



GEF-6 REQUEST FOR PROJECT ENDORSEMENT/APPROVAL

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: National Platform for Sustainable Cities and Climate Change in Peru			
Country(ies):	Peru	GEF Project ID: ¹	9077
GEF Agency(ies):	IADB (select) (select)	GEF Agency Project ID:	PE-P1355
Other Executing Partner(s):	Peru's Ministry of Environment (MINAM) Fondo de las Américas – FONDAM National Water Authority (ANA) Ate Municipality San Borja Municipality Comisión de Regantes Canal Surco-Huatica	Submission Date:	04/12/2016
GEF Focal Area (s):	Multi-focal Areas	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input checked="" type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of Parent Program	Sustainable Cities Integrated Approach Pilot	Agency Fee (\$)	577,981

A. FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Focal Area Objectives/Programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
IAP-Sustainable Cities: Harnessing Local Action for Global Commons	To promote integrated planning and investments related to urban sustainability that result in environmental, social and economic benefits at the local and global scale.	GEFTF	3,211,009	300'000,000
CCM-2 Program 3	Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation	GEFTF	2,752,294	103,328
BD-1 Program 9	Sector policies and regulatory frameworks incorporate biodiversity considerations.	GEFTF	458,716	876,168
Total project costs			6,422,019	300,979,496

¹ Project ID number remains the same as the assigned PIF number.

² When completing Table A, refer to the excerpts on *GEF 6 Results Frameworks for GETF, LDCF and SCCF*.
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B. PROJECT DESCRIPTION SUMMARY

Project Objective: Establish and implement a Sustainable Cities and Climate Change National Platform (The Platform) in Peru, starting with Lima Metropolitan Area (LMA)						
Project Components/ Programs	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
1. Enhancing integrated sustainable urban planning and management	TA	<p>Lima Metropolitan Area considers emissions, urban growth and risk in the development of its urban policies and projects</p> <p>Lima Metropolitan Area identifies management and investment areas to increase climate change resiliency in the coastal area</p> <p>Lima Metropolitan Area defines urban interventions to plan its future growth</p>	<p>One GHG AFOLU inventory and mitigation measures are proposed</p> <p>One urban and vulnerability and risk assessment is developed</p> <p>One Urban Growth assessment is completed</p> <p>One climate change coastal adaptation plan is completed</p> <p>Urban interventions in four districts are developed</p>	GEFTF	2,485,000	0
2. Planning for urban water resource management	TA	<p>Lima Metropolitan Area has the capacity to increase its water supply capacity based on the characteristics of its current watersheds</p> <p>Lima metropolitan Area has a better capacity to manage and model its water supply</p>	<p>One assessment of water use and environmental management for LMA is developed.</p> <p>One computerized system to analyze and plan water use and environmental management for LMA territory is completed</p>	GEFTF	800,000	0

³ Financing type can be either investment or technical assistance.
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3. Monitoring and analyzing local and globally relevant biodiversity performance frameworks for improved ecosystems	TA	<p>Lima Metropolitan Area incorporates biodiversity considerations into its metropolitan urban policies</p> <p>Lima Metropolitan Area incorporates biodiversity aspects in the development of their city level urban planning policies</p> <p>Lima Metropolitan Area districts have the capacity to develop urban projects based on ecosystems</p> <p>Lima Metropolitan Area has the capacities to implement measures to conserve its water channels</p> <p>Lima Metropolitan Area has the technical capacity to develop and build a demonstrative pilot project in one water channel</p>	<p>One LMA Biodiversity Strategy completed</p> <p>One set of urban biodiversity indicators are in place for LMA</p> <p>Four Public Investment Projects (PIPs) on biodiversity are proposed.</p> <p>A Master Plan for the management of water channels .</p> <p>One investment strategy to recover one water canal is developed for a LMA district.</p>	GEFTF	795,000	876,168
4. Catalyzing investments for urban accessibility in Lima	INV	<p>Lima's new metro stations are built using feasibility studies with designs that incorporate non-motorized transport measures, handicap accessibility aspects and transport-oriented practices</p> <p>Lima Metro has a model for its stations which includes non-motorized mobility, accessibility and transport oriented development policies</p>	<p>At least three metro station areas have constructive designs that include multi-modal and urban development criteria</p> <p>Guidelines on Metro station design are developed for the LMA</p>	GEFTF	1,363,000	300,000,000
5. Enhancing partnerships for sustainable cities at local, national and global levels (through knowledge	TA	Urban and environmental information for Lima Metropolitan Area is accessible to the public	A Sustainable Cities and Climate Change Information Platform is implemented	GEFTF	557,919	103,328

management, capacity building and global coordination)		Local authorities and technicians use the environmental and urban information for urban management and planning processes Lima Metropolitan Area citizens have broader knowledge about the analyses and assessments that have been developed	At least 50 local authorities and policy makers from 25 municipal districts have taken capacity building courses on climate risks, urban development and environmental management in urban areas. Four information strategies to disseminate the results of each Project component			
Monitoring and evaluation	TA	Monitoring and evaluation mechanism in place	01 Mid-term evaluation 01 Final evaluation 01 Financial Audit	GEFTF	100,000	0
Subtotal					6,100,919	300,979,496
Project Management Cost (PMC) ⁴				GEF TF	321,100	0
Total project costs					6,422,019	300,979,496

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

C. CONFIRMED SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include evidence for co-financing for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Cofinancing	Amount (\$)
GEF Agency	IADB	Loans	300,000,000
Recipient Government	MINAM (MINAM)	In Kind	103,328
Recipient Government	Municipalidad de San Borja	In Kind	438,084
Others	Comisión de Regantes Surco	In Kind	438,084
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Co-financing			300,979,496

D. TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country Name/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee ^{a) (b)²}	Total (c)=a+b
IADB	GEFTF	Global Sustainable Cities Incentive (set aside)	Multi-focal Areas	IAP-Cities	3,211,009	288,991	3,500,000
IADB	GEFTF	Peru	Climate Change	IAP-Cities	2,752,294	247,706	3,000,000
IADB	(select)	Peru	Biodiversity	IAP-Cities	458,716	41,284	500,000
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total Grant Resources					6,422,019	577,981	7,000,000

a) Refer to the Fee Policy for GEF Partner Agencies

E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁵

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	120,426 hectares
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	hectares
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	Number of freshwater basins
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	Percent of fisheries, by volume
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	1,804,659 tons of CO _{2 eq}
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	metric tons
	Reduction of 1000 tons of Mercury	metric tons
	Phase-out of 303.44 tons of ODP (HCFC)	ODP tons
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	Number of Countries:
	Functional environmental information systems are established to support decision-making in at least 10 countries	Number of Countries:

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

(If non-grant instruments are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF Trust Fund) in Annex D.

⁵ Update the applicable indicators provided at PIF stage. Progress in programming against these targets for the projects per the Corporate Results Framework in the GEF-6 Programming Directions, will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF⁶

A.1. *Project Description.*

1. Global environmental and/or adaptation problems

Lima, the capital of Peru, is the country's biggest and most populated urban area. This city faces several important environment and climate change challenges. The Asia-Pacific Economic Cooperation (APEC) ranking for competitive sustainable and livable metropolises ranks Lima on the last position out of 28 cities in the Environmental Sustainability category⁷, which measures cities' vulnerability to environmental risks. This study ranks every city based on six indicators: air pollution, water quality and risk, natural disaster risk, recycled waste, non-hydro renewable electricity, and public space. Lima occupies the last place in five out of the six categories, including water quality and risk; public park space; and air pollution. As an example, water consumption in the city (164.59 liters per capita per day) is more than triple the amount recommended by the UN (50 liters per day per capita). Additionally, there are only 3.1 m² per capita of public green areas while the World Health Organization (WHO) recommendation is of 9m². The concentration of PM 2.5 is above the international standards in many parts of the city⁸.

Environmental challenges are one of the main concerns of Lima's inhabitants. A survey by Lima Cómo Vamos⁹, a national civil monitoring system, shows that 32% of Lima's dwellers consider pollution as one of the city's main problems. In addition, 35% of the population rates other environmental problems such as waste deposits in public areas as their main concern; 13% consider the lack of trees and green areas as an important problem; and 8% are concerned about the possible scarcity of drinking water in the future. In 2012, the carbon footprint of Lima Metropolitan Area (LMA) was 15.4 millions of tons of CO₂e, of which 36% are generated by the transportation sector; 22% by the industrial sector; 18% by the commercial and housing sectors; 14% by solid waste management through landfills; and 11% by the cement production¹⁰. Lima's emissions represent 11% the national footprint and the per capita footprint at the national level is 4.7t CO₂e while Lima's residents have a footprint of 1.8t CO₂e. Lima is much denser than the rest of the country so the per capita footprint is lower, but given the city's population, this amount is very significant. It is also important to note that while the country's carbon emissions are not among the highest in the region, when compared to the GDP, the country's emissions are quite high¹¹.

Urban Context

LMA urban expansion seems almost unstoppable considering the current national policies. The historical migration has determined the city's shape. Furthermore, the lack of metropolitan planning and institutional capacity at the national and local levels to house and provide public services for the incoming population have increased urban inequality¹². In the last five years, the city's population has been growing at a rate of 1.6% annually. The absence of policies regarding urban development and land use regulation has resulted in a very low-density city. LMA's density (3,329 hab/km²) is one of the lowest among similar Latin American Cities, as an example, Bogota has 6,175 hab/km², and Rio de Janeiro 9,543 hab/km². This urban expansion and lack of integrated long-term urban planning for LMA also bring additional challenges in other

⁶ For questions A.1 –A.7 in Part II, if there are no changes since PIF, no need to respond, please enter "NA" after the respective question.

⁷ Building Better Cities. APEC and PWC. <http://www.pwc.com/us/en/apec-ceo-summit/2015/apec-building-better-cities.pdf>.

⁸ Lima Cómo Vamos Report, 2014.

⁹ Accordingly to Lima Cómo Vamos surveys 2010 – 2015.

¹⁰ Metropolitan Lima Action Plan to reduce carbon and water footprint.

¹¹ This means that more emissions are made in order to produce 1 dollar of GDP in Peru than in countries like Brazil or Colombia. The indicator measures the carbon efficiency in the production of the country's GDP. See "Carbon Offset to Alleviate Poverty" In: <http://cotap.org/per-capita-carbon-co2-emissions-by-country/>; and The World Bank Data. CO₂ emissions (kg per 2011 PPP \$ of GDP). In: http://data.worldbank.org/indicator/EN.ATM.CO2E.PP.GD.KD?end=2011&name_desc=true&start=2011

¹² The GINI index shows a 0.40 for the income inequality in Lima and Callao in 2014. In addition, the UN-Habitat Inequality survey in ten cities in Latin America reveals how unequal are Latin America cities, including Lima. More in:

<http://redciudades.net/blog/desigualdad-gana-terreno-en-mayoria-de-paises-latinoamericanos/>.

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sectors. Approximately 10% of trips take between an hour and an hour and a half¹³, to exacerbate this situation, local motorization rates grow between 8% and 9 % annually¹⁴. This has a significant impact on emissions –due to the long distance trips– and on air quality and health. Another important issue is the development of informal settlements in high-risk areas

Due to its geographic situation, LMA also has high vulnerability to extreme weather related events. According to Peru's National Geological and Mineral Institute, "El Niño" phenomenon and the consequences of climate change¹⁵ can potentially have an impact on at least 30% of LMA. This area has 107 areas vulnerable to climate change risk, 86 of which pose a very high risk to natural phenomena due to their location in unstable slopes and hillsides¹⁶. Furthermore, 60% of all houses in LMA are seismically vulnerable. An estimated 200,000 buildings could potentially collapse in the case of a strong earthquake, and more than 89,000 inhabitants are in high risk of displacement in the case of a tsunami¹⁷. In contrast, investment towards mitigation or adaptation to climate change is low. In contrast, the budget for emergency post-crisis actions is high. In a 2015 public opinion survey, 76.9% of Lima's inhabitants said they have felt an important change in Lima's climate in the last five years. In this same period, seven out of 10 reported having more health problems; 6% say that rains, mudslides, and/or the rise in riverbeds have damaged their homes¹⁸. The Metropolitan Lima Adaptation to Climate Change Strategy shows that the city temperature is rising in between 0.17°C and 0.33°C every ten years, especially in the Eastern part of the city¹⁹.

Water Resources and Solid Waste

Institutional Framework – Water Resources

Peru's National Law for the Administration and Provision of Sanitation Services,²⁰ establishes that the national Government is responsible of ensuring that the potable water and sanitation services are provided to the population with the adequate levels of quality and sustainability. This overall responsibility the National Level falls under the Ministry of Housing, Construction and Sanitation. To achieve this objective, the Ministry is supported by the National Superintendence of Sanitation Services (SUNASS) which is the National regulator. Under the Ministry, the Technical Organism for the Management of Sanitation Services (OTASS) oversees the promotion and execution of the Ministry's sanitation policies.

The regional governments are responsible of formulating, approving and evaluating regional potable water and sanitation plans and policies, in accordance with local government development plans, and with national policies and sector plans. They are also in charge of providing technical and financial support to local governments in the provision of potable water and sanitation services, and of executing the sanitation programs when the local governments request their support.

The local governments are responsible of allocating resources for the financing of investments in potable water and sanitation infrastructure, through their inclusion in municipal development plans and the local budget. They also manage all the assets related to the provision of the service which are publicly owned.

The provincial municipalities are responsible for the efficient and sustainable delivery of potable water and sanitation services via operating organisms.

¹³ Transport Master Plan for Lima and Callao. JICA, 2013.

¹⁴ INEI, 2016.

¹⁵ Peru21, 2015. In: <http://peru21.pe/actualidad/fenomeno-nino-ingemmet-advierte-que-nueve-distritos-lima-estan-riesgo-2222494>.

¹⁶ Peru21, 2015. In: <http://peru21.pe/actualidad/fenomeno-nino-lima-y-callao-hay-86-zonas-vulnerables-2222899>.

¹⁷ El Comercio, 2014. In: <http://elcomercio.pe/lima/ciudad/60-viviendas-lima-son-vulnerables-sismos-noticia-1758302>.

¹⁸ Lima Cómo Vamos survey, 2015.

¹⁹ Lima Province Adaptation Strategy to Climate Change.

²⁰ <http://busquedas.elperuano.com.pe/normaslegales/decreto-legislativo-que-aprueba-la-ley-marco-de-la-gestion-y-decreto-legislativo-n-1280-1468461-1/>

Peru's New National Law for Solid Waste²¹ establishes that the Ministry of the Environment (MINAM) is the national entity in charge of regulating the solid waste sector in the country. To perform these duties, the MINAM produced the National Plan for the Integrated Management of Solid Waste 2016-2024.²² Also at the national level, the Office for Environmental Evaluation and Inspection (OEFA) is in charge of the supervision, control and sanction of the owners of solid waste management infrastructure, be these provincial and/or district municipalities. The approval of solid waste projects is made by the Office for Environmental Certification for Sustainable Investments (SENACE).

The regional governments oversee the design and deployment of public or private investments in the domestic solid waste sector. These duties are performed in coordination with the municipalities. The municipalities are responsible for the management of domestic solid waste.

Water, Sanitation and Solid Waste in LMA

LMA encompasses the basins of three rivers: Rímac, Chillón and Lurín, these contain only 1.8% of the available water in the country but supply 60% of the population. After Cairo, Lima is the second biggest desert city in the world, thus, water scarcity is an important issue. Data from the *Superintendencia Nacional de Servicios de Saneamiento* (SUNASS), shows that the Mantaro River Basin contributes (via the Rímac river) with 60% of the total water supply in the LMA and the Rímac, Chillón and Lurín basins provide the remaining 40% (amongst these three rivers, the Rímac river provides the 80%). Water planning and management are key processes in order to guarantee the sustainable water supply for LMA. Water production from Rímac River increased to 687'476,754 liters in 2014. The amount of water losses is almost 30%, mostly due to an old pipeline system and illegal connections. Water consumption per person is 164.59 liters per day²³, this is more than 150% of United Nations' acceptable levels, which are 50 liters per day per person²⁴. Regarding the quality of the water, although the quality of drinking water in Lima is within the national standards²⁵, 14.3% of *limeños* consider that drinking water lacks purity and 10.8% consider the drainage system to be inefficient²⁶. Wastewater treatment is currently 92%²⁷, but there is no connection between the sanitation plants and the water management system²⁸. Another example of the inefficient use of water resources is the quality and maintenance to LMA's canal network, which provides water for most of the city's green areas. Garbage accumulation and the urbanization of these channels affect their potential to become additional water sources and their capacity to support LMA's urban biodiversity and provide ecosystem services.

Local Biodiversity

Lima's natural ecosystems increase local biodiversity and are a source of income for local farmers. They also are a source of oxygen and biomass for LMA, and they help in the control of the city's humidity. However, in recent years migration and urban expansion have compromised the integrity and sustainability of these ecosystems. Furthermore, lack of protection and maintenance potentially exacerbate this situation²⁹. The challenge this poses is significant as these overlooked urban ecosystems establish biological corridors that strengthen urban biodiversity and provide important ecosystemic services for AML. An important example is the Surco-Huatica channels, which supply water for 1090 ha of green areas over 17 districts in Lima. The situation is particularly pressing in the National Ecological Park Antonio

²¹ <http://www.minam.gob.pe/calidadambiental/nueva-ley-de-residuos-solidos/>

²² <http://sinia.minam.gob.pe/documentos/plan-nacional-gestion-integral-residuos-solidos-2016-2024>

²³ This figure considers only the legal connections consumption. SUNASS (Regulatory institution of the water distribution companies).

²⁴ The suggested water consumption accordingly to United Nations is 20-50 liters a day. In:

<http://www.unwater.org/statistics/statistics-detail/en/c/211765/>.

²⁵ INEI, 2015. In: https://www.inei.gob.pe/media/MenuRecursivo/boletines/boletin-estadisticas-ambientales_1.pdf

²⁶ Lima Cómo Vamos survey, 2015.

²⁷ SUNASS.

²⁸ Actually, there is only one project in place La Chira Project, which treats the water in order to dispose it into the sea.

²⁹ According to a recent poll, 39.4% of locals consider that these green/public spaces lack maintenance, and 10.2% consider that there is not enough care for natural areas.

Raimondi (PENAR), which is located in the Ancon district. In this region, urban expansion is unavoidable and water scarcity is critical and uncontrolled. PEPENAR is a 6,600 ha. Area of land, which is the largest public property in Lima. Taking into account the aforementioned situation, the National Government established a special project for this area (PEPENAR)³⁰. This project focuses on preserving LMA's natural green areas; increasing local biodiversity and ecosystemic services. It also aims to establish a sustainable urban growth plan with appropriate public services and accessible connections to the public transit system.

LMA Public Transport System

Legal Framework – Transport

At the national level, the Ministry of Transportation and Communications (MTC) oversees the establishment and enforcement of the national laws that regulate the sector. It guides and promotes the construction of efficient systems of roads, railways, air and maritime traffic, as well as the respective concession programs. It reviews the proper functioning of the communication, telecommunications and transportation routes, including cars, trucks, trains, ships, aircraft and telephone and internet communications. Additionally, the Regulating Entity for Urban Transport Infrastructure (OSITRAN) supervises, regulates and sanctions the activities and services involved in the operation of public transportation infrastructure. These include the provision of public rail transportation services of Lima Metro.

Besides these office, the Metropolitan Municipality of Lima (MML), the Provincial Municipality of Callao (MPC) and the Ministry of Economy and Finance (MEF) are also involved in the Metro project. Recently, aspects regarding urban mobility have included the Ministry of Housing, Construction and Sanitation (MVC).

Transport in LMA

One of the most evident challenges in the city is the provision of an efficient transportation system. This directly affects LMA inhabitant's quality of life and local air quality. Public transport represents 47% of all trips in LMA, while 24%³¹ by walking. Nonetheless, building infrastructure for private transport represents the vast majority of public spending. Recently, the city has started investing in a metro network. Currently, the public transportation system is privatized, individuals under "shell companies" are the owners of the route concessions. Through this scheme, the legal requirement for owning public bus route concessions is fulfilled, but the national labor or security laws are violated. This situation increases competition between buses, which in turn promotes higher driving speeds and diminishes the quality of service. Additionally, lack of traffic management and low road maintenance exacerbate traffic congestion³². Thus, transport related environmental problems are a significant issue: 74,3% of Lima's inhabitants consider air and noise pollution from the transport sector as the main environmental problem in the city³³. According to a 2016 report by the World Health Organization (WHO), Lima has the worst air quality in the American continent. The city's air pollution levels increased to 88 micrograms of PM10 particles for every cubic meter in 2016, up from 63 in 2014. In addition, the PM2.5 increased from 38 to 48 during the same period³⁴.

Within this context and despite the central government investments to expand and consolidate the "Metro de Lima" network, the city requires additional investments in green and efficient mobility systems. Nearly 50% of trips are done in low quality transportation and 6% in moto taxis³⁵. Today, Line 1 of Lima's Metro is operational, while Line 2's first phase (which will connect East and West Lima) is currently under construction. The additional 4 lines planned for the system are currently under preparation. Even though this is a great improvement, there is a need to invest in additional infrastructure to increase the impact of Lima's metro. The need to plan for the construction of better sidewalks, biking

³⁰ Special Project National Ecological Park Antonio Raimondi: <http://www.minam.gob.pe/pepenar/>.

³¹ JICA, 2013.

³² CAF, 2011.

³³ Lima Cómo Vamos survey, 2015

³⁴ World Health Organisation. In: http://www.who.int/phe/health_topics/outdoorair/databases/cities/en/ In: http://www.bbc.com/mundo/noticias/2016/05/160513_ciencia_ciudad_mas_contaminada_america_latina_gtg.

³⁵ Small three wheeled cars that provide service for short trips, also known as rickshaw in other parts of the world.

³⁶ JICA, 2013.

facilities, and public spaces is not currently been considered by national and local authorities. Additionally, there are currently no plans to implement an efficient transfer system (connecting the metro systems to buses, moto taxis, and taxis).

2. *Root causes*

The absence of strong public policies regarding open data has decreased the government's ability to implement policies based in empirical evidence. A lack of a centralized system that is accessible to all levels of government results in the production of analyses and studies that already exist. This affects not only public finances but also hampers coordination among different public entities. Additionally, there is very low awareness by both authorities and citizens about climate change issues and their repercussions. This has prevented the development of comprehensive environmental and urban studies that take into account LMA as a whole. Therefore, there is an urgent need to increase data generation on environmental topics, and to promote data sharing among agencies, institutions and the public.

As discussed previously, Lima is highly vulnerable to climate change. Even though three rivers supply AML with water, Rimac basin is the most important water source. However, preliminary studies have alerted that this basin will be insufficient to provide water for AML considering the a decrease in yearly precipitation rates and the accelerated urban growth³⁷. Furthermore, According to the National Water Authority (ANA), the Rímac Basin is highly polluted, and this has the potential to create floods that might affect surrounding illegal settlements (up to 1185 lots)³⁸. Additionally, and as mentioned before, the lack of awareness on climate change and the need of adaptation measures have delayed the implementation of public policies to mitigate potential harmful weather events. This enhances the need to recognize the potential role of the Lima Canal network as a water source for the city and as a critical ecosystem for LMA.

Even when Lima has one of the lowest motorization rates in South America, it has high congestion rates. In LMA, approximately 400 vehicles per hour go through a medium road intersection with traffic lights while in Santiago, in an intersection under the same conditions, there are between 800 and 1,000 vehicles per hour³⁹. In addition, in a ranking of APEC cities conducted by Price Waterhouse Cooper (PWC)⁴⁰, Lima scores 18 points out of 28 in the traffic congestion indicator, and 6 points out of 28 in public transport systems. These challenges are the consequence of a series of factors. A poor institutional organization focused on the use of private automobiles and a privatized public transportation system based in individual gains negatively affect congestion and pollution levels. Additionally, the lack of public policies that articulate the whole mobility system in the metropolitan area have hampered the creation of an integrated public transport system. There is a pressing need to establish a Metropolitan Transport Authority that integrates the competencies that are now the responsibility of a number of agencies and institutions distributed across the AML. Several studies⁴¹ have highlighted the need to allocate financial resources to additional infrastructure, which is needed to guarantee a transit oriented development.

A weak environmental and construction law framework, coped with a lack of enforcement of the existing regulations have exacerbated the need to preserve LMA natural ecosystems. Additionally, there are no national or local policies to create and/or preserve green areas, or that regulate the management of urban ecosystem services. Hence, in recent years there has been an increase in the number of green areas affected or eliminated by the development of housing and commercial buildings. Local majors have authorized the construction of these developments without a public consultation and with no regard of the need to protect urban ecosystems⁴². Uncontrolled urban sprawl growth and a self-regulated construction sector only aggravate this situation. However, public awareness of the importance to preserve urban biodiversity and to protect natural areas and other strategic city spaces has recently become more evident in LMA. This is due to increase in the number of non-government organizations, academic institutions and a number of public institutions that have put

³⁷ National Water Authority Master Plan.

³⁸ National Water Authority Master Plan.

³⁹ In: http://portal.andina.com.pe/EDPFiles/EDPWEBPAGE_Bolet%C3%ADn%20Cruzada%20Vial%20-%20Abril%202014.pdf

⁴⁰ In: <https://www.pwc.com/us/en/apec-ceo-summit/2015/apec-building-better-cities.pdf>.

⁴¹ Policy Paper on Urban Sustainable Mobility (IEP, December, 2015) In: http://www.dialogosperu.pe/files/downloads/nota_movilidad.pdf.

⁴² Recently, in two districts authorities decisions have prioritise motorized vehicles over trees and Green areas. Los Olivos: <http://elcomercio.pe/lima/ciudad/olivos-retiran-palmeras-importante-avenida-fotos-noticia-1898786> and Magdalena: <http://elcomercio.pe/lima/ciudad/magdalena-protestan-tala-arboles-tercer-carril-noticia-1852533>.

biodiversity preservation as a top issue in their agenda. This positive change will be key in reverting the current situation and improving the number and quality of green spaces in LMA.

3. *Barriers that need to be addressed*

a) *Lack of organized, official, public, and up-to-date environmental and climate change data*

National and local authorities need reliable environmental and urban indicators as well as a consistent methodology and tracking tools to measure the impact of their policies, in particular those related to urban development and biodiversity. In 2014, the Metropolitan Municipality of Lima launched an environmental observatory with a set of 40 indicators related to air, water, waste, and green areas; however, lack of updating has rendered the system obsolete. Information that is currently available is collected in an un-coordinated manner and only within the geopolitical limits, which does not reflect the reality of LMAs urban footprint and its expansion area and future growth.

b) *Lack of integrated urban and sustainable planning for the whole Lima Metropolitan Area*

The study and planning of LMA's urban growth has lacked sustainability considerations (especially water sustainability), and does not have an integral and holistic approach. Furthermore, there is very scarce information about how climate change will affect LMA given its geographical location in a desert zone. In Peru, there are two types of planning processes: a) traditional urban planning and b) land use planning. The Ministry of Environment (MINAM) is the national authority that develops and encourages land use planning processes with the sub-national authorities. Based on the land use planning process, the MINAM is helping local authorities plan and manage territories that preserve natural resources, and efficiently provide public services to urban areas, especially those located in the outskirts LMA.

Local governments in Lima have an independent approach to planning, which hampers integration of these plans to the metropolitan and national ones. This compartmentalized structure affects the development of integrated long-term planning. It also affects the development of other useful mechanisms such as the establishment of Transport Oriented Development or of using capital gains on property tax increases. As a symptom of the lack of importance given to urban planning, since 2010, LMA doesn't have an updated metropolitan urban plan.

c) *Excessive fragmentation and competence distribution*

The complex governance of the LMA (40 districts in Lima and Callao) is even more challenging considering the enormous extension and population of Lima and Callao⁴³. The specific weight of these two municipalities affects the policies and actions of the smaller districts. Furthermore, local competences and functions are not always well defined and coordination becomes very difficult. At the national level, different agencies also lack coordination and often they develop conflicting guidelines and policies that local governments need to follow, creating confusion and misinterpretations. This situation is exacerbated due to the lack of financial resources at every government level. Even when there have been efforts to improve the interaction between local governments, such as the *mancomunidades* mechanism, these have not been able to overcome the coordination challenges.

d) *Insufficient knowledge regarding biodiversity*

LMA's authorities and citizens are not well aware of the importance that the environment and specifically urban biodiversity and urban ecosystems have in the quality of life. Green areas and other ecosystems are not only important for recreation, but they also provide a series of ecosystemic services that need studying and measuring. Only by generating data about urban biodiversity and ecosystem services will these areas be valued. Urban ecosystems compete with other more profitable land uses, and often the financial reasoning prevails. Thus, this operation will finance strategic assessments and analyses that will provide LMA with vital data to develop an urban biodiversity strategy which will include the identification of strategic metropolitan projects.

e) *Insufficient technical and economic resources*

⁴³ Lima has 43 local authorities (districts) and 1 metropolitan authority plus a regional government over the same jurisdiction.

Callao adds other 7 local authorities (districts) and a regional government to the mix.

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The insufficient economic resources affect strategic long-term urban and environmental investments. This situation requires a creative and resourceful strategy to attract private investment and to make public funds available. This could be done through efficient by a series of mechanisms such as Public-Private Partnerships⁴⁴, the “Infrastructure for taxes” schemes, designing a better model of revenue distribution (based in inequality reduction objectives), and establishing a results-oriented national transference system, among others. In any scenario, it will be necessary to build local and national government capacities, and to simplify the urban and environmental planning and management processes.

4. Baseline scenario or any associated baseline projects

The Lima Metropolitan authority recently approved the Metropolitan Environment Agenda (2015-2017) which establishes Peru’s environmental quality and eco-efficiency priorities. This agenda comprises the following five components: (i) Governance and environmental citizenship; (ii) Natural resources and climate change; (iii) Air quality; (iv) Solid waste management; and (v) Green areas and water. One of its main goals is to compile and organize the environmental indicators in one centralized location through the creation of the Sustainable Cities and Climate Change Information Platform (financed by this operation). The base for the creation of the Platform will be MINAM’s GIS-referenced database (GEOServidor). Through the GEOServidor, data collected by the Platform will be organized geographically and all environmental and urban information will be available to all public institutions.

Peru’s national government is implementing several initiatives and mechanisms focused on climate change and on pressing environmental issues. Among these initiatives are: (i) MINAM’s Sustainable Cities and Climate Change Agenda; (ii) the National Climate Change Strategy; (iii) the National Adaptation Plan; (iv) the Nationally Appropriate Mitigation Actions (NAMA) on energy generation and energy end-use sectors in Peru; (v) the solid waste management NAMA; (vi) the NAMA for sustainable construction with cities vision; (vii) the sustainable urban transport NAMA; and (viii) Lima Metropolitan Municipality Climate Change Strategy.

There are two Greenhouse Gas emissions inventories for Lima-Callao which are in line with the Global Protocol for Community based Emissions (GPC) Guiding Principles: 1) The Economics of Low Carbon, Climate Resilient City. Lima – Callao, Peru (2014), which has MINAM’s and Metropolitan Municipality of Lima’s support⁴⁵; and 2) Carbon and hydric footprint evaluation, Metropolitan Lima, Peru (2013) which has the support of the Metropolitan Municipality of Lima⁴⁶.

The previous metropolitan government invested in two planning reference documents: 1) Lima’s Regional Plan for Concerted Development (Plan Regional de Desarrollo Concertado para Lima); and 2) The Lima-Callao Metropolitan Urban Development Plan (PLAM 2035). The PLAM was intended to guide urban investment in the metropolitan area through 2035, however, it was not approved by the Metropolitan Council and so it is not considered an official document. In the non-governmental sector, since 2010 a local monitoring system “Lima Cómo Vamos”, compiles and publishes a set of urban quality of life indicators that includes environmental, climate change and public space information.

In addition, some assessments on vulnerabilities and risk management have been done in LMA particularly considering the seismic conditions of the country. Different authorities have several plans and programs, the most important of which is the National System on Risks and Disaster Management. Oxfam recently published a report on urban vulnerabilities in Lima. IFEA, the French Institute of Andean Studies, published an Atlas on vulnerabilities and problems in Lima and Callao.

In other sectors, the National Water Authority has an ambitious plan to optimize and improve the metropolitan water management system and to clean Lima’s three rivers (Rímac, Lurín y Chillón). To fulfill this goal, Korean funding has

⁴⁴ Lima’s metropolitan government has an office in charge of promoting private investments.

⁴⁵ Developed by Pontificia Universidad Católica, Universidad Agraria La Molina (Peru) and by the University of Leeds (UK).

⁴⁶ Produced within the Cities footprint project conducted by the Development Bank of Latin America (CAF) and CDKN (<http://www.huelladeciudades.com/>), facilitated by Fundación Futuro Latino Americano (FFLA) and executed by Servicios Ambientales S.A. (SASA).

been allocated to develop a US\$2 billion investment plan. With the GIZ, ANA is working on the development of a program for climate change adaptation. This program will involve the participation of the private sector in the management of water resources in urban areas. In addition, The Nature Conservancy is raising funds to ensure water provision and conservation in Lima through the Aquafondo⁴⁷. All of these key stakeholders have actively collaborated with the Inter-American Development bank, and Peru's National and local authorities for the structuring of this project.

In terms of biodiversity and ecosystems, the Metropolitan Municipality of Lima has developed some studies that give a first glance in terms of the availability of green areas and Lima's ecological structure. Furthermore, there is another project focused in the protection of Lima's hills ecosystem ("Lomas"), which is funded by the Global Environment Facility. Regarding the recovery of the pre-Hispanic Lima's canal network, there is an initiative to declare them a national heritage site. To this end, a communication campaign is already in place. This action will raise awareness about the value of the channels and it will help conserve valuable public spaces for urban biodiversity and their ecosystemic services, amongst other co-benefits.

A Management Technical Committee⁴⁸ has been put in place for PENAR's development. This project, which is led by MINAM, has recently obtained the highest award at the Peruvian Biennale of Architecture, Urbanism and Arts in the urbanism category⁴⁹. The proposal aims to develop a new space with a strong articulation between the ecologic area (6,222 ha), the urban area, and the productive area (including the Industrial Park of Ancon promoted by the Production Ministry -PRODUCE). It will also promote the preservation of the coastal line of the Qhapac Ñan (Inka road system considered World Heritage by UNESCO)⁵⁰, the establishment of low-emission public services, the development of water treatment and solid waste plants and the implementation of sustainable urban mobility systems.

In the transport sector, there are a series of initiatives and actions that involve international and national cooperation, such as the GIZ's TransFER project which establishes mechanisms for short trips transferences to the transport system (train and BRT). Other initiatives for the sector are Peru's Sustainable Urban Transport NAMA, which focuses on reversing car dependency and improving public transport; and urban value capture studies developed by the World Bank for five metro stations in line 2.

The aforementioned projects and actions provide a baseline for the development of this operation. However, they are isolated efforts that do not view the long-term integrated sustainability of LMA. This project aims to provide an integrated approach that will consider coordination between different sectors such as environmental and climate change, urban growth, transport, biodiversity and water availability.

5. The proposed alternative scenario

The objective of the proposed project is to support the establishment and implementation of the National Platform of Sustainable Cities and Climate Change in Peru, starting with the Lima Metropolitan Area (LMA). This is an ambitious, yet viable, objective that is quite innovative for the Peruvian context. It will provide top-quality information and the necessary tools to allow LMA and other cities in the country have an urban planning strategy that includes environmental and climate-change considerations. Since LMA is the most important metropolitan area of the country, visibility of the project will increase the potential for replicability in other national urban areas. This will ensure the national impact of the project and will also increase the possibility that other metropolitan areas throughout Latin America adopt similar approaches.

The project is comprised by four main components and two support components. Among the former the components are:

(i) Enhancing integrated sustainable urban planning and management (ii) Hydric resources availability strategic assessments in LMA; (iii) Monitoring and analyzing local and globally relevant biodiversity performance frameworks for

⁴⁷ Aquafondo: <http://aquafondo.org.pe/nosotros/>

⁴⁸ Decreto Supremo N° 013-2010-MINAM modified by Decreto Supremo N° 002-2015-MINAM.

⁴⁹ In: <http://www.minam.gob.pe/notas-de-prensa/proyecto-del-parque-raimondi-de-ancon-gano-maximo-premio-que-se-otorga-en-arquitectura-y-urbanismo/>.

⁵⁰ More on the Qhapac Ñan Andean Road System here: <http://whc.unesco.org/en/list/1459>.

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improved ecosystems; (iv) Catalyzing investments for urban accessibility in Lima. The two support components are: (v) Enhancing partnerships for sustainable cities at local, national and global levels (through knowledge management, capacity building and global coordination), and (vi) Monitoring and evaluation.

1. Enhancing integrated sustainable urban planning and management (US\$2,485,000)

Among LMA's biggest challenges in urban and climate change are the lack of data and coordination between government offices and the deficient integrated planning for environmental and sustainable urban policies. Therefore, based in the methodology of IDB's Emergent and Sustainable Cities Program (ESC), this component will generate information for public policy decision-making processes at the metropolitan and district levels. The analyses and plans financed by this component are listed below.

- GHG (AFOLU) inventory and mitigation measures
- Urban and vulnerability and risk assessment
- Urban Growth assessment
- Climate change coastal adaptation master plan

GHG (AFOLU) Inventory: This component will finance a GHG emissions inventory in the AFOLU sector (agriculture, forestry, land change and land use). As previously mentioned, there are two recent inventories which estimate GHG emissions of all sectors in LMA, but they don't include AFOLU. This emissions inventory will refine GHG city's estimates and will define an emission baseline. It will also provide mitigation actions to be taken for the AFOLU sector.

Urban Vulnerability Risk Assessment: this component will finance an analysis of LMA risks and vulnerabilities to natural threats, including climate change events. The outcome of this probabilistic risk assessment will be the definition of risk mitigation measures that will serve as inputs to the urban growth assessment and the climate adaptation plan in the coastal area.

Urban Growth Assessment: this component will finance a series of detailed urban analyses to: (i) define growth tendencies; (ii) calculate urban indicators at the district and LMA level; (iii) estimate future growth and its associated costs; (iv) define changes in land use and propose four transformative urban interventions (in 4 districts to be defined) at the detailed design level.⁵¹ For the coastal zone, the urban growth assessment will consider measures to promote the preservation of natural ecosystems. All analyses and assessments in this component are closely related and their intermediate products will feed each other's diagnosis and proposals. These analyses and assessments will use geospatial analysis and a digital terrain model of the city. This information will serve as a baseline for the development of other analyses in this operation.

Coastal Adaptation Plan: This strategic plan will define: (i) construction of green and gray infrastructure, including performance metrics and decision criteria for its development; (ii) district-scale planning with detailed adaptation plans for selected districts; and (iii) decision support tools to better integrate coastal risks and climate change into the urban policies.

All these activities will have a very significant impact in strengthening and improving environmental and urban public policies. The data production, the capacity building and the strategies for a more sustainable city will enhance the competence of national, local authorities and public officials.

2. Planning for urban water resource management (US\$800,000)

⁵¹ For one of this four districts, the component will finance an urban development plan with a 1:5000 scale.
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This component will develop a plan which will consider the current state of the water ecosystems, the pressure that they are under due to urban growth, and the challenges in water availability in LMA considering both urban growth and climate change scenarios⁵². To this end the component will finance: (i) an integrated analysis of all the river basins that supply water for LMA (Rímac, Chillón, Lurín, Mantaro, Interbasin Chillón-Chancay), as well as the coastal aquifer; (ii) based on that data, the component will finance the establishment of a system that will support the management of water resources for LMA. This system will have the capacity to analyze and plan the availability of water for the area, and to design scenarios that consider a set of variables (including hydrometeorological, social, urban, and land use). This will help local authorities recover some of the water losses by providing them with an important decision-making tool. It will also improve the allocation of resources for the development of sustainable infrastructure.

This component will be developed in cooperation with the National Water Authority (ANA). This will constitute the starting point of a very ambitious investment plan the ANA has developed along with the Korean Cooperation, GIZ, and TNC. Through ANA, the project will have close communication with the newly created Basin Council for Rímac, Chillón and Lurín rivers. All the information generated by this component will be part of the Sustainable Cities and Climate Change Information Platform implemented by the project (Component 5).

3. Monitoring and analyzing local and globally relevant biodiversity performance frameworks for improved ecosystems (US\$795,000)

This component will increase LMA's and Peru's authorities knowledge and planning capacity, especially with respect to the urban ecosystems and the environmental services they provide to the city. The component includes three activities:

- Development of an urban biodiversity strategy for LMA
- Design of four Biodiversity Action Plans
- Design of a plan for the recovery of the Lima's channel network

Urban Biodiversity strategy for LMA: This strategy will be based on a diagnosis of LMA biodiversity and the its main threats and challenges. It will include the definition of biodiversity indicators that will facilitate the establishment of policies, projects, goals and monitoring mechanisms for the ecosystem health in an urban context.

Biodiversity Action Plans: With inputs from the urban biodiversity strategy, this component will finance the development of biodiversity action plans in four selected districts (to be defined). The districts will be chosen based on the results of the diagnosis and the assessment of the both the analyses and assessments in component 1, as well as the guidelines for public investment published by the National Ministry of Finance (MEF) related to urban eco-systemic services

Plan for the Recovery of Lima's Channel Network: this Plan will take into account the eco-systemic relevance of the channels as well as their potential to supply water for the city. It will also define a pilot project focused on establishing a model that ensures the sustainable use of water resources and guarantees its availability to irrigate green areas. The pilot will develop a public investment project for the improvement of the ecosystem services of the San Borja Green Corridor.

4. Catalyzing investments for Urban Accessibility (US\$1,363,000)

This component will finance urban analysis, pre-feasibility and construction designs for 3 to 5 metro stations in Line 2. These designs will include accessibility, multimodality and transport-oriented development

⁵² Climate change and urban growth scenarios for this component will be the result of the studies financed under Component 1.
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considerations. The objective of the designs is to achieve the proper urban insertion of Metro Line 2, taking into account the opportunities for development in terms of urban growth, land use and densification, improvement of public space and integration of different transport modes. This will enhance the capacity of the Metro to catalyze compact urban environments and favor sustainable mobility (including non-motorized and public transport), leading to a reduction in energy consumption and greenhouse gas emissions in the city.

The selection of the stations will be coordinated with the Autonomous Authority of the Lima Electric Train (AATE), the mayors of the involved districts, MINAM, the Ministry of Transport, and IDB. This will ensure that the stations are both relevant and the projects have a high potential for construction. The design of the stations and the proposed interventions will serve as a guide and model for the remaining 22 Metro stations in Line 2 and for the future expansion of the system.

5. Enhancing Partnerships for Sustainable Cities at Local, National, and Global Levels (through Knowledge Management, Capacity Building and Global Coordination) (US\$557,919)

This component will finance activities to strengthen local capacities and inter-institutional coordination. Among these activities are: training seminars for national and district authorities, implementation of a communication strategy and project dissemination through media outreach, and technical assistance

This component also includes financing for the design and implementation of an information platform that will house geospatial data, indicators and modeling which will be developed in the first three components of this operation. The information on this Platform will be freely accessible and will be published through the GEF's Observatory on Climate Change and Sustainable Cities and the Global Platform of Sustainable Cities. The platform will also host information on Peruvian cities that are part of the Bank's CES program (Trujillo, Huancayo and Cusco). Information from other cities in Peru will be included as the Sustainable Cities and Climate Change Agenda promoted by MINAM expands.

6. Monitoring and evaluation (US\$100,000)

This component will finance the following activities, US\$ 100,000 respectively:

- 01 mid-term evaluation
- 01 final evaluation
- 01 Financial Audit

6. Incremental/additional cost reasoning

Lima was the host country for the COP 20 in 2014. Since then, the climate change discussion and environmental concerns have taken an important interest from both, authorities and citizens. The MINAM in its efforts to support the environmental sustainability of Peru is promoting a Sustainable Cities and Climate Change Agenda (Agenda) with five strategic lines related to MINAM's legal competences (climate governance, spatial and territorial planning, environmental quality, eco-efficiency and urban biodiversity and ecosystemic services). In this context, the "National Platform for Sustainable Cities and Climate Change in Peru: Lima Metropolitan Area Pilot Project" was born. It aims to develop a pilot in the LMA following the strategic lines of the Agenda to transform the Agenda into the National Platform for Sustainable Cities and Climate Change. The Project aims to benefit the majority of Lima's and Callao habitants (8,755,262 *limeños* and 1,013,935 *chalcacos*⁵³, current population⁵⁴) focusing on LMA's sustainability, resilience, and low carbon and inclusive development.

For selecting the activities of the project, several meetings (more than 25) were conducted with the objective of identify the most relevant areas and where the major impact is to be achieved. Considering this, the project selected and adaptation

⁵³ *Chalaco* is the name given to people from Callao.

⁵⁴ Population projections based in 2007 national census (INEI).

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of the methodology used by the Emergent and Sustainable Cities Program (ESC) as the necessary base assessments as its relevance and effectiveness has been proved in the other 50 cities already included in the ESC. The analyses and assessments have been adapted to the new scale the LMA represents but the first two components of the project include these adapted ESC assessments plus the GEOServidor and Information Platform. This will also allow the opportunity for comparison and will take advantage of other cities experiences. In Peru, there are three other cities part of the ESC program that will also be part of the platform: Cusco, Huancayo, and Trujillo. The climate change adaptation approach is in line with the baseline analyses and assessments already developed in LMA and they consider the GEF guidelines.

In addition, the project considers a territorial approach for dealing with the environmental and urban planning of LMA. This approach is integral and more comprehensive than the urban-only or environmental-only perspective. This will help to incorporate the best practices within the MINAM for territorial and land use planning that are already in place in different regions of the country but are not applied much to urban environments. Moreover, the sustainable urban mobility perspective and Transport Oriented Development approach are important for guaranteeing an urban growth that allows for economic development while keeping in mind the quality of life. Finally, the value for urban biodiversity is more evident and urban settlements need to recognize their biodiversity assets in order to include them in their planning and management.

7. Expected contributions from the baseline and co-financing

MINAM is co-funding the project by using its GEOServidor as the base for the Sustainable Cities and Climate Change Information Platform but the project actions will take the GEOServidor to a different level, scaling it up and allowing authorities to have much more precise information on climate change, environmental, and urban data.

In addition, the Project has carried out a comprehensive and exhaustive research regarding the baseline of its different areas of impact. First, it considers the analyses of the carbon footprint as a starting point for an updated and complete measurement considering Callao and all the emission sources. Its results will compare with the existent ones permitting to have a tendencies analysis but will allow for calculations and updates at the district level. In addition, the studies of Leeds University and CAF present a list of proposals to reduce emissions; this will give the chance to select and analyze to prioritize the actions to develop in LMA to 2050. The value added is in Callao inclusion, the consideration of all sources of emissions and a development of an observatory that allows to measure periodically with the same methodology, and the possibility to disaggregate and update the inventory at the district level. The same value added is in the urban growth, risks, and vulnerability assessments, as they will trespass the jurisdictional limits and allow having information of Lima and Callao while having the newest city plans as baseline. The analyses and assessments will be the first to consider the LMA urban footprint and push the coordination among all the districts, metropolitan authorities, regional authorities, and national level. There is no information available regarding the whole LMA, growth tendencies, comparable urban indicators at the district level and the proposal of transformative urban interventions in four different and representative districts. This will be based partly on the analysis of geospatial data. The project will develop a Digital Terrain Model for LMA and its expansion area and develop growth scenarios considering climate change, risk assessments and population growth.

The strategic planning for a water and environmental management for LMA territory will not only have a bigger scale perspective but the consideration of its hydrological footprint with climate change scenarios is an input to the knowledge of the resource management. The National Authority of Water will include the results into their Master plan. The geographical spaces that will cover this strategic planning constitute a contribution to the water analysis, as it will take a comprehensive approach to the Rímac basin and the other water sources (Chillón, Lurin and Mantaro rivers, the interbasin Chancay-Chillón and the costal aquifers). In terms of the canal network, the baseline will be enriched by the proposed Master Plan and its actions will be implemented allowing more efficiency to the watering of green areas and, consequently, building and preserving more ecosystems and their biodiversity.

The co-financing of the project is related to the IADB loan for Metro de Lima, Line 2, up to US\$ 300'000,000; to an in-kind co-financing of the San Borja Municipality and Junta de Regantes up to US\$ 876,168; and, finally, an in-kind co-financing of US\$ 103,328 from MINAM. The investment will enhance the scope of the Metro de Lima network financing studies that seek to guarantee better public spaces, design stations that facilitate multimodal uses and integrate fully with

the surrounding, and foster transport oriented development. The contributions will not only be in the Line 2 area of influence as the designs will help in other Metro de Lima lines and will show how a better urban environment could work. In addition, the Municipality of San Borja and the Comisión de Regantes (Surco and Huatica River) allocate a co-financing of US\$ 452,018 each for different activities such as the recovery and conservation of green areas alongside the canal and its biodiversity and eco-systemic services and in the maintenance, improvement of the infrastructure, supervision and communication.

Finally, the urban biodiversity of the LMA will be studied, valued, protected and taken into consideration for public policy. LMA urban biodiversity will be analyzed in the whole territory and not only in some protected areas of the city. LMA inhabitants will be able to recognize their biodiversity as part of their identity and as part of the urban environment that needs to be integrated and not eliminated.

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

In the *Enhancing integrated sustainable urban planning and management* component, the urban growth, risk and vulnerabilities, and environmental footprint analyses will identify the GHG at the LMA and district level emissions and define future scenarios and reduction strategies. This will allow authorities to make decisions to reduce the current GHG emissions and control their future sources. In addition, the risks and vulnerability assessments will reduce the vulnerability to climate variability and climate-related risks, and will increase ecosystem resilience focusing on the coastal zone.

The IDB Loan PE-L1147 (US\$ 300'000,000) for the construction of Line 2 of Lima's Metro will serve as co-financing for the project. The project will support the design of at least three of the metro stations in order to improve the integration of the different transport modes that converge in the area of influence of the Metro. This will enhance the capacity of the Metro to favor sustainable mobility, including non-motorized and public transport. According to a study made by the TRANSfer project in 2014⁵⁵, the integration of non-motorized transport modes with the Metro lines of Lima will produce an increase in the use of bicycles for short trips, which would replace trips in taxis and buses. This shift in transport mode would result in an annual reduction of 2,555 Tons of CO₂eq with respect to the BAU, under an optimistic scenario (75% shift), and of 1,825 Tons CO₂eq per year under the pessimistic scenario (25% shift). The total CO₂ reductions over 20 years under the optimistic scenario would be equal to 51,100 Tons CO₂eq. In addition, around 1.7 million tons CO₂eq will be avoided through the operation of the metro itself, due to an 80% reduction in motorized vehicle use over 20 years of operation. These emission reductions are considered as indirect, and the corresponding calculations can be found in the Excel sheet in Annex "GEF Lima - GHG Line 2 Metro".

In the *Planning for urban water resource management* component, the water and environmental management for LMA territory will support a better administration of the resource taking into consideration projected impacts of climate change on water availability. It is the only plan focusing on all sources of water for LMA and consider climate change scenarios for forecasting.

Also, in the *Catalyzing investments for urban accessibility in Lima*, the Metro de Lima investments helps mitigate GHG emissions and increase the use of renewable energy and decreased use of fossil energy resources; and the adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration.

Regarding the *Monitoring and analyzing local and globally relevant biodiversity performance frameworks for improved ecosystems* component, the global environmental benefits come from the financing of the LMA biodiversity and ecosystems services strategic assesment and the collection and adaptation of the Singapore urban biodiversity indicators. There will be significant training for local authorities to put in place urban biodiversity programs and Public Investment Projects (PIPs). In addition, Lima's green areas will secure their water sources with the recovery of the channels, which will affect in the conservation and sustainable use of biodiversity in the metropolitan area. The Project will affect positively the 1,090 ha that are served by the Surco-Huatica canal and will particularly improve the 108 ha. located in San

⁵⁵ TRANSfer, 2014. Integración de modos de transporte como medidas de mitigación para la propuesta NAMA facility. Informe de Avance. Julio.

Borja that will receive the benefits of implementing the Green Corridor in its jurisdiction. Also, it will have a big impact in the North area of LMA as it will strengthen the PENAR ecological and urban management.

The Project components and outcomes will contribute to the objectives of the Global Platform for Sustainable Cities as it is explained in the A.2 section; the Paris Agreement within the United Nations Framework Convention on Climate Change (UNFCCC) regarding the mitigation measures; the Sustainable Development Goals in particular Principles 6 (clean water and sanitation), 11 (sustainable cities and communities), 13 (climate action), 14 (life below water), 15 (life on land); and, finally, the Biodiversity Convention.

9. Innovativeness, sustainability and potential for scaling up.

The project will influence the entire LMA with the inventory of GHG emissions, risk and vulnerability, and urban growth. The project will also focus its interventions in three axes of the city: the Rímac River⁵⁶; the central highway (which connects Lima with the center of the country and is the main corridor for the transportation agriculture and mining goods); and the Lima Metro – Line 2 (first stations are located in the Ate and Santa Anita districts). Lima is crossed East-West by these three axes and that's why the project will concentrate in the East districts area. Nonetheless, as the River, the channels and the Metro Line continue through the LMA, the impact of the intervention will benefit its entire population. Also, the focus on the PENAR, located in the district of Ancon, will expand the benefits of the Project allowing them to reach the north area of the city and its population.

One of the project's innovations is to concentrate the planning, tools and other project activities under a National Platform, open to everyone. This will contribute to develop processes that can guide other urban areas in the country to address environmental and urban climate change considerations in an organized and methodic route. In addition, the Ministry of Environment of Peru is incorporating the Sustainable Cities and Climate Change National Platform into a strategic public policy, strengthening land use planning and territorial approach that is already in place. This will guarantee that the process can be replicated, as their financing will be part of the MINAM's core actions.

Looking at the whole LMA is an important innovative characteristic at the core of the project. It has not been done effectively before. Studies and institutions have failed to study the urban area as a whole, whether for political or financial reasons. Undertaking planning and assessments at this scale implies serious coordination efforts and the need for financing sources that look beyond the geopolitical divisions. There are a series of plans developed for Lima, or for LMA and Callao districts. Nonetheless, the magnitude of the LMA urban footprint, its growth tendencies, relations between districts, changes in land use (and other urban indicators) have not been studied. The plans and assessments will build on and expand other assessments done previously and will merge urban assessments with environmental and climate change. The planning and assessments will provide the necessary information to authorities so they are able to carry out comprehensive analysis; it will also provide tools to manage the territory and plan for the future.

When considering the main stakeholders, the institutions that will be involved in the project development are not only committed but also have the assets to incorporate and continue the results beyond the life of the project. In particular, the MINAM will be the beneficiary institution and will provide continuation to the results including them in its planning tools and structure. The MINAM will build capacity among not only the authorities and institutions of the LMA but also in other regions and at different government levels. In addition, the institutions related to each of the project's components have been working and collaborating with the team since the proposal preparation phase and are also preparing and organizing their teams for the start of the activates proposed. Local governments, the National Water Authority, the Channel Commission, PEPENAR and the PENAR's Management Technical Committee and others are committed and awaiting the projects results and long-term impacts.

Moreover, the Information Platform, the Singapore indicators and the toolkits will serve other districts and regions of the country, and will reinforce the work of the Sustainable Cities and Climate Change Agenda into the National Platform at the MINAM allowing it to continue its work and scaling it up to all urban cities in Peru. The Sustainable Cities and

⁵⁶ Even though the studies will include other river basins such as Chillón, Lurín and Mantaro, and the costal aquifers, the Rimac River is the most important source in Lima.

Climate Change Information Platform will be the point of reference for cities all over the country willing to plan a sustainable urban future.

A Committee to facilitate coordination and the sustainability of the project will be created. The committee will have the participation of key actors including the direct beneficiaries of the plans and assessments but also other stakeholders that were involved during the project preparation phase. Some potential members that can be identified a-priori are: ONGEI-PCM, DGOT-MINAM, PEPENAR-MINAM, INTE PUCP, INDECI, CENEPRED, ANA, SEDAPAL, SUNASS, GIZ, The Nature Conservancy, DGDB-MINAM, AATE, Ministry of Transportation, San Borja Municipality, Ate Municipality, Santa Anita Municipality, Comisión de Regantes Canal Surco-Huatica, Fundación Transitemos, Lima Cómo Vamos, among others. The objective of the committee is to follow project implementation and contribute to improve its impact.

A.2. Child Project? If this is a child project under a program, describe how the components contribute to the overall program impact.

Yes, this is a child project of the GEF's Sustainable Cities Integrated Approach Pilot. The project will generate information that will feed into the Global Platform for Sustainable Cities (GPSC) as a knowledge platform and collaborative space for cities to advance the urban sustainability agenda. All the information and experience generated from the analyses and the use of geospatial tools will be shared, and the lessons learned will be transferred not only to stakeholders in the country through the specific project platform but also to other 27 cities part of the GPSC platform. This will help to contribute to the goal of supporting urban investments and sustainability initiatives and of sharing urban sustainability efforts. Peru will participate in the events of the Sustainable Cities Integrated Approach Pilot, to share the developed information and to learn from other experiences.

The IAP outcomes state among others that urban government leader and officials in developing countries have expertise and policy means to address global environmental concerns in an integrated manner. The core of the projects components address that issue. The comprehensive analyses, inventories, computerized systems, and tools developed aim to provide the necessary information and means for an integrated planning focused on long-term sustainability and the efficient use of resources. The project will push the authorities to start using evidence-based planning mechanisms and decision-making tools based on urban and environmental indicators. LMA does not currently have this information and the project is directly filling the knowledge gap. Additionally, the project and all the assessments and plans financed have a strong focus on capacity building as we recognize that the information and tools are only relevant if they are used by local authorities and incorporated in decision-making processes. This will contribute to create favorable policy environments to enable the LMA and other city's governments to address global environment concerns at the local level – another of the IAP-SC outcomes.

The project will have impact and an active participation at three different levels: between SC-IAP cities, at the national level within LMA and other Peruvian cities, and at an international level sharing information among cities from around the world. The projects aim to make the Peru Platform of Sustainable Cities stronger and as a consequence also de GEF's GPSC.

A.3. Stakeholders. Identify key stakeholders and elaborate on how the key stakeholder's engagement is incorporated in the preparation and implementation of the project. Do they include civil society organizations (yes ☒ /no ☐)? And indigenous peoples (yes ☐ /no ☒)? ⁵⁷

The stakeholders listed in the project document presented before will be involved in the project as it was described, but some other stakeholders have been incorporated:

⁵⁷ As per the GEF-6 Corporate Results Framework in the GEF Programming Directions and GEF-6 Gender Core Indicators in the Gender Equality Action Plan, provide information on these specific indicators on stakeholders (including civil society organization and indigenous peoples) and gender.

Local authorities (districts):

Aate Municipality. The municipality has engaged actively with the project as the Rímac River, the Metro de Lima – Line 2 and the canal network pass through its territory. The mayor of Ate is willing to take advantage of the Metro de Lima investment towards transforming Ate into a more sustainable district. The mayor has given his full support to the project activities, especially the strategic investments along the metro line. The urban development and transportation teams of the municipality will be actively involved in the project and revision of deliverables. Ate representatives have been part of the project preparation process and they are willing to execute the study's results in their jurisdiction.

San Borja Municipality. The municipality is leading the process for the recovery of the canal network. The municipality has stated that it is willing to incorporate on its public policies specific actions towards a better management of the channels. San Borja will give support to the project activities through its environmental office and as chairs of the Comisión de Regantes. San Borja representatives have been part of the project preparation process and they are willing to execute the study's results in their jurisdiction.

Office of Urban Transport for LMA. This office is responsible for planning, regulating and managing the urban transit of passengers, granting the concessions, authorizations and operating permits for the provision of the different modalities of public passenger transport services. Working closely with MINAM, support provided by GEF for the Lima Metro stations project will be coordinated with this unit.

Metropolitan Municipality of Lima (MML). MML oversees the conservation and sustainable use of natural resources in Lima Metropolitan Area. It also promotes public participation in efforts to preserve the natural diversity in the area. Hence, all the activities related to this operation will be closely coordinated with MML through the MINAM.

National authorities:

Ministry of the Environment (MINAM). This Ministry is the main counterpart for this project. It oversees Peru's environmental sustainability by conserving, protecting, recovering and ensuring environmental conditions, ecosystems and natural resources. This includes a role in water and sanitation, solid waste and transport projects. Hence, all the activities pertaining to GEF's support will be coordinated with this ministry and its corresponding units.

Special Project “Antonio Raimondi National Ecological Park” (PEPENAR-MINAM). This special project is in charge of managing and developing “Antonio Raimondi National Ecological Park”, which comprises 6,777 hectares of public land in the Lima's Ancon District.

National Water Authority (ANA). This institution will be actively involved in the water analyses and the revision of deliverables. It will incorporate the studies on the water resource for LMA into its action plan for the next years. They will assign public officers to work closely with the project activities. ANA representatives have been part of the project preparation process and they are willing to execute the study's results in their action plan and to share key information to help the planning process of LMA territory.

Office of Land Use Planning (DGOT - MINAM). This office is in charge of the Land Use Development in Perú and the GeoServidor and will be involved into the adaptation of this tool to the Sustainable Cities and Climate Change Information Platform. They will give technical assistance and will share their experience with the

GeoServidor in order to learn from it. DGOT representatives have been part of the project preparation process and they are incorporating the Platform into their institution.

Ministry of Housing, Construction and Sanitation. This office is responsible of designing and developing the sectorial policy of two sectors: (i) urban development and housing, and (ii) water and sanitation. The Ministry oversees the promotion of sustainable urban development and integrated planning, compact cities, accessible cities and urban programs in housing in the national territory. Also, of designing the mechanisms for affordable housing. In terms of water and sanitation, the Ministry executes investments in infrastructure and supports the water and sanitation operators. Support provided by GEF will be coordinated with this Ministry, especially for the development of the studies related to urban development and water and sanitation.

Office of Programs and Projects in Housing and Urban Development (DGPPVU). This office is part of the Ministry of Housing, Construction and Sanitation. It oversees the supervision and implementation of strategic interventions in terms of the execution of urban and housing projects in local and regional governments. For this project, this office will provide technical assistance and expertise in urban projects that involve urban integrated approaches with housing and mixed uses in local and metropolitan context. The office will support with information related to the urban growth assessment and defining urban interventions to plan for future growth.

Other actors:

Comisión de regantes – Canal Surco y Huatica. This organization groups the users (local governments, companies, etc.) of the water resource from the Surco-Huatica canal and is the one legally in charge of the canal. The Comisión de Regantes have been part of the project preparation process and will be the institution implementing the Master Plan for recovery the canal.

PENAR Management Technical Committee. This committee is currently lead by MINAM's Ministry but other sectorial authorities are its members, such as Agriculture, Defense, External Commerce and Tourism, Housing and Production Ministries. **World Bank.** This institution has developed studies in the influence area of the Metro de Lima - Line 2 and has provided information in the preparation process of the Project. The strategic investments studies related to the metro (that will be financed by this project) will take this studies as a starting point to build upon the general analysis and recommendations and define specific interventions in the metro stations.

TRANSfer Project (GIZ). This project is in charge of the technical assistance of the Transport NAMA with the Ministry of Transport. They have provided information that was used and considered in the project preparation process and will be a useful source of information for the project implementation.

A.4. *Gender Equality and Women's Empowerment.* Elaborate on how gender equality and women's empowerment issues are mainstreamed into the project implementation and monitoring, taking into account the differences, needs, roles and priorities of women and men. In addition, 1) did the project conduct a gender analysis during project preparation (yes ☐ /no☒)?; 2) did the project incorporate a gender responsive project results framework, including sex-disaggregated indicators (yes ☒ /no☐)?; and 3) what is the share of women and men direct beneficiaries (women %, men %)?⁵⁸

Even though the project is not affecting a direct population and the impact will be in the institutions with the objectives of reducing emissions in a territorial approach, the gender equality will be consider when building local capacities. The

⁵⁸ Same as footnote 8 above.

workshops will consider the inclusion, in terms of equity, of women of the different government levels and civil society representatives.

Nonetheless, the project results will benefit women living in LMA territory, as their quality of life will improve due to the progress of environmental and urban processes. 4'580,126 women live in Lima⁵⁹.

A.5 Risk. 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):

Risk	H/M/L	Mitigation action
Political risk: Changes in public sector representatives (at technical and political level) affect project design and implementation.	Medium	A strong execution unit will be put in place to ensure adequate coordination amongst all institutions and stakeholders, with clearly defined roles and responsibilities and decision-making channels.
Lack of continuity of public policies may affect the sustainable cities and climate change agenda	Medium	The project has been careful enough to involve different level of authorities in the preparation process and will continue to do so. In addition, a communication strategy will be in place so <i>limeños</i> know about the objectives of the project.
Not enough economic resources	Medium	The project aims to incorporate in MINAM's national policies but also further funding is going to be found.
Implementation risk: Delays in the adoption and execution of policies and measures identified within the project.	Medium	Close involvement of the local government, the MINAM, and the Implementation Agency to ensure timely execution of the activities.
Low communication	Medium	The project will include a communication strategy between the different stakeholders in order to develop good relations within all them.
Reliability of public data	High	Even if the capacity for tracking the indicators is optimal, the data compilation is always a difficult task. Not every institution uses a metric system or has an international standard to refer to. The information may be partial, old or even formulated in different ways. That is why the project will map the different indicators and its availability and sources in order to have a clear scenario of what is dealing with.
Execution, coordination and results appropriation	Medium	The MINAM has selected an experienced Executive Agency that facilitates the coordination and execution of all actors.

A.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.

This project will work close to other GEF projects such as the investment in the Hills of Lima ("Lomas de Lima") ecosystem (with SERNANP, and UNDP as executing agency), and the energy efficient industrial clusters GEF (with

⁵⁹ INEI, population projections at July 30th 2016.

PRODUCE, and UNIDO as executing agency). Other institutions such as World Bank and GIZ TRANSfer have studies that will be useful in the development of the project and will take advantage of the common positive impacts generated.

As mentioned the project is working and will be coordinating with key stakeholders involved in its activities such as Ate and San Borja Municipalities, National Water Authority, the Ministry of Transportation and Communications, the Train Authority (AATE), the Channel commission, PEPENAR and the newly formed Basin Council for Lurín, Chillón y Rímac rivers, amongst others. In addition, the project will be involved with other institutions such as the French Agency of Development (AFD), World Bank, the Development Bank for Latin America (CAF), Fundación Transitemos, and Lima Cómo Vamos among others. Finally, the coordination with the NAMAs processes in Peru will also be in place, in particular with the transportation NAMA, leaded by the GIZ, AND with the housing NAMA, led by Ministry of Housing and IADB.

Regarding project implementation, the IADB is the GEF's implementing agency, the MINAM is recipient government and beneficiary of the project. The MINAM has designated Fondo de las Américas (FONDAM) to be the sole executing agency in charge of funds administration and project execution. FONDAM is an organization created by the Government of Peru and the US Government and has technical, financial and administrative independence. The objectives of FONDAM are to finance and implement projects in three areas: 1) Environment, 2) Childhood development, and 3) Water and sanitation. FONDAM is the administrator of a series of projects like the AQUAFONDO (TNC). An institutional analysis made by the IADB determined the FONDAM determined that they have the capacity and support systems needed to execute the project funds even though they do not have direct experience with IADB processes.

FONDAM as the executing agency will be the direct recipient of the funds (from the IADB) and will lead the procurement processes for the contracting of the studies. The FONDAM will use the IADB procurement policies for all matters related to the execution of this project. The FONDAM will also be in charge of receiving and distributing the deliverables of each of the studies to the relevant institutions and stakeholders involved. As part of the Implementation Manual that will be presented and approved by the IAD prior project eligibility the FONDAM, the MINAM, and the IADB will determine the counterparts and stakeholders to be involved in each study (Consultive Committee). The FONDAM is responsible for the disbursement of funds and the financial reporting to the IADB.

MINAM as the project's main beneficiary is also responsible of the technical aspects of the project. It will participate in the project by providing technical inputs, being an active member of the Consultive Committee of each study (during the procurement phase and execution), and providing timely comments to the deliverables, as well as a no-objection on final deliverables when determined necessary in the implementation manual.

The project will also have a Coordinator, which will be responsible for monitoring and evaluate. It will also provide support for MINAM in the technical aspects of the project. The Coordinator will be supervised by an authority from the Viceministry of Strategic Development of Natural Resources. The Coordinator will be based in MINAM according to Component 5.

Finally, other partners (such as National Water Authority, Ate Municipality, San Borja Municipality and Comisión de Regantes Canal Surco-Huatica) and the PEPENAR Management Technical Committee will be involved in the Project activities. They will be aware of the implementation process and part of the final products revisions, as they would be the ones incorporating the results in their public policies and programs.

Additional Information not well elaborated at PIF Stage:

A.7 Benefits. Describe the socioeconomic benefits to be delivered by the project at the national and local levels. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The socioeconomic benefits to be delivered by the project are the following:

Improvement in the quality of life for the population of the LMA. When better public policies are implemented as a result of the studies and results of the project, it will improve the quality of life. Citizens will feel the positive impact in their daily lives as a more planned urban environment is developed; more pedestrian friendly and less car oriented. Public transportation will improve because of the metro but the project will ensure that the public space surrounding the metro area is of high quality and allows for multimodality. In particular, with the Metro de Lima, Line 2 implementation, every year it will be 88,000 metric tons of less GHG as the transportation system transforms to be resilient and with low emission. Green areas and other urban ecosystems will be studied and there will be strategy in place for their preservation and inclusion in the urban life. In terms of biodiversity benefits, the 1,090 hectares affected by the canal network will have a strategy for recovery and its biodiversity and ecosystem value will be protected and enhanced, in particular the 108 ha of San Borja that will be the first ones improved by the implementation of the Green Corridor project. Also, the PENAR extension of 6,222 ha. of natural area will benefit from the Project activities and, in particular, the focused activities in the zone.

Authorities and public officers, at the local and national level, will be more capable to manage a growing urban process with an environmental and climate change approach. They have updated and better organized data that will support their decision-making process on urban and environmental policies.

Finally, the project has economic benefits for the local governments and the national authorities that will help them redistribute in a fairer way the public resources, having a positive effect in citizen's lives.

A.8 Knowledge Management. Elaborate on the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives (e.g. participate in trainings, conferences, stakeholder exchanges, virtual networks, project twinning) and plans for the project to assess and document in a user-friendly form (e.g. lessons learned briefs, engaging websites, guidebooks based on experience) and share these experiences and expertise (e.g. participate in community of practices, organize seminars, trainings and conferences) with relevant stakeholders.

The development of this project will be coordinated with MINAM's General Direction offices, and the Housing and Urban Development Division (HUD) of the IADB that manages the Program of Emerging and Sustainable Cities that has worked with the MINAM and other cities in Per, and the GEF. HUD and the IADB have regular learning events and trainings in which the MINAM and authorities form the LMA can present the results of the project, learn from other initiatives and exchange best practices. The project will also seek mechanisms to learn from other agencies, such as The World Bank, The Development Bank for Latin America (CAF), and GIZ Cooperation in the different sectors and projects that they are carrying out.

Working with the Singapore Biodiversity Indicators has its own training agenda and the project will benefit public officers and experts with the training sessions. The project consolidates itself as a strong knowledge generator that will multiply its effects as it works in an Open Data policy. Some data will be developed using satellite imagery, geospatial analysis that will also be available in the GeoServidor. In all possible instances, the data generated will be geo-referenced. All this information of LMA and other cities in Peru will constitute the basis of the National Platform of Sustainable Cities and Climate Change, leaded by MINAM, that will put together all relevant urban and environmental information for decision-making processes.

All information will be made available publicly in the project's Platform. Information will be shared with all public and private, national and international stakeholders; and, externally, to citizenships in general. All components have a focus in capacity building and training to ensure that local authorities know the data, can access it, and update it and use it to

their benefit. Finally, all the information will be shared in the GEF's Global Platform for Sustainable Cities, in the hopes that it can be useful to other cities worldwide and that the findings and lessons can be socialized.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 Consistency with National Priorities.

The proposed activities are aligned with policies and strategies at the highest level. At the constitutional level, item 22 of article 2 of the Constitution of Peru establishes that every person has the fundamental right to enjoy a balanced and appropriate environment to live. Article 67 of the same document, establishes that the State must ensure the effective enjoyment of that right, determining the National Policy for the Environment policy and promoting the sustainable use of natural resources. Article 44 states that within the duties of the State is the protect the population from threats against its security and promote the general wellbeing.

Article I of the General Environment Act, Act No. 28611, states that every person has the inalienable right to live in a healthy environment, balanced and suitable for the full development of life, and the duty to contribute to effective environmental management and to protect the environment. Article V of the same act states that the principle of sustainability is based on the balanced integration of economic, environmental and social aspects of national development, as well as the satisfaction of the needs of current and future generations. Article 64 of the Act requires that in the design and implementation of public policies relating to the creation, development and relocation of population settlements, in their respective planning instruments and in the decisions relating to the preparation of territorial and urban development, environmental protection measures must be considered, on the basis of the provisions in this Act and its regulations and complementary rules, in such a way that it ensure adequate conditions of habitability in the cities and towns of the country, as well as the protection of health, conservation and sustainable use of natural resources and biological diversity and cultural heritage associated with them.

The Nineteen State's Policy of the National Agreement signed on July of 2002, establishes the integration of the National Environmental Policy with the economic, social, cultural and land use policies in order to contribute to overcome poverty and achieve sustainable development in Peru, as well as to institutionalize the environmental management, to protect biological diversity, and to facilitate the sustainable use of the natural resources, ensuring environmental protection and promoting sustainable towns and cities; which will help improve the quality of life, especially of the most vulnerable population in the country.

The 34th State Policy in Land Use and Land Management , sets out a commitment to create a strategic integrated, effective, and efficient process of planning and territorial management that ensures human development throughout the national territory, in a peaceful environment. This process will be based on knowledge and research of the exceptional biodiversity of the territory and the sustainability of its ecosystems. For these purposes we understand the territory as the space comprising soil, subsoil, the maritime domain, and airspace covering them and that develop social, economic, political and cultural relations between people and the natural environment, in a legal and institutional framework; and which converge interests, identities and cultures of peoples, so with this goal, among others, the State will boost and consolidate sustainable cities as dynamic centres of urban and rural development, articulated in reason of their hierarchy and their functional complementarity and that promote economic corridors supplied with water, energy, transport and communications networks in order to facilitate innovation processes, value chains and investment opportunities.

The 32nd policy of State the agreement national, signed on December of 2010, establishes that the State is committed to promote a policy of risk management of disasters, in order to protect the life, health and the integrity of the people; as well as the public and private heritage, promoting and ensuring the location of population and their equipment in the areas of greater safety, reducing vulnerabilities with equity and inclusion, under a process approach comprising: the estimation and reduction of risk, emergency and disaster response and reconstruction. Likewise, it establishes that this policy will be implemented by government agencies of all levels of Government, with the active participation of civil society and

international cooperation, promoting a culture of prevention and directly contributing to the process of sustainable development at the national, regional and local level.

The Ministry of the environment, according to article 2 of the law approved by Legislative Decree No. 1013, has as a general function to design, set up, run and monitor the National and Sectorial Environmental Policy. It aims to conserve the environment in such a way that it ensures the sustainable, responsible, rational and ethical use of natural resources and the environment that sustains them, allowing them to contribute to the social, economic and cultural development of the human person, in permanent harmony with its surroundings, and thus ensuring the present and future generations the right to enjoy a balanced environment suitable for the development of life.

The national strategy on climate change, approved by Supreme Decree No. 086-2003-PCM, points out in his vision that Peru knows its vulnerability to climate change and has incorporated into its policies and development plans measures for adaptation to address the adverse effects of the same. It is a country which has a population that is aware of the risks of these changes and global causes. This national strategy, among its strategic lines sets as a second-order priority: promoting policies, measures and projects to develop the capacity of adaptation to the effects of climate change and reducing vulnerability.

C. DESCRIBE THE BUDGETED M & E PLAN:

The IADB established procedures for project monitoring and evaluation such as the results matrix (Annex A), annual work plans and procurements plans. The results matrix include a description of the main activities and outputs by component. Each product will have indicators and yearly goals to keep track of the Project evolution. The monitoring of the results matrix and the work plans will be follow through the Project implementation. FONDAM, as execution partner will be in charge of the fulfillment of the Project activities with the MINAM accompanying and supervising the process. The IADB and the Project team will also monitor the activities and products based on the bi-annual progress reports and will incorporate it to the Bank Annual Report System. The Project Implementation Reports (PIR) will be submitted annually starting at the second year of implementation.

There is an execution and results monitoring and evaluation mechanism in place resulting in 01 mid-term evaluation (24 months after the beginning of the Project or when 40% of resources are disbursed, whichever comes first) and 01 final evaluation when 80% of the Project resources are disbursed or within the last three months. These activities will give information on how the project is reaching its objectives and how the progress on the activities is going. An independent consultant will execute these evaluations. Finally, audit services will be taken during the Project implementation.


Finally, IADB staff (with funds from the IA fee) will carry project field visits and monitoring. The IADB will hold a final mission to discuss the results of the final evaluation with the executing agency (FONDAM) and the main beneficiary (MINAM) and other key stakeholders involved. An indicative budget is presented next:

Type of activity	Responsible	Budget US\$
Project monitoring progress and outputs implementation	FONDAM, MINAM	Paid by PCM
Mid-Term Review	FONDAM, MINAM	US\$ 25,000
Final evaluation Report	FONDAM, MINAM	US\$ 45,000
Auditing	FONDAM, MINAM	US\$ 30,000
Project Visits	IADB	Paid by IA fees

PART III: CERTIFICATION BY GEF PARTNER AGENCY(IES)

A. GEF Agency(ies) certification

This request has been prepared in accordance with GEF policies⁶⁰ and procedures and meets the GEF criteria for CEO endorsement under GEF-6.

Agency Coordinator, Agency Name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Juan Pablo Bonilla IDB-GEF Executive Coordinator		03/24/2017	Ricardo De Vecchi	+1(202) 623.1986	ricardod@iadb.org

⁶⁰ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF
GEF6 CEO Endorsement /Approval Template-Dec2015

ANNEX A: PROJECT RESULTS FRAMEWORK

Results	Indicators	Base	Goal	Verification
Component 1: Enhancing integrated sustainable urban planning and management				
LMA has comprehensive studies of emissions, urban footprint growth and risks to be incorporated into policies and projects.	Number of GHG emissions studies in the AFOLU sector for the LMA	0	1	IDB's TC M&E system
	Number of risk and vulnerability studies conducted for the LMA	0	1	
	Number of urban growth studies for the AML developed	0	1	
LMA identifies key areas of management and investment to increase resilience to climate change in the coastal zone	Number of climate adaptation plans for the coastal zone	0	1	
LMA defines urban interventions to plan for future growth	Number of districts with proposals for sustainable urban development interventions	0	4	
Component 2: Planning for urban water resource management				
The LMA has a comprehensive strategic planning of all the basins that supply water for the city	Number of water resource management plans carried out for all water sources in the LMA	0	1	IDB's TC M&E system
An integrated water resource management and modeling system has been established	Number of computerized systems for analysis and planning of water resources	0	1	
Component 3: Monitoring and analyzing local and globally relevant biodiversity performance frameworks for improved ecosystems				
LMA has a biodiversity strategy that is incorporated into urban policies	Number of biodiversity strategies for the LMA	0	1	IDB's TC M&E system
LMA has information on indicators of urban biodiversity for the design of policies and planning strategies	Number of sets of indicators of urban biodiversity raised for the LMA	0	1	
LMA districts have the capacity to develop urban projects using an ecosystem conservation approach	Number of public investment projects related to biodiversity defined with competent authorities	0	4	
LMA has a plan for channel conservation	Number of plans for channels	0	1	
The LMA has an enhanced capacity to develop a demonstrative pilot project in one of the channels	Number of studies for an investment project in one of the LMA channels	0	1	
Component 4: Catalyzing investments for urban accessibility in Lima				
Stations of the Lima Metro have incorporated in their design non-motorized mobility aspects and promote transport-oriented development processes	Number of metro stations that have constructive designs considering multi-modality and development around them	0	3	IDB's TC M&E system
The Lima Metro system has a station design model that includes integrated non-motorized mobility policies and guidelines for transport-oriented development	Development of a guide for the design of Lima metro stations developed	0	1	
Component 5: Enhancing partnerships for sustainable cities at local, national and global levels (through knowledge management, capacity building and global coordination)				
Urban and environmental LMA information is broadly available	Number of platforms for urban and environmental information in operation	0	1	IDB's TC M&E system
Local authorities and technicians use the environmental and urban information for urban management and planning processes	Number of specialists receiving training in the use of environmental, urban, risk and climate change information	0	50	
Lima contributes to GEF's Global Platform for Sustainable Cities	Number of GEF events to which the city attends for the exchange of experiences	0	6	
Lima Metropolitan Area citizens have broader knowledge about the studies that have been developed	Number of information strategies designed to disseminate the results of each of the project's components	0	4	

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).

STAP Comments	Team responses
1. Collective Impact and Stakeholder Engagement	
<p>Acknowledging that in approaching complex environmental problems, stakeholder engagement and collective action is critical. The overarching objective of the PFD document speaks to broad inclusiveness in the pursuit of urban development planning and implementation, stressing a "network" approach to help pull the complex web of urban stakeholders onto a path of united vision and effort (see page 9 of PFD).</p> <p>The strength of many GEF initiatives is typically in the technical and institutional components. Often social science components which can enhance performance of GEF interventions are lacking. It was also recognized that the link between local action and global impacts/benefits in this context must be supported with a clear conceptual framework, such that local intent and action is in step with national, regional and international actions. In addition, many governments marginalize informal settlements in their formal decision-making processes. As such, the IAP should attempt to address this challenge as it may undermine success in other areas.</p> <p>One can compare and contrast the traditional isolated impact approach with the collective impact approach (Kania, J.; Kramer, M. 2011. "Collective Impact". Stanford Social Innovation Review. See also http://www.fsg.org/OurApproach/WhatIsCollectiveImpact.aspx)</p> <p>Isolated Impacts:- Funders select individual grantees that offer the most promising solutions Collective Impacts:- Funders and implementers understand that social problems, and their solutions, arise from the interaction of many organizations within a larger system</p> <p>Isolated Impacts:- Non-profits work separately and compete to produce the greatest independent impact Collective Impact:- Progress depends on working toward the same goal and measuring the same things</p> <p>Isolated Impacts:- Evaluation attempts to isolate a particular organization's impact Collective Impacts:- Large scale impact depends on increasing cross-sector alignment and learning among many organizations</p> <p>Isolated Impacts:- Large scale change is assumed to depend on scaling a single organization Collective Impacts:- Corporate and government sectors are essential partners</p> <p>Isolated Impacts:- Corporate and government sectors are often disconnected from the efforts of foundations and nonprofits Collective Impacts:- Organizations actively coordinate their action and shared lessons learned.</p> <p>Over time, the GEF has moved towards the collective approach, though it could be made more comprehensive and better embedded in GEF operations. Collective impacts provide a significant shift away from the traditional paradigm of "isolated impact," because the underlying premise of collective impact is that no single</p>	<p>The GPSC acknowledges the important role that stakeholder engagement plays in urban change and has been designed in such a way to ensure that all relevant stakeholders will be involved in the GPSC's design and implementation process. The Program-Level Results Framework measures stakeholder engagement in the design and implementation of IAP child projects (Indicator 3: Number of cities with meaningful engagement of multiple stakeholders in planning and implementation of the projects supported by the IAP).</p> <p>To ensure that the GPSC achieves a lasting, collective impact, the GPSC will coordinate and collaborate with the relevant entities working in the larger web of urban sustainability. Working within this larger web, the GPSC will actively coordinate its actions to complement and build off of current work, actively seeking to communicate and align initiatives—as demonstrated by the Joint Deliverables section of the PCN. The GPSC, the implementing agencies, and the participating cities will deliver a set of joint activities at the city-level, focusing on geospatial data/tools, indicators, urban planning, and urban finance. To achieve this, the GPSC will have to actively partner with the implementing agencies, international organizations and networks, local governments, civil societies, and the private sector.</p> <p>The design of the GPSC endeavors to encompass the right conditions for a successful collective impact:</p> <ol style="list-style-type: none"> 1. Common Agenda/Framework: The objectives of the GPSC are to (i) provide a platform for knowledge sharing and learning on an integrated approach to urban planning and management, (ii) create a space for networking and learning among cities and relevant organizations on issues related to

STAP Comments	Team responses
<p>organization can create large-scale, lasting social change alone. This has been transposed to tackling environmental problems as well, since the social issues actually heavily influence success in tackling environmental problems at scale even where there are technological solutions available. Typically, there is no "silver bullet" solution to systemic problems, and these problems cannot be solved by simply scaling or replicating one organization or program.</p> <p>Collective impact is best employed for problems that are complex and systemic rather than technical in nature. Collective impact initiatives are currently being employed to address a wide variety of issues around the world, including education, healthcare, homelessness, the environment, and community development. Many of these initiatives are already showing concrete results, reinforcing the promise of collective impact in solving complex social problems.</p> <p>This gradual change in thinking has been well researched, culminating in 2011 with the publishing of a critical article by Kania et. al (2011), which, based on evidence of success and failure in tackling complex and systemic problems, was able to devolve five conditions of collective impact success.</p> <p>Conditions of Collective Impact Success</p> <p>Collective impact is more rigorous and specific than collaboration among organizations. There are five conditions that, together, lead to meaningful results from collective impact:</p> <ol style="list-style-type: none"> 1. Common Agenda: All participants share a vision for change that includes a common understanding of the problem and a joint approach to solving the problem through agreed-upon actions. 2. Shared Measurement: All participating organizations agree on the ways success will be measured and reported, with a short list of common indicators identified and used for learning and improvement. 3. Mutually Reinforcing Activities: A diverse set of stakeholders, typically across sectors, coordinate a set of differentiated activities through a mutually reinforcing plan of action. 4. Continuous Communication: All players engage in frequent and structured open communication to build trust, assure mutual objectives, and create common motivation. 5. Backbone Support: An independent, funded staff dedicated to the initiative provides ongoing support by guiding the initiative's vision and strategy, supporting aligned activities, establishing shared measurement practices, building public will, advancing policy, and mobilizing resources <p>The STAP has consulted with the US Department of Housing and Urban Development on their experience in applying this approach to their urban projects, and they reported significant improvements in accomplishment of project objectives that this model is endorsed by the White House council for Community Solutions. A follow-up study and updated guidance was also published in the Stanford Social Review in 2012 to highlight successes of the performance of initiatives by various municipalities as well as large private sector and CSO entities and foundations (e.g. UN GAIN, Communities That Care, Calgary Homeless Foundation, Bill and Melinda Gates Foundation, AVINA).</p> <p>STAP has passed on information to the lead agency regarding experts in this area who could be consulted as the program document is further developed, along with the Global Knowledge Platform and other child projects. Indeed the Capacity Building subsection of the Global Platform document (see page 9 of the concept note) discusses how to overcome the cacophony of local city decisions that can</p>	<p>urban sustainable development, and (iii) support the participating cities' work on evidence-based urban planning with the aim of forging an agreed-upon common vision and approach to urban sustainability. The Joint Deliverables at the city-level attempt to co-align actions and approaches. The Joint Deliverables framework will focus on urban indicators and geospatial data/tools, urban planning, and urban finance at the city-level.</p> <ol style="list-style-type: none"> 2. Shared Measurement: All participating cities will share a common urban sustainability framework for selecting indicators and geospatial datasets that are relevant to the city's contexts. In addition to this shared framework, participating cities will be encouraged to adopt core common indicators that reflect progress made towards UN SDG 11. The GEF Tracking Tool and Program-Level Results Framework will be tracked across all 11 child projects at the program-level to measure and report the progress of each child project. 3. Mutually Reinforcing Activities: The PCN of the GPSC indicates the type of coordinated activities that will be offered through collaboration with urban think tanks, networks, and implementing agencies. Cities interested in participating in Joint Deliverables will develop a city-specific work program outlining a set of differentiated activities around the GPSC framework. 4. Continuous Communication: The GPSC holds a monthly conference call with all implementing agencies to ensure frequent and structured open communication to build trust, assure mutual objectives, and create common motivation. In addition, GPSC will conduct active and inclusive city-level consultations with the implementing agencies to define a relevant city-level work program.

STAP Comments	Team responses
<p>threaten a united development path. Also in terms of the Global Knowledge platform, there can be support provided to all involved to show how they can be involved in the collective impact community (http://www.collectiveimpactforum.org/). This approach does seem to be emerging as the definitive way in which private and public entities (including funding bodies) are tackling complex social and environment problems, including leveraging and sourcing funding. Also in its favor is the fact that there has been high level, peer-reviewed research involved in devolving these principles for stakeholder engagement.</p>	<p>5. Backbone Support: The GPSC will provide ongoing support by guiding the initiative's vision and strategy, supporting aligned activities, establishing shared measurement practices, building public will, advancing policy, and mobilizing resources.</p>
<p>2. Results Framework</p>	
<p>Looking at the PFD document, to measure a city's "increased scope and depth of integrated urban sustainability planning management policies" will be challenging against a baseline, as will the other proposed metrics. Therefore, the rating system alluded to in Component 1 will be a critical part of the M&E framework and methodology. Similarly, for Component 2 the proposed core performance framework is difficult to understand without putting the concept into practice. A few details are provided in the M&E section on page 24 but there remain many uncertainties as to how this will be achieved in practice given the wide variations between cities as is evident from the section outlining the Child projects.</p> <p>On the issue of process indicators, one might be included to measure the extent of stakeholder engagement, as it is so critical to the IAP success. The aim of the IAP pilot to "ensure broad engagement with stakeholders across a city" is commendable, as is having a process-focused indicator to measure change over the life of the IAP program. Indeed the 5 conditions of success of the Collective impact model could be used as a ratings system based on increasingly comprehensive permutations of these criteria, with a 1 rating meaning perhaps only 1 condition is being met, and 5 meaning all have been met. This is also an important aspect of learning from, and ultimately capitalizing on, the IAP experience to determine best practices in stakeholder engagement, and other processes that may be identified as critical, foundational actions for Cities integrated projects.</p> <p>STAP does not question the need for selected Cities to have some latitude in selecting indicators for their locally specific work. However, there should be an assessment process or preferably a common conceptual framework to ensure that the indicators selected are appropriate to measure the areas of performance critical to the specific interventions, relevant to the overall IAP knowledge needs, benchmarking, and comparability. Indeed the PFD and Global Knowledge Platform documents both cite a medium level risk of lack of alignment between child projects and overall program goals. <u>A comprehensive, suite of locally specific indicators might be achieved through use of a common conceptual framework such that all projects would use similar criteria in determining if the suite of indicators selected covers all the critical areas to be monitored.</u> STAP has developing a similar process for socio-ecological systems, and application of it under the Food Security IAP is already underway. This approach could also be used in the Cities IAP as the program develops.</p> <p>STAP welcomes the opportunity for research on other urban sustainability indicators, and hopes that work for instance on urban metabolism indicators can be included going forward. In addition, in order to contribute to the GEF 2020 IAP strategic priority as relates to resilience and adaptation, open source indices for resilience such as the Notre Dame Global Adaptation Index (ND-GAIN) might be consulted as there exists a clear methodology that can assist with indicator selection, data sources, and rationale for indicator selection.</p>	<p>The GPSC aims to support cities in developing or adopting an evidence-based, integrated approach toward resilient and sustainable cities. As such, the GPSC will lead the development of a comprehensive framework that supports cities in choosing among a suite of locally-specific indicators based on common criteria. As part of the Joint Deliverables, cities wishing to enhance their capacity for measuring urban sustainability will receive guidance on selecting and implementing a set of locally relevant indicators. This work will be part of the GPSC's work towards enhancing a city's capacity for an evidence-based planning approach that is not tied to the duration of the program.</p> <p>Separate from the city-level work on indicators, the GPSC, as a child project of the SC IAP, has developed a results framework to evaluate its progress as a knowledge platform during the duration of the program.</p> <p>At the SC IAP program-level are two results frameworks that attempt to assess the results of all 11 child projects + GPSC: the GEF Tracking Tool and the Program-Level Results Framework.</p>

STAP Comments	Team responses
3. Knowledge Management	
<p>Knowledge Management is a key part of the IAP if the ambition is to widely disseminate information from lessons learned to other cities. STAP welcomes the Global Knowledge Platform as a key component of this effort. STAP looks forward to engaging with this component of the IAP going forward.</p> <p>The PFD makes reference to the importance of comprehensive, evidence-based planning, and states that the IAP is "designed to function as proof of concept". The Global Knowledge Platform, however, emphasizes a construct that speaks to swapping of information between Cities, but reporting nothing back to the GEF and its donors to indicate whether investment was impactful or not. The difference between information gathering and knowledge generation is not clearly delimited, and there is no indication of any plans to develop overarching knowledge questions into a centralized Knowledge Management Strategy for the IAP and then the GEF. (For example: What are the overarching knowledge goals of the IAP? In what ways did the IAP contribute to the GEF 2020 strategic vision? Is the sum of the outputs of the child projects likely to contribute to overall outcomes and ultimately the overall objective of the IAP? What are the best conditions for successful investment?). Developing a Knowledge Management strategy will help inform the Results Framework such that indicators utilized will need to be as objective as possible, and quantifiable where feasible. Without such an approach resulting in clear information flows back to the GEF partnership, including its donors, there will be no way for any objectively derived conclusions to be made about why an intervention succeeded or failed, nor to capture best practices for replication and scale-up. This is critical to any pilot activity, and the STAP wishes to re-emphasize this point because it was made during the consultations.</p> <p>There should also be consultation between the authors of the upcoming STAP and GEF Sec papers on Knowledge Management in the GEF to help organize this area of the IAP. In addition, consultation with the Knowledge Management mechanisms as proposed in the other IAPs should be encouraged.</p>	<p>The GPSC fully acknowledges the wide range of ongoing initiatives and currently existing knowledge on urban sustainability and does not attempt to duplicate them. In addition to serving as a platform for knowledge sharing, it endeavors to compile lessons learned from the child projects and promote innovation through collaboration and knowledge exchange. Case studies on each city will be created at the end of the program to evaluate whether the knowledge positively affected the urban processes and systems. Given the limited budget and timeline, it is unlikely that the GPSC will be heavily engaged in knowledge creation activities but rather it will prioritize knowledge curation and sharing through its platform.</p>
4. Program Structure	
<ul style="list-style-type: none"> • Number of Pilot Cities <ul style="list-style-type: none"> - While STAP typically does not comment upon funding aspects of projects, it can raise questions related to incremental cost reasoning and expected contributions from the baseline. Based on the PFD child project descriptors, as well as Table C of the PFD, it is clear that agencies have wisely targeted cities with ongoing urban sustainability initiatives and investment, and the co-financing arrangements appear robust. However, with each country averaging around \$2M per city from the IAP set-aside, even with the STAR country allocations it is uncertain if the GEF funding spread across 23 cities can trigger the incremental globally beneficial action of improving "the depth, breadth, and quality of local sustainability planning efforts and investment decisions.". For example, are resources sufficient to significantly develop resilience to future extreme events including climate change impacts? The increase in number of pilots expected also further reconfirms the need for streamlined stakeholder engagement processes, indicator assessment and knowledge management. • Link to other IAPs <ul style="list-style-type: none"> - A review of child projects indicates potential opportunities for linkages with other IAPs (e.g., South Africa's Johannesburg project has a clear component for food (in) security). It would be useful to explore these possibilities for engagement in this case, as this could present interesting learning opportunities on urban-periurban-rural interactions. Other examples may exist in the portfolio. 	<p><u>Number of Pilot Cities:</u></p> <ul style="list-style-type: none"> - We agree that the funding is not enough to achieve the desired change and suggest tempering expectations. The funding is simply insufficient to achieve the long-lasting, in-depth change to which the Pilot Program professes to aspire. Taking a more realistic approach given the limited budget can help direct the limited budget to key priorities instead of trying to overcommit. The Joint Deliverables approach attempts to address this by dedicating resources to jointly-agreed upon actions at the city-level. The GPSC will also rely upon existing initiatives to leverage the knowledge and resources of entities currently working on the urban sustainability agenda. <p><u>Link to other IAPs:</u></p> <ul style="list-style-type: none"> - We will recommend to the South Africa child project that synergies with the IAP on Food Security be sought.

STAP Comments	Team responses
<p>5. Miscellaneous Comments</p>	
<ul style="list-style-type: none"> • Table C of PFD <ul style="list-style-type: none"> - The Table C of the PFD makes it very difficult to assess the precise municipalities to be covered in each country, and therefore to align with the city names laid out in the text of the report. There are also several instances of acronyms used without explanations. • Section E of PFD: "Program's target contributions to GEBs" <ul style="list-style-type: none"> - The only relevant target shown is the mitigation of 106,669,069 metric tons of GHG emission reductions. There should be some clarification as to how this figure was reached, especially given the various emission factors that differ widely between each city's energy and electricity sources. Direct and indirect emissions are included. Was this estimate made using the old GEF definition for "indirect" which is under review? For cities to be able to track their own GHG emissions will require a standard method offered as detailed guidelines if there is to be any real benefit from benchmarking and having a common baseline. For example, accounting for road/rail/air traffic passing through a city requires a common boundary to be used. STAP realizes that there has been much good work already done on identifying indicators, but questions whether it will be possible to produce a set of practical guidelines in time for practical use by the pilot cities as they begin their programs. • Program Challenges <ul style="list-style-type: none"> - Under the "Global Coordination and Knowledge-Sharing Platform" section, there are many activities listed. Acknowledging the short time line that the agency has had to outline potential activities, there should be attention paid to the planning, timelines and quantification of the human and other resource issues needed for enabling a city/municipality to participate actively and make a useful contribution. It is a very ambitious program, covering 23 pilot cities, and as noted by the authors, continual turnover of local government officials (and of elected representatives) will make capacity building particularly challenging. Further, the 23 pilot cities outlined in the PFD have very different issues to cope with. This will add challenges to the services to be provided using the various joint activities as planned. 	<p><u>Table C of PFD:</u></p> <ul style="list-style-type: none"> - We agree that there has been confusion about the precise municipalities to be covered in each country. Currently, we have identified 27 participating cities: Xalapa, La Paz (Mexico), Campeche, Recife, Brasilia, Johannesburg, Abidjan, Vijayawada, Guntur, Bhopal, Jaipur, Mysore, Melaka, Saint-Louis (Senegal), Greater Dakar (Diamniadio Industrial Park), Guiyang, Shenzhen, Ningbo, Nanchang, Beijing, Tianjin, Shijiazhuang, Lima, Asuncion, Hue, Ha Giang, and Vinh Yen. <p><u>Section E of PFD:</u></p> <ul style="list-style-type: none"> - Given that many cities use various GHG emissions methodologies, it was agreed at the first GPSC meeting in March 2016 that though there will not be a standard methodology, participating cities will be required to report their target contributions to GHG emissions according to internationally accepted methods and to disclose their methodology. <p><u>Program Challenges:</u></p> <ul style="list-style-type: none"> - We acknowledge that the SC IAP program poses many challenges and have tried to address the details of planning and timelines in our PCN. We are sensitive to resource constraints of cities and are in continued conversation with the implementing agencies to ensure that enough resources are allocated to ensure the successful participation of cities in GPSC activities throughout the duration of the program. The GPSC will focus on shared themes and common challenges of the participating cities in GPSC learning activities and products.

Comments received from GEF Council Members, namely: Canada; France; Germany and USA

Comments	Team responses
<p>6. GPSC v. Existing Initiatives</p> <p>The proposal has parallels to the very successful Cities Development Initiative Asia (CDIA, with parallel funding from BMZ and ADB), which supports medium sized Asian municipalities in infrastructure projects development and access to finance (from development banks and private sector). It needs to be ensured that this project can learn from CDIA's experiences and success factors. [Germany]</p> <p>The PFD provides too few details of the activities the program will support and how they will differ from those of other organizations that are developing similar sustainable cities-focused programs. We expect that the PFD will be modified to respond to STAP comments, and look forward to reviewing the child projects for this program prior to GEF CEO Endorsement. [USA]</p>	
<p>7. Common Framework & Scope</p> <p>The project will contribute to promote among participating cities an approach to urban sustainability that is guided by evidence-based, multi-dimensional, and broadly inclusive planning processes that balance economic, social and environmental resource considerations.</p> <p>We globally support this proposal but we would like to underline the following points.</p> <p>Indeed, regarding the aim of the project and its thematic and geographical (11 countries) scope, it seems that :</p> <ul style="list-style-type: none"> - the common methodological framework could be strengthened by systematically conducting vulnerability studies on hydrological, environmental and socio-economic aspects. These studies will notably allow to take into account resilience and adaptation to climate change; - the common framework of knowledge capitalization must be more precise ; - the issues of urban mobility, in particular in Abidjan, might benefit from the application of innovative planning tools based on analysis of Big Data that have already been tested in these contexts. <p>Opinion: Favorable provided the above comments are taken into account in the design phase.</p> <p>[France]</p>	
<p>We acknowledge the importance of learning from existing initiatives and will work closely with Cities Development Initiative Asia as well as other entities working on the urban sustainability agenda to avoid duplication of efforts and to leverage their knowledge and expertise in certain fields. The GPSC is unique among existing initiatives in that it works to operationalize the knowledge shared and learned in the fully-funded projects of the 27 pilot cities. The immediacy in impact is a rare opportunity for urban practitioners to translate the learned knowledge into a better designed and implemented project. In addition, as a knowledge platform, the GPSC is able to help cities navigate the overwhelming amount of initiatives and knowledge on urban sustainability. The GPSC can also serve as a global network for collaborative engagement on the urban agenda. In addition, the GPSC can contribute to the implementation of the SGD goals. The GPSC concept note outlines the types of activities the program will support.</p> <p>We agree that a common framework is key, given the wide range of thematic and geographic scope of the program. As such, the GPSC proposes an integrated approach based on 4 components: (i) indicators for urban sustainability and geospatial data/tools, (ii) urban planning, (iii) urban finance, (iv) partnerships and engagement. Within this framework, each interested city will develop a roadmap to sustainability.</p> <p>We agree that a systematic assessment of the cities will help given the vast thematic and geographical scope of the program—the GPSC will develop a common assessment framework that may include vulnerability studies. Through these assessments, a more tailored, city-specific action plan will be developed as one of the possible Joint Deliverables. The GPSC will</p>	

Comments	Team responses
<p>While we recognize that multidimensionality is an aspect of the program, it may be useful to limit the variables for each city. This would make the information more comparable, make it easier to assess overall objectives of the program, and facilitate the exchange and dissemination of knowledge. [Canada]</p>	<p>serve as a knowledge repository as well as a collaborative forum where knowledge can be accessed and shared. Case studies of the participating cities will also be developed at the end of the program.</p> <p>We agree with the suggestion of using Big Data in understanding urban mobility issues and look forward to investigating that modality with the Abidjan child project as part of the Joint Deliverables.</p> <p>We agree to limit the variables for each city for ease of implementation and evaluation and will endeavor to keep this in mind.</p>
8. Risks	
<p>The scope of this IAP will make it difficult to sufficiently finance and manage, and it is uncertain that funding and resources spread across 23 cities will result in the desired beneficial outcome for improving local sustainability planning efforts. Please strengthen the proposal to show how these risks will be mitigated. [Canada]</p>	<p>We agree that the funding is not enough to achieve the desired change and scope of the program. Taking a more realistic approach given the limited budget can help direct the limited budget to key priorities instead of trying to overcommit. The Joint Deliverables approach attempts to address this by dedicating resources to jointly-agreed upon actions at the city-level: the GPSC, the implementing agencies, and the participating cities will deliver a set of joint activities at the city-level, focusing on geospatial data/tools, indicators, urban planning, and urban finance. More details on this approach can be found in our Concept Note.</p> <p>The GPSC will also rely upon existing initiatives to leverage the knowledge and resources of entities currently working on the urban sustainability agenda. We acknowledge that the SC IAP program poses many challenges and have tried to address the details of planning and timelines in our Concept Note. The GPSC will also focus on shared themes and common challenges of the participating cities in GPSC learning activities and products.</p>
9. Miscellaneous	
<p>Please clearly outline the methodology for this IAP, including: the criteria used to choose cities; and, the criteria that will be used to measure the effectiveness, efficiency, budgetary cost, and level of stakeholder engagement involved within each child project. [Canada]</p> <p>We note that sound management of harmful chemicals and wastes in urban environment is an expected outcome of the IAP. This link should be strengthened in the project proposal, as only two cities identified chemicals and wastes</p>	<p>The Sustainable Cities Integrated Approach Pilot (SC IAP) is an integrated program consisting of two tracks: (a) City-level projects in 27 cities across 11 countries, with around US\$140 million in GEF grant funding. Each country is supported by one or several implementing agencies to manage the various projects in the</p>

Comments	Team responses
<p>management as a dimension of their project. We propose that more emphasis be placed on the objective of developing “the enabling conditions, tools and environment for the sound management of harmful chemicals and wastes” within all pilot cities proposals, and more detail is included as to how this objective would be met. [Canada]</p>	<p>participating cities. (b) The Global Platform for Sustainable Cities (GPSC), led by the World Bank with US\$10 million in GEF grant funding. The GPSC is a knowledge platform that ties all participating cities together and creates a collaborative space for cities aspiring towards sustainability to engage with entities already working in the urban realm.</p> <p>Within this framework, it is important to clarify that the World Bank is the lead organization for the GPSC track. However, the World Bank did not play a major role in defining the “methodology for this IAP” (i.e. the criteria used to choose the cities, etc.) nor in defining the scope of each project in all pilot cities.</p>

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁶¹

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

PPG Grant Approved at PIF:			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Total	0	0	0

⁶¹ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities. Agencies should also report closing of PPG to Trustee in its Quarterly Report.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF Trust Funds or to your Agency (and/or revolving fund that will be set up)