Noise monitoring station.

8.2. Ecological - Cultural Viewpoint Project: Lurín

The environmental monitoring program for the execution phase of this project is as follows:

FACTOR	STATION	UTM COORDINATES		PARAMETERS	FREQUENCY
Air quality	E01-LUR-ADEICS	18L 308619	8648289	Particulates (PM_{10}), particulates(PM_{25}). Carbon monoxide (CO), sulfur dioxide (SO_2). Nitrogen dioxide (NO_2).	Monthly
	E02-LUR-ADEICS	ISL 308765	8648354	Hydrogen sulfide (H_2S). Ozone (O_3) and methane (CH_4), particulate (PM_{10}), particulate (PM_{25}), carbon monoxide (CO). Sulfur dioxide (SO_2), nitrogen dioxide (NO_2), hydrogen sulfide (H_2S). Ozone (O_3) and methane (CH_4).	Monthly
Environmental noise	E03-LUR-ADEICS	18L 308434	8648381	Decibels (dBA)	Monthly
	E04-LUR-ADEICS	18L 308473	8648258	Decibels (dBA)	Monthly
	E0S-LUR-ADEICS	18L 308504	8648168	Decibels (dBA)	Monthly
	E06-LUR-ADEICS	18L 308686	8648074	Decibels (dBA)	Monthly
	E07-LUR-ADEICS	18L 308830	8648219	Decibels (dBA)	Monthly
	E0S-LUR-ADEICS	18L 309035	8648341	Decibels (dBA)	Monthly
	E09-LUR-ADEICS	18L 309142	8648411	Decibels (dBA)	Monthly
	E10-LUR-ADEICS	18L 308964	8648521	Decibels (dBA)	Monthly
	EII-LUR-ADEICS	18L 308614	8648486	Decibels (dBA)	Monthly
Metereological	FOI-LUR-ADEICS	18L 308619	8648289	Temperature, speed, relative humidity, wind direction, wind speed.	Mensual
	E02-LUR-ADEICS	18L 308765	8648354	Temperature, speed, relative humidity, wind direction, wind speed.	Mensual
Solid waste	All solid pollutants				Quarterly

8.3. Carbon Credits Project: La Prosperidad Coffee Farming Cooperative

The Carbon Credits project is an environmental project to offset CO2 emissions through 790 hectares belonging to 408 coffee producers located in the districts of Chirinos and San Ignacio, in the province of Cajamarca. The project takes as a baseline the current emissions and captures of the plots to subsequently enhance the capture through eco-efficient solutions such as improved densities of agroforestry systems (shade-grown coffee). The aim is to obtain an offset project of more than 680 million tons of CO2 removed over the life cycle of the project (40 years).

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