**Annex 8. Community Development and Institutional Strengthening component of the project (DESCOM-FI for its Spanish initials)**

***Note: based on the Preinvestment Technical Design Study (in Spanish: Estudio de Diseño Técnico de Preinversión (EDTP)) the following information is presented as a reference.***

The Community Development and Institutional Strengthening component of the project (DESCOM-FI for its Spanish initials) consist in the environmental education plan, the technical capacitation, the TDRs for the DESCOM-FI and the strengthening component.

1. **Background**

Currently, the issue of Solid Waste is increasing due to population growth and the variety of consumer goods produced to meet human needs. These goods come wrapped in various materials such as paper, cans, plastic, or cardboard, among others, and are used for a short period before being discarded.

Under the current regulations, the Municipality of Yamparáez conducted the "Technical Design Study for Pre-Investment in Integrated Solid Waste Management in the Municipality of Yamparáez, Yamparáez Province, Chuquisaca Department." The study aims to assess the current state of Integrated Solid Waste Management in the Municipality and propose improvements that will positively impact the health of families and promote a healthy environment for the community’s development.

To achieve this, the Municipality of Yamparáez seeks to optimize its Integrated Solid Waste Management System (ISWM) by establishing an environmentally friendly system that enables source separation, differentiated collection, recovery, and/or appropriate final disposal of generated waste.

In this context, the Community Development and Institutional Strengthening Plan (DESCOM-FI) is proposed for both the investment and post-investment phases, with the goal of establishing a sustainable foundation for Integrated Solid Waste Management in the Municipality of Yamparáez.

1. **Problem analysis and solution strategies**

To identify the issues related to Solid Waste Management in the Municipality of Yamparáez, this chapter presents an analysis of the problem and proposed solutions based on participatory processes conducted with the target population. Additionally, it identifies the key stakeholders involved and their responsibilities within the project.

**Problem Identification**

The results of the socio-economic diagnosis highlighted and identified inadequate solid waste management—ranging from waste generation to final disposal—as one of the main issues in the Municipality of Yamparáez. The population needs to improve its waste management habits, as there are unsanitary practices combined with a lack of awareness about the diseases they risk contracting due to insufficient information. For this reason, the implementation of an Integrated Solid Waste Management System (ISWM) has been identified as a necessary solution. This system aims to reduce water, soil, and air contamination, which directly impacts public health and overall well-being.

Following this, a problem analysis of ISWM in the Municipality was conducted using the problem tree technique, identifying the key causes and effects. This analysis was carried out in collaboration with institutional and local authorities in the project's intervention area. The following charts illustrate the key findings.

The institutional stakeholders identified four main causes:

1. Families are unaware of waste classification.
2. Limited knowledge about solid waste management.
3. Lack of interest from families in classifying solid waste.
4. Insufficient education on waste management.

The main effects identified were:

* Wasted valuable resources that could be recycled.
* Contamination of air, soil, water, and the environment due to improper waste management.
* Environmental contamination is passed down from generation to generation.

The local authorities identified the following causes:

* Lack of public awareness regarding pollution.
* Negative habits passed down through generations.
* Insufficient environmental education.
* Limited support from local authorities in waste management.

The primary effects identified were:

* Environmental contamination (affecting soil, plants, and human health).
* Harmful waste disposal and recycling practices.
* General environmental pollution.
* Lack of trash bins in public areas such as parks, streets, and schools.

Based on the identified causes and effects, an analysis of the current situation regarding ISWM in the Municipality of Yamparáez was conducted. The findings indicate that proper waste management practices are not being implemented. Additionally, the population lacks knowledge about the diseases they are at risk of contracting due to inadequate information and limited resources. This highlights the Municipality's urgent need to improve Integrated Waste Management at both the household level and within the broader community.

From the problem identification process, the key causes of inadequate solid waste disposal in the Municipality were identified as follows:

a) Lack of education on waste management – Most of the population in Yamparáez has little knowledge about Integrated Solid Waste Management, leading to a lack of proper classification, storage, and safe final disposal practices.

b) Culturally ingrained negative habits – These habits have been passed down from generation to generation, making them common practices. However, people are generally unaware of their negative impact on quality of life and the environment.

c) Limited interest from families in waste classification – This factor is closely related to the first cause. The population does not perceive waste as a resource that can be utilized but rather as trash that must be disposed of, regardless of whether it is done in a safe manner.

d) Limited support from authorities – Despite efforts made by the Autonomous Municipal Government of Yamparáez, as the governing body, there is a need to strengthen Integrated Solid Waste Management through institutional capacity-building initiatives.

The people of Yamparáez and institutional authorities have expressed the need to address the solid waste problem, which affects public health. They are willing to participate actively, taking a leading role in changing their current situation and working toward the establishment of a sustainable Integrated Solid Waste Management System.

1. **Solution Strategies**

Based on the problem analysis, strategic actions have been identified to promote Integrated Solid Waste Management through large-scale activities that involve key stakeholders in the project. The following tables present the different strategies proposed by institutional stakeholders and local authorities in the Municipality of Yamparáez.

The Strategic Action Matrix with the Institutional Authorities are:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Action** | **Who Will Implement It?** | **How Will We Do It?** | **When/Duration** | **Where Will It Be Done?** | **Responsible Party** |
| Inclusion of environmental education topics for children and adolescents | District Directorate, Educational Units | Campaigns, Competitions | Once a year | Municipality (urban center) | District Directorate |
| Educational activities for adults on environmental education and Law 755 | GAMY, Environmental Technician (Local Economic Development and Environment) | Workshops, Campaigns | One neighborhood per month, Once a year (entire community) | Municipality | GAMY |
| Information and communication actions for families | Municipality of Yamparáez Office | Home training visits, Production of brochures, leaflets, Campaigns | Twice a year, Once a year | Municipality | Municipality of Yamparáez Office |
| Specific recycling activities (roofs, bricks, furniture) | GAMY, District Directorate | Training workshops on waste recycling (waste transformation), Technical training for making furniture, roofs, etc. | During the school year | Municipality | GAMY in coordination with the District Directorate of Education |
| Environmental Education Videos | Health, GAMY (Communication Officer), District Directorate of Education | Videos, Songs with the population | Once a year, Throughout the year | Municipality | GAMY, District Directorate of Education, Health |

The Strategic Action Matrix with the Local Authorities are:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Action** | **Who Will Implement It?** | **How Will We Do It?** | **When/Duration** | **Where Will It Be Done?** | **Responsible Party** |
| Contamination (recycling) | GAMY | Bulletins, Awareness actions | Continuously | Municipality | GAMY |
| Training in environmental education in neighborhoods | GAMY | Workshops, Neighborhood meetings every two months, Community meetings based on their organization | Neighborhoods, Schools, Community meetings | GAMY |  |
| Solid waste separation (training) and composting activities | GAMY, General Secretaries, District Directorate of Education, Educational Units | Training activities, Campaigns, Competitions | 2 or 3 times a year | Schools, Neighborhoods, Community | GAMY, General Secretaries, District Directorate of Education, Educational Units |
| Socialization of Environmental Education | FEJUVE, Neighborhood Presidents, General Secretaries | Meetings with neighborhoods and communities, Municipality-wide meetings | Neighborhoods and communities involved in the project | GAMY, FEJUVE, Neighborhood Presidents, General Secretaries |  |

These strategic actions aim to reach the target population, fostering awareness and changes in solid waste management practices. They are incorporated into the DESCOM-FI Plan to promote awareness, behavioral change, and the strengthening of waste management services, ultimately generating positive impacts on public health and well-being for current and future generations in Yamparáez.

1. **Stakeholders and Their Main Roles**

To initiate the community participation process, it is necessary to identify the stakeholders involved in the project, along with their roles and level of involvement. Based on the socio-economic diagnosis conducted, the project stakeholders were identified with the participation of local and institutional authorities in the Municipality of Yamparáez, as detailed below:

|  |  |
| --- | --- |
| **Stakeholder Type** | **Description** |
| Social Stakeholders | * Yamparáez Potable Water and Sanitation Service Association (APSAY) * Community Water Committees in the intervention area * Sub-Central Alcantarí, Escana, Huasa Cancha, Pampa Yampara, and Sajpaya * Agricultural Unions of Escana, Pulqui Avaroa, Quirahuani, Lavadero, Paccha Pata, Alcantarí, and Molle Punku * Federation of Neighborhood Councils from San José, Eje Central, Bolívar, Morro, América, 14 de Abril, and San Isidro * School Board of Educational Units in the intervention area * Yamparáez Social Control Committee |
| Institutional Stakeholders | * Autonomous Municipal Government of Yamparáez * District Directorate of Education Yamparáez * Educational Units in the intervention area * Yamparáez Municipal Health Office * Cardenal Maurer Integrated Health Center * Health Posts in Escana and Lavadero * Alcantarí International Airport |
| Supporting Stakeholders | * Yamparáez Police Command * Bank Agency * Churches * Boarding School * Medical Association * Santa Bárbara and Virgen de Guadalupe Transport Unions * Yamparáez Provincial Union Organization * Yamparáez Municipal Market Association * Existing Irrigation Associations in Escana, Lavadero, and Molle Punku * Molle Punku Wheat Association |

**Direct and indirect actors**

Direct actors have a greater influence and should be engaged in the initial stages of project implementation, as their involvement is crucial for its success. Indirect actors have a lesser influence but are still considered because they are part of the intervention area.

The direct actors identified in the project are: GAMY, the District Directorate of Education, the educational units of the population center and the communities of intervention, the Chief of Health of the Municipality, Cardenal Maurer Health Center, Health Posts of the communities of intervention, the Association of Sanitary Potable Water of Yamparáez, the Drinking Water Committees of the communities, the sub-central offices of the intervention Agrarian Unions, the Agrarian Unions of the communities, the Federation of Neighborhood Councils of the Neighborhoods of the Town Center, School Boards of the Educational Units, Social Control, Police Command and Alcantarí Airport.

On the other hand, the following are considered indirect stakeholders: the Yamparáez Provincial Union Organization, the Yamparáez Municipal Market Association, the Escana Valley Irrigation Association (ARVE), the Washhouse Irrigation Association (ASORELA), the Molle Punku Irrigation Association and the Molle Punku Wheat Association. Also, the Evangelical and Catholic Churches, the Women's Boarding School of the Catholic Church, the Santa Bárbara (Alcantarí) and Virgen de Guadalupe de Yamparáez Transport Unions, and the Santa Cruz de Yamparáez Mercantile Bank Agency.

Each direct stakeholder has specific responsibilities in the implementation and sustainability of Integrated Solid Waste Management (ISWM) in Yamparáez. Below is a summary of their primary roles:

|  |  |
| --- | --- |
| **Institution/Organization** | **Roles** |
| Autonomous Municipal Government of Yamparáez | * Oversee Integrated Waste Management and sanitation services * Supervise and evaluate project implementation * Ensure efficient sanitation services * Promote environmental education and public awareness on ISWM * Actively participate in large-scale ISWM promotion and training activities |
| District Directorate of Education | * Coordinate actions with educational and social organizations * Train teachers and administrative staff in environmental education * Integrate ISWM topics into school curricula * Foster inter-institutional collaborations * Actively participate in mass ISWM promotion and training events |
| Educational units in the intervention area | * Annually submit to the Director of the Center the Educational Project of the Educational Unit and the corresponding budget, prepared by the Teachers' Council. * Incorporate specific strategic actions related to environmental awareness and education on ISWM, aimed at the educational community, especially children and adolescents. * Actively participate in massive promotion and training activities on ISWM. |
| Yamparáez Municipal Health Office | * Coordinate actions on topics within its competence, with organizations and institutions. * Promote training actions for personnel of Health Centers and Health Posts in the intervention area, on topics of Environmental Education in ISWM. * Make feasible the implementation of specific topics of environmental education on ISWM within the topics of health prevention they promote. * Make feasible the establishment of inter-institutional and intersectoral alliances for the promotion of ISWM. * o Actively participate in massive promotion and training activities on ISWM. |
| Cardenal Maurer Health Center  Health posts in the Escana and Lavadero communities. | * Incorporate specific strategic actions related to environmental awareness and education on ISWM, aimed at the general population, within the framework of its competencies. * Promote public awareness and carry out environmental education activities on ISWM. * Facilitate the establishment of inter-institutional and intersectoral alliances for the promotion of ISWM. * o Actively participate in massive promotion and training activities on ISWM. |
| Asociación Prestadora de Servicio de Agua Potable Sanitario Yamparáez (APSAY) | * Facilitate the establishment of interinstitutional and intersectoral alliances for the promotion of ISWM. * Actively participate in massive promotion and training activities on ISWM. |
| Water Committees of the communities in the intervention area | * Facilitate the establishment of inter-institutional and intersectoral alliances for the promotion of ISWM. * Actively participate in massive promotion and training activities on ISWM. |
| Sub Centralía Alcantarí, Escana, Huasa Cancha, Pampa Yampara and Sajpaya | * Make feasible the implementation of the ISWM project in the communities and neighborhoods of intervention. * Participate in massive activities of promotion and training in ISWM. |
| Agrarian Union of Escana, Pulqui Avaroa, Quirahuani, Lavadero, Paccha Pata, Alcantarí and Molle Punku. | * Make feasible the implementation of the ISWM project in the communities and neighborhoods of intervention. * Promote active participation and mobilize the population in relation to awareness-raising activities, environmental education in ISWM, to make effective the implementation of the DESCOM-FI. * Make feasible the establishment of inter-institutional and intersectoral alliances for the promotion of ISWM. * o Actively participate in massive promotion and training activities on ISWM. |
| Federation of Neighborhood Councils of the following neighborhoods: San José, Eje Central, Bolívar, Morro, América, 14 de Abril and San Isidro (Yamparáez) | * Make feasible the implementation of the ISWM project in the communities and neighborhoods of intervention. * Promote active participation and mobilize the population in relation to awareness-raising activities, environmental education in ISWM, to make effective the implementation of DESCOM-FI. * Make feasible the establishment of inter-institutional and intersectoral alliances for the promotion of ISWM. * Participate actively in massive promotion and training activities in ISWM. |
| School Board of the Educational Units of the intervention area. | * Promote the active participation of students and parents around the implementation of awareness and environmental education processes in ISWM within the Educational Units of the intervention area. * Make feasible the establishment of interinstitutional and intersectorial alliances for the promotion of ISWM. * Actively participate in massive activities of promotion and training in ISWM. |
| Yamparáez Social Control | * Support and accompany the construction and implementation of the project's DESCOM-FI. * Make feasible the establishment of inter-institutional and inter-sectorial alliances for the promotion of ISWM. * Actively participate in massive promotion and training activities on ISWM |
| Yamparáez Police Command | * Promote the adoption of adequate practices in ISWM in the population through compliance with ISWM regulations. * Make feasible the establishment of inter-institutional and inter-sectorial alliances for the promotion of ISWM. * Actively participate in massive promotion and training activities in ISWM. |
| Alcantarí International Airport | * Make feasible the establishment of inter-institutional and inter-sectorial alliances for the promotion of ISWM. * Promote strategic actions to generate awareness among the population and environmental education on ISWM within the Airport. * Actively participate in massive promotion and training activities on ISWM. |

1. **Formulation of Objectives, Activities, and Indicators**

**a. General Objective of the DESCOM-FI Plan**

* Implement participatory and dynamic social and technical processes related to Integrated Solid Waste Management (ISWM) that encourage public participation, raise awareness, promote behavioral change, and strengthen the Service Operator through Environmental Education in ISWM. This includes support for infrastructure development, conflict prevention and resolution, and the development of the Operator's competencies to establish the foundation for sustainable Integrated Solid Waste Management in the Municipality of Yamparáez.

**b. Specific Objectives**

To achieve the general objective, the following specific objectives are proposed:

* Raise awareness and educate the population on Integrated Solid Waste Management by implementing participatory Environmental Education processes in ISWM that foster awareness and behavioral change regarding health and environmental protection.
* Promote support and monitoring of infrastructure development through participatory processes that enhance public oversight in project implementation, ensuring approval of the work performed.
* Define and implement mechanisms for conflict resolution based on strategic participation guidelines and the promotion of positive relationships among stakeholders, using rationality, dialogue, and understanding to reach agreements before, during, and after project implementation.
* Develop competencies for the Operator to effectively perform their functions as part of the ISWM system.

**c. Approaches**

The approaches guiding this plan are described below:

* **Gender:** Actions that promote equality in decision-making, negotiation, access to knowledge, technology, and opportunities between men and women.
* **Generational:** Consideration of the specific needs of different age groups—children, adolescents, youth, adults, and the elderly—to recognize their role in development and foster their participation and empowerment.
* **Intercultural:** Actions that encourage mutual understanding, acceptance, respect, and appreciation of diverse cultures and values within DESCOM’s activities.
* **Environment:** Actions focused on the proper management, utilization, and safe final disposal of waste to conserve and protect the environment.

**d.** **Action Pillars**

The pillars under which Community Development and Institutional Strengthening are framed include:

* Participatory Management
* Conflict Prevention and Resolution
* Environmental Education in ISWM
* Capacity Building
* Information and Communication

1. **Participatory Management**

These actions involve various stakeholders in the project, who will define roles, responsibilities, and other activities through discussions, observations, and proposals, ensuring project sustainability. Public participation is essential for incorporating social actors into the project's execution and development, whether they are organized or not. Beneficiaries play a key role in designing, implementing, and sustaining the project.

Key participation moments include decision-making, monitoring and oversight, service sustainability, and receiving information.

**a. Conflict Prevention and Resolution**

Actions are undertaken in consensus with all stakeholders in the target population and are widely communicated within the community. These include processes for preventing, mediating, and negotiating conflicts that may arise during project implementation, fostering effective communication.

Conflict Prevention and Resolution involves defining and applying mechanisms for preventing or resolving social conflicts through strategic participation guidelines and the promotion of positive relationships with stakeholders. This approach relies on rationality, dialogue, and understanding with the beneficiary population to reach agreements on potential issues during project implementation.

**b. Environmental Education in ISWM**

Environmental education is considered a continuous learning process that enables individuals to acquire knowledge, attitudes, values, skills, and competencies to modify individual and collective behaviors, fostering a more harmonious, balanced, and integrated relationship with nature.

This approach promotes behavioral change toward sustainable practices in ISWM and environmental protection. It involves key project stakeholders differentiated by gender and age, as well as other relevant actors such as the Education and Health sectors, GAM, and related institutions. These stakeholders engage in training, social mobilization, and other activities to generate and maintain knowledge, skills, and capabilities.

The primary objective is to raise awareness and change attitudes, encouraging the adoption of environmentally friendly practices related to ISWM. This is achieved through:

* Awareness: Helping individuals and social groups develop sensitivity and awareness of environmental issues.
* Knowledge: Ensuring individuals and social groups understand environmental problems, their interconnectedness, and the role of humanity in addressing them.
* Attitudes: Instilling social values and a strong commitment to environmental protection and improvement.
* Skills: Equipping individuals and social groups with the necessary skills to address environmental challenges.
* Evaluation Capacity: Enabling individuals and social groups to assess environmental education programs based on ecological, political, social, aesthetic, and educational factors.
* Participation: Encouraging individuals and social groups to develop a sense of responsibility and recognize the urgency of addressing environmental issues, leading to the adoption of appropriate actions.

Additionally, environmental education follows eight key principles:

* Holistic and Comprehensive Approach: Considers the environment as a whole, examining the interaction between natural and social aspects.
* Participation and Commitment: Encourages involvement from various population sectors at local, regional, and national levels.
* Continuity and Permanence: Establishes an ongoing process that accompanies individuals and communities throughout their lives.
* Foundation for Development: Utilizes diverse methods to facilitate understanding of environmental issues and influences development plans, strategies, and action methods to achieve sustainable development.
* Spatial Coverage: Applies at local, regional, national, and international levels.
* Connection with Reality: Ensures a strong and active link to local, national, and regional realities.
* Temporal and Sustainable Approach: Adapts to current circumstances while maintaining a future vision.
* Universality: Targets all population sectors, age groups, ethnicities, genders, and educational and social levels.

Environmental education operates in three key areas:

* Formal Education: Implemented through schools and academic curricula.
* Non-Formal Education: Conducted through community activities outside the classroom.
* Informal Education: Delivered through media channels that inform and educate the public.

**c. Capacity Building**

Capacity-building actions aim to empower individuals by developing competencies that enable them to perform tasks they previously could not accomplish. This involves learning concepts and implementing best practices with a deep understanding of why they are necessary. These activities facilitate skill acquisition, attitudinal shifts, and the development of expertise in ISWM.

Capacity building is designed to strengthen the competencies of the Service Operating Entity and is applied at different levels:

* Sectoral and Governmental Level,
* Organization level,
* Individual level.

**Sectoral and Governmental Level:** This level involves training all organizations within the sector to develop plans, programs, and projects. Clear agreements must be established to define interactions among all sector organizations.

**Organizational Level:** This level establishes documented procedures for each internal process of the organization, outlining responsibilities and necessary resources for each activity, ensuring clarity and structure.

**Individual Level:** At this level, each individual within the Service Operating Entity receives training specific to their role within the organization, including backup responsibilities in case of absenteeism.

For implementation, competency needs must be identified at each level, required resources determined, responses formulated to address identified needs, implementation carried out, and results evaluated through a continuous improvement cycle.

**d. Information and Communication**

These actions ensure all stakeholders are reached using appropriate media and resources tailored to different target audiences. Content should be designed with a Gender, Generational, and Intercultural Equity Approach and aligned with the socio-cultural context of the target population.

Information aims to convey facts, situations, or processes in a comprehensible manner. Communication seeks to foster a particular attitude, reaction, or motivation in recipients by providing solid arguments.

1. **Scope of the DESCOM-FI Plan**

The DESCOM-FI Plan establishes a set of structured and organized actions to develop processes of social interaction and cooperation, as well as to design procedures and instruments that promote the prevention of social conflicts, raise public awareness about environmental issues, and ensure proper Integrated Solid Waste Management (ISWM).

The DESCOM-FI ISWM guide outlines four phases: the preparatory or project planning phase, the pre-investment phase, the investment phase, and the post-investment phase. The preparatory phase focuses on determining the needs and required projects. This is a preliminary process before the pre-investment phase, where, through participatory methods, the public's demand for sanitation services and integrated solid waste management has been identified, resulting in instruments in which authorities have expressed their commitment to the project.

However, the component related to population diagnosis has been developed during the pre-investment phase to understand the specific characteristics of the intervention area. This has been achieved through a sampled socio-economic survey, a survey with local authorities, and a participatory workshop using talking maps methodology, which has provided information on permanent and transient populations, accessibility, cultural aspects, topography, organizational factors, and more.

Regarding the pre-investment phase or the development of the Technical Design Study for Pre-Investment, components such as the assessment of technical options/service levels and participation were carried out. Through workshops, the community was informed about the technical alternatives for implementing integrated solid waste management, as well as the economic aspects and the fee structure they would pay. The land location and sanitation component were also developed with support from the departmental government of Chuquisaca and GAMY technicians. A site evaluation and selection were conducted for the implementation of the Solid Waste Utilization and Final Disposal Center of the Municipality of Yamparáez, with the chosen site located in the community of Pampa Yampara, covering an area of 3 hectares. Regarding counterpart funding, the primary source identified is GAM Yamparáez, which was also presented to the community in a final project presentation workshop.

Based on all the information compiled in the Technical Design Study for Pre-Investment (EDTP), a participatory intervention plan for DESCOM-FI was structured. To this end, a participatory workshop was held with representatives from the community and institutions. As a result of this work, a Project Monitoring Committee was established to facilitate its financing and implementation. This committee is composed of representatives from local authorities in the intervention area and will remain in place until the project execution begins. However, committee members may be re-elected to continue into the next phase of the project.

1. **Implementation of the DESCOM-FI Plan**

Based on the established investment and post-investment phases, the following components and activities constitute each of these phases.

**Phase 1: Investment**

The investment phase spans from the beginning of construction to the final delivery of the project, including civil works, acquisition of equipment, and procurement of machinery. The components that accompany this phase are:

* Component 1. Environmental education
* Component 2. Support for the execution of works
* Component 3. Capacity building for the operator
* Component 4. Cost structuring and fee determination

**Component 1: Environmental Education in ISWM**

This component includes actions aimed at developing capacities within the target population through participatory awareness and environmental education processes related to ISWM. It begins in parallel with the construction phase.

The activities in this component include:

* Conducting a project initiation workshop
* Formation of an inter-institutional and intersectoral team (GAMY, Health, Education, and others)
* Development of a communication and information plan
* Public training on sanitation and environmental education
* Implementation of advocacy actions related to the project

Each of these activities is detailed below:

**Project Initiation Workshop:** This is the first workshop with the community, where the contracting company, project supervisors, project managers, and DESCOM-FI component leaders are introduced. The scope of the project, execution timeline, project costs, and funding sources are presented. This workshop is directed at representatives of social organizations, the beneficiary population, and Alcantarí Airport. Additionally, this activity includes the participatory development/adjustment of the social intervention plan and the establishment of the DESCOM-FI office.

**Formation of an Inter-Institutional and Intersectoral Team:** This involves creating a coordinating body to implement various actions related to ISWM. It is expected that agreements and/or strategic alliances will be signed to facilitate stakeholder involvement in the development of the component. The team will include representatives from GAM Yamparáez, the health sector, the education sector, water and sanitation entities, Alcantarí Airport, and others. Once formed, the team will define project-related advocacy activities, training processes, and other necessary actions, such as incorporating the topic of "Solid Waste Management" into the educational curriculum.

**Development of the Communication and Information Plan:** This plan is expected to be developed collaboratively with representatives from the community and institutions to identify actions, communication channels, and other means of disseminating information to the general public. It will cover the investment and post-investment phases and utilize different media available in the intervention area, such as radio, television, print media (brochures, leaflets, booklets), videos, workshops, posters, meetings, and others.

Participation from Alcantarí Airport is particularly important, as it has key spaces for information dissemination and public communication. Additionally, ensuring proper solid waste separation is essential due to the daily flow of people using the airport services.

**Training on Sanitation and Environmental Education:** This consists of a series of training sessions for the general public, categorized by age groups, and carried out in formal, non-formal, and informal settings.

The training process aims to bring about behavioral changes in all participants by providing knowledge, fostering attitude changes, and developing skills through a three-pronged training approach:

* Providing Knowledge
* Changing Attitudes
* Developing Skills

**Determination of Environmental Education Content and Materials**

The training topics focus on areas such as environmental management, risk management, occupational safety and hygiene, among others. The target groups are:

* Adult population
* Youth population
* Children
* Teachers from educational units
* Health personnel
* Airport staff and owners or managers of stores, food outlets, cleaning staff, and others working at the airport.
* Local authorities in the project area
* Representatives of community organizations and other organized groups.

The training modules are:

1. Hygiene and Health Module

- Hygiene and health, main health issues in the community

- Personal, family, and community hygiene

- Hygiene and housing improvement (space arrangement, sanitary management of animals).

- Handwashing

2. Environmental Education Module

- Characteristics of the ecosystem

- Hydrological water cycle

- Conservation and protection of natural resources

- Watershed or water resource management

- Environmental pollution

3. Solid Waste Module

- Relationship between waste and population health conditions

- Waste management and environmental conditions

- Solid waste management at home

- Source separation

- Reuse and recycling of solid waste

- Collection and transportation of solid waste

- Utilization of solid waste

- Operation of the sanitary landfill

In the case of teachers, once trained, they must reinforce students' knowledge about solid waste management within their educational content. This will be achieved by integrating the topic into the Educational Curriculum through Strategic Alliances with the education sector and GAMY.

For health personnel, the following training topics will be included:

- Regulations for managing hazardous waste from healthcare facilities

- Occupational safety and health

- Biosafety measures

- Use of differentiated containers for internal storage

- External management of healthcare facility waste

- Differentiated waste collection system for healthcare facilities

For Alcantarí Airport staff, training will emphasize:

- Use of containers

- Internal solid waste management

- External solid waste management

- Solid waste classification

**Implementation of Advocacy Actions Related to the Project:** This involves implementing cleaning campaigns and educational campaigns related to the project, in coordination with educational units and the general population, alongside the project's intersectoral and interinstitutional team. The following activities are planned:

- Cleaning Campaigns: Identifying areas with the highest solid waste pollution, including identified dump sites, followed by cleanup actions in the area with the support of local authorities and the general population.

- Recycling Competitions: Organizing recycling competitions in coordination with educational units, the general population, and Alcantarí Airport, prioritizing recyclable materials such as plastic, paper, cardboard, and metals, as well as promoting collection points for batteries.

- Educational Fairs: These events will showcase project progress and cover topics such as handwashing, waste classification, recycling, and CAAO activities. They will also include competitions for presenting products or works made from recyclable materials, created as part of the process implemented in educational units or with the population. Participation from project leaders, CAAO, DESCOM-FI, educational units, Alcantarí Airport, and others is essential.

**Component 2: Support for Construction Activities**

This component aims to promote social control and active participation of the project population in monitoring construction activities through participatory processes that support implementation and ensure community satisfaction with the completed works. This component begins concurrently with the start of construction and includes a series of inspections and follow-up meetings to support progress until completion.

The activities under this component include:

- Formation and training of the Support and Monitoring Committee for Construction (CAAO)

- Development and implementation of a Conflict Prevention and Resolution Plan

- Conducting inspections to monitor project execution

- Holding follow-up meetings on project execution

- Organizing the Provisional Handover Ceremony

- Organizing the Final Handover Ceremony

- Mid-term project evaluation

- Development of a baseline through sampling and validated or updated population diagnosis

- Ratification or signing of interinstitutional agreements

- Training the population on project benefits

Each activity is described below:

**Formation and Training of the Support and Monitoring Committee for Construction (CAAO)**: In coordination with local authorities in the intervention area, the CAAO will be formed and trained to support Social Management during the implementation of the DESCOM-FI component, based on local customs. The committee will be trained and provided with a Roles and Functions Manual and a notarized Minute Book to record its activities. The committee's main functions are:

- Supporting, accompanying, participating, and contributing to all actions under the DESCOM-FI component.

- Monitoring construction progress from start to final delivery through meetings and on-site inspections.

- Informing the population about the project's scope and progress through internal meetings and other means.

- Facilitating dialogue and consensus-building when issues arise during project execution.

- Assisting in identifying and preventing conflicts during project execution.

- Actively participating in awareness and environmental education activities on ISWM for the population.

- Supporting the service implementation process during the post-investment phase.

Key training topics include:

- Law 341 on Social Participation and Control

- ISWM management models

- Leadership and constructive conflict management

- Gender equity and the importance of women's participation

- Roles of project stakeholders

- Project scope, timeline, and technological alternatives

- Project implementation mechanisms

**Development and Implementation of the Conflict Prevention and Resolution Plan**: A participatory Conflict Prevention and Resolution Plan will be developed with key project stakeholders (Supervising Company, Construction Company, GAMY, CAAO, local authorities, and involved institutional authorities) to define processes and procedures for addressing potential conflicts during project implementation. Techniques such as negotiation, consensus-building, mediation, and dialogue will be employed.

**Conducting Inspections to Monitor Project Execution:** Once the CAAO is established, a schedule for on-site inspections will be developed to monitor progress. During inspections, the construction supervisor will explain project progress and challenges, and participants can ask questions. The process will include photographic documentation and completion of technical monitoring forms, recorded in the Project Book.

**Holding Follow-Up Meetings on Project Execution:** Regular meetings will be held during project execution to organize CAAO and the Interinstitutional and Strategic Team for project-related activities. These meetings will also follow inspections to establish necessary actions for progress or to address identified conflicts.

**Organizing the Provisional Handover Ceremony:** In coordination with the construction supervisor, the provisional handover ceremony will be organized, including pre-ceremony inspections to verify compliance with construction items and address necessary observations. The ceremony will be a public event, reflecting local customs, with participation from local authorities and other stakeholders.

**Organizing the Final Handover Ceremony:** The final handover ceremony will be organized in coordination with the construction supervisor, following inspections to ensure compliance with observations and address any challenges. The event will reflect local customs and involve local authorities and other stakeholders.

**Mid-Term Project Evaluation:** A participatory mid-term evaluation will be conducted to reinforce activities outlined in the DESCOM-FI Plan and its execution timeline, assess completed activities, and ensure project objectives are met.

**Development of a Baseline Through Sampling and Validated or Updated Population Diagnosis:** The population diagnosis developed during the pre-investment phase will be validated or updated to reflect current population data, service coverage, and satisfaction levels. This will be done participative with local authorities and population representatives.

**Ratification or Signing of Interinstitutional Agreements:** All agreements or conventions established during the pre-investment phase will be ratified and, if necessary, supplemented to achieve project objectives.

**Training the Population on Project Benefits**: During project execution, the population will be informed about the project's scope and importance through training sessions on its benefits.

**Component 3: Operator Competency Development**

As construction progresses, training will be provided to personnel who will operate the waste collection service effectively and productively after the investment phase. The consulting team will also develop project operation manuals.

The training and technical assistance program will target administrative staff, the Yamparáez Municipal Government Council, and personnel directly or indirectly involved in waste collection services and the technical aspects of the project. The plan will include a budget and implementation schedule.

Table 204. Training and Technical Assistance Matrix

The following table outlines the authorities and administrative and operational personnel to be trained. The training topics cover administrative, financial, and technical areas, as detailed below:

|  |  |  |
| --- | --- | --- |
| **Position** | **Area** | **Training Topics** |
| Mayor, Council, Secretaries, Directors (12 people, 2 days) | Administrative | Institutional model of waste collection service, Financial statement analysis, Integrated Solid Waste Management (ISWM) |
| Relationship Units (14 people, 2 days) | Administrative | Institutional model of waste collection service, Financial statement analysis, ISWM |
| Accounting and Finance Unit (6 people, 2 days) | Administrative | Institutional model of waste collection service, Structuring waste collection rates and fees, Billing for waste collection fees |
| Human Resources Officer (1 person, 2 days) | Administrative | Payroll management and personnel monitoring |
| Street Sweeping and Collection Operators (4 people, 3 days) | Operational | Sweeping and collection systems, Equipment and transportation to be used, Brief explanation of ISWM |
| Waste Utilization Operators (2 people, 3 days) | Operational | Waste classification by characteristics, Storage, recycling, and composting systems |
| Final Disposal Landfill Operators (2 people, 3 days) | Operational | Earthmoving, leachate management, soil waterproofing, compaction |

Likewise, the team of consultants will have to prepare process and operation manuals.

The following table shows the methodology to be applied for the technical assistance training to authorities, administrative, financial and operational personnel of the Yamparáez Municipal Autonomous Government.

|  |  |  |  |
| --- | --- | --- | --- |
| **Topics** | **Methodology** | **Materials to Use** | **Time (Days)** |
| - Institutional model of waste collection service  - Financial statement analysis  - Integrated Solid Waste Management (ISWM)  (12 participants: Mayor, Council, Secretaries, and Directors) | Explanation of the project's ex-ante and ex-post phases, social, economic, and environmental viability, and the determination of direct administration by the GAM.  Review of the GAM's economic and financial condition and resource allocation for the ISWM Unit.  Summary analysis of the project and its benefits; experiences of other municipalities with ISWM and their results | Notebooks, pencils for each participant.  Data display, screen, laptop. | 2 days (during the project execution phase) |
| - Institutional model of waste collection service  - Financial statement analysis  - Integrated Solid Waste Management (ISWM)  (14-unit managers and personnel directly or indirectly related to the GAM) | - Explanation of the project's ex-ante and ex-post phases, social, economic, and environmental viability, and the determination of direct administration by the GAM.  - Review of the GAM's economic and financial condition and resource allocation for the ISWM Unit.  - Summary analysis of the project and its benefits; experiences of other municipalities with ISWM and their results. | Notebooks, pencils for each participant.  Data display, screen, laptop. | 2 days (during the project execution phase) |
| - Institutional model of waste collection service  - Structuring waste collection rates and fees  - Billing for waste collection fees  (Training for 6 administrative and accounting staff) | - Explanation of the project's ex-ante and ex-post phases, social, economic, and environmental viability, and the determination of direct administration by the GAM.  - Analysis and definition of the proposed rate or fee with the financial staff.  - Analysis of the billing method and channel for waste collection fees. | Notebooks, pencils for each participant.  Data display, screen, laptop. | 2 days (during the project execution phase) |
| Payroll management and personnel monitoring  (Technical assistance for human resources staff) | Direct work with the HR department, analysis for personnel allocation or internal appointments or calls for positions in the ISWM Unit. | Notebook, pencil for the participant.  Data display, screen, laptop. | 2 days (during the project execution phase) |
| Sweeping and collection systems. Equipment and transportation to be used. Brief explanation of ISWM. | Direct work with sweeping, collection, and transportation operators. | Notebook, pencil for the participant.  Data display, screen, laptop. | 3 days (during the project execution phase) |
| Waste classification by characteristics, storage, and recycling and composting systems. | Direct on-site work with storage, recycling, and composting system operators. | Notebook, pencil for the participant.  Data display, screen, laptop. | 3 days (during the project execution phase) |
| Earthmoving, leachate management, soil waterproofing, and compaction. | Direct on-site work with storage, recycling, and composting system operators. | Notebook, pencil for the participant.  Data display, screen, laptop. | 3 days (during the project execution phase) |
| Development of process and operation manuals for personnel. | Coordinated work with the administrative and legislative branch of the GAM, cabinet work, and socialization. | Notebook, pencil for the participant.  Data display, screen, laptop. | 20 days (during the project execution phase) |

**Phase 2: Post-Investment**

The post-investment phase includes the following components:

- Training for authorities and reinforcement for waste collection service operators

- Participation and education of stakeholders

- Sustainability of waste collection services

Each component is detailed below.

**Component 1: Training for Authorities and Reinforcement for Waste Collection Service Operators**

During the investment phase, a series of training sessions were conducted to ensure that the population and project stakeholders understand the scope and benefits of the project. Additionally, capacity-building efforts were undertaken to strengthen the entity responsible for providing waste collection services.

In the post-investment phase, prior to the system's operation, a preparatory process takes place, which includes the following:

* 1. Training for authorities
  2. Reinforcement for waste collection service operators
  3. Transfer of all technical information to the ISWM Unit by construction contractors and machinery suppliers
  4. Development of management tools for the EMA: Design of forms and formats for registration, customer service, and all user-related processes. Finalization of the ISWM Unit's organizational chart and functions manual, as well as the creation of informational tools.
  5. Preparation of the Annual Operating Plan (POA) and budget

**Training for Authorities**

For authority training, the focus is on the system to be implemented, specifically the operation and maintenance phase. The training topics include:

- Proper use of waste bins and containers

- Sweeping and collection routes

- Waste collection service schedules

- Source separation of solid waste

- Classification and utilization of solid waste

- Location and use of green collection points

For health-related authorities, the following topics are included:

- Internal and external management of solid waste from healthcare facilities

- Differentiated collection of solid waste from healthcare facilities

**Reinforcement for Waste Collection Service Operators**

For operators, the main training topics include:

- Planning

- Administrative processes: Training on staff functions, customer service, etc.

- Commercial administration: Billing for waste collection fees, marketing of recyclable materials, control records

- Operation and maintenance:

- Source separation: Organic, recyclable, and non-recyclable fractions

- Sweeping system operation

- Collection and transportation system operation, vehicle and equipment maintenance, route application, differentiated collection

- Solid waste classification, washing, weighing, storage, and sale processes

- Composting processes: Material reception, classification, shredding, pile formation, production control, final product, and sale based on use

- Sanitary landfill operation: Daily cell operation for common waste, hazardous waste from healthcare facilities, and batteries

- Records and control of inputs and outputs

- Internal wastewater management

- Biosafety measures

- Exchange of experiences with other EMAs of similar size and ISWM systems

Operators will receive certification upon completing the training.

- Social conflict resolution through active population participation, focusing on user complaint management.

- Continuous communication processes, including public information dissemination and internal communication among staff from different areas.

- Transparency processes

**Transfer of All Technical Information to the ISWM Unit by Construction Contractors and Machinery Suppliers**

Once construction is completed and the final handover is done, DESCOM-FI, in coordination with the construction supervisor, will facilitate the transfer of all technical project information. This includes supervision reports to the Yamparáez Municipal Government and then to the ISWM Unit. This information will be used to reinforce operational staff training. The technical information to be transferred includes:

- As-built drawings

- Equipment technical specifications

- Warranties

- Operation and maintenance manuals

- Sanitary landfill closure plan

- Fixed asset inventory and other items delivered to the ISWM Unit

**Development of EMA Management Tools**

Once the processes and procedures for system operation are consolidated, forms and formats for operation and maintenance records, user service records, and other related documents will be designed. Additionally, the final organizational chart and functions manual for the ISWM Unit will be formalized through a legal instrument approved by the GAM. Finally, informational tools such as brochures, leaflets, newsletters, citation forms, and communication formats will be developed for future use by the ISWM Unit.

**Preparation of the Annual Operating Plan (POA) and Budget**

Considering the approved waste collection fee structure, the ISWM Unit's Annual Operating Plan and budget for the current fiscal year will be prepared.

**Identification of Dissemination Spaces**

To determine the total investment for the DESCOM-FI component, it is necessary to identify the dissemination channels for the plan. Based on the social diagnosis conducted for the study, the following dissemination spaces have been identified:

In the Yamparáez Urban Area

The following dissemination spaces have been identified:

- GAM facilities

- Water Committee offices

- Social headquarters offices

- Educational unit facilities

- Maurer Comprehensive Health Center facilities

- Municipal Coliseum

In Rural Population Centers

The following dissemination spaces have been identified:

- Educational units

- Escana and Lavadero Health Posts

- Social headquarters in population centers

- Main square

At Alcantarí International Airport

The following information spaces have been identified:

- Airport entrance road, where signs about solid waste management in the municipality can be installed

- Airport entrance gate

- User service corridors

- Waiting areas

- Food area

These spaces are considered highly suitable for implementing the communication and dissemination strategy.

**Component 2: Participation and Education of Stakeholders**

This component involves participatory processes to strengthen and consolidate changes in the practices of the target population. Building on the awareness and training in Environmental Education and ISWM conducted during the investment phase, reinforcement activities will be carried out through educational initiatives led by key project stakeholders (CAAO, Interinstitutional and Intersectoral Committee, GAMY, local authorities, and others).

This phase also promotes the characteristics of the waste collection service through printed, digital, radio, and television materials.

The activities under this component include:

- Home visits to inform about service schedules and train on source separation of solid waste: Organic, recyclable, and residual fractions.

- Workshops on timely payment of waste collection fees, payment and billing systems, proper use of bins, containers, and collection routes.

- Classification practices in educational units, neighborhoods, and communities.

- Dissemination of service schedules, fee payment, and billing mechanisms through media channels.

Each activity is described below:

a. Home Visits for Service Schedule Information and Source Separation Training

Before the service begins and as reinforcement during its operation, home visits (door-to-door) will be conducted in the service area. Families will be trained on service schedules, start dates, and source separation: Organic (what organic waste to separate and deliver), recyclable (what recyclable waste to separate at home and how to deliver it), and residual (non-recyclable waste).

This process will also remind the population about the importance of paying waste collection fees and the payment mechanism. Visits will also include entities within Alcantarí Airport to ensure they are informed.

b. Workshops on Timely Payment of Fees and Proper Use of Bins, Containers, and Collection Routes

Parallel to home visits, workshops will be conducted to promote timely payment of fees, payment and billing systems, proper use of bins and containers, and collection routes with specific days and times.

c. Classification Practices in Educational Units, Neighborhoods, and Communities

As part of the training workshops, classification practices will be conducted for organic, recyclable, and residual fractions. This will help the population understand and practice waste separation and management at home.

Guided visits to the utilization and final disposal center will also be organized for neighborhood and community representatives, as well as airport staff, to familiarize them with classification, composting, and final disposal processes.

d. Dissemination of Service Schedules, Fee Payment, and Billing Mechanisms Through Media Channels

Once service schedules and frequencies are defined, mass dissemination actions will be carried out to inform the population and other users (entities, institutions, airport, etc.) about the service's start date, source separation, fee payment, and the components of the Yamparáez Utilization and Final Disposal Center.

**Component 3: Sustainability of Waste Collection Services**

This component focuses on actions to ensure the sustainability of the service in technical, economic, environmental, and social aspects. The main activities include:

- Development of the exit baseline

- Legal approval of the waste collection fee

- Application of the service's tariff structure

- Preparation of the investment plan for replacements and expansions

- Development of the service sustainability plan

- Review and/or adjustment of the operation and maintenance plan

- Support for service implementation

- Final project evaluation

Each activity is described below:

**Development of the Exit Baseline**

Once the service begins, the project's exit situation will be established, including user satisfaction levels. Key indicators such as beneficiary population, satisfaction levels, and access to basic services will be generated.

**Legal Approval of the Waste Collection Fee**

After consolidating the fee structure during the investment phase, its approval and formalization will be pursued through the Yamparáez Municipal Government, with DESCOM-FI supporting the entire process. The approval document must clearly state the start date or period for fee collection.

**Application of the Service's Tariff Structure**

Once the billing mechanism is established, users will begin paying fees. Financial management mechanisms for waste-generated income will be implemented, and DESCOM-FI will monitor fee collection.

**Preparation of the Investment Plan for Replacements and Expansions**

After adjusting and approving the tariff structure, an investment plan for replacements and expansions over the project's lifespan will be prepared in collaboration with the ISWM Unit. This plan will include infrastructure, machinery, and equipment.

**Development of the Service Sustainability Plan**

To achieve the project's objectives, DESCOM-FI, in collaboration with the ISWM Unit, will develop a sustainability plan covering technical, economic, financial, environmental, and social aspects to ensure the project's long-term success.

**Review and/or Adjustment of the Operation and Maintenance Plan**

The operation and maintenance plan presented by the construction supervisor will be reviewed and adjusted in collaboration with the ISWM Unit to establish a clear and applicable work schedule.

**Support for Service Implementation**

Support will be provided during service implementation to identify shortcomings and reinforce processes. This will involve monitoring population participation, sweeping, collection, transportation, classification, utilization, and final disposal processes. Recommendations will be made based on the results.

**Final Project Evaluation**

Once all activities are consolidated, a final project evaluation will be conducted to identify lessons learned, with participation from all project stakeholders.

1. **Operational matrix of the DESCOM-FI plan**

The operational matrix of the DESCOM-FI Plan is described in the next table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Activity** | **Tasks** | **Target Population** | **Compliance Indicators** | **Verification Means** |
| 1 | Development of the project start-up workshop. | Preparation or adjustment of the Social Intervention Plan through participatory workshops. | 60% Authorities, 60% population (families) | At least 2 workshops for training and work. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Updated Intervention Plan. |
|  | Opening of DESCOM-FI Office | - | Office installed with identification sign | Photographic Report |  |
|  | Development of the project start-up workshop. | 60% local authorities, 60% beneficiary population (families), 60% municipal representatives, construction company, DESCOM-FI, Work supervision, GAM Yamparáez | At least 2 start-up workshops with the beneficiary population | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report |  |
| 2 | Formation of the inter-institutional and inter-sectoral team (GAMY, Health, Education, and others) - EIIE | Meeting for the formation of the inter-institutional and inter-sectoral team. Workgroups to define working strategies. | 60% authorities, 60% beneficiary population, 60% project direct actors | At least 2 meetings held | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Signed alliance/strategy document. |
| 3 | Development of the communication and information plan | Development of the communication and information plan, Participatory validation of the communication and information plan | 60% authorities, 80% CAAO, 80% EIIE | At least one meeting | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Communication Plan validated by authorities. |
| 4 | Training of the population in health and environmental education | Training workshops in health and environmental education for adults, youth, children, teachers, health personnel, personnel, and people working at Alcantarí airport, local authorities, and organization representatives in hygiene and health, environmental education, and solid waste management. | At least 50% of the adult population trained, At least 60% of youth, children trained, At least 80% of teachers trained, At least 60% of health personnel trained, At least 60% of airport personnel and people with economic activities trained, At least 60% of authorities and representatives trained. | Workshops developed for each target group. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Training Plan developed and approved. |
| 5 | Implementation of advocacy actions related to the project. | Development of cleaning campaigns, Recycling contests, Educational fairs. | 60% authorities, 80% CAAO, 60% EIIE, 80% educational units, Alcantarí airport participation. | At least one cleaning campaign in each project area (urban and rural), At least 1 recycling contest held, At least one fair held in each project area (urban/rural), with participation from educational units. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report |

**II. Component 2: Support for the execution of works**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Activity** | **Tasks** | **Target Population** | **Compliance Indicators** | **Verification Means** |
| 1 | Formation and training of the Support and Monitoring Committee (CAAO) | Development of meetings to form the CAAO | 60% authorities, 40% women | CAAO formed with representation from the beneficiary population, with 40% women. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Election and Appointment Minutes, Inspection schedule, Approved functions manual, Notarized project book. |
|  | CAAO training | 60% of the CAAO | At least 2 training sessions |  |  |
| 2 | Development and implementation of the Conflict Prevention and Resolution Plan. | Development of work meetings to identify possible conflicts and formulate solution strategies. | 60% CAAO, 60% EIIE, 60% local authorities and institutions | 1 work meeting | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Plan approved and prepared. |
| 3 | Development of inspections to monitor the project’s execution. | Development of inspections to follow up on work progress. | 60% CAAO, 60% EIIE, 60% local authorities and institutions | 1 inspection per month during project execution. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Inspection Sheet, Activity Report, Project Book. |
| 4 | Development of follow-up meetings for the project execution. | Development of follow-up meetings for the progress of the work. | 60% CAAO, 60% EIIE, 60% local authorities and institutions | 1 monthly meeting during project execution. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report. |
| 5 | Organization of the Provisional Reception of Works Ceremony. | Development of inspections before the Provisional Reception of the Work. | 60% CAAO, 60% EIIE, 60% local authorities and institutions | 2 inspections before the provisional reception. | Activity Planning, Provisional Reception Minutes, Activity Minutes, Participation List, Photographic Report, Activity Report, Project Book. |
|  | Dissemination of the Provisional Reception of the Work | - | At least 3 media channels implemented as per the communication plan. |  |  |
|  | Organization of the ceremony together with the works supervisor. | 60% CAAO, 60% EIIE, 60% local authorities and institutions, 50% family representatives attend the Ceremony. | Ceremony organized and held with the participation of authorities and other actors. |  |  |
| 6 | Organization of the Final Reception of Works Ceremony. | Development of inspections before the Final Reception of the Work. | 60% CAAO, 60% EIIE, 60% local authorities and institutions | 2 inspections before the final reception. | Activity Planning, Final Reception Minutes, Activity Minutes, Participation List, Photographic Report, Activity Report, Project Book. |
|  | Dissemination of the Final Reception of the Work | - | At least 3 media channels implemented as per the communication plan. |  |  |
|  | Organization of the ceremony together with the works supervisor. | 60% CAAO, 60% EIIE, 60% local authorities and institutions, 50% family representatives attend the Ceremony. | Ceremony organized and held with the participation of authorities and other actors. |  |  |
| 7 | Mid-term evaluation of the project | Development of a mid-term evaluation workshop. | 60% CAAO, 60% EIIE, 60% local authorities and institutions | 1 workshop held | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Updated Social Intervention Plan. |
| 8 | Development of the baseline entry by sampling and validated or updated population diagnosis | Development and validation of the instrument to be used. | 60% CAAO, 60% EIIE | 1 meeting held | Baseline plan developed and approved. Activity Minutes, Participation List, Photographic Report, Activity Report. |
|  | General application | As per sample size determination based on project size. | Application of the questionnaires as per defined sample size. | Document developed and submitted to GAMY. |  |
|  | Systematization and preparation of baseline and population diagnosis document. | - | Document developed and submitted to GAMY. |  |  |
| 9 | Ratification or signing of inter-institutional agreements | Review of existing agreements and adjustments for ratification or signing of new inter-institutional agreements. | 60% CAAO, 60% EIIE, 60% local authorities and institutions | Adjusted, complemented, ratified/signed agreements. | Signed documents. |
| 10 | Training of the population on project benefits | Training the population on project benefits. | 50% of beneficiary families. | Training workshops developed. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report. |

**Phase Post-Investment**

**I. Component: Training for Authorities and Strengthening Operators**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Activity** | **Tasks** | **Target Population** | **Compliance Indicators** | **Verification Means** |
| 1 | Training for authorities | Development of training workshops for authorities. | 60% local authorities and institutions | At least 2 training workshops | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report. |
| 2 | Strengthening operators of the cleaning service | Development of training workshops/practices/visits/exchanges for operators. | 80% GIRS Unit personnel, 60% CAAO, 60% EIIE | Workshops in the following areas: administrative, financial/economic, operation and maintenance, other areas as described in the DESCOM-FI plan, experience exchanges. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Certification for participants. |
| 3 | Transfer of all technical information to the GIRS Unit by builders and machinery suppliers | Management of transferring supervision documentation to GAM and later to the GIRS Unit. | - | Transfers carried out. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Transfer Minutes. |
| 4 | Development of GIRS management tools: Designing forms and formats for registration, user attention, and everything related to users, final GIRS Unit organizational chart, functions manual, information tools. | Development of GIRS instruments. | 80% GIRS Unit personnel | Instruments developed. | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Instruments approved by GAMY. |
| 5 | Development of POA and budget | Development of POA and budget. | 80% GIRS Unit personnel | POA and budget developed | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Approved POA and budget. |

**II. Component: Participation and Education of the Actors**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Activity** | **Tasks** | **Target Population** | **Compliance Indicators** | **Verification Means** |
| 1 | Home visits for service schedule information and training in source separation of solid waste: organic, recyclable, and other waste. | Home visits development | 80% families. | Visits conducted with material distribution | Activity Planning, Activity Minutes, Participating Families List, Photographic Report, Activity Report. |
| 2 | Training and awareness workshops on timely payment of the cleaning fee and payment and collection system, proper use of trash bins, containers, and collection routes. | Development of training workshops | 80% CAAO, 50% beneficiary families | At least 1 workshop per project intervention area | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report. |
| 3 | Recycling practices in educational units, neighborhoods, and communities. | Development of recycling practices | 80% CAAO, 50% neighborhoods/communities, 60% Educational Units | Practices conducted | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report. |
| 4 | Dissemination through media of service hours, cleaning fee payment, and collection mechanisms. | Dissemination of the service according to the approved communication plan. | - | Implementation of approved communication plan. | Activity Planning, Activity Minutes, Activity Report. |

**III. Component: Service Sustainability**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Activity** | **Tasks** | **Target Population** | **Compliance Indicators** | **Verification Means** |
| 1 | Development of the exit baseline | General application | As per sample size determination | Application of questionnaires as per defined sample size. | Questionnaires applied, Systematization document submitted. |
|  | Systematization and development of the baseline and population diagnosis document. | - | Document developed and submitted to GAMY. |  |  |
| 2 | Legal approval of the cleaning fee | Assistance in the approval of the cleaning fee and payment mechanism. | - | Approval documents. | Approval documents submitted. |
| 3 | Application of the cleaning service tariff structure | Follow-up on cleaning fee payment, Quantification of arrears. | - | Evaluation report developed. | Evaluation report developed and submitted. |
| 4 | Development of the investment plan for replacements and extensions | Development of the investment plan for replacements and extensions | - | Investment plan for replacements and extensions developed and approved. | Investment plan submitted and approved. |
| 5 | Development of the service sustainability plan | Development of the service sustainability plan | - | Service sustainability plan developed and approved. | Sustainability plan submitted and approved. |
| 6 | Review and/or adjustment of the operation and maintenance plan | Review and/or adjustment of the operation and maintenance plan | - | Review and/or adjustment of operation and maintenance plan | Operation and maintenance plan submitted and approved. |
| 7 | Support for the service implementation | Support for the service implementation, Operator reinforcement. | - | Evaluation forms implemented, Evaluation report submitted, Reinforcement workshops held. | Activity Planning, Activity Minutes, Activity Report, Photographic Report, Participation List, Evaluation Report, Evaluation Forms. |
| 8 | Final project evaluation | Development of a final evaluation workshop. | 60% CAAO, 60% EIIE, 60% local authorities and institutions | 1 workshop held | Activity Planning, Activity Minutes, Participation List, Photographic Report, Activity Report, Final Report. |

1. **Scope of Work**

The scope of work includes, but is not limited to:

a. Review and validate the pre-investment document of the DESCOM-FI component, and based on the final project design and operational matrices, develop a general work plan and execution schedule for the investment and post-investment phases.

b. Organize the population and/or community for social management and control in project implementation.

c. Develop, organize, and execute the training plan based on the operational matrices for DESCOM-FI implementation.

d. Prepare training content and materials, considering population, ethnic-cultural aspects, age, and gender differences, and using community inputs and those required by the technical team or other stakeholders.  
e. Train the general population through workshops, talks, mass media, etc., in sanitary education, proper use of services, waste reduction, source separation, and transformation, as well as awareness-raising for sustainability, environmental sanitation, and good practices.

f. Train selected operators in skills for the operation and maintenance of constructed works with the support of the solid waste professional.

g. Promote and/or strengthen the creation of the Entity Responsible for Urban Waste Collection Services (EESAU) and guide the community and Municipal Government in its implementation or optimization of existing administration.

h. Organize training on service operation and infrastructure maintenance, including theoretical and practical content for landfill operation, maintenance techniques, and other skills for community members and EESAU staff.

i. Develop and finance all workshops and activities described in the operational matrices (ANNEX No. 1). The consultancy budget must include materials, equipment, and venue rentals for workshops.  
j. Support the organization of the community and/or GAM for the implementation and operation of the EESAU.

k. Implement and carry out cleaning campaigns, fairs, and educational campaigns. Costs and materials must be included in the consultancy budget.

l. Develop educational materials and instruments for execution, monitoring, and follow-up records based on landfill construction and service provision characteristics.

m. Deliver to the EESAU:

* Tools and/or equipment for administration, operation, and maintenance, office furniture, and stationery.
* Containers and other necessary items as described in the final project design.
* Promote and implement operational regulations managed by the municipal council.
* Develop management tools (manuals of functions and procedures)

1. **Activities**

The implementation of DESCOM-FI will be coordinated with the physical infrastructure executor to ensure synchronization in the following phases:

* **First Phase**: DESCOM-FI, Investment parallel to physical construction.
  + Start: Upon issuance of the work order to the construction company.
  + End: Provisional Handover of the works.
* **Second Phase**: DESCOM-FI, Post-Investment.
  + Start: After Provisional Handover.
  + End: Final Handover of the works.

1. **Expected Results**

The implementation of DESCOM-FI must deliver the products outlined in the operational matrices for the investment, consolidation, and post-investment phases.

**Main Products for the Investment Phase**

For DESCOM:

* Community Diagnosis (Socio-Environmental) and Validated and Updated Pre-Investment Design of DESCOM-FI: The following aspects must be considered: socio-economic and demographic factors (total population and beneficiary population), generation of solid waste categorized by population sectors, per capita production, and projected calculated waste collection fee.
* Beneficiary Population is Aware of the Project Scope and Exercises Social Control.
* The Population and/or Community is Knowledgeable About Solid Waste Management.
* The Population and/or Community Carries Out ISWM Actions.
* Intersectoral Agreements Execute the Integrated Solid Waste Management Plan (ISWM).
* Environmental Education Actions are Implemented.
* The Population is Aware of Environmental Mitigation Measures.
* The Population is Sensitized to Pay Waste Collection Fees.

For FI:

* Community Members Trained in Skills for the Administration, Operation, and Maintenance of Executed Project Works.
* The GAM/Beneficiary Community has the Entity Responsible for Urban Waste Collection Services (EESAU).
* An Office is Available to Serve Users, with a User Registry and EESAU Annual Operating Plan (POA).
* The Management Model for Service Provision is Defined, and EESAU is Built and Implemented.
* The Operation and Maintenance Plan for the Sanitary Landfill is Developed, Approved, and Implemented.
* The Integrated Solid Waste Management Plan (ISWM) is Developed with Commitments for Future Implementation.
* The Waste Collection Fee or Rate is Approved and/or Ratified.
* EESAU is Institutionally and Legally Consolidated, with the Development of the Municipal ISWM Regulations. Sanitary Landfill EESAU Staff and Municipal Technicians are Competent in Landfill Operation.
* Urban Waste Collection Operation Staff are Competent in Waste Collection and Management.
* EESAU has Administrative, Financial, and Accounting Management Tools for its Administration.
* EESAU has Registration, Control, and Monitoring Tools for Waste Collection Fee Billing.
* EESAU has Education and Communication Strategies for ISWM Implementation.
* Municipal Personnel (Council and Executive) have been Socialized and Trained on Project-Related Topics for its Implementation and Operation.

**Main Products for the Post-Investment Phase**

**For DESCOM:** Follow-up and Reinforcement of Activities Initiated in the Investment Phase. Application of the Ex-Post Control Form at the Conclusion of the Service.

* The population exercises social control and shared responsibility for service provision and local solid waste management.
* The population and/or community, organizations, and/or families, along with the EESAU, establish strategies for solid waste collection and separation.
* Educational centers and institutions in the area develop strategies for waste collection and separation.
* The population complies with the payment of service fees or tariffs.
* Social safeguards under CAF standards are completed.

**For FI:** Monitoring of GAM and EESAU Performance. Reinforcement of GAM in Integrated Solid Waste Management.

* Implementation of the Operation and Maintenance Plan.
* The EESAU has conducted at least one accountability report to the population and relevant authorities.
* The GAM applies municipal regulations on solid waste.
* The EESAU has an approved Annual Operating Plan (POA).
* The EESAU reports at least 50% compliance with fee or tariff payments.
* Legal regularization of properties used for service provision.
* The EESAU has the administrative and operational capacity to provide urban waste collection services, including collection, sweeping, cleaning of public areas, treatment, final disposal, and proper technical closure of dump sites.
* The GAM, together with partner institutions, continues to implement the Integrated Solid Waste Management Plan.

It must incorporate cross-cutting approaches of interculturality, gender equity, generational equity, and environmental sustainability from the start of activities until the end of project implementation.

1. **Institutional Strengthening Component**

**Training and Technical Assistance**

As the construction of the works established in the project progresses, a series of training sessions should be implemented for the personnel, so that in the future, when the investment phase concludes, they will be able to operate the waste management service effectively and with higher productivity. Additionally, the consulting team should prepare operation manuals for the project.

The training and technical assistance program will, in this case, be directed to the administrative staff, the council of the Autonomous Municipal Government of Yamparáez, both directly and indirectly related to waste management services and the technical aspect of the project. This plan should include a budget and implementation schedule.

The following table shows the matrix with the authorities and the administrative and operational personnel who will be trained. The topics to be developed in the workshops are aimed at the administrative, financial, and technical areas, as detailed below:

|  |  |  |
| --- | --- | --- |
| **Position** | **Area** | **Topics to Train** |
| Mayor, council, secretaries, directors (12 people, 2 days of training) | Administrative | Institutional model of the waste service, financial statement analysis, integrated solid waste management |
| Relationship units (14 people, 2 days of training) | Administrative | Institutional model of the waste service, financial statement analysis, integrated solid waste management |
| Head of the accounting and finance unit (6 people, 2 days of training) | Administrative | Institutional model of the waste service, structuring of waste service fees and tariffs, waste service fee collection |
| Head of human resources (1 person, 2 days of training) | Administrative | Payroll management and personnel monitoring |
| Sweepers, collectors (4 people, 3 days of training) | Operational | Sweeping and collection systems. Equipment and transportation to be used. Brief explanation of GIRS |
| Recovery operators (1 person, 3 days of training) | Operational | Classification of waste by characteristics, storage, and recycling and composting systems |
| Operators of final disposal at the sanitary landfill (1 person, 3 days of training) | Operational | Land movement, leachate management, soil waterproofing, compaction |

**Methodology and Training Schedule**

The following table presents the methodology to be applied for training and technical assistance to the authorities, administrative, financial, and operational staff of the Autonomous Municipal Government of Yamparáez.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Session No.** | **Topics** | **Methodology** | **Materials to be Used** | **Time (Days)** |
| 1 | Institutional model of the waste service, financial statement analysis, integrated solid waste management (12 people: Mayor, Council, Secretaries, Directors) | Pre- and post-project explanation, social, economic, and environmental viability, determination of direct administration by the GAM, reading of GAM's economic and financial condition, project summary and its benefits, experiences of other municipalities on GIRS and results. | Notebooks, pencils for each participant. Data display, screen, laptop, and biosecurity materials. | 2 days (during the execution phase of the project) |
| 2 | Institutional model of the waste service, financial statement analysis, integrated solid waste management (14-unit heads and staff directly or indirectly related to GAM) | Pre- and post-project explanation, social, economic, and environmental viability, determination of direct administration by the GAM, reading of GAM's economic and financial condition, project summary and its benefits, experiences of other municipalities on GIRS and results. | Notebooks, pencils for each participant. Data display, screen, laptop, and biosecurity materials. | 2 days (during the execution phase of the project) |
| 3 | Institutional model of the waste service, structuring of waste service fees and tariffs, waste fee collection (6 people from administrative and accounting areas) | Pre- and post-project explanation, social, economic, and environmental viability, determination of direct administration by the GAM, analysis and definition of the proposed fee or tariff with the financial staff, analysis of fee collection modalities. | Notebooks, pencils for each participant. Data display, screen, laptop, and biosecurity materials. | 2 days (during the execution phase of the project) |
| 4 | Payroll management and personnel monitoring (technical assistance with human resources staff) | Direct work with the HR department, analysis for personnel placement or appointments at the internal level or call for positions within the Integrated Solid Waste Management Unit. | Notebook, pencil for the participant. Data display, screen, laptop, and biosecurity materials. | 2 days (during the execution phase of the project) |
| 5 | Sweeping and collection systems, equipment and transport to be used. Brief explanation of GIRS (Operators of sweeping, collection, and transport systems) | Direct work with sweepers, collectors, and transport operators. | Notebook, pencil for the participant. Data display, screen, laptop, and biosecurity materials. | 3 days (during the execution phase of the project) |
| 6 | Classification of waste, storage, and recycling and composting systems (Recovery operators) | Direct work with storage, recycling, and composting system operators. | Notebook, pencil for the participant. Data display, screen, laptop, and biosecurity materials. | 3 days (during the execution phase of the project) |
| 7 | Land movement, leachate management, soil waterproofing, compaction (Final disposal operators) | Direct work with operators at the sanitary landfill. | Notebook, pencil for the participant. Data display, screen, laptop, and biosecurity materials. | 3 days (during the execution phase of the project) |
| 8 | Development of process and operation manuals for personnel | Coordination with GAM’s administrative and legislative staff, desk work, and socialization | Notebook, pencil for the participant. Data display, screen, laptop, and biosecurity materials. | 20 days (during the execution phase of the project) |