



Part I: Project Information

GEF ID

11015

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

CBIT No

NGI No

Project Title

Strengthening the national capacity for the management of POPs in Costa Rica

Countries

Costa Rica

Agency(ies)

UNDP

Other Executing Partner(s)

Ministry of Energy and Environment (MINAE)

Executing Partner Type

Government

GEF Focal Area

Chemicals and Waste

Sector

Taxonomy

Focal Areas, Chemicals and Waste, Disposal, Open Burning, Sound Management of chemicals and waste, Plastics, Best Available Technology / Best Environmental Practices, Emissions, Persistent Organic Pollutants,

Unintentional Persistent Organic Pollutants, Waste Management, Hazardous Waste Management, Influencing models, Demonstrate innovative approach, Transform policy and regulatory environments, Convene multi-stakeholder alliances, Strengthen institutional capacity and decision-making, Stakeholders, Private Sector, SMEs, Capital providers, Large corporations, Communications, Public Campaigns, Behavior change, Awareness Raising, Beneficiaries, Local Communities, Civil Society, Trade Unions and Workers Unions, Non-Governmental Organization, Academia, Type of Engagement, Consultation, Participation, Information Dissemination, Partnership, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Women groups, Gender-sensitive indicators, Gender results areas, Knowledge Generation and Exchange, Participation and leadership, Access to benefits and services, Capacity Development, Capacity, Knowledge and Research, Knowledge Generation, Innovation, Learning, Indicators to measure change, Adaptive management, Theory of change, Enabling Activities, Targeted Research

Rio Markers

Climate Change Mitigation

Significant Objective 1

Climate Change Adaptation

No Contribution 0

Biodiversity

No Contribution 0

Land Degradation

No Contribution 0

Submission Date

6/23/2023

Expected Implementation Start

2/1/2024

Expected Completion Date

1/31/2029

Duration

60In Months

Agency Fee(\$)

380,000.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CW-1-1	Strengthen the sound management of industrial chemicals and their waste through better control, and reduction and/or elimination	GET	4,000,000.00	23,622,457.00
Total Project Cost(\$)			4,000,000.00	23,622,457.00

B. Project description summary

Project Objective

The GEF financed project (Grant: USD 4,000,000; Co-financing: USD 23,522,457), implemented by the Ministry of Environment and Energy (MINAE) with support of the United Nations Development Programme (UNDP), aims to reduce the emissions/releases, minimize exposure of human beings to UPOPs in strategic sectors including plastics and to advance the Stockholm Convention in Costa Rica. The project is structured in four components and the following main outcomes: ? Government and relevant stakeholders involved, and POPs environmental sound management (ESM) capacities strengthened. ? Unintentional POPs (UPOPs) emissions and control systems strengthened. ? Plastics management systems strengthened. ? BAT/BEP for the reduction of use and consumption of plastics and management of plastics waste. ? Awareness-raised, lessons learned, and knowledge managed. The project will provide Global Environmental Benefits in terms of reducing and eliminating 30 MT of PCB contaminated materials; 34 gTEq of emissions from biomass burning and plastics management , benefiting 5,180,000 inhabitants of the country.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$ \$)	Confirmed Co- Financing(\$)
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Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 1: Strengthen institutional capacities, and the policy and regulatory framework to address POPs-containing chemicals, products and waste, including plastics	Technical Assistance	A) Government and relevant stakeholders involved POPs ESM capacities strengthened	<p>A1) Capacity built to effectively eliminate/reduce and monitor releases of POPs and newly listed POPs</p> <p>A2) Improvement of the legal and regulatory framework to support the environmentally sound management of the life cycle of chemicals</p> <p>A3) Capacity building in government institutions to control imports of POPs containing products</p> <p>A4) Cost-benefit scheme developed for the environmentally sound management of chemical products in Costa Rica, including POPs and Mercury</p>	GET	1,150,000.00	6,791,456.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
			A5) Comply with Stockholm Convention's targets on PCBs (Reduction of 30 MT of PCBs containing waste held by private owners)			
Component 2: Reduction of the release of UPOPS in priority sectors.	Technical Assistance	B) UPOPs Emissions and control systems strengthened	<p>B1) National strategy on the elimination of burning methods in the agricultural sectors</p> <p>B2) 3 Pilot Projects for the reduction of UPOP emissions from uncontrolled and/or open burning of biomass (sugarcane, pineapple and rice) agrochemical and other waste</p> <p>B3) Pilot for the use of pineapple biomass based on a circular economy approach</p>	GET	1,050,000.00	6,200,895.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 3: Improved plastics management.	Technical Assistance	<p>C) Plastics management systems strengthened</p> <p>D) BAT/BEP for the reduction of use and consumption of plastics and management of plastics waste</p>	<p>C1) National Strategy for non-recoverable/non-reusable plastic</p> <p>C2) Platform for the comprehensive management of plastic waste</p> <p>D1) Pilot #1: BEP/BAP for the comprehensive management of plastics in agricultural activities</p> <p>D2) Pilot #2 on Non-Recyclable plastics including sources, consumption baseline and business model feasibility study for their management</p> <p>D3) Pilot #3 on Management of vehicle plastics at the end of their life cycle</p>	GET	1,409,524.00	8,324,105.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
Component 4. Awareness raised, Lessons learned identified, monitored and assessed.	Technical Assistance	E) Awareness-raised, lessons learned, and knowledge managed	E1) Awareness raising approaches and plans developed and implemented E2) M&E and adaptive management in response to necessities and results from the MTR and final findings with lessons learned applied E3) Knowledge management system for best practices and communication platform at national level established	GET	200,000.00	1,181,123.00
Sub Total (\$)					3,809,524.00	22,497,579.00
Project Management Cost (PMC)						
GET			190,476.00			1,124,878.00
Sub Total(\$)			190,476.00			1,124,878.00
Total Project Cost(\$)			4,000,000.00			23,622,457.00

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	UNDP	Grant	Investment mobilized	50,000.00
GEF Agency	UNDP	In-kind	Recurrent expenditures	50,000.00
GEF Agency	UNDP	Grant	Investment mobilized	1,500,000.00
GEF Agency	UNDP	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Ministry of Environment and Energy	In-kind	Recurrent expenditures	305,000.00
Recipient Country Government	Ministry of Health	In-kind	Recurrent expenditures	398,600.00
Civil Society Organization	One Sea	Grant	Investment mobilized	1,000,000.00
Civil Society Organization	One Sea	In-kind	Recurrent expenditures	1,500,000.00
Other	UTN	Grant	Investment mobilized	4,000,000.00
Private Sector	COOPELESCA	Grant	Investment mobilized	587,441.00
Private Sector	COOPELESCA	In-kind	Recurrent expenditures	488,986.00
Private Sector	ESPH	Grant	Investment mobilized	224,500.00
Private Sector	ESPH	In-kind	Recurrent expenditures	302,705.00

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Private Sector	ICE	Grant	Investment mobilized	1,278,500.00
Private Sector	ICE	In-kind	Recurrent expenditures	2,481,483.00
Private Sector	JASEC	Grant	Investment mobilized	393,420.00
Private Sector	JASEC	In-kind	Recurrent expenditures	129,322.00
Private Sector	NICOVERDE	Grant	Investment mobilized	1,100,000.00
Private Sector	NICOVERDE	In-kind	Recurrent expenditures	1,400,000.00
Private Sector	CRDC&PEDREGAL	Grant	Investment mobilized	450,000.00
Private Sector	CRDC&PEDREGAL	In-kind	Recurrent expenditures	3,900,000.00
Private Sector	POAS BIO ENERGY	Grant	Investment mobilized	624,000.00
Private Sector	POAS BIO ENERGY	In-kind	Recurrent expenditures	958,500.00
Total Co-Financing(\$)				23,622,457.00

Describe how any "Investment Mobilized" was identified

During PPG phase the following Investment Mobilized was identified: The FFEM through the project Rethinking Plastic Consumption in Costa Rica: From Ideas to Action will invest in pilot projects which validate EPR and zero waste circular economy in mass consumer plastics industry: implement the principle of hierarchy, BAT, BEP, as a business model in waste management, in order to reduce plastic footprint. The Private Sector through the Power generation and distribution companies will support the identification, sampling and management of PCB containing equipment under its ownership as well as their replacement aligned to Stockholm Convention and national legal framework requirements. Nicoverde will support investments in equipment for the different initiatives (bio textiles, bio materials, mushroom substrate) for

pineapple biomass utilization. Poas Energy will invest in the prototype of equipment for gas generation by means of pineapple biomass pellets. Lastly, CSO will support collection of non-recoverable plastics and transform them into raw material for the construction industry.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GE T	Costa Rica	Chemicals and Waste	POPs	4,000,000	380,000	4,380,000.00
Total Grant Resources(\$)					4,000,000.00	380,000.00	4,380,000.00

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)
PPG Required **true**

PPG Amount (\$)
150,000

PPG Agency Fee (\$)
14,250

Agenc y	Trus t Fun d	Countr y	Focal Area	Programmin g of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Costa Rica	Chemical s and Waste	POPs	150,000	14,250	164,250.0 0
Total Project Costs(\$)					150,000.0 0	14,250.0 0	164,250.0 0

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	0	0	0	0
Expected metric tons of CO ₂ e (indirect)	0	400	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 CO ₂ e (direct)				
Expected metric tons of CO ₂ e (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 CO ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)		400		
Anticipated start year of accounting		2027		
Duration of accounting		3		

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)
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)	
1.00	30.00	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)
Polychlorinated biphenyls (PCB)	1.00	30.00		
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)
30.00			

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)
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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)
	3,000.00		

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)
34.00	34.00		

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)
1	1		

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)
2	2		

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	425,000	425,000		
Male	425,000	425,000		
Total	850000	850000	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Core Indicator 9: Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (thousand metric tons of toxic chemicals reduced). The target on indicator 9.6 was established based on existing inventory of remaining PCBs and PCB-contaminated equipment, considering on going efforts of the electric sector. Indicator 9.8 Avoided residual plastic waste. It is estimated that through activities and pilots under Component 3, the project will downcycle, recycle end of life plastics and or/extend the life of at least 1,000 MT per year from the 3rd year of implementation onwards which represents 3,000 MT of plastic waste avoided. Core Indicator 10: Reduction, avoidance of emissions of POPs to air from point and non-point sources (grams of toxic equivalent gTEQ) This Core Indicator is measured for 5 years of project implementation and 2 years after project implementation. The UPOPs calculation is done applying the Stockholm Toolkit . In the case of biomass burning: Group 6 ? Category a ? Class 1 and 3. The projet will gradually address 10% of the annual UPOPs emissions of the selected crops. This means avoding 9gTEQ (accrued) during 5 years of project implementation, reaching 17gTEQ (accrued) after 2 years of project completion. In the case of plastics: Group 6 ? Category a ? Class 1 and 3. The projet will gradually address 40% of the annual UPOPs emissions due to mismanagement of plastics in prioritized sectors.. This means avoding 9gTEQ (accrued) during 5 years of project implementation, reaching 17gTEQ (accrued) after 2 years of project completion. TOTAL: 18 gTEQ during 5 years of project implementation, reaching 34 gTEQ (accrued) after 2 years of project completion. Core Indicator 11. Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment The detail of the number of Beneficiaries for Costa Rica is introduced in Annex 13. It is estimated that 850,000 people (425,000 women and 425,000 men) will benefit from project activities implementation. During PPG phase, the following Indicators were identified as co benefits of the Project: Core Indicator 6. Greenhouse Gas Emissions Mitigated (metric tons of CO₂e) GHG emissions result from the manufacturing of plastic polymers, therefore reducing the demand for new plastics, either by downcycling, recycling end of life plastics or extending the life of plastics products (including agricultural and vehicle) will result in a reduction in GHG emissions. It is estimated that through activities and pilots under Component 3, the project will downcycle, recycle end of life plastics and or/extend the life of at least 1,000 MT per year from the 3rd year of

implementation onwards which represents 400 MT of CO₂e emissions mitigated by the end of the project.

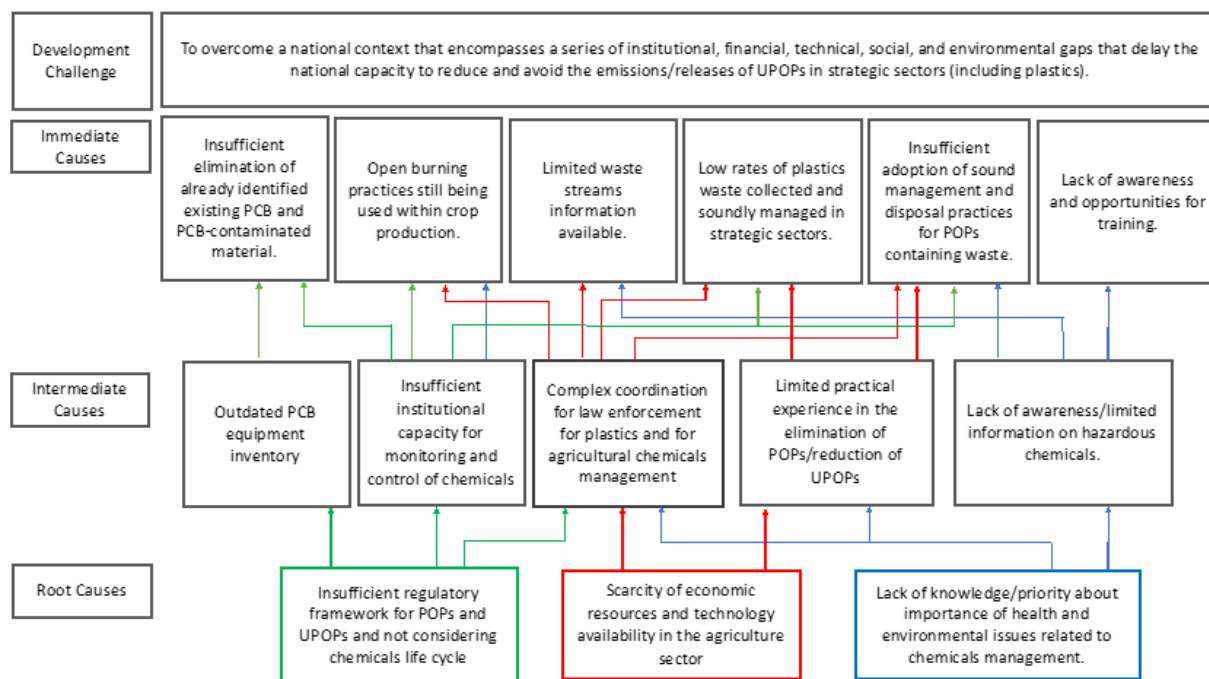
Part II. Project Justification

1a. Project Description

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (system description).

The development challenge is to overcome a national context that encompasses a series of regulatory, institutional, technical, behavioral, social, and environmental gaps that impede the national capacity to reduce and avoid the emissions/releases of UPOPs in strategic sectors (including plastics).

The analysis of the development challenge during PPG phase has identified three levels of causes for the environmental sound management of the POPs, their emissions and waste within the national framework and international commitments, in particular the Stockholm Convention. The problem tree with immediate, intermediate, and root causes is detailed below:



The main challenges to be addressed by this project, which are directly linked to the root causes identified in the Problem Tree Analysis Diagram, are the following:

a) Enable conditions for the sound management of POPs and UPOPs through institutional strengthening, promoting coordination and enhancing legal and policies framework. For that purpose, baseline information still needs to be strengthened, as well as available alternatives for harmful chemicals substitution, and made it available for decisions makers resulting in robust national plans and strategies. UPOPs and newly listed POPs still require major and improved control within the country.

Environmental monitoring and emissions control require strengthening, training, and infrastructure for sampling as well as analytical capacity to generate data on real contamination levels.

b) Phase-out, by 2025, all PCB-containing equipment and PCB disposal and waste in an environmentally sound manner by 2028, as per the Stockholm Convention. This Project will build upon the ongoing efforts of the Government to identify and promote the environmentally sound management of PCB equipment and waste in power sector and specifically, will foster and articulate results in both private sector and sensitive sites. It will be critical to sensitize and assist both, in order to improve the existing lack of information and thus advance in the coordination of necessary activities for an adequate environmentally sound management of PCBs.

c) Promote the adoption of best available practices and best environmental practices in the agricultural sector and for plastic waste management that will enhance the reduction of UPOPs emissions. The country has considerable agricultural area and currently the legal framework allows the controlled agricultural burning (QAC) with previous authorization, but this regulation does not include UPOPs emissions control. In addition, in terms of plastic management the country has several National Strategies, National Plans and Regulations that enhance the reduction of use of plastics and the promotion of plastic waste management. However, the country still lacks sufficient information of waste volumes and low rate of plastic waste is collected and sound managed.

d) Build capacity and make knowledge accessible for key stakeholders to adopt sustainable practices for the POPs management and other hazardous substances as well as the promotion of their substitution. Equally important to address is to raise awareness on the impacts on health and environment of POPs and other harmful chemicals.

Finally, to address the sound management of hazardous chemicals, the project's strategy will require the involvement of key stakeholders, such as government authorities (including customs officers to ensure the control of imports), agricultural producers organizations, industrial associations, civil society, academics, laboratories and researchers.

2) The baseline scenario and any associated baseline projects.

Baseline Scenario

General background

Costa Rica is considered one of the 20 countries with the greatest biodiversity in the world, with an area of only 51 100 km² (0,03% of the world's total) and 589 000 km² of territorial waters. The country has a population of 5,153,957 inhabitants^[1], being 50% female and 50% male population. It is divided into 7 administrative provinces (Annex 3) which are Alajuela, Cartago, Guanacaste, Heredia, Limon, Puntarenas, and San Jose. These provinces are divided into 82 cantons, which are further subdivided into 473 districts.

Institutional and Legal Framework

Protection of the environment is one of Costa Rica's political pillars. The following institutional framework accompanies the protection of the environment and human health, including protection from hazardous chemicals and waste within the scope of the project.

The Ministry of Environment and Energy (MINAE) is in charge of formulating, planning and implementing policies related to natural resources and environment protection of the Government of this Republic. Likewise, the MINAE is in charge of the control, audit, promotion and development of the field mentioned. It is the national authority responsible for coordinating the actions derived from the application of Stockholm Convention. Therefore, it is the entity with the jurisdiction to establish prohibitions and determine an action plan and the strategies for the POP management.

The Ministry of Health (MINSALUD) is the governing body of public health; it is responsible for protecting the environmental conditions that can risk human health. It establishes the policies, regulations, technical regulations, and it has control over topics related to hazardous products, pesticides, handling of residues and atmospheric pollution. Similarly, it is the legal and responsible national entity in charge of coordinating the actions derived from the application of Basel Convention; it also processes the permits for exports of hazardous residues such as POP.

Regarding waste, in accordance with Law for Integrated Management of Hazardous Residues (Law 8839), the Ministry of Health is the rector for addresses, monitoring, assessment and control. The leader is also accountable for encouraging and implementing the coordination between institutions, especially between the MINAE and the Ministry of Agriculture and Livestock (MAG).

The MAG has a Phytosanitary Government Service (SFE), which has functions and responsibilities documented in article 5 of the Law No.7664 "The "Phytosanitary Protection Law". This law mandates that the marketing of agrochemicals comply with the current technical and legal regulations and seeks to protect human health, biodiversity and the compliance of the phytosanitary regulations that apply for the national and international marketing of vegetables. Furthermore, the SFE is the legal and responsible national entity in charge of coordinating actions derived from the application of Rotterdam Convention (Article 6, Executive Decree No.33104), in joint efforts with MINSALUD, that controls the imports of pesticides and prohibits the entry of hazardous pesticides.

The Ministry of Finance through its General Directorate of Customs is responsible for obtaining a timely and effective control of the import and export of goods to the national territory, protecting the interests of the community such as health, safety, and the environment. The General Directorate of Customs is the national hierarchical superior body of customs, which is in charge of the technical and administrative functions of customs and creates policies and regulations for the activities of customs and related departments. It is accountable for the implementation of international conventions and the national legislation of POP, in cooperation with other ministries, which inform Customs of the prohibitions or restrictions for the import of specific products through technical notes.

Finally, the country counts with a Technical Coordination Secretariat for the Management of Chemical Substances, created by Executive Decree No. 33104-RE-MAG-MINAE-S on January 2nd, 2006, and defined as "a support body for the competent and national focal point authority of the different conventions as well as linked authorities, whose aim is to promote an effective and efficient conveyance of the topic of chemical substances at a national level". Therefore, it is a body for coordination between

institutions and sectors, as well as platform for synergies between the Stockholm, Basel, and Rotterdam conventions. It is composed of representatives of the following sectors: MAG, MINSALUD, MINAE, Ministry for Foreign Affairs and Worship (RREE), Custom Services of the Ministry of Finance, Occupational Safety Council, Non-governmental organizations (NGO), Union of Private-Sector Chambers and Associations, National Council of Rectors.

Regarding the legal framework, the country has made significant progress in the development of different regulatory instruments, of which the following can be highlighted within the framework of the project:

Law No. 8839 for the comprehensive management of solid waste approved in 2010. This law has a national scope and delegates responsibility for the integral management of solid waste to each of the 82 municipal governments, under the permanent direction of the MINSALUD, in permanent coordination with the MINAE. The law introduces the principle Extended Producer Principle (EPR) only applicable to special handling waste, which are defined through National Decree No. 38272-S of the MINSALUD. It is relevant to highlight that within this Decree single use plastics and plastics for agricultural use (other than containers) are not included. On the other hand, vehicles are considered special handling waste and as such, End-of-life vehicle management must be performed by authorized manager.

In 2015, directly related to the management of chemical products, the Decree No.40705-S Technical Regulation RTCR 478 was established for the control Chemical Products, Hazardous Chemical Products, Registration, Import and Control. The regulation requires the country to carry an inventory of chemical substances used nationally by different companies. Also in 2015, through Decree No. 40457-S and its Technical regulation RTCR 481:2015, a compulsory label was required for all chemicals products registered in the country. The Labelling is done according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and is valid for five years.

In 2016, Decree No. 39472-S General Regulations for Sanitary Authorizations and Permits for Operation Granted was established, for the regulation of the operation of all companies established in the country. This legal instrument allows the Ministry of Health to control different aspects such as emissions, releases, residues, and chemical safety.

UPOPs emissions for certain activities are regulated through i) Executive Decree No. 31837-S Regulation of requirements, conditions, and controls for the use of alternative fuels in cement kilns; ii) Executive Decree No. 38237-S Regulation on air emission limits for glass melting furnaces; and iii) Executive Decree No. 39136-S-MINAE Regulation on operating conditions and emission control of facilities for co-incineration of ordinary solid waste. Although Costa Rica does have regulation for Agricultural waste burning through Decree 35368-MAG-S-MINAEET ?Regulation for Controlled Agricultural Burning?, this does not include UPOPs emissions control.

With regards to Plastics Management, a basic regulatory framework for the management of plastics is in place. The Decree No. 37567 from 2013 refers to actions for sustainable buying schemes for waste products and collection containers (waste containers) as well as a Regulation for Waste Value Recovery Centres (Decree No. 35906 - 2010). In December 2019 the country approved the Law to fight the plastic pollution (Law No. 9786) and in 2021, through Law No. 9825 (July) and Law No. 10031 (October) the country provided local governments additional control and independence to the to apply fines for waste generators do not implement separation at source and/or contravene applicable regulations.

In terms of PCB, in 2019 the country enacted Decree No. 40697-MINAE-S Regulation for the identification and environmentally safe elimination of PCBs. The decree establishes the guidelines for the identification and environmentally safe elimination of PCBs present in oils, equipment and waste that contain or are contaminated with PCBs. Furthermore, the decree requires the registration of equipment and waste, their classification, labeling, management, and establishes deadlines for the disposal of existing inventories as established by the Stockholm Convention.

Costa Rica's Engagement in International Agreements on Chemicals and Waste Management

Costa Rica is party to the four main international conventions on Chemicals:

- a) Stockholm Convention on Persistent Organic Pollutants was approved by Law No. 8538 of August 23, 2006, and ratified by Executive Decree No. 33438 November 6, 2006. The country developed its National Implementation Plan in 2009 and completed its update in 2015.
- b) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Destruction was ratified by Executive Decree No. 23927 of December 13, 1994.
- c) Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides Moving in International Trade, ratified by Executive Decree No. 35416 of June 30, 2009.
- d) Minamata Convention on Mercury. Through Law No. 9391, Costa Rica became a party to the Minamata Convention on Mercury. Costa Rica has recently approved the Decree No. 43170 - MINAE-S Prohibition of registration, import, export, and manufacture of mercury-added products listed in Annex A, Part I of the Minamata Convention on Mercury, and manufacturing processes using mercury or mercury compounds.

In September 2016, Costa Rica became the first country in the world to sign a National Pact for Sustainable Development Goals (SDGs), in line with its environmental protection and sustainable development policies.

Costa Rica is also signatory of the Strategic Approach to International Chemicals Management (SAICM). In 2017, the Decree No. 40148-S-MINAE-MAG-MTSS-RE-H: Declaration of public interest and proclamation of the National Chemical Safety Policy was issued. The Policy is based on the five objectives set by SAICM and is implemented through an action plan coordinated by the Technical Coordination Secretariat for the Management of Chemical Substances.

Lastly, in May 2021, Costa Rica has formally become a Member of the Organization for Economic Cooperation and Development (OECD), evidencing, among other aspects, a strong commitment to green growth. Likewise, this Full-Size Project (FSP) will contribute to improve country's performance for chemicals and waste management to protect human health and the environment.

Persistent Organic Pollutants

PCB Baseline

In terms of PCBs, Costa Rica has made great progress thanks to the implementation of the UNDP-GEF project "Integrated PCB Management in Costa Rica" from 2013 until 2019. Through this project the

country was able to identify and address main national barriers for the sound management of PCBs. As a result, the country's legal framework and enforcement for PCB were strengthened through the previously mentioned Decree No. 40697-MINAE-S. In addition, an online POPs information System was created (<http://cops.digeca.go.cr>) which allows consultation on the stocks of these compounds as well as a periodic update by the generators or owners of these stocks. The project also supported the test of 1,400 transformers with high probabilities of being contaminated with PCB and provided storage capacity for hazardous waste. Furthermore, it successfully supported the elimination/ decontamination of 1,311 MT of PCBs and PCB containing equipment. In terms of national capacity for treatment and disposal, the project strengthened installed capacity for decontamination of PCB oil and PCB-contaminated equipment with concentrations below 500 ppm. However, for contaminated equipment with concentrations over 500 ppm, export is still required.

Currently there are registered in POPs Information System 134,194 transformers, of which 131,038 (97.6%) belongs to the 8 generation and distribution companies available in the country. The remaining number of transformers (3,156) are owned by 342 companies.

During PPG phase, a survey was conducted among companies of the electric sector (generation and distribution). Out of the 8 consulted companies, only five^[2] were able to submit details on their PCB inventories. The following table summarizes current situation of equipment and PCB inventory among the electric sector based on the received information.

Table 1. PCB inventory in the electric sector

	Total number of equipment	Number of equipment containing PCB (confirmed by chromatography)	Number of equipment pending confirmation
CNFL	28,672	-	2,854
ESPH	6,132	112	340
ICE	78,458	46	77,786
JASEC	8,479	3,228	4,239
COOPEGUANACASTE	1,326	-	1,275
TOTAL	123,067	3,386	86,584

Source: PPG Team.

The survey showed some inconsistencies with the information available in the register and that there is still a great effort to be made in the identification of PCB contaminated equipment. When identified, a considerable number of transformers still require chromatographic analysis for confirmation of PCB contamination. Although most of the companies' evidence identification and sampling plans, most of

them confirmed that won't be able to able to meet 2025 Stockholm deadline and currently do not have operational/financial budgets to replace all PCB contaminated equipment.

In terms of the private sector, it was evidenced the lack of participation of the private owners since the Decree No. 40697-MINAE-S was approved. In addition, some PCB-contaminated equipment is scattered in rural and vulnerable sites such as health centers, public education institutions and drinking water supply systems.

Based on the POPs Information System and the survey, it was conservatively estimated by the PPG team that 906 tons of equipment contaminated with PCBs still require elimination before 2028. Considering that other countries in the LAC region present 6% of electrical transformers contaminated with PCBs, the PPG stage has estimated that 8,549 transformers contaminated with PCBs in Costa Rica need to be eliminated or disposed in an environmentally sound manner. This information will be revised during the implementation of the FSP for a more accurate estimation and updated accordingly.

Table 2. PCB Electrical Equipment context

Source	Number of Transformers	Transformers most likely to be contaminated with PCBs (tons)	Total mass of equipment (tons)	Volume of Oil (tons)
Power sector	139,320	8,359	886	265.8
Private sector and sensitive sites	3,156	189	20	6
Total (100%)	142,476	8,549	906	271.8

Source: PPG Team.

In order for Costa Rica to phase-out by 2025, all PCB-contained equipment and dispose of PCBs in an environmentally sound manner by 2028, the following barriers can be considered: support the mechanisms for identifying remaining equipment's contaminated with PCBs (mainly in private sector and sensitive sites); Fragmentation of control and enforcement exist, particularly for PCBs equipment, which need to be aligned; Lack of awareness/knowledge on the requirement of elimination by 2028 of industrial sector companies and other PCBs contaminated equipment owners.

UPOPs baseline

According to the 2015 NIP, the total annual amount of UPOPs releases in the country is 271 gTEQ/y where Group 6 (emissions from biomass burning and burning of waste and accidental fires) accounts for 199.07 gTEQ/y of UPOPs into the air and soil, over 70% of all emissions in the country. Between 2005-2013, an increase of UPOPs emissions was observed (from 26% to 71%). This is mainly due to factors such as consumption habits and agricultural production that involves open burning and waste disposal, which is consistent with weaknesses in waste management as well as enforcement of existing regulations and standards.

In 2017, DIGECA carried out an update of the UPOPs inventory using the UNEP Toolkit for relevant groups (3, 6, 7, 9) as identified in the 2015 NIP. The 2017 update[3]³ showed that Group 6 releases increased to 346.5 gTEQ/y. Within this category the document indicated that biomass burning category emitted 29.22 gTEQ/y in 2013 increasing to 39.84 gTEQ/y in 2017. These emissions were mainly related to rice, pineapple and sugar cane crops, since these were the identified crops that mostly use burning in their production.

In addition, the study showed an increase for waste burning and accidental fires from 169.85 gTEQ/y in 2013 to 306.42 gTEQ/y in 2017. Thus, indicating a steady increase over time. Within this category the UPOPs emissions are directly related to mismanagement of plastics as a considerable part of the products within the categories contain this material.

a. Biomass burning

Although economic diversification has occurred in recent years, Costa Rica is a historically agricultural economy, activity that contributed to 4.5% of GDP[4]⁴ in 2021.

In the country, the use of fire for agricultural purposes is regulated by Decree No. 35368-MAG-S-MINAE, which defines controlled agricultural burning (QAC) as "the use of fire intentionally provoked to a vegetal material, under a pre-established plan in which preventive measures are taken to mitigate damage to natural resources and neighboring properties, which is carried out for phytosanitary purposes, crop facilitation or land clearing ". To carry out this practice on agricultural land, written authorization must be granted by the competent local or regional MAG agency. The reception, analysis and resolution of applications processed by individuals and legal entities is carried out by this entity through the Agricultural Extension Agencies (AEA).

Within the agricultural activity the land uses with the highest QAC practice are linked to the production of the following crops: sugarcane, pineapple and the rice. According to the Agricultural Statistical Report[5]⁵ ? n? 32, in 2021 Costa Rica had a total of 402,376 has under agricultural activities where 9.5% has been approved for conducting burning practices.

The total agricultural area and total production can be subcategorized as follows: i) Agro-industrial crops (62.8% of planted area) which includes sugar cane crop with 59,836 has of planted area; ii) Fresh fruits (22.7% of planted area) which includes pineapple with 40,000 has of planted; iii) Basic grain (13.4% of planted area) which includes rice with 32,965 has of planted area; and iv) Vegetables (1.1% of planted area).

During the last period sugarcane production resulted in 1,164 permits and 78.57% of the approved area at the national level, followed by pineapple with 166 permits and 18.13% of the area at the national level, followed by rice with 15 permits and 1.46% of the authorized area respectively. The following table details the trend of the past three years:

Table 3. Controlled agricultural burning in sugar cane, pineapple, and rice.

	June 2019 - May 2020	June 2020 - May 2021	June 2021 ? May 2022

	N? of permits	Planted Hectares (Has)	% of Has with QAC	N? of permits	Planted Hectares (Has)	% of Has with QAC	N? of permits	Planted Hectares (Has)	% of Has with QAC
Sugar Cane	1,328	62,630	63%	1,224	62,665	67%	1,164	59,839	49.89%
Pineapple	169	40,000	19%	152	40,000	19%	166	40,000	17.22%
Rice	17	31,657	11%	27	30,468	16%	15	32,965	1.68%

Source: Controlled agricultural Burning Reports. Ministry of agriculture and livestock (MAG)

As it can be observed, the sector that most practices open burning is sugarcane production. The reduction in the number of hectares under controlled agricultural burning evidenced in the past years is due to technological changes in sugarcane cultivation in terms of green harvesting. On the other hand, rice cultivation has shown a notable reduction in the practice of burning. In the last year, only 553.8 hectares have been subjected to this practice and it was confirmed with key stakeholders (CONARROZ and Grupo Pelon) that these practices are being discouraged among rice producers.

Regarding distribution within the territory, the highest concentration of permits granted in the last five years is in the Chorotega (43%), Brunca (30%) and Huetar Norte (18%) development regions.

The existing regulation creates a permanent inter-institutional committee, made up of members of the MAG, the Ministry of Health and the Ministry of Environment and Energy. This committee has the following functions: i) Follow up on the issue of controlled burning for agricultural purposes, suggesting policies tending to improve the enforcement and supervision of this agricultural practice; ii) Establish a national training plan on the subject of controlled burning for agricultural purposes; iii) Identify and propose initiatives that encourage the reduction of the area of ??burning, promoting the recovery of protection areas; and iv) Incentivize the reuse and exploitation of agricultural residues through application of critical technological alternatives.

However, emissions control and regulation enforcement are fragmented in different government areas. There are no environmental and emissions monitoring associated to these practices. For that purpose, strengthening, training, and infrastructure for sampling as well as analytical capacity to generate data on real contamination levels is required.

Finally, through consultation of different key stakeholder from the aforementioned crops sector during the PPG phase, there are some initiatives that are being researched and developed in the country to encourage the reduction of open burning practices. The information gathered is summarized below:

? Pineapple: The National Technical University of Costa Rica (UTN) is working together with Nicoverde SA and the United Pineapple Chamber in the Huetar Norte region where the 86% of the pineapple crop is being produced. The United Pineapple Chamber represents 12,000 hectares and the 30% of the total national pineapple production.

The pineapple crop generates 240 MT/hectare of biomass. The alternatives explored and tested by the University's Foundation are the use of pineapple biomass for the production of: i) Biomaterials (used for the replacement of packaging materials for pineapple that is exported); ii) Edible and medicinal mushrooms; and iii) bio textiles. These three alternatives have the potential to be scalable to the total area under pineapple cultivation.

? Sugarcane: The Azucarera El Viejo represents 10,000 hectares of sugar cane production plus 3,000 hectares from individual producers. Currently they conduct efforts to reduce the open burning practices through the introduction of green mechanical harvesting which is implemented in almost 60% of the area. Unlike pineapple cultivation, the sugar cane cultivation in Costa Rica faces different technical and economic barriers which hinder the introduction of alternatives (such as biochar or boiler supply) for biomass valorization and consequent reduction of open burning practices. These barriers include high costs for mechanical harvesting (machinery), lot/crop land conditions (eg. must be level, free of stones, with turning areas), low profitability of the sugar cane production, cost-effective alternatives.

? Rice: In consultation with CONARROZ, which is the National Rice Corporation that represents rice production throughout the country, it was confirmed that burning practices in rice production are being discouraged. At the same time, it was confirmed that there are no technical or economic limitations or barriers that prevent any rice producer from eliminating rice burning. At present, this is due to a lack of awareness and training among those who still carry out this practice.

Major progress was confirmed through consultations with Grupo Pelon where rice production not only does not implement burning practices but is also being developed free of pesticides.

b. Plastic waste management

Costa Rica is the largest importer of plastics in Central America, for local consumption, processing, and export. The value of imports of finished plastic products has doubled in the last decade. In the year 2021^[6], 398,254 MT of plastic materials and their manufactures were imported, and 118,479 MT were exported for a net national consumption of 279,875 MT. A total of 131 importing companies were identified (51.9% micro and small, 26% medium and 19.1% large), mainly in the plastic products category. These companies generate 13,000 direct jobs and about 10,000 indirect and informal jobs. Large companies employ 79% of the population.

The National Plan for the Implementation of the Stockholm Convention for the Management of Persistent Organic Pollutants in Costa Rica (2015) indicates existence of POPs present in the manufacturing process of plastic polymers, used as additives or catalysts in the manufacturing process, as well as in the monomer itself.

The Ministry of Health estimates that Costa Ricans produce 161,000 tons of plastic waste per year, of which 120,000 tons end up in landfills and 40,000 tons in natural environments. From the waste that is reaching landfills it is estimated that 20% are being openly burnt and from the waste that is reaching the environment (because they have not been collected) it is estimated that 12.1% are being openly burnt.

This means that annually 28,800 tons of plastics are being burnt in the country (24,000 tons in landfills and 4,800 tons dumped).

Moreover, although it has improved in recent years, solid waste recovery remains low, having reached a rate of 9.6% in 2021. This rate is composed of 3.9% of recycling, 2.7% of composting and 3.4% of co processing^[7]. Within the recycling rate only 17% consists of plastics. A considerable amount of ordinary recoverable waste that is collected by Municipalities and Private Managers are rejected mainly because they are not clean and dry or have no market and are sent to the landfill or for co-processing.

So far, Costa Rica has adopted 14 different regulations for special waste, however, plastics are included in the category of ordinary waste and not special waste. Therefore, Extended Producer Responsibility (EPR) is limited to voluntary corporate environmental and social responsibility policies and is not mandatory, resulting this in one of the major challenges for plastics management in the country. Despite this, various government strategies include actions to promote EPR on a voluntary basis in the private sector, in favor of society and the environment.

Costa Rica has a Strategy for the Elimination of single-use plastics that is part of the National Plan for Comprehensive Waste Management (2016-2021). The Strategy provides a scheme for the voluntary action of those institutions of the public, private and civil society sectors that decide to register commitments by 2020 around these five strategic lines, their respective verification metrics, and thus fulfill some tasks of the National Plan. The above-mentioned plan in its section 1.1.2, introduces a review, update, and adjustment of municipal regulations, in accordance with the regulations for the sound management of waste and includes incentives for separation at the source. This translates into reduced rates in the payment of municipal taxes and public waste collection services if the reduction, substitution, and non-use of single-use plastics is demonstrated. Nevertheless, barriers exist mainly due to high cost of the initiative and the low cost of plastic. Currently, the National Policy for Comprehensive Waste Management is being updated for the period 2022-2032.

It is relevant to highlight that in terms of plastic waste management, this FSP will be complementary to the Project ?Rethinking plastic consumption in Costa Rica: putting ideas into practice? which is starting its implementation in January 2023 with fund of the French Facility for Global Environment (FFEM) and will contribute to the quantification of plastic waste from different sources. This activity, among other synergies, will allow for a more precise definition of the plastic waste baseline estimated in this project.

c. Agricultural plastic waste

Costa Rica does not have a specific regulatory framework for the management of plastics for agricultural use (including containers, mulch films, greenhouse films, plant and fruit protectors, bags, etc.). These are covered by the previously mentioned Law No. 8839 for the comprehensive management of solid waste. Through the National Decree No. 38272-S the Ministry of Health established that metal, plastic, and glass containers to contain agrochemicals (after triple washing) are special handling waste, meaning they are subject to Extended Producer Responsibility (EPR). On the other hand, no reference is made to other plastics for agricultural use.

In 2004, the "Clean up our fields" Foundation was created in Costa Rica at the initiative of the Chamber of Agricultural Inputs (CIA), with the support of international organizations such as the German Cooperation Office (GTZ) and the Regional Agricultural Health Agency (OIRSA). Through the programme "Campo Limpio" it focused on the recovery, sorting, compacting, shredding and proper disposal of the empty phytosanitary containers in Costa Rica.

For collecting the agri-plastic, the programme currently has six (6) collection centers located in Perez Zeledón (San José province), Guápiles (Limon province), Cartago and Pacayas (Cartago province), San Carlos (Alajuela province), Bagaces and Nandayures (Guanacaste province). The plastic recovered at each of the collection centers is generally recovered for the manufacture of corner posts.

During the last 3 years, as shown in the following table the Foundation has been able to collect over 200 MT of agricultural waste. The detail of the type of material can also be evidenced for the year 2022.

Table 4. Agricultural waste collection

	2020	2021	2022
Total Collected agricultural waste (MT)	229.1	273	201
Type of material (%)	HDPE		59.3
	Cardboard		10.8
	PET		9.3
	Metal		8.3
	Non-recoverable waste		6.4
	Tomato plastic		5.9

Source: Clean Up Our Fields Foundation

According to the Foundation's information, the decrease in the 2022 collection is due to the fact that the state authorities cut the budget for fuel expenses to the different MAG extension agencies in the country, which caused a decrease in the collection campaigns and therefore in the decrease of agricultural waste collection.

There are other initiatives in the country, such as the case of Recyplast (Ministry of Health Authorized Waste Manager) in alliance with banana, pineapples, and melon producers. The plastic waste resulting from crop production is recovered through collection centers and then processed and transformed into corner pieces. Recyplast currently receives annually near 14,000 MT of plastic waste and transform it into corner protector for palletized products. These initiatives are still isolated in the country resulting in a sound management of only a small portion of the plastic waste generated by the agricultural activity.

Based on latest estimations from the SFE on the apparent pesticides use in agriculture[8]⁸, during 2020 Costa Rica averaged 11.47 kilos of active ingredient per hectare while in 2021 averaged 8.89 kilos of active ingredient per hectare. Considering the area planted to agricultural activities[9]⁹, for the last few years the apparent use of pesticides can be estimated as shown in the Table. Since there is no official comprehensive information in terms of volume of plastic being used in the agricultural activity, an estimate of the volume of plastic generated as waste in the activity using different sources and assumptions.

Table 5. Plastics for agricultural use in Cosa Rica

	2018	2019	2020	2021
Agricultural area (has)	417,855	404,469	403,374	402,376
Active ingredient Use: 10.18 kg a.i./ha (MT)[10] ¹⁰	4,253.76	4,117.49	4,106.35	4,096.19
Estimated pesticide Use (MT) (35% a.i. avg)	12,153.61	11,764.27	11,732.42	11,703.39
Estimated Empty Containers (MT): 0.05MT/MT pesticide	607.68	588.21	586.62	585.17
Estimation of other plastics for agricultural use[11] ¹¹ (MT)	19,648.34	19,018.90	18,967.41	18,920.49
Estimated Total Plastic (MT)	20,256.02	19,607.12	19,554.03	19,505.66

Source: PPG Team.

As per consultation during PPG phase, current barriers for the collection, are mainly coming from: i) farmers lack of awareness/training on how these plastics should be treated (including triple washing procedure), ii) limitations for transportations and iii) absence of shredding machinery, the plastic is currently compacted which occupies a larger volume. In addition, due to a weak legal enforcement and the absence of robust and widespread systems for the proper management of the agricultural plastics, this waste stream is likely to be dumped/openly burned in the fields.

d. Plastic in vehicles

According to the data obtained for the 2015 NIP, the main source of c-PentaBDE described in the scope of the inventory comes from imported vehicles manufactured between 1975 and 2004. Depending on the country of origin, the probability of the presence of c-PentaBDE may vary, therefore different coverage factors apply according to the place of presumed manufacture. It was estimated that, in 2013, there were 8,377 kg of c-PentaBDE distributed in vehicles manufactured from 1975 to 2004.

As identified in the NIP, vehicle management in Costa Rica presents a great gap in terms of regulations that establish guidelines for the handling and final disposal of vehicle parts, which affects aspects such as: difficulty in estimating a waste flow of vehicles (since there is no restriction of the time of the allowed useful life), lack of managers registered for disposal in the Ministry of Health, lack of information to estimate the cost associated with the final treatment, and lack of obligation for the owner of the vehicle to deliver it to an authorized manager after carrying out its deregistration. Since 2017, Costa Rica has restricted the import of vehicles over 12 years of age.

Plastics make up 14% of a vehicle's composition. Considering an average weight of 1,500 kgs per vehicle, plastic represents 210 kgs. Most of these polymers have a very short useful life because when there is an accident, reconstruction, modification, or disassembly of the vehicle, they are replaced by new parts and these lose their commercial value, which makes this industry have a large amount of material discarded in a short time.

Waste from vehicles that are no longer in use fall into a reutilization cycle as spare parts, based on market demand, but there are no regulations to encourage their disposal properly. The plastics used in the manufacture of vehicles are of different types and, due to their functionality, are exposed to different pollutants. This makes their proper management difficult, as their correct segregation and identification is more complex.

Through the development of a technical standard (INTE B20:2019)^[12] that ensures disassembly of vehicles in an environmentally sound manner, DIGECA has worked to achieve adequate management of plastics in vehicles at their end of life. Nevertheless, this standard is being voluntary and much of this waste continues to be sent, at best, to sanitary landfills. Thus, it is important to develop an enforceable regulatory framework.

Currently, in the country there are two main sources of plastic waste from the vehicles: i) straightening and painting workshops and ii) second-hand spare parts sales workshops. The following table details an estimate amount of plastic waste that is being generated monthly by each of the streams:

Table 6. Plastic waste from vehicles.

Sources	Nº of shops in the country	Avg. of Total cars	Kg plastic waste/car	Kg plastic waste/month
Straightening and painting shops	2,000 ^[13]	7,724 cars repaired ^[14]	20	154,480
Second hand spare parts shops	900 ^[15]	1,800 cars disassembled	107.4	193,320
Total				347,800

Source: PPG Team.

These estimated volumes were built in consultations with different key stakeholders during the PPG phase since there is no comprehensive available data. Among the polymers most frequently used in this industry are A.B.S. (Acrylonitrile Butadiene Styrene); ABS PC (ABS Polycarbonate Alpha); PA (Polyamide); PC (Polycarbonates); PE (Polyethylene); PP (Polypropylene); PP - EPDM (Ethylene Propylene Diene Diene Monomer); PVC (Polyvinyl Chloride); GU-P / BMC-SMC-MMC (Glass Fiber Reinforced Polyester Resins); EP (Epoxy Resin); GFRP (Glass Fiber Reinforced Plastics).

These plastics due to the barriers previously identified are currently subject to the same practices of ordinary waste management, where most of the waste is destined to landfills if properly collected or dumped/open burnt otherwise.

Analytical Capacity

The analytical capacity of national laboratories for POPs is essential to provide support to productive activities in the private sector and to provide maintenance and control to the public sector.

At a national level, the analysis of POP substances has been historically oriented to pesticides due to high agricultural production and due to the need of private companies to present certificates of analysis as part of the controls established by law. There main matrixes available for pesticides are: water and effluents; food; soils and sediments; and solid waste.

In the case of PCB, some laboratories have implemented PCB methods of analysis due to the approval of the Stockholm Convention in August 2006, other national regulatory requirements, and research initiatives to analyze the impact of these compounds. Oil transformers make up the majority of the matrix. There has been analysis in water, soils, sediments and animal tissues in smaller amounts.

Overall, the POP analysis performed in air, fish, marine mammals, human blood and breast milk are very scarce. In the private sector, there is a laboratory that offers services for the analysis of dioxins and furans, as well as new POPs (PBDE, PFOS).

On the other hand, the national universities research laboratories have great potential for skill development for the analysis of new POP. They are having qualified personnel and the equipment needed to implement methods of analysis for new POPs and are in the stage of developing protocols of analysis for these compounds.

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project.

The Project's vision is to proceed with direct interventions on the immediate, intermediate and root causes previously identified; recognizing the multi-dimensional impacts of POPs and UPOPs on prioritized sectors on the environment, health, biodiversity and poverty. The objective of this FSP is to reduce emissions/releases of UPOPs in strategic sectors including plastics minimizing the exposure of human beings and advance in the compliance of the Stockholm Convention in Costa Rica.

The following figure shows the alternative pathway and solutions to address the three categories of immediate, intermediate, and root causes described in problem tree.

Objective	To reduce emissions/releases, minimize exposure of human beings to UPOPs in strategic sectors including plastics, and to advance the Stockholm Convention in Costa Rica						
Outputs	34 gTEq/y of UPOPs avoided and 30 MT of PCBs contaminated materials eliminated.	1 pilot implemented for the use of pineapple biomass based on a circular economy approach	3 pilots implemented for the reduction of UPOPs emissions from open burning of biomass	1 pilot implemented for the comprehensive management of plastics in agricultural activities.	1 pilot implemented for the development of a business model for Non-recyclable plastics.	1 pilot implemented for the sound management of vehicle plastics at the end of their life.	850,000 direct beneficiaries
Immediate Solutions	Legal and regulatory framework improved to support the environmental sound management of the life cycle of chemicals.	Capacity built in government institutions to control imports of UPOPs, as well as effectively eliminate and monitor releases of POPs.	National Strategy developed for the elimination of burning methods in the agricultural sector.	National Strategy developed for the non-recoverable/non reusable plastic.	Platform for the comprehensive management of plastic waste implemented.	Awareness raising plans developed and national knowledge management system for best practice sharing and communication established.	
Intermediate Solutions	Legal framework enhanced and government and key stakeholders capacities strengthened for the sound management of POPs and waste.	UPOPs emissions and control systems strengthened		Plastics management systems strengthened and BAT/BEP for the reduction of use and consumption of plastics established.	Strategic sectors sensitized and aware on POPs emissions reduction and waste management		
Root Solutions	Institutional capacities, the policy and regulatory framework strengthened to address POPs containing chemicals, products and waste including plastics.	Emissions/releases of UPOPs reduced in priority sectors.		Plastic management improved.	Capacity built and knowledge accessible to every key stakeholder for the sound management of POPs and waste		

The project's approach is implemented through 4 project components, leading to 5 specific outcomes and 13 outputs which have been described in detail in Chapter IV 'Results & Partnerships' and Chapter V 'Project Results Framework (PRF)'.

In summary, the strategy selected to address the overall development challenge is the following:

Component 1 'Strengthen institutional capacities, and the policy and regulatory framework to address POPs-containing chemicals, products and waste, including plastics'.

This Component aims to strengthen institutional capacities through interventions in different areas. Firstly, the project will contribute to the definition of a legal roadmap to support the draft/update of policies and regulations for the sound management of chemicals, with focus on POPs and UPOPs (including plastics), throughout their life cycle and recommend strong enforcement mechanisms. Likewise, national analytical capacities will be strengthened for the sampling and measurement of POPs and UPOPs.

This component also envisions the strengthening of the import control, mainly addressing newly listed POPs, through the definition of suitable tariff codes as well as capacity building in key government institutions and promote their collaboration to adopt appropriate legal and administrative measures to control. In addition, the strengthening of customs officers will be properly addressed.

The analysis and the development of a cost benefit scheme will be also supported to enhance the country to identify available alternatives for POPs, Hg and hazardous chemicals substitution as well as undersading barriers for their introduction and use.

Lastly, the project strategy under this component is to develop a National Plan to support the country to phase-out, by 2025, all remaining PCB-containing equipment and to dispose of, by 2028, all remaining PCBs in an environmentally sound manner.

Component 2 'Reduction of the release of UPOPs in priority sectors'.

This component will focus on developing a National Strategy for the reduction of open burning practices within the agricultural sector in order to reduce UPOPs emissions. For this purpose, crops that mainly adopt these practices (sugar cane, rice, and pineapple) will be selected to carry out pilot projects in association with key stakeholders to build knowledge on available and suitable alternatives that will lead to reduction of biomass open burning. The pilot projects will also include UPOPs sampling and chemical analysis, which will contribute to give accurate inputs for the National Strategy development as well as the updating of the legal framework.

Furthermore, for the pineapple biomass the project will also support the analysis and design of a business model with a circular economy approach.

Component 3 ?Improved plastics management?.

This component foresees the development and implementation of three pilot projects to improve and build national capacity for plastic waste management. The project will assist the design of business models for addressing plastic waste from the agricultural sector, plastic waste from vehicles and non-recyclable plastic waste. For the plastic waste resulting from vehicles end of life the project will support in addition the sampling and chemical analysis of PBDE.

A National Strategy for non-recoverable/non-reusable plastic waste, not collected and leaked that has been accumulating in the environment will be designed and disseminated, and it will seek to address issues related to collected non-recoverable post-consumer and post-industrial plastic waste, involving key stakeholders from public and private institutions. The project will also encourage the Coordination Platform for Plastics Management which will become a permanent dialogue mechanism led by the Ministry of Health and the Ministry of the Environment and Energy as well as key stakeholders (Government and private sector) involved in plastics management.

Component 4 ?Awareness raised, lessons learned identified, monitored and assessed?.

Lastly, this component will periodically monitor the project's activities to ensure results achievement. Through this component evaluations and lessons learned will be captured and integrated through adaptive feedback management.

Expected Outcomes and components of the Project:

Component 1. Strengthen institutional capacities, and the policy and regulatory framework to address pops-containing chemicals, products and waste, including plastics

Outcome A. Government and relevant stakeholders involved pops esm capacities strengthened

Output A1. Capacity built to effectively monitor, reduce, and eliminate POPs and newly listed POPs releases.

Through this Output the project will strengthen national analytical capacity for POPs and newly listed POPs emissions, following the recommendations of the 2015 Stockholm Convention NIP.

The following activities will be developed to achieve Output A1:

a) Baseline assessment: during the first year the project will perform a baseline analysis of the existing national analytical capacities for the analysis of POPs currently listed in Stockholm Convention as well as those chemicals that are expected to be listed and other potentially hazardous chemicals of national concern. With focus on research centers and universities, the project will assess (including economical

aspects) their analytical capacities in order to strengthen them to perform POPs and hazardous chemicals measurement.

b) Capacity building plan: based on the assessment the project will identify and enhance the analytical capacity for at least 4 National Labs to analyze POPs and other hazardous chemicals, and support inter-laboratory comparisons and certifications of public, private and academic institutions. The project will also support the identification of sources of financing to promote and enhance the capacity of public/private institutions to carry out R&D for POPs sampling and analysis.

This activity will be developed in close coordination with the pilots of Component 2, the strengthening of national analytical capacities of national laboratories will pay particular attention on providing sufficient monitoring of POPs and UPOPs emissions from biomass burning. In order to maximize impact, this activity will be also coordinated with the National Technical University (UTN) project ?UPOPs measurement from sugar cane, pineapple and rice biomass burning in the northern region? which will be implemented by phases starting Phase I in 2024. UPOPs measurement will be based on sites with intensive use of chlorinated pesticides. This output will provide relevant assistance to the agricultural institutions in Costa Rica.

Output A2. Improvement of the legal and regulatory framework to support the environmentally sound management of the life cycle of chemicals.

Through this Output the project will provide support to the activities of the DIGECA, focusing on capacity development to enable the strengthening of the national regulatory framework for chemicals management and the reduction of POPs emissions. Activities will include the review and upgrading of existing standards and regulations applicable to Chemicals management.

The following activities will be developed to achieve Output A2:

a) Overall policies and regulations assessment: the project will conduct an initial assessment of existing regulations and enforcement policies on life cycle management of chemicals and the reduction of POPs emissions and identify gaps. Results will provide recommendations for standards and regulations amendments, modifications and/or development of new standards and regulations in order to ensure compliance with international agreements as well as compliance with national objectives related to Chemicals management and their elimination.

b) Legal Framework Roadmap: based on the assessment, the project will propose a roadmap including the national approach to draft/update policies, regulation, guidelines, execution, and regulation bodies, for the sound management of chemicals and plastics throughout their life cycle and recommend strong enforcement mechanisms.

This roadmap will be validated by the DIGECA and consulted within the Technical Coordination Secretariat for the Management of Chemical Substances. By implementing an agreed roadmap, the project will ensure that the legal drafting during the project is done in a coherent and integrated approach, defining clear roles and responsibilities for each institution. This roadmap will strengthen country's compliance in accordance with the Stockholm Convention and the international chemicals and waste agenda (such as SAICM).

During PPG phase the following legal instruments to be supported by the project were identified:

- Regulation for the mandatory application of the standard **INTE B20:2019, minimum technical specifications in treatment facilities for the end-of-life vehicle management.**

- **Executive Decree for the implementation of the National strategy for the elimination of burning methods in the agricultural sectors developed under Output B1. In addition, support the drafting of any policy/regulations identified as necessary for its sustainability.**

- **Executive Decree for the implementation of the National Strategy for non-recoverable plastics management developed under Output C1. In addition, support the drafting of any policy/regulations identified as necessary for its sustainability.**

- **Guidelines for monitoring (including limits) and measurement of POPs emissions for agricultural burning.**

c) Legal Framework and Policies Dissemination: the project will undertake the necessary dissemination activities to inform regulations drafted according to the established legal roadmap, involving relevant actors throughout chemicals and waste management.

Output A3. Capacity building in government institutions to control imports of POPs containing products.

Through this activity the project aims to support the country for strengthening the control of imports and use of hazardous chemicals containing POPs that currently escape current import regulations, and that lack control on usages, quantities and selling permissions.

The following activities will be developed to achieve Output A3:

a) Coordination mechanism established: the project will design and establish a coordination mechanism between the MINAE and enforcement authorities in the different relevant ministries of the country for improved POPs control. The following Ministries will be engaged: the Ministry of Health, the Ministry of Finance, the Ministry of Commerce, the Ministry of Agriculture.

b) Institutional strengthening: evaluate existing control measures implemented in the country and ensure the adoption of the necessary legal and administrative measures for the control of imports of the POPs containing products aligned to the Stockholm Convention. Support the country in establishing and applying adequate tariff codes and promote the inspection of imported goods based on a risk analysis (to concentrate controls on areas of highest risk of non-compliance).

c) Training programme developed: design and implement a training programme at national and local level for accountable government institutions and customs officials for timely detection. The main objective of this training programme is to provide the skills necessary to monitor and control the imports and exports of hazardous chemicals, with focus on newly listed POPs including the detection and prevention of illegal trade. The training programme will include contents of international commitments, national institutional and legal framework, safe storage and sound management of hazardous chemicals, Globally Harmonized System of Classification and Labelling of Chemicals (GHS), health, and environmental associated risks.

The training will be deployed using effective e-learning tools. To minimize the impact of staff turnover and sustain the training the project will promote the integration of the training programme within authorities training curricula and ensure the availability of the training in government platforms/websites.

Through this activity the project will train 50 Customs Officers, seeking to include vulnerable groups and a gender-balanced participation.

A training needs assessment (guided by SES) will be undertaken to ensure that the information has been delivered to the participants as required and will have a meaningful impact on their job performance.

Output A4. Cost-benefit scheme developed for the environmentally sound management of chemical products in Costa Rica, including POPs and Mercury

Through this Output the project will provide technical assistance to undertake a cost-benefit analysis for the substitution and phase out of POPs, Hg and Highly Hazardous Chemicals.

The following activities will be developed to achieve Output A4:

a) Cost-benefit scheme developed: Based on the NIP, Minamata Initial Assessment and other identified Highly Hazardous Chemicals available in Costa Rica, the project will conduct an assessment of suitable alternatives to these chemicals of national concern. The objective is to analyze available alternatives (products and processes) in the market and understand barriers for their introduction and use. The analysis will include Hazard/comparative exposure assessment, technical feasibility assessment and economic feasibility assessment (including environmental and health costs), availability and accessibility.

Activities will be performed in partnership with relevant enterprises, ministries, and the chamber of commerce, to determine which processes/operations can be developed/adjusted to decrease UPOPs, Hg, and Highly Hazardous Chemicals releases. The outcomes of the study will provide relevant decision-making information for ministries and will provide stakeholders options and related costs for phaseout.

b) Results dissemination: the project will support the dissemination of the analysis within key stakeholders from private a public sector.

Output A5. Comply with Stockholm Convention's targets on PCBs (Reduction of 30 MT of PCBs containing waste held by private owners)

Through this Output the project will assist Costa Rica with the planning of the remaining PCB contaminated equipment management. This Output will focus on: i) ensuring that the electric sector (which was highly involved in previous UNDP-GEF PCB Project) continue working on their identification, management and elimination plans aligned to Stockholm Convention; ii) Engaging private sector to identify and develop appropriate management and disposal plans in accordance with the national regulatory framework and the commitments undertaken in the Convention; and iii) Support the identification of PCB contaminated equipment in rural and vulnerable sites. This approach would put Costa Rica well on track to fully comply with its obligations under the Stockholm Convention on PCBs for the years 2025 and 2028.

Through this Output the project will evidence the elimination of 30 MT of PCBs and PCB contaminated waste.

As identified in Risk 7, a targeted assessment will be prepared for this activity that will consider air emissions, solid waste generation and workers' health and safety. Based on the targeted assessment, an ESMP will be developed that will include mitigation measures for the identified risks, as well as a Pollution Prevention and Management Plan and Occupational health and Safety Plan.

The following activities will be developed to reach Output A5:

a) Update National PCB Inventory: during the first year the project will assist the DIGECA in the development of activities to update and consolidate a national comprehensive inventory of electrical equipment and waste contaminated with PCBs in the country. The main efforts will be directed to the power sector, private sector, and sensitive sites.

For the power sector the project will coordinate and develop activities with the 8 generation and distribution companies through a technical committee. The following companies will be involved

National Power and Light Company S.A. (CNFL), Costa Rican Electricity Institute (ICE), Administrative Board of the Municipal Electric Service of Cartago (JASEC), Heredia Public Utilities Company (ESP HEREDIA), Coopeguanacaste, Coopesantos, Coopealfaroruz and Coopelesca. In particular ESPH experience and planning will be shared to enhance electric sector in advancing on their identification and management of PCB containing equipment.

For the Private Owners the project will develop coordination activities with: Chamber of industries of Costa Rica (CICR) and already registered private owners in the POPs Information System.

For the Sensitive Sites the project will develop coordination activities with health centers, public education institutions, drinking water supply systems, among others.

The gathered information will feed the POPs information System <http://cops.digeca.go.cr> allowing PCB inventory to be updated and final disposal of all national existences is registered. The project will ensure this information is periodically reviewed and monitored during project implementation.

b) National environmentally sound management/elimination Plan: based on the national PCB contaminated waste stockpiles and national treatment capacity the project will therefore develop the basis for a concrete and adapted national management and disposal plan. This plan will set the conditions for the destruction of the remaining PCBs stockpiles in Costa Rica, ensuring sustainability of the expected results and the fulfillment of Stockholm Convention commitments.

The elimination of 30 MT of PCBs and PCB contaminated waste will be achieved in close collaboration with private sector companies that will destroy stocks in accordance with national legislation along with support and enforcement from the government and enforcement authorities. Finally, the project's assistance will assess cost effective commercial options for the environmentally sound destruction/export of PCBs consistent with international standards in order to achieve economies of scale. For this purpose, the project will also consider experiences from other projects in Latin America (for example Mexico, Brazil, Argentina).

Component 2. Reduction of the release of upops in priority sectors

Outcome B. UPOPs emissions and control systems strengthened

Output B1. National strategy for the elimination of burning methods in the agricultural sectors.

Through this Output and aligned with results within Outputs B2, the project will contribute to the elimination of open burning of Agricultural Waste/Biomass in order to reduce and eventually eliminate identified UPOPs releases linked to these practices.

As identified in Risk 2, a high-level targeted assessment of the national strategy will be developed to assess the economic impact on farmers if affordable treatment technology for agricultural waste to replace open burning was not found. The assessment will propose recommendations to eliminate or reduce the risk that will be incorporated into the strategy.

Through this Output the project will evidence the reduction of 9 gTEQ during project implementation, increasing to 17 gTEQ after two years of project completion.

The following activities will be developed to reach Output B1:

a) National Strategy Development: The project will develop a national strategy for a period of 5 years to enable the gradual reduction of biomass burning in different crops within the country. For its preparation, consultation processes will be established among relevant stakeholders. Initially, it can be highlighted the participation of the Ministry of Environment and Energy, Ministry of Agriculture, Ministry of Health,

Ministry of Finance, enforcement authorities, Producers' Associations, related research institutes, and other relevant stakeholders.

International experiences, both regional and global, that could contribute to the development of the strategic guidelines will also be considered in the development of the strategy. The pilot projects developed within Output B2 targeting sugar cane, rice and pineapple crops will also contribute to the development of the strategy.

The Strategy will define areas of joint action to enable the gradual reduction and eventual elimination of biomass burning. The roles and responsibilities of the different actors will be clearly defined. In addition, it will include recommendations on different financing alternatives as well as the development of policies/regulations necessary for its sustainability.

The Strategy will be implemented through Executive Decree to be developed under Output A2.

b) Monitoring and Evaluation: The National Strategy will be periodically monitored in its progress and quantitative measures will be set to determine the effectiveness of its implementation in achieving specific local and global environmental goals. Indicators will include: environmental improvement (where reduction of UPOPs releases will be considered), economic development, social impacts, capacity building, investment effectiveness.

c) Dissemination: the project will ensure the dissemination of the National Strategy among key stakeholders and ensure proper mechanisms for regular reporting on progress and effectiveness.

Output B2. 3 Pilot Projects for the reduction of UPOP emissions from uncontrolled and/or open burning of biomass (sugarcane, pineapple, and rice) and other waste

In line with Output B1, this output will develop three pilot projects to introduce BEP/BAT in the processing of sugar cane, pineapple, and rice, with the aim to measure emissions and reduce uncontrolled burning of biomass. The activities will be coordinated with the Producer Chambers of the three sectors with a top-down approach to generate the highest percentage of participation in the sector and bring the results to all producers. For the development and implementation of this activity, experiences and lessons learned from GEF/UNDP projects in the region (e.g., Ecuador, Colombia) will be considered.

UPOPs releases reduction identified in Output B1 will be also supported through the implementation of these pilot projects.

For a more comprehensive approach, the pilot linked to the reduction of open burning of biomass in pineapple cultivation has been developed within the following Output B3 in conjunction with the use of its biomass with a circular economy approach.

Prior to the commencement of any of the selected pilots, a targeted assessment will be conducted for each pilot tackling risks related to accidental release of hazardous material due to mismanagement and natural disasters and occupational health and safety.

The following activities will be developed to reach Output B2:

1. Sugarcane:

The pilot will seek to minimize the burning of sugarcane biomass through a more sustainable approach. For that purpose, the pilot will be preceded by feasibility analysis among the following options of approach: Option a) *in situ* biodegradation, using microorganisms cultivated in bioreactors; Option b) biochar/biogas production, where the production of biochar/biogas will be based on three stages: harvest,

fine chop and pyrolysis; and Option c) cellulose production for appropriate uses, will have 3 stages as well: harvest, fine chop and cellulose synthesis.

This activity will consider Guanacaste and Alajuela province for the pilot implementation and will also include the determination of POPs/UOPs emissions reduced. It will be developed in close coordination with MAG, MINSALUD, UTN, LAICA and Azucarera El Viejo. In addition, the pilot will be developed in coordination with the national policies in force related to waste management.

The following activities will be developed:

- a) Determination of most feasible option: a.1. Assessment of each option; a.2 Determination of the most appropriate partner; a.3 Legal arrangements with partner enterprise registration.
- b) Pilot project operation: b.1 Pilot size industry design; b.2 Pilot Plant procurement; b.3 Operation tests; b.4 UOPs sampling and chemical analysis; b.5 Assessment of results.
- c) Promote technology transfer for farmers, local government institutions, private technical assistants, universities, and other agricultural development agencies.

2. Rice:

The pilot will seek to minimize the burning of rice biomass through a more sustainable approach. The pilot will support CONARROZ's ongoing efforts to discourage open burning practices in rice production. For that purpose, the project will conduct a feasibility analysis of *in situ* biodegradation using bio inputs available in the country.

This activity will consider Guanacaste and Alajuela province for the pilot implementation. The pilot will define a business model of the most feasible alternative and the POPs emissions will be accounted for.

This pilot project will be developed in close coordination with the MINAE, MAG, MINSALUD, UTN and Conarroz.

The following activities will be developed:

- a) Determination of the most appropriate partner and legal arrangements.
- b) UOPs sampling and chemical analysis.
- c) Identify/Test feasible and effective bio inputs to conduct biomass degradation, conduct on site demonstrations.
- d) Provide technical assistance to farmers for the application of best agricultural practices, promoting *in situ* biomass degradation.
- e) Assessment of results.
- f) Promote technology transfer for farmers, local government institutions, private technical assistants, universities, and other agricultural development agencies.

Output B3. Assessment and Pilot for the use of pineapple biomass through a Circular Economy approach.

The pilot will seek to avoid open burning in pineapple production while maximizing the use of pineapple biomass with a more sustainable approach. For that purpose, the pilot will be preceded by feasibility analysis among the following options of approach: Option a) *in situ* biodegradation through the use of

microorganisms cultivated in bioreactors; Option b) *short fiber* biomaterial production for different alternative uses and the associated demand, such as: substrate for fungus, construction panels, single use products, biochar, biogas or supplement to animal feed. The process will consist in three stages: harvest, fine chop and dry of the biomaterial; and Option c) *long fiber* biomaterial production for appropriate uses and the associated demand, which will also have three stages: harvest, decorticate and spin of the long fiber.

The pilot will be implemented in Huetar Norte region and will define a business model of the most feasible alternative and the POPs emissions will be accounted for.

It will be developed in close coordination with MAG, MINSALUD, UTN, Nico Verde (enterprise) and Huetar Pineapple grower's union.

Prior to the commencement of the pilot, a targeted assessment will be conducted for each pilot tackling risks related to accidental release of hazardous material due to mismanagement and natural disasters and occupational health and safety.

The following activities will be developed:

- a) Determination of most feasible option: a.1. Assessment of each option; a.2 Determination of the most appropriate partner; a.3 Legal arrangements with partner enterprise registration.
- b) Pilot project operation: b.1 Pilot size industry design; b.2 Pilot Plant procurement; b.3 Operation tests; b.4 UOPs sampling and chemical analysis; b.5 Assessment of results.
- c) Promote technology transfer for farmers, local government institutions, private technical assistants, universities, and other agricultural development agencies.

Component 3. Improved plastics management

Outcome C. Plastics management systems strengthened

Output C1. National Strategy for non-recoverable/non-reusable plastic

Through this Output, the project will develop a National Strategy for non-recoverable / non-reusable plastic waste, not collected / leaked that has been accumulating in the environment. The Strategy will result in a reduction of 9 gTEQ during project implementation, increasing to 17 gTEQ after two years of project completion, emitted in the country through prevention of generation, reduction of use, comprehensive management of post-industrial and post-consumer non-recoverable plastic waste, and collection of accumulated plastic waste in natural environments. It will also implement concrete actions for the use of recovered materials and offer a sustainable environmental and economic alternative to the final disposal in a sanitary landfill or incineration.

As identified in Risk 3, a high-level targeted assessment of the economic impact of the reduction of non-recoverable plastic on existing informal workers in waste sector. If the targeted assessment indicate a significant economic impact, a Livelihoods Planning Framework (LPF) will be developed, which will include measures and policies for alternative livelihoods for these groups.

The following activities will be developed to reach Output C1:

- a) Intersectoral Committee: the project will promote the creation of an intersectoral committee responsible for the development of the National Strategy, which will be co-led by the Ministry of Environment and Energy and the Ministry of Health. Through this committee key stakeholders such as local and national governments, the private sector and civil society will be identified and involved in the development of the National Strategy through consultation processes.

b) National Strategy development: the project will conduct at least 6 intersectoral workshops for the development of the contents of the National Strategy: i) Industry and Commerce, ii) Local governments, iii) NGOs, iv) Government Institutions, v) National Recyclers Network and vi) Academic sector.

This will result in potential areas of joint action that would allow prevention and improvement on the management of non-recoverable plastic for the period 2024-2029. The roles and responsibilities of the different actors will be clearly defined. In addition, it will include recommendations on different financing alternatives as well as the development of policies/regulations necessary for its sustainability.

The strategy will be coordinated with the National Policy on Integrated Waste Management 2010-2021, the National Recycling Strategy 2016-2021, both in the process of being updated, and will be adjusted, if required, once the new version of these instruments is available. It will also articulate with the National Strategy for the Substitution of Single-Use Plastics 2017-2021, the National Circular Economy Policy and National Circular Economy Strategy which are under development.

The Strategy will be implemented through Executive Decree to be developed under Output A2.

c) Monitoring and Evaluation: The National Strategy will be periodically monitored in its progress and quantitative indicators will be set to determine the effectiveness of its implementation in achieving specific local and global environmental goals. Indicators will include environmental improvement (where reduction of UPOPs releases will be considered), economic development, social impacts, capacity building, investment effectiveness.

d) National Strategy Dissemination: the project will ensure the dissemination of the National Strategy among key stakeholders and ensure proper mechanisms for regular reporting on progress and effectiveness.

Output C2. Coordination platform for plastics management

This output will be complementary to the project 'Rethinking the plastic consumption in Costa Rica: Ideas to Action?' financed by the French Cooperation Fund for the Global Environment (FFEM) for the period 2022-2025 and will support the implementation of a Coordination platform. This output will build up on the results of the aforementioned Project and assure the continuation of the Coordination platform for three additional years, maximizing resources and promoting the initial work on plastic waste. The platform will become a permanent dialogue mechanism led by the Ministry of Health and the Ministry of the Environment and Energy as well as key stakeholders (Government and private sector) involved in plastics management.

The following activities will be developed to reach Output C2:

a) Information system development: this activity will support the design, creation, and administration of an information system (website) of the coordination platform and intersectoral worktable on plastic waste management.

b) Coordination platform management: this activity will support the management of the platform and intersectoral worktable, in plastic waste management. It will promote the definition of a work plan, objectives, scheduling of activities. Six annual work sessions, one every two months, will be carried out in both virtual and face to face modality.

The establishment of a coordination mechanism will facilitate private sector investment for plastics management through the establishment of incentives and through a permanent dialogue and collaboration between producers, importers, users, and waste treatment facilities. The ultimate objective of the coordination mechanism will be to balance benefits for each of the stakeholders to ensure its

sustainability. In addition, the Coordination platform is expected to bring economies of scale for plastics management costs, as compared to individually led management initiatives.

c) Communication strategy: a communication strategy, including communication material and media strategy, will be designed and implemented to support the coordination platform and intersectoral work.

Outcome D. BAT/BEP for the reduction of use and consumption of plastics and management of plastics waste

Output D1. Pilot #1: bep/bap for the comprehensive management of plastics in agricultural activities

The pilot seeks to improve/integrate agricultural-use plastic through bat/bep of plastic waste produced along the value chain of agricultural production, where different plastics are being used such as: ropes, sacks, bags, cans, bottles, pesticide containers, mulching films, greenhouse films, etc. This activity will consider guanacaste province (linked mainly to the cultivation of melon) and cartago province (linked mainly to the cultivation of vegetables, flowers) for the pilot implementation.

After the identification, characterization and localization of the agro-plastics, the project will habilitate a network of mini-collection centers which will feed the collection/pre-processing centers which will be equipped with machinery for grinding and packing of plastics. A mobile extruder of plastic for semi-finished products (such as bars, rods, and flat sections) will be used alternatively in the centers. For that purpose, the following center locations will be considered: orotina (central pacific), palmar norte (south zone), parrita or quepos (south pacific).

A business model of collection/pre-processing centers will be produced, and the pops emissions will be accounted for. This activity will be developed in close coordination with mag, minsalud, chamber of agricultural inputs, clean up our fields foundation and dos pinos.

Prior to the commencement of the pilot, a targeted assessment will be conducted for each pilot tackling risks related to accidental release of hazardous material due to mismanagement and natural disasters and occupational health and safety.

The following activities will be developed within output d1:

- a) pilot design: assessment of types of plastics, quantification of each type of identified plastics.
- b) pilot plant: procurement equipment
- c) operation tests
- d) assessment of results

Output D2. Pilot #2 on non-recyclable plastics including sources, consumption baseline and business model feasibility study for their management.

Through this output the project will develop, test, and evaluate a coordinated model for ?non-recyclable? plastics? waste management and reducing pops and other toxic emissions from open burning of plastics.

The pilot will develop a business model through a public-private partnership for integral management of ?non-recyclable? plastics? waste. This will incorporate bat/bep to carry out cleaning activities, waste collection logistics, storage, and transfer to processing centers. Collected plastic will be transformed into

useful raw materials, while at the same time maintain function of a dynamic permanent inventory of these types of plastics.

After collection of plastics from clean-up activities, selection, and classification of plastic's types, preprocessing them for production of semi-finished products. Pilot will be equipped with machinery for grinding, baling, and packing of plastics.

A business model of collection/pre-processing centers will be produced, and the pops emissions will be accounted for. This activity will be developed in close coordination with minsalud, crdc pedregal, mundo rep, coca cola femsa, fifco, dos pinos and one sea foundation.

Prior to the commencement of the pilot, a targeted assessment will be conducted for each pilot tackling risks related to accidental release of hazardous material due to mismanagement and natural disasters and occupational health and safety.

The following activities will be developed within output d2:

- a) pilot design
- b) pilot plant: equipment procurement
- c) operation tests
- d) assessment of results

Output D3. Pilot #3 on management of vehicle plastics at the end of their life cycle

Through this output the project will develop, test, and evaluate a business model of bat/bep for vehicle plastic's waste management including recycling into semi-finished products, and reducing pops and other toxic emissions from open burning of plastics.

The pilot will develop an integrated scheme, including bat/bep for vehicle plastic's waste management from a systematized collection from the: i) strengthening and painting shops and ii) second hand spare parts shops, which will serve functions of a dynamic permanent inventory of these types of plastics.

After identification, quantification and characterization of the plastics, pilot will integrate selection and classification of plastic's types, preprocessing them and production of semi-finished products for construction purposes such as bars, rods, flat sections, etc. (with traceability). Pilot will be equipped with machinery for grinding and packing of plastics. An extruder of plastic for semi-finished products (such as bars, rods, and flat sections) will be used in the processing centre established for the purpose.

A business model of collection/pre-processing centres will be produced, and the pops emissions will be accounted for. This activity will be developed in close coordination with minsalud, aviema and canatepa.

Prior to the commencement of the pilot, a targeted assessment will be conducted for each pilot tackling risks related to accidental release of hazardous material due to mismanagement and natural disasters and occupational health and safety.

The following activities will be developed within output d3:

- a) pilot design

- b) pilot plant: equipment procurement
- c) operation tests
- d) pbde identification, sampling, and chemical analysis.
- e) assessment of results

Component 4. Lessons learned identified, monitored and assessed

Outcome E. Awareness-raised, lessons learned and knowledge managed

Output E1. Awareness raising approaches and plans developed and implemented.

This FSP envisages the development of a strategy for communication and dissemination at national, provincial, and cantonal level through different means for raising awareness on general public, with special focus on women, youth, and other vulnerable groups.

Through this Output the project aims to raise awareness of at least 3,000 people, seeking to include vulnerable groups and a gender-balanced participation.

The following activities will be implemented to achieve Output E1:

a) Case Study Reports developed: the project will document activities, results and lessons-learned in individual case study reports. This will result in at least six (6) reports linked to the pilot activities within Output B2, B3, D1, D2 and D3 and will include failures and successes of the activities undertaken. These documents will be disseminated among key stakeholders and will be also published in the Knowledge and Information Exchange (KIE) platform developed under Output E3.

b) Communication Strategy: this FSP will design and implement a national communication campaign to raise awareness on risks and damages to health and the environment due to exposure to hazardous chemicals, which will include specific activities and communicational resources for mass dissemination. This campaign will be of particular interest for the promotion and raising awareness on the reduction of the use of plastics as well as an improvement in the management of their waste.

This campaign aims to raise awareness on stakeholders, project beneficiaries, public and especially women, youth, and other vulnerable groups. Gender considerations will be taken into account in the design and implementation of this strategy, to guarantee awareness of targeted audience in terms of gender mainstreaming in chemicals management within the scope of this project.

The design of this National Communication Strategy will include the different Communication activities identified within Outputs in previous Components.

c) Implement the Stakeholder Engagement Plan detailed in Annex 8 and briefly described in following section ?Stakeholder Engagement?, including youth and other vulnerable groups.

d) Implement the Gender Action Plan detailed in Annex 10 and briefly described in following section ?Gender Equality and Women?s Empowerment? for gender mainstreaming and raising awareness at different levels of related key targeted groups.

Output E2. M&E and adaptive management in response to necessities and results from the MTR and final findings with lessons learned applied.

The project results as outlined in the Project Results Framework (Section V), will be monitored periodically during implementation to ensure that the project effectively achieves its results. The results

of the monitoring will be reported in an intermediate and final evaluation and the lessons learned captured will be integrated in the project through adaptive feedback management. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy.

As a standard practice for every UNDP project, continuous monitoring of FSP results and achievements will be ensured, while the application of adaptive management of the project after conclusion of the Mid-Term Review (MTR) will be warranted. The Project Management Unit (see Section VII on Governance and Management arrangements for detailed information) will design the project's M&E system and be responsible for implementing the project's M&E Plan (see Section VI below), including the Project's Inception Workshop, annual planning workshops and Project Implementation Reports (PIRs).

The following activities will be implemented to achieve Output E2:

a) Development of Project's Inception Workshop.

b) Monitoring:

i) Project Results Framework (outcome indicators, GEF Core Indicators, baseline and annual target indicators).

ii) Project Risk Matrix, Environmental and Social Framework/Social Environmental Screening Procedures (ESMF/SESP), SESA, the Gender Analysis and Action Plan, and the Stakeholder Engagement Plan.

c) Holding Project Steering Meetings.

d) Carrying out 'Mid-Term Review' (MTR): The MTR will be carried out after the second submission of the PIR; it will assess the progress of each project activity and attainment of the project's indicators presented in the Project Results Framework (Section V of the ProDoc) and Multiyear Work Plan (Annex 4). This review will also consider one Gender Assessment of project impact completed as part of MTR and the disbursement of financial resources and co-financing provided by project partners, and it will monitor and assess administrative aspects for the execution of the project. The MTR will also inform the adaptive management of the project and improve its implementation as a remainder of the project's duration.

e) Carrying out Terminal Evaluation (TE): The TE aims to evaluate whether all planned project activities have been developed, resources granted by the GEF have been disbursed and spent in line with GEF and UNDP policies and rules, following activities as set out in this Project Document. The TE will also extract and identify lessons learned, how to disseminate them most efficiently and make recommendations to ensure that project results are sustainable.

Output E3. Knowledge management system for best practices and communication platform at national level established.

The project will design and implement a permanent knowledge and information exchange (KIE) platform at national level where all the knowledge generated during project implementation will be available and shared. Main findings, all lessons learned, best practices and project experiences will be gathered. All information will be captured in user-friendly means to share, disseminate, and update communication materials integrating the corresponding gender-related challenges. This platform will make use of social media to disseminate materials and schedule presentations among selected audiences of key stakeholders and will produce quarterly reports.

The platform will be a useful tool for key stakeholders from the private and public sector, including decision makers, to easily access valuable information to improve their activities and take well informed decisions.

4) Alignment with GEF focal area and/or Impact Program strategies.

The alignment with GEF focal area strategies is the same as presented at the PIF stage.

The project is aligned to the following Focal Area objectives:

CW-1-1 Strengthen the sound management of industrial chemicals and their waste through better control, and reduction and/or elimination.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing.

Component 1.

Contributions from the baseline:

In Costa Rica several important progress has been done in developing legal and policy frameworks towards the lifecycle management of POPs in the country. Further improvement should be encouraged for newly listed POPs, supporting the import controls as well as the identification of suitable alternatives.

In the country the POP analysis performed in air, fish, marine mammals, human blood and breast milk are very scarce. Historically the analysis of POP substances has been oriented to pesticides due to high agricultural production and due to the need of private companies to present certificates of analysis as part of the controls established by law. On the other hand, the national universities research laboratories have great potential for skill development for the analysis of new POP. They are having qualified personnel and the equipment needed to implement methods of analysis for new POPs and are in the stage of developing protocols of analysis for these compounds.

In terms of PCBs, in order for Costa Rica to phase-out by 2025, all PCB-contained equipment and dispose of PCBs in an environmentally sound manner by 2028, the following barriers can be considered: support the mechanisms for identifying remaining equipment's contaminated with PCBs (mainly in private sector and sensitive sites and to put the power sector back on track); Fragmentation of control and enforcement exist, particularly for PCBs equipment, which need to be aligned; Lack of awareness/knowledge on the requirement of elimination by 2028 of industrial sector companies and other PCBs contaminated equipment owners.

Contributions from Co-financing:

Co financing from Power generation and distribution companies will support the identification, sampling and management of PCB containing equipments under its ownership aligned to Stockholm Convention and national legal framework requirements. The project led by UTN ?Inventory of agricultural areas subject to crop burning, mainly pineapple, sugar cane and rice, linked to the possible emission of unintentional POPs - Phase I? will strengthen national capacities for measuring and monitoring UPOPs (linked to Component 1 and Component 2).

Finally, the Ministry of Environment and Energy (MINAE) and the Ministry of Health will strengthen human resources to improve and increase cooperation and coordination between government authorities with competence in the area and for a smooth exchange in the information required for the management of POPs and plastics in prioritized sectors within the country.

Contributions from GEFTE:

The funding will be used to develop an analytical capacity building plan to enhance the analysis of POPs and other hazardous chemicals in the country, including the identification of sources of financing to promote and enhance the capacity of public/private institutions to carry out R&D for POPs sampling and analysis. In particular 4 labs will be supported. (Output A.1)

In addition, legal framework and policies development and/or updating will be funded, as well as the required capacity built in involved government institutions for the life cycle management with focus on import controls of POPs in the country (Output. A.2 and Output A.3). Furthermore, will conduct an assessment of suitable alternatives to the chemicals of national concern and understand barriers for their introduction and use. The analysis will include Hazard/comparative exposure assessment, technical feasibility assessment and economic feasibility assessment (including environmental and health costs), availability and accessibility (Output A.4).

Lastly, the identification of remaining PCB contaminated equipment in private sector and sensitive sites will be supported and eventually the management in sensitive sites will be addressed. (Output A.5)

Component 2.

Contributions from the baseline:

According to the latest update of UPOPs inventory, Group 6 releases increased to 346.5 gTEQ/y. Within this category the biomass burning category emitted 29.22 gTEQ/y in 2013 increasing to 39.84 gTEQ/y in 2017. These emissions were mainly related to rice, pineapple and sugar cane crops, since these were the identified crops that mostly use burning in their production.

In the country, the use of fire for agricultural purposes is regulated by Decree No. 35368-MAG-S-MINAE, which defines controlled agricultural burning (QAC) as "the use of fire intentionally provoked to a vegetal material, under a pre-established plan in which preventive measures are taken to mitigate damage to natural resources and neighboring properties, which is carried out for phytosanitary purposes, crop facilitation or land clearing ". However, emissions control and regulation enforcement are fragmented in different government areas. There are no environmental and emissions monitoring associated to these practices. For that purpose, strengthening, training, and infrastructure for sampling as well as analytical capacity to generate data on real contamination levels is required.

Contributions from Co-financing:

Cofinancing from NICOVERDE will support on going initiatives and investments for the sustainable production of pineapple, as well as the reduction of its biomass burning and the use of this biomass to be introduced in the development of different alternatives (biotextiles, bio materials, mushroom substrate).

Poas Energy will cofinance the prototype of equipment for gas generation by means of pineapple biomass pellets.

Finally, the project led by UTN ?Inventory of agricultural areas subject to crop burning, mainly pineapple, sugar cane and rice, linked to the possible emission of unintentional POPs - Phase I? will support the identification of UPOPs in prioritized crops in the project (linked to Component 1 and Component 2).

Contributions from GEFTE:

The funding will be destined to support the country in developing a National Strategy for a period of 5 years to enable the gradual reduction of biomass burning in different crops that carry out this practice in the country, promoting and coordinating required consultation processes among relevant stakeholders (Output B1).

Furthermore, under this Component the development and implementation of three pilot projects will be funded to provide evidence of the alternatives that can be adopted in each of the crops (rice, sugar cane, pineapple) to avoid burning biomass (Output B2). Additionally, a business model will be funded for the use of pineapple biomass with a circular economy approach within the following alternatives: substrate for fungus, construction panels, biomaterials, biochar, biogas or supplement to animal feed (Output B3).

Component 3.

Contributions from the baseline:

According to the latest update of UPOPs inventory, Group 6 releases increased to 346.5 gTEQ/y. Within this category waste burning and accidental fires from 169.85 gTEQ/y in 2013 to 306.42 gTEQ/y in 2017. Thus, indicating a steady increase over time. Within this category the UPOPs emissions are directly related to mismanagement of plastics as a considerable part of the products within the categories contain this material.

Costa Rica is the largest importer of plastics in Central America, for local consumption, processing, and export. The Ministry of Health estimates that Costa Ricans produce 161,000 tons of plastic waste per year, of which 120,000 tons end up in landfills and 40,000 tons in natural environments. From the waste that is reaching landfills it is estimated that 20% are being openly burnt and from the waste that is reaching the environment (because they have not been collected) it is estimated that 12.1% are being openly burnt. This means that annually 28,800 tons of plastics are being burnt in the country (24,000 tons in landfills and 4,800 tons dumped). Additionally, recycling rates remains low in the country.

Regarding agricultural plastics, as per consultation during PPG phase, current barriers for the collection, are mainly coming from: i) farmers lack of awareness/training on how these plastics should be treated (including triple washing procedure), ii) limitations for transportations and iii) absence of shredding machinery, the plastic is currently compacted which occupies a larger volume. In addition, due to a weak legal enforcement and the absence of robust and widespread systems for the proper management of the agricultural plastics, this waste stream is likely to be dumped/openly burned in the fields.

Finally, related to plastic waste from vehicles, the country presents a great gap in terms of regulations that establish guidelines for the handling and final disposal of vehicle parts, which affects aspects such

as: difficulty in estimating a waste flow of vehicles (since there is no restriction of the time of the allowed useful life), lack of managers registered for disposal in the Ministry of Health, lack of information to estimate the cost associated with the final treatment, and lack of obligation for the owner of the vehicle to deliver it to an authorized manager after carrying out its deregistration. Due to these barriers, plastics from vehicles are currently subject to the same practices of ordinary waste management, where most of the waste is destined to landfills if properly collected or dumped/open burnt otherwise.

Contributions from Co-financing:

Cofinancing from the Fonds Français pour l'Environnement Mondial through the Project 'Rethinking the plastic consumption in Costa Rica: Ideas to Action.' will mainly support: i) Baseline of plastics consumption, waste management, externalities and policy development needs in Costa Rica.; ii) Pilot projects to demonstrate innovative approaches and technologies for reducing the use of plastics and for better management of plastic waste.

CRDC & PEDREGAL provide cofinancing on their operations, professional fees and investments related to their process of introducing non recoverable plastics as construction material.

One Sea Foundation will cofinancne through its project 'Landscape without plastic' which addresses the contamination of natural environments by tragic plastics and has a goal to collect 200,000 tons of tragic and non-recoverable plastics and transform them into raw material for the construction industry as a part of a national strategy for tragic plastics.

Contributions from GEFTF:

The funding will be destined to support the country in developing a National Strategy (5 years) for non-recoverable/non-reusable plastic waste, not collected/leaked that has been accumulating in the environment, establishing an intersectorial Committee and conducting intersectoral workshops (Output C1). Complementary to the Project 'Rethinking the plastic consumption in Costa Rica: Ideas to Action.' A coordination platform will be funded which will become a permanent dialogue mechanism led by the Ministry of Health and the Ministry of the Environment and Energy as well as key stakeholders (Government and private sector) involved in plastics management (Output C2).

Finally, three pilot projects will be funded: i) develop, test, and evaluate a business model of BAT/BEP for vehicle plastic's waste management including recycling into semi-finished products (Output D3); ii) develop, test, and evaluate a coordinated model for 'non-Recyclable' plastics' waste management (Output D2); improve/integrate agricultural-use plastic through BAT/BEP of plastic waste produced along the value chain of agricultural production, where different plastics are being used such as: ropes, sacks, bags, cans, bottles, pesticide containers, mulching films, greenhouse films, etc. (Output D1).

Component 4.

Contributions from the baseline:

The Ministry of Environment and Energy (MINAE) through its Directorate of Environmental Quality Management (DIGECA) to ensure the project's objective of reducing emissions and releases, minimizing exposure of human beings to UPOPs in strategic sectors including plastics, and advancing compliance of the Stockholm Convention in Costa Rica will require multiple coordination of key stakeholders and proper tools in place to guarantee effective implementation and the adoption of adaptive management if required.

Contributions from Co-financing:

The Ministry of Environment and Energy (MINAE) will provide in-kind contributions in the form of human resources and/or facilities/office supplies for holding events, forums, workshops, trainings, courses and awareness-raising.

Contributions from GEFTF:

The development of a strategy for communication and dissemination at national, provincial, and cantonal level through different means for raising awareness on general public, with special focus on women, youth, and other vulnerable groups will be funded (Output E1).

The project will support the a project monitoring and evaluation system with its mid-term and final evaluation reports to assess project performance and GEB impact (Output E2). Lastly, the project will design and implement a permanent knowledge and information exchange (KIE) platform at national level where all the knowledge generated during project implementation will be available and shared (Output E3).

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF).

The Global environmental benefits (GEB) of the project at the CEO endorsement stage are the same as presented at the PIF stage.

The project's GEBs include the following:

- 30 MT of PCB contaminated materials eliminated.
- Total 34 gTEQ (accrued value) avoided:
 - o 17 gTEQ avoided from the reduction of biomass combustion.
 - o 17 gTEQ avoided through plastics management and reduction.
- 850,000 direct project beneficiaries (425,000 women and 425,000 men)

7) Innovativeness, sustainability and potential for scaling up. ?

Innovation

The innovation of this project is based on the integrated approach for different wastes containing POPs. To begin with, the project revisits the issue of oils and dielectric equipment in use and disuse that contain or are contaminated with PCBs in the country, extending efforts to those sectors that have not yet been addressed (private and sensitive sites). Secondly, the project addresses plastic waste coming from different waste streams such as vehicle plastics waste due to repairs or due to vehicle end of useful life that contain PBDEs, plastic of agricultural use waste resulting from crop production value chain, and

proper management of non-recoverable plastics that include several types of plastic contaminated within which are found with flame retardant substances and UV protectors, packaging waste among others.

Likewise, the project proposes work on priority crops in the agricultural sector to reduce UPOPs releases resulting from open burning practices through the identification of alternative practices and the assessment of based on a circular economy approach.

The integrated approach consists of, on the one hand, the systematic improvement of the institutional, policy and legal framework, and on the other hand, the design and implementation of different pilot projects.

For the institutional strengthening the project will work on building capacity to improve POPs import controls as well as improving the national analytical for their analysis and monitoring. A cost benefit analysis is also foreseen to evaluate country alternatives for POPs substitution. The legal framework will be also strengthened and National Strategies to support UPOPs reduction from open burning and plastic management improvement will be developed.

The proposed pilots will provide innovative, environmentally, and economically sustainable solutions for the elimination of POPs, reduction of UPOPs emissions and support for local communities in solving environmental problems through the use of waste for the generation of new business opportunities, incorporating circularity in the established production model. The BAT/BEP application in the pilot projects will allow scaling up to the level of the productive sectors.

Furthermore, the project is innovative as it requires close technical and financial collaboration from the private sector to achieve its objectives.

Sustainability

Sustainability of the project interventions beyond its completion will be mainly ensured as follows:

Under Component 1, through the strengthening of the capacity of already existing institutions, supported by policies and regulations that will be further improved and expanded upon with the project's support. Furthermore, through the strengthening of government intuitions to enhance import controls of POPs being used in the country and the national analytical capacity built for proper monitoring and analysis of POPs releases.

Under Component 2, the project will work in three pilot projects (one for each of the prioritized crops) and will design and implement related activities in close coordination with key stakeholders of sugar cane, rice, and pineapple.

These activities will include the development of business models that support the reduction of UPOPs, the introduction of the circular economy approach and will contribute to build capacity of main actors that as a consequence will enable the sustainability of obtained results and lessons learned. Stakeholders to be involved will include crop producers' associations, universities, industrial associations, agribusiness companies as well as local authorities.

In addition, this component foresees the development of the National Strategy on the elimination of burning methods in the agricultural sector which will also contribute and support sustainability of results.

Under Component 3, the project will address plastic waste currently leaking into the environment, plastic waste resulting from vehicles repair or end of life, and plastic waste being used in agricultural activities. For this purpose, the project will design and implement three pilot projects in close coordination with key stakeholders of the agricultural, vehicles and mass consumption companies.

Stakeholders to be involved will include crop producers' associations, agricultural input companies, second hand spare parts shops, straightening and painting shops, food and beverages companies, recycling companies as well competent authorities, among others. The pilot activities, which include the development of business models will contribute to build capacity of main actors that as a consequence will enable the sustainability of obtained results and lessons learned.

In addition, the establishment of a coordination mechanism of Government with private sector to promote investments in the waste management and plastic. Sustainability will also be guaranteed by supporting key elements, such as improving compliance capacity and establishing a monitoring mechanism that will facilitate the collection of information on management and disposal activities in the country.

Under Component 3, the project will document in a systematic way lessons learned and experiences and make them available through the permanent knowledge and information exchange (KIE) platform.

Potential for Scaling Up

The project has been designed to integrate and promote up-scale and amplification of successful experiences. The capacity building approach mainstreamed in all components is to ensure knowledge and experiences stay and replicate in country within relevant institutions.

Under Component 1, the potential for scaling up is based on the development of the cost-benefit scheme for the assessment and implementation of alternatives for POPs and other hazardous chemicals being used in Costa Rica, in order to understand existing barriers for their substitution. Additionally, when the project comes to an end the increased capacity of government institutions and the improved policy and regulatory enabling environment for sustainable POPs management will continue to serve the country and its different sectors to encourage the adoption BAT/BEP for the scaling up of results.

Through the Component 2 and 3, the potential for scale up is based on the pilot projects that will serve as the basis for replication in other cases in the country, supported by the feasibility study developed. At first, the results and lessons learned from each of the pilot projects will be shared among the relevant stakeholders in each of the sectors to encourage their implementation. Secondly, results and lessons learned from these activities results will serve as valuable inputs for the development of the National Strategies for the elimination of Open Burning methods and for non-Recoverable/non-reusable plastic, that will ultimately allow the scaling up of the results to a national scale.

In particular under Component 3, the establishment of the coordination platform for plastic management will facilitate coordination and collaboration between producers, importers, users and waste treatment facilities, expected to result in economies of scale enabling scaling up of results for the environmental sound management of plastics in Costa Rica.

Furthermore, results obtained can be replicated in other countries in the region, while large potential also exists for replication in other regions in the world of this kind of integrated POPs approach.

Under Component 4, throughout the project's implementation, project results, experiences, lessons-learned, knowledge products will be captured and make them available through dissemination activities and the KIE platform to ensure the information is available to key stakeholders in the country, facilitating the scaling up.

- [1] [WorldBank Data](#)
- [2] National Power and Light Company S.A. (CNFL), Costa Rican Electricity Institute (ICE), Administrative Board of the Municipal Electric Service of Cartago (JASEC), Heredia Public Utilities Company (ESP HEREDIA), Coopeguanacaste.
- [3] DIGECA - Actualizaci3n del inventario nacional de dioxinas y furanos no intencionales para el a?o 2017. Internal document
- [4] Agriculture (% of GDP), Costa Rica - [WorldBank Data](#)
- [5] Statistical Reports - [Infoagro - Agricultural Statistics](#).
- [6] National Institute for Statistics and Census (INEC).
- [7] Current situation of integrated waste management in Costa Rica. Reference material for the update of the National Policy on Integrated Waste Management 2022-2032. Ministry of Health (MS).
- [8] [Apparent Pesticide Use in Costa Rica](#)
- [9] Agricultural Statistical Reports n? 32- [Infoagro - Agricultural Statistics](#).
- [10] An average of 2020 and 2021 rate was considered.
- [11] FAO 2021 ?Assessment of agricultural plastics and their sustainability? - [Agricultural Plastics - A call for action](#)
- [12] INTE B20:2019
- [13] National Chamber of Automotive Paint and Straightening and Painting Shops (CANATEPA)
- [14] Based on the ?Number of material accidents? in 2021 (Assumption: 2 cars repaired per accident) Road Safety Advice (COSEVI) - [Number of material accidents 2015-2021](#)
- [15] The Clean Wave report based on contacting 350 workshops during PPG phase.

1b. Project Map and Coordinates

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

A. Geographic Regions of Costa Rica



Costa Rica is located on the Central American isthmus, between the geographic coordinates 8° and 11° north latitude, 82° and 85° west latitude.

B. Preliminary regions for Output B2 and B3 implementation.

North Zone and northwest zone of the country, provinces of Alajuela and Guanacaste.



D. Preliminary regions Output D2 and D3



1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities

Private Sector Entities Yes

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

During the PPG phase, a Stakeholder Analysis and Stakeholder Engagement Plan, detailed in Annex 8, was developed in order to identify key stakeholders and relevant beneficiaries to be involved in project implementation process.

This plan seeks to strengthen UNDP institutional partner capacities for managing social and environmental risks and ensuring full and effective stakeholder engagement, including appropriate mechanisms to respond to complaints from project-affected people. This Plan follows the Guidance Note UNDP Social and Environmental Standards (SES).

The Annex lists in detail different stakeholders that have been identified to be strongly linked to and interested in project activities. During PPG several activities were conducted, detailed in Table 1 ?Stakeholder Engagement activities carried out during the PPG phase? of Annex 8, for engaging the wide universe of stakeholders relevant to the expected results of this FSP, allowing not only to communicate project?s objectives and activities but also to identify their concerns and expectations.

As a result, a stakeholder engagement plan was developed. This plan describes the different activities and engagement strategies to be conducted during the implementation period through which the project aims to engage the key stakeholders, addressing their concerns and meet and/or manage their expectations and proposed means of communication to be used.

The grievances will be geared directly to the Ministry of Environment and Energy (MINAE) through the institutional mechanisms by which people concerned with or potentially affected by the project can express their grievances to the Directorate of Environmental Quality Management (DIGECA). Ultimately, grievances and complaints can be lodged to the following address:

Mail address: digeca@minae.go.cr

Phone: 2257-1839

Address: Av. 18, streets 9 and 9 bis, #935, San Jos?.

Directorate of Environmental Quality Management (DIGECA)

Ministry of Environment and Energy (MINAE)

This FSP needs to engage a variety of stakeholders not only from the public sector but also from the private sector in order to achieve the planed outputs and outcomes. The following table summarizes the actors that the project will need to involve and describes their responsibilities in project?s implementation as well as their contributions to addressing the development challenge:

Type	Group	Stakeholder	Role
Public Entities	National Government	Ministry of Environment and Energy (MINAE) <i>Directorate for Environmental Quality Management (DIGECA)</i>	<p>MINAE is designated as the institution responsible for coordinating the establishment of policies and actions to protect air, water, soil, and energy resources, in order to have an entity to assume these priority tasks within the process of environmental management of the country. The DIGECA is the department in charge of the fulfillment of this mandate by the MINAE.</p> <p>DIGECA will be the focal point for the Costa Rican government during the execution of the project. It actively participates in the preparation, presentation, and implementation of the project, being part of the steering committee. It will also be the coordinator and communication channel of the project with the other public institutions.</p>

		<p>Ministry of Agriculture and Livestock (MAG)</p> <p><i>State Phytosanitary Service (SFE)</i></p>	<p>It is responsible for developing public policies, programs and regulations necessary to benefit the agricultural sector and the population in general, developing and implementing the best agricultural practices and seeking the use of the best available technologies.</p> <p>The SFE, attached to the MAG, is the department that controls and regulates the commercial exchange of agricultural products both for import and export, registration, control and regulation of chemical and biological substances for agricultural use (pesticides, fertilizers, biological substances and other related products).</p> <p>The SFE It will serve as a source of information and generation of data related to the implementation of activities linked to the agricultural sector (Output B2, B3 and D1) and will support the development of the National Strategy under Output B1.</p>
		<p>Ministry of Economy, Industry and Commerce</p>	<p>The Ministry is in charge of promoting industrial and commercial activity in the country.</p> <p>It will contribute as a source of information and channel of communication with the different sectors under the scope of the project and support the drafting of any legal instrument identified by the project.</p>

	Ministry of Finance <i>General Directorate of Customs</i>	<p>Designated by law is responsible of the control of imports and exports through the General Directorate of Customs.</p> <p>It will contribute as a source of information and will support the activities linked to the strengthening of imports control of POPs (Output A3)</p>
	Ministry of Health <i>Radiological Protection Directorate</i> <i>Directorate of Environmental Health</i>	<p>It is the governing body by law and is responsible for the creation of public policies, National Strategies, laws, and regulations on integrated solid waste management.</p> <p>It will be member of the Steering Committee and is the official data generator on solid waste management in the country. It will support the implementation of activities linked to the waste management.</p>
Other Public Institutions	Institute of Technical Standards of Costa Rica (INTECO)	<p>INTECO is the Technical Standards Institute of Costa Rica; a private, non-profit association, created in 1987. It is recognized, by law #8279, as the National Standardization Entity and has the declaration of public utility for the interests of the State. It is the representative of Costa Rica with the international and regional organizations of standardization ISO, IEC, COPANT.</p> <p>It will participate in the development of technical guidelines and standards under the scope of the project.</p>

	Local Government	National Union Local Governments	<p>Since 1977, it is the organization that represents local governments, in different commissions and boards of directors, such as the consultative platform on solid waste, and the commission for contaminated sites. It is the channel of communication with local governments. It is the creator of the national network of municipal environmental technicians.</p> <p>It will be the channel of communication and coordination with local governments for the implementation of activities under the scope of the project, mainly in pilot sites implementation.</p>
		Institute of Promotion and Municipal Advice IFAM	<p>Institute that advises and promotes the sustainable development of municipal governments.</p> <p>It will be source of information for the project and channel of communication with the municipal governments for the implementation of activities, mainly in pilot sites implementation.</p>
International Organizations	Cooperation Agencies	United Nations Development Programme (UNDP)	<p>UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services, and for the Project Assurance role of the Project Board/Steering Committee.</p> <p>UNDP and its Costa Rica Country Office have extensive experience working with the private sector, governmental institutions, and civil society.</p>

Civil Society Organizations	Industrial Associations	Costa Rican Union of Chambers and Associations of the Private Business Sector (UCCAEP)	<p>Organization that brings together more than 40 chambers and business associations in the country.</p> <p>It will serve as the communication channel with the private sector in general to disseminate the scope of the project, coordinate actions, and share knowledge and lessons learned of the project.</p>
		Chamber of Industries	<p>Since 1943, it has been the institution that represents and unites companies in the country's industrial sector.</p> <p>It will serve as the communication channel with the industrial sector of the country to disseminate the scope of the project, coordinate actions, and share knowledge and lessons learned of the project.</p>
		Association of Importers of Vehicles and Machinery (AIVEMA)	<p>Since 1976, it has brought together importers and distributors of vehicles, motorcycles, heavy trucks, buses, and agricultural-industrial machinery.</p> <p>It will contribute as source of information on the generation of plastic waste in the automotive sector, and partner in the implementation of the pilot on automotive plastic waste (Output D3).</p>
		National Chamber of Automotive Straightening and Painting Workshops (CANETAPA)	<p>Is the chamber that brings together automotive straightening and painting workshops.</p> <p>It will contribute as source of information on the generation of plastic waste in these workshops and partner in the implementation of the automotive plastics pilot (Output D3).</p>

		Clean Up Our Fields Foundation	<p>It is a non-profit organization established by the Chamber of Agricultural Inputs in 2004, with the support of international organizations such as the German Cooperation Office (GTZ) and the Regional Agricultural Health Organization (OIRSA).</p> <p>It will contribute as source of information and partner in the implementation of the pilot for plastics of agricultural use (Output D2).</p>
		Chamber of Agricultural Inputs	<p>The Chamber of Agricultural Inputs of Costa Rica is an organization made up of the leading companies in the input supply and technology transfer sector for agriculture. It also acts as an interlocutor of the agricultural and livestock chemical industry with the government and public opinion.</p> <p>It will contribute as source of information and partner in the implementation of the pilot for plastics of agricultural use (Output D2).</p>

	Costa Rican Chamber of the Plastics Industry (ACIPLAST)	<p>Established in 1971, it is a non-profit private trade organization that represents the plastics industry sector.</p> <p>This organization is oriented towards the search for continuous improvement and strengthening of the competitive positioning of the companies in the plastics industrial sector. Likewise, it handles representation before governmental entities to coordinate major national issues related to the sector.</p> <p>It will contribute as source of information and partner and coordination channel in the implementation of activities related to plastic waste management under Component 3.</p>
	Costa Rican Chamber of Construction (CCC)	<p>It is the chamber that brings together the companies linked to the value chain of the construction sector and represents them at national and international level.</p> <p>It will provide information of the sector and support the implementation of activities related to plastic waste management, mainly Outcome C and Output D2.</p>
Crop Producers Associations	National Banana Corporation (CORBANA)	<p>Corporation that brings together the entire banana agricultural sector of the country.</p> <p>It will contribute as a source of information and channel of communication with the banana sector for the implementation of project activities on plastic waste management in the agricultural sector. (Output D1)</p>

	<p>National Rice Corporation (Conarroz)</p>	<p>Corporation that brings together the national rice sector.</p> <p>It will contribute with information of national rice sector and support the implementation of activities aimed at reducing the open burning practice in rice cultivation. (Output B2)</p>
	<p>National Chamber of Pineapple Producers and Exporters (CANAPEP)</p>	<p>National Chamber of pineapple producers and exporters in the country.</p> <p>It will be partner in the implementation of the pilot activities to reduce the open burning practice in pineapple crop as well as the use of pineapple biomass based on a circular economy approach. (Output B2 and B3)</p>
	<p>National Union of Small and Medium Agricultural Producers ? National UPA</p>	<p>Chamber that groups the small and medium agricultural producers of the country.</p> <p>It will be a communication and coordination channel for the implementation of activities related to plastic waste for agricultural use management. (Output D1)</p>
	<p>Industrial Agricultural League of Sugar Cane (LAICA)</p>	<p>Institution that brings together sugarcane producers in the country.</p> <p>Source of information and communication for the implementation of the pilot to reduce open burning practices in the sugarcane sector.</p>

NGO	Foundation One Sea	<p>Organization that develops and implements projects for the protection of marine environments, focused on the generation of public policies and regulatory framework for the prevention of pollution of the seas through preventive management of solid waste.</p> <p>It will be partner in the implementation of activities related to plastic waste management in the environment, automotive and agricultural under Component 3.</p>
	CEGESTI	<p>CEGESTI is a non-profit foundation specialized in generating capacities for sustainable development through the provision of consulting and training services. It currently implements the National Marine Waste Plan 2021-2030.</p> <p>It will contribute as source of information and technical communication channel with organizations and municipalities regarding solid waste management. Ally in the generation of public policy, technical and legal regulations within the scope of the project.</p>
	Costa Rican Network of Recyclable Waste Recovery companies (Red Concerva)	<p>It is a national network of recovery and recycling companies.</p> <p>It will contribute as communication and coordination channel with companies and organizations focused on the recovery and recycling of plastic waste to promote implementation of activities mainly under Component 3.</p>

	Foundation ?Algo por mi tierra?	<p>Organization working on the prevention of environmental contamination, which organizes volunteer days for cleaning, construction and installation of fences to collect floating waste in cantonal rivers.</p> <p>It will contribute as data source and communication channel with environmental organizations and collaborators in the implementation of actions focused on plastic waste management leaked to the environment and the automotive sector. (Output D2 and D3)</p>
	Foundation for Sustainability and Equity - ALIARSE	<p>The Foundation for Sustainability and Equity, known as ALIARSE, is a non-governmental organization promoted by public institutions and private companies to contribute to sustainability, social justice, and national development.</p> <p>It will be partner in the implementation of activities related to the plastic waste management in the environment. (Output C1 and D2)</p>
	Foundation MareBlu	<p>Non-profit organization, focused on the cleaning of natural environments, the recovery of tragic and non-recoverable plastic waste.</p> <p>It will contribute as source of information and channel of communication and coordination with organizations in the sector to support activities linked to Output D2.</p>

Agribusiness Companies	Pelon Group S.A.	<p>It is a business group and is the largest producer of rice in the country. It has been developing and implementing pesticide-free production practices.</p> <p>It will support the implementation of the pilot activities to reduce the open burning practice in rice (Output B2)</p>
	Sugar Company ?El Viejo?	<p>It is one of the country's sugar mills, focused on sugar production and electricity generation from sugar cane cultivation.</p> <p>It will be partner in the implementation of the pilot to reduce the practice of burning in sugarcane cultivation. (Output B2)</p>
Food and beverage Companies	<p>Considering the project scope, this group is made of:</p> <ul style="list-style-type: none"> - Florida Ice and Farm Company (FIFCO) ? Florida Bebidas - Coca-Cola - Dos Pinos 	<p>These are the three largest companies within the food and beverage sector in the country.</p> <p>They will participate in the implementation of the activities to address the issue of plastic waste in the environment. (Output C1 and D2)</p>

	Power generation and distribution companies	<ul style="list-style-type: none"> - Costa Rican Institute of Electricity (ICE) - National Power and Light Company S.A. (CNFL) - Public Services Company of Heredia (ESPH) - Administrative Board of the Municipal Electrical Service of Cartago (JASEC) - Coopeguanacaste - Coopesantos - Coopealfaroruiz - Coopelesca 	<p>These are the power generation and distribution companies in the country, responsible for complying with the identification, sound treatment and elimination of equipment contaminated with PCBs, aligned to the commitments under the Stockholm Convention.</p> <p>They will support and contribute to the implementation of activities in Output A5.</p>
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	Waste Management and recycling Companies	<p>Considering the project scope, this group is made of:</p> <ul style="list-style-type: none"> - Recyplast - MundoRep - <i>PEDREGAL</i> and Center for Regenerative Design and Collaboration (<i>CRDC</i>) - Fortech 	<p>Companies within the plastic waste recycling sector. Recyplast linked to the agricultural sector, Mundorep linked to the post-consumer and post-industrial sector and CRDC-Pedregal linked to non-recoverable plastic waste and tragic plastics.</p> <p>They will contribute as source of information and communication with their represented sectors and will support the implementation of Pilot Projects for plastic waste management (Output D1, D2 and D3).</p> <p>Fortech is a PCB management company and chemical analysis lab for PCB. The company will be involved in activities under Output A5.</p>
Academy	National Council of Rectors (CONARE) and Universities	<p>The following Universities will be considered:</p> <ul style="list-style-type: none"> - Technical University of Costa Rica (UTN) - National University of Costa Rica (UNA) - Costa Rica University (UCR) - EARTH University - National Institute of Learning (INA) - Technological of Costa Rica (TEC) 	<p>CONARE is the national council of rectors of public universities, which dictates their education and research policies.</p> <p>CONARE and Public universities are a source of information and generation of knowledge through research projects linked to the issues addressed by the project.</p> <p>In particular, the UTN will be partner in the implementation of activities aimed at reducing the open burning practice in pineapple crop as well as the use of pineapple biomass based on a circular economy approach. In addition will support activities for UPOPs measurement.</p>

Laboratories	Public and Private	<p>Considering the project scope, this group is made of:</p> <ul style="list-style-type: none"> - Regional Institute of Studies on Toxic Substances of the National University (IRET) - International Center for Conciliation and Arbitration (CICA) - Lambda - Fortech 	These laboratories will participate and support the activities linked to the strengthening of national analytical capacities for POPs. (Output A1)
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Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier; Yes

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

Executor or co-executor;

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

The proper management of chemicals, in the context of sustainable development, has important gender dimensions. In everyday life, men, women and children are exposed to different types of chemicals in

varying degrees of concentration. The level of exposure to toxic chemicals, as well as their impact on human health, is determined by biological as well as social factors. Social factors, especially those related to job role assignment, have a direct impact on human exposure to toxic chemicals, including the level, frequency and type of chemicals. At the same time, biological factors that differentiate men from women, as well as between adults and children, can influence the type of health damage from exposure to toxic chemicals.

Costa Rica's population in 2022 was 5.23 million people, of which 2.63 million were men (50.3%) and 2.60 million were women (49.7%). By area of residence, 73.5% of women live in urban areas and 26.5% in rural areas, compared to 71.5% and 28.5% of men, respectively.

As could be seen, women have a higher educational level, however, their participation in the labor market is lower. According to the results of the Continuous Employment Survey as of the fourth quarter of 2022, the labor force was 2.46 million people and the net labor participation rate was 59.7% of the economically active population. The female labor force was 991 thousand people versus 1.47 million men. The net participation rate for women was 48.2% and for men it was 71.1%. Regarding the three main branches of activity where employed persons are concentrated, at the national level, 378 thousand people worked in commerce and repair activities, which represents 17.4 % of the employed population, while 256 thousand people worked in the manufacturing industry (11.8 %) and 219 thousand people in the agriculture, livestock, forestry and fishing sector (10.1 %).

The level and type of chemical exposure in the workplace often differs because men and women have different work assignments based on social constructs. Thus, men work more in the automotive and power sector exposed to PCB and other brominated POP; while women are more exposed to chemicals from cleaning products, cosmetics, products used in the textile industry or in the health care sector; and finally, boys and girls involved in agricultural activities are more exposed to pesticides and other chemicals used in this sector. Similarly, in solid waste management there is exposure to products containing PCBs, mercury and other hazardous chemicals. The management and disposal of this type of solid waste in many cases is carried out by people from the poorest quintiles of the population and who work in the informal sector, where women are overrepresented. In terms of UPOP emissions, both women and men are exposed due to inadequate management practices in the different sectors covered by the project.

During the PPG phase a gender action plan was developed for addressing gender equality in project outcomes. The Annex 10 "Gender Analysis and Action Plan" includes the detail of this work, but it can be highlighted that main objective of this plan is to mainstream the gender approach in the life cycle of the project "Strengthening National Capacities in the Management of Persistent Organic Pollutants in Costa Rica", contributing to sustainable and inclusive development of the population living in the project's intervention areas. Likewise, the following specific targets were established:

1. Raise awareness on the concepts of gender approach to achieve a sustainable and inclusive development in the management of persistent organic pollutants.
2. To promote actions in the project that protect the health of men and women, taking into account the differentiated exposure by sex to POPs and their residues.
3. Improve the spaces for participation and empowerment of women as agents of change to ensure that the prioritized sectors are free of POPs and their residues.
4. Generate sex-disaggregated information that will serve as a basis for strengthening the project's monitoring, communication and evaluation mechanisms on the reduction and management of POPs and their residues.

As a result, it is expected to promote equal opportunities in the intervention areas throughout the life cycle of the project, thus contributing to the strengthening of governance processes and sustainable and inclusive development, for an adequate management of persistent organic pollutants and their waste.

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

Yes

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

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

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

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

The project has a significant number of private sector partners (please, refer also to Section 2 ?Stakeholders?). A good sign of private sector engagement in the project's implementation is that 60% of the project's co-financing (USD 14,318,857 is being provided by the private sector; as such it can be concluded that Private Sector Engagement for this project is substantial.

The involvement of the private sector in the project will be:

- a) Regulatory, enforcement and awareness raising activities supported by the project will have as one of the main target private owners of PCBs contaminated equipment from industries and power companies.
- b) Private sector will be involved in consultations and drafting of National Strategies to be developed by the project, as well as regulatory framework and technical standards improvement.
- c) Capacities strengthened for the development of business models to promote the adoption of alternatives to biomass burning of identified crops.
- d) Capacities strengthened for the development of business models to promote the collection, sorting, management, valorization and/or sound disposal of plastics from the automotive and agricultural sector.

The private sector partners who are engaged in the project's implementation can be grouped as follows:

- ? Power generation and distribution companies
- ? Agribusiness companies
- ? Food and Beverage Companies
- ? Waste management and Recycling Companies

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

A group of risks has been identified and need to be considered during the execution of the project. As per standard UNDP requirements, the National Project Coordinator will monitor risks quarterly and report on the status of risks to the UNDP Country Office (CO) in Costa Rica. The UNDP CO will record progress in the UNDP ATLAS risk log (UNDP Risk Register). Risks will be reported as critical when the impact and probability are HIGH (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual Project Implementation Report (PIR).

The social and environmental risks identified in the SESP during PPG phase (Annex 5) are included in the UNDP Risk Register in Annex 6. The description of how the project risks will be mitigated is shown in both Annexes 6 (UNDP Risk Register) and in Annex 9 (ESMF).

The following table summarizes the key risks that could threaten the achievement of project results:

Risk Class	Risk Description and	Risk Management Response
Social and Environmental	<p>Risk 1: Customs officials, inspectors and other government officials may not have the capacity to properly enforce legislation related to the import of POPs</p>	<p>The project's design will include a training programme at the national and local level for accountable government institutions and customs officials for timely detection (Output A3-c). The main objective of this training programme is to provide the skills necessary to monitor and control the imports and exports of hazardous chemicals, with focus on newly listed POPs including the detection and prevention of illegal trade.</p> <p>A training needs assessment (guided by SES) will be undertaken to ensure that the information has been delivered to the participants as required and will have a meaningful impact on their job performance. In line with the Environmental and Social Management Framework (ESMF) that has been prepared for the Project, additional capacity building will be done as needed per the developed Environmental and Social Management Plans (ESMPs).</p>
	<p>Risk 2: Economic impact on farmers if affordable treatment technology for agricultural waste to replace burning was not found</p>	<p>This impact will be taken into consideration during development of the national strategy for the elimination of burning methods in the agricultural sectors (Output B1-a) through a high-level targeted assessment that will result in recommendations to eliminate or reduce this risk that will be incorporated into the strategy. In addition, the strategy will include recommendations on different financing alternatives as well as the development of policies/regulations necessary for its sustainability.</p> <p>The project has also developed a Stakeholder Engagement Plan (SEP) to engage relevant stakeholders, especially farmers and identifying affordable and effective alternatives to the open burning of agricultural waste/biomass.</p>
	<p>Risk 3: Potential disturbance of existing informal networks involved in the waste sector including collection, transportation and disposal of plastic waste in Costa Rica</p>	<p>As mentioned in the ESMF, a high-level targeted assessment of the economic impact of the reduction of non-recoverable plastic on these groups. If the targeted assessment indicate a significant economic impact, a Livelihoods Planning Framework (LPF) will be developed, which will include measures and policies for alternative livelihoods for these groups.</p> <p>The project has also developed a SEP that ensures participation of all stakeholders in project activities.</p>
	<p>Risk 4: Marginalization of stakeholder groups from participating in decisions that may affect them</p>	<p>The project has developed a SEP that ensures participation of all stakeholders in project activities. The plan will ensure effective engagement between various stakeholders by creating and disseminating information, fostering cooperation, and enhancing capacities.</p> <p>It will also put in place a Grievance Redress Mechanism (GRM) to provide meaningful means for local communities and affected populations to raise concerns and/or grievances when activities may adversely impact them.</p>

<p>Risk 5: Gender discrimination reproduced through limiting women's ability to contribute to decision-making and to benefit from the project</p>	<p>As part of the project design, gender considerations have been taken into account in the design and implementation of the national communication campaign to raise awareness on risks and damages to health and the environment due to exposure to hazardous chemicals to guarantee awareness of gender mainstreaming in chemicals management within the scope of this project.</p> <p>A Gender Action Plan (GAP) has been prepared to mitigate the identified risks and propose measures that ensure that women are represented in decision-making on project activities and are included in capacity building activities.</p>
<p>Risk 6: Community health and safety risks due to waste generation and emissions from processing of agricultural biomass and plastic waste.</p>	<p>As part of the project design, the national strategy for non-recoverable/non-reusable plastic (Output C1) will consider the environmental impacts (air emissions) caused by transport, storage and disposal of plastic waste.</p> <p>In line with the ESMF that has been prepared for the project, a targeted assessment will be conducted for each of the pilot demonstrations to assess risks related to air emissions and occupational health and safety. The assessment will identify environmentally sensitive receptors that may be affected by accidental releases such that mitigation measures will be developed and included in standalone ESMPs through a Pollution Prevention and Management Plan and an Occupational Health and Safety Plan.</p>
<p>Risk 7: Community health and safety risks due to release of pollutants during storage, transport or disposal of PCBs and PCB contaminated waste stockpile</p>	<p>In line with the ESMF that has been prepared for the project, a targeted assessment will be prepared for this activity that will consider air emissions, solid waste generation and workers' health and safety. Based on the targeted assessment, an ESMP will be developed that will include mitigation measures for the identified risks, as well as a Pollution Prevention and Management Plan and Occupational health and Safety Plan.</p>
<p>Risk 8: Increase in consumption of energy resources and greenhouse gas emissions</p>	<p>As part of the project design, the proposed treatment methods for agricultural waste (Outputs B2 and B3) will be evaluated and selected based on their potential use of energy resources and greenhouse gas emissions.</p>
<p>Risk 9: Flooding or other damage to storage and disposal facilities due to natural disasters</p>	<p>As mentioned in the ESMF, the targeted assessment/ESMP that will be prepared for the pilot projects for the management of agricultural waste/ biomass (Outputs B2 and B3) and plastic waste (Outputs D1, D2 and D3) will assess the vulnerability of the storage or disposal facilities and mitigation measures put in place to safeguard them in the resulting site-specific ESMPs.</p>

	<p>Risk 10: Working conditions within project demonstration activities in contravention to principles and standards of ILO fundamental conventions</p>	<p>As mentioned in the ESMF, Labour Management Procedures (LMP) will be developed for the project to clarify the terms and conditions related to project labour that all private sector engaged in the project will adhere to.</p> <p>The targeted assessments for the pilot projects for the management of agricultural waste/ biomass (Outputs B2 and B3) and plastic waste (Outputs D1, D2 and D3) and the resulting site-specific ESMPs will include an Occupational Health and Safety Plan to ensure SES compliance measures are in place prior to commencement of the works.</p>
Financial	<p>Risk 11: Private stakeholders within prioritized sectors are reluctant to play an active role during project execution.</p>	<p>During the PPG stage, the main concerns and interests of the key stakeholders for the project were compiled, allowing the development of proper stakeholder engagement strategy during project implementation.</p> <p>This includes an effective communication strategy to be developed and implemented during project's execution to raise awareness among the stakeholders and the community in general aware of the project's scope, activities, and benefits.</p>
	<p>Risk 12: Impacts due to fluctuations in credit rate, market and currency that may affect project total budget due to a stressful economic national context.</p>	<p>UNDP monitors expenditure on a daily basis. Further UNDP HQ provides global oversight of project delivery minimizing the risk of operational risk due to currency risks.</p>
Operational	<p>Risk 13: Limited capacity of national stakeholders to adopt BAT/BEP in prioritized sectors as well as sound management of related wastes.</p>	<p>During the implementation of the FSP, awareness-raising activities and technical training programs will be developed and implemented, as well as capacity building in government institutions, customs officers and other interested parties in prioritized sectors who are related to POPs and related waste LCM, as well as UPOPs releases, to ensure the knowledge and experience needed to carry out their tasks properly.</p>
	<p>Risk 14: Deficiencies in communication and relationship with stakeholders may impact the adequate progress in project execution.</p>	<p>During PPG phase main concerns and interests of the stakeholders interested in the project were compiled, allowing the formulation of actions that allow eliminating these barriers and emphasizing on the benefits of being part of the project. Within the Stakeholder Engagement Plan these activities are planned to continue during the project implementation.</p> <p>Furthermore, an effective communication strategy will be developed to raise awareness among the stakeholders and the community in general aware of the project's activities.</p>

	<p>Risk 15: Lack of interest at national and local level to actively participate in the development and implementation of project activities.</p>	<p>The PMU and the Project Steering Committee will provide continuous feedback and monitor the project results on a regular basis. Furthermore, consultations will be held with decision makers from other government organizations to communicate the relevance of their participation in the project</p>
Organizational	<p>Risk 16: Limited capacity in project monitoring.</p>	<p>The project foresees in its Component 4 a series of activities aimed at a periodic monitoring and follow-up on the development of the project and a comprehensive reporting during the MTR, where possible deviations from the programmed actions can be identified early, as well as compliance with the proposed objectives.</p>
Strategic	<p>Risk 17: Limited capacity in the Ministry of Environment and Energy (MINAE) and other key stakeholders that can generate conflicts, misinformation, and misunderstandings of the overall objective of the project.</p>	<p>During the implementation of the FSP, stakeholder engagement activities and technical training programs will be developed and implemented, as well as capacity building in government institutions, customs officers and other interested parties who are working on issues related to the management of chemicals and hazardous waste, to ensure the knowledge and experience needed to carry out their tasks properly.</p> <p>Furthermore, an effective communication strategy and an awareness raising campaign will be developed during the implementation of the FSP to raise awareness among the stakeholders and the community in general of the project's scope and activities.</p>
	<p>Risk 18: Change of Government, will might result in new management and technical appointees within entities that are project partner, requiring additional efforts to ensure buy-in for project support, which might slow down the speed of project implementation at the start of the project.</p>	<p>In the situation that this would happen, technical personnel from UNDP CO staff and the UNDP Panama RTA will do their utmost to inform and convince new decision makers on the importance of the project, the reasons why it was developed and the positive impact it will have on human health and the environment in Costa Rica.</p>

COVID-19	<p>Risk 19: COVID pandemic context may result in difficulties of activities execution due to several causes (involved people's health harmed, limited domestic travel, etc.). Additionally, co-financing partner commitments may be delayed.</p>	<p>COVID-19 risk has been evaluated and considered to be Low. However, if this occurs during FSP implementation, virtual and remote methods for working implementation will be developed/implemented if needed. Furthermore, PMU will regularly monitor the risks carry out period assessment of market context changes, both at the national and international levels, to ensure the project remains a relevant and trusted partner for the private sector stakeholders.</p>
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6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

Section 1: General roles and responsibilities in the projects? governance mechanism

Implementing Partner: The Implementing Partner for this project is the Ministry of Environment and Energy (MINAE).

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
- Procurement of goods and services, including human resources.
- Financial management, including overseeing financial expenditures against project budgets.
- Approving and signing the multiyear workplan.
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

Responsible Parties: not Responsible Parties are identified for this FSP.

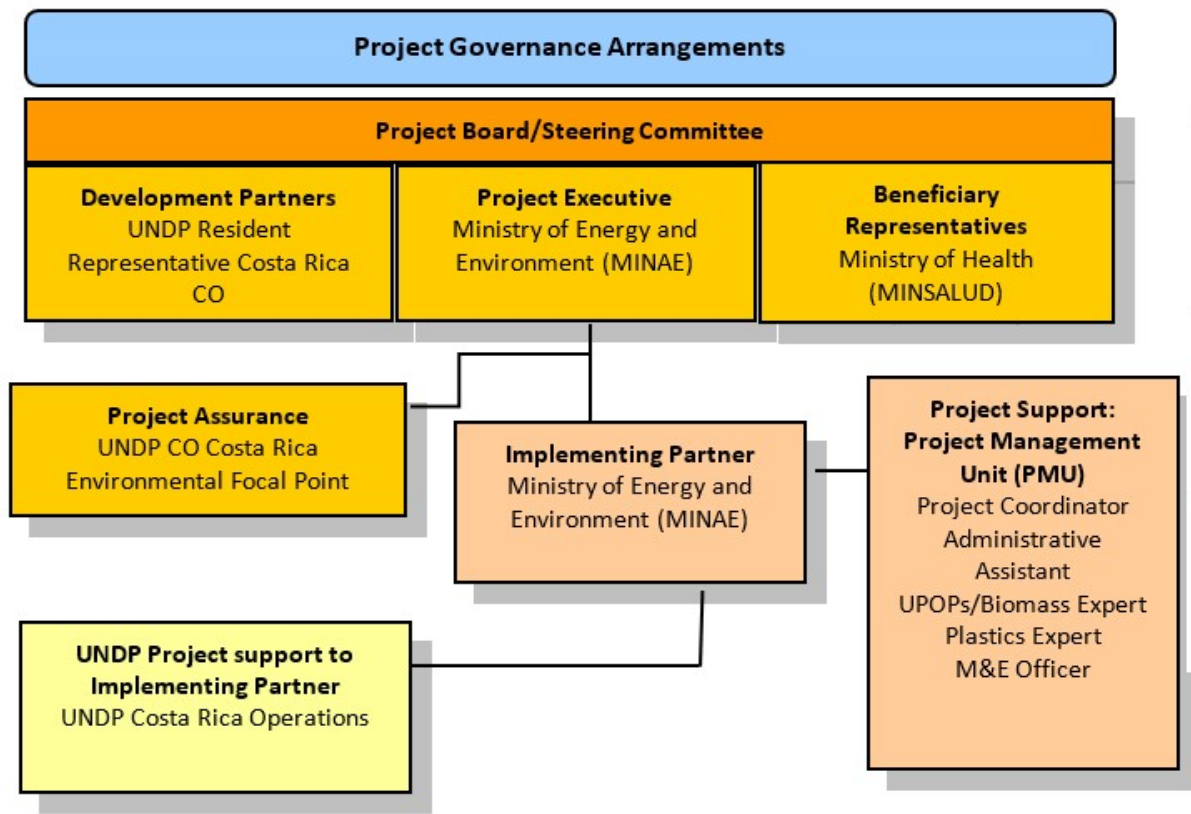
Project stakeholders and target groups: The stakeholders of the project correspond to a diversity of entities of the Government (at national and local level), private sector, local stakeholders, academia and CSOs, as

detailed in Table 7. Partnerships of the FSP, such as: industrial associations, universities, agribusiness companies, food and beverage companies, power generation and distribution companies, public and private laboratories, research centers, waste management and recycling companies., etc. These stakeholders can engage having similar approach and goals for the environmental sound management of POPs and the reduction of UPOPs releases in prioritized sectors and promote a sustainable production, community health, and sustainability.

UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. **The UNDP GEF Executive Coordinator, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project.** UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

A strict firewall will be maintained between the delivery of project oversight and quality assurance performed by UNDP and project execution undertaken by UNDP. The segregation of functions and firewall provisions within UNDP in this case is described in the next section.

Section 2: Project governance structure.



- First line of oversight**
- UNDP oversight support to IP call center staff providing project oversight support
- Second line of oversight**
- Regional Bureau and Country Office at portfolio level
 - BPPS NCE RTA oversees quality assurance compliance. BB oversees RTA function
 - UNDP NCE Executive Coordinator and Bureau Deputy Coordinator can revoke DOA/cancel project or provide oversight.

The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

UNDP project support: The Implementing Partner and GEF OFP have requested UNDP to provide support services in the amount of USD\$ 58,000 for the full duration of the project, and the GEF has agreed for UNDP Costa Rica Operations team to provide such execution support services and for the cost of these services to be charged to the project budget. The execution support services ? whether financed from the project budget or other sources - have been set out in detail and agreed between UNDP Country Office and the Implementing Partner in a Letter of Agreement (LOA). This LOA is attached to this Project Document.

To ensure the strict independence required by the GEF and in accordance with the UNDP Internal Control Framework, these execution services will be delivered independent from the GEF-specific oversight and quality assurance services.

Section 3: Segregation of duties and firewalls vis-?-vis UNDP representation on the project board:

As noted in the [Minimum Fiduciary Standards for GEF Partner Agencies](#), in cases where a GEF Partner Agency (i.e. UNDP) carries out both implementation oversight and execution of a project, the GEF Partner Agency (i.e. UNDP) must separate its project implementation oversight and execution duties, and describe in the relevant project document a: 1) Satisfactory institutional arrangement for the separation of implementation oversight and executing functions in different departments of the GEF Partner Agency; and 2) Clear lines of responsibility, reporting and accountability within the GEF Partner Agency between the project implementation oversight and execution functions.

In this case, UNDP's implementation oversight role in the project ? as represented in the project board and via the project assurance function ? is performed by the UNDP Resident Representative Costa Rica (on Project Board), and the UNDP Costa Rica Environmental Focal Point (project assurance). UNDP's execution role in the project (as requested by the implementing partner and approved by the GEF) is performed by UNDP Costa Rica Operations, and other staff in the Operations unit, who will report to the Deputy Resident Representative.

Section 4: Roles and Responsibilities of the Project Organization Structure:

a) Project Board: All UNDP projects must be governed by a multi-stakeholder board or committee established to review performance based on monitoring and evaluation, and implementation issues to ensure quality delivery of results. The Project Board (also called the Project Steering Committee) is the most senior, dedicated oversight body for a project.

The two main (mandatory) roles of the project board are as follows:

1) **High-level oversight of the execution of the project by the Implementing Partner** (as explained in the [?Provide Oversight?](#) section of the POPP). This is the primary function of the project board and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results.

2) **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the [?Manage Change?](#) section of the POPP).

Requirements to serve on the Project Board:

- ? Agree to the Terms of Reference of the Board and the rules on protocols, quorum and minuting.
- ? Meet annually; at least once.
- ? Disclose any conflict of interest in performing the functions of a Project Board member and take all measures to avoid any real or perceived conflicts of interest. This disclosure must be documented and kept on record by UNDP.
- ? Discharge the functions of the Project Board in accordance with UNDP policies and procedures.
- ? Ensure highest levels of transparency and ensure Project Board meeting minutes are recorded and shared with project stakeholders.

Responsibilities of the Project Board:

- ? Consensus decision making:
 - o The project board provides overall overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
 - o Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report;
 - o The project board is responsible for making management decisions by consensus.
 - o In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

- o In case consensus cannot be reached within the Board, the UNDP representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

? Oversee project execution:

- o Agree on project manager's tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.

- o Appraise annual work plans prepared by the Implementing Partner for the Project; review combined delivery reports prior to certification by the implementing partner.

- o Address any high-level project issues as raised by the project manager and project assurance;

- o Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS Nature, Climate and Energy Executive Coordinator (and the GEF, as required by GEF policies);

- o Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.

- o Track and monitor co-financed activities and realisation of co-financing amounts of this project.

- o Approve the Inception Report, GEF annual project implementation reports, mid-term review and terminal evaluation reports.

- o Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.

? Risk Management:

- o Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.

- o Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and reputation but are outside of the control of the project. For example, social and environmental risks associated with co-financed activities or activities taking place in the project's area of influence that have implications for the project.

- o Address project-level grievances.

? Coordination:

- o Ensure coordination between various donor and government-funded projects and programmes.

- o Ensure coordination with various government agencies and their participation in project activities.

Composition of the Project Board: The composition of the Project Board must include individuals assigned to the following three roles:

1. **Project Executive:** This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Executive usually is the senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the Project Board. If the project executive co-chairs the project board with representatives of another category, it typically does so with a development partner representative. The Project Executive is: Ministry of Energy and Environment (MINAE) through its Directorate of Environmental Quality Management (DIGECA).
2. **Beneficiary Representative(s):** Individuals or groups representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often representatives from civil society, industry associations, or other government entities benefiting from the project can fulfil this role. There can be multiple beneficiary representatives in a Project Board. The Beneficiary representative (s) is/are: Ministry of Health (MINSALUD)
3. **Development Partner(s):** Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partner(s) is/are: UNDP Costa Rica Country Office Resident Representative.

b) **Project Assurance:** Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is/are: Programme Officer, NOB (National Professional Officer-B)

Project Management ? Execution of the Project: The Project Manager (PM) (also called project coordinator) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The project manager typically presents key deliverables and documents to the board for their

review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers.

A designated representative of the PMU is expected to attend all board meetings and support board processes as a non-voting representative.

The primary PMU representative attending board meetings is: Project Manager/Coordinator.

Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

There is a group of GEF-financed projects and other initiatives in Costa Rica currently under implementation related to the development challenge that this project is also addressing, which could provide some additional support to strengthening this institutional partnership approach. Thanks to the involvement of the institutional partners in some of them, it seems of mutual benefit the achievement of the outcomes of this project. Specifically, this FSP will ensure coordination and count on the capacity built and knowledge gathered from the concurrent projects that are already in progress, as shown in Table below:

Project	Agency	Main relevance for this FSP
Rethinking the plastic consumption in Costa Rica: Ideas to Action.	French Cooperation Fund for the Global Environment (FFEM) - UNDP	<p>The objective is to minimize the impact on the environment and health through a reduction in the discharge of toxic substances, (potentially) microplastics and exposure from the use of plastics in Costa Rica by addressing the capacity to manage plastic waste and reducing its use through innovative approaches. This objective will be achieved through two main components:</p> <ol style="list-style-type: none">1. Baseline of plastics consumption, waste management, externalities and policy development needs.2. From ideas to actions: pilot projects to demonstrate innovative approaches and technologies for reducing the use of plastics and for better management of plastic waste.
Landscape without Plastics: 2022-2030	UNDP and private companies and organizations	The project addresses the contamination of natural environments by tragic plastics. The goal is to collect 200,000 tons of tragic and non-recoverable plastics and transform them into raw material for the construction industry as a part of a national strategy for tragic plastics.
National Marine Waste Plan 2021-2030	Environmental Protection Agency (EPA)	Focused on addressing the generation of marine waste from activities fisher and tourism, and from domestic, agriculture and industrial waste.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

The project is aligned to the following National and Sectorial Policies:

- 2015 National Implementation Plan (NIP) of Stockholm Convention;
- Minamata Initial Assessment (MIA) of Minamata Convention;
- Strategy for the substitution of single-use plastics;
- National Sustainable Production and Consumption Policy;
- National Waste Management Plan (2016-2021, in the process of updating);
- National Circular Economy Policy (under development) and National Circular Economy Strategy (under public consultation)
- National Recycling Strategy (2016-2021), currently being updated.
- National Bioeconomy Strategy (2020-2030)
- National Decarbonization Plan 2018-2050 (DCC) and Nationally Mitigations Actions (NAMA) Waste Sector
- SAICM priorities as well as the ongoing process of revising SAICM objectives after 2020.

Other national, regional, and global strategies such as the recently developed Agreement of the Principle 10 of the Rio declaration, the SDGs national implementation strategy and the OECD recommendations on chemicals and waste management.

The results of this project's interventions will contribute to the understanding of the challenges related to Plastics management and their impact on health and the environment. This is particularly relevant in the context of UNEA 5.2's decision to initiate negotiations of an internationally legal binding instrument to end plastic pollution and to establish a science-policy panel on chemicals and waste and to prevent pollution.

This FSP is aligned to UNSDCF outcome 2.1. By 2027, institutions are transformed and modernized to provide people- centered, inclusive, innovative, effective, efficient, timely and flexible, gender-transforming

quality services, articulated with other institutions and with a strong territorial approach, allowing municipalities to become the main agents of change in local development, especially in territories with a lower development index. / Output 1.3. National and local public institutions have strengthened their capacities to manage, inform and supervise substances harmful to the environment, as well as to substitute and eliminate them. UNSDCF outcome 3.2. By 2027, women in their diversity and vulnerable populations participate in and benefit from an innovative, inclusive economy that enhances their opportunities for decent work and entrepreneurship, with better conditions to access financing mechanisms. /Output 2.2. National and local public sectors have strengthened capacities for the promotion of a green, blue, purple and circular economy and the strengthening of climate action.

This FSP by reducing the emissions and releases of UPOPs in strategic sectors including plastics will help the government to work towards the achievement of the Sustainable Development Goals (SDGs). The SDGs most relevant to this project are:

SDG 3 "Good Health and Well-being" by avoiding biomass and waste being openly burnt and protecting local, regional and global populations from the health impact of hazardous chemicals.

SDG 5 "Gender Equality" by designing interventions addressing gender differentiated roles and impacts of POPs management in strategic sectors.

SDG 6 "Clean Water and Sanitation" by protecting water resources from contamination. By improving waste management, the pollution of ground and surface water, rivers and water ways and thus drinking water sources, is minimized.

SDG 11 "Sustainable Cities and Communities" by improving the generation and management of different waste streams (including plastics) which makes cities and human settlements inclusive, safe, resilient, and sustainable and reduce the adverse environmental impact.

SDG 12 "Responsible Consumption and Production" by working towards a circular economy approach where materials being circulated in our society are produced and consumed in a sustainable manner.

SDG 13 "Climate Action" by reducing and improving waste management as well as reducing emissions from biomass and waste open burning.

SDG 14 "Life below water" by safeguarding marine life from exposure to hazardous chemicals and wastes through the improvement of management systems.

SDG 15 "Life on land" by reducing waste generation and ensuring residual waste is properly managed which avoids pollutants leaking into the soil, ground water, streams, and rivers, and reducing the burning of waste which avoids the decomposition of waste, emit harmful pollutants and chemicals into the air.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

Component 4 is related to "Lessons learned identified, monitored and assessed" aiming at disseminating project results and experiences on best practices and lessons learned for the improvement of management and reduction of POPs/UPOPs in prioritized sectors with a budget allocation of USD 200,000 and co-financing of USD 1,176,123.

Under Component 4 the project aims to document activities, results and lessons-learned at least six (6) individual case study reports linked to the pilot activities within Output B2, B3, D1, D2 and D3 which will include failures and successes of the activities undertaken. Complementarily, a communication strategy will be developed and implemented to raise awareness on risks and damages to health and the environment due to exposure to hazardous chemicals with focus on those addressed by the project.

Furthermore, within this Component the project envisages the design and implementation of a permanent knowledge and information exchange (KIE) platform at national level where all the knowledge generated during project implementation will be available and shared. Main findings, all lessons learned, best practices and project experiences will be gathered. All information will be captured in user-friendly means to share, disseminate, and update communication materials integrating the corresponding gender-related challenges.

Furthermore, it should be noted that UNDP annually organizes meetings for Government Officers and Project Coordinators of all the UNDP-GEF funded Chemicals and Waste Projects in Latin America and the Caribbean. In these meetings, lessons learned, and best practices are shared among the countries which has created a coordination mechanism among all the projects in the region. Finally, UNDP will ensure that relevant information and lessons learned will be collected as input for the Mid-term Review and Terminal Evaluation.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

The budgeted M&E plan has been summarized in the table below:

GEF M&E requirements to be undertaken by Project Management Unit (PMU)	Indicative costs (US\$)	Time frame
Inception Workshop and Report	10,000	Inception Workshop within 2 months of the First Disbursement
M&E required to report on progress made in reaching GEF core indicators and project results included in the project results framework	5,000	Annually and at mid-point and closure.
Preparation of the annual GEF Project Implementation Report (PIR)	5,000	Annually typically between June-August
Monitoring of Stakeholder Engagement Plan and Gender Action Plan	20,000	Continuous.
Monitoring of Environmental and Social Safeguards	50,000	Continuous.
Supervision missions	5,000	Annually
Learning missions	5,000	As needed

GEF M&E requirements to be undertaken by Project Management Unit (PMU)	Indicative costs (US\$)	Time frame
Independent Mid-term Review (MTR)	25,000	Add date included on cover page of Project Document
Independent Terminal Evaluation (TE)	25,000	Add date included on cover page of Project Document
TOTAL indicative COST	150,000	

For additional details kindly refer to Chapter VI "Monitoring and Evaluation (M&E) Plan" of the UNDP

Project Document.

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The Global environmental benefits (GEB) of the project at the CEO endorsement stage are the same as presented at the PIF stage. The project's GEBs include the following:

- 30 MT of PCB contaminated materials eliminated
- 3,000 MT of plastic waste avoided.
- Total 34 gTEQ (accrued value) avoided:
 - o 17 gTEQ avoided from the reduction of biomass combustion.
 - o 17 gTEQ avoided through plastics management and reduction.

- 850,000 direct project beneficiaries (425,000 women and 425,000 men)

During PPG phase, the following GEBs were identified as co benefits of the Project:

- 400 MT of CO₂e emissions mitigated.

In addition, the socioeconomic benefits to be delivered by the project at the national and local levels include:

Reduced health impact from the exposure to hazardous chemicals, particularly the UOPs releases due to open burning practices and mismanagement of plastic wastes.

Job creation through opportunities enhanced in the deployment of business models for the use of biomass from different crops as well as the recycling/downcycling of plastics in different prioritize sectors.

Improved policy, regulatory, monitoring and analysis frameworks, to safeguard human health and the environment.

Reduction of plastics in the environment.

A general increase in awareness about the environmental impacts of POPs, and Toxic Chemicals.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
High or Substantial	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

This Environmental and Social Management Framework (ESMF) was developed for the UNDP-supported, GEF-financed project "Strengthening the national capacity for the management of POPs in Costa Rica". The Project will be implemented by the Ministry of Energy and Environment through Country Office Support to National Implementation Modality (COS to NIM).

This ESMF has been prepared for the submission of the UNDP project proposal to the GEF for the purposes of assisting in the assessment of the project's potential environmental and social impacts. Preliminary analysis and screening conducted during the project development phase via UNDP's Social and Environmental Screening Procedure (SESP) identified potential social and environmental risks associated with project activities as follows:

- Risk 1: Customs officials, inspectors and other government officials may not have the capacity to properly enforce legislation related to the import of POPs (Moderate)
- Risk 2: Economic impact on farmers if affordable treatment technology for agricultural waste to replace burning was not found (Moderate)
- Risk 3: Potential disturbance of existing informal networks involved in the waste sector including collection, transportation and disposal of plastic waste in Costa Rica (Moderate)
- Risk 4: Marginalization of stakeholder groups from participating in decisions that may affect them. This risk is associated with overall project activities (Moderate)
- Risk 5: Gender discrimination reproduced through limiting women's ability to contribute to decision-making and to benefit from the project (Moderate)
- Risk 6: Community health and safety risks due to waste generation and emissions from processing of agricultural biomass and plastic waste (Moderate)
- Risk 7: Community health and safety risks due to release of pollutants during storage, transport or disposal of PCBs and PCB contaminated waste stockpile (Moderate)
- Risk 9: Increase in consumption of energy resources and greenhouse gas emissions (Low)
- Risk 10: Flooding or other damage to storage and disposal facilities due to natural disasters (Moderate)
- Risk 11: Working conditions within project demonstration activities in contravention to principles and standards of ILO fundamental conventions (Moderate)

This screening resulted in the identification of eleven risks, nine as 'Moderate' and two as 'Low' significance, resulting in an overall social and environmental risk categorization of 'Moderate' for the Project.

This ESMF has been developed based on this project risk categorization to specify the processes that will be undertaken by the Project Management Unit for the additional assessment of potential impacts and identification and development of appropriate risk management measures, in line with UNDP's Social and Environmental Standards.

This ESMF identified the need for the following measures:

1. High level targeted assessment of the National Strategy for non-recoverable/non-reusable plastic (Output C1) to assess the economic impact of the reduction of non-recoverable plastic on informal waste networks.
2. High level targeted assessment for national strategy for the elimination of burning methods in the agricultural sectors (Output B1-a) to assess the economic impact on farmers if affordable treatment technology for agricultural waste to replace open burning was not found.
3. Targeted assessments for pilot projects for the management of agricultural waste/ biomass (Outputs B2 and B3) and plastic waste (Outputs D1, D2 and D3) as well as elimination of Polychlorinated biphenyls (PCB) waste stockpiles (Output A5-b) to assess their risk to the environment and the health of the surrounding communities, air quality wastewater generation and worker health and safety and based on the assessment, preparing, and approving appropriate site specific Environmental and Social Management Plans (ESMPs) that will include a Pollution Prevention and

Management Plan and an Occupational Health and Safety Plan for avoiding, and where avoidance is not possible, reducing, mitigating, and managing adverse impacts.

This ESMF also details the roles and responsibilities for its implementation and includes a detailed budget and monitoring and evaluation plan.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
PIMS_6496_GEFID_11015_POPs COSTA RICA_Annex 9_ESMF	CEO Endorsement ESS	
PIMS_6496_GEFID_11015_POPs COSTA RICA_Annex 5_SESP	CEO Endorsement ESS	
GEF Checklist PIMS 6496 POPs project Costa Rica April 11 2022	Project PIF ESS	
Pre SESP Costa Rica GEF VII project April 12 2022 cleared	Project PIF ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

<p>This project will contribute to the following Sustainable Development Goal (s): SDG 3 ?Good Health and Well-being?; SDG 5 ?Gender Equality?; SDG 6 ?Clean Water and Sanitation?; SDG 11 ?Sustainable Cities and Communities?; SDG 12 ?Responsible Consumption and Production?; SDG 13 ?Climate Action?; SDG 14 ?Life below water?; SDG 15 ?Life on land?</p>				
<p>This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): UNSDCF outcome 2.1. By 2027, institutions are transformed and modernized to provide people- centred, inclusive, innovative, effective, efficient, timely and flexible, gender-transforming quality services, articulated with other institutions and with a strong territorial approach, allowing municipalities to become the main agents of change in local development, especially in territories with a lower development index. / Output 1.3. National and local public institutions have strengthened their capacities to manage, inform and supervise substances harmful to the environment, as well as to substitute and eliminate them. UNSDCF outcome 3.2. By 2027, women in their diversity and vulnerable populations participate in and benefit from an innovative, inclusive economy that enhances their opportunities for decent work and entrepreneurship, with better conditions to access financing mechanisms. /Output 2.2. National and local public sectors have strengthened capacities for the promotion of a green, blue, purple and circular economy and the strengthening of climate action.</p>				
	<p>Objective and Outcome Indicators (no more than a total of 20 indicators)</p>	<p>Baseline</p>	<p>Mid-term Target</p>	<p>End of Project Target</p>
<p>Project Objective:</p>	<p>To reduce emissions/releases, minimize exposure of human beings to UPOPs in strategic sectors including plastics, and to advance the Stockholm Convention in Costa Rica</p>			
	<p><u>Mandatory Indicator 1:</u> GEF Core Indicator 11: # direct project beneficiaries disaggregated by gender (individual people)</p>	<p>-</p>	<p>340,000 beneficiaries</p>	<p>850,000 beneficiaries (425,000 women and 425,000 men)</p>

	<p><u>Mandatory Indicator 2:</u> GEF Core Indicator 9: _____ Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials, and products (thousand metric tons of toxic chemicals reduced)</p>	1,302.4 ton of PCB contaminated materials eliminated/exported through the UNDP/GEF Project 4485.	12 MT of PCBs contaminated materials eliminated	30 MT of PCBs contaminated materials eliminated
	<p><u>Mandatory Indicator 3:</u> GEF Core Indicator 10: _____ Reduction, avoidance of emissions of POPs to air from point and non-point sources (grams of toxic equivalent gTEQ)</p>	-	4 gTEQ avoided as follows: 2 gTEQ avoided from the reduction of emissions of biomass combustion. 2 gTEQ avoided through plastics management and reduction.	18 gTEQ ^[1] avoided as follows: 9 gTEQ avoided from the reduction of emissions of biomass combustion. 9 gTEQ avoided through plastics management and reduction.
	<p><u>Mandatory Indicator 3 b:</u> <u>GEF Core Indicator 6:</u> Greenhouse Gas Emissions Mitigated (Million metric tons of CO₂e)</p>	-	160 MT of CO ₂ e emissions mitigated.	400 MT of CO ₂ e emissions mitigated.
Project component 1	Strengthen institutional capacities, and the policy and regulatory framework to address POPs-containing chemicals, products and waste, including plastics			

Project Outcome A Government and relevant stakeholders involved in POPs environmental sound management capacities strengthened	Indicator 4: Institutional Capacities strengthened measured by: - Analytical capacity strengthened. - Legal framework improved. - Imports Control strengthened.	-	National analytical capacity assessed. National Policies and regulations assessment.	Capacity built in 4 national labs. Legal Framework Roadmap developed. Customs officers training programme implemented.
	Indicator 5: project specific Cost-Benefit Scheme for POPs, Hg substitution and National PCB elimination plan developed.	-	Cost Benefit Scheme and National PCB elimination plan developed.	Cost Benefit Scheme and National PCB elimination plan developed.
Outputs to achieve Outcome A	A1) Capacity built to effectively eliminate/reduce and monitor releases of POPs and newly listed POPs A2) Improvement of the legal and regulatory framework to support the environmentally sound management of the life cycle of chemicals A3) Capacity building in government institutions to control imports of POPs containing products A4) Cost-benefit scheme developed for the environmentally sound management of chemical products in Costa Rica, including POPs and Mercury A5) Comply with Stockholm Convention's targets on PCBs (Reduction of 30 MT of PCBs containing waste held by private owners)			
Project component 2	Reduction of the release of UPOPS in priority sectors			
Outcome B UPOPs Emissions and control systems strengthened	Indicator 6: National strategy on the elimination of burning methods in the agricultural sectors developed	-	-	National strategy on the elimination of burning methods in the agricultural sectors developed

	Indicator 7: Number of pilot projects implemented for the reduction of UPOP emissions and the promotion of the circular economy approach.	-	No pilot projects implemented	Three (3) pilot projects implemented: - One (1) pilot for the reduction of UPOPs in sugar cane. - One (1) pilot for the reduction of UPOPs in rice. - One (1) pilot for the reduction of UPOPs and the adoption of the circular economy approach in pineapple.
Outputs to achieve Outcome B	B1) National strategy on the elimination of burning methods in the agricultural sectors. B2) 3 Pilot Projects for the reduction of UPOP emissions from uncontrolled and/or open burning of biomass (sugarcane, pineapple and rice) agrochemical and other waste B3) Pilot for the use of pineapple biomass based on a circular economy approach			
Project component 3	Improved plastics management			
Outcome C Plastics management systems strengthened	Indicator 8: National Strategy for non-recoverable/non-reusable plastic developed.	-	-	National Strategy for non-recoverable/non-reusable plastic developed.
	Indicator 9: Platform for the comprehensive management of plastic waste implemented.	-	-	Platform for the comprehensive management of plastic waste implemented.
Outputs to achieve Outcome C	C1) National Strategy for non-recoverable/non-reusable plastic C2) Platform for the comprehensive management of plastic waste			
Outcome D BAT/BEP for the reduction of use and consumption of plastics and management of plastics waste	Indicator 10: Number of pilot projects implemented for plastic waste management improvement.	-	No pilot projects implemented.	Three (3) pilot projects implemented: - One (1) pilot for agricultural plastics - One (1) pilot for non-recyclable plastics - One (1) pilot for vehicle plastics.

Outputs to achieve Outcome D	D1) Pilot #1: BEP/BAP for the comprehensive management of plastics in agricultural activities D2) Pilot #2 on Non-Recyclable plastics including sources, consumption baseline and business model feasibility study for their management. D3) Pilot #3 on Management of vehicle plastics at the end of their life cycle			
Project component 4	Monitoring & Evaluation			
Outcome E Awareness raised, Lessons learned identified, monitored and assessed	Indicator 11: National Communication Strategy developed, and a knowledge information exchange (KIE) platform established.	-	National Communication Strategy developed. Knowledge information exchange (KIE) platform established.	National Communication Strategy developed, and 3,000 awareness raised. Knowledge information exchange (KIE) platform established, and six (6) case study reports published.
	Indicator 12: Percentage of project expenditure spent on the FSP planned activities.	0%	40%	100%
Outputs to achieve Outcome E	E1) Awareness raising approaches and plans developed and implemented. E2) M&E and adaptive management in response to necessities and results from the MTR and final findings with lessons learned applied. E3) Knowledge management system for best practices and communication platform at national level established			

[1] Avoidance of 18 gTEq during project implementation (5 years) and reaching 34 gTEq (accrued) after 2 years of project completion.

ANNEX B: 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).

GEF ID: 11015

Project Title: **Strengthening the national capacity for the management of POPs in Costa Rica**

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STAP secretariat screener: Sunday Leonard

STAP's overall assessment: Minor

This project aims to cover a broad range of activities which would assist Costa Rica in meeting its obligations under various conventions related to chemicals and wastes. We appreciate the systems approach taken by the proponents of the project and their inclusion of a 'problem tree' and a 'theory of change' that makes connections between various components of the project. The country's complex waste streams require such an integrated approach for impact. However, the theory of change does not adequately reflect the pathways and assumptions. It is mainly a diagram reflecting the project component. We recommend that it should be improved in congruence with suggested STAP guidelines.

The use of pilot projects to profile Best Available Technologies (BAT) and Best Environmental Practices (BEP) has the potential to also spur innovations. We also note the incorporation of circular economy approaches in the plastics and the pineapple waste pilot project components. STAP has prepared detailed guidelines for developing circular economy projects, and we would urge the proponents of the project to consult these in detail: [How to Design Circular Economy Projects \(stapgef.org\)](https://stapgef.org/). STAP's report on [circular economy and climate mitigation](#) also provides insights that will be useful for this project, including alternative use for pineapple and other waste biomass, highlighted in Case Study 7 of the report

Furthermore, Costa Rica has an excellent record of environmental management practices in Latin America and there is existing research which should be harnessed for sharpening project targets. There may also be opportunities to link some of the project goals to energy and carbon mitigation efforts. For example, by selecting the system-thinking-based alternative to biomass burning, e.g., waste to energy solutions, the uPOPs emissions from this sector can be reduced. At the same time, the alternative solution can also reduce carbon emissions from the energy sector. Furthermore, because open burning is a significant source of black carbon – a potent climate forcer and air pollutant, this project has an important opportunity to contribute to climate change mitigation.

In line with the above, it is essential that the full range of global environmental benefits possible from this project are accounted for, including the chemicals and waste reduction, climate mitigation, and marine pollution reduction benefits. The proposal currently only accounts for the chemicals and waste benefits. The climate change benefits from black carbon emission avoidance, and reduced marine pollution from better plastic management should be reported since they are part of the GEF results framework. And this will adequately reflect the systems approach of the project.

UNDP Answer: During the PPG phase, climate change mitigation and marine pollution prevention (as plastic waste avoided) were considered as co benefits.

Also, there is a significant amount of research on alternative use of biomass waste such as pineapple, sugarcane, and rice, including those undertaken in Costa Rica.

Examples include:

? Valverde, J.C., Arias, D., Campos, R., Jimenez, M.F., Brenes, L., 2020. Forest and agro-industrial residues and bioeconomy: perception of use in the energy market in Costa Rica.

Energy, Ecology & Environment 6, 232-243. <https://doi.org/10.1007/s40974-020-00172-4>

? Ana Chen, Ysabel J. Guan, Mauricio Bustamante, et al. 2020. Production of renewable fuel and value-added bioproducts using pineapple leaves in Costa Rica, Biomass and Bioenergy, 141, <https://doi.org/10.1016/j.biombioe.2020.105675>.

? Lucía Segura Gil, Pedro Fito Maupoey. 2018. An integrated approach for pineapple waste valorization. Bioethanol production and bromelain extraction from pineapple residues, Journal of Cleaner Production, 172, 1224-1231, <https://doi.org/10.1016/j.jclepro.2017.10.284>.

? Eixenberger, D., Carballo-Arce, A.F., Vega-Baudrit, J.R. et al. Tropical agroindustrial biowaste revalorization through integrative biorefineries? review part II: pineapple, sugarcane and banana by-products in Costa Rica. Biomass Conv. Bioref. (2022). <https://doi.org/10.1007/s13399-022-02721-9>

? Hernández-Chaverri, R., Buenrostro-Figueroa, J., & Prado-Barragán, L. (2021). Biomass: biorefinery as a model to boost the bioeconomy in Costa Rica, a review. Agronomy Mesoamerican, 32(3), 1047-1070. <https://doi.org/10.15517/am.v32i3.43736>

We encourage the project proponent to explore this set of research to inform the selection of technologies and solutions.

UNDP Answer: Noted with thanks. The aforementioned research were explored during PPG phase and will continue to be assessed during project implementation for addressing biomass waste management activities (Output B1, B2 and B3).

In developing the national strategy for plastics, we encourage the project proponent to prioritize upstream solutions that will help avoid using non-recoverable and non-reusable plastics in the first place. Strategies and policies should aim to discourage the unnecessary use of plastics rather than seeking to reuse them at their end of life. STAP report on plastics and the circular economy and circular economy and climate mitigation can provide valuable insights on this.

UNDP Answer: Noted with thanks. The National Strategy to be developed under Output C1 will work on upstream solutions through the prevention of generation and reduction of use of plastics involving the following stakeholder groups in a comprehensive manner: i) Industry and Commerce, ii) Local governments, iii) NGOs, iv) Government Institutions, v) National Recyclers Network and vi) Academic sector.

Simultaneously, it will also provide for the necessary national measures for the comprehensive management of post-industrial and post-consumer non-recoverable plastic waste, and collection of accumulated plastic waste in natural environments. It will also implement concrete actions for the use of recovered materials and offer a sustainable environmental and economic alternative to the final disposal in a sanitary landfill or incineration.

Concerning vehicles, the proposal in paragraph 26 highlights a great gap in terms of regulations that establish guidelines for the handling and final disposal of vehicle parts, including aspects such as: difficulty in estimating a waste flow of vehicles (since there is no restriction of the time of the allowed useful life), lack of managers registered for disposal in the Ministry of Health, lack of information to estimate the cost associated with the final treatment, and lack of obligation for the owner of the vehicle to deliver it to an authorized manager after carrying out its deregistration. However, the component related to vehicles in paragraphs 74

and 75 did not adequately address all of these issues, without which there is the risk of not achieving the desired objectives. We encourage the proponent to address all of the gaps identified related to vehicle waste management.

UNDP Answer: Identified gaps for handling and disposal of vehicles will be addressed both through the Output A2 "Improvement of the legal and regulatory framework to support the environmentally sound management of the life cycle of chemicals." and Output D3. Pilot #3 on Management of vehicle plastics at the end of their life cycle.

Through Output A2 the project will support the strengthening of the national regulatory framework for chemicals management and the reduction of POPs emissions, including the review and upgrading of existing standards and regulations applicable to Chemicals management.

In particular, the following legal instrument will be supported as identified during PPG phase: - Regulation for the mandatory application of the standard **INTE B20:2019, minimum technical specifications in treatment facilities for the end-of-life vehicle management**.

Through Output D3, in addition to the development of a business model, the project will proceed to the identification, quantification and characterization of the plastics available in within the main two sources of vehicles parts: i) strengthening and painting shops and ii) second hand spare parts shops.

While an environmental and social safeguard screening was included, there is no significant assessment of the potential impact of climate change on the project. Given that the [World Bank's Climate Change Knowledge Portal](#) highlights Costa Rica's considerable vulnerability to climate change and natural disasters, we recommend that the proponent carry out a detailed climate risk screening for the project and develop mitigation measures for any identified risk.

UNDP Answer: A comprehensive and thorough risk analysis was carried out at the PPG stage, including Climate Risk screening.

Reference: Please refer to Section IV "Results and Partnership", sub-section "Risks", of the PRODOC.

Annex 5: SESP

Annex 6: UNDP Risk Register.

PIF	What STAP looks for	Response	Response at PPG phase
Part I: Project Information			
B. Indicative Project Description Summary			
Project Objective	Is the objective clearly defined, and consistently related to the problem diagnosis?	Yes	-
Project components	A brief description of the planned activities. Do these support the project's objectives?	Yes	-
Outcomes	<p>A description of the expected short- term and medium-term effects of an intervention.</p> <p>Do the planned outcomes encompass important global environmental benefits?</p> <p>Are the global environmental benefits likely to be generated?</p>	Yes ? UPOP and PCB reduction GEBs are annotated with quantitative targets while others are mentioned as well in more general terms.	-
Outputs	<p>A description of the products and services which are expected to result from the project.</p> <p>Is the sum of the outputs likely to contribute to the outcomes?</p>	Yes, there are a series of outputs listed along with each outcome but these could be made more specific.	<p>During PPG phase, Outputs were described in further detail.</p> <p>Reference: Please refer to Section IV ? Results and Partnerships? of the PRODOC.</p>
Part II: Project justification	<p>A simple narrative explaining the</p> <p>project's logic, i.e. a theory of change.</p>		

<p>1. Project description. Briefly describe:</p> <p>1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)</p>	<p>Is the problem statement well-defined? Are the barriers and threats well described, and substantiated by data and references?</p> <p>For multiple focal area projects: does the problem statement and analysis identify the drivers of environmental degradation which need to be addressed through multiple focal areas;</p> <p>and is the objective well-defined, and can it only be supported by integrating two, or more focal areas objectives or programs?</p>	<p>The multiple focal areas and the linkages and synergies are also presented.</p>	<p>-</p>
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PIF	What STAP looks for	Response	Response at PPG phase
2) the baseline scenario or any associated baseline projects	<p>Is the baseline identified clearly?</p> <p>Does it provide a feasible basis for quantifying the project's benefits? Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project?</p> <p>For multiple focal area projects: are the multiple baseline analyses presented (supported by data and references), and the multiple benefits specified, including the proposed indicators; are the lessons learned from similar or related past GEF and non-GEF interventions described; and how did these lessons inform the design of this project?</p>	Yes, and the outcomes are benchmarked with the baseline very well.	-

3) the proposed alternative scenario with a brief description of expected outcomes and components of the project	<p>What is the theory of change?</p> <p>What is the sequence of events (required or expected) that will lead to the desired outcomes?</p> <p>? What is the set of linked activities, outputs, and outcomes to address the project's objectives?</p> <p>? Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions?</p> <p>? Is there a recognition of what adaptations may be required during project implementation to respond to changing conditions in pursuit of the targeted outcomes?</p>	<p>Theory of change document is provided. However, it does not adequately reflect the pathways and assumptions. It is mainly a diagram reflecting the project component. We recommend that it should be improved in congruence with suggested STAP guidelines.</p>	<p>During the PPG phase, a thorough analysis and development of the Theory of Change was conducted. For this purpose, a series of technical workshops were carried out virtually in order to validate the ToC with key stakeholders of this FSP.</p> <p>Reference: Please refer to the Development Challenge in Section II and Theory of Change in Section III of the PRODOC.</p>
5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing	<p>GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?</p> <p>LDCF/SCCF: will the proposed incremental activities lead to adaptation which reduces vulnerability, builds adaptive capacity, and increases resilience to climate change?</p>	Noted	-

6) global environmental benefits (GEF trust fund) and/or adaptation benefits (LDCF/SCCF)	<p>Are the benefits truly global environmental benefits, and are they measurable?</p> <p>Is the scale of projected benefits both plausible and compelling in relation to the proposed investment?</p> <p>Are the global environmental benefits explicitly defined?</p> <p>Are indicators, or methodologies, provided to demonstrate how the global environmental benefits will be measured and monitored during project implementation?</p> <p>What activities will be implemented to increase the project's resilience to climate change?</p>	Yes, but need to consider other benefits possible from the project, including climate change mitigation and marine pollution prevention.	During PPG phase, climate change mitigation and marine pollution prevention (as plastic waste avoided) were considered as co benefits.
7) innovative, sustainability and potential for scaling-up	<p>Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning? Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors?</p> <p>Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?</p>	There are some localized innovations, but a lot will depend on how the BAT and BEP are operationalized.	<p>During the PPG phase a more detail description on innovativeness, sustainability and potential for scaling up of the project.</p> <p>Reference: Please refer to Section IV ?Results and Partnerships? - sub section ?Innovativeness, Sustainability and Potential for Scaling Up? of the PRODOC.</p>

<p>1b. Project Map and Coordinates. Please provide</p> <p>geo-referenced information and map where the project interventions will take place.</p>		Provided	-
<p>2. Stakeholders.</p> <p>Select the stakeholders that have participated in consultations during the project identification phase: Indigenous people and local communities; Civil society organizations; Private sector entities. If none of the above, please explain why. In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.</p>	<p>Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers? What are the stakeholders? roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge?</p>	<p>Yes ? stakeholder table is included in project design and stakeholder satisfaction also in outcome goals.</p>	-
<p>3. Gender Equality and Women's Empowerment.</p> <p>Please briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis). Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes/no/ tbd. If possible, indicate in which results area(s) the project is expected to contribute to gender equality: access to and control over resources; participation and decision-making; and/or economic benefits or services. Will the project's results framework or logical framework include gender-sensitive indicators? yes/no /tbd</p>	<p>Have gender differentiated risks and opportunities been identified, and were preliminary response measures described that would address these differences? Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed?</p>	<p>Gender equity plan is adequately provided</p>	-

<p>5. Risks. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design</p>	<p>specifically for things outside the project's control?</p> <p>Are there social and environmental risks which could affect the project?</p> <p>For climate risk, and climate resilience measures:</p> <p>? How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?</p> <p>? Has the sensitivity to climate change, and its impacts, been assessed?</p> <p>? Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with?</p> <p>What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures?</p>	<p>Risk management table is also included. Climate risk screening is provided as part of SESP screening document. Detailed climate risk screening need to be carried out.</p>	<p>A comprehensive and thorough risk analysis was carried out at the PPG stage, including Climate Risk screening.</p> <p>Reference: Please refer to Section IV "Results and Partnership", sub-section "Risks", of the PRODOC. Annex 5: SESP Annex 6: UNDP Risk Register.</p>
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<p>6. Coordination. Outline the coordination with other relevant GEF-financed and other related initiatives</p>	<p>Are the project proponents tapping into relevant knowledge and learning generated by other projects, including GEF projects?</p> <p>Is there adequate recognition of previous projects and the learning derived from them?</p> <p>Have specific lessons learned from previous projects been cited?</p> <p>How have these lessons informed the project's formulation?</p> <p>Is there an adequate mechanism to feed the lessons learned from earlier projects into this project, and to share lessons learned from it into future projects?</p>	<p>Yes ? there is listing of coordination prospects provided with public and private sector and donors.</p>	<p>-</p>
<p>8. Knowledge management. Outline the Knowledge Management Approach? for the project, and how it will contribute to the project's overall impact, including plans to learn from relevant projects, initiatives and evaluations.</p>	<p>What overall approach will be taken, and what knowledge management indicators and metrics will be used?</p> <p>What plans are proposed for sharing, disseminating and scaling-up results, lessons and experience?</p>	<p>Yes adequately provided</p>	<p>-</p>

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<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Concur	<p>STAP acknowledges that on scientific or technical grounds the concept has merit. The proponent is invited to approach STAP for advice at any time during the development of the project brief prior to submission for CEO endorsement.</p> <p>* In cases where the STAP acknowledges the project has merit on scientific and technical grounds, the STAP will recognize this in the screen by stating that <i>?STAP is satisfied with the scientific and technical quality of the proposal and encourages the proponent to develop it with same rigor. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design.?</i></p>

2. Minor issues to be considered during project design	<p>STAP has identified specific scientific /technical suggestions or opportunities that should be discussed with the project proponent as early as possible during development of the project brief. The proponent may wish to:</p> <p>(i) Open a dialogue with STAP regarding the technical and/or scientific issues raised;</p> <p>(ii) Set a review point at an early stage during project development, and possibly agreeing to terms of reference for an independent expert to be appointed to conduct this review. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.</p>
3. Major issues to be considered during project design	<p>STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical methodological issues, barriers, or omissions in the project concept. If STAP provides this advisory response, a full explanation would also be provided. The proponent is strongly encouraged to:</p> <p>(i) Open a dialogue with STAP regarding the technical and/or scientific issues raised; (ii) Set a review point at an early stage during project development including an independent expert as required. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.</p>

COMMENTS SUBMITTED BY COUNCIL MEMBERS ON THE GEF TRUST FUND JUNE 2022
WORK PROGRAM

? Canada Comments

? Canada supports this project as it is in line with the Stockholm Convention. PCBs are a priority as the deadlines to remove from use (2025) and destroy/irreversibly transform them (2028) are fast approaching.

UNDP Response: Noted

? Germany Comments

Germany approves the following PIF in the work program but asks that the following comments are taken into account: Suggestions for improvement to be made during the drafting of the final project proposal:

? The PIF is well reasoned and designed. By addressing the management of POPs and strengthening institutional capacities, it directly contributes to the goals of the Stockholm convention and the GEF chemicals and waste focal area strategy.

UNDP Response: Noted

? Please assess whether synergies with other development projects in Costa Rica can be used. A relevant project might be ?Transformative Low Carbon and Climate Resilient Pathways of Costa Rica? (implemented by GIZ) which also addresses sustainability issues in the sugarcane production (among other value chains).

UNDP Response: With MINAE as implementing partner and UNDP as one of the executing partners, a close collaboration between both initiatives during the project's implementation.

? Switzerland Comments

? Overall the PIF is considered of high quality. However, the project would benefit from the inclusion of a gap analysis of the existing policies against the Overarching Policy Strategy like proposed by SAICM to advance and strengthen the sound management of chemicals and waste not only in the area of POPs, but for all hazardous chemicals and waste fractions to achieve a coherent and comprehensive management system and to overcome deficiencies in a closer cooperation and coordination among all relevant stakeholders dealing with hazardous chemicals and waste in the country.

UNDP Response: Thank you. Output A2. Improvement of the legal and regulatory framework to support the environmentally sound management of the life cycle of chemicals includes the development of a roadmap for the strengthening of the country's compliance in accordance with the Stockholm Convention and the international chemicals and waste agenda such as SAICM.

? Comment for all UNDP projects

? In light of the recent audit report by the UNDP Office of Audit and Investigations (OAI) of UNDP GEF Management, all projects included in the Work Program implemented by UNDP shall be circulated by email for Council review at least four weeks prior to CEO endorsement/approval. This shall take place as actions of the Management Action Plan 16 that address the OAI recommendations are being implemented, and as the independent, risk-based third-party review of compliance by UNDP with the GEF Policy on Minimum Fiduciary Standards is being completed. Project reviews will take into consideration the relevant findings of the external audit and the UNDP management responses and note them in the endorsement review sheet that will be made available to the Council during the 4-week review period.

UNDP Response: Noted

ANNEX C: Status of Utilization of Project Preparation Grant (PPG).
(Provide detailed funding amount of the PPG activities financing status in the table below:

Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Budget	<i>Amount Spent To date</i>	<i>Amount Committed</i>	<i>Notes</i>
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62000	GEF TRUSTEE	71200	International Consultants	62,400.00	50,071.84	6,083.43	International Experts to provide overall guidance on project preparation to National Consultants engaged by the project and preparation of the UNDP-GEF Project Document, the GEF CEO Endorsement, the SESP, the GEF Tracking Tools).
		71300	Local Consultants	30,000.00	24,073.00	7,427.00	National Experts to provide overall guidance on project preparation to National Consultant engaged by the project.
		71400	Contractual Services - Individual	24,000.00	19,258.40	4,741.60	National Stakeholder Specialist to Support for the preparation of the PPG phase, including the organization and use of tools (zoom / teams) for virtual meetings and organization of workshops.

		71600	Travel	13,800.00	18,073.58	-	Travel costs related to travel for fieldwork and exchange of experiences
		75700	Training, Workshops and Confer	7,800.00	8,258.98	-	Includes the organization of the two Workshops (PPG Inception Workshop and Project Document Validation Workshop), training of national experts on establishing the project's baseline as well as four working meetings with national stakeholders.
		74100	Professional Services	5,000.00	4,012.17		For the development of the Partner Capacity Assessment and Due Diligence for Co-Financing letters from the Private Sector
		74200	Translation costs	7,000.00	5,617.03	2,382.97	Includes the translation relevant documents (PRODOC, SES?) from English to Spanish to facilitate consultation and validation process

		PROJECT TOTAL	150,000.00	129,365.00	20,635.00
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ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

Costa Rica: 9.7489° N, 83.7534° W

A. Geographic Regions of Costa Rica



Costa Rica is located on the Central American isthmus, between the geographic coordinates 8° and 11° north latitude, 82° and 85° west latitude.

B. Preliminary regions for Output B2 and B3 implementation.



North Zone and northwest zone of the country, provinces of Alajuela and Guanacaste.

C. Preliminary regions Output D1 plastics in agricultural activities.



D. Preliminary regions Output D2 and D3



GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate. Web mapping applications such as [OpenStreetMap](#) or [GeoNames](#) use this format. Consider using a conversion tool as needed, such as: <https://coordinates-converter.com> Please see the Geocoding User Guide by clicking [here](#).

Location Name	Latitude	Longitude	Geo Name ID	Location & Activity Description
Costa Rica	10.273563299452297	-84.0739102	188	<input type="checkbox"/>
AZUCARERA EL VIEJO CORRALILLO	10.41864	-85.47788	188	<input type="checkbox"/>
ARROCERA PEL?N	10.491536	-85.409539	188	<input type="checkbox"/>
NICOVERDE	10.47734	-84.28192	188	<input type="checkbox"/>
UTN	10.47734	-84.28192	188	<input type="checkbox"/>
La Ceiba Province	9.90832	-84.59593	188	<input type="checkbox"/>
Cartago Province	9.88655	-83.80847	188	<input type="checkbox"/>
Guanacaste Province	10.02187	-85.25154	188	<input type="checkbox"/>
Guanacaste Province	9.97754	-85.18892	188	<input type="checkbox"/>
Puntarenas Province	9.43132	-84.16741	188	<input type="checkbox"/>
Puntarenas Province	8.96802	-83.46155	188	<input type="checkbox"/>

Location Name	Latitude	Longitude	Geo Name ID	Location & Activity Description
San Jos?	9.928100	-84.090700	188	<input type="checkbox"/>

ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category	Detailed Description	Component (USDeq.)							Total (USD eq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency) [1]
		Component 1	Component 2	Component 3	Component 4	Sub-total	M&E	PM C		
Equipment	Required machinery and equipment for pilot projects in Outputs B2 and B3. (Machinery to be defined when alternatives for pilots are selected due to the feasibility analysis. Machinery could involve equipment for pineapple fiber production, biogas production, cellulose production, etc.)		490,000			490,000			490,000	Ministry of Energy and Environment (MINE)

Equipm ent	Required machinery and equipment for pilot projects in Outputs D1, D2 and D3. (Machinery to be defined when alternatives for pilots are selected due to the feasibility analysis. Machinery could involve equipment for pre-processing plastics from different waste streams (vehicle, agricultural or non-recoverable) and equipment for plastic waste transformation into semi-finished product.			625,000		625,000			625,000	Ministr y of Energy and Environ ment (MINA E)
Equipm ent	Standard IT equipment					-		9,000	9,000	Ministr y of Energy and Environ ment (MINA E)
Equipm ent	Standard office equipment and furniture (desks, chairs, etc)					-		6,000	6,000	Ministr y of Energy and Environ ment (MINA E)

Sub-contract to executing partner	Direct project services from UNDP for a limited set of activities, including personnel hiring, processing of payments and travel, procurement and hiring of consultants.					-		58,000	58,000	United Nations Development Programme (UNDP)
Contractual services - Individual	One Plastics Expert for the technical coordination and assistance of pilot projects D1,D2 and D3 (at USD 30,000/y) + 12.5 % of Project Coordinator's costs: the Project Coordinator will undertake day-to-day project implementation, administration, procurement and management activities at USD\$40,000 per year (USD\$5,000 per year will be charged to this component). See annex 7 for additional details			175,000		175,000			175,000	Ministry of Energy and Environment (MINE)

Contractual services - Individual	75% of Project Coordinator's costs: the Project Coordinator will undertake day-to-day project implementation, administration, procurement and management activities at USD\$40,000 per year (USD\$20,000 per year will be charged to this component). See annex 7 for additional details	150,000				150,000			150,000	Ministry of Energy and Environment (MINE)
Contractual services - Individual	One local individual (Project Administrative Assistant). See annex 7 for additional details					-		90,000	90,000	Ministry of Energy and Environment (MINE)

Contractual services - Individual	<p>One Project M&E Officer engaged for the coordination, implementation, oversight and follow-up of the Gender Action Plan, Social and Environmental Risks Management and the Stakeholder Engagement Plan follow-up as well as Mandatory reports production at USD\$18,000/year. Activities include M&E of GEF core indicators and project results framework, GEF Project Implementation Report (PIR), and Monitoring of Environmental Social and Management Framework and Plan. See Annex 7 for additional details.</p>					-	90,000	90,000	Ministry of Energy and Environment (MINE)
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Contractual services - Individual	One UPOPs/Bio mass Expert for the technical coordination and implementation of pilot projects implementation for UPOPs reduction (at USD 30,000/y) + 12.5 % of Project Coordinator's costs: the Project Coordinator will undertake day-to-day project implementation, administration, procurement and management activities at USD\$40,000 per year (USD\$5,000 per year will be charged to this component). See annex 7 for additional details		175,000			175,000		175,000	Ministry of Energy and Environment (MINE)
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Contractual services - Company	Consulting firms to support the feasibility analysis and assessment of each of the alternatives defined within Outputs B2 and B2; definition of plant design and equipment to be installed; provision of technical support and technology transfer to farmers of prioritized crops (Total USD 175,000) + UPOPs chemical analysis for each pilot: pineapple, sugar cane and rice (Total USD 75,000) + Contractual Services for the high level targeted assessment (Output B1), targeted assessment and ESMP (Output B2 and B3). (USD25,000)		275,000			275,000		275,000	Ministry of Energy and Environment (MINE)
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Contractual services - Company	Contractual services for the KIE design and implementation				19,000	19,000			19,000	Ministry of Energy and Environment (MINE)
Contractual services - Company	Contractual services to support the PCB National Elimination Plan (Output A5) + Contractual Services for the development of the Cost Benefit Scheme (Output A4).+ Contractual services to support capacity building of 4 labs + Contractual Services for the targeted assessment and ESMP for Output A5. (USD10,000)	500,000				500,000			500,000	Ministry of Energy and Environment (MINE)

Contractual services - Company	Services to support the pilot operations within Outputs D1,D2 and D3 (Total USD 294,524) + PBDE chemical analysis for Output D3 (Total USD 20,000) + Contractual Services for Plastic Management Platform (USD 50,000) + Contractual Services for the high-level targeted assessment (Output C1), targeted assessment and ESMP (Output D1, D2 and D3). (USD 25,000)			389,524		389,524			389,524	Ministry of Energy and Environment (MINE)
International Consultants	One International Consultant for the MTR \$20,000 and One International Consultant for the TE \$20,000. See M&E budget table on PRODOC section VI.					-	40,000		40,000	Ministry of Energy and Environment (MINE)

Internati onal Consult ants	One International Consultant to support the national analytical capacity building. See annex 7 for additional details	60,000				60,000			60,000	Ministr y of Energy and Environ ment (MINA E)
Internati onal Consult ants	One International specialist to support the development of the National Strategy for reducing UPOPs from open burning. See Annex 7 for additional details.		10,000			10,000			10,000	Ministr y of Energy and Environ ment (MINA E)
Local Consult ants	One Local consultant for MTR \$5,000 and one Local Consultant for TE \$5,000. See M&E budget table on PRODOC section VI.					-	10,000		10,000	Ministr y of Energy and Environ ment (MINA E)
Local Consult ants	One local consultant to support the development and implementat ion of the National Communicat ion Strategy				16,000	16,000			16,000	Ministr y of Energy and Environ ment (MINA E)

Local Consultants	One local consultant to support the development and implementation of the National Strategy under Output C1. See Annex 7 for additional details.			100,000		100,000			100,000	Ministry of Energy and Environment (MINE)
Local Consultants	One local consultant to support the development of the National Strategy in consultation with national stakeholders.		40,000			40,000			40,000	Ministry of Energy and Environment (MINE)

Local Consultants	One local legal/institutional Specialist to support the legal roadmap design and the drafting of required regulations/policies (at USD 18,000/y) + 1 local consultant to support import control strengthening (at USD 18,000/y) + 1 local consultant to support the PCB inventory updating (at USD 18,000/y). See annex 7 for additional details	270,000				270,000			270,000	Ministry of Energy and Environment (MINE)
Training, Workshops, Meetings	Inception workshop (see M&E budget table for additional details)					-	10,000		10,000	Ministry of Energy and Environment (MINE)
Training, Workshops, Meetings	Training workshops, seminars and meetings to strengthen project management capabilities					-		12,176	12,176	Ministry of Energy and Environment (MINE)

Training , Worksh ops, Meeting s	Trainings under Component 1 for institutional strengthenin g in POPs import control, national analytical capacity strengthenin g, PCB identificatio n and management , legal and policies disseminatio n.	75,000				75,000			75,000	Ministr y of Energy and Environ ment (MINE)
Training , Worksh ops, Meeting s	Workshops to support Strategy development and disseminatio n under Output B1 + Trainings to support technology transfer to farmers and key stakeholders under Outputs B2 and B3.		25,000			25,000			25,000	Ministr y of Energy and Environ ment (MINE)

Training , Worksh ops, Meeting s	Workshops to support Strategy development and disseminatio n under Output C1 and implementat ion of Plastic Platform Output C2 + Trainings to support capacity building to key stakeholders under Outputs D1, D2 and D3.			50,000		50,000			50,000	Ministr y of Energy and Environ ment (MINE)
Travel	Supervision and learning missions. See M&E budget table on PRODOC section VI					-	10,000		10,000	Ministr y of Energy and Environ ment (MINE)
Travel	Travel to support Knowledge sharing, communicati on and local capacity building support in prioritized sectors (D1,D2 and D3).			45,000		45,000			45,000	Ministr y of Energy and Environ ment (MINE)

Travel	Travel to support the implementation of Outputs A.1, A.3 and A5 for the proper involvement and capacity strengthened of different stakeholders .	50,000				50,000			50,000	Ministry of Energy and Environment (MINE)
Travel	Travel to support the implementation of the activities for Component 2, mainly activities for pilot projects under Outputs B2 and B3		25,000			25,000			25,000	Ministry of Energy and Environment (MINE)
Office Supplies	Basic office supplies for duration of project period					-		5,000	5,000	Ministry of Energy and Environment (MINE)
Other Operating Costs	Audio Visual and Print Production Cost to support the development of policies, policy instruments, or regulatory frameworks influenced to POPs/UPOPs LCM.	45,000				45,000			45,000	Ministry of Energy and Environment (MINE)

Other Operating Costs	Insurance for Project's equipment					-		300	300	Ministry of Energy and Environment (MINE)
Other Operating Costs	Mandatory Audit Services (USD\$2,000 per year for 5 years)					-		10,000	10,000	Ministry of Energy and Environment (MINE)
Other Operating Costs	Printing and Production Cost to support trainings and strategy dissemination		10,000	25,000		35,000			35,000	Ministry of Energy and Environment (MINE)
Other Operating Costs	Translation of MTR and TE					-	5,000		5,000	Ministry of Energy and Environment (MINE)
Grand Total		1,150,000	1,050,000	1,409,524	35,000	3,644,524	165,000	190,476	4,000,000	

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant

instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies' capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).