

GEF-8 REQUEST FOR CEO CHILD ENDORSEMENT/APPROVAL

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General Child Project Information

Child Project Title

Circular Solutions to Plastic Pollution in Peru

Region	GEF Project ID
Peru	11191
Country(ies)	Type of Project
Peru	FSP
GEF Agency(ies)	GEF Agency Project ID
UNEP	
Project Executing Entity(s)	Project Executing Type
World Wildlife Fund, Inc. (WWF)	Others
GEF Focal Area (s)	Submission Date
Multi Focal Area	6/27/2024
Type of Trust Fund	Project Duration (Months)
GET	60
GEF Project Grant: (a)	Agency Fee(s) Grant: (b)
4,437,156.00	399,344.00
PPG Amount: (c)	PPG Agency Fee(s): (d)
150,000.00	13,500.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
5000000	56,274,152.00

Project Sector (CCM Only)

Rio Markers

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
Significant Objective 1	No Contribution 0	Significant Objective 1	No Contribution 0

Project Summary

Provide a brief summary description of the project, to offer a snapshot of what is being proposed. The summary should include: (i) what is the problem and issues to be addressed? ii) as a child project under a program, explain how the description fits in the broader context of the specific program; (iii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. (max. 250 words, approximately 1/2 page)

Peru produces about one million tons of plastic waste per year. About 50.6% of plastic waste end in landfills, 34% in dumps and only 15.4% is recycled. Despite significant advances, like issuing the law on single-use plastics, Peru faces key barriers to confront plastic pollution like (i) limited availability of alternatives to petroleum-based items, (ii) limited capacities to evaluate risks, regulate and control food contact items, (iii) reluctance to change from producers, retailers, and consumers, (iv) weak plastics recycling chain and waste management, (v) limited capacities for monitoring plastics regulations, amount others.

This project will implement a strategy composed of four interlinked components: (i) to stimulate circularity regarding single-use plastics, (ii) to strengthen collaboration between public and private sectors, (iii) to enhance the national framework to address plastic pollution, and (iv) to generate practical knowledge about the enablers and barriers for change. A key aspect of the strategy will be to test and utilize social and behaviour change tools to encourage the adoption of circular solutions that reduce or eliminate single-use plastics in markets, supermarkets, food courts, and fast-food restaurants.

It is expected that 56,098 tons of residual plastic waste from the food and beverage sector will be avoided, leading to larger long-term effects. In addition, it is foreseen that the project will avoid 248,498 t of CO₂e and 9 gTEQ of persistent organic pollutants. The project will contribute, among other things, to the following outcomes: Societal choices shifted towards lower-carbon products and services, reduce of plastic pollution, improvement in resource efficiency and circularity in key sectors, “3R” waste management systems are mainstreamed, phase-out of most polluting products and practices.

Child Project Description Overview

Project Objective

To reduce plastic pollution in Peru by accelerating the transition towards a circular economy in the food and beverage industry

Project Components

Component 1. Stimulate circularity, reduction, and reuse of single-use plastics

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
1,622,390.00	20,575,935.00

Outcome:

1.1. Enhanced behaviours and practices that support circular solutions to plastic pollution

Output:

- 1.1.1 Baseline diagnosis of gender sensitive behaviours in markets, supermarkets, food courts and fast-food restaurants in the three target districts.
- 1.1.2 Trials of circular solutions and improved innovative practices in markets, supermarkets, food courts and fast-food restaurants in the three target districts.
- 1.1.3 Trials to improve municipal control and enforcement of plastics regulations in the three target districts.
- 1.1.4 Three gender sensitive updated EDUCCA municipal programmes that address elimination of single-use plastics.
- 1.1.5 Three updated ordinances and implementing tools to eliminate single-use plastics.
- 1.1.6 Promising startups that provide circular solutions to plastic pollution engaged with business accelerators.

Component 2. Strengthen involvement and collaboration of public and private sectors

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
732,442.00	9,289,182.00

Outcome:

- 2.1. Clean Production Agreements focused on the food and beverage sector reduce the use of plastic.
- 2.2. Public-private agreements facilitate plastic reduction and circularity of beverage bottles and food packaging.

Output:

- 2.1.1 APLs directive assessed and updated.
- 2.1.2. An upgraded APL platform for monitoring and reporting.
- 2.1.3. At least eight new APLs signed with supermarkets, convenience stores, producers of mass consumption products, and fast-food restaurants.
- 2.2.1 Industry endorsed design guidelines for beverage PET bottles.
- 2.2.2 Guidelines for circular design of beverage bottles and food packaging.
- 2.2.3 Initial list of chemicals and polymers of concern used in food contact plastics.
- 2.2.4 Draft regulation on circularity of beverage bottles and food packaging.

Component 3. Strengthen the national framework

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
1,045,120.00	13,254,715.00

Outcome:

- 3.1. Extended Producer Responsibility is implemented in the food and beverage sector.
- 3.2. New instruments accelerate plastic reduction and circularity in the food and beverage sector

Output:

- 3.1.1 SIGERSOL upgraded to manage EPR monitoring and reporting.
- 3.1.2 Formally adopted methodology to calculate collection, valorisation and returnability targets to implement EPR regulation.
- 3.1.3 Catalogue of infractions and sanctions of the EPR regulation.
- 3.1.4 Aula APRENDE gender sensitive online courses for key stakeholders to advance the implementation of EPR regulations.
- 3.2.1 National regulations for plastic carrier and produce bags and food contact plastics incorporating gender-responsive considerations that address differentiated impacts on and roles of women and men in plastic use, disposal, and alternatives.
- 3.2.2. National guidelines to implement single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants.
- 3.2.3. Government strategy to scale-up circular solutions and improved practices using social and behavioural change in markets, supermarkets, food courts and fast-food restaurants.

Component 4. National and Program-level Coordination, Knowledge Management and Communication

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
743,190.00	9,425,493.00

Outcome:

- 4.1. Effective national and global coordination including active participation and contribution to global project meetings and working groups.
- 4.2 Increased National and Global knowledge and awareness on Circular Solutions to Single Use Plastic Packaging Pollution from the Food and Beverage Sector

Output:

- 4.1.1. National level coordination mechanism established and implemented.
- 4.1.2. Coordination and active participation and contribution to Global Project meetings and working groups.
- 4.2.1. Communication and Knowledge Management strategy developed and implemented for the project developed and implemented using the Global Project, and other relevant platforms.
- 4.2.2. Contribution to the Global Project Knowledge Management and Communication.
- 4.2.3. Seven lessons documents about the application of circular solutions and improved practices in the food and beverage sector.
- 4.2.4. Policy briefs and plastic pollution dialogues to foster science-based decision making.
- Output 4.2.5. SINIA strengthened to be the plastic pollution national knowledge hub.

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
82,400.00	1,045,036.00

Outcome:

M&E Outcome: Efficient and timely project execution, monitoring and evaluation processes carried out, and corresponding improvement of project execution as appropriate.

Output:

- M&E Output 1 Documented monitoring and reporting process throughout the entire project execution life cycle ensuring successful project delivery.
- M&E Output 2 Independent evaluations to assess the progress, success, and effectiveness of the project undertaken and recommendations reflected in project implementation.
- M&E Output 3 Regular contribution to the Global Project M&E Reporting.

Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
Component 1. Stimulate circularity, reduction, and reuse of single-use plastics	1,622,390.00	20,575,935.00
Component 2. Strengthen involvement and collaboration of public and private sectors	732,442.00	9,289,182.00
Component 3. Strengthen the national framework	1,045,120.00	13,254,715.00
Component 4. National and Program-level Coordination, Knowledge Management and Communication	743,190.00	9,425,493.00
M&E	82,400.00	1,045,036.00
Subtotal	4,225,542.00	53,590,361.00
Project Management Cost	211,614.00	2,683,791.00
Total Project Cost (\$)	4,437,156.00	56,274,152.00

Please provide Justification

PMC is 5% but by rounding the decimals it turns out that it is greater.

CHILD PROJECT OUTLINE

A. PROJECT RATIONALE

Describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Since this is a child project under a program, please include an explanation of how the context fits within the specific program agenda. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Global plastic pollution

1. Plastic pollution is one of the fastest growing global environmental problems. At least eight million metric tonnes of plastic enter the ocean each year (Jambeck et al., 2015), which is equivalent to one garbage truck per minute. Plastic pollution has been shown to cause harm to species, ecosystems, and human health.
2. Plastic production, consumption and pollution levels have increased exponentially since plastic became widespread in the 1950s. More than 2,000 animal species have encountered plastic pollution in their environment, and nearly 90% of species specifically studied are known to be negatively affected (Tekman et al., 2022). The total social, economic, and environmental costs of all plastic produced in 2019 have been estimated at USD3.7 trillion (+/-USD1 trillion) over its lifetime (WWF, 2021).
3. By 2040, under a business-as-usual scenario, plastic waste generation is expected to double, plastic leakage into the ocean will triple, and levels of plastic pollution in the ocean will quadruple (Pew & SYSTEMIQ, 2020). Recognizing the scale and urgency of the plastic pollution crisis, and the transboundary

nature of the problem, United Nations member states agreed in March 2022 to start work on a treaty to end plastic pollution (i.e., International Legally Binding Instrument on Plastic Pollution, including in the Marine Environment). The aim is to agree on a treaty text by the end of 2024.

Plastic pollution in Peru

4. According to Peru's Ministry of the Environment (MINAM), the country produces about 1,003,143 metric tons of plastic waste per year (Table 1) and only 1.25% of this waste is properly recycled. It is known that the formal recycling rate in Peru is very low (<3.5%) and that Metropolitan Lima and Callao generate about 50% of the total plastic waste. However, the available information is scarce and limited to the formal sector, even though there is a consensus that the informal sector moves significant quantities of recycling, even larger volumes than the formal sector.

5. MINAM considers that plastic consumption in Peru is a matter of great concern, as an average Peruvian citizen uses around 30 kg of this material per year. This figure is further reflected in the massive use of plastic bags, where nearly three billion bags are used annually, equivalent to using about six thousand bags per minute. It has been estimated that in Metropolitan Lima and Callao, 886 t of plastic waste are generated daily, representing 46% of the total at the national level.

The Peruvian food and beverage sector

6. Peru does not have a petrochemical industry and therefore imports all the virgin resin and additives as needed for the production of plastics. The Peruvian plastics chain includes importers of feedstock and/or finished goods, manufacturers or transformers of polymers into manufactured and semi-manufactured products, traders, distributors, and exporters.

7. The plastics and the food and beverage sectors have several organisations that represent their industries. On one hand, there is the National Society of Industries ([SNI](#)), a private non-profit organisation that brings together the business community of the Peruvian manufacturing industry. It comprises 58 committees that cover various sectors of the manufacturing industry, including committees related to food and beverages (e.g., Treats Committee, Oil and Derivatives Manufacturers Committee), chemicals, plastics (e.g., Plastics Committee), among others. On the other hand, there are organisations that represent specific groups like the Association of Non-Alcoholic Beverages and Soft Drinks of Peru (ABRESA) and the Peruvian Association of the Plastic Industry ([APIPLAST](#)):

- ABRESA congregate six producers of a broad portfolio of products such as bottled water, sport drinks, soft drinks, juices, among other. The members of ABRESA are Coca Cola and its bottling company Arca Continental Lindley, PepsiCo, Industria San Miguel, CBC Perú and Backus. [Grupo AJE](#), another large producer, does not participate in ABRESA.
- APIPLAST congregate a wide range of companies of the plastics value chain. There is a Recycling and Circular Economy Commission which is very active. APIPLAST is a member of the 'Latin American Plastics Industry Association' (ALIPLAST).

8. In 2022, the food and beverage sector contributed about 3.7% of the national Gross Domestic Product and exported about USD1,429 million (MEF, 2022). This sector is very diverse and includes a wide range of supply and production chains. The main producers of mass consumption products are ALICORP and Gloria. In [2023](#), the most preferred beverage brands were Inca Kola, Coca Cola, Cielo, Altomayo and Nescafé^[1].

There are about 273 supermarkets that are managed by three large retail groups: INTERCORP (Plaza Vea, Vivanda and Mass), Grupo Falabella (Tottus and Precio Uno) and CENCOSUD (Wong and Metro).

9. The food and beverage sector demands large quantities of plastic items for packaging. The plastics sector had a rapid growth between 2013 to 2018 mainly due to the demand for bottles and labels of the soft drinks sector, which ranks fourth among the sectors demanding plastic materials (SNI, 2019).

National plastic waste production and plastic flow

10. Peru has detailed statistics about the production and composition of solid waste that includes information about plastics. This information is made public through (i) published reports and (ii) online via the Information System for Solid Waste Management (SIGERSOL) and the National Environmental Information System ([SINIA](#)). The latest published report is from 2019 (MINAM, 2020), the online sources are frequently updated.

11. The [SIGERSOL](#) has two components:

- a. The municipal SIGERSOL compiles information about (i) household and (ii) non-domestic waste (e.g., markets, parks, restaurants, public institutions) that has been managed by local municipalities. The SIGERSOL also provides information about the amount and composition of plastic waste since 2019 in this [link](#). Plastic waste is classified as “usable” and “single-use” (non-usable). “Usable plastics” comprise six plastic types: polyethylene terephthalate (PET), high density polyethylene (HDPE), low density polyethylene (LDPE), polypropylene (PP) and polystyrene (PS). Single-use plastics comprise plastic bags and tecnopor^[2] (expanded polystyrene).
- b. The non-municipal SIGERSOL compiles information from solid waste managed by operating companies and the productive sector^[3] (e.g., agriculture, tourism, industry, fishing, housing and construction).

12. In 2022, Peru produced 38.9 Mt of solid waste, 30.5 Mt from non-municipal sources and 8.4 Mt from municipal sources:

- Most of the non-municipal waste was recovered for valorisation^[4] (83.3%), this included 4,152.86 t of plastics (0.02%). The rest was disposed of mainly in landfills (61.2%) and safety landfills (37.9%).
- Most of the municipal solid waste was disposed of in landfills (61.18%), 37.07% was disposed of in waste dumps, and 1.76% was recovered for valorisation (Table 1). Plastics constituted 1,003,142 t (11.86%), most of these were usable plastics (Table 2, Figure 1). The most abundant plastic residues, in descending order, were plastic bags (33.84%), PET (22.99%), HDPE (13.07%), and LDPE (9.79%) (Figure 2). Only 12,508 t of all plastic residues were valorised^[5] (1.25%).

13. Grupo GEA (2020) calculated the plastics flows for 2018 (Figure 3). They found that 806 x10³ t were disposed of that year and went to landfills (50.6%), dumps (34%) and recycling (15.4%). The authors

estimated that the plastic residues for recycling were handled by formal and informal collection centres, respectively, 79% and 21%. Finally, about 16% of the plastic production was exported mainly as packaging of the agri-food industry (e.g., fruits and vegetables, confectionary and snacks, sauces and spices). For PET (267×10^3 t in 2018), GEA (2020) calculated that 37% was disposed in landfills, 28% was exported, 19% was disposed in dumps, and 16% was recycled (Figure 4).

14. In summary, most of the recorded plastic residues come from municipal solid waste (945,217 t per year, 2019-2022 average). About 70% of the plastic residues are plastic bags (339,460 t in 2022), PET (230,630 t in 2022) and HDPE (131,141 t in 2022). There is no information about the incidence of snack bags and confectionary wrappers which are multiple layers of polymer materials which are not recyclable. According to the estimates of Grupo GEA (2020), 50.6% of plastic residues end in landfills, 34% in dumps and 15.4% is recycled. There are no estimates of the additional amount of non-managed plastics that are dumped directly into the environment (e.g., plastic bags, bottles, snack bags, wrappers).

Table 1. Total municipal solid waste and final destination between 2019 and 2022. Source: MINAM SIGERSOL.

Municipal solid waste	Year			
	2019	2020	2021	2022
Total municipal solid waste (t)	7,781,904.29	7,905,118.13	8,214,355.90	8,455,715.19
Percentage of municipal solid waste disposed of in landfills	53.45	54.94	61.29	61.18
Percentage of municipal solid waste disposed of in the environment (waste dumps)	45.47	44.31	36.91	37.07
Percentage of municipal solid waste valorised	1.08	0.75	1.81	1.76
Total plastics (t)	948,107	911,280	918,338	1,003,142
Percentage of plastic in total municipal solid waste	12.18	11.53	11.18	11.86

Table 2. Plastic types in the municipal solid waste in 2022. Source: MINAM. National Plastic Waste Statistics. Updated 13 February 2023.

Total municipal solid waste (t)	8,455,715.19	100%
Total plastic residues (t)	1,003,143	11.86%
Total usable plastics (t)	598,161	7.07%
PET (t)	230,630	2.73%
HDPE (t)	131,141	1.55%
LDPE (t)	98,185	1.16%
PP (t)	67,148	0.79%
PS (t)	49,639	0.59%
PVC (t)	21,418	0.25%
Total single-use plastics (t)	404,982	4.79%
Plastic bags (t)	339,460	4.01%
Tecnopor (t) (expanded polystyrene)	65,522	0.77%

Figure 1. Percentage of usable and single-use plastics in the municipal solid waste between 2019 and 2022.
Source: Source: MINAM. National Plastic Waste Statistics. Updated 13 February 2023.

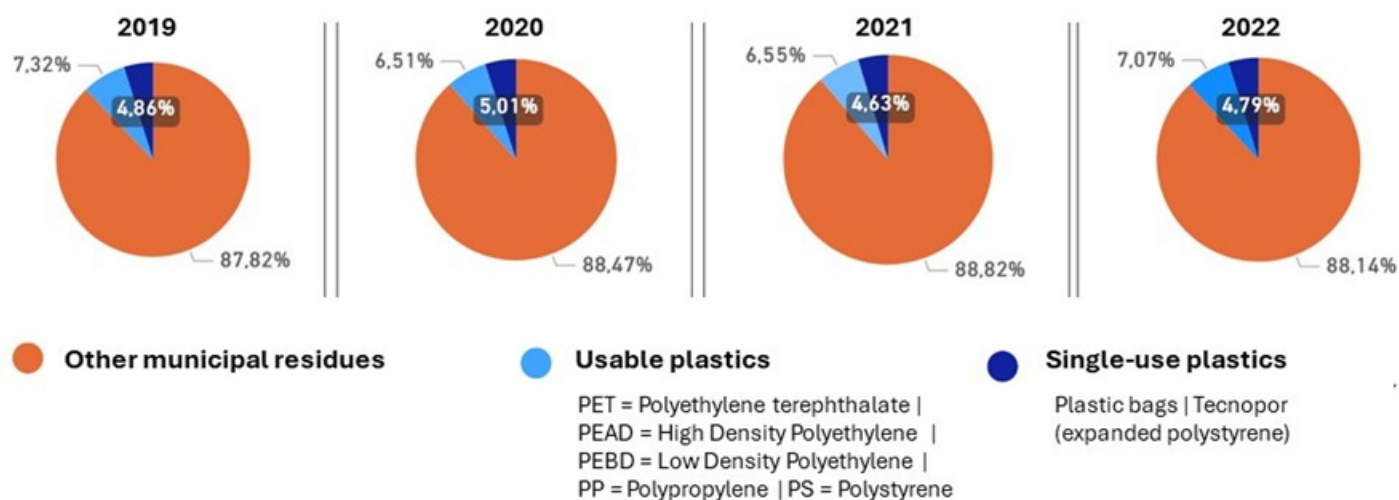


Figure 2. Percentage of plastic types with respect to the total plastic waste generated in the municipalities of Peru. Source: MINAM. National Plastic Waste Statistics. Updated 13 February 2023.

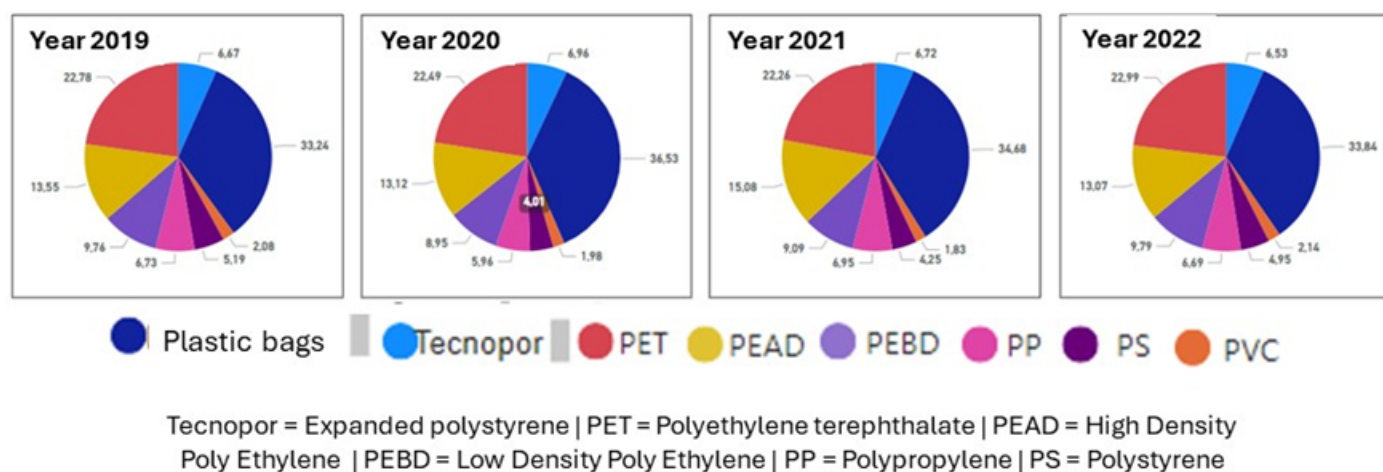


Figure 3. Peruvian national plastics flows in 2018. Source: Grupo GEA (2020).

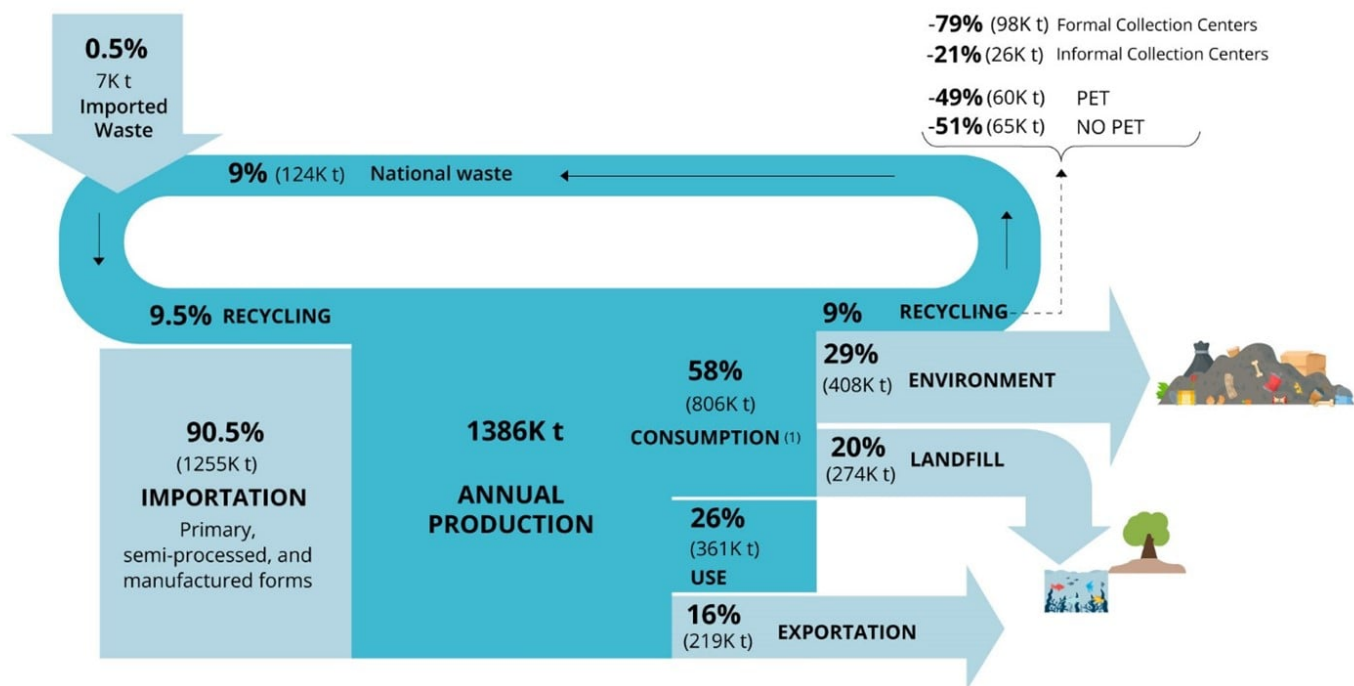
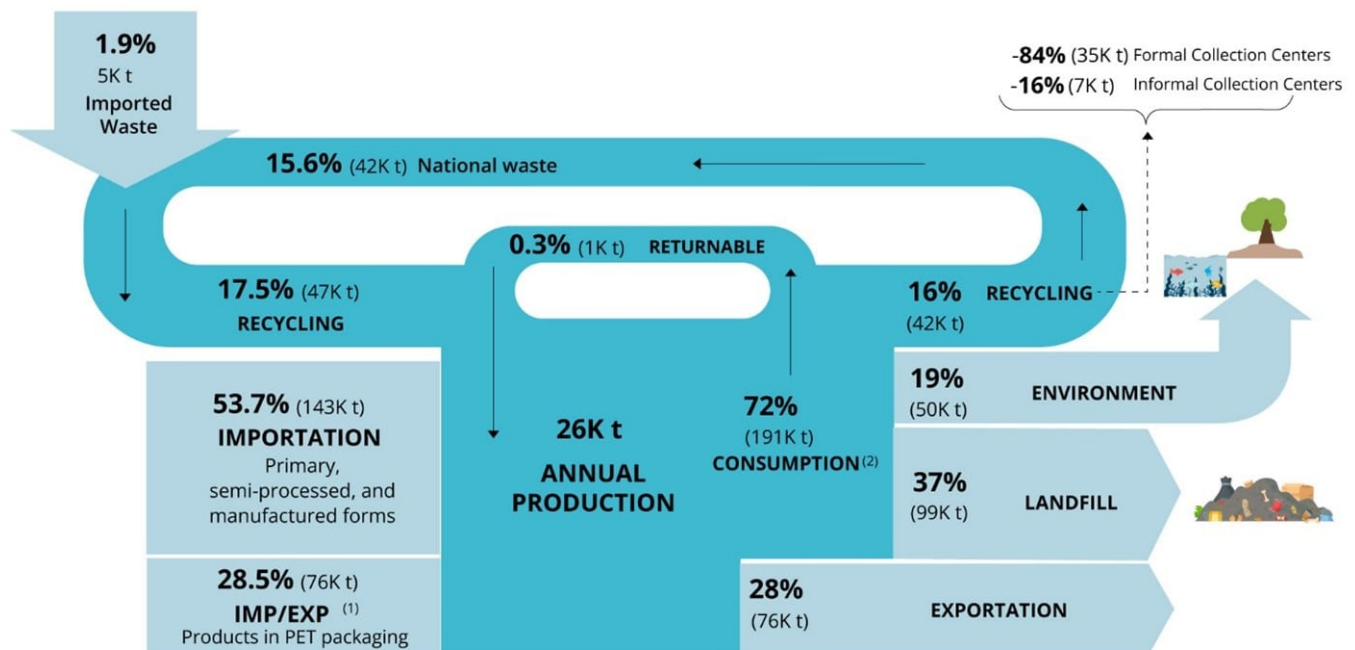


Figure 4. PET national plastics flows in 2018 in Peru. Source: Grupo GEA (2020).



The baseline scenario

Institutional framework

15. The key government entities related to the use of plastics and the plastic waste regulation and management are the Ministry of Environment (MINAM), the Ministry of Production (PRODUCE), the Ministry of Health (MINSa), the provincial and district municipalities, the National Quality Institute (INACAL) and the Agency for Environmental Assessment and Enforcement (OEFA).

The Ministry of Environment (MINAM)

16. MINAM was established on 8 October 2008 by Legislative Decree [1013](#), as the governing entity of the Executive Branch of the environment sector. The ministry is responsible for designing, establishing, executing, and supervising national and sectoral environmental policy. MINAM is in charge of environmental protection, sustainable management of natural resources and the conservation of species and ecosystems. Among its competences, MINAM exercises national leadership for the management and handling of solid waste, in accordance with the Comprehensive Solid Waste Management Law (Legislative Decree [1278](#) of 2017).

17. Regarding plastics the main units of MINAM are:

- The General Directorate of Solid Waste (DGGRS) which belongs to the Vice Ministry of Environmental Management ([VMGA](#)). DGGRS's functions are to coordinate, promote, advise, and organise with local and regional authorities the implementation of solid waste management regulations. It is also in charge of formulating and implementing, as appropriate, the technical-normative instruments for the management and handling of solid waste and managing the SIGERSOL (one of SINIA's environmental information platforms). In addition, Directive [001-2023-MINAM/DM](#) on Clean Production Agreements (APLs) indicates that the DGGRS must ensure the application of the procedure established in this directive, which includes the review of the diagnosis, proposal, subscription, monitoring and evaluation of APLs.
- The General Directorate of Education, Citizenship and Environmental Information (DGE CIA) which belongs to the VMGA. DGE CIA is responsible for (i) promoting environmental education, culture, and citizenship, (ii) managing environmental information and (iii) the identification of research priorities and needs, promoting the development of scientific research on environmental issues. DGE CIA administer the National Environmental Information System ([SINIA](#)), direct the implementation of the Municipal Programme for Environmental Education, Culture and Citizenship ([EDUCCA](#))(Ministerial Resolution [003-2023-MINAM](#)), implement the Initiative for the Strengthening of Decentralized Environmental Management Capacities ([APRENDE](#)), and coordinate the [Peru Limpio Strategy](#).
- The Agency for Environmental Assessment and Enforcement (OEFA) is a specialised technical public entity attached to MINAM. It is also the governing entity of the National Environmental Assessment and Enforcement System (SINEFA) and exercises the functions at national level of supervision, monitoring, evaluation, control, sanctioning and enforcement of the incentives within its competence.

The Ministry of Production (PRODUCE)

18. PRODUCE is the entity of the Executive Branch with competencies in the areas of fisheries, aquaculture, industry, micro, small, medium and large enterprises, domestic trade, promotion, development of cooperatives and industrial parks. In addition, regarding the industrial sector, it is responsible for industrial standardisation and the regulation of controlled products, as well as for productive innovation and technology transfer within the scope of its competencies.

19. Regarding plastics the main units of PRODUCE are:

- The Vice Ministry of Micro and Small Businesses and Industry which is the authority on industrial standardisation, quality, regulation of controlled products, promotion and encouragement of industrial activity, micro and small businesses (MYPEs), cooperatives and internal trade.
- The General Directorate of Policy and Regulatory Analysis (DGPARG), which is national regulatory authority responsible for proposing and formulating national and sectoral policies and regulations on MYPEs, industries, industrial parks, productive innovation, technology transfer, cooperatives, and domestic trade. It is also responsible for the regulation of manufactured industrial products and controlled products.
- The General Directorate of Supervision, Inspection and Sanctions (DGSFS), which is responsible at the national level for the supervision, inspection and control of compliance with regulations on micro, small and medium-sized enterprises, industries, cooperatives and domestic trade.
- The National Institute of Quality (INACAL), a specialised technical public body attached to PRODUCE. INACAL is the national reference for quality - technical standardisation, accreditation, and metrology. It is also in charge of the National Quality System and manages the national information service for technical standards and conformity assessment procedures.

The Ministry of Health (MINSA)

20. MINSA is the governing entity of the Executive Branch of the Health sector and is responsible for: (i) people's health, (ii) health insurance, (iii) epidemics and health emergencies, (iv) environmental health and food safety, (v) health intelligence, (vi) pharmaceutical and sanitary products, medical devices and pharmaceutical establishments, (vii) human resources in health, (viii) health infrastructure and equipment, and (ix) health research and technologies.

21. Regarding plastics the main units of MINSA are:

- The General Directorate for Environmental Health and Food Safety (DIGESA) which is the national authority on environmental health and food safety, responsible for technical and regulatory aspects, surveillance, oversight of the physical, chemical, and biological risk factors external to the person and environmental health control.
- The General Directorate of Strategic Interventions in Public Health (DGIESP) is the line entity that establishes priority intervention models that integrate health promotion actions; prevention, control and reduction of risks and damage to the health of the population, in the field of public health in the national territory, considering the social determinants of health, human rights, gender and intercultural approaches to health in all stages of life.

Ministry of Education (MINEDU)

22. MINEDU is the entity of the Executive Branch that exercises the steering role in the sector and has competence in matters of education, sport and recreation, and others that are assigned to it by law.

23. According to Supreme Decree 001-2015-MINEDU, among other functions, MINEDU must formulate, approve, adapt, evaluate and update the National Curriculum, considering intercultural, bilingual, inclusive, environmental and community approaches, as well as establish the technical guidelines for its diversification, and conduct, monitor and evaluate its implementation.

The provincial and district municipalities

24. In Peru, regional governments and provincial and district municipalities have specific roles and responsibilities in solid waste management. Regional governments promote the proper management and handling of solid waste mainly through the preparation and execution of public, mixed or private investment programmes for solid waste management in coordination with provincial municipalities. Provincial and district municipalities are responsible for the management of household and special solid waste within their jurisdiction. Their functions include regulating and supervising the management and provision of solid waste services and approving infrastructure projects for the final disposal of solid waste. In addition, district municipalities are responsible for the provision of cleaning services, collection and transportation of solid waste and for ensuring the proper disposal of solid waste (Legislative Decree [1278](#) of 2017).

25. In addition, the Organic Law of Municipalities ([Law 27972](#)) states that local governments represent the local community, promote the adequate provision of local public services and comprehensive, sustainable and harmonious development. In line with this, local governments are responsible for promoting spaces for the trade and supply of food and, therefore, the operation of markets.

26. Furthermore, the Organic Law of Municipalities also indicates that local governments have the competence to supervise and sanction within their respective jurisdictions. In line with this, these regulations also take effect in Law [30884](#) so that it fulfils its role of control and sanction to the establishments and areas where plastic items are sold and traded.

Regulatory framework

27. The main environmental regulations are:

- [The General Environmental Law](#) (Law [28611](#) of 2005). This law established the legal framework for environmental management in Peru. It instituted the basic principles and rules to ensure the effective exercise of the right to a healthy, balanced and adequate environment for the full development of life, as well as the fulfilment of the duty to contribute to an effective environmental management and to protect the environment, as well as its components, with the aim of improving the quality of life of the population and achieving the sustainable development of the country. Chapter 3 of the law, on Environmental Quality, includes an article on solid waste management, assigning responsibilities for the management of domestic waste to local governments and for non-domestic waste to the generator. Over the years, this subject was further developed in the Comprehensive Solid Waste Management Law (Legislative Decree [1278](#) of 2017). Finally, the Law 28611 established the National Environmental Policy as the instrument that defines and guides the environmental actions of national, regional, and local government agencies, as well as the actions of the private sector and civil society (articles 8 to 12). The [National Environmental Policy 2030](#) was adopted in 2021 by Supreme Decree [023-2021-MINAM](#).
- [The Framework Law on Climate Change](#) (Law [30754](#) of 2018). This law established the principles, approaches and general provisions to reduce the country's vulnerability to climate change, take advantage of opportunities for low-carbon growth and thus comply with the international commitments assumed by the State before the United Nations Framework Convention on Climate Change. In addition, the law defines an institutional framework for the integrated management of climate change in Peru, based on which climate change adaptation and mitigation measures are incorporated into the policies, strategies, plans, programmes, and investment projects of the three levels of government, within the framework of their competences and functions. In this context, it is important to note that climate change mitigation measures consider, among others, programmes, projects, and activities aimed at reducing greenhouse gas (GHG) emissions. In the case of GHG emissions from the waste sector, they are mainly associated with the generation of methane and CO₂, which are mainly generated by the disposal of solid waste in landfills and/or dumps nationwide, as well as by the low

recycling rate of materials such as plastic, which leads to the manufacture of products from virgin raw materials, with higher energy consumption and the generation of CO₂ emissions. The law also established that the National Climate Change Strategy, as well as the Regional Climate Change Strategies and the Nationally Determined Contributions (NDCs), are the main climate management instruments.

- The Law on the Conservation and Sustainable Use of Biological Diversity (Law [26839](#) of 1997). This law seeks, among other things, to conserve the diversity of ecosystems and promote the economic development of the country based on the sustainable use of the components of biological diversity, promoting the participation of the private sector for these purposes. The law established that, in order to comply with article 68 of the Political Constitution of Peru (which refers to the State's obligation to promote the conservation of biological diversity and protected natural areas), the State must also promote the prevention of pollution and degradation of terrestrial and aquatic ecosystems, for example due to discarded plastic. Furthermore, Law 26839 also established the National Biodiversity Strategy as the main planning instrument for the fulfilment of the objectives of this law and the Convention on Biological Diversity.

28. The main regulations regarding provincial and district municipalities are:

- The provincial and district municipalities, based on Supreme Decree [005-2010-MINAM](#), are responsible for implementing a report on the implementation of the Recycler Formalisation and Selective Solid Waste Collection Programme, overseeing the activities and selective collection of solid waste and formalisation of recyclers, systematising the records used by recyclers' organisations regarding the amount of solid waste recycled and managing a registry of Authorized Recyclers' Organisations legally established and registered in the Public Registry.
- The Organic Law of Municipalities (Law 27972) states that provincial municipalities are responsible for issuing regulations regarding the collection, distribution, storage and marketing of food and beverages, as well as building, equipping and maintaining wholesale or retail markets. Complementarily, district municipalities must ensure compliance with hygiene standards and planning of the collection, distribution, storage and trade of food and beverages, at district level, in accordance with provincial regulations, must also ensure the operation of wholesale or retail markets in their jurisdiction and promote the construction, equipment and maintenance of food markets that meet the needs of the residents of their jurisdiction.
- Both provincial and district municipalities must prepare and implement waste management plans: the Provincial Municipal Solid Waste Management Plan (PIGARS) and the District Municipal Solid Waste Management Plan (PMR). These plans must be approved by a provincial or district ordinance.
- With respect to plastics, and based on Supreme Decree [006-2019-MINAM](#), municipalities, within the framework of their competencies, are responsible for carrying out communication, education, training and awareness-raising actions for traders of plastic goods and raising awareness among citizens about the responsible consumption of plastics. These actions must be reflected in the EDUCCA programme of each municipality. In addition, this law indicates that the municipalities must supervise supermarkets, markets, stores and other similar establishments in the use and replacement of single-use plastic bags, and the fee charged to each bag they give to their customers.

29. The main regulations related to plastics are:

- The Comprehensive Solid Waste Management Law (Legislative Decree [1278](#) of 2017). The purpose of this law is to ensure sanitary and environmentally sound solid waste management by establishing the rights, obligations, faculties, and responsibilities of society as a whole. This law is applicable to all

activities, processes, and operations of solid waste management, from generation to final disposal. This law also establishes that the first aim of solid waste management in the country is to prevent or minimise the generation of waste at source, rather than seeking any other alternative. Secondly, with respect to the waste generated, recovery and valorisation are privileged. The final disposal of solid waste in infrastructure is the last management alternative, which must be carried out under environmentally appropriate conditions, as established by the corresponding regulations. Law 1278 also includes the principles of: i. Circular economy, ii. Waste recovery, iii. Principle of extended producer responsibility (EPR), iv. Principle of shared responsibility, and v. Principle of environmental and public health protection. It also establishes the instruments for solid waste management, such as the National Plan for Integrated Solid Waste Management (PLANRES), APLs, SIGERSOL, PIGARS, PMR, for provincial and district municipalities, among others.

- The Law that Regulates Single-Use Plastic and Disposable Containers or Packaging (Law 30884 of 2018). This law seeks established the regulatory framework for single-use plastic, other non-reusable plastics and disposable expanded polystyrene containers or packaging for food and beverages for human consumption in the country, as well as control and sanction regime. In the case of polymer-based bags, it established a progressive reduction within a period of 36 months, from the entry into force of the law, for commercial establishments to replace the delivery of non-reusable polymer-based bags with reusable bags or bags that ensure their recovery. In addition, these establishments have to charge for each bag they provide, at least an amount equivalent to the market price, and explicitly inform the consumer. The law also established a ban on single-use plastics and disposable containers or packaging, such as plates, cups and other polymer-based utensils and tableware for food and beverages for human consumption, which are not recyclable or based on expanded polystyrene (technopor). Finally, the law introduced incentives for manufacturers, importers, distributors and marketers of plastic items.

To ensure compliance with Law 30884 the MINAM, through OEFA, is in charge of the supervision, control and sanctioning of the environmental obligations. PRODUCE is in charge of supervising, controlling and sanctioning the measures contained in the technical regulations. The Ministry of Culture (MINCUL) is in charge of the supervision, control and sanction with respect to the areas declared cultural heritage. The National Institute for the Defence of Competition and the Protection of Intellectual Property (INDECOPI) exercises oversight functions to protect the rights of consumers, ensuring that information in the markets is correct, ensuring the suitability of the goods and services regulated in the law. The National Service of Natural Areas Protected by the State (SERNANP), also attached to MINAM, is in charge of the supervision, control and sanction with respect to the natural protected areas. Finally, the regional governments and provincial and district municipalities, are responsible for the supervision, control and sanction in the areas under their jurisdiction.

- The Special Regime for the Management and Handling of Container and Packaging Waste (hereon abbreviated EPR regulation). This is a proposed regulation that was open to public consultation in November 2023 (Ministerial Resolution [355-2023-MINAM](#)). Until April 2024, the proposal was being reviewed, it is expected that it will be approved during 2024. The EPR regulation will establish a special regime for the management and handling of packaging waste, by establishing the obligations and responsibilities of the actors involved in the various stages of waste generation and management, including segregation, storage, selective collection, transport, conditioning, recovery, and final disposal. For the purposes of this regulation, consumer packaged goods are those products that have been packaged and/or wrapped with materials such as: beverage and food carton, metal, paper and cardboard, glass, and plastic.

The proposed EPR regulation is grounded on the fact that the residues of containers and packaging (i.e., container and packaging waste, abbreviated REE) have significantly increased but have a very low valorisation rate. The main characteristics of the proposed EPR regulation that are relevant to the management of plastics from the food and beverage sector are:

1. It excludes flexible packages, which implies leaving out snack bags, confectionary wrappers, and sachets.
2. It includes all types of containers and packaging for all goods (not only foods) from metal, paper, cardboard, plastic, glass and carton packages for foods and drinks.
3. The key public authorities are:
 - MINAM that regulates the management of container and packaging waste and assesses and approves the REE Management Plans.
 - The National Environmental Certification Service for Sustainable Investments ([SENACE](#)) that evaluates the environmental impact of REE valorisation facilities.
 - OEFA that supervises the application of the regulation and sanction infractions.
 - District municipalities that promote and facilitate the implementation of the REE Management Plans, promote formalisation of recyclers and contribute to the establishment of sites for processing REE.
4. The EPR regulation set responsibilities for the following actors of the waste management chain:
 - Producers of consumer goods who are responsible of the REE until their valorisation (including selective collection of post-use residues). They must implement a system to manage REE, prepare an REE Management Plan (to be approved, monitored, and assessed by MINAM), and submit an Annual Declaration through the SIGERSOL platform.
 - Producers and importers of containers and packaging who must submit an annual declaration of the amount and characteristics of the items produced or imported.
 - Distributors and retailers of packaged consumer goods who must install 'clean points' to collect REE and give them to the pertinent REE management systems.
 - Generators of container and packaging residues (individuals and entities) who must minimise, segregate and store REE and give them to authorised waste management service providers (e.g., recyclers, municipalities).
5. It mandates that OEFA adopts, within 180 working days after the regulation is issued, the applicable catalogue of infractions and sanctions (first complementary mandate of the EPR regulation).
6. It mandates that MINAM, within 30 months after the regulation is issued, issue the targets for selective collection and valorisation of container and packaging residues. After that, MINAM must update the targets every five years (third complementary mandate of the EPR regulation).

- Peruvian technical standards related to plastics in the food and beverage sector. A Peruvian Technical Standard (NTP) is a technical document containing technical specifications, approved by consensus among interested parties. NTPs are voluntary in Peru and are based on international standards to meet the needs of stakeholders, provide quality criteria, facilitate access to markets and often serve as the basis for technical regulations (which are mandatory). In the list of NTPs, in the category Environmental Management, two NTPs referring to plastics in the food and beverage sector can be identified. NTP 222.103:2020, on eco-efficiency, focuses on plastic bags with reusable handles for the same purpose. In addition, there is also NTP-ISO 18603:2019, on packaging and the environment, which establishes the requirements for packaging such as plastic, glass and aluminium bottles, among others, to be classified as recoverable through the recycling of materials (PRODUCE, 2024).

30. Regarding recycling, the main regulations are:

- The Law that Regulates the Activity of Recyclers (Law [29419](#) of 2009) that (i) established a framework to regulate the activity of recyclers, (ii) encourages their formalisation and (iii) promotes a sound management of solid waste in the country. To this end, this law defines recyclers as people who, in a dependent or independent manner, carry out selective collection, segregation and commercialisation of non-hazardous solid waste. It also indicates that the activity of recyclers is regulated by the local governments through the incorporation of recyclers into the solid waste management system of their jurisdiction. Finally, the law also established training programs for recyclers, which are carried out by

MINAM and local governments with the support of educational entities, regional governments, non-governmental organisations, MINEDU, and MINSA.

- The regulation to Law 29419 (Supreme Decree [005-2010-MINAM](#)) which established a series of responsibilities that recyclers' organisations must comply with. Some of these include generating a registry and submitting a monthly report to the municipality on the amount of solid waste recycled, ensuring that formalised recyclers have the protection equipment (leather gloves, masks with rechargeable filters and closed shoes or sneakers that facilitate continuous movement, among others) and transportation (motorcycle van, tricycle, boat, rail truck) required by the regulations, and complying with the selective collection established by the municipality. The regulation also states that the selective management of solid waste for recovery purposes (minimisation, segregation at the source, selective collection, conditioning, and marketing of solid waste) may be carried out by recyclers' organisations and Solid Waste Commercialization Company (EC-RS). Recyclers' Organisations may carry out this activity if they are legally established and registered in the Public Registry and are included in the Recyclers' Formalization and Selective Solid Waste Collection Program of the district and provincial municipalities, as appropriate. On the other hand, the EC-RS can carry out this activity if they are registered with DIGESA and authorised by the corresponding municipality.
- The Supreme Decree [001-2022-MINAM](#) which amends the regulation to Law 29419 indicates that Solid Waste Service Provider Company (EPS-RS) and EC-RS that are registered with DIGESA may maintain their registration until it expires and then they must register in the Authoritative Registry of Solid Waste Operating Companies with MINAM. The decree also states that both the EPS-RS and EC-RS will be called solid waste operating companies (EO-RS) once this regulation enters into force. That means that those companies that seek to carry out the selective collection service of usable solid waste, including plastic, should be called EO-RS.

31. Regarding gender equality and youth, the main regulations are:

- Regarding gender equality, the Supreme Decree [008-2019-MIMP](#) adopted the National Gender Equality Policy (PNIG) to demonstrate the state commitment to promote full citizenship rights for all women in their diversity. The PNIG seeks to improve the effectiveness and quality of the actions of public administration entities, at all levels of government, to guarantee the human rights of women in equality and without discrimination. This public policy instrument was built in a participatory manner and with a vision of strategic planning. Consequently, the Multisectoral Strategic Plan for Gender Equality (PEMIG), approved by [Supreme Decree 002-2020-MIMP](#), established six priority objectives and 52 services to be materialised through inter-institutional actions by 21 public entities.
- The Ministry of Women and Vulnerable Populations (MIMP) works to turn Peru into a country without discrimination and with equal opportunities. Its mission is to design and execute policies in favour of women and other vulnerable sectors, guaranteeing rights and a life free of violence, as well as follow up and reporting actions of gender equality integration in state institutions. MIMP coordinates the implementation of the PNIG and the PEMIG.
- Peru has a National Youth Policy Supreme Decree [013-2019-MINEDU](#) that, based on the constitutional principles that all the citizens have equality before the law, and establishes the obligation of compliance, implementation, and execution by all entities of the powers of state and levels of government. This regulation has six priority objectives and specific goals which addresses, among others, youth access to decent work and increased citizen participation. The youth approach that is used in this policy is related to the perspective of the life cycle of the population to identify the ways in which they relate to each other based on their possibilities, expectations, needs and priorities and tackles the potential barriers derived from stereotypes and demean for being young.

Existing public and private initiatives

32. The most relevant public initiatives related to plastic pollution are:

- Clean Production Agreements. APLs are instruments whose objective is to introduce into productive, extractive and service activities a set of voluntary actions that go beyond compliance with the current legislation, to prevent or minimise the generation of solid waste. The procedure for the signing, monitoring and evaluation of APLs, as well as the definition of the three levels of recognition are set out in Directive [001-2023-MINAM/DM](#). The APL initiative recognises three levels that can be achieved by companies: (i) the first level will be achieved with the presentation of a Cleaner Production diagnosis; (ii) the second level will be obtained with the signing of an agreement between the company and MINAM that includes goals and commitments to improve in relation to cleaner production; and (iii) the third level will be obtained with the presentation of a report on compliance with the aforementioned goals.
- Peru Limpio Strategy. The “Peru Limpio: Education and communication strategy on responsible consumption, recovery and integrated management of solid waste” was adopted in 2021 by Ministerial Resolution [22-2021-MINAM](#). The objective of Peru Limpio is to promote and strengthen good environmental practices for responsible consumption, as well as the minimisation of solid waste generation, segregation and recovery of solid waste, articulating efforts with public and private actors, as an integral part of the transition towards a circular economy. Within the framework of Peru Limpio, MINAM currently has six priority and recurrent environmental education and information campaigns: (i) *Salva Playas* (Save Beaches), that promotes good environmental practices on beaches, mainly the reduction of single-use plastic; (ii) [Menos Plástico Más Vida](#) (Less Plastic More Life), that promotes responsible consumption of single-use plastics, within the framework of the Law 3084; (iii) *Recicla Ya* (Recycle Now), this awareness campaign seeks to get citizens to segregate and recover usable waste; (iv) *Peru Limpio Chuya Chuya Peru* (Clean Peru, Very Clean Peru), a campaign that seeks to improve the environmental behaviour of citizens to keep public spaces clean; (v) *Gran Cruzada Verde* (Great Green Crusade), a campaign that seeks to raise awareness among the population about climate change and how to conserve and sustainably use natural resources; and (vi) *Muévete Sostenible* (Move Sustainable), which promotes sustainable travel such as walking, the use of non-motorised vehicles and mass public transport, in order to reduce polluting emissions and the carbon footprint of the environment.

33. The most relevant private initiatives related to plastic pollution are:

- [Peru Sostenible](#). A network of companies promoting a sustainable development of the country. Additionally, in partnership with the United Nations, Perú Sostenible seeks to integrate different actors around the 17 Sustainable Development Goals. It has an action table dedicated to SDG 12 (responsible consumption and production). It seeks to encourage the adoption of sustainable production and consumption models, an approach that covers all stages of the value chain of goods and/or services. This implies an integral approach from design, through production, commercialisation, extending to post-consumption, including final disposal.
- [FANTÁSTICO – Sostenibilidad con Plástico](#) of the Peruvian-German Chamber of Commerce and Industry ([AHK Peru](#)), together with the National Society of Industries, within the framework of the AL-INVEST Green program of the European Union. Fantástico promotes the adoption of alternative products to single-use plastics. It has three lines of action: (i) to improve the sustainable management of plastic in companies and institutions and their suppliers, (ii) to promote the development of the national market for alternative products to single-use plastics, and (iii) to contribute to the formalisation of the recycling supply chain. It works with “tractor companies” (i.e., a company that

promotes a culture of environmental responsibility with its community) and range of providers of alternatives to plastics (mostly MYPEs).

- [Recicla Consciente](#). This is a nation-wide initiative launched in 2019 by Supermercados Peruanos S.A. Its objective is to raise awareness and promote a recycling culture. This initiative unites different allies from the private (ca., 25 companies) and public sectors and has four lines of action (i) to promote environmental citizenship, (ii) to implement and manage recycling stations, (iii) to establish alliances with recyclers, and (iv) to investigate recycling habits. Among the main actions of this initiative are the operation of 55 recycling stations located in the locales of Supermercados Peruanos S.A., announcing products with recyclable containers in stores and in the e-commerce channel plazavea.com, and frequent information campaigns.
- [Hazla por tu playa](#). A Peruvian initiative founded and carried out by the non-for-profit organisations [Conservamos por Naturaleza](#) and Life Out of Plastic ([LOOP](#)) that seeks to raise awareness about plastic pollution, as well as to empower agents of change, through clean-ups of beaches, water beaches, aquatic ecosystems and wetlands. Hazla por tu playa works as a collective action that raises awareness to change habits, inspiring by example and understanding that we can all leave a positive footprint. Every year they carry out a simultaneous beach clean-up campaign in Peru, where they seek to collect as much waste as possible.
- [Perú Cero Tecnopor](#): It is an initiative of the National Society of Industries in collaboration with the Ciudad Saludable and MINAM focused on raising awareness about the damage caused the use of expanded polystyrene. The initiative was launched in [June 2023](#) and promotes compliance with the law on single-use plastics, which banned the use of tecnopor food containers since December 2021.

Baseline projects

34. The Appendix 13 summarise the ongoing baseline projects. The most relevant projects are:

- [Incentive Program for the Improvement of Municipal Management](#). This programme was created in 2009 by Law 29333 and became operational in 2010. It is a Budget Incentives tool linked to the Budget by Results executed by the Ministry of Economy and Finance (MEF) that promotes the improvement of the quality of public services provided by provincial and district municipalities at the national level. This programme includes “[commitment 3](#): implementation of an integrated solid waste management system' which has specific year-bound targets and is supervised by [MINAM](#)’ DGGRS.
- [Programme for the Development of Solid Waste Management Systems in Priority Areas - Phase 1](#). This programme includes 31 projects, 25 of which were formulated by provincial municipalities and six by district municipalities, with funding from the Japan International Cooperation Agency (JICA) and the Inter-American Development Bank (IDB) through loan contracts for a total value of S/ 328 billion. The programme aims to close the infrastructure gap in solid waste management and considers the construction of infrastructure for the reuse and final disposal of waste, the development of capacities in the Solid Waste Management Units of the municipalities for an adequate integrated solid waste management, among others.
- [Programme for the recovery of areas degraded by solid waste in priority areas - Phase 2 \(2022 - 2026\)](#). This programme is financed by JICA and the IDB through a loan of S/ 292 billion. The objective of the programme is to improve the integrated solid waste management system in selected cities in Peru where sanitary landfills have been constructed as part of the solid waste management programme (see above). This objective will be achieved through the closure of existing open dumps

and the establishment of an adequate maintenance system to improve environmental quality in the selected areas of Peru.

- Integrated Solid Waste Management Programme for the Improvement and Expansion of the Public Cleaning Service in Arequipa, Tacna and Coronel Portillo. In 2022, the Peruvian government agreed to execute an external debt operation of € 50 million with the KfW Development Bank to finance the improvement and expansion of the public cleaning services in the Arequipa, Coronel Portillo and Tacna provinces. MINAM oversees this investment project, which seeks to implement landfills and valorisation plants for organic and inorganic waste, among other investments. As part of this programme, a sanitary landfill is expected to be built in Arequipa, which could begin operations in 2026 with the possibility of incorporating a gas capture and electricity generation system.
- Con Punche Peru. In 2023, the Peruvian government, through the MEF launched the '[Con Punche Peru](#)' plan with 19 measures focused on economic reactivation at the national and regional level. The MEF made available nearly S/5,900 million, about S/310 million were allocated to 18 projects in 18 cities in Peru, including the San Martin Department[\[6\]](#), to close the gap in solid waste disposal infrastructure.
- EDUCCA Municipal Programme. The Municipal Programme for Environmental Education, Culture and Citizenship ([EDUCCA](#)) is the municipalities' planning and management instrument for the implementation of the National Environmental Policy 2030 and the Organic Law of Municipalities. This programme is implemented or executed through local governments (district and provincial municipalities) that have competencies within the framework of the National Environmental Management System. For the implementation of this programme, it is necessary that each municipality has a Work Plan, which must be elaborated, approved, implemented, and reported based on the guidelines established by MINAM. The EDUCCA programme includes a range of activities with teachers, promoters, students, and the community.
- Clean Cities, Blue Ocean (CCBO). This programme (2019 - 2025) is working to address every step of the waste value chain, from production to end use, prioritising the most inclusive, economically viable and environmentally sustainable solutions and focusing on combating ocean plastic pollution by strengthening local solid waste management systems. In addition, the programme leverages local, national, and international expertise, along with its grant programme to test, scale up and share innovative and proven local solutions with governments, communities, and businesses. In Peru, the project intervenes in three coastal cities (Paíta, Mancora and Ica) to improve the capacity of local governments to manage solid waste, including waste segregation to facilitate recycling. This project has pioneered the use of social and behaviour change strategies to address waste management in Peru.
- Peruvian Plastics Policy and Technical Assistance (September 2023 – December 2024). This technical assistance initiative is funded by the World Bank and implemented in coordination with MINAM. It aims to improve the capacity of the Government of Peru in its efforts to control plastic pollution at the national and global level. The project will conduct a review of the Peruvian regulatory framework and practices on plastic pollution control, integrated waste management and circular economy to identify gaps in the design, implementation, and level of enforcement of Peruvian regulations at different levels of government. It is also foreseen to establish exchanges with regional governments and the private sector involved to receive input and validate the findings.

- Plastic Waste in Remote and Mountainous Areas of Peru Project. This one-year project is funded by the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRSC). It aims to improve the capacity, infrastructure, knowledge and expertise of relevant decision-makers, in relation to the environmentally sound management of plastic waste and the reduction of plastic waste generation in Peru. The umbrella project features activities at the global and national level. It comprises the collection and dissemination of success stories, gathering of data and generation of knowledge, education and outreach, and pilot projects in selected remote and mountainous countries, including Peru.
- Capacity development to catalyse actions and commitments at the national and global level to reduce plastic pollution including in the marine. This one-year technical assistance initiative proposes the implementation of 10 activities by MINAM, with advice and technical support from UNEP. At the end, it is expected to generate information from key actors in the areas of plastic pollution and a review and analysis of national regulations and policies and a proposal for regulations related to plastic pollution will be carried out. In addition, it aims to develop a National Plan to catalyse action. This initiative is part of larger [international project](#) implemented by GRID ARENDAL.
- Peru's National Plastics Action Platform. This is a two-years initiative based on a [Memorandum of Understanding](#) between MINAM and the World Economic Forum (WEF) to develop the basis to establish the Peru National Plastic Action Partnership within the framework of the Global Plastics Action Partnership (GPAP). The collaboration foresees convening local actors to strengthen multi-stakeholder dialogue and collaboration to promote multilateral discussions to advance national efforts and goals for greater plastics circularity.
- National project to promote the minimization of plastic waste in Peru and ensure its environmentally sound management in compliance with the Basel Convention in Peru. This is a one-year project that will initiate during 2025 and is funded by the Basel Convention. It aims to strengthen the national efforts to prevent, minimise and eliminate plastic waste and manage it in an environmentally sound manner. The project will engage private sector to apply best practices and technologies from plastic product design to plastic waste recycling. In addition, the project will promote prevention and minimisation of plastic waste and its environmentally sound management.
- Plastic Smart Cities in Latin America and the Caribbean. This two-year project will probably initiate during the second half of 2024. It is part of WWF's [Plastic Smart Cities](#) global initiative which aims to achieve zero plastic leakage into nature. The project objective is to reduce plastic waste pollution by 30% in four cities of Latin America, and to improve the quality of life of citizens by reinforcing public policy to ensure Plastic Smart Cities by 2030. The regional project includes supporting a Peruvian municipality to advance towards becoming a Plastic Smart City.

Global environmental problem and root causes

35. The global environmental problem is plastic pollution. In particular, the present project focuses on the problem of plastic pollution derived from the food and beverage sector in Peru (Figure 5).

36. Plastics are versatile, durable, and slow-degrading materials that have become ubiquitous in every aspect of contemporary lives including food packaging, health care, construction, electronics, clothing, cosmetics, among others.

37. The production of plastics initiated at the beginning of the 20th century, and afterwards large-scale commercial production expanded during the 1950s (Meikle, 1995; Geyer, 2020). The production of plastics exponentially increased from 1.7 Mt in 1950 (when mass production of plastics began) to 400.3 Mt in 2022 (Suman et al., 2020; Plastics Europe, 2023). Geyer et al., (2017) estimated that a total of 8,300 Mt of virgin plastics had been produced until 2015. OECD (2022) estimated that, under the current circumstances (business-as-usual scenario), the global production of plastics will increase to 1,321 Mt per year in 2030, mainly driven by economic growth. Most of the plastics used are petroleum-based plastics. In 2022, of the total plastics production (i.e., 400.3 Mt), 90.6% was produced from fossil-based feedstock (virgin plastics), 8.9% from recycled plastics and 0.5% from bioplastics (Plastics Europe, 2023).
38. Bioplastics[7] seem a promising alternative to synthetic plastics, but they have several limitations and challenges. For example, inadequate disposal of biodegradable bioplastics produces microplastics and pollutants (Niu et al., 2024; Piyathilake et al., 2024) and there is growing concern about contamination in food-contact items (Bonwick et al., 2019; Zimmermann et al., 2020).
39. Most of the plastics are used for packaging. Between 1990 and 2019, 30.81% of the global plastic production was used for packaging (OECD, n.d.), this figure increased to 44% in 2021 (Plastics Europe, 2022). WEF (2016) reported that, worldwide, 95% of plastic packaging material is discarded after a single use and that 32% escape the collection systems.
40. The most conspicuous issue is the leakage of plastic debris into the environment and the accumulation of plastic residues in the oceans and land. Currently, plastic debris accumulation is found all around the globe (Barnes et al., 2009; Chiba et al., 2018; Ostle et al., 2019; Hurley et al., 2020; Rodríguez-Seijo & Pereira, 2020; GRID-Arendal. 2021; Abel et al., 2023; Eriksen et al., 2023). Ryberg et al., (2019) calculated that, in 2015, 9.2 Mt of plastics leaked into the environment (6.2 Mt of macroplastics and 3.0 Mt of microplastics). The main sources of leakage of macroplastics and microplastics were, respectively, mismanaged solid waste and tyre abrasion. Schwarz et al., (2023) calculated that, in 2017, 0.8 Mt of microplastics and 8.7 Mt of macroplastics entered the global environment (respectively, 0.2% and 2.1% of plastics produced in the same year). The packaging sector contributed most to macroplastic leakage. These authors also projected an accumulation in the environment of 2.2 Gt of macroplastics and 3.1 Gt of microplastics by 2050 in a business-as-usual model.
41. The three main areas of concern about the global impacts of plastic pollution are:
- The interaction between macroplastics and biota which causes ingestion, suffocation, entanglement, transport of invasive species and pathogens, and habitat destruction (Welden, 2020; MacLeod et al., 2021)
 - The physical and toxicological impacts of microplastics and nanoplastics on ecosystems, biota, and human beings (Welden & Lusher, 2020; MacLeod et al., 2021; Landrigan et al., 2023).
 - The effects from the leakage of plastic additives and residual monomers into the environment and human beings (Groh et al., 2019; Wiesinger et al., 2021; Landrigan et al., 2023; Maddela et al., 2023).
42. The food and beverage sector is a major contributor to plastic pollution. Geyer et al., (2017) estimated that ca., 42% of all non-fibre plastics ever made had been used for packaging. It is assumed that this reflects the global shift that has occurred from reusable to single-use containers (e.g., beverage bottles, wrappers[8],

flexible bags for frozen foods, fast-food and ready meals). Morales-Caselles et al., (2021) found that between 50% and 80% of the litter found in rivers, shorelines, open ocean, and seafloor were disposable items from the food and beverage sector (e.g., bags, cutlery, bottles) and ca., 80% of these were plastic items. The top ten items in descending order were plastic bags, plastic bottles, food containers and cutlery, wrappers, synthetic ropes, fishing-related items, plastic caps and lids, industrial packaging, glass bottles, and beverage cans.

43. There is an increasing demand for plastic food packaging which is driven by the transition towards a more processed diet and the associated demand for convenience packaged food products (processed and hyper-processed foods), which in turn is driven by (i) the increase in international food trade of processed foods^[9] (UNCTAD, 2024), (ii) the need for extended shelf life of products, (iii) urbanization, (iv) changing consumer lifestyles, (v) constraints on household's time, (vi) rising disposable income and (vii) population growth. Chakori et al., (2021) identified, as root causes, three interlinked subsystems that drive single-use plastic food packaging: (1) globalisation of the food market, (2) the expansion of supermarkets, and (3) the constraints on household's time.

The problem scenario

44. In Peru, the most conspicuous problematic plastic items from the food and beverage sector are plastic bags, beverage bottles, food containers, cutlery and plates, and wrappers. During the project preparation phase (PPG) it was decided to also include monodose sachets (e.g, aji, mayonnaise, ketchup) that are usually provided in fast-food restaurants. This was done considering their characteristics: (i) widespread use, (ii) not recyclable, and (iii) no information about their contribution to plastic littering.

45. The data from the municipal SIGERSOL shows that plastic waste is mainly composed, in descending order, by plastic bags, polyethylene terephthalate (PET) (e.g., bottles and food containers), high density polyethylene (HDPE) (yogurt and dairy containers), and low density polyethylene (LDPE) (e.g., cutlery) (Figure 2).

46. The 2023 beach cleanup found a similar trend, the most common items were plastic bags, beverage bottles and their caps, wrappers, and food containers (Figure 6). HAZla por tu Playa found that the most common plastic items found on Peruvian beaches between 2020 and 2023 were: (i) beverage bottles and their caps, (ii) wrappers, (iii) bags, (iv) plates and cutlery, and (v) food containers (Figure 7). A few large companies are the source of the plastic food and beverage items found on the beaches (Figure 8, Figure 9, Figure 10). The international corporations are among the top global plastic polluters (BreakFreeFromPlastic. 2024).

47. It is important to highlight two aspects of the 2023 data (Figure 10):

- The most frequent plastic bags were unlabelled. This could reflect the empirical information that illegal plastic bags circulate in the country.
- Biodegradable and compostable plastic bags contribute to marine litter.

Effects

48. The most evident effects of the plastic pollution derived from the food and beverage sector in Peru are the accumulation of plastic waste (e.g., beaches, riversides, roads, countryside) and the physical impacts on

the biota (Figure 5). Less obvious effects are (i) the impacts from microplastics, nanoplastics and chemicals on the ecosystems and human health, and (ii) the economic consequences from plastic pollution.

Impacts from microplastics, nanoplastics and chemicals that enter the environment and the food chain and alter terrestrial and aquatic biodiversity.

49. Microplastics and nanoplastics have become ubiquitous and have been found from the open ocean (GESAMP, 2015; GESAMP, 2016, Moon et al., 2024), to the deep sea (Van Cauwenberghe et al., 2013; Barrett et al., 2020; Abel et al., 2022), to high mountains (Napper et al., 2020; Wang et al., 2023), to soils (Büks & Kaupenjohann, 2020; Rodríguez-Seijo & Pereira, 2020; Kublik et al., 2022; Altamirano Leon & Galarreta Galarreta, 2023; Sa'adu & Farsang, 2023; Silva, 2023) and to clouds (Aeschlimann et al., 2022; Xu et al., 2023; Wang et al., 2023). Micro and nanoplastics have entered the food chain and are found in commercial species of Peru (Ossa & Murillo, 2016; De-la-Torre et al., 2019; De-la-Torre et al., 2019a; Chota-Macuyama & Mendoza, 2020; De-la-Torre et al., 2020; Fernández-Ojeda et al., 2021; Iannaccone et al., 2021; Melgarejo Velásquez, 2022). Also, it has been found that micro and nano plastics harm aquatic fish and invertebrates (Brandts et al., 2022; Doyle et al., 2022; Han et al., 2022; Yang & Wang, 2023; Yi et al., 2024).

Impacts on human health

50. The most known path is through the exposure to contaminated water, air, and foods (Chucos Palomino, 2020; Tovar, 2022; Lett et al., 2021; Enyoh et al., 2023; Landrigan et al., 2023). For example, microplastics have been found in human placenta (Ragusa et al., 2021; Geng et al., 2023; Amereh et al., 2024; Garcia et al., 2024; Paul et al., 2024) and arteries (Liu et al., 2024). The most prevalent plastics found in placenta and arteries were, polyethylene and PET, respectively (Garcia et al., 2024; Liu et al., 2024). Marfella et al., (2024) found polyethylene in 58.4% of patients with carotid artery plaque. It has also been found that the use of plastic items (e.g., water bottles, food containers), bottled water, carbonated drinks and seafood are pathways to the intake of nano and microplastics (Mason et al. 2018; Smith et al., 2018; Zuccarello et al., 2019; Shruti et al., 2020; De-la-Torre et al., 2022; Gambino et al., 2022; Cáceres-Farias et al., 2023; Chen et al., 2023; Huan et al., 2023; Yoganandham et al., 2023; Yu et al., 2023; Aguirre-Sanchez et al., 2024; Socas-Hernández et al., 2024). Zucarello et al., (2019) calculated a daily intake of 1.5 million particles kg^{-1} bodyweight day^{-1} from mineral water in plastic bottles. De-la-Torre et al., (2022) calculated that Peruvians ingest about 48.18 microplastic items per person per year only from the consumption of choro (*Aulacomya atra*). Similarly, Aguirre-Sanchez et al., (2024) estimated that the Tumbes' population ingest about 431 microplastic items per capita per year from the consumption of local black arks (*Anadara tuberculosa*) and mangrove crabs (*Ucides occidentalis*). During the PPG it was found that the impact of microplastics on human health is a growing concern for the Ministry of Health.

51. An additional path that impact human health is the transfer of chemicals (e.g., additives, processing aids, residual monomers) from the plastics that have contact with foods (e.g., machinery, containers, packaging, kitchenware) (Manoli & Voutsas, 2019; Wiesinger et al., 2021; Landrigan et al., 2023). These chemicals (i.e., food contact chemicals) could migrate from the plastic material itself to the foodstuff posing health concerns if ingested in non-safe quantities by the consumer. The food contact chemicals include intentionally added substances (e.g., plasticisers, antioxidants) and non-intentionally added substances like impurities, contaminants, reaction products and by-products, and degradation products (Geueke et al., 2023).

52. Wagner et al., (2024) reported that about 16,000 chemicals are use in plastics, but only 6% of them are subject to international regulations. These authors estimated that about 4,200 plastic chemicals are of concern because they are persistent, bioaccumulative, mobile, and/or toxic. Geueke et al., (2023) identified 1,975 food contact chemicals in plastics. Geueke et al., (2023a) found that reusing and recycling plastics could also have negative health impacts since hazardous chemical can be released during reuse and accumulate during recycling. These authors found 853 food contact chemicals in recycled PET, frequently detected chemicals

include antimony, acetaldehyde (a genotoxic carcinogen), di-(2-ethylhexyl) phthalate (DEHP) (linked to reproductive problems) and dibutyl phthalate (DBP) (an endocrine disruptor).

53. Muncke et al., (2020) highlighted that food contact chemicals are a matter of utmost concern considering that most of these chemicals are not sufficiently assessed for their impacts on human health, while others are known hazardous substances. There is growing evidence that the chemicals that contaminate foods can severely affect human health. For example, Völker et al., (2022) found potent mixtures of metabolic disrupting chemicals in daily use food contact plastics (e.g., HDPE yogurt bottles, PET beverage bottles, LDPE plastic wrap and freezer bags) that can contribute to obesity. Whitehead & Peaslee (2023) found that fluorinated HDPE plastic containers (commonly used for sauces like ketchup and mayonnaise) leach per- and polyfluoroalkyl substances (PFAS) into food, resulting in a direct route of exposure to hazardous chemicals.

54. Some of the better-known chemicals that migrate from food packaging and other food-contact materials are:

- Bisphenol A (BPA), found, for example, in polycarbonate beverage bottles and metal can coatings. BPA is an endocrine disrupting chemical associated with obesity, reproductive abnormalities, cardiovascular illness, and cancer (Schug & Birnbaum, 2014; Abraham & Chakraborty, 2020).
- Per- and polyfluoroalkyl substances (PFAS) are extremely persistent chemicals (“forever chemicals”) found in nonstick cookware, grease-resistant food containers and disposable food packaging like disposable paper bags, sandwich wrappers, and pizza boxes (Schneider et al., 2017; CHEM Trust, 2019; CHEM Trust, 2021; Straková et al., 2021; Whitehead & Peaslee, 2023). PFAS are associated with infertility, thyroid, liver and kidney disorders, and metabolic dysfunctions (Bonato et al., 2020; Panieri et al., 2022).
- Di(2-ethylhexyl) adipate (DEHA) is a plasticiser found in food containers and films that wrap meats, butter and cheese, it has been associated with endocrine disruptions and cancer (Cao et al., 2013; Lovrenović et al., 2020; Behairy et al., 2021).

55. During the PPG it was found that the impact on human health from the chemicals of food packaging is not yet on the agenda of the Ministry of Health.

Economic consequences

56. All the previously described effects have important economic consequences like increased costs in waste management, maintenance and cleaning of drainage systems, and health care. Deloitte (2019) estimated that the average worldwide direct costs of coastal cleanup and the loss of economic value in marine tourism, fisheries and aquaculture was USD1.97 per capita per year. This corresponds to USD15,994 million in 2024^[10]. WWF (2021) estimated that the lifetime cost of all the plastics produced in 2019 was about USD3.7 trillion. The actual figure must be much higher since this estimate did not include health costs and the costs related to lost inland ecosystem services and emission from uncontrolled plastic waste. WWF (2021) estimated that the market price of plastics was about 10% of the total lifecycle costs. Therefore, the costs generated by plastic pollution are being subsidised by society at large.

Causes

57. The immediate causes of the problem are: (i) the direct disposal of plastic residues into the environment, (ii) insufficient plastic waste management systems, and (iii) the production and use of plastic products that contain substances that are harmful or with unknown consequences.

Disposal into the environment

58. An unknown quantity of plastic residues is thrown into the environment by end users and about 37% of municipal solid waste is disposed of in unmanaged waste dumps (Table 2). Grupo GEA (2020) estimated that about 34% of plastic residues end in dumps (Figure 5).

59. This situation is produced by operational and behavioural causes:

- a. Operational causes. A large number of municipalities do not have the resources and capacities to manage solid waste (e.g., collection, segregation and valorisation) and to dispose the final residues into landfills. Therefore, these municipalities use waste dumps. In addition, when needed, the local population tend to develop clandestine waste dumps. Two major limitations for the municipalities are (i) funding for solid waste management, and (ii) capacities to detect and sanction offenders. The Peruvian municipalities charge the costs of street sweeping and rubbish collection as part of the “arbitrios”^[11] and there is high level of arrears. In 2022, the Office of the Comptroller General of the Republic of Peru found that: (i) 58% of the municipalities have $\geq 40\%$ arrears of arbitrios, (ii) 42% of the municipalities do not have ordinances to supervise solid waste management, and (iii) 32% of the municipalities do not have regulations to sanction infractions (CGR, 2022).
- b. Behavioural causes. There are several reasons why end users do not properly manage plastic waste, including (i) ignorance about the impacts of plastic pollution, existing regulations, and collection facilities, and (ii) a deep-rooted throwaway culture reinforced by the general perception that plastic is a cheap and disposable material, and by the fact that food packaging is generally designed to be discarded after use (e.g., beverage bottles, wrappers).

60. An additional factor to consider is the empirical information that plastic bags and tecnopor food and beverage items are illegally entering the Peruvian market. This seems to be confirmed by the fact that, in 2023, most plastic bags found on beaches were unlabelled (Figure 10).

Insufficient plastic waste management systems

61. As indicated before, the existing waste management infrastructure is insufficient to process and dispose of all the plastic waste. Grupo GEA (2020) estimated that about 15.4% of plastic residues are valorised and 50.6% end in landfills (Figure 5).

62. This situation is produced by three main causes:

- a. Insufficient and inadequate segregation of plastic waste at the source. This, in turn, is caused by: (i) ignorance about the impacts of plastic pollution, existing regulations, and collection facilities, (ii) deliberate non-compliance of regulations (strong non-compliant motivations), (iii) limited availability of facilities for proper waste disposal, (iv) minimal incentives to recover recyclable plastics, (v) a deep perception that waste management is someone else’s responsibility (e.g., municipalities, shops), and (vi) difficulty to identify the types of plastics. Regarding the last point, worldwide consumers have difficulties understanding the labelling regarding plastic types and recycling information (Buelow et al., 2010; Burrows et al., 2022). This also happens in Peru, where:

(i) plastic type labels (e.g., ♻️) are commonly mistaken with the recycle symbol (♻️) (giving the false idea that all plastics are recyclable), (ii) it is common that people ignore the meaning of the seven plastic type symbols, (iii) not all plastic items include labelling about their nature, and (iv) plastic items do not include labelling about their recyclability in Peru.

- b. Insufficient valorisation of plastic residues. This, in turn, is caused by: (i) minimal incentives and disincentives to recover recyclable plastics, (ii) plastic items with designs that hinder valorisation^{[12]¹² and/or non-recyclable materials^{[13]¹³ (e.g., wrappers, disposable cutlery), (iii) disposal of dirty plastic items that cannot be recycled, (iv) most valorisation and processing facilities are concentrated in Lima which lowers the market price in remote areas to cover the cost of transportation^{[14]¹⁴, (v) high informality in the collection and conditioning processes despite the regulations that promote the formalisation of recyclers ([Law 29419](#) and Decreto Supremo [005-2010-MINAM](#)) (Grupo GEA, 2020; De-la-Torre et al., 2022a), and (vi) at present virgin plastic is cheaper than recycled plastic (Redacción AP, 2024; Rojas, 2024).}}}
- c. Insufficient infrastructure for final disposal of unusable waste, which is caused by the insufficient coverage of landfills and the limited capacities of municipalities to implement and operate landfills.

Plastic products with harmful additives or substances with unknown consequences

63. As indicated before plastics contain chemicals that can contaminate foods and that most of them are not regulated (paragraph 53). At the moment, (i) Peruvian producers do not release the information about the chemicals and additives present in the food contact plastic, and (ii) the current regulatory framework is insufficient to control the chemicals and polymers of concern. In addition, there are no laboratories capable to analyse these substances. Finally, consumers are not aware of the health risks associated with these substances.

Root causes

64. There are six key root causes of the plastic pollution derived from the food and beverage sector in Peru (Figure 5):

- a. The ongoing proliferation of plastic packaging and containers which is directly linked with (i) the increased production and supply of processed and ultra-processed foods and their increased global trade (which demands packaging that protects the contents and extends shelf life), (ii) the general characteristics of plastics (i.e., low-cost material, considered hygienic and aseptic, convenience of flexible plastic packaging) and (iii) the limited availability of competitive alternatives to disposable food packaging (see below). There is empiric evidence that in Peruvian urban areas COVID-19 motivated: (i) an increase in the demand for food delivery services and packaged foods, and (ii) an ongoing trend to prefer buying packaged foods instead of bulk products. Finally, a key factor is that, in Peru like in other countries, producers do not internalise the costs of dealing with the discarded plastics and the consequences of plastic pollution but transfer the responsibility of these costs to consumers and society at large.
- b. There are few competitive alternatives to replace disposable plastics. In Peru, there are several commercial alternatives (degradable or recyclable) available to replace disposable plastic food items

like utensils made of sugar cane, paper trays for soft fruits, paper cups with [INGEO](#) polylactic acid coating (a biopolymer), bamboo fibre food containers, water-soluble cassava starch bags, among others. In addition, new alternatives are rolling out like the [Okeanos](#) snack bags and containers made from calcium carbonate^[15] (Wallace, 2023). In addition, further options are under development in other parts of the world, like the [Lactips](#) casein biodegradable and water soluble packaging or [Evoware](#) and [Notpla](#) seaweed-based sachets. However, at the moment, most of these alternatives are not competitive since they tend to be more expensive than the very cheap plastic items and need to scale-up production to reduce unit prices. Also, many alternatives need to be further developed and face production challenges. For example, see the review about moulded pulp fibres by Semple et al., (2022).

- c. Ignorance about the problem of plastic pollution. This is a global issue because plastic pollution is a multidimensional complex problem that is difficult to comprehend. In general, the public has little understanding about the causes and consequences of the problem and about the connections between their personal use of food-related plastics and the consequences that impact their own lives (Henderson & Green, 2020; Kedzierski et al., 2020; Phelan et al., 2020; Rhein & Schmid, 2020; Garcia-Vazquez & Garcia-Ael, 2021; Soares et al., 2021). In addition, the National Environmental Policy to 2030 (Supreme Decree [023-2021-MINAM](#)) identified insufficient knowledge as one of the indirect causes that contribute to the decrease in the goods and services provided by ecosystems that affect the development of people and environmental sustainability. The policy document also highlights a weak science-policy interface.
- d. Regulatory gaps and insufficient application of current regulations. Peru has developed an important regulatory framework for the management of plastics (e.g., Decreto Legislativo [1278](#), Ley [30884](#), Decreto Supremo [003-2020-PRODUCE](#)). Nonetheless, there are several gaps that need to be addressed. For example, single-use petroleum based plastic carrier bags are banned since 2019, but plastic produce bags were left allowed and unregulated. Also, biodegradable and compostable carrier bags were introduced as an alternative, however, to date the pertinent technical regulations and technical standards have not been promulgated. In addition, municipalities have the mandate to implement the national regulations within their jurisdiction but, as indicated before, not all municipalities have issued the pertinent ordinances nor have the capacities to implement the regulations.
- e. Limited capacities for enforcement and sanctioning offenders. There are persistent limitations about law enforcement against plastic waste pollution at the national and local levels, which constitutes a major motivation for offenders. During the PPG it was seen that, at the local level, enforcement is unpopular, and some municipal authorities avoid issues that could erode their election base.
- f. Economic crisis. Peru is experiencing an economic recession that has increased inflation and poverty levels (Alarcón, 2023; Espinoza, 2023; Montesinos, 2023; Ramos, 2023; Anon, 2024; Lukacs, 2024). Food inflation increased continuously since November 2019 (0.92% month⁻¹) to a peak of 13.16% month⁻¹ in February 2023, followed by a continuous decline to reach 4.4% month⁻¹ in February 2024 (Trading Economics, 2024). It is estimated that food inflation will be about 3.3% month⁻¹ during 2025. This has resulted in reduced household consumption and the search for low-priced food items many of them plastic packaged processed and ultra-processed products. During the PPG it was seen that supermarkets are aiming to offer low-cost products to consumers and have no interest in changes that could increase prices (e.g., introducing alternative food packaging).

Figure 5. Root cause analysis of plastic pollution from the food and beverage sector in Peru

Figure 6. Percentage composition in Peru beaches during 2023 of the top ten items collected globally.
Source: Ocean Conservancy (2023).

Figure 7. Most common items found in Peruvian beaches between 2020 and 2023

Figure 8. Number of items found on Peruvian beaches in 2023 by business group.

Figure 9. Plastic items found on Peruvian beaches in 2020 by producer.

Figure 10. Plastic items found on Peruvian beaches in 2023 by producer.

Please note that we were unable to upload the above figures 5 to 11 due to glitches with the portal. Those figures can however be found in the CEO ER document available in the road map.

The long-term solution

65. Plastic pollution from the food and beverage sector in Peru is a typical wicked problem. The current baseline scenario is complex (Figure 5), it is impossible to fully address all the causes of plastic pollution simultaneously, and there are a range of possible interventions to confront the multiple issues. Without a major multilevel and multisectoral long-term intervention plastic pollution will continue to deteriorate biodiversity and human health.

66. There are no international or national consensus on the way forward. At present, the main lines of work to deal with plastic pollution have been to improve waste management systems and to boost plastic recycling. However, here it is proposed that the Peruvian food and beverage sector need to decouple from petroleum-based food contact plastics because:

- These plastics are not circular materials. Petroleum-based plastics degrade during conventional mechanical recycling needing to be blended with additives and virgin feedstock to allow remanufacturing (Schyns & Shaver, 2021). Pinter et al., (2021) found that PET bottles could have up to 75% recycled material (and 25% virgin PET) to have a closed loop recycling process. However, Geueke et al., (2023a) found that hazardous chemicals accumulate during plastic recycling. At present, the best solution is to repurpose degraded and non-recyclable plastics to other applications like building materials. Chemical recycling, which break plastics down into molecular building blocks for reuse, is a set of promising technologies. But these technologies are not widespread and existing commercial infrastructure is concentrated in Europe (Krause et al., 2024).
- Petroleum-based plastics release particles and chemicals that pose serious threats to human health and the environment (Muncke et al., 2020; Völker et al., 2022; Geueke et al., 2023; Landrigan et al., 2023; Whitehead & Peaslee, 2023).

67. Consequently, it is proposed that the long-term goal is that the Peruvian food and beverage sector does not generate plastic waste and pollution (Figure 11). To change the current situation four major transformations are needed:

- To replace current petroleum-based food contact plastics with innocuous circular materials (e.g., glass, paper, bioplastics).
- To strengthen and condition waste management systems to process current plastic waste and present and future circular materials (e.g., recycle, repurpose).

- To eliminate hazardous chemicals from food contact materials.
- To change societal attitudes and behaviours with respect to the use of petroleum-based plastics and circular materials in the food systems.

68. These are challenging transformations that cannot be fully achieved in the short term. It is envisaged that, to achieve the proposed goal, three phases will be necessary (Figure 11):

- An initial phase focused on addressing the most crucial issues like reducing the use of petroleum-based plastics, fostering the use of alternative circular materials and items, establishing multilevel multisectoral processes to implement practical solutions, and initiating social behaviour changes.
- An intermediate phase focused on phasing-out petroleum-based plastics, consolidating the use of innocuous circular materials, implementing structural regulatory and institutional changes to sustain the transition process, and building up social behaviour changes.
- A final phase that consolidates the advances to ensure that plastic pollution is eliminated.

69. The present project will concentrate on key elements of the initial phase and lay the foundations for initiating the following phases of this long-term strategy, therefore contributing to develop enabling conditions for long-term change. In line with the global programme ([GEF ID 11181](#)) this project will concentrate on upstream and midstream solutions.

Figure 11. Foreseen phases of the transition towards eliminating plastic pollution from the Peruvian food and beverage sector.

Barriers that limit the solution of the problem

70. The proposed project will have to confront the following barriers that limit addressing plastic pollution generated by the Peruvian food and beverage sector (Figure 12):

Barrier 1. Limited availability and supply of alternatives to petroleum-based items.

71. At the moment, the existing circular alternatives (e.g., paper trays, cassava starch bags, glass bottles) are a marginal part of the market mainly because their cost tend to be higher than the traditional plastic items and their supply is limited. Also, a number of alternative items are not produced in the country and have to be imported, which further increases the final price. Finally, there are several plastic applications that do not have yet a commercial substitute (e.g., snacks bags and cling film) and the alternatives which are under development face a range of challenges to enter the market such as financial limitations to scale-up, apprehension from producers and consumers, and regulatory barriers (Bening et al., 2021; Ada et al., 2023). The availability of competitive commercial substitutes is part of a vicious cycle, in which the prices cannot be reduced as production cannot scale-up because of limited demand. Therefore, the circular alternatives cannot compete with the well-established production of cheap petroleum-based plastic items (e.g., pet bottles, multi-material multilayer flexible packaging). Peruvian new ventures (small companies and start-ups) face a range of challenges to develop and to scale-up, including difficulties obtaining funding and investment, limited interest of consumers, limited production capacity, resistance from stakeholders grounded in the linear economy, among others.

Barrier 2. Limited capacities to evaluate risks, regulate and control food contact items.

72. Peru has no national reference laboratories that could undertake analyses related to plastics qualities and toxins in plastic products. For example, at the moment there are no accredited laboratories to carry out the laboratory analyses necessary to issue the certificate of conformity stipulated in the Technical Regulation on Biodegradable Plastic Bags (Decreto Supremo [025-2021-PRODUCE](#)). This occurs because accreditation is voluntary, the laboratories only get accredited when they perceive that there will be a future demand for their services that justifies the investment they must make. In addition, the analysis of food contact chemicals and hazardous substances require specialised equipment and personnel that are not available in the country. This is a major obstacle for the urgent need to evaluate the risks from food contact chemicals in present plastics and future circular alternatives and to regulate and control food contact items.

Barrier 3. Reluctance to change from producers and retailers.

73. Multinational corporations and large retailers^[16] are key stakeholders since they have economic and political influence that affect the public opinion and government decision making. Despite public commitments and voluntary initiatives to confront plastic pollution, it is documented that corporations (petrochemicals and consumer goods) do not implement systematic change and solutions-at-the-source and that they take measures to delay public regulations (Schröder & Chillcott, 2019; Changing Markets, 2020; Mah, 2021; Geddie & Brock, 2022; Geddie & Brock, 2022a; Phelan et al., 2022; Vandenberg, 2024). This responds to several barriers that these companies face like the cost of transitioning to alternative packaging, the limited availability of alternative packaging options (see barrier 1 above), and the risk to lose market share and revenues (Ma et al., 2020; Grafström & Aasma, 2021). Ma et al., (2020) found, in Europe, that company managers see consumers as the most prominent factor in addressing plastic pollution. But consumers can be an enabler or an impediment to change (a double-edged sword) depending on their awareness of the plastics problem and their willingness to take actions (e.g., prefer convenient low-cost items). During the PPG it was observed that retailers are unwilling to make changes that could increase the prices to consumers considering the present economic crisis and possible loss of revenues.

Barrier 4. Resistance to change from consumers.

74. In Peru and worldwide, a lot of effort has been dedicated to raise awareness about recycling and plastic pollution. MINAM and several NGOs frequently implement awareness campaigns about plastic pollution (e.g., MINAM's 'menos plástico, más vida', "No quiero esto en mi ceviche" campaign by MINAM and OCEANA, LOOP's 'HAZla por tu playa'). However, awareness is insufficient, there is empirical evidence that Peruvians are more aware of the problem of plastic pollution, but (i) do not comprehend its implications and the connections between their personal actions and the consequences they generate, and (ii) do not take action to address the problem. López Vargas et al., (2022) and StatKnows (2022) present information about knowledge and attitudes about plastic recycling, among them: (i) urban Peruvians do not recycle because it requires a lot of effort or time and lack of habit, (ii) 60% do not know if plastic collection facilities are available, (iii) 83% cannot identify which plastics are recyclable, and (iv) most persons purchase products with plastic packaging because "it is the option there is". Deloitte (2023) found that, for consumers, affordability was the number one barrier to adopt more sustainable practices. Knowledge is only one of the factors that influence action, as can be seen in the most used frameworks of behaviour -- the theory of planned behaviour (Ajzen, 1991) and the COM-B model (Michie et al., 2011). During the PPG it was seen that resistance to change seems to be related to (i) ignorance about the problem, (ii) availability of alternatives and (iii) affordability of alternative options and practices.

75. It is widely recognised that behaviour is a key driver of plastic pollution and that a better understanding of the behavioural costs and benefits will facilitate the design of actions to confront plastic pollution and to adopt new circular alternatives (Jia et al., 2019; Kedzierski et al., 2020; Chakori et al., 2021; Jacobsen et al., 2022; Findrik & Meixner, 2023; Garcia-Vazquez et al., 2023; Luo & Zhao, 2023; MacDonald et al., 2023; Northen et al., 2023; Rabiū & Jaeger-Erben, 2024). Nudge theory, applied to consumers and business employees, seems to have positive impacts on addressing plastic pollution matters (Thaler & Sustein, 2008; Tursun & Basefer, 2019; Lim, 2020; Wensing et al., 2020; Thaler & Sustein, 2021; Luo & Zhao, 2023). Also, it has been found that there are different responses depending on gender, age, and income-level conditions (Berthold et al., 2023; Garcia-Vazquez et al., 2023; Du et al., 2024). There are limited studies about understanding the use behaviours of plastic items by consumers and within households and the application of behaviour change instruments to address plastic pollution (MacDonald et al., 2023), though there are initiatives that are including this approach in their interventions like USAID's CCBO project.

Barrier 5. Weak plastics recycling chain

76. Despite significant efforts to advance recycling chains^[17], these continue to be underdeveloped. For example, most recyclers are informal and only a small fraction of plastics are recovered and recycled (Grupo GEA, 2020; USAID, 2021; Holland Circular Hotspot, 2021; De-la-Torre et al., 2022a). As indicated before key drivers are price distortions (e.g., virgin PET is much cheaper than recycled PET) and the limited capacities of municipalities to manage recycling programmes.

Barrier 6. Weak plastic waste management.

77. Mismanagement of plastic waste is widely extended, despite significant efforts and advances. As explained before this occurs because of the many causes like the proliferation of plastic items, consumer behaviour, the limited capacities of municipalities, and regulatory gaps.

Barrier 7. Limited capacities for monitoring and enforcement of plastics regulations.

78. Municipalities are responsible for controlling and enforcing the national regulations regarding waste and plastics management. In turn, the Environmental Assessment and Control Agency (OEFA) supervise that municipalities comply with their waste management duties. As indicated before, municipalities have several limitations to control and enforce plastics regulations like insufficient financial and personnel resources and that not all municipalities have issued specific ordinances to address single-use plastics, among others.

Barrier 8. Knowledge gaps and weak science-policy interface.

79. There are severe knowledge gaps regarding the production, use and impacts of plastics on human health and the environment (e.g., micro and nano plastics, additives in food contact plastics). Also, there are very weak links between scientists and decision makers for the generation and use of evidence to support fact-based policies, strategies, and regulations to tackle plastic pollution. It is widely recognised that the science-policy interface confronts a range of challenges and tensions like poorly institutionalised evidence-based policy-making, politicization of science, divergent interests and distrust (Jones et al., 2008; Young et al., 2014; Schmid-Petri et al., 2022; Raubenheimer & Urho, 2023; Wellstead et al., 2023). Finally, the existing information that is being generated by the various public, private, and civil society projects and initiatives is scattered and fragmented.

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- [1] Inca Kola and Coca Cola belong to Coca Cola. Cielo belongs to Grupo AJE. Altomayo and Nescafe are coffee brands.
- [2] The Law that Regulates Single-Use Plastic and Disposable Containers or Packaging (Law [30884](#) of 2018) banned the production, trade and use of disposable containers of foods and beverages made of tecnopor.
- [3] The following actors must report in the non-municipal SIGERSOL: solid waste operating companies, non-municipal solid waste generators, producers of electrical and electronic devices, tire producers, and companies that generate waste material.
- [4] Almost all the recovered residues were from the agri-food industry, 98.9% in 2022.
- [5] In 2022, 12,508.03 t of plastic residues were valorised: 8,388 t of PET, 4,117 t of HDPE, and 3.03 t of other plastics. Source: MINAM. National Plastic Waste Statistics. Updated 13 February 2023.
- [6] The Tarapoto district (one of the project target districts) is part of the San Martin Department. See page 47.
- [7] See Appendix 11 for definitions.
- [8] In this document the term “wrapper” is used to refer to single-use bags and packing of snacks and confectionary.
- [9] Global trade in food grew by 350% from 2000 to 2021, reaching a total value of USD 1.7 trillion (UNCTAD, 2024).
- [10] Projected world population in 2024 is 8,118,835,999 persons x USD1.97 per person.
- [11] The “arbitrios municipales” (municipal taxes) are quarterly fees paid for the provision of public services like street sweeping, rubbish collection, maintenance of public parks and gardens, and municipal security. These rates are approved by ordinances that establish the amounts of the rates that taxpayers must pay.
- [12] For example, beverage bottles can have three different plastic types: PET in the bottle, HDPE in the cap and polypropylene in the film label.
- [13] Food and beverage producers demand packaging that protect their product, extend the shelf life, or makes the product more appealing to consumers. In turn, this results in packaging with reduced recyclability. For example, coloured PET bottles or multi-material multilayer flexible packaging (e.g., coffee, potato chips, snacks). Coloured PET bottles are more difficult to recycle and reduce the quality and value of recycled PET (Thomas, 2023). This is why the Council for PET Bottle Recycling of Japan adopted the 'Voluntary Design Guidelines for Designated PET Bottles' that makes compulsory that all bottles are made only of non-coloured PET (Council for PET Bottle Recycling, 2023). Also, why, Coca Cola switched the traditional green Sprite bottles to transparent and is testing label-less bottles to facilitate recycling (Jackson, 2022; Mohan, 2024). In contrast, multi-material multilayer flexible packaging is not currently recyclable (Kaiser et al., 2017; de Mello et al., 2022).
- [14] About 50% - 60% lower price than that paid in Lima (De-la-Torre et al., 2022a).
- [15] Okeanos will initiate operations in Peru during 2024.
- [16] In 2023, there were 273 supermarkets operated by three corporate groups (i.e., CENCOSUD, Grupo Falabella and INTERCORP). These supermarkets sold about [USD2,000 million](#) in 2023. In 2024 there were 10 brands of convenience stores ([675](#) locales) owned by different corporate groups. The brands with most points of sale were Tambo+ (Lindcorp Group), Oxxo (Mexican group [FEMSA](#), which includes Coca Cola

bottling) and Listo! ([Grupo Romero](#) owner of ALICORP the second largest producer of mass-market products of the Andean region).

[17] For instance, the Law that Regulates the activity of Recyclers ([Law 29419](#)), the Incentive Program to Improve Municipal Management ([Law 29332](#)) and the [Recicla Consciente](#) initiative of Supermercados Peruanos S.A.

B. CHILD PROJECT DESCRIPTION

This section asks for a theory of change as part of a joined-up description of the project as a whole, including how it addresses priorities related to the specific program, and how it will benefit from the coordination platform. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the guidance document. (Approximately 3-5 pages) see guidance [here](#)

Changes from the Child Project Concept

1. The project preparation phase included a participatory planning process to prepare detailed situation and causal chain analyses and the pertinent theory of change and intervention strategy. This work allowed to better focus the project intervention and to refine the structure initially proposed in the Child Project Concept (CPC). Appendix 12 compiles the information and evidence of the participation and engagement strategy applied during the project preparation phase. The changes in project structure and scope are the following:

Project objective

2. The wording of the project objective was modified to be more direct.

CPC: To reduce plastic pollution in Peru, accelerating the transition to a circular economy in the food and beverage industry, evaluating, improving, and innovating the plastic value chain, in the production, distribution, marketing and consumption phases, while strengthening the commitment and capacities of the private and public sectors.

PRODOC: To reduce plastic pollution in Peru by accelerating the transition towards a circular economy in the food and beverage sector.

Project components

3. The four major lines of work were maintained, but the scope and wording were adjusted to conform with the theory of change.

Component 1, scope was adjusted to focus on single-use plastics.

CPC: Circularity, reduction, and reuse of plastic

PRODOC: Stimulate circularity, reduction, and reuse of single-use plastics.

Component 2, scope was adjusted to focus on strengthening public- private collaboration.

CPC: Strengthening the involvement, capacities, and collaboration of the public and private sectors.

PRODOC: Strengthen involvement and collaboration of public and private sectors.

Component 3, scope was adjusted to focus on the national regulatory and institutional framework.

CPC: Strengthen the national and global political framework.

PRODOC: Strengthen the national framework.

Component 4, scope was adjusted to comply with the requirements of the global project.

CPC: Monitoring, evaluation, and knowledge management.

PRODOC: National and Program-level Coordination, Knowledge Management and Communication

Number of outcomes

4. To better focus the project intervention the number of outcomes was reduced from 16 in the CPC to seven in the PRODOC. This implied merging outcomes and revising the scope of work to have a coherent project strategy.

Correspondence between CPC and PRODOC outcomes

CPC outcomes	PRODOC outcomes
1.1 The amount of virgin plastic imported and used in local production is reduced, and the use of recycled material in plastic containers is increased, by strengthening the value chains of post-consumer recycled material.	The project will not directly work with the recycling chain. The purpose of this outcome was mainstreamed into outcomes 1.1, 2.2, 3.1 and 3.2.
1.2. The food and beverage sector develops and implements eco-design and eco-labeling criteria that guarantee reuse, returnability and/or recycling in the national market.	Incorporated into outcome 2.2.
1.3 The Food and Beverage Sector implements innovative business models based on circular systems of reuse, returnability and/or refill systems that promote the generation of formal employment.	Incorporated into outcomes 1.1, 2.1, 2.2, and 3.1.
1.4. A change in consumer habits is achieved that supports the implementation of business models based on circular systems of reuse, returnability and/or refill systems.	Incorporated into outcome 1.1.
1.5. Creation of financing opportunities aimed at companies and ventures for the development of R+D+i projects (innovation, development and research) with a focus on viable and ongoing circular economy.	During project preparation it was found that the main private stakeholders are large corporations that have access to investment and capital. The project will focus on linking promising micro and small businesses with business accelerators (output 1.1.6).
2.1. Companies are encouraged to sign new clean production agreements, through incentives and recognition systems, to support the transition to the circular economy of plastics.	Incorporated into outcome 2.1.
2.2. Compliance with the regulatory framework on plastics and extended producer responsibility is ensured by strengthening supervision, control, and enforcement actions at the national, regional, and local levels.	Incorporated into outcome 3.1.
2.3 Strengthened capacities to implement eco-design criteria for reuse, returnability and/or recycling in micro, small and medium-sized enterprises in the plastic food and beverage packaging industry, and other actors involved in the chain such as academia, local and regional governments.	Incorporated into outcome 2.2.
2.4. A national reporting system is implemented for transparency purposes on progress in the transition to a circular economy for plastics, which will strengthen public commitments.	Incorporated into outputs 2.1.2, 3.1.1 and 4.2.5.
3.1. Strengthened regulatory frameworks, regulations, and policies to promote the transition towards the circular economy and implementation of extended producer responsibility in the food and beverage sector.	Incorporated into outcomes 3.1 and 3.2.
3.2 Enabling conditions are generated that contribute to the implementation and compliance with regulations related to single-use plastic and extended producer responsibility for packaging (plastics) in the food and beverage sector.	Mainstreamed along the project interventions. For example, outputs 1.1.4, 1.1.5, 2.1.1, 2.2.4, 3.1.2, 3.1.3, 3.1.4, 3.2.1, 3.2.2, 3.2.3, 4.2.4.

CPC outcomes	PRODOC outcomes
3.3. There are planning instruments at the national level to conduct actions to combat plastic pollution and meet the commitments of the global treaty on plastics.	The project will not directly address the commitments to be generated by the global treaty on plastics. Though, it will contribute to develop national level instruments like outputs 3.2.2 and 3.2.3.
3.4. There are adequate regional coordination and collaboration spaces for the design and implementation of a strategy to fulfill the commitments of the global treaty on plastics.	Two core elements of the project strategy are (i) a whole-of-government approach and (ii) constructive public-private dialogue. These elements are mainstreamed along the project intervention (e.g., the Intersectoral Coordination Body and the Technical Working Groups on Circular Design of Plastic Beverage Bottles and Food Packaging).
4.1. There are spaces for the exchange of knowledge, dialogue and dissemination of initiatives, projects, research, and experiences, on circular solutions to plastic pollution, between the public, private and academia sectors.	Incorporated into outcomes 1.1, 2.2, and 4.2.
4.2. The National Environmental Information System (SINIA) is strengthened with bibliographic information and national, subnational, and local statistics related to plastics and circular economy.	Incorporated into output 4.2.5.
4.3. The National Report on the State of the Environment is strengthened with a catalog of indicators of circular solutions to plastic pollution.	Incorporated into output 4.2.5.

Theory of change

5. **The proposed project will contribute to accelerate an initial phase of a long-term transition of the Peruvian food and beverage sector to reduce and eventually eliminate plastic pollution (Figure 11). This will be done, building upon the progress made by the range of public and public initiatives and projects. To confront plastic pollution and in line with the seven identified barriers, the project will apply a strategy composed of four interlinked lines of work or components (Figure 12): (i) to stimulate circularity regarding single-use plastics (e.g., carrier bags), (ii) to fortify public - private collaboration to implement improved practices, (iii) to strengthen the national framework (e.g., initial implementation of EPR), and (iv) to generate practical knowledge about the enablers and barriers for change.**
6. **The project is based upon the application of four levers for system transformation:**
 - a. **Governance and policies.** The project will implement actions to improve intersectoral coordination and dialogue to enhance policy coherence to address plastic pollution. Core elements of the project strategy are to cultivate and foster (i) a whole-of-government approach response to plastic pollution from the food and beverage sector and (ii) the strengthening of the science-policy interface to support fact-based decision-making.
 - b. **Multi-stakeholder dialogue and consensus building.** The project will foster multilevel intersectoral and public - private constructive dialogue among key stakeholders to build agreements and practical instruments to confront plastic pollution.
 - c. **Innovation and learning.** The project will aim to transform the system by implementing an experiential learning approach to test circular solutions and improved practices and by systematically documenting, assessing, and sharing learning. It is foreseen that learning will generate positive incremental loops and will be scaled-up in the near future.
 - d. **Society and behaviour change.** A core element of the project strategy, which is mainstreamed all along the planned interventions, is to systematically identify the factors that enable or prevent pro-environmental

| pro-nature behaviours (in this case plastic pollution) at the individual and community levels (i.e., society and behaviour change).

7. It is recognised that there are other levers that the project will not apply. The most notorious is financial leverage, which is included in the Global Project. In this case, it was considered that developing financial tools will be an enormous effort well beyond the means of the funding and time available for the present project. However, the project will facilitate that start-up accelerators support small businesses that develop promising circular items or services.
8. The four interlinked components of the project comprise seven outcomes and 27 outputs (Table 7). The project intervention will directly address barriers 1, 3, 4, 7 and 8 (Table 8). It is recognised that the other barriers are important, but they are beyond the scope of the project which focuses on upstream and midstream interventions.
9. To accelerate the transition towards a circular economy the project strategy has the following steps (Figure 13):
 - First, to undertake trials in three districts to gain hands-on experience on the application of a suite of circular solutions and improved practices (Table 9) and compliance of plastics regulations (outputs 1.1.2 and 1.1.3). These trials will be based upon a detailed gender sensitive diagnostic of the motivational factors of service providers, retailers, consumers, and patrons (output 1.1.1). The trials will have the following characteristics:
 - They will focus on four “environments” (i.e., markets, supermarkets, food courts, fast-food restaurants) in three urban socio-economic settings (coast: San Martin de Porres district, highlands: Cayma district, jungle: Tarapoto district, i.e., the target districts) (Figure 15).
 - They will test circular solutions (e.g., cotton reusable carrier bags) and improved practices (e.g., refill reusable water bottles) (Table 9).
 - They will test tools to promote behaviour change, including the use of “green nudges” to motivate adoption of circular solutions and compliance of plastics regulations (Thaler & Sustein, 2008; UNEP, 2020; Wensing et al., 2020; Carlsson et al., 2021; Thaler & Sustein, 2021; DesRoches et al., 2023; He et al., 2023).
 - They will assess the feasibility of applying the circular solution or improved practice (e.g., cost, supply).
 - They will be implemented together with municipalities, voluntary business owners (green champions and early adopters), and providers of circular solutions.

The trials will closely work with the pertinent municipal EDUCCA programmes for feedback, to scale-up viable practices in the municipality and to update the programmes (output 1.1.4). Also, the trials will provide and receive feedback from the work with APLs (output 2.1.1). It is planned that the learning of the trials will provide inputs to update the pertinent ordinances of the three municipalities (output 1.1.5), and will be the basis to prepare national guidelines for the reduction of single-use plastics (output 3.2.2), national regulations on carrier and produce bags (output 3.2.1), and a national strategy to scale-up circular solutions in markets, supermarkets, food courts and fast-food restaurants (output 3.2.3) (Figure 13). Finally, the project will foster that promising startups that provide feasible solutions connect with existing business accelerators to expand their operations (output 1.1.6) (Figure 13).

- Second, to assess the present APL framework with a view to understand the motivations behind the instrument and how to make it more appealing to the food and beverage sector (output 2.1.1). This will include introducing nudges to motivate the reduction and substitution of plastics. In parallel, to strengthen the APL online platform to facilitate access, reporting and evaluation (output 2.1.2). Then, the updated APL framework will be tested with key producers^[1] (output 2.1.3) to generate learning that will eventually generate, towards the end of the project, a revised and updated APL directive (output 2.1.1).
- Third, to establish two public-private Technical Working Groups for Circular Design of (i) beverage bottles and (ii) food packaging (e.g., ready meals, fruits and vegetables for the domestic market and export) (Figure 13). The two Technical Working Groups will integrate representatives of MINAM, PRODUCE, and MINSA to foster a whole-of-government approach. It is foreseen that, through facilitated constructive dialogue and technical assistance, these working groups will reach agreements to improve circularity. The project will: (i) promote that bottling companies prepare and adopt industry design guidelines for PET bottles (output 2.2.1) like those used in Japan¹³, (ii) support the preparation of national guidelines

for circular design of beverage bottles and food packaging (output 2.2.2), (iii) encourage the preparation of an initial list of chemicals and polymers of concern used in food contact plastics (output 2.2.3), and (iv) foster the drafting of a proposed regulation on circularity of these items^[2] (output 2.2.4). All of these processes will be supported by science – policy dialogue (outputs 4.2.4 and 2.4.5).

- Fourth, to support the initial implementation of the new EPR regulation by: (i) updating the SIGERSOL platform (e.g., infrastructure, software, procedures) to be able to manage the EPR reports (output 3.1.1), (ii) preparing the methodology to set targets for collection, valorisation and returnability of food and beverage companies (output 3.1.2), (iii) developing the catalogue of infractions and sanctions of the EPR regulation (output 3.1.3), and (iv) implementing online courses for key stakeholders (e.g., producers, municipalities) on EPR implementation using the Aula APRENDE platform (output 3.1.4) (Figure 13).
- Fifth, to potentiate the SINIA^[3] as a plastic pollution knowledge hub and make available all project information through this portal (output 4. 2.5). To register the lessons from the various interventions in lessons documents that will be widely disseminated (output 4.2.3) and to use project knowledge to prepare a strategy to scale-up circular solutions in the country (output 3.2.3).
- Finally, all the interventions will be supported by knowledge management, communication, and monitoring and evaluation plans. It is foreseen that annual reporting (i.e., GEF Project Implementation Reports or PIRs) and the Mid-Term Review will provide inputs for adaptive project management.

The target districts

10. During the PPG it was decided to undertake the trials in districts that reflect the urban socio-economic settings of Peru (i.e., coast, highlands and jungle). The criteria used to select the target districts were: (i) large population, (ii) large production of solid waste, (iii) presence of shopping malls with supermarkets and food courts, (iv) presence of fast-food restaurants, (v) participation in the Incentive Program for the Improvement of Municipal Management, (vi) active implementation of the EDUCCA programme, (vii) execution of complementary projects or initiatives. At the end, the MINAM team selected the three target districts: (1) San Martin de Porres located in the coast within the Lima metropolitan area, (2) Cayma located in the highlands within the Arequipa province, and (3) Tarapoto located in the jungle within the San Martin province. Delegates of the three districts contributed to the design of the present project.

San Martin de Porres

11. The district of San Martin de Porres is the second most populated district in the province of Lima, it has a total population of 794,838 people and a poverty level is 10.35% (INEI, 2018; MINSA, 2024) whose population (INEI, 2018). The district has more than 100 food markets (INEI, 2017), two shopping malls (Real Plaza and Plaza Center) and four supermarkets (Tottus, Metro, Makro and Plaza Vea) (Table 3). In 2022, San Martin de Porres generated 321,502.43 t of waste, 12.22% was plastic waste (Table 6).

Cayma

12. The district of Cayma, the third most populated district of the Arequipa province. It has a total population of 91,935 persons and a poverty level of 6.4% (INEI, 2018; MINSA, 2024). This district has six food markets (five municipal markets and one non-municipal market), two shopping centres (Real Plaza and Mall Plaza) and two supermarkets (Plaza Vea and Tottus). It has been estimated that plastic is about 10.39% of the waste of the food markets. In 2022, Cayma generated 25,411.59 t of waste, 12% was plastic waste (Table 6).

Tarapoto

13. Tarapoto is the most populated district of the San Martin province, it has 84,618 persons and poverty level of 11.12% (INEI, 2018; MINSA, 2024) and a district poverty level of 11.12%. Tarapoto has seven food markets (five municipal and two non-municipal markets) and one supermarket (Precio Uno). The Cinerama Plaza includes a food-court. It has been estimated that plastic is about 23.75% of the waste of the food markets. In 2022, Tarapoto generated 28,921.08 t of waste, 10.36% was plastic waste (Table 6).

Table 3. General social information and number of retail establishments in San Martin de Porres.

Social data					Retail establishments		
Total population	% of women	% of young people	% of unsatisfied basic needs	Poverty level (%)	Number of food markets	Number of malls	Number of supermarkets
794,838	52%	24%	11.14%	10.35%	118	2	4

Table 4. General social information and number of retail establishments in Cayma.

Social data					Data on supply establishments		
Total population	% of women	% of young people	% of unsatisfied basic needs	Poverty level (%)	Number of food markets	Number of malls	Number of supermarkets
110,215	51%	24%	10.5	6.4	6	2	2

Table 5. General social information and number of retail establishments in Tarapoto.

Social data					Data on supply establishments		
Total population	% of women	% of young people	% of unsatisfied basic needs	Poverty level (%)	Number of food markets	Number of malls	Number of supermarkets
84618	48%	23%	25.8%	11.12%	76	0	1

Table 6. Solid and plastic waste generation during 2002 in San Martín de Porres, Cayma and Tarapoto. Source: SIGERSOL.

District	Total waste generation (t/year)	Plastic (%)	Plastic generation (t/year)	Annual generation by type of plastic (t/year)							
				PET	PEAD	PEBD	PP	PS	PVC	Single-use plastic bags	Tecnopor
San Martín de Porres	321,502	12.22%	39,286	7,729	5,354	4,175	2,533	1,728	727	14,421	2,619
Cayma	25,412	12%	3,044	1,001	292	213	534	51	30	699	224
Tarapoto	28,921	10.36%	2,997	837	366	264	108	67	61	1,094	202

Table 7. Project components, outcomes, and outputs

Outcomes	Outputs
Component 1. Stimulate circularity, reduction, and reuse of single-use plastics	
Outcome 1.1. Enhanced behaviours and practices that support circular solutions to plastic pollution	<p>1.1.1. Baseline diagnosis of gender sensitive behaviours in markets, supermarkets, food courts and fast-food restaurants in the three target districts.</p> <p>1.1.2. Trials of circular solutions and improved innovative practices in markets, supermarkets, food courts and fast-food restaurants in the three target districts.</p> <p>1.1.3. Trials to improve municipal control and enforcement of plastics regulations in the three target districts.</p> <p>1.1.4. Three gender sensitive updated EDUCCA municipal programmes that address elimination of single-use plastics.</p> <p>1.1.5. Three updated ordinances and implementing tools to eliminate single-use plastics.</p> <p>1.1.6. Promising startups that provide circular solutions to plastic pollution engaged with business accelerators.</p>
Component 2. Strengthen involvement and collaboration of public and private sectors	

Outcomes	Outputs
Outcome 2.1. Clean Production Agreements focused on the food and beverage sector reduce the use of plastic	<p>2.1.1. APLs directive assessed and updated.</p> <p>2.1.2. An upgraded APL platform for monitoring and reporting.</p> <p>2.1.3. At least eight new APLs signed with supermarkets, convenience stores, producers of mass consumption products, and fast-food restaurants.</p>
Outcome 2.2. Public-private agreements facilitate plastic reduction and circularity of beverage bottles and food packaging	<p>2.2.1. Industry endorsed design guidelines for beverage PET bottles.</p> <p>2.2.2. Guidelines for circular design of beverage bottles and food packaging.</p> <p>2.2.3. Initial list of chemicals and polymers of concern used in food contact plastics.</p> <p>2.2.4. Draft regulation on circularity of beverage bottles and food packaging.</p>
Component 3. Strengthen the national framework	
Outcome 3.1. Extended Producer Responsibility is implemented in the food and beverage sector	<p>3.1.1. SIGERSOL upgraded to manage EPR monitoring and reporting.</p> <p>3.1.2. Formally adopted methodology to calculate collection, valorisation and returnability targets to implement EPR regulation.</p> <p>3.1.3. Catalogue of infractions and sanctions of the EPR regulation.</p> <p>3.1.4. Aula APRENDE gender sensitive online courses for key stakeholders to advance the implementation of EPR regulations.</p>
Outcome 3.2. New instruments accelerate plastic reduction and circularity in the food and beverage sector	<p>3.2.1. National regulations for plastic carrier and produce bags and food contact plastics incorporating gender-responsive considerations that address differentiated impacts on and roles of women and men in plastic use, disposal, and alternatives.</p> <p>3.2.2. National guidelines to implement single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants.</p> <p>3.2.3. Government strategy to scale-up circular solutions and improved practices using social and behavioural change in markets, supermarkets, food courts and fast-food restaurants.</p>
Component 4. National and Program-level Coordination, Knowledge Management and Communication	
Outcome 4.1. Effective national and global coordination including active participation and contribution to global project meetings and working groups	<p>Output 4.1.1. National level coordination mechanism established and implemented.</p> <p>Output 4.1.2. Coordination and active participation and contribution to Global Project meetings and working groups.</p>
Outcome 4.2 Increased National and Global knowledge and awareness on Circular Solutions to Single Use Plastic Packaging Pollution from the Food and Beverage Sector	<p>Output 4.2.1. Communication and Knowledge Management strategy developed and implemented for the project developed and implemented using the Global Project, and other relevant platforms.</p> <p>Output 4.2.2. Contribution to the Global Project knowledge management and communication.</p> <p>Output 4.2.3. Seven lessons documents about the application of circular solutions and improved practices in the food and beverage sector.</p> <p>Output 4.2.4. Policy briefs and plastic pollution dialogues to foster science-based decision making.</p> <p>Output 4.2.5. SINIA strengthened to be the plastic pollution national knowledge hub.</p>

Table 8. Contribution of project outcomes to address the barriers that limit addressing plastic pollution from the food and beverage sector in Peru.

Barrier	Project intervention
Barrier 1. Limited availability and supply of	The project will identify feasible circular solutions and improved practices through participatory action research. For this, the project will implement trials to test circular solutions that are available in the country as well as known improved practices (outcome 1.1). The trials will

Barrier	Project intervention
alternatives to petroleum-based items.	include assessing the feasibility of scaling-up these alternatives (e.g., affordability, innocuity, users' acceptability). The project will support linking promising start-ups that develop feasible circular solutions with existing business accelerators (output 1.1.6). Feasible circular solutions and improved practices will be promoted through national guidelines and a government scale-up strategy (outcome 3.2).
Barrier 2. Limited capacities to evaluate risks, regulate and control food contact items.	The project will contribute indirectly to address this barrier by fostering: (i) the preparation of an initial list of chemicals and polymers of concern used in food contact plastics (output 2.2.4), (ii) the formulation of policy briefs, and (iii) the development of pertinent science – policy dialogues (output 4.2.4).
Barrier 3. Reluctance to change from producers and retailers.	The project will identify the factors that limit the mainstreaming of circular solutions and improved practices in producers and retailers. For this, the project will implement trials in markets, supermarkets, food courts and fast-food restaurants in three districts (outcome 1.1) as well as constructive dialogue with producers of plastic bottles and food packaging (outcome 2.2). The learning will be used to develop management instruments for scaling-up (outputs 1.1.4, 1.1.5, 2.2.1, 2.2.2, 2.2.3, 2.2.4).
Barrier 4. Resistance to change from consumers.	The project will identify the behaviour determinants that constrain changes in plastic usage by consumers in markets, supermarkets, food courts and fast-food restaurants in three districts. For this, the project will implement gender-based trials (outcome 1.1) and the learning will be used to develop management instruments for scaling-up (outputs 3.2.1, 3.2.2, 3.2.3).
Barrier 5. Weak plastics recycling chain.	The project will not directly work with the plastics recycling chain. However, it is expected that the pilots (outcome 1.1), the work with APLs (outcome 2.1) and EPR (outcome 3.1), and the management instruments to be developed (outcomes 1.1, 2.2 and 3.2) will contribute to strengthen plastics recycling and valorisation.
Barrier 6. Weak plastic waste management.	The project will not directly work on plastic waste management. However, it is expected that as a whole the project outcomes will contribute to reduce plastic waste and to foster valorisation.
Barrier 7. Limited capacities for monitoring and enforcement of plastics regulations.	The project will identify behaviour determinants that motive non-compliance of plastics regulations of retailers, service providers and consumers. For this, the project will implement trials in three districts to assess the use of behaviour tools and green nudges to promote compliance (output 1.1.3) and use the learning to complement municipal enforcement strategies (output 1.1.5) and scale up instruments (outputs 3.2.1, 3.2.2, 3.2.3).
Barrier 8. Knowledge gaps and weak science-policy interface.	The project will support science – policy dialogue by facilitating the access to key information, generating policy briefs, and enabling bi-directional interactions to build trust among authorities, private sector, and academia (outcome 2.2, outputs 4.2.4 and 2.4.5).

Table 9. Suite of circular measures to be tested.

Target environments	Measures to be trialled
Municipal markets	<p>Eliminate single-use plastic carrier bags, substitute with reusable bags made from circular materials (e.g., cotton, recycled plastic, shopping baskets).</p> <p>Eliminate single-use petroleum-based plastic produce bags, substitute with circular alternatives (e.g., bioplastic bags, paper bags, reusable cotton produce bags, no bag).</p> <p>Install or potentiate the use of collection points for recyclable materials (e.g., glass, metal, paper, PET), including collecting non-recyclable plastics (e.g., snacks bags, single-dose sachets) to fabricate building materials.</p>
Supermarkets	<p>Eliminate single-use plastic carrier bags, substitute with reusable bags made from circular materials (e.g., cotton, recycled plastic, shopping baskets).</p> <p>Eliminate single-use petroleum-based plastic produce bags, substitute with circular alternatives (e.g., bioplastic bags, paper bags, reusable cotton produce bags, no bag).</p> <p>Increment the availability and use of returnable beverage bottles (e.g., glass, plastic) and test deposit return schemes.</p> <p>Reduce excessive packaging of fruits, vegetables, and ready meals (e.g., salads, baked chicken), introduce improved recyclability plastic designs, replace petroleum-based packaging with circular options (e.g., paper trays), test deposit return schemes on food containers (e.g., ready meals, glass sauce bottles).</p>

Target environments	Measures to be trialled
	<p>Eliminate the sale of disposable plastic food utensils (plates, cutlery, straws, glasses, cups), replace with circular options.</p> <p>Install or potentiate the use of collection points for recyclable materials, including collecting non-recyclable plastics (e.g., snacks bags) to fabricate building materials.</p>
Food Courts	<p>For on-site consumption: eliminate all single-use plastics (e.g., beverage bottles, cutlery, single-dose sachets) to become a plastic-free food court (switch to reusable plates, cutlery, and glasses). Introduce beverage refills returnable bottles and sauce dispensers, install or potentiate the use of collection points for recyclable materials (e.g., food residues, paper cups).</p> <p>For take-away: reduce excessive packaging, eliminate default provision of disposable plastic cutlery and single-dose sachets, introduce carrier bags and disposable cutlery of circular materials, introduce alternatives to single-dose sachets, introduce fully recyclable food containers, test deposit return schemes on food containers (returnable packaging).</p>
Fast-food restaurants	<p>For on-site consumption: eliminate all single-use plastics (e.g., beverage bottles, cutlery, sachets) to become a plastic-free restaurant (switch to reusable plates, cutlery, and glasses). Introduce beverage refills returnable bottles and sauce dispensers, install or potentiate the use of collection points for recyclable materials (e.g., food residues, paper cups).</p> <p>For take-away: reduce excessive packaging, eliminate default provision of disposable plastic cutlery and sachets, introduce carrier bags and disposable cutlery of circular materials, introduce fully recyclable food containers, introduce alternatives to sachets, test deposit return schemes on food containers (returnable packaging).</p>

Figure 12. Overview of the theory of change.

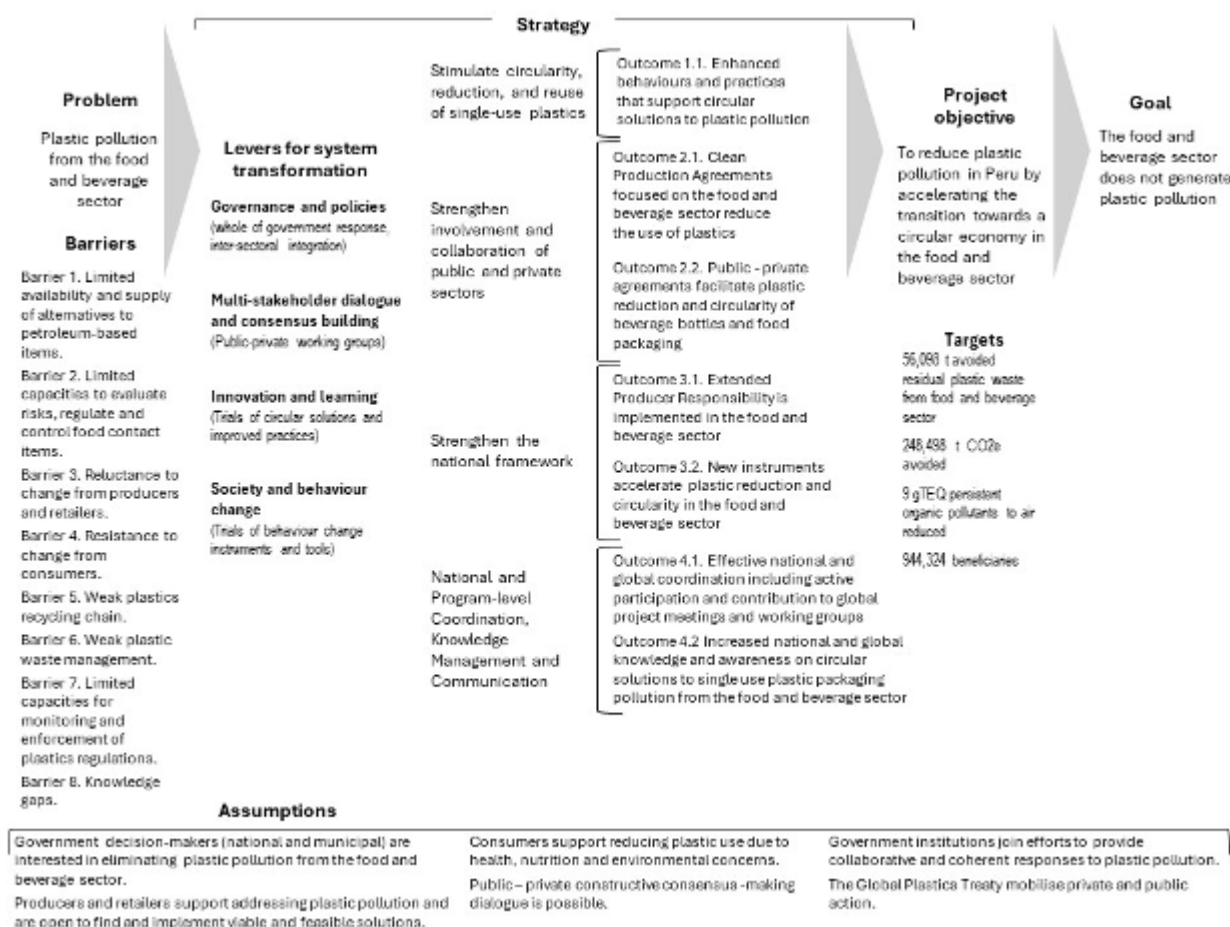
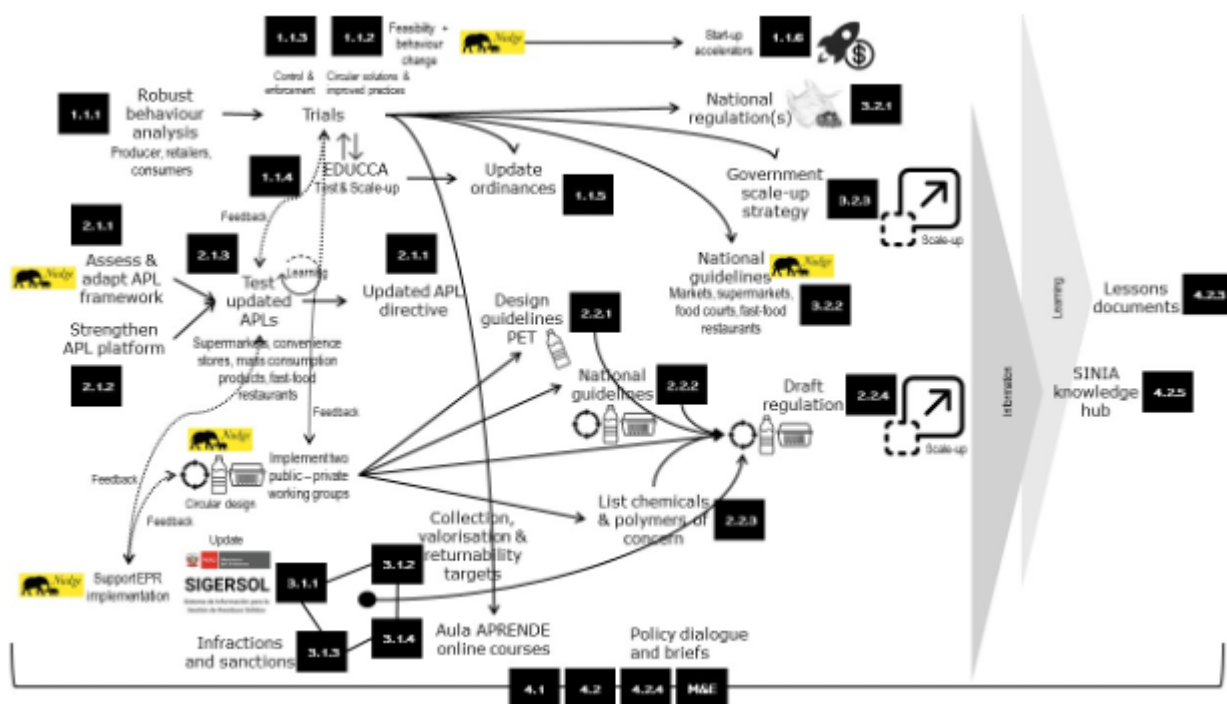


Figure 13. Project strategy



Project components and expected results

14. The project objective is 'to reduce plastic pollution in Peru by accelerating the transition towards a circular economy in the food and beverage industry'. The United Nations Environment Programme (UNEP) and the World Wildlife Fund (WWF) will join their expertise and experience to contribute to the ongoing efforts of the Peruvian government to advance the transition towards a food and beverage industry that does not generate plastic pollution and to generate new tools and lessons for worldwide application. At the end, the project will aim to reduce the amount of discarded plastics in Peru.
15. The project is organised into four components and seven outcomes (Table 7). The four components are:
 - The component 1 will focus on stimulating circularity, reduction, and reuse of single-use plastics in key “environments” (i.e., markets, supermarkets, food courts, fast-food restaurants) and generating knowledge that can be scaled-up.
 - The component 2 will strengthen public - private collaboration and constructive dialogue to advance circular solutions in food and beverage producers and retailers.
 - The component 3 will focus on strengthening the national framework for the management of plastics by supporting the initial implementation of the new EPR regulation and developing new instruments to accelerate circularity and the reduction of the use of plastics.
 - The component 4 will ensure sound project coordination at the national level and with the other projects of the Global Programme and documenting and disseminating the project learning.
16. The results framework and the multiyear workplan are found in Annex C and Appendix 6, respectively.

Component 1. Stimulate circularity, reduction, and reuse of single-use plastics.

17. To advance towards a transformation of the Peruvian food and beverage sector, this component will focus on generating, testing and scaling-up tools grounded on community and behaviour change to accelerate the implementation of circular solutions to plastic pollution generated by single-use plastics.

Outcome 1.1. Enhanced behaviours and practices that support circular solutions to plastic pollution.

18. At the end of the project, it is expected that a suite of viable circular solutions and improved practices will be: (i) under implementation in the three target districts (paragraph 88), and (ii) ready to be scaled-up to other

parts of the country (outcome 3.2). To accomplish this aim, the project will implement an experimental approach grounded on participatory action research to test circular solutions and improved practices to reduce or eliminate the use of single-use plastics in markets, supermarkets, food courts, and fast-food restaurants (Figure 13). The target single-use plastic items will be carrier bags, produce bags, beverage bottles, food containers, food utensils (cutlery, plates, glasses, straws, cups), single-dose sachets, and plastic wrap.

19. The backbone of the work will be the “COM-B model” (Michie et al., 2011) and the “Community-Based Social Marketing” framework (McKenzie-Mohr, 2011; McKenzie-Mohr & Schultz, 2014), complemented with “Green Nudges” and “Social and Behaviour Change Strategies” (for definitions see Appendix 11) (Figure 14). Following the steps of the Community-Based Social Marketing framework, the project will identify the enablers and barriers to promote the desired behaviour change (output 1.1.1), then develop and test change strategies based on behaviour change tools including Green Nudges (outputs 1.1.2 and 1.1.3) and, finally, prepare Social and Behaviour Change Strategies to be mainstreamed into the target municipal EDUCCA programmes (output 1.1.4) and national strategies (outputs 3.2.2 and 3.2.3).
20. To achieve this outcome, the project will generate six outputs (Table 7), starting with a baseline diagnosis of gender sensitive behaviours of service providers, retailers, consumers, and patrons and their motivations related to the use of single-use plastics (e.g., plastic bags and beverage bottles) in the three target districts (output 1.1.1) (Figure 13). This will be the basis to design and implement trials (outputs 1.1.2 and 1.1.3) to test in practice the feasibility of introducing available circular solutions and improved practices in markets, supermarkets, food courts and fast-food restaurants. Positive results will be further tested through the three municipal EDUCCA programmes and the outcomes will eventually be mainstreamed into these programmes and the pertinent local ordinances (outputs 1.1.4 and 1.1.5). Also, key messages will be integrated into the Peru Limpio Strategy. Finally, the Peruvian startups that produce viable circular solutions will be connected to existing business accelerators to promote their growth (output 1.1.6).
21. The learning generated in this outcome will be systematised in knowledge documents to be widely disseminated and made available through the SINIA and other portals, such as IW:LEARN (outputs 4.2.3 and 4.2.5). It is envisaged that at least four knowledge documents will be generated, the preliminary titles are:
 - Lessons about reducing single-use plastics in markets, supermarkets, food courts, and fast-food restaurants in Peru.
 - Lessons about the application of social and behaviour change tools to address plastic pollution from the food and beverage sector in Peru.
 - Lessons on the application of behaviour change practices in men and women to implement circular solutions and improved practices to address plastic pollution from the food and beverage sector in Peru.
 - Lessons on the role of Peruvian municipalities in fostering circular solutions and improved practices to address plastic pollution from the food and beverage sector.
22. The work of this outcome will be guided by a Behaviour Change Officer and implemented together with the project’s Technical Officer and three technical assistants (one for each target district) (Attachment 3c of Appendix 3). An international specialist will provide specific advice and technical support.

Figure 14. Array of project outputs within the COM-B model and the Community-Based Social Marketing framework.

COM-B model

Community-Based Social Marketing

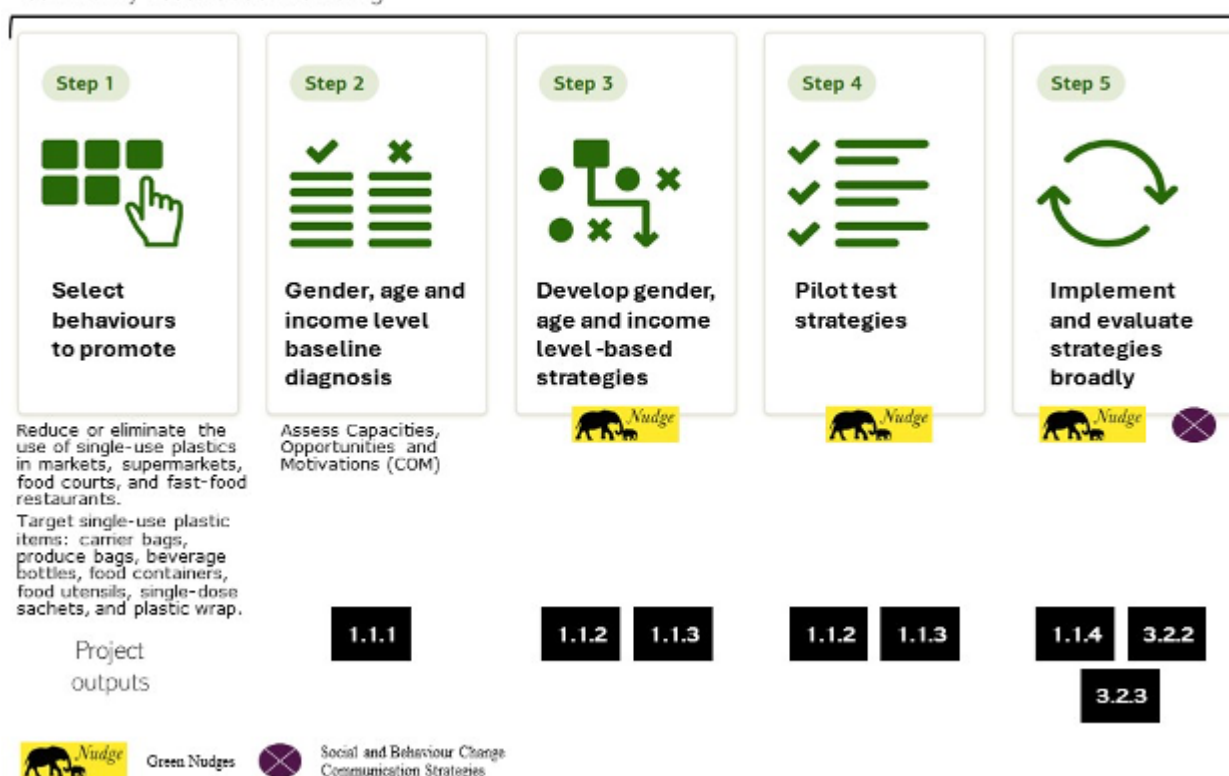
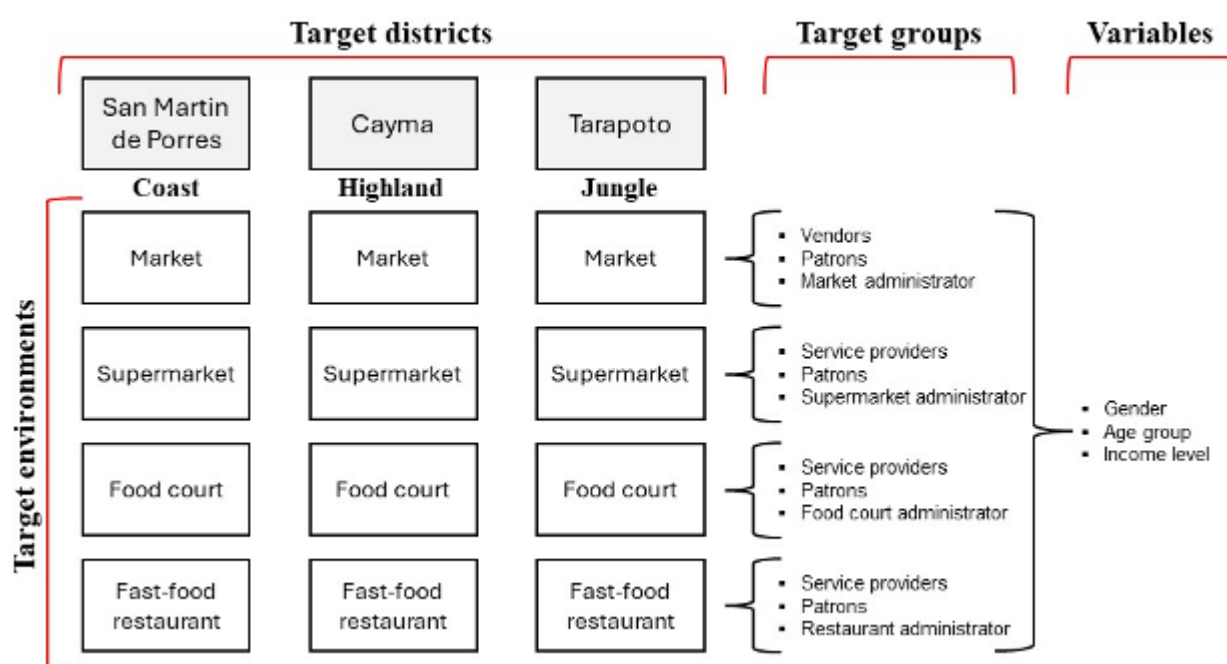


Figure 15. Combinations of target districts, environments, groups, and variables for the baseline diagnoses of behaviours.



Output 1.1.1. Baseline diagnosis of gender sensitive behaviours in markets, supermarkets, food courts and fast-food restaurants in the three target districts.

23. The Behaviour Change Officer, with support of an international specialist and the project's Gender and Participation Expert (GPE), will develop the instruments (e.g., individual surveys, focus groups) to identify, within the framework of the COM-B model, the motivation factors that enable or prevent pro-environmental behaviours with respect to the use of single-use plastic items: carrier bags, produce bags, beverage bottles, food containers, food utensils (cutlery, plates, glasses, straws, cups), single-dose sachets, and plastic wrap (Figure 14).
24. The first step will be to establish collaborative agreements with the entities that run the locales where the diagnoses and trials will be undertaken. This will include applying WWF's due diligence process to each business partner.
25. The second step will be to design and apply the diagnosis on each target environment of the target districts (Figure 15). The GPE will ensure that the design will include gender considerations. The diagnoses will be applied in one market, one supermarket, one food court, and one fast-food restaurant of each of the target districts, which represent three different socio-economic and cultural settings (Figure 15). The target groups will be market vendors, service providers (e.g., personnel of supermarkets and fast-food restaurants), patrons, and administrators of the locales. Assessing the motivation factors of service providers is key. For example, in supermarkets these persons pack ready meals (i.e., use food containers, plastic wrap and bags) and in fast-food restaurants prepare meals and pack foods for take-away and delivery. Similarly, assessing the motivation factors of the administrators of the locales is crucial since these persons direct the work of the employees and take key decisions like the location and operation of collection points. The motivation factors will be assessed in a combination of gender conditions, age groups (young persons, adults, senior citizens^[4]) and income levels (Figure 15).
26. The primary focus of the analyses will be to identify gender, age, and income level related pro-environmental behaviour determinants about the use of single-use plastics and compliance of pertinent regulations within the context of the COM-B model.

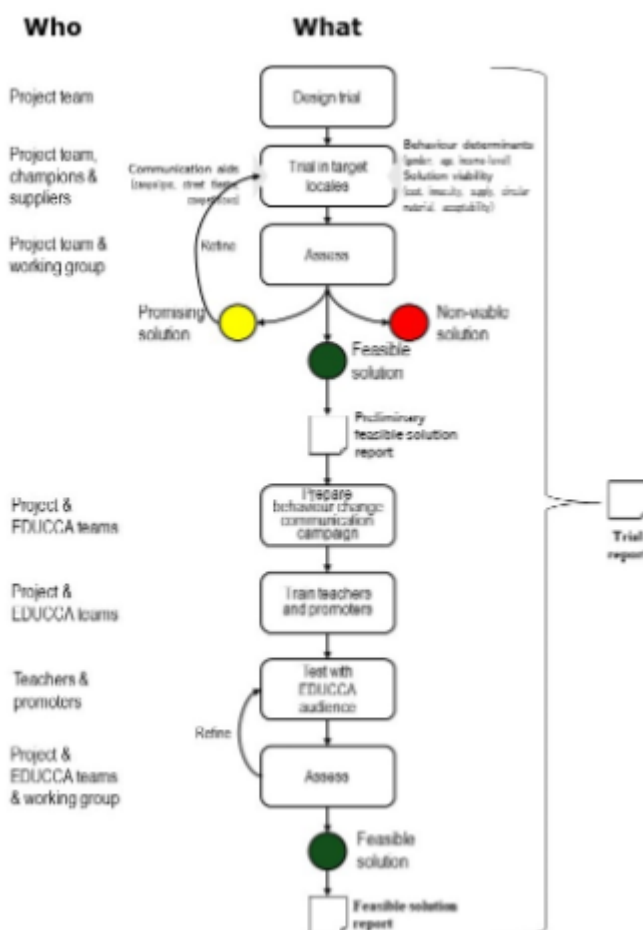
Output 1.1.2. Trials of circular solutions and improved innovative practices in markets, supermarkets, food courts and fast-food restaurants in the three target districts.

27. Using the results of the behaviour analyses the project will execute various trials to test the introduction of circular solutions and improved practices. The approach will be experimental, grounded on participatory action research, to learn by trial and error about the determinants (enablers and barriers) that affect the acceptance or refusal of the circular measures (Figure 14). On each district, a Technical Assistant will implement the trials in close coordination with the project partners. **At the conclusion of the trials, there will be a rollout phase to demonstrate the business sense of the trials and their potential to engage larger value chains.**
28. The process to implement the trials has two parts: (i) an initial trial in the target locales, and (ii) a subsequent trial of feasible solutions with selected EDUCCA audiences (Figure 16). The GPE will ensure that all trials include gender considerations. The entire experience and learning of each trial will be systematised and documented into a "trial report"^[5]. The "trial reports" will serve as inputs for the development of other outputs (e.g., 1.1.4, 1.1.5, 3.2.1, 3.2.2, 3.2.3) (Figure 13). Additionally, the rollout phase will highlight the commercial viability of the circular solutions and help reach broader value chains.
29. The initial trial has the following steps:
 - i. Identify champions in the locales. These will be persons that are keen to try-out new alternatives and practices, to share their views about their experiences, and to propose improvements.
 - ii. Establish a coordination group on each district. The members of the District Coordination Groups (a) will contribute their experience to design the trials and to analyse the results, and (b) will harmonise their actions to support the execution of the trials. Each district coordination group will integrate representatives of the partner markets, businesses (i.e., supermarkets, food courts, fast-food restaurants) and municipalities. When viable, pertinent representatives of local academia and civil society organisations (e.g., LOOP) will be invited to join the district coordination group. The project will connect the members of the three District Coordination Groups to foster debate and the exchange of ideas and experiences. It is envisaged that the three District Coordination Groups will become a learning community focused on solutions to single-use plastics.

- iii. Compile a repertoire of circular solutions and improved practices (including green nudges applied to address single-use plastics) from a search of circular alternatives available on the market, specialised literature, and experience from the WWF network, other agencies, and other projects (e.g., USAID's CCBO). The Table 9 presents an initial list of the suite of circular measures to be tested.
 - iv. Identify suppliers of circular solutions to be tested. For example, (i) dispensers of beverages and sauces, (ii) food containers made of reusable or recyclable materials, (iii) food containers made of compostable materials like Lastic, bagasse or paper, or (iv) collection of non-recyclable plastics to make building materials. Emphasis will be given to identify MYPES that develop and offer circular solutions. In the case of disposable alternatives to plastics (e.g., polylactic acid bioplastic) a lifecycle assessment will be applied to evaluate the circularity of the material and its biodegradability under Peruvian circumstances, among other matters.
 - v. Design each trial (e.g., eliminate carrier bags from markets) with specialised technical assistance. The trial will involve introducing a circular solution (e.g., a new circular material, a reusable item) and/or an improved practice (e.g., refusing produce bags) with the support of green nudges and communication tools. The design will include evaluating the viability of the new circular solution or improved practice based on the following parameters: (i) cost (affordable compared to the existing practice), (ii) innocuity (innocuous to food items, does not release contaminants to the environment), (iii) supply (sufficient provision to cover the potential demand), (iv) circular material, (v) acceptability (acceptable by customers, vendors and service providers | builds upon gender behaviour determinants).
 - vi. Execute each trial in the target locale. The trial (i) will assess both the behaviour determinants (enablers and barriers) and the viability of the circular solution or improved practice, and (ii) will be supported by pertinent communication aids (e.g., campaigns, street theatre, storytelling, games) (Figure 14). It is planned that the cost of each trial will be shared between the project and the entities that run the locales (paragraph 103).
 - vii. Assess the outcomes of the trial and, when appropriate, introduce refinements. Each feasible solution will be documented on a "preliminary feasible solution report".
30. The subsequent trial will test feasible solutions with a wider audience using the resources of the EDUCCA municipal programme. This trial has the following steps:
- i. Prepare a gender sensitive behaviour change communication campaign (BCCC) to introduce specific circular solutions or practices. A BCCC follows a specific sequence that moves the target audience from awareness of an issue towards a behaviour resulting in a specific outcome.
 - ii. Train a group of teachers and promoters^[6] to implement the BCCC. It is foreseen that these persons will be able to prepare their own materials, conduct complementary media activities, and engage their constituency.
 - iii. Implement the BCCC to test the circular solution with the EDUCCA audience.
 - iv. Assess the outcomes of the trial and, when appropriate, introduce refinements and improvements.
 - v. Prepare a "feasible solution report" which documents the circular solution or improved practice and provides guidance for its implementation. The "feasible solution reports" will also be inputs to other outputs (Figure 13).
31. A "feasible solution or practice" is that which has the following characteristics:
- Is affordable, it has a similar or minor cost when compared to the present option or the initial investment has a positive rate of return.
 - Is innocuous, the materials in contact with food are listed in specific regulation (national or international) and there is no scientific evidence that transfer contaminants to the food products or release contaminants to the environment.
 - Is available in sufficient quantity to cover the present and projected demand.
 - Is made of a circular material, which is a material that can be fully recycled to become raw materials for new products like glass, aluminium, or cotton (see Appendix 11 for definitions).

- Is acceptable or appealing customers, vendors, and service providers, and builds upon gender sensitive behaviour determinants.

Figure 16. Workflow of the trials of circular solutions and improved practices.



Output 1.1.3. Trials to improve municipal control and enforcement of plastics regulations in the three target districts.

32. Using the results of the behaviour analyses (output 1.1.1) the project will execute various trials to test gender sensitive behaviour change tools to improve compliance with pertinent regulations. For example, desired behaviours will be: (i) that people do not throw plastic items into the environment, (ii) that customers refuse single-use plastics, (iii) that market vendors do not purchase and make available illegal plastic carrier bags and tecnopor items, and (iv) that market vendors and retailers do not trade illegal tecnopor food and beverage containers. There will be close coordination with the Peru Cero Tecnopor initiative (page 27).
33. The process to implement the trials will be like the one previously detailed in output 1.1.2 (Figure 16). The main difference is that the trials will focus on improved practices and green nudges to motivate positive behaviour. The GPE will ensure that all trials include gender-sensitive behaviour change tools. The “feasible solution reports” from these trials will serve as inputs to:
 - Revise the three municipal control and enforcement strategies. The improved strategies will include gender sensitive behaviour change tools and green nudges to incentivise compliance.
 - Improve the three EDUCCA programmes (output 1.1.4).
 - Update the pertinent ordinances (output 1.1.5).

Output 1.1.4. Three gender sensitive updated EDUCCA municipal programmes that address elimination of single-use plastics.

34. The results of the trials (outputs 1.1.2 and 1.1.3) will be used to prepare gender sensitive Social and Behaviour Change Strategies that will be mainstreamed into the EDUCCA programmes of the three municipalities (Figure 13 and Figure 14). This will be done in close coordination between MINAM's specialists and the EDUCCA teams of the municipalities, with the support of the GPE. The updated programmes will go through the pertinent approval process, first, by the municipal councils and, finally, by MINAM. It is expected that MINAM will mainstream the main learning of the project into the national guidelines of the EDUCCA programme for nationwide application.

Output 1.1.5. Three updated ordinances and implementing tools to eliminate single-use plastics.

35. The results of the trials (outputs 1.1.2 and 1.1.3) and the pertinent developments of national regulations (e.g., EPR) will be used to prepare proposals of municipal ordinances to eliminate single-use plastics and to manage plastic residues. The project will contract a lawyer to assist the municipal teams in the preparation of the proposals and the package of complementary implementing tools.

Output 1.1.6. Promising startups that provide circular solutions to plastic pollution engaged with business accelerators.

36. First, the project team will identify business accelerators interested in circular solutions for the food and beverage sector. The starting point will be the network of business accelerators of PRODUCE's ProInnovate^[7] programme. Then, during the implementation of the trials (output 1.1.2), the project team will identify Micro and Small Businesses that produce and offer promising circular solutions that could benefit from business development support. Next, the project will promote that the promising MYPES and the business accelerators get together to explore opportunities for collaboration. As an affirmative action the project will give particular attention to women-led MYPES. Finally, the project will support that PRODUCE and MINAM jointly organise an open one-day business roundtable to bring together companies that offer circular solutions to plastic pollution from the food and beverage sector (with emphasis on MYPES) and business accelerators. A memoir of the event will be prepared and widely disseminated.

Component 2. Strengthen involvement and collaboration of public and private sectors.

37. This component will focus on reducing the use of plastics by producers and retailers through voluntary measures built upon constructive private – public dialogue and collaboration. For this, the project will strengthen the APL framework (outcome 2.1) and foster public-private technical working groups on circular design of beverage bottles and food packaging (outcome 2.2) (Figure 13). The project will promote sex-balanced participation whenever possible.

Outcome 2.1. Clean Production Agreements focused on the food and beverage sector reduce the use of plastics.

38. At the end of the project, it is expected that an increased number of producer and retailer companies of the food and beverage sector implement APLs. Until April 2024, a total of 34 APLs had been signed, of these, seven were with companies of the food and beverage sector (all large enterprises). Only two APLs had been signed with a supermarket chain (i.e., the APL signed with CENCOSUD in 2021 and the APL signed with Tottus in 2023). It is expected that the increased number of APLs will, in turn, result in a reduction in the use of plastics in beverage bottles, food containers and packaging.
39. To achieve this outcome, the project will generate three outputs (Table 7), starting with revising the APL directive to make it more appealing to the food and beverage sector (output 2.1.1), and strengthening the APL platform to facilitate the provision of information to businesses and the monitoring, reporting and evaluation of the APLs (output 2.1.2). Then, actively engage with companies of the food and beverage sector to promote that they implement APLs (output 2.1.3). Finally, based on the experience and learning to be generated, update again the APL directive (Figure 13).

Output 2.1.1. APLs directive assessed and updated.

40. Since their inception, APLs have a set duration of one year and provide as a “reward”, after completing the agreed targets, a “recognition” that can be used in the promotion of the company’s products or services. The latest version of the APL directive (i.e., Ministerial Resolution 175-2023-MINAM of May 2023) maintains the APL duration in one year and includes as a “reward” a diploma and the use of a “recognition seal” for 18 months. During the project preparation phase, it was found that these “rewards” do not seem sufficiently appealing to businesses.
41. First, the project will support an in-depth assessment of the APL instrument with emphasis on understanding the motivations of food and beverage companies for implementing APLs (e.g., bottling companies, snack food companies, supermarkets, restaurants, manufactures of plastic bottles and food packaging). The analysis will include:
 - The identification of motivations and barriers from the perspective of the companies of all sizes (micro, small, medium, and large), building upon the extensive literature about conservation agreements and voluntary conservation.
 - The identification of capabilities, opportunities, and motivations of business decision-makers related to the decision of engaging into APLs (COM-B model).
42. Second, the results of the assessment will be used to refine the APL framework by:
 - Introducing appropriate incentives (including green nudges) and removing barriers to make the instrument more appealing as well as accessible to micro, small and medium sized enterprises.
 - Linking APLs with the new EPR regulation (outcome 3.1).
 - Connecting APLs with the network of production and market incentives like Peru Compras, Perú Produce, ProInnovate and the Law 30309.

The analysis will be jointly done by MINAM, MIDAGRI and PRODUCE to have a wider perspective and to foster a whole-of-government approach response. The renovated APL framework will be adopted by issuing a new APL directive.
43. Third, to monitor the new agreements (see output 2.1.3) and systematically analyse through in-depth interviews, focus groups or other instruments: (i) how the APLs and the related incentives and nudges are acknowledged and perceived by the companies of the food and beverage sector, and (ii) the behaviour determinants of pertinent decision-makers.
44. Finally, the learning will be used to update the APL framework and to issue a new APL directive. Also, the experience will be systematised into a knowledge document to be widely disseminated and made available through the SINIA and IW:LEARN portals (outputs 4.2.3 and 4.2.5). The preliminary title is lessons on improving APLs to foster reduced plastic use in the food and beverage sector.

Output 2.1.2. An upgraded APL platform for monitoring and reporting.

45. At the moment the APL webpage is very basic and does not include facilities for reporting, monitoring and evaluation of the clean production agreements. The project will invest in software development and hardware to build an APL platform with improved capabilities. The new platform will be aligned and connected with the network of MINAM’s information systems (e.g., SIGERSOL) and will accommodate the needs of the updated APL directive (paragraph 121).

Output 2.1.3. At least eight new APLs signed with supermarkets, convenience stores, producers of mass consumption products, and fast-food restaurants.

46. After the issuing of the renovated APL directive (paragraph 121) the project will co-sponsor a promotional campaign to advertise the APLs to the food and beverage sector (micro, small, medium, and large enterprises). The emphasis will be on supermarkets, convenience stores, producers of mass consumption products (e.g., beverages, snack food companies), fast-food restaurants and producers of food-contact plastic items and packaging. The campaign will integrate gender considerations, ensuring that the messages and materials promote gender equality and women's empowerment. In parallel, MINAM personnel will engage in direct communication with companies and business organisations to promote APLs, ensuring equitable practices in all interactions.

47. It is envisaged that the promotional campaign will be a joint effort of MINAM, PRODUCE and key private partners like the National Society of Industries and ABRESA. The project will contribute to the design of the promotional campaign, the preparation of some communication materials and the implementation of the campaign in the three target districts. The GPE will ensure that the promotional campaign and communication materials are gender sensitive and use inclusive language.
48. The development and performance of the new agreements will be monitored. The project will provide technical assistance and tools to systematically document and analyse the development of these APLs and to identify key enablers and barriers (paragraph 122). The learning will be used to further refine the APL framework (output 2.1.1). Finally, the learning will be distilled into a lessons document on improving APLs to foster reduced plastic use in the food and beverage sector (output 4.2.3).

Outcome 2.2. Public-private agreements facilitate plastic reduction and circularity of beverage bottles and food packaging.

49. The project will implement actions aimed at: (i) improving the recyclability and reducing the amount of plastics used in beverage bottles and food packaging (e.g., containers, wrappers), and (ii) motivating dialogue about safer food-contact plastic items. To achieve this outcome, the project will generate four outputs that will be based on the implementation of two public – private Technical Working Groups on Circular Design of beverage bottles and food packaging (paragraph 88) (Figure 13) (Table 7). The centrepiece will be to facilitate constructive dialogue between public and private stakeholders grounded on scientific evidence (output 4.2.4). The project will promote sex-balanced participation when possible.
50. It is planned that MINAM will convene an Intersectoral Coordination Body to ensure a whole-of-government approach response in the public – private dialogues and to jointly develop the draft regulation on circularity of beverage bottles and food packaging (output 2.2.4) and the instruments to be developed as part of outcome 3.2. The core team of the Intersectoral Coordination Body will be MINAM, PRODUCE, MINSA, and MINEDU. Other pertinent sectoral entities will be convened as pertinent.

Output 2.2.1. Industry endorsed design guidelines for beverage PET bottles.

51. The project will support that MINAM and PRODUCE convene a public – private Technical Working Group on Circular Design of Plastic Beverage Bottles. The working group will be open to producers of plastic bottles, bottling companies and key industry stakeholders like SNI Plastics Committee and will include representatives from MINSA and pertinent academic entities.
52. The aim of the Technical Working Group on Circular Design of Plastic Beverage Bottles will be to analyse options to improve bottle design aiming to a bottle-to-bottle closed loop. A preliminary list of topics for analysis includes (i) the materials used in bottles, caps, and labels, (ii) the use of coloured PET and caps, (iii) the removal of external labels (aiming towards a label-free PET beverage bottles), (iv) the incorporation of recycled plastics into the beverage bottles, (v) the reduction or elimination of shrink wrap and plastic rings in bottle packaging, (vi) the use of understandable labelling of the plastic type and country-specific recycling options, among other. The project will motivate that the working group discusses about expanding the use of reusable beverage bottles and related deposit return schemes.
53. It is foreseen that the working group will agree on rules of operation and adopt an agenda of topics and a roadmap for discussion. The project will provide expert facilitators and technical assistance to support the process and to develop constructive dialogue and consensus building. Policy briefs will be prepared to assist the discussion and to support science-based decision making (output 4.2.4). The agreements of the Technical Working Group on Circular Design of plastic beverage bottles will be recorded and compiled in a memoir of the process.
54. Based upon the results of the technical working group, the project will encourage that the bottling companies prepare and adopt industry design guidelines for PET bottles (produced in the country and imported). For this, the project will provide technical assistance and information about circular guidelines used in other countries, like the 'Voluntary Design Guidelines for Designated PET Bottles' of Japan or the "Design for Recycling Guidelines for PET bottles" of the European PET Bottle Platform.

Output 2.2.2. Guidelines for circular design of beverage bottles and food packaging.

55. First, the project will support that MINAM and PRODUCE convene a public – private Technical Working Group on Circular Design of Plastic Food Packaging (e.g., ready meals, take-away and delivery, fruits and vegetables, wrappers). The working group will be open to producers of plastic food packaging, restaurants, convenience stores and supermarkets, as well as key industry stakeholders like SNI Plastics Committee and APIPLAST. The working group will also include representatives from MINSA and pertinent academic entities, integrating gender considerations into the design of proposed solutions
56. The aim of the Working Group on Circular Design of Plastic Food Packaging will be to analyse options to improve resources efficiency and recyclability and to advance towards a close loop of food containers, trays, wrappers and packaging. A preliminary list of topics for analysis includes (i) the types of plastic materials used in food containers, wrappers and trays (petroleum-based and bioplastics), (ii) the use of alternative innocuous circular materials (e.g., bagasse, metal) and recycled plastics for food packaging, (iii) the utilisation of reusable containers and recyclable wrappers, (iv) the use of understandable labelling to facilitate waste classification, reuse, and recycling, among other.
57. It is foreseen that the working group will agree on rules of operation and adopt an agenda of topics and a roadmap for discussion. The project will provide expert facilitators and technical assistance to support the process and to develop constructive dialogue and consensus building. Policy briefs will be prepared to assist the discussion and to support science-based decision making (output 4.2.4). The agreements of the working group will be recorded and compiled in a memoir of the process.
58. Second, the project will provide technical support to MINAM, PRODUCE and MINSA to develop national guidelines for circular design of beverage bottles and food packaging based upon the agreements of the two working groups (paragraphs 130 and 134) and international experience. It is foreseen that the guidelines will be formally adopted by the Peruvian government through a legal instrument to be decided. The guidelines will be published and widely disseminated and communicated.

Output 2.2.3. Initial list of chemicals and polymers of concern used in food contact plastics.

59. The project will provide technical support to MINSA, PRODUCE and MINAM (the Intersectoral Coordination Body) to bring to discussion in the two technical working groups the issue of chemicals that are present in food-contact plastics. A policy brief will be prepared building upon up-to-date international information (Chatam House, 2023; Landrigan et al., 2023; Wagner et al., 2024) and the discussions within the framework of the negotiations of the International Legally Binding Instrument on Plastic Pollution, Including in the Marine Environment (ILBIPP). It is foreseen that the producers of food-contact plastic items release the information about the additives and chemicals present in the feedstock that they use.
60. The project will sponsor that a team of Peruvian scientists compile a first commented list of chemical and polymers of concern using the information from the industry and other reliable sources. This list will be analysed with MINSA, PRODUCE and MINAM and then formally published by the Peruvian government through a legal instrument to be decided. The project will support a gender sensitive information campaign to widely disseminate the list of chemical and polymers of concern in food contact plastics. The project team will ensure that the information and communication materials are mainstreamed into the EDUCCA programmes of the three target districts and that key messages are channelled to pertinent audiences and incorporated into the Peru Limpio Strategy.

Output 2.2.4. Draft regulation on circularity of beverage bottles and food packaging.

61. The learning and results of the previous outputs will be used to propose a new regulation about circularity of beverage bottles and food packaging in Peru. The level and type of regulation will be decided together by MINAM, MINSA and PRODUCE (within the Intersectoral Coordination Body) to foster a whole-of-government approach.
62. The project will provide technical support to prepare the draft regulation and the explanatory memorandum (i.e., a technical file), which contains the legal, cost-benefit and impact analyses and other requirements stated in the “Framework Law for Legislative Production and Systematization” (Law 26889) and its regulation. A technical and legal team of MINAM, MINSA and PRODUCE will ensure that the package is sound and will undertake the necessary consultations to refine the proposal.
63. At the end MINAM, MINSA and PRODUCE will use the draft regulation to undertake the formal process of regulatory quality assessment, Regulatory Impact Analysis, public consultation, and approval.

Component 3. Strengthen the national framework.

64. To further the transformation of the current situation, the project will strengthen the national framework for the management of plastics from the food and beverage sector. For this, the project will support the initial implementation of the new EPR regulation (outcome 3.1) and the development of new instruments to accelerate circularity and to reduce the use of plastics by building upon the results of the present initiative (outcome 3.2) (Figure 13) (Table 7).

Outcome 3.1. Extended Producer Responsibility is implemented in the food and beverage sector.

65. It is foreseen that the EPR regulation will be approved during 2024, therefore the project will contribute to develop key instruments to operationalise its implementation (paragraph 29). The project will aid to:
- Expand the capacity of the SIGERSOL to manage the increased load of monitoring and reporting information (e.g., the Annual Producer Declaration, articles 13 and 14 of the draft EPR regulation) (output 3.1.1).
 - Develop the methodology to set the targets for selective collection and valorisation of plastic containers and packaging (articles 21-24 and third and fourth complementary mandates of the draft EPR regulation) (output 3.1.2) and the catalogue of infractions and sanctions of the new regulation (first complementary mandate of the draft EPR regulation) (output 3.1.3).
 - Prepare online courses to train key actors to facilitate the implementation of the new regulation (e.g., municipal officers, private sector) (output 3.1.4).
66. The project will contribute to the design of an information campaign and communication materials to inform key audiences about (i) the EPR regulation, (ii) the use of SIGERSOL, (iii) the targets for selective collection and valorisation of plastic containers and packaging and (iv) the catalogue of infractions and sanctions. The GPE will ensure that the information campaign and communication materials are gender sensitive and use inclusive language.
67. Finally, the learning will be distilled into a lessons document on the initial implementation of EPR on the Peruvian food and beverage sector (output 4.2.3).

Output 3.1.1. SIGERSOL upgraded to manage EPR monitoring and reporting.

68. At the moment the SIGERSOL does not have the capacity to handle the vast amount of data needed for monitoring, reporting and evaluation of the REE Management Plans, the Annual Producer Declarations and other mandatory inputs. Therefore, the project will complement MINAM's investment by providing software, hardware, and temporary personnel to strengthen the capacity of the SIGERSOL platform, to develop the pertinent module(s), and to prepare the required procedures and management instruments. Of course, the emphasis will be on managing the information from plastic items from the food and beverage sector (e.g., bottles, food containers and packaging).
69. A baseline customer satisfaction survey, based on a five-point Likert scale, will be run after the new module(s) are launched. The project will contribute to the design and analysis of this survey. Afterwards, MINAM will apply further biannual surveys to measure customer satisfaction and to obtain valuable feedback to refine the operation of the SIGERSOL module(s).
70. Finally, the project will also contribute to the preparation of communication materials to inform and guide SIGERSOL users. Pertinent information will be mainstreamed into the Aula APRENDE online courses (output 3.1.4).

Output 3.1.2. Formally adopted methodology to calculate collection, valorisation and returnability targets to implement EPR regulation.

71. According to the draft EPR regulation (paragraph 29), within 30 months after the regulation is issued, MINAM must set and publish the targets for selective collection and valorisation of container and packaging residues. After that, MINAM must update the targets every five years. The producers are obliged to set individual targets into their operations and to report their achievements into the Annual Producer Declarations. The project will provide specialised technical assistance and international experience to support MINAM in:

- The development of the methodology to calculate the pertinent targets, with emphasis on food containers and packaging (e.g., beverage bottles, wrappers, snack bags), and
 - The preparation of the Ministerial Resolution and complementary operational instruments (e.g., internal procedures and manuals) to set and issue the targets.
72. The project will also contribute to the preparation of communication materials and an information campaign to notify key audiences. Pertinent information will be mainstreamed into the Aula APRENDE online courses (output 3.1.4).

Output 3.1.3. Catalogue of infractions and sanctions of the EPR regulation.

73. According to the draft regulation OEFA must adopt the catalogue of infractions and sanctions (see above). It is envisaged that MINAM and OEFA will establish a working group to develop this instrument. The project will contribute to the work of MINAM and OEFA by:
- Providing legal assistance and bringing international experience to support the development of the catalogue of infractions and sanctions and the complementary instruments needed to expedite implementation (e.g., internal procedures).
 - Providing legal assistance for the preparation of the formal instruments to issue and adopt the catalogue of infractions and sanctions.
 - Preparing an information campaign and communication materials to inform key audiences, ensuring that the information campaign and communication materials are gender sensitive and use inclusive language.

Output 3.1.4. Aula APRENDE gender sensitive online courses for key stakeholders to advance the implementation of EPR regulations.

74. Aula APRENDE is an online Moodle platform that provides training to public and private environmental managers, municipalities, regional governments, and the public. Its main purpose is to develop capacities of civil servants to improve environmental management. Aula APRENDE contains a range of regular and occasional courses (self-paced and distance learning with tutoring) on topics like management and valorisation of municipal waste residues, and environmental education for teachers, among other. At the moment, Aula APRENDE does not include specific training about plastic pollution and the management of plastic residues.
75. The project will contribute to the development of self-paced online courses to support the implementation of the EPR regulation. In particular, the courses will assist target audiences in topics like (i) the general requirements of the EPR regulation (e.g., reporting, targets for selective collection and valorisation, catalogue of infractions and sanctions), (ii) the preparation of the Annual Producer Declaration, (iii) the use of the SIGERSOL platform for reporting, and (iv) the application of the EPR regulation in provincial and district municipalities. The target audiences will be producers, importers, retailers, municipal officers, and the general public.
76. It is planned to develop five courses in total: (i) one for private sector audiences (producers, importers, retailers), (ii) one for municipal officers, (iii) one for the general public, and (iv) two for EDUCCA teachers and promoters (a course on measures to fight plastic pollution and an introductory course to the EPR regulation). The course on fighting plastic pollution will have two versions. The first will be launched during the first year of project implementation. The second (updated) version will be prepared at the end of the third year of project implementation, using the learning from the project. The GPE will ensure that the courses are gender sensitive and use inclusive language. In all cases, it is conceived that the Aula APRENDE courses will integrate learning from the trials in the target districts (outputs 1.1.2 and 1.1.3).

Outcome 3.2. New instruments accelerate plastic reduction and circularity in the food and beverage sector.

77. The learning generated by the project will be used to prepare three instruments to accelerate a reduction in the use of single-use plastics and to increase circularity in beverage bottles, food containers and packaging (Figure 13):
- A set of national regulations to reduce the use of plastic carrier and produce bags and to promote circular food contact materials (output 3.2.1).

- A collection of national guidelines to implement single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants (output 3.2.2).
- A government strategy to scale-up circular solutions and improved practices in markets, supermarkets, food courts and fast-food restaurants (output 3.2.3).

78. It is conceived that MINAM, MINSA and PRODUCE together will provide a whole-of-government approach to the development of these three instruments (paragraph 129).
79. In the long-term it is expected that these instruments (together with other measures like APLs and the implementation of the EPR regulation) will generate a significant reduction in the amounts of plastic bags, beverage bottles, food containers and food utensils found in the municipal waste.

Output 3.2.1 National regulations for plastic carrier and produce bags and food contact plastics incorporating gender-responsive considerations that address differentiated impacts on and roles of women and men in plastic use, disposal, and alternatives.

80. The project will provide technical assistance to prepare specific national regulations for plastic carrier and produce bags^[8] and food contact plastics, based upon the experience of the trials (i.e., the trial reports and the feasible solution reports), the Working Group on Circular Design of Plastic Food Packaging, the initial list of chemicals and polymers of concern and the project learning. The purpose will be to phase out the use of single-use plastic bags and to promote the use of circular and innocuous alternatives to food packaging. The level and type of regulations will be decided by the Intersectoral Coordination Body (see above); these could be technical regulations, complementary supreme decrees to regulate specific plastic items, among other.
81. The project will provide technical support to a technical and legal team of the Intersectoral Coordination Body to draft the regulations that will be, afterwards, issued by the pertinent administrative processes.
82. Finally, the project will also contribute to the design of communication materials and an information campaign to notify key audiences, ensuring that gender responsive considerations are integrated throughout the materials and messages. The information campaign will be implemented by MINAM.

Output 3.2.2. National guidelines to implement single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants.

83. The results of the trials (outputs 1.1.2 and 1.1.3) will be used to prepare four sets of national guidelines to advice (i) markets, (ii) supermarkets, (iii) food courts and (iv) fast-food restaurants on the implementation of measures to reduce or eliminate single-use plastics. The proposed actions will include behaviour change tools and green nudges identified during the trials. The national guidelines will be voluntary, though will be formally issued by MINAM and / or PRODUCE, as pertinent.
84. It is foreseen that the four guidelines will be electronic documents hosted in the SINIA and accessible through this and other pertinent public and private web portals. The GPE will ensure that the guidelines have gender differentiated actions and use inclusive language.
85. The project will co-sponsor a promotional campaign to advertise the national guidelines to target audiences (e.g., owners of small restaurants, managers of fast-food restaurants and supermarkets, civil society organisations). It is envisaged that the promotional campaign will be a joint effort of MINAM, PRODUCE, key private partners (e.g., the partners of the trials) and civil society organisations. The project will contribute to (i) the design of the promotional campaign, (ii) the preparation of some communication materials and (iii) the launching events in the three target districts. The GPE will ensure that the promotional campaign and communication materials are gender sensitive and use inclusive language.

Output 3.2.3. Government strategy to scale-up circular solutions and improved practices using social and behavioural change in markets, supermarkets, food courts and fast-food restaurants.

86. The project will support the process to prepare and adopt a government strategy to scale-up to the national level the viable circular solutions and improved practices identified during project implementation (outcome 1.1). This strategy will be in line with the developments of the public – private dialogue (outcome 2.2), the implementation of the EPR regulation (outcome 3.1), the national regulations for plastic bags and food contact plastics (output 3.2.1) and the learning from other projects and initiatives. The aim of the strategy will be to eliminate single-use plastics and to apply circular economy measures and practices in markets, supermarkets,

food courts and fast-food restaurants. The project will ensure that the strategy has gender differentiated actions and uses inclusive language.

87. To ensure a whole-of-government approach the strategy will be developed within the framework of the Intersectoral Coordination Body. The project will provide technical assistance and logistic support to the Intersectoral Coordination Body.
88. An intersectoral participatory process will be executed to prepare a strategy that is in line with national policies and strategies and grounded in long-term public initiatives and programmes. It is foreseen that key initiatives of the private sector and civil society organisations will be invited, as pertinent, to join the planning process to ensure synergies and complementarity. The final strategy will have time-bound specific targets, key performance indicators and a coordination and implementation mechanism, and will be formally adopted by a legal instrument to be decided.
89. The project will facilitate meetings and dialogue to motivate collaborative agreements with private sector, municipalities, and civil society organisations to advance the implementation of the scale-up strategy. It is expected that at least three collaborative initiatives are signed before the project end.
90. Finally, the project will contribute to publish and disseminate the strategy and to implement in-person and virtual events to inform key audiences. The materials and events will be gender responsive

Component 4. National and Program-level Coordination, Knowledge Management and Communication

91. As explained in the theory of change, the project is grounded on an experiential learning approach supported by strong knowledge management and communication actions (Figure 13). This component will focus on (i) ensuring effective coordination at the national level among key public and private partners and at the global level with the Global Platform (also called Global Project | GEF ID 11197) and the other child projects (outcome 4.1), and (ii) fostering knowledge sharing about circular solutions to single-use plastic pollution from the food and beverage sector (outcome 4.2). There will be a Knowledge Management Expert (KME) and a Communication Expert that will support the implementation of this component.

Outcome 4.1. Effective national and global coordination including active participation and contribution to global project meetings and working groups.

92. National and global coordination mechanisms (outputs 4.1.1 and 4.1.2, respectively) will be established to ensure effective collaboration and synergies during project implementation.

Output 4.1.1. National level coordination mechanism established and implemented.

93. The core elements of the national-level project coordination mechanism will be the Project Management Unit (PMU) and the Project Steering Committee (PSC). The project will have a three-month inception phase during which the Executing Agency (i.e., WWF) will undertake the following actions:
 - i. Contract the members of the PMU during the first two months of project implementation. The PMU will be responsible for the day-to-day management of the project. The integration of the PMU is detailed below in the institutional arrangements section, and the terms of reference of the personnel are found in the Attachment 3e of Appendix 3.
 - ii. Request the formal designation of the delegates of the entities that integrate the Project Steering Committee. The details about the organisation and operation of the Project Steering Committee are detailed below in the institutional arrangements section and Appendix 5.
 - iii. Sign collaborative agreements for project implementation with the three target municipalities, business partners and civil society organisations. This includes applying WWF's due diligence to business partners.
94. The inception phase will end with the implementation of the Inception Workshop, during the third or fourth month after project initiation, in which the Project Steering Committee will review the workplan and budget for the first year and adopt pertinent execution tools and agreements. After this first meeting the Project Steering Committee will hold regular meetings, at least once per year.

95. There will be four project-level coordination mechanisms (Figure 19). The project will promote sex-balanced participation when possible.
- i. **Technical Coordination Group** to facilitate collaboration, synergies, and cross-fertilisation of ideas among project partners. The Technical Coordination Group will be composed by formally designated delegates from public partners (MINAM, PRODUCE, MINSA, MINEDU, INACAL), the district municipalities of San Martín de Porres, Cayma and Tarapoto, the associations of recyclers of the three target districts, private partners (to be confirmed before project initiation), civil society organisations (e.g., Grupo GEA, Recicla Consciente) and academia (to be confirmed before project initiation). It is foreseen that the Technical Coordination Group will meet frequently, as required by the dynamics of project implementation, at a minimum four times per year.
 - ii. An **Intersectoral Coordination Body** to foster a whole-of-government approach to dealing with single-use plastics and promoting circular solutions to confront the plastic pollution generated by the food and beverage sector. The core team of the Intersectoral Coordination Body will be MINAM, PRODUCE, MINSA, and MINEDU. Though, other sectoral entities will be convened as pertinent.
 - iii. Three **District Coordination Groups** (one on each target district) that integrate representatives of the partner markets, supermarkets, food courts, fast-food restaurants, district municipalities, and pertinent recyclers organisations to support the implementation of the trials and to analyse their results (outputs 1.1.2 and 1.1.3). The project will connect the three District Coordination Groups to exchange ideas and experiences.
 - iv. Two **Technical Working Groups on Circular Design** of (i) beverage bottles and (ii) food packaging to develop outputs 4.1.1, 4.1.2 and 4.1.3. Each group will integrate representatives of pertinent key stakeholders like bottling companies, producers of plastic items (e.g., PET preforms, snacks wrappers), the SNI Plastics Committee, retailers, key public entities (e.g., MINAM, PRODUCE) and pertinent academic entities.
96. The PMU will prepare an Exit Strategy building upon the results of the Mid-Term Review (see below). The Exit Strategy will be a planned set of actions to ensure that the project outcomes and benefits are sustained after project closure. The draft Exit Strategy will be analysed with the Global Project team and the Technical Coordination Group before being presented to the Project Steering Committee for review and approval.
97. The PMU together with pertinent parties (e.g., MINAM, private partners, district municipalities) will implement the approved Exit Strategy, will submit quarterly progress reports to the Project Steering Committee, and will include progress information in the annual Project Implementation Reviews (see below).

Output 4.1.2. Coordination and active participation and contribution to Global Project meetings and working groups.

98. The Global Platform's objective is to optimise the delivery of a cohesive programme across 15 countries to enhance replicability and address global barriers to reducing plastic pollution in the food and beverage sector. As such various mechanisms are envisaged to ensure regular coordination with each of the national child projects. These include the participation of relevant staff and consultants in virtual meetings and the contribution and review of documents, with the overall aim of ensuring alignment and exchange across the national projects.
99. The Peru child project will implement the following actions to ensure coordination with the Global Platform:
- Participation and contribution of inputs (to documents, agenda, etc) in the Annual Conference, starting in 2025, in order to share and exchange experiences, knowledge and best practices. Representation from government and the Project Management Unit have been budgeted.
 - Attendance and contributions to at least 2 virtual learning sessions on relevant topics per month, in order to apply IP assets to national planning and adapt these to the local national context.
 - Participation and contributions to working groups organized by the Global Project, in particular the Advisory Committee, Private Sector Working Group and Technical Working Group meetings.

The project will privilege the participation of women on these meetings, and the language to be used will be gender responsive.

Outcome 4.2 Increased national and global knowledge and awareness on circular solutions to single use plastic packaging pollution from the food and beverage sector.

100. The project will emphasise on facilitating sound communication and documenting and sharing the lessons. For this, two lines of work will be developed:

- To facilitate communication and information flow among key project stakeholders, the other child projects and the members of the Global Project (outputs 4.2.1 and 4.2.4).
- To systematically document, share and disseminate project knowledge and lessons (outputs 4.2.2, 4.2.3, and 4.2.5).

Output 4.2.1. Communication and Knowledge Management strategy developed and implemented for the project developed and implemented using the Global Project, and other relevant platforms.

101. The project will have both a communication strategy and a knowledge management strategy to guide project-level activities as well as collaborative activities with the Global Project, and other platforms.

Project communication strategy

102. At project start, the Communications Expert will establish a “communications working group” with the communication officers of the project partners (public, private, NGOs). Each entity will designate a delegate that will integrate the working group and that will be the channel for the flow of information and communication materials. This workgroup will prepare and agree:

- annual work plans that will be jointly implemented and evaluated, and
- protocols and procedures for collaboration and joint actions.

103. The Communications Expert will prepare press materials and news, but their dissemination will be done through the channels and social networks of the project partners (e.g., YouTube, Instagram, Twitter). These channels will be the main means to conduct the messages of the communications and knowledge transfer strategies.

104. In the second quarter of project implementation, the Communications Expert will prepare:

- A detailed Project Communication Strategy in line with the Global Project Communication Strategy. The purpose of this strategy will be to transmit vital information about the project throughout its implementation. The strategy will focus on the key stakeholders (Attachment 3c of Appendix 3) and the project beneficiaries (Table 12). It will include: (a) actions for wide dissemination of the core ideas about circular solutions to the plastic pollution generated by the food and beverage sector^[9], (b) regular contributions to the Global Project and IW: LEARN networks (e.g., news, results and experience notes, factsheets, lessons documents), and (c) the conceptual framework for the array of promotional and information campaigns to be implemented and communication materials to be prepared during project implementation. The Project Communication Strategy will be analysed with the members of “communications working group”, and it will be executed through annual joint work plans. At the end of each year, the communications working group will evaluate achievements and performance of the project’s communication strategy and it will make relevant adjustments.
- A project brief that outlines the objective, expected outcomes and scope of the project. The project brief will be a concise, visually appealing electronic document written in plain language to be accessible to the general public. In Peru, the project brief will be accessible through the project website landing page (see below) and the pertinent channels of the project partners. An English version will be prepared and uploaded to the Global Project and IW: LEARN portals.
- Three guidelines to be agreed with the partners and implemented in all project actions:
 - i. Organisation of sustainable plastic-free events (e.g., UNDP guidelines for sustainable events, UNEP sustainable events guide, the Green Events Tool, and the guide to plastic-free events).
 - ii. Gender-sensitive behaviour and the use of inclusive and gender-sensitive language.
 - iii. Organisation of inclusive meetings and events (e.g., Harvard Inclusive Meeting Guide).

105. The Communications Expert, in coordination with the “communications working group”, will prepare communication materials to implement the project’s communication strategy.
106. Finally, as part of the communication strategy, the project will have initiation and closing events.
 - The initiation events will be held in Lima (San Martin de Porres district), Cayma and Tarapoto to convene the project partners and key stakeholders. The meetings will be held during the second quarter of project implementation. In these meetings, key stakeholders will (i) be informed of the first year workplan and the implementation arrangements (as agreed in the Inception Workshop), (ii) confirm their contributions and participation in project implementation, and (iii) agree on coordination mechanisms for each outcome.
 - The closing events will also be held in Lima (San Martin de Porres district), Cayma and Tarapoto to present the project results and lessons to project partners, key stakeholders and interested audiences. The project memoir, the four short videos (see below) and the lesson documents (output 4.2.3) will be presented in the closing events.

Project webpage

107. The project will have a webpage within the portal to be developed by the Global Platform. The WWF Peru portal will host a simple web landing page, in Spanish and English. This landing page will be linked to the websites of the project partners, core entities, and to the Global Project and IW:LEARN portals. It is planned that both the web landing page and the project webpage will be online by the end of the first semester of year 1. The Communications Expert will be responsible for managing the web landing page and the project webpage.
108. If necessary, accounts will be created and maintained in virtual platforms and social networking sites (e.g., Facebook, Twitter, YouTube, Instagram) that are accessible to the target audiences of the project. However, the priority will be that information flows through the partner channels and networks.

Project strategy for knowledge management

109. In the second quarter of project implementation, the Knowledge Management Expert will prepare the Project Strategy for Knowledge Transfer. The purpose of this strategy will be to capture project knowledge, transfer it to pertinent key stakeholders and make it available to interested parties in Peru and worldwide. The Project Strategy for Knowledge Transfer will be synergic with (i) the communication strategy, (ii) the gender action plan, and (iii) the stakeholders engagement plan, and will be in line with the Global Project Knowledge Strategy.
110. Two core elements of the strategy will be: (i) to ensure that all the information and knowledge products (e.g., policy briefs, lessons documents) is uploaded into the SINIA (output 4.2.5), and (ii) to ensure close coordination and collaboration with IW:LEARN.
111. The project will actively contribute information and knowledge to the IW:LEARN network (e.g., experience and results notes, lessons documents). The Gender and Participation Expert will ensure that the project submit contributions to the IW:LEARN Gender Hub. It is expected that that the Peru project will contribute a minimum of 10 communication and knowledge products to the IW:LEARN portal, including at least two contributions to the Gender Hub. Also, to support dissemination of advances and lessons, GEF resources will be invested to support participation of members of project team and partners in the International Waters Conferences (IWC) of 2026 and 2028.
112. In line with the project knowledge strategy, the Knowledge Management Expert will establish both methods and procedures for the project team to systematically document the experience of the project and finally prepare documents that present the project learning (output 4.2.3). The Knowledge Management Expert will provide practical guidance to the project team so that they can adequately document experiences and good practices. The Gender and Participation Expert will ensure that these actions capture social, gender and intergenerational aspects.
113. GEF resources will be invested to support participation in the international waters’ conferences (IWC) of 2025 and 2027.
114. The project knowledge strategy will include as knowledge products: (i) seven lessons documents (output 4.2.3), (ii) a final memoir, and (iii) four short videos that systematise the project experience. The memoir will be prepared in the final year to summarise the whole project experience. It will be an electronic document in plain language with a very graphic format to be presented in the closing event and distributed through the channels and social networks of the project partners. The memoir will include a summary in English for international

audiences. In addition, four videos will be prepared during the third and fourth years of project implementation. These will summarise the project achievements and lessons, including testimonies of key stakeholders and beneficiaries. The short videos will include subtitles in English and will be made available through IW: LEARN, the project partners websites and YouTube. The Gender and Participation Expert will ensure that the videos include gender and intergenerational perspectives.

Output 4.2.2. Contribution to the Global Project knowledge management and communication.

115. The Global Project includes Component 3 on Knowledge Management and Communication which aims to integrate actions across all participating child projects for programme coherence and to enable synergies through knowledge management and coordination activities. These will foster the sharing of project lessons and experiences among and beyond the national projects. It will also promote coherence of indicators and implement a cohesive communications strategy to drive the uptake of solutions beyond the national child projects, and to amplify impact and behaviour change to a broader audience. The following actions are planned:
- Integrated communications strategy: website, branding materials, communication products, and stakeholder engagement events developed.
 - Integrated knowledge management strategy: annual conferences, knowledge sharing sessions, webinars, capacity development activities organised.
 - Best practices and success stories from all projects of the programme and other knowledge products developed.
116. As indicated in output 4.2.1, the Peru project will develop project-level communication and knowledge strategies in accordance with the strategies of the Global Project. In addition, the following actions will be taken to ensure that the Peru project contributes to the Global Project:
- Designate focal points to liaise and coordinate with the Global Project team (i.e., the Communications Expert and the Knowledge Management Expert).
 - Ensure alignment with the IP branding guidelines and the communications strategy.
 - A designated project staff from PMU will be responsible for liaising with the Global Project on communications matters related to the Program.
 - Sharing of key knowledge and communication products (in English) to the Global Project Web-site; if needed, translate Global Project content for national partners and stakeholders to increase uptake.
 - Provide updates and inputs to the project webpage (to be hosted on the Program website).
 - Share challenges and successes with the broader IP (through virtual meetings and online forum) and the contribution to the broader community via knowledge sharing with relevant external fora (e.g. participation in events, panels, conferences, contributing to external websites, the Global Project, etc.).

Output 4.2.3. Seven lessons documents about the application of circular solutions and improved practices in the food and beverage sector.

117. The learning of the project will be systematised into seven lessons documents. The provisional themes are:
- i. Lessons about reducing single-use plastics in markets, supermarkets, food courts, and fast-food restaurants in Peru.
 - ii. Lessons about the application of social and behaviour change tools to address plastic pollution from the food and beverage sector in Peru.
 - iii. Lessons on the application of behaviour change practices in men and women to implement circular solutions and improved practices to address plastic pollution from the food and beverage sector in Peru.
 - iv. Lessons on the role of Peruvian municipalities in fostering circular solutions and improved practices to address plastic pollution from the food and beverage sector.
 - v. Lessons on collaborative public - private circular design of beverage bottles and food packaging.

- vi. Lessons on improving APLs to foster reduced plastic use in the food and beverage sector.
- vii. Lessons document on the initial implementation of EPR on the Peruvian food and beverage sector.

118. The final list and scope of the lessons documents will be decided after the Mid-Term Review. Then, towards the end of the third year the lessons documents will be prepared. These documents will have a dissemination format (e.g., visually appealing, plain language) to be accessible to a broad audience. Each document (i) will be in Spanish with and extended summary in English for international audiences, and (ii) will be in a high-quality PDF format to be downloaded from the web (no paper printing to save natural resources).
119. Finally, the lessons documents will be presented in the closing events, uploaded to the SINIA and the IW:LEARN portals, and widely disseminated through different channels within Peru, to the audiences of the other child projects and to international audiences.

Output 4.2.4. Policy briefs and plastic pollution dialogues to foster science-based decision making.

120. The project will foster the use of policy briefs to support public-private dialogue and fact-based decision making. The policy briefs will be succinct and precise documents, written for non-specialists, that provide balanced information about a problem with options and specific recommendations to address it.
121. During the first year the project team will formulate a guide for preparing policy briefs building upon the experience of specialised personnel of MINAM, WWF and UNEP and key publications like the Biodiversa+ and IDRC guides, Balian et al., (2016) and Arnautu & Dagenais (2021). This guide will be applied throughout the project.
122. It is estimated that the project will sponsor the preparation of about five policy briefs, though the exact number and precise timing will be decided during project execution. It is foreseen that during the first year, policy briefs will be prepared to contribute to the two public – private Technical Working Groups on Circular Design of beverage bottles and food packaging (outcome 2.2) (preliminary topics are (i) the use of recycled plastics in beverage bottles, food containers and food packaging, (ii) human health threats from microplastics from food packaging, and (iii) chemicals and polymers of concern used in food contact plastics). However, it is very likely that other policy briefs will be needed, for example, for the draft regulation on circularity of beverage bottles and food packaging (output 2.2.4) and the national regulations for plastic carrier and produce bags and food contact plastics (output 3.2.1).
123. Policy briefs will be commissioned to recognised academics of the country. The project will facilitate access to forefront information and review by international peers using the community of professionals related to the other child projects and the WWF network. At the end, all policy briefs will be uploaded to the SINIA and the IW:LEARN portals and widely disseminated through different channels for national and international audiences.

Output 4.2.5. SINIA strengthened to be the plastic pollution national knowledge hub.

124. The project will contribute to the expansion of the SINIA to process and make available information about plastic pollution by:
 - i. Investing in software development and hardware to expand the capacities to systematise and make available information about plastic pollution (e.g., scientific publications, data from beach cleanups).
 - ii. Ensuring that all the information generated by the project is uploaded to the SINIA portal.
125. During the first year a needs assessment will be undertaken which will include two parts:
 - First, to support the personnel of DGE CIA to: (i) identify the existing sources of public and private information about the situation of plastic pollution and available circular solutions, and (ii) how to make available the most crucial findings to support decision making. For example, the data, statistics and results of the International Coastal Cleanup, Hazla por tu playa or Recicla Consciente initiatives.
 - Second, to assess the needs of software adjustment or development and complementary hardware to manage plastic pollution information.
126. Next, the project will complement MINAM's investments in software development and hardware, as pertinent, with emphasis on managing the information of the food and beverage sector. The DGE CIA personnel will ensure

the appropriate agreements with key public and private sources of information and the operation and maintenance of the pertinent modules of the SINIA to develop it to become the plastic pollution national knowledge hub.

127. The project will contribute to the design of an online promotional campaign and the preparation of some communication materials to advertise the new capabilities of the SINIA portal. The GPE will ensure that the promotional campaign and communication materials are gender sensitive and use inclusive language.
128. Finally, the project team will ensure that all the information from the present project is uploaded into the SINIA and made available to the public.

Gender equality and women's empowerment

129. The Gender Analysis and the Gender Action Plan are in the Attachments 3a and 3b of Appendix 3. There will be a Gender and Participation Expert that will support the PMU and will provide technical assistance and guidance for the gender action plan, and together with the monitoring expert, will monitor and assess progress during project implementation.
130. Peru has international and regional commitments for the promotion of gender equality and women empowerment. Peru is signatory and have ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (1985), is signatory of the Declaration and Beijing Action Plan (1995), as well as the Inter-American Convention on the Prevention, Punishment, and Eradication of Violence against Women Convention of Belém do Pará (1994).
131. The Peruvian Constitution (articles 26 and 191) expresses the mandate that there should be no discrimination based on gender and race. Law 28983 on equal opportunities for women and men aims to guarantee men and women equality, dignity, and autonomy in the exercise of their rights. The National Gender Equality Policy (Supreme Decree 008-2019-MIMP) demonstrates the Peruvian state commitment to promote full citizenship for all women in their diversity, guarantee the human rights of women in equality terms and without discrimination, and seeks to improve the effectiveness and quality of the actions of public administration entities, at all levels of government.
132. The Supreme Decree 005-2017-MIMP established a mechanism for gender equality in the entities of the national and regional governments for closing gender gaps on participation and representation. The Regional Governments of Arequipa, Lima, and San Martin, based on the Organic Law of Regional Governments (Law 27867), have ordinances for the implementation of regional councils and plans to protect the rights of women and implement concrete actions for their participation and development.
133. In terms of the state institutions there is the Ministry of Women and Vulnerable Populations (MIMP) which works to turn Peru into a country without discrimination and with equal opportunities. Its mission is to design and execute policies in favour of women and other vulnerable sectors, guaranteeing their rights and a life free of violence, as well as to follow up and report actions of gender equality integration in state institutions.
134. The Gender Inequality Index (GII) measures inequality in three aspects of Human Development: reproductive health, empowerment, and economic status, among 191 countries. Peru is in number 90 of the GII ranking, as described in Table 10. However, in reproductive health, it has a very high maternal mortality range of 88 women per 100,000 live births and a medium level of 56.8 teenage pregnancies between 15 and 19 years (births per 1,000 women), as well as unpaid domestic chores of approximately 5 hours from the 24 hours a day. Peru has important achievements in women accessing to education, although the indices of access to the labour force show that there is a gap of 15.8 percentage points between men and women, which means that although the progress in education access, the possibility to economic empowerment faces gender inequality barriers. The gender analysis makes a further explanation of the GII, gender conditions for the project implementation, and gender related national policies and regulations.
135. The gender analysis found that:
 - Peru has several international and regional commitments for the promotion of gender equality. Likewise, there is a solid public and institutional policy context for the integration of gender equality at the national level. Peru's political context is very favourable and encouraging for making major changes in gender equality aspects.

- The Peru Child Project will be focused on upstream and midstream actions, and this may limit the application of gender considerations focused mainly on women. However, some entry points have been identified to support the development and actions to give appropriate attention to gender inequality, and to address plastic problem that affects the society as a whole.
- There is extensive information about circular economy and plastic pollution, and less about gender equality in this topic. The information is focused on the traditional reproductive role of women and assigns most of responsibility to them. This does not recognize the shared responsibility of the plastic related problems to men and women in the exercise of the functionality of the households.
- People's behaviour towards plastics are understudied, moreover, there is not enough information sex desegregated. Using the "COM-B" framework for behaviour change integrating gender-differentiated elements will provide specific information about the needs, interests, and motivations of the diverse parts of the society, and this will allow to design more accurate actions, and therefore, achieve real social transformations.

Table 10. Gender Inequality Index in Peru.

Gender inequality Index (GII)		Reproductive health		Empowerment			Economic Status	
		Maternal Mortality Ratio (deaths per 100,000 live births)	Adolescent birth rate (births per 1,000 women ages 15–19)	Share of sits in parliament (% held by women)	Population with at least some secondary education (% ages 25 and older)		Labour force participation rate (% ages 15 and older)	
Index	Rank				Female	Male	Female	Male
0.380	90	88	56.8	40.0	59.3	69.9	66.1	81.9

Source: UNDP Human Development Report 2023. Gender Inequality Index

136. The Gender Action Plan (Attachment 3a of Appendix 3) delineates 17 gender specific activities to be executed during project implementation, among which are the following:

- [1] Develop baselines diagnoses that identifies gender-age related pro-environmental behaviour determinants (Output 1.1.1) to provide specific information related to the use of single-use plastic in the markets, supermarkets, food courts and fast-food restaurant in the three target districts.
- [2] Trials to be implemented in the three districts designed and built upon gender sensitive behaviour determinants (from COM-B model) (Output 1.1.2).
- [3] Trials to improve the practices to strengthen control and compliance of plastics regulations includes gender sensitive behaviour change tools (Output 1.1.3.).
- [4] Update EDUCCA municipal programmes that integrate strategies of social and behaviour change with gender-based tools and learnings from the project trials (Output 1.1.4) and register the benefits for men and women derived from their implementation.
- [5] Affirmative action to give particular attention to women led MYPES to participate in the process of development and explore opportunities for collaboration with business accelerators (Output 1.1.6.)
137. Develop campaigns with gender inclusive and gender sensitive information to advertise the APLS for food and beverage micro, small, medium, and large enterprises (Output 2.1.3), to widely disseminate the list of chemicals and polymers (2.2.3.),disseminate the catalogue of infractions and sanctions of ERP regulations (Output 3.1.3.) and develop a communication campaign to provide information about the national regulations. (Output 3.2.1)
- [6] Develop a gender sensitive online-training modulus on EPR through the Aula APRENDE and register the benefits for men and women trained by the programme (Output 3.1.4).
- [7] Project communication strategy includes a gender equality approach (inclusive language, examples, data) (Output 4.2.1.)
- [8] Develop national guidelines on the implementation of measures to reduce or eliminate single-use plastic integrating gender differentiated actions and impacts and a co-sponsored promotional campaign with communication materials using gender sensitive and inclusive language for target audiences (Output 3.2.2).
- [9] Develop a government strategy to scale-up to the national level the viable circular solutions and improved practices learned from project implementation integrating gender differentiated actions and with inclusive language. (Output 3.2.3).

- [10] Project lessons documented about the application of behaviour change practices in men and women to implement circular solutions and improved practices to address plastic pollution from the food and beverage sector (Output 4.2.3)
 - [11] Affirmative actions to ensure sex-balanced participation in project technical groups and trainings (Outputs (1.1.2.; 1.1.3., 2.1.3., 2.2.1., 2.2.2., 3.1.4., 3.2.2., 3.2.3)).
 - [12] All the project implementation activities will record sex and age data in participation, include gender considerations in hiring and procurement, and in all project reporting mechanisms. The PMU will be established by gender balance and there will be one specialized gender and participation person to support project implementation.
 - [13] All the project implementation activities will record sex and age data in participation, include gender considerations in hiring and procurement, and in all project reporting mechanisms. The project communication strategy includes a gender equality approach and will be expressed in all documents and communications. The PMU will be established with gender balance and there will be at least two capacity building trainings developed for raising awareness of gender equality aspects in the execution of the project.
138. The action plan will be responsibility of the Gender and Participation Expert that will support the project team and will give technical support for project implementation and to the trial interventions.

Stakeholder engagement

139. The stakeholders' analysis and engagement plan are in Attachment 3c of Appendix 3. There will be a Gender and Participation Expert that will support the PMU, to coordinate the implementation of the plan, and together with the MEE, will monitor and assess progress.
140. During the PPG a stakeholder analysis has been made. This analysis focused on the most relevant actors derived from the consultations and meetings for the Child project. There are 52 actors identified as key stakeholders for the Peru Child Project. There are 14 from the public sector, 11 private institutions, nine private initiatives, three public-private initiatives, seven international cooperation, five NGOs, and three from research institutions. From these 52 actors, the majority have been identified as key stakeholders due to their high level of influence and interest and for whom special attention should be given for full involvement and to apply a collaboration strategy during project execution. The stakeholder analysis and engagement plan require to be updated during the inception phase to review the stakeholders' interests and ratify the collaboration strategies.
141. A strategy for consultation and stakeholders' participation was implemented during the PPG. Therefore, the Peru project PPG phase was conducted in full consultation with and with close engagement of governmental entities, private sector, NGOs, and other relevant stakeholders - particularly, those who will be directly involved in the implementation of the project activities. The memoirs of all meetings are compiled in Appendix 12 of Participation and Engagement Strategy for PPG phase. The Table 11 summarise the number of meetings and number of consulted persons, organisations, and institutions.
142. The strategy for consultation and stakeholders' participation for the PPG phase was implemented in two levels:
- Institutional level with formal delegates and partner institutions (PPG institutional workshops) for technical consultations, information provision and the correspondent clearance of the Project Document. Four formal workshops were implemented: (1) Initiation virtual workshop held on the 11 of January 2024 to introduce the Child project to the MIMAM as main stakeholder, introduce the PPG team and stablish the arrangements for the Project design; (2) Strategic Planning workshop held on the 23-24 of January 2024 in Lima to draft the project concept key element and theory of change, and a roadmap; (3) Key elements workshop held on the 6-7 of March 2024 in Lima, to present the up-to-date draft of the PRODOC, a draft of the results framework, implementation arrangements and strategy; (4) Final validation workshop, held in Lima on the 11 of April 2024, for a final insights integration to the PRODOC. Right after the three last institutional meetings there were formal presentations of the workshop's results to the top-level management of MINAM.
 - In-site and virtual consultations with key stakeholders (in presence and virtual interviews, bilateral meetings and focus groups) were developed by the PPG team with the parties involved in the country plastic sector. There were 32 meetings held with about 81 representatives from key stakeholders.

Table 11. Summary of results of the strategy for participation and engagement during the PPG phase.

Stakeholder Engagement Activity	Number of meetings	Number of organizations /institutions
1. Institutional level workshop with formal delegates and partner entities.	One virtual meeting Three in-person meetings.	69 participants in total (ca., 16 persons per meeting)
2. In-person and virtual consultation with key stakeholders.	32 meetings	81 participants

143. Some of the actions recommended by the stakeholders' engagement plan are:

- a. There will be a Gender and Participation Expert that will support the PMU and will provide technical assistance and guidance for the implementation of the Stakeholder Engagement Plan, and together with the Monitoring and Evaluation Expert (MEE) will monitor and assess progress, and record that the number of beneficiaries is achieved throughout the project life.
- b. The formal involvement of project stakeholders will begin with the project initiation workshop. In this meeting, key stakeholders will (i) confirm their contributions and participation in project implementation, (ii) agree on coordination and collaboration mechanisms for each outcome. There will be as well closing workshops for delivering information of the implementation and closing of the project.
- c. At project start the Technical Coordination Group will be assembled with the project partners as part of the project governance arrangements. There will be representants of the diverse key stakeholders and will integrate representant from the diverse sectors that will participate in the project.
- d. There will be four coordination and participation mechanisms in the project established during year 1:
 - i) Three District Coordination Groups (one each target district) to exchange experience and learnings, and ii) Two Technical Working Groups (TWG), one on Circular Design of Plastic Beverage Bottles, and on Circular Design of Plastic Food Packaging.
- e. In Year 1, a project communication strategy will be prepared to transmit information and to encourage stakeholder participation. This strategy will have a gender equality, intergenerational equity, and inclusiveness approach for disseminating information to the diverse actors of the project. In addition, a person specialized in communication will be contracted by the PMU to facilitate sharing knowledge and an adequate transmission of information to key stakeholders, as well as the interaction with the Global Project. The Communications Expert will work in close collaboration with the GPE.
- f. There will be specific communication campaigns in Year 3 & 4, one to be implemented by MINAM to promote new instruments to accelerate plastic reduction and circularity in the food and beverage sector; and other, to promote national guidelines to implement single-use plastic reduction in markets, supermarkets, food courts, and fast-food restaurants, and launch in events in the three target districts.
- g. There will be behaviour change communication campaigns with the EDUCCA Programme that will train diverse audiences from the three target districts during Year 2 & 3; and there will be a gender sensitive online course in AULA APRENDE platform for key stakeholders to advance the implementation of EPR regulations.
- h. There will be a gender sensitive promotional campaign to influence the reduction of plastic use in the food and beverage sector (improving APLs) in Year 4.
- i. The key project staff and partners will participate in the annual conferences organized by the Global Project and some key project stakeholders and partners will participate in key events at global level.
- j. During the PPG there has been identified four general barriers, and Table 5, summarises them and propose mitigation actions. During the implementation it is necessary to continuously identify operational barriers that the stakeholders may be facing, and to stablish and implement mitigation actions.

144. About 944,324 persons have been identified as project beneficiaries. Table 12 presents a description of the project beneficiaries.

145. Four general barriers for stakeholder participation were identified, Table 13 summarises these barriers and the proposed mitigation actions.

Table 12. Direct beneficiaries from project activities.

Project Outcome	Beneficiaries' description	number
Outcome 1.1. Enhanced behaviours and practices that support circular solutions to plastic pollution	-Persons participating in the trials of circular solutions in the three target districts: a) supermarkets employees and patrons; b) market vendors and patrons; c) food courts employees and clients; and d) fast food restaurants employees and clients. -Persons reached through behaviour change trials. -Municipal officers in charge of law enforcement. -Persons that implement the municipal EDUCCA programme and persons reached by the EDUCCA programme in the three target districts.	932,814
Outcome 2.1. Clean Production Agreements focused on the food and beverage sector reduce the use of plastic	-Personnel of the companies that implement APLs. -Costumers of supermarkets, convenience stores, producers of mass consumption products and fast-food restaurants that implement APLs.	to be calculated
Outcome 2.2. Public-private agreements facilitate plastic reduction and circularity of beverage bottles and food packaging	-Private companies that use the guidelines for circular design. -Members of the two public-private Technical Working Groups.	40
Outcome 3.1. Extended Producer Responsibility is implemented in the food and beverage sector	-Companies that use/report on the SIGERSOL platform. -Users of Aula APRENDE online courses: a) municipal personnel and b) employees from companies that implement REP.	11,448
Outcome 3.2. New instruments accelerate plastic reduction and circularity in the food and beverage sector	-Employees and customers of the markets, supermarkets, food courts, and fast-food restaurants that apply the guidelines for single-use plastic reduction measures.	to be calculated
Outcome 4.1. Effective national and global coordination including active participation and contribution to global project meetings and working groups.	-Members of the PMU, Project Steering Committee and Technical Committee.	22
Outcome 4.2 Increased National and Global knowledge and awareness on Circular Solutions to Single Use Plastic Packaging Pollution from the Food and Beverage Sector	-Persons interested in plastic reduction using SINIA. -Users of policy briefs: a) decision makers from producers and retailers, and b) public sector from municipalities and central government.	to be calculated
Total direct beneficiaries		944,324

Table 13. Stakeholder engagement barriers and proposed mitigation actions.

1. Time availability. Public institutions participants must leave other activities to participate in the project activities and events.
The members of the public institutions that may be part of the project implementation have high work demands in their duties. Make sure that all meetings / workshops are efficiently planned and managed, with a clear agenda and specific targets/results and considering the needs and time limitations of the participants.
2. Communication in meetings and working groups. This includes difficulty to understand technical matters and complex concepts, language, difficulty expressing ideas.
Encourage the use of plain-inclusive language and graphic communication during trainings, meetings, and information diffusion mechanisms (to be included into the project's communication strategy). Complement group meetings with in-person meetings. Assure that facilitators and trainers will have the abilities to integrate all the participants opinions. Consider less trained persons for support their full understanding.
3. Gender inclusive communication and involvement
Implement project's gender indicators and actions determined in gender action plan as part of implementing positive actions to facilitate balanced gender participation. Use gender inclusive language in all project documents and communications (to be included into the project's communication and knowledge strategies). Register and follow up sex and age disaggregated information regarding participation in meetings and workshops.
4. Cultural and political differences.
Identify in advance cultural issues and take measures to accommodate special requirements (e.g., food, others). Ensure that all meetings and activities are culturally sensitive (e.g., use inclusive language), as well as political-neutral (e.g., do not allow the expression of political agendas or statements). At the beginning of an activity or meeting establish basic rules (e.g., respect different views, political neutrality).

Project monitoring and evaluation

146. The project Monitoring and Evaluation Plan is consistent with the GEF Monitoring and Evaluation policy and is fully detailed in Appendix 4. The Project Results Framework presented in Annex C includes Specific, Measurable, Achievable, Relevant and Time-bound (SMART) indicators and targets for each expected outcome and output. Annex G includes the breakdown of costs of monitoring and evaluation activities. A Monitoring & Evaluation Expert (MEE) will guide the implementation of the Monitoring and Evaluation Plan.
147. Project-level monitoring and evaluation will be undertaken in compliance with GEF requirements in accordance with the GEF Policy on Monitoring, Project and Program Cycle Policy, Guidelines on the Project and Program Cycle Policy (2020 update), and other relevant GEF policies.
148. The Monitoring and Evaluation Plan will be revised at project start and presented during the first meeting of the Project Steering Committee to ensure that project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. The PSC will be responsible for proposing to UNEP management any necessary amendments to the Monitoring and Evaluation Plan during project implementation. WWF will be responsible for monitoring day-to-day project activities under the guidance of UNEP as the implementing agency.
149. The expected outcome is “efficient and timely project execution, monitoring and evaluation processes carried out, and corresponding improvement of project execution as appropriate” and will be achieved through three outputs that are described below.
150. During project implementation, the PIRs, the MTE and the TE will include a review and reporting of the GAP and relevant gender dimensions of the project.

M&E Output 1. Documented monitoring and reporting process throughout the entire project execution life cycle ensuring successful project delivery, including collection and analysis of gender-disaggregated data to track progress on gender-related outcomes.

151. Project-level monitoring imply the following activities:
 - i. Execute Inception Workshop and Report.
 - ii. Baseline, mid-point, and final monitoring of GEF Core Indicators/GEBs.
 - iii. Prepare yearly Project Implementation Review (PIR) to UNEP and GEF
 - iv. Prepare yearly Co-financing Report.
 - v. Prepare quarterly progress and financial reports.
 - vi. Monitor the Environmental and Social Safeguards (ESS) risks.
 - vii. Prepare semi-annual Progress/ Operational Reports to UNEP.
 - viii. Undertake monitoring visits to pilot sites.
 - ix. Prepare the Final Project Operational Completion Report.
152. WWF will deliver the following reports:
 - i. Inception Report. An Inception Workshop will be held during the third or fourth month after project initiation. Before this event it will be necessary that the members of the Project Steering Committee had been formally designated, and that the project team has been contracted. The Inception Report will be delivered during the second quarter of year 1.
 - ii. Project Implementation Review. The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. UNEP will undertake quality assurance of the PIR before submission to the GEF. The PIR submitted to the GEF will be shared with the Project Steering Committee. The PIRs will include information about the advance of the GEF Core Indicators, the yearly co-financing report, progress of the Gender Action Plan, and the situation regarding environmental and social risks.
 - iii. Quarterly progress and financial reports to be submitted to UNEP.

- iv. Semi-annual Progress/ Operational reports to be submitted to UNEP.
- v. Final Project Operational Completion Report to be prepared during the end of the last year. It will compile the final GEF PIR and the Terminal Evaluation Report. The final project report package will be analysed with the Project Steering Committee during an end-of-project meeting to discuss lessons and post-project actions.

M&E Output 2. Independent evaluations to assess the progress, success, and effectiveness of the project undertaken and recommendations reflected in project implementation, with specific attention to evaluating gender impacts, effectiveness of gender mainstreaming efforts, and lessons learned.

153. In line with the UNEP Programme Manual and Evaluation Policy, all projects are subject to a performance assessment (review or evaluation) at mid-point when required, and at the end of the project when they reach operational completion. These performance assessments will be either independent evaluations or a management-led reviews. All projects must have a review/evaluation budget that comes from secured funding. The Evaluation Office will decide whether a management-led Mid-term Review (MTR) or Terminal Review (TR) commissioned and managed by the Project Manager is sufficient, or whether an independent Mid-Term Evaluation (MTE) or Terminal Evaluation (TE), managed by the Evaluation Office is required. The Evaluation Office will provide tools, templates and guidelines for all management-led reviews.

Mid-Term Review

154. A Mid-Term Review/Evaluation is required for all Full-Sized Projects (FSP). The MTR/MTE will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. The members of the Project Steering Committee could be interviewed as part of the process and the Project Manager will develop a management response to the recommendations along with an implementation plan. The results of the MTR/MTE will be presented to the Project Steering Committee. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

Terminal Evaluation

155. In case a management-led Terminal Review (TR) is required, the UNEP Evaluation Office will provide tools, templates, and guidelines to support the Review consultant. The Evaluation Office will perform a quality assessment of the Terminal Review report and a formal validation of the TR performance ratings, which will form a part of the final report document. This quality assessment will be attached as an annex to the Terminal Review report, validated performance ratings will be captured in the main report.
156. However, if an independent Terminal Evaluation (TE) of the project is required, the Evaluation Office will be responsible for the entire evaluation process and will liaise with the Task Manager and the project implementing partners at key points during the evaluation.
157. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, GEF, executing partners and other stakeholders. The TE will typically be initiated after the project's operational completion. If a follow-on phase of the project is envisaged, the timing of the TE will be discussed with the Evaluation Office in relation to the submission of the follow-on proposal. The direct costs of the TE will be charged against the project evaluation budget.
158. The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalized. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process.
159. The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the Project Manager is required within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalisation of the Recommendations Implementation Plan. The compliance performance against the recommendations is then reported to senior management on a six-monthly basis and to member States in the Biennial Evaluation Synthesis Report.

M&E Output 3. Regular contribution to the Global Project M&E reporting

160. In addition to the project's monitoring and evaluation reporting, it is expected that the Peru project will share key reports and, if required, will provide inputs to the Global Project monitoring and evaluation reporting. This will include participation and inputs to the Global Project's monitoring and evaluation kick-off meeting and contributions to the following Global Project reports: (i) Integrated Programme Annual Report, (ii) Quarterly reports, (iii) Mid-Term Review and (iv) Terminal Evaluation. The details will be further elaborated during the inception phase of the project and the Global Project's monitoring and evaluation kick-off meeting.

Partnerships

161. The transformation of the Peruvian food and beverage sector to reduce and eventually eliminate plastic pollution requires collaborative action from a wide range of private and public actors. The core partners of the project are the environment, production and health national authorities, the three target district municipalities, and a number of producers, retailers and civil society organisations.
162. As indicated before, the project will have a Technical Coordination Group to facilitate teamwork and synergies among project partners (output 4.1.1). In addition, the Stakeholder Engagement Plan details the forms of interaction to be implemented by the project.

Public sector

163. At the national level, the core government partners are MINAM, PRODUCE, MINSA and MINEDU. They will integrate an Intersectoral Coordination Body to foster a whole-of-government approach. At the local level, the key partners will be the district municipalities of San Martin de Porres, Cayma and Tarapoto.

Private sector

164. On the production side, the key partners will be the SNI Plastics Committee, ABRESA, and companies like Peruana de Moldeados (PAMOLSA) and Grupo AJE who participated during the project preparation phase. Other producers will be invited to join the project and to be part of the Technical Working Groups on Circular Design of beverage bottles and food packaging.
165. On the retailer side, the key partners will be selected (i) municipal market administrators and vendors, (ii) supermarket locales, (iii) food-courts, and (iv) fast-food locales on each of the three target districts. The partner markets will be the Mercado de Abastos Centro Cívico in San Martin de Porres, the Mercado Mercado Municipal 1 in Cayma, and the Mercado Municipal 3 in Tarapoto. The other retail partners will be confirmed before project start. During the project preparation phase there were conversations with supermarket chains, food courts and fast-food chains like Supermercados Peruanos S.A. (commercial names PlazaVea, Vivanda, MASS, and Makro), Wong, Real Plaza, Norky's and Roky's, however specific collaboration agreements were not yet confirmed. These partners will support the baseline analyses (output 1.1.1) and will co-fund the trials and campaigns in the three districts (outputs 1.1.2 and 1.1.3).
166. The producers and retailers will have representatives in the Project Steering Committee.

Civil Society Organisations, academia, international cooperation, and other initiatives

167. Partner Civil Society Organisations will be Grupo GEA, Ciudad Saludable and Reciclame Perú. Two social enterprises will also have synergies with the project: LOOP and SINBA. Civil Society Organisations will have a representative in the Project Steering Committee.
168. Three universities were identified as key partners during the project preparation phase: Pontificia Universidad Católica del Perú (PUCP), Universidad de Ingeniería y Tecnología (UTEC), and Universidad Nacional de Ingeniería (UNI). Pertinent academics from these universities will be invited to contribute to the Technical Working Groups on Circular Design of beverage bottles and food packaging and other project outputs.
169. Regarding international cooperation agencies and international institutions, key collaboration includes:
- The USAID initiatives on confronting plastic pollution. The CCBO project that will close during 2024 and a new undisclosed initiative that is being designed.

- MINAM's collaboration with the World Economic Forum (WEF) to establish Peru's National Plastics Action Platform (NPAP Peru) under the Global Plastic Action Partnership.
- WWF's Plastic Smart Cities initiative that will start interventions in Peru and other Latin American countries during 2024.

Contributions to national policies, strategies, and plans

170. The project will contribute to the National Environment Policy 2030 and to the implementation of two priority strategies of the environmental sector: the National Biodiversity Strategy and the National Climate Change Strategy. The project also contributes to the implementation of the National Plan for Integrated Solid Waste Management. Table 14 details the specific instruments to which this project will contribute.

Table 14. Contribution of the project to national policies, strategies and plans.

Policies / Strategies	Instrument	Contribution of the project
The General Environmental (Law 28611)	National Environmental Policy 2030	The project will contribute to Priority Objective 2: Reduce levels of deforestation and ecosystem degradation, to Priority Objective 3: Reduce air, water and soil pollution, to Priority Objective 4: Increase the proper disposal of solid waste, to Priority Objective 6: Strengthen environmental governance with a territorial approach in public and private entities, Priority Objective 7: Improve the environmental performance of production and consumption chains of goods and services, applying the circular economy, to Priority Objective 8: Reduce GHG emissions in the country and to Priority Objective 9: Improve the environmental behaviour of citizens.
Comprehensive Solid Waste Management Law (Legislative Decree 1278)	National Plan for Integrated Solid Waste Management 2016 - 2024	The project will contribute to Strategic Axis 1: Capacity Development, specifically to: Specific Objective 01, referred to "Strengthen the capacities of authorities, officials, operators, professionals, technicians and recyclers, as well as the knowledge of students of all educational levels; to improve the integrated, sustainable and inclusive management of solid waste in local governments". Specific Objective 02: "Promote the development and transfer of knowledge of technologies in the integrated management of solid waste". It will also contribute to Strategic Axis 2: Institutional Development, specifically to: Specific Objective 03: "To have an updated legal framework on solid waste at municipal and non-municipal level". Specific Objective 04: "To strengthen the SIGERSOL platform in order to have updated and available information for decision making at national, regional and local level".
National Biodiversity Strategy	National Biodiversity Action Plan	The project will contribute to Specific Objective 3, which refers to the reduction of direct and indirect pressures on biodiversity and its ecosystem processes, through the expected reduction of plastic waste, and will also have a direct impact on biodiversity, as a significant percentage of plastic waste is currently disposed of in ecosystems, including terrestrial, freshwater, and marine ecosystems.
National Climate Change Strategy	Nationally Determined Contributions	The project's contribution to climate change will come from the reduction of environmental and economic impacts generated by the inadequate management of solid waste, specifically plastics, and its production through the consumption of virgin raw materials, which in turn generates GHG emissions. the project will contribute to the fulfilment of Strategic Objective 2 of the National Climate Change Strategy, referring to the population, economic agents and the State conserving carbon stocks and contributing to the reduction of GHG emissions. In addition, the project will also contribute to compliance with the Nationally Determined Contribution (NDC), specifically through the mitigation measure "Incorporation of recycled PET plastic in the production of new

Policies / Strategies	Instrument	Contribution of the project
		packaging" recently proposed for incorporation in the next update of Peru's NDC.

Sustainability

171. The project strategy to ensure post-project sustainability is to develop catalytic advances that build upon the existing regulatory and institutional framework and the present public and private initiatives and programmes. For example, mainstreaming social and behaviour change tools into the municipal EDUCCA programmes (output 1.1.4). In addition, an Exit Strategy will be prepared building upon the results of the Mid-Term Review and applied during the years 3 and 4 of project implementation.

172. The main actions to contribute to post-project sustainability are:

- **To develop and put in place new regulations and instruments.** In particular:
 - i. The national regulations for plastic carrier and produce bags and food contact plastics that incorporate the learning from the project and that build upon the law on single use plastics (output 3.2.1).
 - ii. The instruments to operationalise the EPR regulation (outputs 3.1.2 and 3.1.3).
 - iii. The updated municipal ordinances to eliminate single-use plastics (output 1.1.5).
 - iv. The national guidelines for circular design of beverage bottles and food packaging integrating gender considerations (output 2.2.2).
 - v. The national guidelines to implement single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants (output 3.2.2).
 - vi. The government strategy to scale-up circular solutions and improved practices (output 3.2.3).
 - vii. The draft regulation on circularity of beverage bottles and food packaging (output 2.2.4).
- **To strengthen capacities to implement pertinent measures,** mainly by strengthening the APL and SIGERSOL platforms (outputs 2.1.1 and 3.1.1).
- **To provide training to strengthen capacities of public and private actors,** principally by:
 - i. Hands-on-training of the participants of the trials and the teachers and promoters of the EDUCCA programmes in the target districts (outputs 1.1.2 and 1.1.3).
 - ii. Training of municipal officers and the teachers and promoters of the EDUCCA programmes in the target districts (outputs 1.1.3 and 1.1.4).
 - iii. Developing self-paced online courses to support the implementation of the EPR regulation (output 3.1.4).
- **To promote inter-ministerial coordination** through the Intersectoral Coordination Body (output 4.1.1).
- **To foster public – private collaboration and constructive dialogue** principally through the trials in the target districts (outputs 1.1.2 and 1.1.3) and the Technical Working Groups on Circular Design of beverage bottles and food packaging (outputs 4.1.1, 4.1.2 and 4.1.3).
- **To increase public awareness** by mainstreaming vital knowledge and information into the EDUCCA programme (output 1.1.4), the preparation of key policy briefs (output 4.2.4), and the support to a range of information and communication campaigns to be implemented by the project partners.
- **To facilitate that promising MYPES get support from business accelerators** (output 1.1.6).
- **To facilitate access to information and knowledge exchange,** mainly by disseminating project lessons (output 4.2.3), preparing policy briefs (output 4.2.4), supporting that the SINIA becomes a plastic pollution knowledge hub (output 4.2.5), and the exchanges with actors of the other child projects and the IW:LEARN network (outputs 4.2.1 and 4.2.2).

Catalytic effect, replication and scaling-up

173. It is foreseen that project will have an important catalytic effect in the present scenario. The main anticipated effects are:

- a. It is expected that the use of practical applications of social and behaviour change tools and improved practices through the trials will motivate further investigation and their application in other contexts (e.g., hotels, grocery stores).
- b. The introduction of circular design concepts and tools into the production and use of beverage bottles and food packaging is likely to stimulate further discussion within the industry, the development of improved items, and a reduction in the use of unnecessary plastics.

- c. The preparation of an initial list of chemicals and polymers of concern used in food contact plastics is assumed to initiate public discussion, research, and the development of pertinent regulations.
174. The project will not be able to engage directly in replication and scaling-up but will prepare the ground for it. In terms of replication the main probable elements are:
- The application of the social and behaviour change tools and best practices identified in the trials^[10], at a minimum, in other markets of the three target districts and other locales of the partner supermarkets, fast-food restaurants and food courts.
 - The use of the updated municipal ordinances (output 1.1.5) as templates to improve the regulations in other districts of the country.
 - The integration of key messages into the EDUCCA Municipal Programme and the Peru Limpio Strategy.
175. The project will facilitate scaling-up mainly by:
- The preparation of:
 - i. A government strategy to scale-up circular solutions and improved practices using social and behavioural change in markets, supermarkets, food courts and fast-food restaurants (output 3.2.3).
 - ii. The national guidelines to implement single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants (output 3.2.2).
 - iii. The national guidelines for circular design of beverage bottles and food packaging integrating gender considerations (output 2.2.2).
 - Encouraging that bottling companies adopt industry design guidelines for PET bottles (output 2.2.1).
 - Supporting the application of APLs in the food and beverage sector (output 2.1.3).
176. It is foreseen that the various tools and lessons from the project will be useful to other countries and applicable to various contexts worldwide.

[1] It is foreseen to promote APLs aimed at reducing plastics with supermarkets, convenience stores, fast-food restaurants, and producers of mass-consumption products (e.g., snacks and confectionary). The existing APLs focus mostly on waste management.

[2] Peru implements a strict regulatory quality analysis process which includes the use of Regulatory Impact Assessment (RIA). Therefore, it seems unlikely that during the project time frame it will be possible to attain the issuing of a new regulation.

[3] The SINIA was established in 2004 as an element of the National Environmental Management System (Law 28245) and was included into the General Environmental Law (Law 28611 of 2005). SINIA's regulation was issued in 2021 (Supreme Decree 034-2021-MINAM). The SINIA support decision-making by compiling, systematising and facilitating public access to environmental information from public and private sources. The SINIA manages four types of information: (i) statistics, (ii) bibliography, (iii) regulations, and (iv) spatial or georeferenced environmental information. The information is accessible through the [SINIA portal](#) which is also the gateway to the range of specialised information platforms (including SIGERSOL).

[4] According to Law 27802 of 2022, young persons are those between 15 and 29 years. According to Law 30490 of 2016, a senior citizen is understood to be someone who is 60 years of age or older.

[5] Each "Trial Report" will document and systematise the experience and learning (positive and negative) of testing a circular solution or improved practice in the target locales and with selected EDUCCA audiences.

[6] The persons that implement an EDUCCA programme are teachers, school promoters, youth promoters, and community promoters.

[7] The National Program for Technological Development and Innovation ([ProInnovate](#)) includes the [Startup Perú](#) initiative which supports business development through business incubators and accelerators and angel investors.

[8] The Law 30884 excluded plastic produce bags from the ban on single-use plastics.

[9] The Project Communication Strategy will ensure that key messages are incorporated into the Menos Plástico Más Vida campaign and other pertinent campaigns of the Peru Limpio Strategy.

[10] Documented into the feasible solution reports (Figure 16) and the guidelines to implement single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants (output 3.2.2).

Institutional Arrangement and Coordination with Ongoing Initiatives and Project.

Please describe the Institutional Arrangements for the execution of this child project, including framework and mechanisms for coordination, governance, financial management and procurement. This should include consideration for linking with other relevant initiatives at country-level (if a country child project) or regional/global level (for coordination platform child project). If possible, please summarize the flow of funds (diagram), accountabilities for project management and financial reporting (organogram), including audit, and staffing plans. (max. 500 words, approximately 1 page)

Implementation arrangements

1. The implementation arrangements of the project and their relationship to the Global Project are presented in Figure 17 and the flow of funds diagram is presented in Figure 18.

Implementing Agency

2. The Implementing Agency (IA) of this project is the GEF International Waters unit of the Ecosystems Division of the United Nations Environment Programme. The IA will be responsible for the overall project supervision, overseeing the project progress through the monitoring and evaluation of activities and progress reports of the established components. It will be responsible for quality assurance procedures, organise contracting with the Executing Agency (EA), approve progress reports and clear disbursement. The IA will be responsible for contracting independent evaluators for undertaking the Mid-Term Review and the Terminal Evaluation. The IA will also monitor progress to ensure the proper quality of outputs. UNEP will report project implementing progress to the GEF. The IA will take part in the Project Steering Committee and can request the PSC to meet outside of the planned schedule as deemed necessary. The Implementing Agency will also ensure close coordination between the project and the Global Project.

3. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility of the UNEP Task Manager. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Executing Agency

4. The World Wildlife Fund (WWF) will be the Executing Agency for the project and will host the Project Management Unit which will coordinate, manage and be responsible for the project on a day-to-day basis. WWF will be responsible for the overall management of the financial and human resources directly related to project execution in Peru. It will function as the general coordinator of the execution of the project and will be accountable to the Implementing Agency and the Project Steering Committee for the achievement of project outputs and outcomes. The Executing Agency will take guidance from the GEF implementing agency and the Project Steering Committee in all matters concerning the project.

Project Steering Committee

5. The Project Steering Committee is the most senior, dedicated oversight body for a project. The two main and nondelegable roles of the PSC are (i) high-level oversight of the execution of the project by the Executing Agency (i.e., WWF) and (ii) the approval of strategic project execution decisions of the Executing Agency (Figure 19). The PSC will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework, the budget, the workplan and/ or the Monitoring and Evaluation plan.

6. The Project Steering Committee will meet at least annually to ensure the delivery and quality of activities and outputs, to approve the annual workplan and budget, and to ensure country ownership and governance. The PSC members will review the project execution against the scope of project activities and review annual workplans and budget in accordance with the approved CEO ER documents. The Project Steering Committee may meet extraordinarily when the chairperson convenes it as per request of its members. The Project Manager will act as the secretary of the Project Steering Committee and will participate in these meetings with no right to vote. This person will provide regular project updates to the PSC and will prepare and keep the project board minutes and supporting documentation.

7. The Project Steering Committee will include representatives of the National Partner, the Implementing Agency, and the project beneficiaries (Figure 19). The GEF Operational Focal Point will be a *de facto* member of the PSC.

8. The National Partner will be represented by a representative of the Vice Ministry of Environmental Management of MINAM, who will chair the Steering Committee, and a delegate from the General Office of Cooperation and International Affairs (OGCAI). The Implementing Agency will be represented by the GEF IW Task Manager or other UNEP officer to be designated. The project beneficiaries will be represented by four persons that represent the key stakeholder groups that will be part of the project: (1) a delegate of food and beverage producers, (2) a delegate of food and beverage retailers, (3) a delegate of the target municipalities (i.e., San Martin de Porres, Cayma and Tarapoto), and (4) a delegate of the Civil Society Organisations (Figure 19).

9. The PSC will take decisions by consensus. In case consensus cannot be reached within the Project Steering Committee, the UNEP representative will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed. The PSC will make decisions alongside the UNEP and GEF as part of the monitoring and evaluation activities.

Project Management Unit

10. The Project Management Unit will be established by the Executing Agency at the start of the project implementation and will be led by the Project Manager, who will manage the project on a day-to-day basis and will include four staff members (Attachment 3e of Appendix 3). It has been established that at least 40% of the PMU personnel will be women. WWF will host the PMU.

11. The members of the PMU are:

- The Project Manager (also called Project Coordinator) is the most senior representative of the Project Management Unit and is responsible for the overall day-to-day management of the project on behalf of the Executing Agency, including leading the technical implementation of the project and managerial duties like the mobilisation of all project inputs, supervision over project staff, consultants, contractors, and service providers (as pertinent). The Project Manager ensures adequate project implementation and the generation of the outputs and outcomes set in the Project Document. This person will present key deliverables and documents to the Project Steering Committee for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers. The Project Manager will attend all board meetings and support board processes as a non-voting representative.
- The Behaviour Change Officer will be responsible for ensuring (i) the systematic identification of the factors that enable or prevent pro-environmental behaviours, (ii) the mainstreaming of behaviour change tools and green nudges into the project outputs according to the planned strategy (Figure 13), and (iii) the sharing of this knowledge to scale-up its application.

- The Technical Officer will support the implementation of the project with emphasis on components 2 and 3.
- The Administration Assistant will provide administrative, logistic, and financial support.

12. The PMU will be supported by four part-time experts from WWF:

- A Gender and Participation Expert that will advise on gender mainstreaming and implement and assess progress of the Gender Action Plan and the Stakeholders Engagement Plan (Attachments 3a and 3c of Appendix 3).
- A Communication Expert that will prepare the project communication strategy and guide its implementation (page 74).
- A Knowledge Management Expert that will prepare and guide the implementation of the project strategy for knowledge management (page 76).
- A Monitoring & Evaluation Expert (MEE) what will implement and assess progress of the monitoring and evaluation workplan (Appendix 4).

Project coordination and working groups

13. The project will foster intersectoral and multi-stakeholder collaboration and coordination. For this, four project-level coordination mechanisms will be established (Figure 19, page 73):

- i. A Technical Coordination Group to facilitate collaboration, synergies, and cross-fertilisation of ideas among project partners.
- ii. An Intersectoral Coordination Body to foster a whole-of-government approach among the key government authorities: MINAM, MINSA, MINEDU and PRODUCE.
- iii. Three District Coordination Groups facilitate coordination, collaboration, and cross-fertilisation of ideas among project partners on each of the target districts (i.e., San Martin de Porres, Cayma, Tarapoto).
- iv. A public-private Technical Working Group on Circular Design of Plastic Beverage Bottles.
- v. A public-private Technical Working Group on Circular Design of Plastic Food Packaging.

Figure 17. Implementation arrangements.

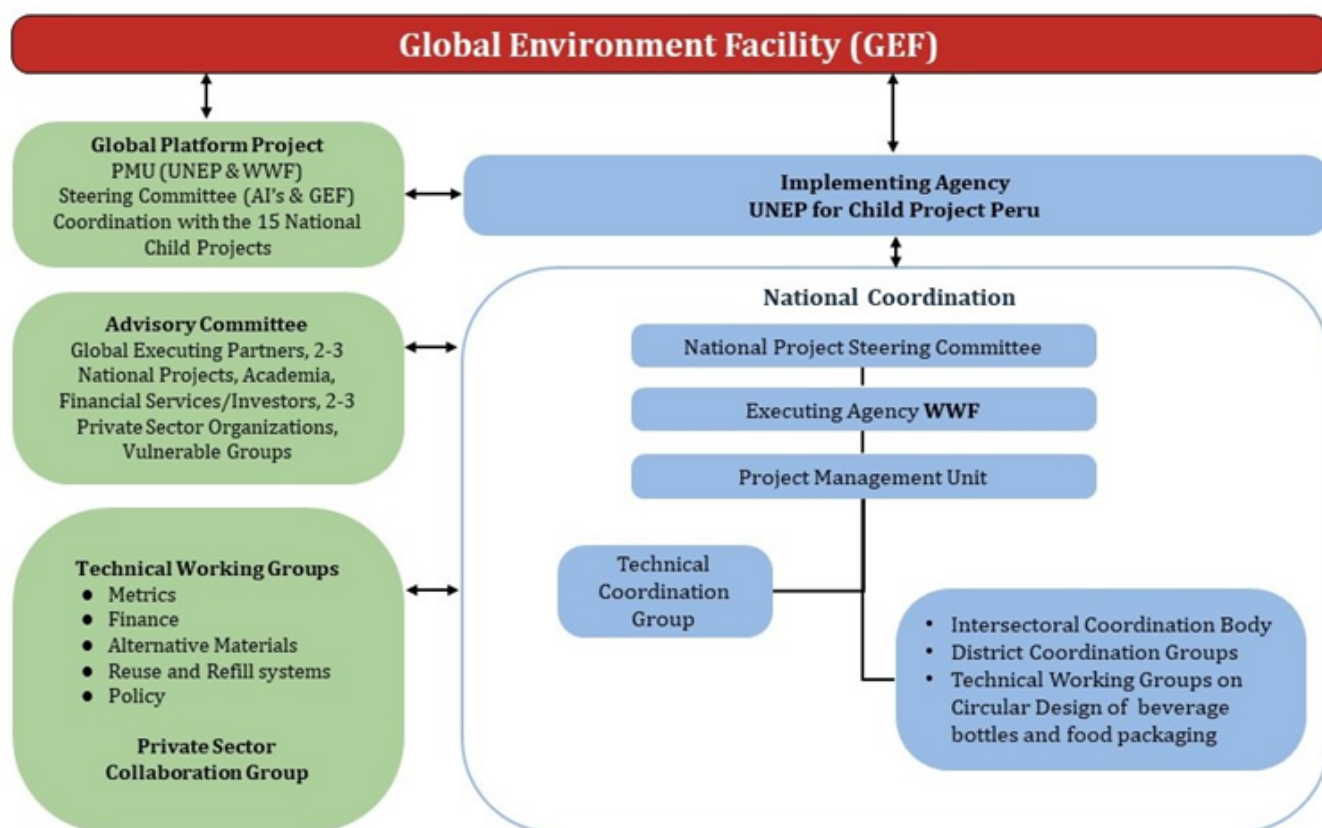


Figure 18. Flow of funds diagram.

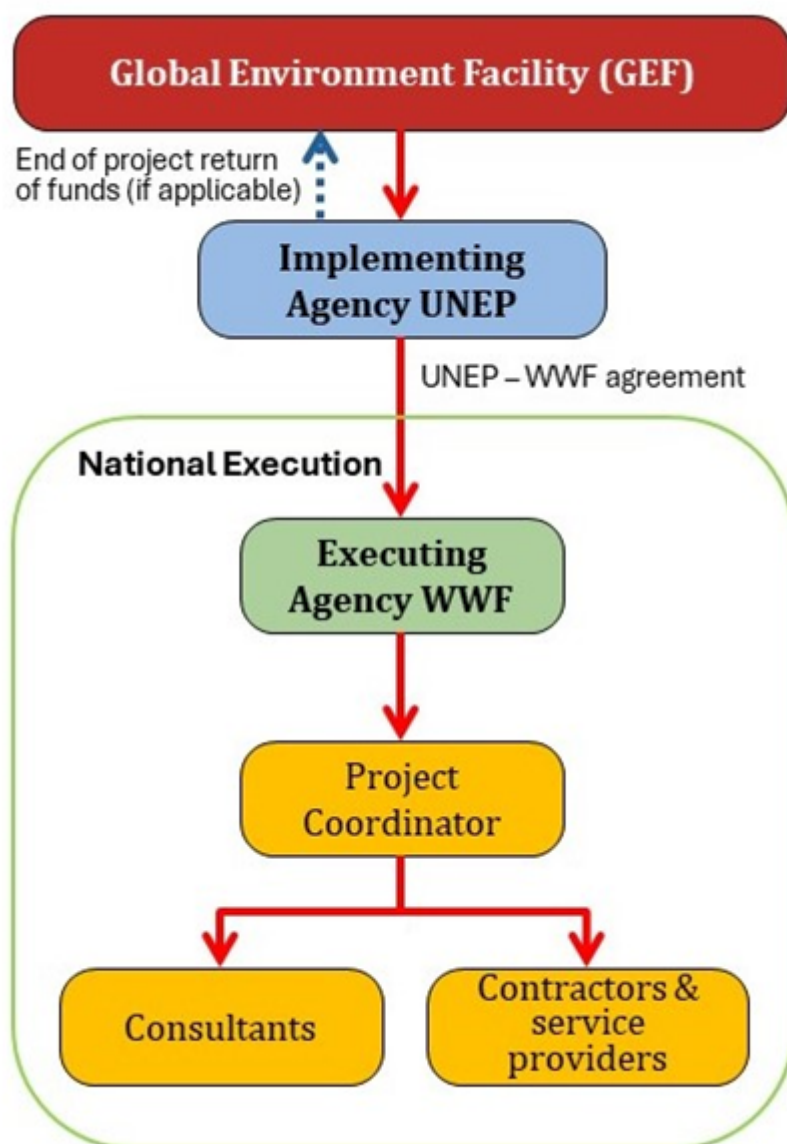
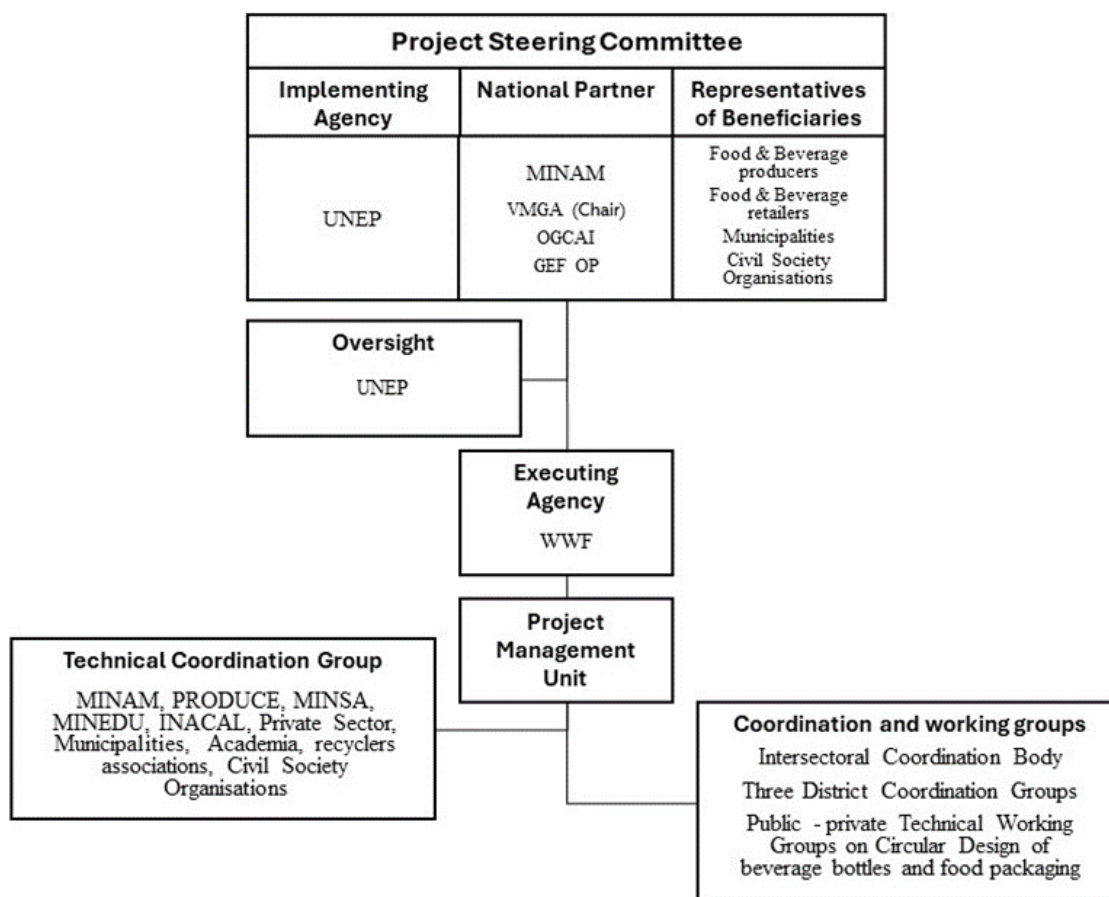


Figure 19. Project organization chart.



Will the GEF Agency play an execution role on this child project?

If so, please describe that role here and the justification.

Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing (max. 500 words, approximately 1 page)

Collaboration and synergies with other initiatives

14. The implementation of the project will be carried out in close collaboration with the Global Project under the GEF's Circular Solutions to Plastic Pollution Integrated Program and with IW:LEARN to participate in regional and global workshops to ensure that the results of this project are available to the wider community (see outcomes 4.1 and 4.2).

15. Similarly, the project will align and generate synergies during its implementation with other national and international projects and initiatives dealing with plastic pollution (Appendix 13). Table 15 summarise the initiatives that will be key for project implementation. In addition, the project will build upon the lessons and experience on social and behaviour change tools of USAID's CCBO project that closes during 2024 and will seek to use the lessons generated by the GEF project that is addressing plastic pollution from cities in Colombia, Jamaica and Panama (GEF ID [10547](#)).

Table 15. Key projects and initiatives for collaboration and synergy.

Scale	Executing Agency	Project/Initiatives
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National	District municipalities of San Martin de Porres, Cayma and Tarapoto.	EDUCCA Municipal Programme. Behaviour change tools and improved practices will be tested together with the promoters of the EDUCCA programmes in the three target municipalities. The municipal programmes will be updated to incorporate and implement the learning from the project. MINAM will mainstream the learning into their national guidelines for the municipal EDUCCA programmes.
National	MINAM	Peru Limpio Strategy. Key learning and messages will be mainstreamed into the “Menos Plástico Más Vida” campaign as well as other campaigns as pertinent.
National	Supermercados Peruanos S.A.	Recicla Consciente. Joint trials of circular solutions and better practices in some locales and to mainstream key messages and project learning into the Recicla Consciente initiative and their communication campaigns.
National	National Society of Industries, Ciudad Saludable and MINAM	Perú Cero Tecnopor. Coordinate joint activities during the implementation of the trials to improve control and enforcement in the three target municipalities (output 1.1.3).
National	MINAM in coordination with the World Bank.	Peruvian Plastics Policy and Technical Assistance. The present project will build upon the results of this World Bank initiative which will identify gaps in the regulatory framework and prepare a study of green finance for plastic pollution control.
National	MINAM with support of the World Economic Forum and WWF.	Peru's National Plastics Action Platform. The present project will link its actions to the process of developing the Peru National Plastic Action Partnership. In particular with the multi-stakeholder platforms that will be developed.
National	MINAM	Minimization of plastic waste in Peru and ensure its environmentally sound management in compliance with the Basel Convention in Peru. The present project will seek opportunities for collaboration on circular design of beverage bottles and food packaging.
Regional	WWF	Plastic Smart Cities in Latin America and the Caribbean. Ensure close collaboration and coordination in the activities to be implemented in Cayma.

Table On Core Indicators

Core Indicators

Indicate expected results in each relevant indicator using methodologies indicated in the GEF-8 Results Measurement Framework Guidelines. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)	282385	248498	0	0
Expected metric tons of CO₂e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)				
Expected metric tons of CO₂e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)	282,385	248,498		
Expected metric tons of CO₂e (indirect)				
Anticipated start year of accounting	2024	2025		
Duration of accounting	10	10		

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 7 Shared water ecosystems under new or improved cooperative management

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Shared water Ecosystem		Humbolt Current		
Count	0	1	0	0

Indicator 7.1 Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
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Indicator 7.2 Level of Regional Legal Agreements and Regional management institution(s) (RMI) to support its implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
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Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministeral Committees (IMC; scale 1 to 4; See Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Humbolt Current		2		

Indicator 7.4 Level of engagement in IWLEARN through participation and delivery of key products(scale 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
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Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
0.00	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
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Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.3 Hydrochlorofluorocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
84,420.00	56,098.00		

Indicator 10 Persistent organic pollutants to air reduced

Grams of toxic equivalent gTEQ (Expected at PIF)	Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)	Grams of toxic equivalent gTEQ (Achieved at MTR)	Grams of toxic equivalent gTEQ (Achieved at TE)
10.00	9.00		

Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 10.2 Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	75,367	479,717		
Male	71,853	464,607		
Total	147,220	944,324	0	0

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

Core indicator 6 was estimated based on subindicator 6.7 <<Emissions avoided outside AFOLU sector (direct)>>. The calculation uses the estimated avoided residual plastic waste (core subindicator 9.8) and the emission factors for the plastic waste eliminated and the avoided open burning of a percentage of that waste to calculate the GHG emissions, then multiplied by 10 years, to reflect the duration of the global project (~8 years) and an additional two years' projected impact due to the continued impact of interventions past the end of the project lifetime.

Core indicator 7 corresponds to the Humboldt Current Large Marine Ecosystem. The target for core sub-indicator 7.3 is 2 as it is expected that the Inter-ministerial Coordination mechanism dealing with plastic pollution will be operating during the first year of the project however but national and local reforms will only be at the preparation level by the end of the year (see outputs 2.2.4 and 3.2.1).

Core indicator 9 corresponds to the amount of avoided residual plastic waste (sub-indicator 9.8). It corresponds to the total sum of (i) the increased amounts of PET and HDPE recycled (in metric tons) plus (ii) the reduction of the amount of plastic bags (in metric tons) in the annual "plastic solid waste statistics" report from MINAM. It is assumed that this reduction will be produced by the implementation of the EPR regulation (outputs 3.1.1, 3.1.2, 3.1.3), the APLs (outputs 2.1.1 and 2.1.2), the improved circular design of plastic bottles and food packaging (outputs 2.2.1 and 2.2.2), the updated ordinances (output 1.1.5) and the national regulations (outputs 2.2.3 and 3.2.1).

Core indicator 10 is estimated upon the estimated avoided residual plastic waste (core sub-indicator 9.8) using conversion factors of the avoided open burning of a percentage of that waste.

Core Indicator 11 is the number of persons that will receive targeted support from the project (disaggregated by sex).

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Moderate	Climate change might result in stronger and more frequent climate fluctuations, in particular El Niño Southern Oscillation (ENSO). ENSO conditions (El Niño or La Niña) will impact the areas where the project will work (e.g., heavy precipitation or drought). Until 9 May 2024 an El Niño event

		was transitioning towards ENSO-neutral conditions with a 69% chance of the development of La Niña during the second half of 2024. It is very likely that ENSO conditions will develop during project implementation. Therefore, the PMU will monitor climate conditions and ENSO indexes, mainly through NOAA Climate Prediction Centre. Annual workplans will be adjusted, as needed, to cope with the impacts of ENSO events. Regarding global climate change, the project will contribute to a net reduction of GHG emissions by reducing the use of unnecessary plastics.
Environmental and Social	Low	The project will intervene in urban areas. It is not foreseeable that the project activities will be affected by environmental hazards, except extreme weather events or earth tremors and earthquakes. In terms of social conditions, there are no major risk factors (e.g., food insecurity, violence, social unrest) in the three target municipalities. At the national level, crime and the economic crisis are the main concerns of the population. During project implementation measures will be taken to protect the safety and security of project participants.
Political and Governance	Low	Peru has experienced political instability in the past years. The next general elections will be held in 2026 during project implementation. The main risk is that political changes could imply modifications in local and national government priorities. Waste management and plastic pollution are high in the national agenda, therefore, it is expected that there will be no major changes on these matters. When the new authorities assume office, UNEP and WWF will make the necessary arrangements to present the project and to establish communication channels with the pertinent authorities.

INNOVATION

Institutional and Policy	Low	Peru has a well developed institutional and policy framework for the administration of plastics production and waste management. This includes the law on single-use plastics and the EPR regulation to be issued during 2024. Also, the private sector has various partnerships and initiatives related to the management of plastic items, residues and waste (e.g., SNI Plastics Committee, Recicla Consciente). The project is based upon the existing framework and has been designed to foster intersectoral collaboration and public-private partnership and dialogue.
Technological	Low	In general, the project does not face technological risks. The only challenge is the practical application of social and behaviour change tools to confront plastic pollution, which is a novel and challenging field (MacDonald et al., 2023). The project design includes: (i) building upon the learning from USAID's CCBO project that pioneered the use social and behaviour change tools in waste management, (ii) a behaviour change officer as part of the project staff, (iii) specialised international technical assistance, and (iv) experience and knowledge exchange with other child projects.
Financial and Business Model	Moderate	In Peru the production and retail companies are, in general, large corporations with strong economic and political power. A main point is the resistance to change because of concerns like the costs related to transitioning to new production and business forms (e.g., change of machinery, deposit – return

		schemes), the limited availability of low-cost alternative packaging options, and the risk to lose market share and revenues. Nonetheless, the private sector is developing and supporting several initiatives to confront plastic pollution and expressed interest in participating in this project during the PPG phase. On the other side, MYPES that develop and offer circular solutions face difficulties to expand their businesses because of limitations of funding and market-access. To address these challenges the project design has incorporated direct work with production and retail companies (e.g., circular design of food packaging, trials in supermarkets and food courts) and the identification of promising MYPES and linking them with business accelerators.
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EXECUTION

Capacity	Low	MINAM has strong experience in the implementation of GEF projects and is executing several initiatives related to waste management, recycling, and plastic pollution. The same applies to WWF Peru which is well experienced in project execution and work with plastic pollution and private sector and civil society organisations. Nonetheless, the project design includes measures for (i) capacity development measures to support MINAM, other government authorities (e.g., PRODUCE, MINSA), the district municipalities and the private sector, (ii) knowledge and information sharing, (iii) intersectoral collaboration and (iv) public – private constructive dialogue.
Fiduciary	Low	To ensure effective financial and procurement management the project will apply WWF procedures under the supervision of UNEP. WWF is well experienced in the implementation of GEF projects.
Stakeholder	Low	A wide range of stakeholders have shown enthusiasm and commitment to the project during the PPG phase (Appendix 12). Nonetheless, it is foreseeable that: (i) Some production and retail companies will be reluctant to change and may resist the development of new regulations. (ii) Market vendors will be hesitant to adopt circular measures and new practices until they perceive a concrete benefit and / or the majority have implemented the change. (iii) Due to political differences district municipal councils may have internal discrepancies about the measures to be included in the ordinances. A Stakeholder Engagement Plan (Attachment 3c of Appendix 3)) has been prepared to ensure effective engagement of the various stakeholders throughout the lifecycle of the project. In addition, the project design has mainstreamed actions to foster collaboration, to build trust, and to conduct constructive dialogue.
Other		
Overall Risk Rating	Low	The overall risk is low except for the Environmental and Social Risks, which follows a different classification methodology. A risk management plan will be define at inception phase,

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Explain how the proposed interventions are aligned with GEF- 8 programming strategies, including the specific integrated program priorities, and country and regional priorities, Describe how these country strategies and plans relate to the multilateral environmental agreements, such as through NDCs, NBSAPs, etc.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how.

(max. 500 words, approximately 1 page)

Alignment with GEF-8 programming strategies

1. The project is fully in line with the objective of the GEF-8 Circular Solutions to Plastic Pollution Integrated Programme which is to catalyse circular economy approaches to reduce plastic production, consumption, and waste. Table 16 summarise how the project actions respond to the entry points of the integrated programme (GEF ID [11181](#)).

Global Environmental Benefits

2. The project contributes directly to the Chemicals and Waste Focal Area and indirectly to the Climate Change and International Waters focal areas. Regarding the Chemicals and Waste Focal Area, the project is expected to avoid 56,098 t of residual plastic waste from the Peruvian food and beverage sector (GEF subindicator 9.8). This will in turn generate a reduction of about 9gTEQ of emissions to the air from the open burning of plastic waste (GEF core indicator 10). Regarding climate change, the avoided residual plastic waste and the interventions of the present GEF project are estimated to avoid 248,498 metric tons of CO₂e (GEF subindicator 6.7). Finally, regarding international waters, the reduction in the production and use of single use plastics (especially plastic bags) will contribute to lower the amount of plastic waste that ends up into the Humboldt Current Large Marine Ecosystem. In addition, it is foreseen that by the end of the project the Intersectoral Coordination Body will be functioning and preparing national reforms (GEF subindicator 7.3) and that these actions will permeate into the implementation of the Humboldt Current Strategic Action Programme^{[1]¹⁸}. Finally, the present project will fully engage with IW:LEARN and share information, experience and knowledge worldwide.

3. In addition, it is foreseen that addressing plastic pollution from the Peruvian food and beverage sector will contribute to generate a wide range of global environmental benefits, including:

- i. Marine life protection: Reduction in plastic waste means less plastic entering oceans (e.g., plastic bags), which helps to protect marine life from ingestion and entanglement.
- ii. Ecosystems and habitats preservation: Plastic pollution, including microplastics, can disrupt ecosystems, affecting everything from plankton to predators. Plastic waste can accumulate in natural habitats, altering them and making them inhospitable for many species. Minimising plastic waste helps maintain the balance of ecosystems.
- iii. Preservation of biodiversity: Plastic pollution can harm all types of biodiversity by disrupting food chains and habitats, provoking harm (e.g., suffocation with plastic bags, ingestion of microplastics) or potentially affecting organisms due to chemical additives in plastics. In addition, reducing plastic production and consumption can lead to lower levels of harmful

chemicals released into the environment. This helps protect soil, water, and air quality, reducing the risk of contamination for both wildlife and humans.

- iv. **Reduced greenhouse gas emissions:** Plastic production and incineration contribute to greenhouse gas emissions. By reducing plastic usage and properly managing plastic waste, emissions will be reduced and hence contributing to climate change mitigation.
- v. **Landfill space conservation:** Plastic waste occupies valuable landfill space, and many plastics take hundreds of years to decompose. Reducing plastic usage lessens the burden on landfills.
- vi. **Less resource depletion:** Plastic production requires significant amounts of fossil fuels and natural resources. Cutting down on plastic usage conserves these resources for future generations.
- vii. **Preservation of scenic beauty:** Plastic pollution detracts from the beauty of natural landscapes, coastlines, and urban areas.

Co-benefits

4. In terms of co-benefits, it is foreseen that the present project will generate the following:

- To reduce inland, freshwater and marine pollution because of the reduction in the production and use of single-use plastics. In turn, this will contribute to lessen the impacts of plastic pollution on biodiversity.
- To promote better human health by:
 - i. Introducing into the policy scenario the issues of contaminants from food-contact plastics. The project includes discussing chemicals and polymers of concern in the Technical Working Groups on Circular Design of beverage bottles and food packaging and preparing an initial list of discussing chemicals and polymers of concern in food contact plastics.
 - ii. Reducing the use of single-use plastics in beverage bottles and packaging. Taking into account the existing evidence that food-contact plastics release micro and nano plastics and chemicals that get into humans.
- To enhance the engagement and inclusion of women and young persons into the formal and informal processes to confront plastic pollution through the technical working groups, constructive dialogue processes and the EDUCCA programme.

5. More broadly co-benefits include:

- i. **Cost savings:** Governments spend significant resources on waste management, cleaning up plastic pollution and dealing with its consequences, such as damage to infrastructure and marine life. By preventing pollution at its source, these costs can be minimised, allowing funds to be allocated elsewhere.
- ii. **Job Creation:** Initiatives aimed at reducing plastic pollution, such as reuse systems and the development of alternative materials, create employment opportunities in various sectors, including waste management, research and development, and manufacturing.

- iii. Innovation and Entrepreneurship: Addressing plastic pollution fosters innovation in sustainable materials, food and beverage processing and distribution, and waste management technologies. This stimulates economic growth by creating new markets for responsible products and services.
- iv. Enhanced reputation: Businesses and regions that actively combat plastic pollution often enjoy improved reputations, attracting environmentally conscious consumers and investors. This can lead to increased market share, higher revenues, and greater investment inflows.
- v. Tourism promotion: Cleaner environments resulting from reduced plastic pollution can attract more tourists, boosting local economies reliant on tourism. Beaches, parks, and natural attractions are more appealing when free from litter and plastic debris.
- vi. Public health improvement: Decreased plastic pollution means less plastic waste in waterways and food chains, reducing the risk of ingestion by humans and animals. This helps to mitigate health issues associated with plastic contamination, such as endocrine disruption and chemical toxicity.
- vii. Community empowerment: Engaging communities in plastic pollution reduction initiatives promotes a sense of ownership and responsibility for the environment. This strengthens social cohesion and encourages collective action on other pressing issues.
- viii. Resource conservation: Minimising plastic usage encourages the efficient use of resources, including fossil fuels used in plastic production. This supports sustainability efforts and reduces reliance on finite resources, contributing to long-term economic stability.

Table 16. Alignment of the project with the entry points of the Circular Solutions to Plastic Pollution Integrated Programme.

Circular Solutions to Plastic Pollution Integrated Programme entry points	Project actions
Strengthen collaborative, public-private partnerships that encompass stakeholders throughout the plastic value chain and set a common vision with ambitious targets.	This is a core element of the project strategy (Figure 13).
Prioritise women engagement.	The Gender Action Plan includes specific actions to increase women participation in project implementation and to empower men and women in the use of circular solutions to plastic products in the food and beverage sector.
Creating the enabling policy environment for circular solutions by establishing regulations and incentives that foster circular economy best practices for the plastic industry.	<p>The project will incentivise best practices through guidelines for circular design of beverage bottles and food packaging (output 2.2.2), and national guidelines for single-use plastic reduction measures in markets, supermarkets, food courts and fast-food restaurants (output 3.2.2).</p> <p>The project will develop national regulations for plastic carrier and produce bags and food contact plastics (output 3.2.1) and a draft regulation on</p>

Circular Solutions to Plastic Pollution Integrated Programme entry points	Project actions
	circularity of beverage bottles and food packaging (output 2.2.4).
Raising awareness on the need for, and economic opportunity associated with, circular solutions within government agencies that engage in the food and beverage industry, such as city planning, tourism, and health departments	The project will directly work with MINAM, MINSA, MINEDU, PRODUCE and the district municipalities of San Martin de Porres, Cayma and Tarapoto.
Policy coherence across government agencies.	Fostering a whole-of-government approach is a core element of the project strategy. A key element will be establishing an Intersectoral Coordination Body (output 4.1.1).
To foster circularity within the food and beverage industry by innovating circular product designs that are reusable, refillable, modular or recyclable and fostering ecolabeling to clarify sustainability for consumers	The project will foster circular design of beverage bottles and food packaging (outputs 2.2.1 and 2.2.2).
To foster circularity within the food and beverage industry by incentivising companies that create circular systems (e.g. reusable food container systems).	The project will test circular solutions and improved practices (output 1.1.2) and will disseminate the results (output 3.2.2).
To foster circularity within the food and beverage industry by helping circular SMEs innovators bridge to commercialisation through innovation prizes, incubators, accelerators and other mechanisms.	The project will connect promising MYPEs with business accelerators (output 1.1.6).
To foster circularity within the food and beverage industry by promoting voluntary extended producer responsibility schemes as well as corporate adoption of circular solutions.	The project will support the initial implementation of the new EPR regulation (outputs 3.1.1 to 3.1.4).
To foster a cultural paradigm shift by consumers, particularly youth, toward a more circular economy.	Engaging young persons is a core element of the project strategy, the EDUCCA programme will be a key channel for this purpose (outputs 1.1.2, 1.1.3 and 1.1.4).
Ensuring solutions that reduce plastic production and consumption (e.g. reusable to-go coffee cups) are accessible and affordable to the public.	The trials of circular solutions and improved practices will allow to identify options that are feasible and accessible (output 1.1.2).
Developing transparent, harmonised systems, and ecolabeling so the public can easily discern which products and services are sustainable and, through consumer purchasing power, drive market demand for circular products and services.	Clear labelling is included into the topics to be analysed in the Technical Working Groups on Circular Design of beverage bottles and food packaging.

Alignment with the Kunming- Montreal Global Biodiversity Framework

6. The Kunming-Montreal Global Biodiversity Framework (GBF) was adopted on 19 December 2022 during the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity ([Decision 15/4](#)).

7. The GBF and global plastic pollution are interconnected through various environmental and ecological mechanisms:

- **Biodiversity Impact:** Plastic pollution significantly impacts biodiversity in various ecosystems, including terrestrial, freshwater, and marine environments. Plastic waste can harm wildlife through ingestion, entanglement, and habitat destruction, leading to population declines and ecosystem imbalances.
- **Ecosystem Services:** Biodiversity plays a crucial role in providing ecosystem services such as pollination, water purification, and climate regulation. Plastic pollution can disrupt these services by contaminating water sources, altering habitats, and affecting species interactions.
- **Policy Alignment:** The GBF aims to address the decline of biodiversity globally through conservation efforts, sustainable resource management, and ecosystem restoration. Strategies within the framework, such as protected area expansion and sustainable land use practices, can indirectly mitigate plastic pollution by promoting healthier ecosystems and reducing anthropogenic pressures.
- **Cross-cutting Issues:** Both biodiversity loss and plastic pollution are interconnected with broader sustainability challenges such as climate change, pollution, and resource depletion. Integrated approaches that consider the interlinkages between these issues can lead to more effective solutions and policy coherence at the global, regional, and national levels.
- **Public Awareness and Behaviour Change:** Promoting awareness about the linkages between biodiversity conservation, plastic pollution, and human well-being can foster responsible consumption patterns, waste management practices, and support for conservation initiatives outlined in the GBF.
- **Research and Innovation:** Collaborative efforts between biodiversity conservation and plastic pollution mitigation sectors can drive innovation in sustainable materials, waste reduction technologies, and circular economy models, contributing to both biodiversity conservation goals and plastic pollution prevention.

8. The present project will directly contribute to achieve targets 7, 14 and 15 of the GBF. Therefore, the actions of the project will result in biodiversity benefits helping reduce the rates of loss and degradation of globally important ecosystems and biodiversity, reducing threats to freshwater and coastal aquatic ecosystems, and improving ecosystem health in coastal areas, due to improved circular practices which will reduce the leakage of plastic into inland and oceans ecosystems.

Alignment with country policies, plans, and strategies

9. In 2019, MINAM approved the sectoral list of national policies under its guidance or leadership ([Ministerial Resolution 242-2019-MINAM](#)). These instruments are: (i) the National Environmental Policy, (ii) the National Biodiversity Strategy, (iii) the National Climate Change Strategy, and (iv) the National Plan for Integrated Solid Waste Management. The present project is consistent with all these national policies:

- **The National Environmental Policy.** The project is aligned with seven of the nine priority objectives of this policy: PO 2, PO 3, PO 4, PO 6, PO 7, PP 8 and PO 9. These objectives aim to respond to problems such as: loss of biological diversity, deterioration of environmental quality, weak environmental governance, increase in unsustainable production processes of goods, and environmentally unsustainable behaviour of citizens.

- The National Biodiversity Strategy. The project is aligned with SO 3 of the National Biodiversity Action Plan, which refers to reducing direct and indirect pressures on biodiversity and its ecosystem processes.
- The National Climate Change Strategy. The project is aligned with SO 2 which seeks GHG mitigation and also with the mitigation measure ‘Incorporation of recycled PET plastic in the production of new packaging’, recently proposed for incorporation in the next update of Peru's NDC.
- The National Plan for Integrated Solid Waste Management. The project will contribute to the achievement of Strategic Axis 1: Capacity Development, through its SO 1 and SO 2, and Strategic Axis 2: Institutional Development, through its SO 3 and SO 4.

In terms of environmental research, the project will contribute to implement the regulation of Law 30884 (Supreme Decree [006-2019-MINAM](#)) which established that MINAM, PRODUCE and MINEDU must disseminate the results of research, technological development, innovation and technological transfer projects aimed at mitigating negative impacts of single-use plastics.

[1] The Strategic Action Programme is under implementation with support of the GEF project [9592](#).

D. POLICY REQUIREMENTS

Gender Equality and Women’s Empowerment:

We confirm that gender dimensions relevant to the project have been addressed during Project Preparation as per GEF Policy and are clearly articulated in the child Project Description (Section B).

Yes

1) Does the project expect to include any gender-responsive-measures to address gender gaps or promote gender equality and women's empowerment?

Yes

If the child project expects to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment, please indicate in which results area(s) the project is expected to contribute to gender equality:

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision-making; and/or

Generating socio-economic benefits or services for women.

Yes

2) Does the child project's results framework or logical framework include gender-sensitive indicators?

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during Project Preparation as required per GEF policy, their relevant roles to project outcomes has been clearly articulated in the Child Project Description (Section B) and that a Stakeholder Engagement Plan has been developed before CEO endorsement.

Yes

Select what role civil society will play in the Project:

Consulted only;

Member of Advisory Body; Contractor; **Yes**

Co-financier; **Yes**

Member of project steering committee or equivalent decision-making body ; **Yes**

Executor or co-executor;

Other (Please explain)

Private Sector

Will there be private sector engagement in the Child project?

Yes

And if so, has its role been described and justified in section B "Child project description"?

Yes

Environmental and Social Safeguards

We confirm that we have provided information regarding Environmental and Social risks associated with the proposed child project or program, including risk screenings/ assessments and, if applicable, management plans or other measures to address identified risks and impacts (this information should be presented in Annex E).

Yes

Please provide overall Project/Program Risk Classification

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
	Low		

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described during Project Preparation in the Project Description and that these activities have been budgeted and an anticipated timeline for delivery of relevant outputs

has been provided. This includes budget for linking with and participation in knowledge exchange activities organized through the coordination platform.

Yes

Socio-economic Benefits

We confirm that the child project design has considered socio-economic benefits to be delivered by the project and these have been clearly described in the Project Description and will be monitored and reported on during project implementation (at MTR and TER).

We confirm that the design of the project has considered socio-economic benefits that have been clearly described the Project Description and will be monitored and reported on during implementation.

It is foreseen that the project will generate diverse socio-economic benefits:

1. It will contribute to human health as it will promote the discussion of contaminants from food-contact plastics, including chemicals and polymers of concern, as well as to reduce of use of single-use plastics in beverage bottles and packaging. These discussions and the derived actions will contribute to community health and food safety as it will tackle the issues of the release of micro and nano plastics and chemicals from food contact plastics into humans. All potential actions implemented in this respect will result on public health improvement and progressive health cost savings.
2. It will generate social cohesion and empowerment since the implementation of the project requires a collective sense of ownership, multiple stakeholders and constructive dialogues, and it will also improve the inclusion of women and youth to address plastic pollution.
3. It will make a particular contribution to society behaviour change regarding plastic pollution, as all the planned interventions will identify factors and determinants that will promote changes towards the use of plastics and will have impacts at the individual and at the community levels. Benefits will be made to the target districts, as they are large in population and have large production of solid waste, although the learnings derived from these districts, will be latter extrapolated at the national level.
4. It will facilitate that some start-up accelerators support MYPES that are producing promising circular items or services that may be extrapolated in other contexts.
5. It will contribute to increase and to widely disseminate information, learnings and knowledge about plastic pollution and particularly to scale-up circular solutions at country level. The learning process will include government institutions to join efforts to collaborative responses to plastic pollution at the national level.

Among the socio-economic tangible and intangible benefits of the project, 944,324 persons have been identified as direct beneficiaries. Table 12 provides a detailed description and number of beneficiaries.

ANNEX A: FINANCING TABLES

GEF Financing Table

Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non- Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
UNEP	GET	Peru	International Waters	International Waters: IW IP Contributions	Grant	4,437,156.00	399,344.00	4,836,500.00
Total GEF Resources (\$)						4,437,156.00	399,344.00	4,836,500.00

Project Preparation Grant (PPG)

Was a Project Preparation Grant requested? true

PPG Amount (\$) 150000

PPG Agency Fee (\$) 13500

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
UNEP	GET	Peru	International Waters	International Waters: IW IP Contributions	150,000.00	13,500.00	163,500.00
Total PPG Amount (\$)					150,000.00	13,500.00	163,500.00

Please provide Justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
Total GEF Resources					0.00

Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
Plastics IP	GET	4,437,156.00	56274152
Total Project Cost		4,437,156.00	56,274,152.00

Confirmed Co-financing for the project, by name and type

Please include evidence for each co-financing source for this project in the tab of the portal

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Civil Society Organization	Gea Group	In-kind	Recurrent expenditures	150000
Civil Society Organization	RECICLAME	In-kind	Recurrent expenditures	1000000
Civil Society Organization	World Wildlife Fund - WWF Peru	In-kind	Recurrent expenditures	500000
Private Sector	Peruana de Moldeados (PAMOLSA)	In-kind	Recurrent expenditures	20000
Private Sector	Peruvian Supermarkets	In-kind	Recurrent expenditures	135000
Private Sector	Sinba Sura SAC	In-kind	Recurrent expenditures	25000
Private Sector	Life Out Of Plastic – L.O.O.P.	In-kind	Recurrent expenditures	40000
Private Sector	Asociacion de la Industrias de Bebidas y Refrescos sin Alcohol - ABRESA	In-kind	Recurrent expenditures	100000
Recipient Country Government	Ministry of Environment (MINAM)	In-kind	Recurrent expenditures	409344
Recipient Country Government	Ministry of Environment (MINAM)	Public Investment	Investment mobilized	53835952
Recipient Country Government	Provincial Municipality of San Martin	In-kind	Recurrent expenditures	58856
Total Co-financing				56,274,152.00

Please describe the investment mobilized portion of the co-financing

The co-financing of Grupo Gea and RECICLAME correspond to the cost of their participation into project activities as well as on-going synergic initiatives. The contribution of WWF corresponds to three complementary projects.

The co-financing from the private sector (PAMOLSA, SPSA, SIMBA, LOOP, ABRESA) includes the cost of their participation into the project activities (e.g., trials and working groups) as well as on-going synergic initiatives (e.g., SPSA's collection points, ABRESA's campaigns).

The cofinancing of MINAM includes: (1) the cost of the personnel and facilities that will directly contribute to project technical and administrative implementation, and (2) mobilised investment projects to improve municipal waste management including plastic waste management and recycling.

ANNEX B: ENDORSEMENT

GEF Agency(ies) Certification

GEF Agency Coordinator	Date	Project Contact Person	Telephone	Email
GEF Agency Coordinator	6/25/2024	Victoria Luque Panadero	2540207621	victoria.luque@un.org
Project Coordinator	6/25/2024	Isabelle Vanderbeck	12027254201	isabelle.vanderbeck@un.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Please attach the Operational Focal Point endorsement letter(s) with this template.

Name of GEF OFP	Position	Ministry	Date (MM/DD/YYYY)
Inés Pando Ávila	Head, General Office for Cooperation and International Affairs	Ministry of Environment	3/31/2023

ANNEX C: PROJECT RESULTS FRAMEWORK

Please indicate the page number in the Project Document where the project results and M&E frameworks can be found. Please also paste below the Project Results Framework from the Agency document. For the Integrated Programs' global/regional coordination child project, please include the program-wide results framework, inclusive of results specific to the coordination child project. For any country child project, please ensure that relevant program level indicators are included.

Project Objective	Objective level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
To reduce plastic pollution in Peru by accelerating the transition towards a circular economy in the food and beverage sector	1. Avoided residual plastic waste from food and beverage sector ^{[1]¹⁹} (t). (GEF core indicator 9.8).	2022 12,505 t recycled PET & HDPE. 339,460 t plastic bags in municipal solid waste.	End of year 3 ≥ 21,037 t of recycled PET & HDPE + reduction of plastics bags End of year 4 ≥ 35,062 t of recycled PET & HDPE + reduction of plastics bags Accumulated end-of-project ≥ 56,098 t of recycled PET & HDPE +	- Annual “ plastic solid waste statistics ” report from MINAM based on the municipal SIGERSOL.	MINAM	Assumptions: Producers and consumers adopt plastic reduction measures. Risks: APLs are not appealing to producers and retailers. Producers do not promptly adopt EPR target measures during the initial	Target 12.5 Indicator 12.5.1	Direct outcomes: 3.3: Global plastic pollution is reduced. 3.6: Resource efficiency and circularity in key sectors are improved. 3.8: “3R” waste management systems are mainstreamed. 3.12: Markets, supply chains, trade and

Project Objective	Objective level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
			reduction of plastics bags			voluntary period ^[2] ²⁰ .		consumer behaviours have shifted towards reduced pollution, influenced by transparency enabled by digital technologies.
	2. Emissions avoided (t CO ₂ e) (GEF core indicator 6.7).	0	Accumulated end-of-project: 248,498 metric tonnes of CO ₂ eq avoided	INGEI biannual report published on INFOCARBONO	MINAM	Assumptions: the expected residual plastic waste reduction materialises.		Direct outcome 1.8: Societal choices have shifted towards lower-carbon products and services and sustainable lifestyles
	3. GEF core indicator 10 Persistent organic pollutants to air reduced (gram of toxic equivalent gTEQ)	0	9 g TEQ	UNEP calculator	PMU	Assumptions: the expected residual plastic waste reduction materialises.		Direct outcome 3.11: Global advocacy catalyses the phase-out of most polluting products and practices
	4. Number of direct beneficiaries, disaggregated by sex (GEF core indicator 11).	0	Midterm ≥ 283,297 persons (139,383 men 143,915 and women) ^[3] ²¹ End of project ≥ 944,324 persons (464,607 men and 479,717 women) ^[4] ²² .	- Number of persons that will receive targeted support from the project. Records of number of persons that participate in activities and meetings (e.g., training, technical assistance) of the project (disaggregated by sex).	PMU		Target 5.1 Indicator 5.1.1	

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
Outcome 1.1. Enhanced behaviours and practices that support circular solutions to plastic pollution	Number of persons directly engaged in the behaviour change trials ^{[5]²³} (disaggregated by sex). Number of persons reached through the behaviour change trials ^{[6]²⁴} (disaggregated by sex).	Baseline value: 0 Very limited experience in Peru about applying social and behaviour change tools to confront plastic pollution. USAID's CCBO project has pioneered its application in waste management working in Mancora, Piura and Pisco municipalities.	Year 2. ≥ 700 persons directly engaged in the trials in the three target districts. Year 3. $\geq 1,500$ persons directly engaged in the trials in the three target districts. Year 2. $\geq 2,000$ persons reached through behaviour change trials in the three target districts. Year 3. $\geq 3,000$ persons reached through behaviour change trials in the three target districts.	- Progress reports of each individual trial. - Trial reports ^{[7]²⁵} . - Records of persons that directly participate in the trial ^{[8]²⁶} (number of persons disaggregated by sex). - Records of persons reached through the trials ^{[9]²⁷} .	PMU	Assumptions There are early adopters that are willing to test circular solutions. Risks Market vendors and operators of supermarket, fast-food restaurants, and food courts afraid of losing customers.	None	3.12
1.1.1 Baseline diagnosis of gender sensitive behaviours in markets, supermarkets, food courts and fast-food restaurants in the three target districts.	Number of diagnoses. The diagnoses identify gender, age, and income-level related pro-environmental behaviour determinants ^{[1]²⁸} related to (i) the use of single-use plastics and (ii) compliance of pertinent regulations of patrons, market vendors, service providers and locale administrators	Baseline value: 0 There is no information about the pro-environmental behaviour determinants linked to the use of single-use plastics of patrons, market vendors, service providers and locale administrators in the target environments of the three target districts.	Year 1. Three baseline diagnoses completed of gender sensitive behaviour determinants.	- Baseline diagnosis report of each target district.	PMU	Assumptions Solid assessment tools. Risks Patrons, market vendors, service providers and locale administrators are reluctant to answer surveys and other assessment tools.	None	3.12

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
	(target groups) in the markets, supermarkets, food courts and fast-food restaurants (target environments) of the three target districts.							
1.1.2 Trials of circular solutions and improved innovative practices in markets, supermarkets, food courts and fast-food restaurants in the three target districts.	Number of feasible circular solutions and innovative practices ^{[11]²⁹} that reduce the use of single-use plastics to be scaled-up.	Baseline value: 0 There are a range of available circular solutions and improved practices that face barriers (e.g., availability, cost, gender sensitive behaviour) that limit substitution of single-use plastics.	Year 2: ≥ 2 Year 3: ≥ 5	- Trial Reports. - Feasible Solution Reports ^{[12]³⁰} .	PMU	Assumptions There are available solutions that can be scaled-up. There are early adopters that are willing to test circular solutions. Risks Market vendors and operators of supermarket, fast-food restaurants, and food courts afraid of losing customers.	None	3.6 3.8 3.11
1.1.3 Trials to improve municipal control and enforcement of plastics regulations in the three target districts.	Number of improved strategies ^{[13]³¹} to strengthen control and compliance of plastics regulations.	Baseline value: 0 Municipalities are responsible for enforcing national plastic regulations as well as their specific ordinances. There are a range of known barriers like political support, gender driven citizens behaviour, and limited budget.	Year 3: 3 strategies	- Control and enforcement strategies of the three target districts. - Trial Reports. - Feasible Solution Reports.	PMU	Assumptions District mayors and Municipal Councils support the elimination of single-use plastics and introducing behaviour change tools to increase compliance. Risks Sabotage and opposition	None	3.6 3.8 3.11

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
						from interest groups. Resistance to change from deeply rooted behaviours.		
1.1.4 Three gender sensitive updated EDUCCA municipal programmes that address elimination of single-use plastics.	<p>Number of persons^{[14]³²} that implement the EDUCCA programme^{[15]³³} (disaggregated by sex).</p> <p>Number of persons reached through EDUCCA programme activities^{[16]³⁴} (disaggregated by sex).</p> <p>Number of updated EDUCCA municipal programmes that integrate gender sensitive behaviour change tools and learning from the trials (output 1.1.2).</p>	<p>Number of persons that implement the EDUCCA programme:</p> <p>San Martin de Porres: 249 (2022)</p> <p>Cayma: 44 (2022)</p> <p>Tarapoto: 600 (2022)</p> <p>Number of persons reached by the EDUCCA programme:</p> <p>San Martin de Porres: 729,974 (2024)</p> <p>Cayma: 95,853 (2024)</p> <p>Tarapoto: 74.723 (2024)</p> <p>Number of updated EDUCCA plans: 0</p>	<p>Number of persons that implement the EDUCCA programme:</p> <p>San Martin de Porres: ≥250 per year (years 2 to 4).</p> <p>Cayma: ≥ 50 per year (years 2 to 4).</p> <p>Tarapoto: ≥600 per year (years 2 to 4).</p> <p>Number of persons reached by the EDUCCA programme:</p> <p>San Martin de Porres: ≥730,000 per year (years 2 to 4).</p> <p>Cayma: ≥96,000 per year (years 2 to 4).</p> <p>Tarapoto: ≥75,000 per year (years 2 to 4).</p> <p>Number of updated EDUCCA programmes:</p> <p>3 programmes by year 3</p>	<p>- Annual reports uploaded to MINAM's EDUCCA platform.</p> <p>- Records of persons that implement the EDUCCA programme on each district (promoters, volunteers, municipal personnel) (disaggregated by sex).</p> <p>- Records of persons that participate in EDUCCA programme activities (e.g., fairs, campaigns) on each district (disaggregated by sex).</p> <p>- Gender sensitive Social and Behaviour Change Strategies.</p> <p>- Updated EDUCCA programmes endorsed by the Municipal authorities and uploaded to MINAM's EDUCCA platform.</p>	<p>District municipalities of San Martin de Porres, Cayma and Tarapoto</p> <p>PMU</p>	<p>Assumptions:</p> <p>Municipal governments support including single-use plastic elimination in EDUCCA programmes.</p> <p>Risks:</p> <p>Reduced funding due to changes in budget allocation priorities.</p>		3.12

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
1.1.5 Three updated ordinances to eliminate single-use plastics.	Number of municipal ordinances aimed at eliminating single-use plastics in the three target districts.	Baseline value: 2 ordinances in San Martin de Porres and Cayma. Based on the Law on Single Use Plastics , several municipalities have issued ordinances to reduce these plastics. San Martin de Porres and Cayma have these ordinances since 2022 (537-MDSMP) and 2019 (265-2019-MDC), respectively. Tarapoto does not have such kind of ordinance.	Year 3: 2 ordinances updated incorporating the learning from the trials (output 1.1.2) (San Martin de Porres and Cayma). Year 3. 1 ordinance issued incorporating the learning from the trials (output 1.1.2) (Tarapoto).	- Ordinances issued and published.	District municipalities of San Martin de Porres, Cayma and Tarapoto PMU	Assumptions: Municipal governments support phasing out single use plastics. Risks: Sabotage and opposition from interest groups.		3.3
1.1.6. Promising startups that provide circular solutions to plastic pollution engaged with business accelerators.	Number of MYPES that provide feasible or promising circular solutions that have signed agreements with business accelerators ^[17] ^[35] . Number of persons that participate in the business roundtable on circular solutions to plastic pollution from the food and beverage sector.	Baseline value: 0 MYPES that provide feasible or promising circular solutions have not been identified.	Year 2: ≥ 2 MYPES Year 3: ≥ 4 MYPES Year 3: ≥ 80 persons participate in the business roundtable	- Trial progress reports. - Records of participants in the business roundtable (number of persons disaggregated by sex).	PMU	Assumptions: Peruvian MYPES are developing circular solutions to plastic pollution from the food and beverage sector. Risks: Business accelerators not interested in this kind of business.		3.6 3.12
Outcome 2.1. Clean Production Agreements focused on the food and beverage sector	Reduced use of plastics in packaging, bags, bottles, and food containers (t).	Baseline value: 0 Currently APLs do not report the quantities of	Year 2: ≥ 50 t accumulated from all signed APLs.	- Reports from companies of the food and beverage sector that signed APLs during project	MINAM PMU	Assumptions: APLs are appealing to food and		3.3

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reduce the use of plastic		plastic use reduction.	Year 3: ≥ 100 t accumulated from all signed APLs. Year 4: ≥ 200 t accumulated from all signed APLs.	implementation		beverage companies. Food and beverage companies are motivated to reduce the use of plastics. Risks Companies are reluctant to report plastic reduction values.		
2.1.1. APLs directive assessed and updated.	Number of updates of the APL directive during project implementation Updated APLs directive includes modifications to be more appealing to food and beverage companies of all sizes.	Baseline value: 0 The APL directive was updated on May 2023 . It states that the APL duration is one year and the “reward”, after completing the agreed targets is a diploma and the use of a “recognition seal” for 18 months.	Year 1 (Q3): 1 update. APL directive updated to introduce attractive non-monetary incentives and green nudges to reduce the use of plastics in food and beverage sector. Year 4: 1 update. APL directive updated based upon learning from application in supermarkets, convenience stores, producers of mass consumption products, and fast-food restaurants. End of project target: 2 updates.	- APLs signed with supermarkets, convenience stores, producers of mass consumption products, and fast-food restaurants published in the pertinent portal . - APL implementation reports. - Report about lessons from implementation of APLs in the food and beverage sector.	MINAM PMU	Assumptions APLs are appealing to food and beverage companies. Food and beverage companies are motivated to reduce the use of plastics. Risks Companies are reluctant to report plastic reduction values.		3.12
2.1.2. An upgraded APL platform for monitoring and reporting.	Average customer satisfaction level (five-point Likert scale).	Baseline value: not available. The APL webpage is very basic and does not include facilities for reporting, monitoring and evaluation of the clean production agreements.	Year 1 (Q3): Baseline customer satisfaction survey. Year 2 (Q1): ≥ 3.0 customer satisfaction. Year 2 (Q3): ≥ 3.5 customer satisfaction. Year 3 (Q1): ≥ 4 customer satisfaction.	- Report of baseline customer satisfaction survey. - Biannual reports of customer satisfaction surveys [18] ³⁶ . All measures based using an online survey	MINAM	Assumptions APLs are appealing to food and beverage companies. Companies are willing to use the web platform. Risks		None

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
			<p>Year 3 (Q3): ≥ 4 customer satisfaction.</p> <p>Year 4 (Q1): ≥ 4 customer satisfaction.</p> <p>Year 4 (Q3): ≥ 4 customer satisfaction.</p>	based on a five-point Likert scale. The online survey will be sent to all companies that have ever signed an APL.		Users of APL platform do not respond the surveys.		
2.1.3 At least ten new APLs signed with supermarkets, convenience stores, producers of mass consumption products, and fast-food restaurants.	Total number of new APLs signed with supermarkets, convenience stores, producers of mass consumption products, and fast-food restaurants.	<p>Baseline value: 7^{[19]37}</p> <p>APLs are instruments established in the Solid Waste Management Law and its regulation. APLs are also mentioned in the Law on Single Use Plastics. These voluntary agreements signed between MINAM and producers aim to promote reductions in solid waste generation. The APL directive was updated in 2023. Until April 2024, 36 APLs had been signed. 7 APLs have been signed with companies of the food and beverage sector.</p>	<p>Year 2: ≥ 5 new APLs</p> <p>Year 3: ≥ 10 new APLs</p> <p>End of project target: ≥ 10 new APLs</p>	<p>- APLs signed with food and beverage sector during project implementation, published in the pertinent portal.</p> <p>- Lessons document on improving APLs to foster reduced plastic use in the food and beverage sector</p>	<p>MINAM</p> <p>PMU</p>	<p>Assumptions</p> <p>APLs are appealing to food and beverage companies.</p> <p>Food and beverage companies are motivated to reduce the use of plastics.</p> <p>Risks</p> <p>Companies are reluctant to report plastic reduction values.</p>		3.12
Outcome 2.2. Public-private agreements facilitate plastic reduction and circularity of beverage bottles	Number of agreements to implement circular design of plastic beverage bottles and	<p>Baseline value: 0</p> <p>There are no industry-wide basic agreements on measures to</p>	<p>Year 1 (Q2): Intersectoral Coordination Body^{[20]38} installed.</p> <p>Year 1 (Q2): Technical Working</p>	- Memoirs of meetings of the Technical Working Group on Circular Design of Plastic Beverage	PMU	<p>Assumptions</p> <p>Producers and retailers are willing to assume and implement common</p>		<p>3.3</p> <p>3.12</p>

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
and food containers.	food containers sold in Peru.	improve circularity of plastic beverage bottles and food containers sold in Peru.	Group on Circular Design of Plastic Beverage Bottles installed. Year 1 (Q2): Technical Working Group on Circular Design of Plastic Food Containers installed. Year 3 (Q4): 2 sets of agreements, one for beverage bottles and one for food containers.	Bottles and the Technical Working Group on Circular Design of Plastic Food Containers. - Signed public – private agreements. - To document public-private dialogue of the working groups on beverage bottles and food containers.		measures that facilitate circularity of plastic items sold in Peru. Risks Strong competition and rivalry between companies limit cooperation.		
2.2.1 Industry endorsed design guidelines for beverage PET bottles.	Number of voluntary industry guidelines for circular design of PET bottles. The voluntary guidelines specify the characteristics of beverage PET bottles (domestically produced or imported) to facilitate recycling in Peru.	Baseline value: 0 There are individual initiatives but no industry-wide basic design agreements to facilitate recycling of beverage PET bottles in Peru. Some of the barriers for recycling include the materials used in caps and labels, coloured PET, inks, and adhesives.	Year 3: One set of design guidelines for circular design of PET bottles endorsed by the beverage industry to facilitate recycling in Peru ^{[21]³⁹} .	- Design guidelines for PET bottles published online. - Memoirs of the Technical Working Group on Circular Design of Plastic Beverage Bottles.	PMU Beverage industry	Assumptions Facilitated constructive dialogue allows producers to agree on basic design measures that facilitate recycling PET bottles sold in Peru. Risks Strong competition and rivalry between companies limits cooperation.		3.12
2.2.2 Guidelines for circular design of beverage bottles and food containers.	Number of national guidelines for circular design of beverage bottles and food containers. The national guidelines are based upon the	Baseline value: 0 There are no official national guidelines about circular design and the use of circular materials for beverage	Year 3: Two national guidelines endorsed by the pertinent entities ^{[22]⁴⁰} , one for beverage bottles and other for food containers.	- National guidelines formally endorsed, published, and disseminated. - Memoirs of meetings of the Technical Working Group on	PMU MINAM	Assumptions MINAM, PRODUCE and MINSA implement a whole-of-government approach to promote circular design of beverage		3.12

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
	learnings and agreements from public – private dialogue and endorsed by pertinent national authorities.	bottles and food containers.		Circular Design of Plastic Beverage Bottles and the Technical Working Group on Circular Design of Plastic Food Containers. - Signed public – private agreements.		bottles and food containers. Risks Companies are reluctant to adopt circular design practices.		
2.2.3 Initial list of chemicals and polymers of concern used in food contact plastics.	Number of official lists ^{[23]⁴¹} of chemicals and polymers of concern used in food contact plastics in Peru.	Baseline value: 0 There is no official information about chemicals and polymers of concern present in food contact plastics in Peru.	Year 1 (Q3): One policy brief about chemicals and polymers of concern used in food contact plastics. Year 2 (Q4): Draft initial list of chemicals and polymers of concern used in food contact plastics. Year 3 (Q1): One published initial official list of chemicals and polymers of concern used in food contact plastics.	- Policy brief - Formal document that makes public the initial official list of chemicals and polymers of concern used in food contact plastics in Peru. - Memoirs of meetings of the Technical Working Group on Circular Design of Plastic Beverage Bottles and the Technical Working Group on Circular Design of Plastic Food Containers.	PMU	Assumptions General support to address the risks related to chemicals and polymers of concern used in food contact plastics. Risks Producers reluctant to disclose information about the chemicals and polymers of concern present in their materials.		3.9 3.11
2.2.4 Draft regulation on circularity of beverage bottles and food containers ^{[24]⁴²} .	Number of regulations on circularity of beverage bottles and food containers.	Baseline value: 0 Existing regulations do not set measures to enhance circularity of	Year 4 (Q2). Draft regulation and technical file ^{[25]⁴³} based upon the learnings from outputs 2.1.1, 2.1.2 and 2.2.3.	- Formal communications about the draft regulation. - Draft regulation and technical file.	MINAM	Assumptions A whole-of-government approach is applied for the design of the draft regulation.		3.6

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
		beverage bottles and food containers.	The instruments will be ready to undertake regulatory quality assessment.			MINAM, MINSA and PRODUCE effectively collaborate. Risks Sabotage and opposition from interest groups.		
Outcome 3.1. Extended Producer Responsibility is implemented in the food and beverage sector	Number of food and beverage companies that implement the EPR regulation.	Baseline value: 0 On November 2023, MINAM submitted to public consultation the draft “ Special Regime for the Management and Handling of Container and Packaging Waste ”. Until April 2024, the draft regulation was being revised; it includes a two-year transition period before the regulation is fully enforceable. It is foreseen that the regulation will be issued towards the end of 2024.	Year 2: ≥ 2 companies Year 3: ≥ 8 companies Year 4: ≥ 12 companies	- MINAM’s reports about companies of the food and beverage sector that have adopted container and packaging waste management plans and report on their implementation .	MINAM	Assumptions Food and beverage champion companies rapidly implement the EPR regulations during the transition period. Risks Sabotage and opposition from interest groups.		3.12
3.1.1 SIGERSOL upgraded to manage EPR monitoring and reporting.	Database Load and Stress testing metrics[26] ⁴⁴ .	SIGERSOL[27] ⁴⁵ cannot handle the expected volume of EPR monitoring and reporting information.	Year 2: Database Load and Database Stress metrics within set performance goals[28] ⁴⁶ . Year 3: Idem Year 4: Idem	- Reports of Database Load and Database Stress tests.	MINAM	Assumptions Software and hardware solutions are available. Risks MINAM cannot sustain		3.13

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						the upgraded SIGERSOL.		
3.1.2 Formally adopted methodology to calculate collection, valorisation and returnability targets to implement EPR regulation.	<p>MINAM's ministerial resolution adopting the directive for calculating selective collection, valorisation and returnability targets.</p> <p>MINAM's ministerial resolution establishing the targets for selective collection and valorisation for the EPR regulation.</p>	<p>Baseline value: 0</p> <p>MINAM has not adopted the methodology to calculate selective collection, valorisation and returnability targets.</p> <p>MINAM has not established the selective collection, valorisation and returnability targets.</p> <p>The draft EPR regulation (see 3.1) requires that MINAM issue targets for selective collection and valorisation within 30 days after the regulation is published and that the targets are updated every five years. It is foreseen that the EPR regulation will be issued towards the end of 2024.</p>	<p>Year 2 (Q2): MINAM's ministerial resolution adopting the directive for calculating selective collection, valorisation and returnability targets.</p> <p>Year 2 (Q3): MINAM's ministerial resolution establishing the targets for selective collection and valorisation for the EPR regulation.</p>	<p>- Reports from technical assistance and support to MINAM.</p> <p>- Publications in El Peruano.</p>	<p>PMU</p> <p>MINAM</p>	<p>Assumptions</p> <p>Feasible targets can be calculated.</p> <p>Risks</p> <p>Producers opposition to proposed targets.</p>		3.5
3.1.3. Catalogue of infractions and sanctions of the EPR regulation.	Legal instrument adopting the catalogue of infractions and sanctions of the EPR regulation	<p>Baseline value: 0</p> <p>The draft EPR regulation requires that OEFA adopt the catalogue of infractions and sanctions within 180 working days after the regulation is issued.</p>	Year 2 (Q2): OEFA's resolution establishing the catalogue of infractions and sanctions of the EPR regulation.	- Publication in El Peruano.	<p>OEFA</p> <p>MINAM</p> <p>PMU</p>	<p>Assumptions</p> <p>MINAM and OEFA authorities support the prompt development of the catalogue of infractions and sanctions.</p> <p>Risk</p> <p>Sabotage and opposition</p>		3.5

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						from interest groups.		
3.1.4 Aula APRENDE gender sensitive online courses for key stakeholders to advance the implementation of EPR regulations.	<p>Number of online training modules on EPR available through Aula APRENDE.</p> <p>Number of persons trained on EPR through Aula APRENDE (disaggregated by sex).</p>	<p>Baseline values: 0</p> <p>Aula APRENDE is MINAM's online platform to provide training, technical assistance and guidance to public and private entities, local governments and interested persons.</p>	<p>Year 1 (Q4): self-paced course for the general public on the EPR regulation is online.</p> <p>Year 1 (Q4): self-paced course on EPR regulation for EDUCCA teachers and promoters is online.</p> <p>Year 1 (Q4): self-paced course on fighting plastic pollution for EDUCCA teachers and promoters is online.</p> <p>Year 3 (Q1): self-paced course for municipal officers is online.</p> <p>Year 3 (Q1): self-paced course for private sector is online.</p> <p>Year 4 (Q1): updated^{[29]⁴⁷} self-paced course on fighting plastic pollution for EDUCCA teachers and promoters is online.</p> <p>Year 2: ≥300 persons (disaggregated by sex).</p> <p>Year 3: ≥600 persons (accumulated number disaggregated by sex).</p> <p>Year 4: ≥1200 persons (accumulated number </p>	<p>- Training courses accessible through the Aula APRENDE portal.</p> <p>- Registration records of each course (name, organisation, sex).</p>	<p>MINAM</p> <p>PMU</p>	<p>Assumptions</p> <p>Personnel from industry, local governments and NGOs are willing to learn about EPR implementation.</p> <p>Risks</p> <p>MINAM cannot sustain the online courses on EPR.</p>		3.12

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
			disaggregated by sex).					
Outcome 3.2. New instruments accelerate plastic reduction and circularity in the food and beverage sector	Percentage of reduction of national plastic bags weight (t) in municipal waste records.	Baseline value: 339,460 t (2022).	Year 3: 3% reduction compared with the 2022 baseline value. Year 4: 5% reduction compared with the 2022 baseline value.	- Annual “ plastic solid waste statistics ” report from MINAM based on the municipal SIGERSOL.	MINAM PMU	Assumptions: Producers and consumers reduce the use of plastic bags. Risks: Increased flow of illegal plastic bags.		3.3
3.2.1 National regulations for plastic carrier and produce bags and food contact plastics incorporating gender-responsive considerations that address differentiated impacts on and roles of women and men in plastic use, disposal, and alternatives.	Number of regulations to motivate a reduction in the use of plastic carrier and produce bags based upon the learning from the project trials (outputs 1.1.2 and 1.1.3).	Baseline value: 1 regulation (Law 30884). Law 30884 exclude produce bags from the regulation and requests the issuing of technical standards for reusable, biodegradable and compostable plastic bags.	Year 4: ≥2 regulations (produce bags, reusable bags, biodegradable bags, compostable bags) based upon the learning from the project trials.	- Regulations issued and published in El Peruano.	MINAM PMU	Assumptions General support to phase out the use of single-use plastic bags. Risks Opposition to a reduction in the use of produce bags.		3.5
3.2.2 National guidelines to implement single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants.	Number of national guidelines to implement single-use plastic reduction measures based upon the learning from the project trials (outputs 1.1.2 and 1.1.3). Number of persons informed about the national guidelines through the launch events in the target municipalities.	Baseline values: 0 There are no official national guidelines to apply single-use plastic reduction measures in markets, supermarkets, food courts, and fast-food restaurants.	Year 3 (Q3): 4 guidelines (markets, supermarkets, food courts, fast-food restaurants). Year 3 (Q4): 1 legal instrument adopting the guidelines. Year 3 (Q4): 4 guidelines available for download in SINIA portal. Year 4 (Q1): 3 launch events (one on each target district). Year 4 (Q1): ≥300 persons participate in the launch events (disaggregated by sex).	- Legal instrument and guidelines published in El Peruano. - SINIA portal. - Records of participants in the launch events (disaggregated by sex).	PMU MINAM	Assumptions The guidelines facilitate scaling-up measures to reduce single-use plastics. Risks Sabotage and opposition from interest groups.		3.12
3.2.3. Government strategy to scale-	Legal instrument adopting a	Baseline values: 0	Year 4 (Q1): 1 government strategy adopted.	- Government strategy grounded on a	MINAM	Assumptions		3.5

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
up circular solutions and improved practices using social and behavioural change in markets, supermarkets, food courts and fast-food restaurants.	government strategy to scale-up circular solutions and improved practices to reduce the use of single-use plastics based upon the learning from the project trials (outputs 1.1.2 and 1.1.3). Number of collaborative initiatives to implement the government strategy.		Year 4 (Q2): ≥ 3 collaborative initiatives ^{[30]⁴⁸ to implement the government strategy}	whole-of-government approach formally adopted, published, and disseminated. - Legal instrument published in El Peruano. - Collaboration agreements.	PMU	Interest in implementing measures to reduce the use of single-use plastics. Risks Resistance to change.		
Outcome 4.1. Effective national and global coordination including active participation and contribution to global project meetings and working groups	Number public, private and civil society entities participating in the project steering committee. Number public, private and civil society entities participating in the technical coordination group.	Baseline values: 0 The project steering committee and technical coordination group will be established at project start.	For the project steering committee: 1 public entity, 1 private entity, 1 local government, 1 civil society organisation. For the technical coordination group: ≥ 3 public entities, ≥ 3 private entities, 3 local governments, ≥ 3 civil society organisations.	- Meeting minutes of the project steering committee and technical coordination group. - Records of persons that participate in the meetings of the project steering committee and technical coordination group (disaggregated by sex).	PMU	Assumptions Public, private and civil society entities are willing to engage in project coordination. Risks Frequent personnel changes in public entities.		3.11 3.12 3.13
4.1.1. National Level Coordination mechanism established and implemented	PMU operational. Inception Workshop report with detailed workplan, budget and institutional arrangements produced. Number of meetings of the	Baseline values: 0 The PMU team will be contracted at project start. The project steering committee and technical coordination group will be	Year 1 (Q1): PMU operational ^{[31]⁴⁹. Year 1 (Q2): Inception Workshop and report completed. Year 1 (Q2): first meeting of the Steering Committee. Years 1 to 4: ≥ 1 meeting per year of}	- Contracts of PMU members - Inception Workshop Report - Meeting minutes of the project Steering Committee and the Technical Coordination Group.	PMU	Assumptions Well trained and experienced personnel is available. Risks Frequent personnel changes in public entities.		None

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
	<p>project Steering Committee.</p> <p>Number of meetings of the Technical Coordination Group.</p> <p>Exit Strategy adopted and implemented.</p> <p>Percentage of implementation of the Exit Strategy.</p>	established at project start.	<p>the Steering Committee.</p> <p>Year 1 (Q2): first meeting of the Technical Coordination Group.</p> <p>Years 1 to 4: ≥ 4 meeting per year of the Technical Coordination Group.</p> <p>Year 3 (Q1): Exit Strategy adopted by the Steering Committee.</p> <p>Year 3 (Q4): $\geq 40\%$ implementation of the Exit Strategy.</p> <p>Year 4 (Q4): 100% implementation of the Exit Strategy.</p>	<p>- Quarterly reports to the Steering Committee about Exit Strategy implementation</p>				
4.1.2. Coordination and active participation and contribution to Global Project meetings and working groups	<p>Number of participations in annual conferences and key events of the Global Project.</p> <p>Percentage of participation in virtual events and working groups of the Global Project.</p> <p>Percentage of reports of the Global Project with contributions of Peru PMU and national stakeholders.</p>	<p>Baseline values: 0</p> <p>Meetings will be organised after project start.</p>	<p>Year 4: ≥ 3 annual conferences and key events organised by the Global Project.</p> <p>Years 1 to 4: $\geq 75\%$ of virtual events and working groups organised by the Global Project.</p> <p>Years 1 to 4: $\geq 75\%$ of reports of the Global Project with contributions of Peru PMU and national stakeholders.</p>	<p>- Annual progress reports.</p> <p>- Memoirs of annual conferences, virtual events, and working groups.</p> <p>- Global Project reports.</p>	PMU	<p>Assumptions</p> <p>Global Project team request contributions well in advance.</p> <p>Risks</p> <p>Language barrier for non-English speakers.</p>		
Outcome 4.2 Increased National and Global knowledge and awareness on Circular Solutions to Single Use Plastic Packaging Pollution from	<p>Number of knowledge products, activities and events created (disaggregated by type).</p> <p>Number of persons (disaggregated by sex, occupation,</p>	Communication and knowledge management strategies to be refined at project start.	<p>Year 4: ≥ 20 knowledge products, activities, and events.</p> <p>Year 4: ≥ 100 persons that contributed towards knowledge products.</p> <p>Year 4: $\geq 5,000$ persons that</p>	<p>- Peru Project Strategy for Knowledge Management and annual workplans.</p> <p>- Reports of knowledge events.</p> <p>- Project website and</p>	PMU	<p>Assumptions</p> <p>Key stakeholders value knowledge about addressing plastic pollution.</p> <p>Risks</p>		3.13

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the Food and Beverage Sector	entity, age) contributing towards knowledge products. Number of persons (disaggregated by sex, occupation, entity, age) that participated in knowledge products, activities, and events.		participated in knowledge products, activities, and events.	social media articles, news items, best-practices, and other knowledge management reports - PIRs.		Persons unwilling to share their experience and knowledge.		
Output 4.2.1. Communication and Knowledge Management strategy developed and implemented for the project developed and implemented using the Global Project, and other relevant platforms.	Communication and Knowledge Management Strategies prepared and under implementation . Number of best practices/project results/news per year. Number of best practices/project results/news shared with other relevant platforms per year. Number of events attended by project team and key stakeholders. Number of persons that participate in the project initiation events. Number of persons that participate in the project closing events.	Communication and knowledge management strategies to be refined at project start.	Year 1 (Q2): Communications Working Group established. Year 1 (Q2): Project Communication Strategy adopted. Year 1 (Q2): Project brief in Spanish and English available through key channels. Year 1 (Q2): Project webpage online, linked to other key portals. Year 1 (Q2): ≥300 persons participate in the initiation events in the target districts. Year 1 (Q2): Project Strategy for Knowledge Transfer adopted. Years 1 to 4: ≥ 5 best practices/project results/news shared per year. Years 1 to 4: ≥ 5 best practices/project results/news shared with other relevant platforms per year.	- Peru Project Communication Strategy and annual workplans. - Peru Project Strategy for Knowledge Management and annual workplans. - PIRs.	PMU	Assumptions Key stakeholders value the knowledge and information generated by the project. Risks Persons unwilling to share their experience and knowledge.		3.13

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
			<p>Year 3 (Q2): 2 short videos online.</p> <p>Year 4: 2 international events in total.</p> <p>Year 4 (Q2): 2 additional short videos online³³.</p> <p>Year 4 (Q2): ≥500 persons participate in the initiation events in the target districts.</p>					
Output 4.2.2. Contribution to the Global Project Knowledge Management and Communication.	<p>Alignment with Global Project communication and knowledge strategies.</p> <p>Percentage of participation in annual conferences, knowledge sharing sessions, webinars, and capacity development activities.</p> <p>Number of knowledge inputs and products^{[34]⁵⁰} in English contributed to the Global Project website.</p>	Contributions will begin at project start.	<p>Year 1 (Q2). Project strategies fully aligned with the Global Project Knowledge Management and Communication strategy and workplan.</p> <p>Years 1 to 4: ≥75% of knowledge events organised by Global Project.</p> <p>Year 4. ≥5 knowledge inputs and products in English.</p>	<p>- Global Project Knowledge Management and Communication strategy and workplan.</p> <p>- Knowledge inputs and products in English.</p> <p>- PIRs.</p>	PMU	<p>Assumptions</p> <p>Global Project team request contributions well in advance.</p> <p>Risks</p> <p>Global Project team does not take into account the peculiarities of the context in Peru.</p>		3.13
Output 4.2.3. Seven lessons documents about the application of circular solutions and improved practices in the food and beverage sector.	Number of lessons documents that systematise key project learning.	Lessons will be systematically documented during project implementation.	<p>Year 3 (Q1): Final list of lessons documents to be prepared^{[35]⁵¹}.</p> <p>Year 4 (Q2). ≥7 lessons documents accessible through the SINIA and IW:LEARN platforms.</p>	<p>- Lessons documents published in the SINIA and IW:LEARN platforms.</p> <p>- PIRs</p>	PMU	<p>Assumptions</p> <p>Key stakeholders value the knowledge and information generated by the project.</p> <p>Risks</p>		3.13

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
						Persons unwilling to share their experience and knowledge.		
Output 4.2.4. Policy briefs and plastic pollution dialogues to foster science-based decision making.	Number of policy briefs dealing with issues of plastic pollution from the food and beverage sector.	There are no national policy briefs about plastic pollution from the Peruvian food and beverage sector.	Year 1 (Q2): Project guide to prepare policy briefs adopted. Year 1 (Q3): 2 policy briefs. Year 3 (Q4): 3 policy briefs.	- Project guide to prepare policy briefs. - Policy briefs published in the SINIA and IW:LEARN platforms.	PMU	Assumptions There is sufficient scientific knowledge to sustain the policy briefs. The authors of the policy briefs are recognised as credible and impartial scientists. Risks Sabotage from interest groups to disregard the findings for political or economic reasons.		3.13
4.2.5. SINIA strengthened to be the plastic pollution national knowledge hub.	Number of visits per month to plastic pollution knowledge hub (quarterly average). Average end-user satisfaction level (five-point Likert scale).	SINIA does not include a hub for information about plastic pollution.	Year 2 (Q2): Needs assessment of SINIA upgrading prepared. Year 2 (Q3): SINIA plastic pollution hub online. Year 2 (Q4): ≥100 visits per month (quarter average). Year 3: ≥150 visits per month (quarter average). Year 4: ≥200 visits per month (quarter average). Year 2 (Q4): ≥3.0 customer satisfaction.	- SINIA upgrade needs assessment report. - Monthly report of web analytic tools. - Quarterly reports of customer satisfaction surveys ^{[36]⁵². Use a five-point Likert scale. The survey will be offered to visitors of the plastic pollution knowledge hub.}	MINAM	Assumptions Stakeholders are interested in accessing information about plastic pollution. Risks Users of the information hub do not respond the surveys.		3.5 3.12

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
			<p>Year 3 (Q2): ≥ 3.5 customer satisfaction.</p> <p>Year 3 (Q4): ≥ 4 customer satisfaction.</p> <p>Year 4 (Q2): ≥ 4 customer satisfaction.</p>					
M&E Outcome. Efficient and timely project execution, monitoring and evaluation processes carried out, and corresponding improvement of project execution as appropriate.	Percentage of mandatory reports ^{[37]⁵³} delivered on time.	Monitoring and evaluation will initiate at project start.	<p>Year 1: $\geq 90\%$.</p> <p>Year 2: $\geq 90\%$.</p> <p>Year 3: $\geq 90\%$.</p> <p>Year 4: $\geq 90\%$.</p>	- Date of submission of mandatory reports.	PMU	<p>Assumptions</p> <p>PMU functions well.</p> <p>Risks</p> <p>Unforeseen events (e.g., changes in PMU team, natural disasters).</p>		
M&E Output 1. Documented monitoring and reporting process throughout the entire project execution life cycle ensuring successful project delivery	Mandatory monitoring reports delivered on time.	Monitoring and evaluation will initiate at project start.	<p>Inception Report. Year 1 (Q2).</p> <p>PIR. July each year.</p> <p>Progress and financial reports. Quarterly.</p> <p>Progress/operational reports. Semi-annually.</p> <p>Co-financing reports. June each year.</p> <p>Core Indicators baseline report: Year 1 (Q2).</p> <p>Core Indicators mid-point report: One month before MTR mission.</p> <p>Core Indicators final report: One month before Terminal Evaluation mission.</p>	<p>- Date of submission of mandatory monitoring reports.</p> <p>- Mandatory reports.</p>	PMU	<p>Assumptions</p> <p>PMU functions well.</p> <p>Risks</p> <p>Unforeseen events (e.g., changes in PMU team, natural disasters).</p>		None

Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification / Methodology	Responsible Entities	Assumptions & Risks	Relevant SDG target(s) and indicators	UNEP MTS reference* Relevant Programme of Work (PoW) Outcomes
M&E Output 2. Independent evaluations to assess the progress, success, and effectiveness of the project undertaken and recommendations reflected in project implementation.	Mandatory evaluation reports delivered on time.	Monitoring and evaluation will initiate at project start.	Year 2 (Q3): MTR team contracted. Year 2 (Q4). MTR report completed. Year 2 (Q4). MTR report presented to the Steering Committee. Year 4 (Q1): Terminal Evaluation team contracted. Year 4 (Q2): Terminal Evaluation report completed. Year 4 (Q2); Terminal Evaluation report presented to the Steering Committee.	- Contracts of MTR and Terminal Evaluation consultants. - MTR report. - Terminal Evaluation Report.	PMU	Assumptions PMU functions well. Risks Unforeseen events (e.g., changes in PMU team, natural disasters).		None
M&E Output 3. Regular contribution to the Global Project M&E reporting	Contributions to Global Project reporting delivered on time.	Monitoring and evaluation will initiate at project start.	Year 1 (Q3): Peru project delegates participate in Global Project's monitoring and evaluation kick-off meeting. Global Project annual report. Annual contributions. Global Project quarterly reports. Quarterly contributions. Global Project MTR process and report. As required. Global Project Terminal Evaluation process and report. As required.	- Memoir of Global Project's monitoring and evaluation kick-off meeting. - Global Project annual reports. - Global Project quarterly reports. - Global Project Terminal Evaluation report.	Global Project team PMU	Assumptions PMU functions well. Risks Unforeseen events (e.g., changes in PMU team, natural disasters).		None

[1] Measured as the total sum of (i) the increased amounts of PET and HDPE recycled (in metric tons) plus (ii) the reduction of the amount of plastic bags (in metric tons) in the annual “[plastic solid waste statistics](#)” report

from MINAM. It is assumed that this reduction will be produced by the implementation of EPR (outputs 3.1.1, 3.1.2, 3.1.3), APLs (outputs 2.1.1 and 2.1.2), improved circular design of plastic bottles and food containers (outputs 2.2.1 and 2.2.2), updated ordinances (output 1.1.5) and national regulations (outputs 2.2.3 and 3.2.1).

[2] Until April 2024 the EPR regulation had not been issued. The draft includes a two-year transition period after issuing the regulation, during this transition period the application of selective collection and valorisation targets is voluntary. The draft regulation can be found in the following [link](#).

[3] Assuming that until the mid-term of the project about 30% of beneficiaries will be women.

[4] Sex ratio based on [INEI](#) data for 2020: 49.20% men and 50.80% women.

[5] These are persons that will directly participate in implementing the behaviour change trials of circular solutions and improved practices to reduce or eliminate single-use plastics in markets, supermarkets, food courts, and fast-food restaurants in the three target districts (San Martin de Porres, Cayma, Tarapoto) (outputs 1.1.2 and 1.1.3). These persons will directly participate in testing the solutions (e.g., market vendors, fast-food restaurant employees, suppliers of circular solutions, municipal officers).

[6] These are persons that will be reached through the behaviour change trials (outputs 1.1.2 and 1.1.3). These persons will be the customers, patrons and visitors of the markets, supermarkets, food courts, and fast-food restaurants in the three target districts (San Martin de Porres, Cayma, Tarapoto).

[7] Each “Trial Report” documents the experience and learning (positive and negative) of testing a circular solution or improved practice in the target locales and with selected EDUCCA audiences.

[8] For example, market vendors, fast-food restaurant employees, suppliers of circular alternatives, municipal officers.

[9] For example, fast-food restaurant customers, municipal market patrons, users of food courts.

[10] Based on the COM-B model, these behaviour determinants are capability, opportunity, and motivation (Michie et al., 2011).

[11] Feasible circular solutions and innovative practices must have the following characteristics: (i) affordable, (ii) innocuous when contact with food, (iii) available in sufficient quantity to cover demand, (iv) circular material, (v) appealing | acceptable to customers, vendors, and service providers, builds upon gender sensitive behaviour determinants (COM-B model).

[12] Each “Feasible Solution Report” documents a circular solution or improved practice that is feasible (see footnote above) and provides guidance for its implementation.

[13] Improved strategies will include gender sensitive behaviour change tools and green nudges to incentive compliance.

[14] These are: teachers, school promoters, youth promoters and community promoters.

[15] The [EDUCCA](#) municipal programme is a national initiative coordinated by MINAM that is implemented by local municipalities. Its objective is to increase environmental culture. The three target municipalities implement the EDUCCA programme.

[16] These are the persons that participate in the EDUCCA programme activities and campaigns, for example school children, entire families, market vendors, among other population groups.

[17] These are micro and small enterprises (MYPES) to be identified during the trials in the target districts (outputs 1.1.2 and 1.1.3). A feasible solution is that which complies with the criteria used by the project (see 11). A promising solution is that which has limitations (e.g., insufficient supply, high unit cost) that could be potentiated by further business development. The feasible or promising solutions refer to solutions to plastic pollution from the food and beverage sector.

[18] Biannually measure average satisfaction level using an online survey based on a five-point Likert scale. The online survey will be sent to all companies that have ever signed an APL.

[19] Until April 2024, seven one-year APLs had been signed with companies of the food and beverage sector: Coca Cola Peru (2018), PAMOLSA (2019), CENCOSUD (2021), PAMOLSA (2021), Nestle Peru (2021), PERUPLAST (2023), Industrias del Envase (2023).

[20] It is planned that MINAM will convene an Intersectoral Coordination Body to ensure a whole-of-government approach response in the public – private dialogues. The core team of the Intersectoral Coordination Body will be MINAM, PRODUCE, MINSA, and MINEDU.

[21] An example is the “[Voluntary Design Guidelines for Designated PET Bottles](#)” from the Council for PET Bottle Recycling of Japan.

[22] It is foreseen that the national guidelines would be endorsed by MINAM (recyclability), PRODUCE (production) and MINSA (food safety) to ensure a whole-of-government approach.

[23] It is foreseen that the official initial list of chemicals and polymers of concern in food contact plastics will be endorsed by MINAM, PRODUCE and MINSA to ensure a whole-of-government approach.

[24] Peru implements a strict regulatory quality analysis process which includes the use of Regulatory Impact Assessment ([RIA](#)). Therefore, it seems unlikely that during the project time frame it will be possible to attain the issuing of a new regulation.

[25] The technical file contains the information about the technical basis of the regulatory proposal and the foreseen impacts as established by the “Framework Law for Legislative Production and Systematization” (Law [26889](#)) and its [regulation](#).

[26] Database Load testing is the process of simulating a realistic or expected load on your database, such as concurrent users, queries, transactions, or data volume. Database Stress testing simulates heavy workloads to identify performance limits, assess scalability, and response times.

[27] The Information System for Solid Waste Management (SIGERSOL) is an online system to collect, process and report information from solid waste managers (municipalities, waste management companies, producers).

[28] Performance goals will be defined by MINAM when SIGERSOL upgrade intervention is designed.

[29] Updated to include learning generated by the project activities.

[30] With local governments, private sector, civil society organisations.

[31] This implies that all the PMU personnel has been contracted and their working space is operational (e.g., office space, internet access, computers).

[32] The communications working group will assemble the communication officers of the project partners to coordinate the joint implementation of the Project Communication Strategy.

[33] The project will prepare four short videos that systematise the project experience. These videos be made available through IW: LEARN, the project partners websites and YouTube.

[34] For example, success stories, best practices, project brief, summaries of lessons documents.

[35] The provisional themes are: i. Lessons about reducing single-use plastics in markets, supermarkets, food courts, and fast-food restaurants in Peru, ii. Lessons about the application of social and behaviour change tools to address plastic pollution from the food and beverage sector in Peru, iii. Lessons on the application of behaviour change practices in men and women to implement circular solutions and improved practices to address plastic pollution from the food and beverage sector in Peru, iv. Lessons on the role of Peruvian municipalities in fostering circular solutions and improved practices to address plastic pollution from the food and beverage sector, v. Lessons on collaborative public - private circular design of beverage bottles and food containers, vi. Lessons on improving APLs to foster reduced plastic use in the food and beverage sector, and vii. Lessons document on the initial implementation of EPR on the Peruvian food and beverage sector.

[36] Quarterly measure average satisfaction level using an online survey of visitors based on a five-point Likert scale.

[37] Inception Report, annual PIRs, quarterly progress and financial reports, semi-annual progress/operational reports, Project Operational Completion Report, Mid-Term Review report, Terminal Evaluation report.

ANNEX D: STATUS OF UTILIZATION OF PROJECT PREPARATION GRANT (PPG)

Provide detailed funding amount of the PPG activities financing status in the table below:

Project Preparation Activities Implemented	GETF/LDCF/SCCF Amount (\$)		
	Budgeted Amount	Amount Spent To date	Amount Committed
PPG Design Experts	75,000.00	75,000.00	0.00
National Coordinators	45,000.00	45,000.00	0.00
Stakeholder consultations, meetings and workshops	30,000.00	30,000.00	0.00
Total	150,000.00	150,000.00	0.00

ANNEX E: PROJECT MAP AND COORDINATES

Please provide geo-referenced information and map where the project interventions will take place

Location Name	Latitude	Longitude	GeoName ID
San Martin de Porres	-11.992831	-77.08841	8,351,065

Location Description:

Activity Description:

Plastic reduction pilots in markets, supermarkets, fast food chains, and shopping malls

Location Name	Latitude	Longitude	GeoName ID
Tarapoto	-6.494145	-76.369666	8,351,337

Location Description:

Activity Description:

Plastic reduction pilots in markets, supermarkets, fast food chains, and shopping malls

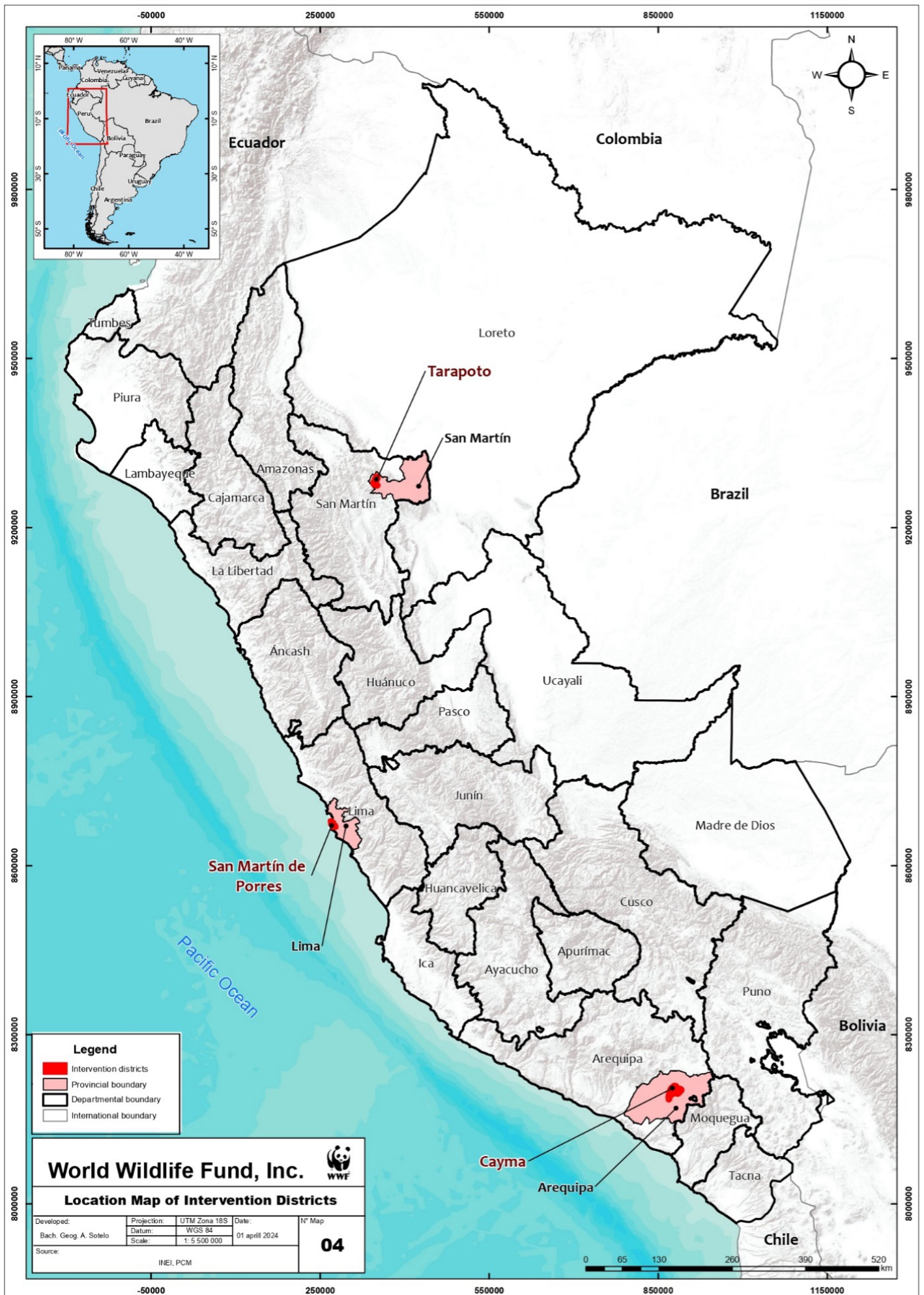
Location Name	Latitude	Longitude	GeoName ID
Cayma	-16.252686	-71.456962	8,350,505

Location Description:

Activity Description:

Plastic reduction pilots in markets, supermarkets, fast food chains, and shopping malls

Please provide any further geo-referenced information and map where project interventions are taking place as appropriate.



ANNEX F: ENVIRONMENTAL AND SOCIAL SAFEGUARDS DOCUMENTS INCLUDING RATING

Attach agency safeguard datasheet/assessment report(s), including ratings of risk types and overall project/program risk classification as well as any management plans or measures to address identified risks and impacts (as applicable).

Title

11191 - Plastic IP Peru - Annex F - SRIF

ANNEX G: BUDGET TABLE

Please upload the budget table here.

BUDGET LINE JUSTIFICATION	TOTAL	BUDGET ALLOCATION BY PROJECT COMPONENT, M&E and PMC						BUDGET BY YEAR						Responsible Entity
		C1	C2	C3	C4	M&E	PMC	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	Executing Entity receiving funds from the GEF Agency
		GEF (US\$)	GEF (US\$)	GEF (US\$)	GEF (US\$)	GEF (US\$)	GEF (US\$)	US\$	US\$	US\$	US\$	US\$	US\$	
PROJECT PERSONNEL COMPONENT														
Project Personnel													537,600	
National Project Coordinator / Senior Technical Advisor	201,600	20,160	60,480	50,400	20,160		50,400	50,400	50,400	50,400	50,400		201,600	WWF
Technical and scientific staff	336,000	201,600	42,000	48,720	43,680			84,000	84,000	84,000	84,000		336,000	WWF
Consultants w/m													1,518,472	
Policy and legislation experts	112,000	12,000	30,000	70,000				20,000	16,000	36,000	40,000		112,000	WWF
Thematic plastic technical and scientific experts	995,805	291,683	218,522	354,600	131,000			337,636	312,319	295,850	50,000		995,805	WWF
Gender and social expert(s)	70,000	21,000	14,000	28,000	7,000			17,500	17,500	17,500	17,500		70,000	WWF
M&E specialist	70,000	14,000	21,000	21,000	14,000			17,500	17,500	17,500	17,500		70,000	WWF

Other project consultants/experts	205,667	81,467	62,400	31,200	15,600	15,000		57,000	52,667	52,000	44,000		205,667	WWF
Evaluator (Mid-term)(Terminal)	65,000					65,000			32,500		32,500		65,000	WWF
Administrative Support													74,235	
Admin / Finance Support Staff	74,235						74,235	18,559	18,559	18,559	18,559		74,235	WWF
Travel													497,190	
Travel of Staff on official business	349,950	268,800	6,400	3,200	69,950	1,600		85,650	88,100	88,100	88,100		349,950	WWF
Travel for Global Project meetings	124,000				124,000			31,000	31,000	31,000	31,000		124,000	WWF
Travel of Consultants	23,240	6,600	16,640					14,920	8,320				23,240	WWF
SUB CONTRACT COMPONENT														
Contract Services													537,000	
Commercial Contract Company Services	537,000	305,000	125,000	50,000	57,000			262,000	182,000	64,000	29,000		537,000	WWF
TRAINING COMPONENT														
Training													165,000	
Training Personnel / Users	165,000	165,000						15,000	90,000	60,000			165,000	WWF
Meetings													452,600	
Inception Workshop meeting	800					800		800					800	WWF
Steering Committee and/or Working Group meetings	6,000				6,000			1,500	1,500	1,500	1,500		6,000	WWF
Meeting National	374,400	25,000	106,000	166,000	77,400			76,100	52,100	35,100	211,100		374,400	WWF
Meeting International	71,400				71,400				35,700		35,700		71,400	WWF
SUPPLIES COMMODITIES AND MATERIALS														
Supplies, Commodities and Materials													469,680	

Office Supplies and consumables	9,600						9,600	2,400	2,400	2,400	2,400		9,600	WWF
Materials	460,080	210,080		180,000	70,000			17,520	232,520	107,520	102,520		460,080	WWF
Equipment and Furniture													44,563	
Equipment	44,563		10,000	20,000	10,000		4,563	24,563	20,000				44,563	WWF
Premises													19,200	
Office Premises	19,200		6,000	10,000			3,200	4,800	4,800	4,800	4,800		19,200	WWF
MISCELLANEOUS COMPONENT														
Operating and Other Costs													70,416	
Operating Cost	46,000						46,000	11,500	11,500	11,500	11,500		46,000	WWF
Equipment Rental and Maintenance	24,416		6,000	12,000	6,000		416	6,104	6,104	6,104	6,104		24,416	WWF
Reporting costs (publications, maps, NL)													44,000	
Publications, Translations, Dissemination and reporting costs	28,000		8,000		20,000					8,000	20,000		28,000	WWF
Audits	16,000						16,000	4,000	4,000	4,000	4,000		16,000	WWF
Sundry (communications, postages)													7,200	
Communications (tel, e-mail, etc..)	7,200						7,200	1,800	1,800	1,800	1,800		7,200	WWF
TOTAL	4,437,156	1,622,390	732,442	1,045,120	743,190	82,400	211,614	1,162,252	1,373,289	997,633	903,983	0	4,437,156	

Please explain any aspects of the budget as needed here

N/A

ANNEX I: RESPONSES TO PROJECT REVIEWS

From GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF.

N/A

