



PROJECT IDENTIFICATION FORM (PIF)

UNEP/GEF WORKING TEMPLATE

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: SCCF

PART I: PROJECT INFORMATION

Project Title:	Building climate resilience of urban systems through Ecosystem-based Adaptation (EbA) in Latin America and the Caribbean.		
Country(ies):	El Salvador, Jamaica, Mexico	GEF Project ID:	
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01238
Other Executing Partner(s):	Ministry of Environment and Natural Resources (El Salvador), Ministry of Land and Environment (Jamaica), Ministry of Planning and Environmental Policy (Mexico) with support from UNEP – Regional Office for Latin America and the Caribbean (ROLAC)	Submission Date:	10 January 2014
GEF Focal Area (s):	Climate Change	Project Duration(Months)	48 months
Name of parent programme (if applicable):		Agency Fee (US\$):	570 000

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK

<i>Focal Area Objectives</i>	<i>Trust Fund</i>	<i>Indicative Grant Financing (US\$)</i>	<i>Indicative Co-financing (US\$)</i>
CCA-1 (Component 2)	SCCF	4 825 000	15 484 000
CCA-2 (Component 1 and 3)	SCCF	850 000	4 820 000
CCA-3 (Component 1)	SCCF	325 000	1 606 000
Total project costs		6 000 000	21 910 000

B. INDICATIVE PROJECT FRAMEWORK

Project Objective: To increase the climate change resilience of vulnerable urban communities living in three medium-sized Latin American and Caribbean cities through the application of Ecosystem-based Adaptation (EbA) and its integration into medium- and long-term urban planning.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (US\$)	Indicative Co-financing (US\$)
1. Mainstreaming EbA into medium- and long-term urban development planning.	TA	1.1 Technical and institutional capacity of local, sub-national and national government to integrate EbA into urban development planning, policies and regulations strengthened.	1.1.1 Stocktaking and revision, with an emphasis on resource allocation, of relevant policies to integrate EbA at local and national scales. 1.1.2 A framework for sharing technical information on EbA to promote government, private sector and community action to implement EbA interventions in urban areas.	SCCF	619 733	3 013 000

			<p>1.1.3 Local and sub-national government in pilot cities trained on the effects of climate change and implementation of urban EbA.</p> <p>1.1.4 Strategy to upscale and sustain EbA interventions through strengthening of local financial mechanisms to fund EbA actions.</p> <p>1.1.5 Roadmaps for medium- and long-term urban development in the three pilot countries that include EbA considerations and interventions.</p>			
2. Implementation of urban EbA interventions to establish climate-resilient communities.	INV TA	2.1 Vulnerability of communities within pilot cities to climate change hazards reduced.	<p>2.1.1 Assessments of climate change hazards and adaptation needs in each pilot city, which will guide EbA interventions.</p> <p>2.1.2 Scenario mapping of resource availability in relation to expected population growth, land use, economic activities, climate change, development plans, disaster risk, urban catchment condition and land-use change.</p> <p>2.1.3 Protocols for city-specific implementation of urban EbA interventions, developed in consultation with stakeholders.</p> <p>2.1.4 Relevant urban EbA interventions implemented within pilot cities at community, urban landscape and urban catchment level (upstream and downstream from the pilot cities) which increase climate resilience, disaster preparedness and adaptive capacity of urban communities.</p> <p>2.1.5 Alternative livelihoods based on city-specific urban EbA interventions developed and promoted to reduce climate vulnerability of urban communities.</p>	SCCF	4 600 000	15 384 000
3. Knowledge and awareness of urban EbA throughout the region.		3.1 Knowledge of urban EbA interventions collated and disseminated to other local and national governments throughout the region, thereby	<p>3.1.1 Communication strategy developed to collect and disseminate knowledge on best-practice urban EbA.</p> <p>3.1.2 Public awareness communication materials, for each phase of the project, shared with decision-makers, community members and identified</p>	SCCF	500 000	3 013 000

		increasing the resilience of urban and surrounding areas to climate change impacts.	stakeholders. 3.1.3 A long-term research programme, with an emphasis on cost-benefit analyses, on the impacts of urban EbA interventions in pilot cities. 3.1.4 Reports, policy briefs and toolkits detailing lessons learned and good urban EbA practices disseminated to local, sub-national, national and regional authorities. 3.1.5 Knowledge generated by the SCCF project, including lessons learned, available through the REGATTA network.			
			Sub-Total		5 719 733	21 410 000
			Project management cost (PMC)	SCCF	280 267	500,000
			Total project costs		6 000 000	21 910 000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE (US\$)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (US\$)
Multilateral Agency	Inter-American Development Bank (IADB)	Grant	4 600 000
Bilateral Aid Agency	Spanish Agency for International Cooperation and Development (AECID)	Grant	8 560 000
Multilateral Agency & National Government	Inter-American Development Bank (IADB) and Government of Jamaica	Grant	7 650 000
Multilateral Agency	United Nations Environment Programme (UNEP, Coastal EbA in SIDS)	Grant	700 000
Multilateral Agency	United Nations Environment Programme (UNEP, REGATTA)	Grant	400 000
Total Co-financing			21 910 000

D. INDICATIVE TRUST FUND RESOURCES (US\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY

GEF Agency	Type of Trust Fund	Focal area	Country Name/Global	Grant amount (US\$) (a)	Agency Fee (US\$) (b)	Total (US\$) (a+b)
UNEP	SCCF	Climate Change	El Salvador	2 000 000	190 000	2 190 000
UNEP	SCCF	Climate Change	Jamaica	2 000 000	190 000	2 190 000
UNEP	SCCF	Climate Change	Mexico	2 000 000	190 000	2 190 000
Total Grant Resources				6 000 000	570 000	6 570 000

E. PROJECT PREPARATION GRANT (PPG)

	<u>Amount Requested (US\$)</u>	<u>Agency Fee for PPG (US\$)</u>
No PPG required	_____	_____
(up to) US\$50k for projects up to and including US\$1 million	_____	_____

(up to) US\$100k for projects up to and including US\$3 million
 (up to) US\$150k for projects up to and including US\$6 million
 (up to) US\$200k for projects up to and including US\$10 million
 (up to) US\$300k for projects above US\$10 million

150 000	14 250

PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF PROJECT ONLY

GEF Agency	Type of Trust Fund	Focal area	Country Name/Global	(in US\$)		
				PPG (a)	Agency Fee(b)	Total c = a + b
NA						
Total PPG Amount						

MFA: Multi-focal area projects; Multi-Trust Fund projects.

PART II: PROJECT JUSTIFICATION

A. PROJECT OVERVIEW

A.1.1. The project problem, root causes and barriers that need to be addressed

In Latin America and the Caribbean (LAC), 77% of the population currently lives in cities, and this proportion is projected to reach 85% within the next two decades¹. Such statistics place the LAC region’s cities among the fastest growing in the developing world². This rapid urban expansion is particularly noticeable in small and mid-sized cities³, which grow faster than most mega-cities⁴.

Rapid urbanisation is placing growing pressure on urban authorities to increase their provision of basic services and infrastructure, which frequently occurs within a context of limited urban planning capacity. As a result, approximately 50 million people within the LAC region do not have access to potable drinking water⁴. The limited delivery of services by local governments has resulted in urban communities relying strongly on urban ecosystems for a range of important services, such as urban catchments⁵ for water provision. Indeed, throughout the LAC region, urban and peri-urban ecosystems – e.g. wetlands, green spaces, agricultural land, coastal areas and woodlands – provide a wide range of important services for urban communities. These services include the provision of natural resources (e.g. food, fuel wood and water) and regulatory functions (e.g. flood mitigation, water filtration, microclimate regulation and waste decomposition). Furthermore, urban ecosystems provide protective, recreational and cultural benefits while improving the aesthetics of cities.

The uncontrolled human population growth in cities has however been detrimental to urban ecosystems. For example, the construction of infrastructure to meet population demands can disrupt the functioning of urban and surrounding ecosystems by creating additional pollution and leading to their over-exploitation. This environmental degradation has negative effects on urban communities because of the reduction in services provided by biophysically degraded ecosystems. The urban poor, who often have limited access to basic services and therefore rely to an extent on ecosystem services, are particularly vulnerable to environmental degradation⁶. It

¹ UN-HABITAT. 2009. *State of the World’s Cities 2008/2009. Regional up-dates: Latin American and Caribbean and at a glance.* <http://www.unhabitat.org/downloads/docs/presskitsowc2008/regional%20updates%20latin.pdf>. Accessed 26 November 2013.

² ECLAC. 2012. *Social Panorama of Latin America*. Panamá: Economic Commission for Latin America and the Caribbean (ECLAC) United Nations.

³ This includes cities that have populations of up to 5 million people.

⁴ UNEP. 2010. *Global Environmental Outlook: Latin America and the Caribbean. GEO LAC 3*. Panamá: United Nations Environment Programme.

⁵ For the purposes of this project, urban catchments are defined as those catchments that are partially contained within the city limits and are important for the city’s water supply. Eba interventions implemented within these catchments will improve water quality and quantity within the pilot city.

⁶ Winchester, L. 2008. *Harmony and dissonance between human settlements and the environment in Latin America and the Caribbean*. Santiago, Chile: Economic Commission for Latin America and the Caribbean (ELAC), German Agency for Technical Cooperation (GTZ) and Germany’s Federal Ministry for Economic Cooperation and Development (BMZ).

is estimated that approximately 100 million people within the LAC region live in areas that do not meet the minimum standards of environmental quality⁷.

Environmental degradation and the consequent vulnerability of urban communities within the LAC region are likely to increase as a result of the effects of climate change. In general, the LAC region currently experiences: i) frequent drought⁸; ii) intense storms and frequent hurricanes; and iii) sea level rise. Prolonged droughts are expected to cause water shortages affecting between 79 million and 178 million people throughout the region⁸. It is also anticipated that extreme rainfall events will become more frequent by the end of this century⁹. Furthermore, sea level is expected to rise in the region by 5 mm yr⁻¹ during the next 100 years¹⁰, substantially increasing the vulnerability of approximately 290 million people¹¹ to the effects of flooding⁴.

At country level, the effects of climate change on vulnerable urban communities are similar to those described for the LAC region as a whole. In El Salvador for example, San Salvador (the capital city) experiences frequent flooding events¹² that destroy natural and man-made infrastructure. Such events are now recurrent, particularly in the densely populated sub-basins of Acelhuate, Las Cañas and Tomayate rivers. The Tropical Storm Ida in 2009, Tropical Storm Agatha in 2010 and Tropical Depression 12E in 2011 negatively affected 122 000, 120 000 and 500 000 people, respectively. These three recent tropical storms have caused losses and damages of approximately US\$ 1.3 billion (~6% of the GDP in 2011)¹³. In Jamaica, climate-related hazards include floods, landslides, mudflows, drought, fires and tropical cyclones/hurricanes. The parishes of St. Elizabeth, Clarendon, Kingston and Manchester are the most vulnerable to hurricanes, which cause flooding (coastal), landslides and extreme rainfall in these parishes¹⁴. In Mexico, current predictions indicate that: i) the mean annual temperature will increase by 0.5 ± 0.5 °C in the south and 1.3 ± 0.8 °C in the north by 2020¹⁵. These increasing temperatures have already resulted in the frequent occurrence of prolonged drought. In addition, in 2009 alone, floods affected more than 554 000 people, destroyed approximately 420 000 ha of crops and caused losses of more than US\$ 1 billion¹⁶.

Most of the observed and predicted climate-related hazards result in adverse impacts on natural resources. Combined with the effects of environmental degradation, climate change will therefore have significant consequences for the lives of millions of people. In cities, the consequences currently observed include: i) decreases in water availability and quality; ii) loss of property and lives; and iii) negative effects on energy production, infrastructure and supporting urban ecosystems. Overall, the estimated cost of the expected effects of extreme climatic events in the LAC region is US\$ 250 billion¹⁷. Such economic loss is ill afforded in this region, where 70 million people live in extreme poverty¹⁸. Consequently, local governments of cities in the region need to find concrete solutions to reduce the vulnerability of urban communities to the effects of climate change.

The **problem** that the proposed SCCF project seeks to address is that urban communities in the LAC region are vulnerable to the current and predicted effects of climate change. Environmental degradation, and the associated

⁷ OMS/UNICEF . 2007. *La meta de los ODM relativa al agua potable y el saneamiento: el reto del decenio para zonas urbanas y rurales*. Ginebra, Suiza. 41 p: Organización Mundial de la Salud - Fondo de las Naciones Unidas para la Infancia.

⁸ Magrin, G.C. 2007. *Latin America. Climate Change 2007: Impacts, adaptation and vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, UK, 581-615. In: : Parry, M.L., Canziani, O.F., Palutikof, J.P., van der Linden, P.J. & Hanson, C.E. (eds.), Cambridge University Press.

⁹ IPCC. 2013. *Working Group I Contributions to the IPCC Fifth Assessment Report Climate change 2013: The Physical Science Basis. Summary for policy makers*. IPCC WGI AR5.

¹⁰ Parry, M.L. Canziani, O.F. Palutikof, J.P. van der Linden, P.J. & Hanson, C.E. (eds.). 2007. *Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. IPCC. Cambridge University Press, Cambridge, United Kingdom.

¹¹ It is estimated that approximately 50% of the population within the LAC region live within 100 km of the coast.

¹² Fernández-Lavado, C. 2010. *Caracterización de la inundabilidad en el Área Metropolitana de San Salvador (El Salvador, CA)*. San Salvador, El Salvador: Programa IPGARAMSS. Geólogos del Mundo.

¹³ GOES/CEPAL. 2011. *Evaluación de daños y pérdidas en El Salvador ocasionados por la depresión tropical 12E*. San Salvador, El Salvador: Gobierno de El Salvador (GOES) - Comisión Económica para América Latina (CEPAL).

¹⁴ <http://www.discoverjamaica.com/gleaner/discover/geography/climate.htm>. Accessed 26 November 2013.

¹⁵ Comisión Intersecretarial de Cambio Climático. 2009. *México Cuarta Comunicación Nacional ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático*.

¹⁶ CENAPRED 2010. *Socioeconomic impacts of the principal disasters occurring in the Mexican Republic in 2009*.

¹⁷ ECLAC- IDB. 2010. *Climate Change: A regional perspective*. Santiago, Chile: United Nations.

¹⁸ CEPALSTAT. 2010. *Pobreza extrema. CEPALSTAT sobre la base de encuestas de hogares de los países de la región*. Bases de Datos y Publicaciones Estadísticas Comisión Económica para América Latina y el Caribe.

loss of essential ecosystem services, exacerbates this problem. This problem is further aggravated by the limitations of urban authorities in terms of technical capacity, knowledge and financial resources. There is consequently an urgent need to strengthen the capacity to plan, implement, manage and upscale adaptation interventions to increase the climate change resilience of vulnerable urban communities living in LAC cities.

The **proposed response** is to increase the climate resilience of vulnerable urban communities in LAC countries by catalysing the large-scale implementation of Ecosystem-based Adaptation (EbA) in the urban context. This will be achieved by demonstrating urban EbA interventions in pilot cities in El Salvador, Jamaica and Mexico, as well as by integrating EbA into medium- and long-term urban planning. In addition to the proposed on-the-ground interventions, local government and communities in the pilot cities will be trained on climate change and EbA in an urban setting. Furthermore, knowledge on the design and implementation of urban EbA will be disseminated throughout the three focal countries and the LAC region in general.

EbA provides an effective way to reduce climate change vulnerability while providing multiple benefits to communities and the environment by protecting, maintaining and rehabilitating ecosystems¹⁹. Examples of urban EbA interventions include: i) urban reforestation, which limits urban heat-island effects, mitigates flooding and enhances groundwater recharge²⁰; ii) restoration of urban wetlands, which filter water and promote infiltration; and iii) urban agriculture, which builds the climate resilience of vulnerable urban communities by diversifying food sources and income streams. Importantly, EbA has been shown to require comparatively small investments relative to the long-term social, economic and environmental benefits²¹.

Significant barriers to achieving the implementation of urban EbA exist in the LAC region. These barriers include: i) insufficient institutional capacity to coordinate the implementation and upscaling of urban EbA interventions; ii) insufficient resources allocated to EbA in government policies and strategies; iii) insufficient evidence to demonstrate the benefits of urban EbA to policy- and decision-makers; iv) limited understanding of local urban communities of the benefits of EbA, as a result of limited on-the-ground examples; and v) limited knowledge and financial resources to incorporate urban EbA into local and national development plans.

The proposed SCCF project (hereafter referred to as the SCCF project) will contribute to overcoming the above adaptation barriers by: i) integrating EbA into local and national government structures and medium- and long-term urban planning; ii) implementing EbA interventions in urban areas to increase community resilience to climate change in three pilot cities; and iii) transferring knowledge of urban EbA to local communities and local, sub-national and national governments throughout the LAC region.

*A.1.2. The **baseline** scenario and associated baseline projects*

Urban communities in El Salvador, Jamaica and Mexico are negatively affected by climate change. In particular, severe storms and more frequent floods and droughts are reducing water supply and sanitation standards. This is associated with multiple economic, social and environmental problems. Ensuring food and water security, managing disaster risks, protecting infrastructure, and improving the livelihoods of the urban poor are major challenges in urban areas in the LAC region. In El Salvador, Jamaica and Mexico, these baseline problems are being addressed by a number of baseline projects, further described below.

Regional – IADB Biodiversity Ecosystem Services (BES) Programme. The main objective of this programme is to mainstream biodiversity and ecosystem services into the following economic sectors: agriculture, sanitation, transportation, tourism and water. The BES Programme will do this by supporting the countries in: i) integrating the value of BES into key economic sectors; ii) protecting priority regional ecosystems; iii) developing effective

¹⁹ Jones, H.P., Hole, D.G. & Zavaleta, E.S. 2012. *Harnessing nature to help people adapt to climate change*. Nature Climate Change 2: 504–509.

²⁰ Some tree species provide additional benefits to human populations through the provision of non-timber forest products (NTFPs). Such NTFPs include nuts, seeds, berries, medicinal plants, fuelwood, fodder and construction materials.

²¹ UNEP/STREP 2012. *A comparative analysis of ecosystem-based adaptation and engineering options for Lami Town, Fiji*: Synthesis Report.

environmental governance and policy; and iv) creating new sustainable development business opportunities²². The programme will operate in all LAC countries, including El Salvador, Jamaica and Mexico, was approved in July 2013 and is currently in the preparation phase. It includes a range of sub-projects, several of which are relevant to the SCCF project. Examples of these projects include, *inter alia*: i) Building Capacity in the Economics of Biodiversity and Ecosystem Services (US\$ 200 000); ii) Communications, Outreach and Capacity Building Support Biodiversity, Ecosystem (US\$ 300 000); iii) Support to Biodiversity and Ecosystem Services Platform (US\$ 200 000); and iv) Expanding Private Sector Investment in Biodiversity and Ecosystem Services (US\$ 360 000). The SCCF project will build on these projects by facilitating the inclusion of climate change considerations and an EbA approach into the capacity-building and knowledge-sharing activities. Furthermore, it will contribute to the business and investment plans developed under the BES programme by contributing lessons learned about investment in EbA measures from literature reviews and the SCCF project's interventions. The project will also incorporate a focus on climate-proofing investments through the use of EbA into the business and investment plans developed.

El Salvador – AECID Cooperation Fund for Water and Sanitation (FCAS-ES)²³. This programme, funded by the Spanish Agency for International Cooperation and Development (AECID), aims to improve the lives of suburban and rural communities in El Salvador by enhancing, rehabilitating and expanding water supply systems and infrastructure. It also has a component that will involve the institutional strengthening of implementing agencies and local governments, to ensure sustainable development of the water sector. The budget of the project is €57 million contributed by FCAS, and €14 million²⁴ contributed by local investment. Implemented from 2011 until 2016, it will benefit 168 000 people. The principal activities in this programme are focused on improving: drinking water; sanitation; management of water resources; institutional capacity, and local capacity. Included in this project are five projects:

- SLV-001-B: Infrastructure Program on Water and Sanitation in Peri-urban and Rural Areas of El Salvador;
- SLV-041-B: Plan of Governance and Planning of Water Resource Management;
- SLV-042-M Water and Sanitation in Rural Areas;
- SLV-056-B Integrated Project on Water, Sanitation and the Environment; and
- CTR-004B: Nexos Regional Water Project.

As climate change is not considered as a factor in any of these projects, their interventions are unlikely to be climate-resilient. The SCCF project will primarily build on the capacity-building and institutional-strengthening activities of these programmes by including a focus on climate change adaptation (particularly EbA) in any training conducted and educational materials developed. Furthermore, where programme activities take place in urban areas, the SCCF project will enhance the climate-resilience of these activities by including climate change considerations and an EbA approach in their planning and implementation. This will support the FCAS-ES programme in achieving its goal of improving the supply of water to Salvadoran communities.

Jamaica – IADB Kingston Metropolitan Area (KMA) Water Supply Improvement Project (KMAWSIP)²⁵. The primary objective of this project is to improve the quality of life of the Kingston population by improving the reliability of potable water and sanitation services. The project comprises four components: i) rehabilitation of the potable water supply for Kingston and St. Andrew Area (KSA); ii) rehabilitation of the potable water supply for KMA; iii) energy efficiency improvements; and iv) institutional strengthening of the National Water Commission (NWC). The Government of Jamaica is implementing the project, from 2011 until 2016. The funding agent is the IADB, and the budget is US\$ 133 million. Its activities are focused on improving the functioning and energy efficiency of existing water supply and treatment infrastructure, and developing new infrastructure, notably an

²² Inter-American Development Bank. Biodiversity and Ecosystem Services Program: An Overview.

<http://www.iadb.org/en/topics/environment/biodiversity-platform/biodiversity-platform/idb-biodiversity-ecosystem-services-latin-america,7721.html>.

Accessed 9 December 2013.

²³ Published information currently only available in Spanish. <http://www.fondodelagua.aecid.es/es/fcas/donde-trabaja/paises/el-salvador.html>. Accessed 2 December 2013.

²⁴ ~US\$ 77 million and ~US\$ 19 million, respectively, at early December 2013 exchange rates.

²⁵ Kingston Metropolitan Area (KMA) Water Supply Improvement Project – Project Profile. 2011. <http://www.iadb.org/en/projects/project-description-title,1303.html?id=JA-L1035>. Accessed 2 December 2013.

aquifer recharge system and new water supply networks for selected areas. In addition, the final component is focused on strengthening the capacity of the NWC. However, none of these interventions considers climate change, and all are therefore vulnerable to the effects of climate change and climate variability. The SCCF project aims to promote the inclusion of adaptation to climate change in planning and capacity-strengthening activities. Furthermore, the project will promote the incorporation of an urban EbA approach into infrastructure-based project activities, to increase their sustainability under climate change conditions.

Mexico – IADB Programme for the Sustainability of Water Supply and Sanitation Services in Rural Communities (PROSSAPyS)²⁶. This IADB-funded programme will improve drinking water and sanitation infrastructure across Mexico, benefitting approximately 2 million people. It has three main components, focusing on: i) institutional capacity development; ii) improvement of infrastructure; and iii) community participation in the provision of water and sanitation services. PROSSAPyS is currently in preparation phase, and has an estimated budget of US\$ 450 million. Although the primary focus of the PROSSAPyS is rural areas, the SCCF project will enhance the climate change resilience of its interventions by integrating adaptation principles into its capacity development activities. General EbA principles and lessons learned from SCCF project interventions, such as rainwater harvesting and grey water recycling, will be incorporated into training and communications materials developed and disseminated by PROSSAPyS. This will assist PROSSAPyS to develop climate-resilient interventions by facilitating the incorporation of climate change considerations into planning. The SCCF project will also facilitate analysis of the interactions between climate change, ecosystem health, water, and disaster risk, and using this information will assist in the identification of effective adaptation actions. This will support PROSSAPyS in meeting its water supply and sanitation goals.

Mexico – AECID Cooperation Fund for Water and Sanitation (FCAS-M)²⁷. This project, funded by the AECID, aims to improve the quality of life and promote social equity and environmental sustainability of the most vulnerable Mexican populations. The activities include: i) construction and improvement of water supply and sanitation systems; ii) increasing the technical capacity of water management institutions and water supply operators; and iii) ensuring the operational and financial sustainability of water management systems in the medium- and long-term. It will benefit 616 000 people and has a budget of €41 million²⁸, half of which is contributed by FCAS and the other half by the Mexican government. Despite its focus on sustainability, this baseline project does not consider climate change, which will compromise its infrastructure interventions and reduce the effectiveness of its capacity-building activities. The SCCF project will enhance the resilience of FCAS-M interventions to the effects of climate change. It will do this by incorporating climate change adaptation into FCAS-M's construction and improvements of water supply and sanitation systems. Furthermore, the SCCF project will disseminate knowledge on EbA implementation, thereby increasing the technical capacity of the staff of water management institutions and water supply operators. The SCCF project will also enhance the operational and financial sustainability of FCAS-M interventions by promoting the inclusion of climate change considerations in the planning stages of these interventions.

Further city-specific baseline projects will be identified, during the PPG phase and following city selection.

*A.1.3. The proposed **alternative scenario**, with a brief description of expected outcomes and components of the project*

The SCCF project aims to increase the resilience of vulnerable urban communities to the effects of climate change by building on and complementing the activities of relevant baseline projects with urban EbA interventions. Furthermore, the SCCF project will catalyse large-scale implementation of EbA in urban areas, which will be achieved by collating and disseminating, to relevant authorities, scientific knowledge on urban EbA and lessons learned during project implementation.

²⁶ The majority of published information is in Spanish. http://www.iadb.org/en/projects/project-description-title.1303.html?id=ME-L1147#_Ummmp2PIWyM4. Accessed 2 December 2013.

²⁷ Published information currently only available in Spanish. <http://www.fondodelagua.aecid.es/es/fcas/donde-trabaja/paises/mexico.html>. Accessed 2 December 2013.

²⁸ ~US\$ 56 million at early December 2013 exchange rates.

The interventions designed in the SCCF project will be implemented in El Salvador, Jamaica and Mexico. The selection of these countries is based on three criteria. Firstly, these three countries play leadership roles in adaptation to climate change, water management and conservation of natural resources in the LAC region. They can therefore facilitate further positive change within the region. Secondly, climate-related hazards that are increasing in frequency and severity as a result of climate change, e.g. floods, droughts and extreme rainfall events, are common to the three countries. Thirdly, the three countries have submitted specific requests to UNEP for technical assistance with implementing EbA in alignment with specific city and country needs and processes. This similarity of threats will facilitate the transfer of EbA technologies as well as lessons learned between the selected countries. In addition, however, subtle differences between the countries and the threats they face will allow a wider suite of more generally applicable approaches to be developed. This will facilitate the transfer of EbA measures to other countries in the LAC regions.

In each country, one mid-sized city (see Section A.1.1) will be selected as a pilot city. The criteria for selecting pilot cities include, *inter alia*: i) political influence of the city in the LAC region; ii) availability of relevant city-specific or regional baseline projects; iii) possible synergies with other regional and national projects; iv) vulnerability of the city to current and future climate change threats; and v) the willingness of local authorities to implement urban EbA. All criteria will be reviewed during the PPG inception workshop. However, potential candidate cities for the SCCF project include: i) San Salvador (El Salvador); ii) Kingston or Montego Bay (Jamaica); and iii) Tampico or Aguascalientes (Mexico).

The project components are described below.

Component 1: Mainstreaming EbA into urban development planning.

This component will strengthen the technical and institutional capacity of local governments of pilot cities as well as national governments to plan and implement urban EbA. The strengthened technical capacity within governments will facilitate the mainstreaming of EbA into development strategies at local and national levels. A detailed description of the adaptation scenario funded from SCCF resources is presented in section A.1.4.

Indicative activities within this component are described below.

- Identify and revise existing policies, with an emphasis on resource allocation, that are relevant to ecosystem management and/or climate change adaptation to identify entry-points for integrating EbA.
- Strengthen collaboration and promote exchange of technical information between national and local governments with regard to urban EbA. Such collaboration will also include: i) regional institutions; ii) local communities; iii) the private sector; and iv) existing regional platforms for knowledge sharing for example the Knowledge Centre on Cities and Climate Change (K4C).
- Hold training workshops on climate change and EbA planning and implementation.
- Design concrete financial mechanisms for urban EbA interventions.
- Design an upscaling strategy for urban EbA based on the financial mechanisms designed.
- Design a roadmap for medium- and long-term urban planning that integrates EbA considerations and methods.
- Develop policy briefs and technical guidelines on increasing the resilience of vulnerable urban communities to climate change.

Component 2: Implementation of urban EbA interventions to establish climate-resilient communities.

This component will implement concrete, on-the-ground EbA interventions in the three pilot cities. These interventions are designed to increase the resilience of vulnerable urban communities to the effects of climate change. An initial assessment of the current and predicted effects of climate change and adaptation needs in each pilot city will guide the selection of interventions. This selection will be informed by the policies reviewed in Component 1. In particular, the on-the-ground interventions will be: i) city-specific; ii) cost-effective; and iii) environmentally and socially sustainable. In addition to urban interventions, it is envisaged that some EbA

interventions will be implemented in rural areas surrounding the pilot cities, within the urban catchment (see Section A.1.1). These interventions will be selected specifically to increase climate resilience and improve the biophysical integrity and functioning of ecosystems within the pilot cities. The inclusion of such rural ecosystems will be further discussed during the PPG inception workshop. Further details regarding the adaptation scenario within this component are provided in section A.1.4.

Indicative activities within this component are described below.

- Assess the current and predicted effects of climate change in each pilot city.
- Generate likely scenarios of resource availability based on multi-sectoral variables. These variables will include factors such as urban population growth, land use, land policy, trends in economic activities, and predicted effects of climate change on the economic sector.
- Identify adaptation needs that are both city- and LAC-specific through a multi-stakeholder consultation process.
- Assess cultural and other social constraints that may affect urban EbA interventions in the pilot cities.
- Implement relevant EbA interventions appropriate to the social, cultural and environmental contexts of each pilot city. Potential suites of interventions include urban reforestation, urban wetland and riparian corridor restoration, urban/peri-urban agriculture on a landscape level, and rainwater harvesting, water and organic matter recycling on a household level.
- Identify and restore any ecosystems in rural areas surrounding the pilot cities whose biophysical integrity affects the climate-resilience of vulnerable communities in the cities. Examples of such ecosystems are those that promote the filtering and storage of water entering the cities, such as wetlands and riparian corridors. Potential interventions include improved agricultural practices, wetland restoration, and reforestation of riparian corridors.
- Develop and implement a concrete plan for promoting alternative livelihoods based on the ecosystem services enhanced by urban EbA interventions.

Component 3: Knowledge and awareness of urban EbA throughout the region.

This component will document existing knowledge about EbA and lessons learned during the implementation phase of the project. These will be shared with policy- and decision-makers and urban communities throughout the LAC region. As a result, awareness of the benefits of urban EbA will increase in the region, as well as the technical capacity of governments to plan and implement EbA interventions in cities.

Indicative activities within this component are described below.

- Collate, review and synthesise existing best-practice knowledge on EbA.
- Document lessons learned during the implementation phase of the project.
- Identify the most appropriate communication channels within and between cities and countries in the region. This will include webinars, existing networks such as REGATTA, online platforms such as K4C, television and radio broadcasts, pamphlets and training workshops. Design a communication strategy based on these communication channels.
- Complement existing channels by designing a web-based platform to be established on local government websites/community websites. This platform will provide a focal point for information exchange and facilitate access to the tools developed for the project. These tools will include, *inter alia*, a project database, technical reports, handbooks, leaflets and documentary films.
- Disseminate knowledge and lessons learned to local and national authorities as well as local communities using all available communication channels.
- Establish public awareness and training programmes on the effects of climate change and the benefits of and methods for implementing urban EbA.
- Design long-term research programmes (which will continue beyond the SCCF project) to assess the impacts of urban EbA interventions. This research programme will emphasise cost-benefit analyses and be based in local scientific institutions.
- Use UNEP's economics of ecosystems and biodiversity tool (TEEB) to undertake annual valuation of ecosystems in which project interventions have been implemented.

- Develop protocols to guide future urban EbA interventions. These protocols will be based on the best-practice knowledge collated above and informed by lessons learned during the implementation of urban EbA interventions in the pilot cities.
- Develop and disseminate reports, policy briefs and toolkits based on the above protocols to local, sub-national, national and regional authorities.
- Make all information collated available through the REGATTA network.

A.1.4. Additional cost reasoning and expected contributions from the baseline, the SCCF and co-financing

The SCCF project will increase the climate resilience of vulnerable urban communities within three pilot cities in El Salvador, Jamaica and Mexico by implementing urban EbA interventions. This will improve the access of these urban communities to essential ecosystem services such as water provisions, groundwater recharge, flood mitigation, erosion control and food provision.

UNEP has identified potential baseline co-financing of ~US\$ 22 million (see Table C). This includes co-financing from baseline projects, namely the **BES Programme**, funded by the IADB the **FCAS-ES** and **FCAS-M** programmes, funded by AECID, the **KMAWSIP** project, funded by the IADB and the Government of Jamaica, and **PROSSAPyS**, funded by the IADB. Additional co-financing is to be provided by **UNEP's CE-SIDS programme** and the **REGATTA** project funded by UNEP and the governments of Spain, Norway and Sweden. The SCCF project aims to increase the resilience of the baseline investments under future climate change conditions. The additional cost reasoning for each component of the SCCF project is described below. A description of the climate change vulnerabilities of the baseline projects versus the adaptation alternative under the SCCF project is presented in Appendix A.

Component 1: Mainstreaming EbA into urban development planning.

Business as usual scenario:

At present, there is insufficient knowledge and capacity in city management authorities in El Salvador, Jamaica and Mexico to develop and implement financially viable and ecologically appropriate urban EbA projects. Climate change programmes in the LAC region, such as the UN-HABITAT Cities and Climate Change Initiative (CCCI), UNISDR Making Cities Resilient Campaign and EUROCLIMA (see Section A.4 for further details), have begun to increase the capacity of local and national governments to develop strategies for adaptation to climate change. However, these programmes have not successfully equipped local and national governments to institute urban EbA interventions. As a result, urban EbA is not included in existing programmes and plans designed to improve the living conditions of urban poor communities in the three focal countries. In order for the three focal countries to integrate urban EbA into development planning, the institutional and technical capacity of city management authorities needs to be strengthened. This is required so that climate change adaptation, urban development plans and measures to reduce disaster risk are complemented by urban EbA interventions in the LAC region.

Adaptation scenario:

With SCCF funding, the proposed project will equip local government in pilot cities with the skills to design and implement urban EbA projects for building the resilience of urban communities to climate change. This will be achieved by conducting a review of existing policies, strategies, legislation, and budget related to the management of natural resources, hazards and climate disasters. The review will focus on water management, disaster risk reduction and climate change adaptation. It will also be used to identify entry points and funding mechanisms for integrating an EbA approach into existing policies, strategies and legislation. Complementing this approach, a framework to disseminate technical skills and knowledge on EbA will be developed. The framework will: i) identify important stakeholders in government, the private sector and local communities; and ii) establish mechanisms to share technical information. This will promote government, private sector and community action to implement EbA interventions in pilot cities. Building on this, local government in pilot cities will be trained to plan, design and implement urban EbA interventions. The development of this training will include consolidating

information on: i) the effects of climate change in urban areas; ii) the effectiveness of urban EbA interventions for increasing climate resilience; and iii) best practices in urban EbA. This information will be incorporated into the training materials and thereby disseminated to decision makers in local and sub-national government. Developing countries, including those from the LAC region, have established a medium- and long-term national adaptation planning (NAP) process. Furthermore, they have invited GEF, the UN agencies and other organisations to provide support through SCCF resources to facilitate this process. SCCF funding will be used, *inter alia*, to develop a roadmap for medium- and long-term urban development planning which will incorporate EbA considerations and methods. The financing strategies for the upscaling of EbA interventions in urban areas, based on experience in the three pilot cities, will be developed and disseminated to policy and decision makers. This will enable urban EbA approaches to be promoted in other cities within the LAC region.

The SCCF project will build upon the ongoing activities of the baseline projects. The BES, FCAS-ES and PROSSAPyS programmes include capacity-building objectives to which the SCCF project will contribute. The exact budget allocations of each of these programmes towards capacity-building is yet to be confirmed. However, it is estimated that: i) US\$ 50 000 of the BES budget; ii) US\$ 480 000 (0.5% of total budget) of the FCAS-ES budget; and iii) US\$ 2 050 000 (0.5% of total budget) of the PROSSAPyS budget can be used as cofinancing for this component. The exact value of these baseline project activities relevant to the SCCF project will be determined during the PPG phase. Additionally, it is estimated that US\$ 233 000 of the co-financing provided by CE-SIDS and US\$ 200 000 of the co-financing provided by REGATTA are relevant to this component. The total cofinancing is therefore estimated to be US\$ 3 013 000 for this component. The additional cost for increasing capacity within city management authorities in pilot cities to implement urban EbA is estimated to be US\$ 619 733.

Component 2: Implementation of urban EbA interventions to establish climate-resilient communities.

Business as usual scenario:

Urban areas in the three focal countries face a range of challenges, which include rapid urbanisation, extensive poverty, social marginalisation and reduced food and water security. There are several programmes underway to address these problems, including the BES, FCAS-ES, KMAWSIP, PROSSAPyS and FCAS-M baseline projects. However, these projects do not adequately consider climate change. Many of the current problems and natural hazards affecting urban communities in El Salvador, Jamaica and Mexico will be exacerbated by climate change and climate variability. Likely effects of climate change on urban populations in these countries include: i) more frequent droughts, floods, landslides and fires; ii) increases in the frequency and severity of storms and hurricanes; and iii) sea level rise. These effects result in reduced access to clean water, damaged infrastructure, increased spread of life-threatening diseases, loss of life, and decreased agricultural yields. Until recently, most urban interventions aimed at adapting to climate change in the three pilot cities have focused on the development of hard infrastructure as a means of reducing vulnerability to the effects of climate change. Although these measures are often appropriate solutions to specific urban problems or climate change threats, they are also usually costly and incompatible with other sustainable development initiatives, and many have unforeseen negative side effects.

Alternative scenario:

SCCF resources will be used in the three pilot cities to increase the resilience of urban communities that are vulnerable to the effects of climate change through the implementation of urban EbA interventions. These interventions will be chosen based on the needs of each pilot city, and are likely to be varied given the wide range of local biophysical and socio-economic contexts. To guide the selection of appropriate interventions, studies will be conducted to assess the present and likely future effects of climate change on vulnerable communities in each of the pilot cities. These studies will also identify the adaptation needs in these communities. Furthermore, projected resource availability will be assessed, taking into account expected population growth, economic activities, climate change, development plans, disaster risk, urban catchment condition and land-use change. Based on the results of these studies, EbA interventions that address the immediate adaptation and resource provision needs of the urban communities will be proposed for each pilot city. Workshops will be held with

stakeholders to select urban EbA interventions based on these proposals, and UNEP's EbA Decision Framework Tool will be used to support the selection process.

The implementation of selected interventions will be guided by scientifically rigorous protocols, developed in collaboration with national and international experts and based on international best practice. Workshops and outreach activities in target communities will encourage a participatory approach during project implementation. These activities will also promote support from local communities and build adaptive capacity. Urban EbA interventions will be implemented within both the pilot cities and the surrounding water catchment zones. Urban EbA interventions can be divided into three categories: i) those that act at the level of the local communities and household; ii) those that act at the level of the urban landscape; and iii) those that act at the level of the urban catchment. Some potential urban EbA interventions in these categories are discussed below.

Urban EbA interventions that increase resilience to climate change at the community and household level include rainwater harvesting, water recycling, organic matter recycling, and ecological sanitation. These activities will increase the supply of water to households and improve living conditions. They will furthermore facilitate the use of urban agriculture to supplement food supplies and diversify livelihoods. Urban agriculture interventions using climate resilient crops will be implemented in green spaces within the cities, in gardens, in vacant lots and/or on the roofs of buildings. An urban agriculture approach that could be applied in wetlands, if they exist in the pilot cities, is chinampas agriculture²⁹. A similar alternative that could be used in drier cities is solar hydroponics³⁰. Through the implementation of these household-level urban EbA interventions, resources will be conserved and effectively used, resulting in increasingly reliable supplies of potable water and food³¹ and a wider range of livelihood options for vulnerable communities.

EbA interventions that act on the level of the urban landscape include those within the broad classes of reforestation, rehabilitation of wetlands and riparian corridors, and improving urban agricultural practices. These interventions improve water quality and availability and mitigate the effects of floods, complementing the improved water supply and sanitation objectives of several of the baseline projects. These broad classes of landscape-level EbA interventions are therefore likely to be implemented in both the pilot cities and their urban catchments. Tree and crop species planted through these interventions will be climate-resilient, being selected based on their flood tolerance³², drought tolerance³³, and potential to provide climate change adaptation³⁴ and community benefits³⁵. This will ensure that vulnerable urban communities derive the greatest possible benefits in terms of climate change adaptation from these EbA interventions. Climate-resilient trees will be planted in riparian zones, along sidewalks, in green spaces, in vacant lots, and/or within gardens. By increasing the vegetative cover within the pilot cities, urban reforestation will reduce heat stress, facilitate increased infiltration of rainwater into aquifers, and reduce air pollution, surface runoff and erosion. Secondly, degraded wetlands and riparian corridors within the pilot cities will be rehabilitated using selected climate-resilient plant species. Urban wetland and riparian corridor restoration will reduce flooding and erosion and will provide natural water filtration

²⁹ This type of agriculture was developed by the Aztecs and is still in use today. It involves using wetland areas to cultivate food, without the use of fertiliser, while conserving both soil and wetland habitat. See the following resources for further information: <http://permaculturenews.org/2013/05/28/chinampas-2-0-an-elegant-technology-from-the-past-to-save-the-future/>; Lal, R. 2008. The urgency of conserving soil and water to address 21st century issues including global warming. *Journal of Soil and Water Conservation* 63: 140A–141A. Doi: 10.2489/jswc.63.5.140A. Available at: <http://www.jswconline.org/content/63/5/140A.short#>. Accessed 2 December 2013.

³⁰ Published information currently only available in Spanish. Microfinanzas Para La Adaptación Basada En Ecosistemas: Opciones, costos y beneficios. <http://www.pnuma.org/meba/fichas/archivocompletosfichas.pdf>. Accessed 9 December 2013.

³¹ Recent studies have shown that home gardens can provide a significant proportion of the fruits and vegetables consumed by households (60% of leafy vegetables, 20–50% of all fruit and vegetables). There is also evidence that home gardens significantly reduce the number of malnourished children in poor communities. The Center for Sustainable Development. <http://www.csd-i.org/csd-i-blog/2013/6/12/international-adaptation-workshop-northern-nonprofit-project.html>. Accessed 14 June 2013.

³² Flood-tolerant species will be characterised by deep, extensive root systems, fast growth rates and the ability to tolerate extended periods of inundation.

³³ Drought-tolerant species will be adapted to dry conditions. Widespread species that exhibit phenotypic plasticity and grow in a range of different climatic conditions will be favoured.

³⁴ Plant species can provide a range of adaptation benefits, including: i) plants with extensive root systems bind soil and prevent erosion associated with heavy rainfall; ii) trees with wide canopies provide shade, thereby reducing heat stress; iii) nitrogen-fixing species improve soil fertility, increasing productivity and thus food security; and iv) flowering plants increase the food supply for and therefore population of pollinators, with positive effects on agricultural productivity.

³⁵ Plant species that provide a range of additional benefits will be favoured. Plant species will be characterised in terms of their ability to provide: i) food (fruit, berries); ii) fodder; iii) medicinal materials; iv) resin; v) fibre; vi) timber; and vii) charcoal.

and purification systems. Thirdly, interventions will be implemented involving mixed agricultural systems with decreased use of synthetic fertilisers as well as the planting of tree/shrub species that promote the stabilisation of soil and infiltration of water.

At the catchment level, the combined EbA interventions dealing with reforestation, riparian corridor rehabilitation and better agricultural practices will reduce water flows, decrease nitrate and phosphorous pollution from fertilisers into downstream water bodies, retain sediments and stabilise soil. The restoration of ecosystems at a landscape level will reduce risks of landslides and flash floods that could affect vulnerable communities.

The SCCF project will develop and promote alternative livelihoods based on the ecosystem services enhanced by the urban EbA interventions implemented in each city. These diversified livelihoods will make use of resources produced by the planted trees and rehabilitated wetlands and riparian corridors. Alternative livelihoods will enhance the climate resilience of vulnerable urban communities by providing community members with a wider range of income options in times of climate-related stress. The secondary jobs created through urban agriculture (for example, street vending of food) will provide further alternative livelihood options, which will also increase the climate resilience of these communities.

Through the implementation of one or more of these and other potential urban EbA interventions, and the simultaneous training of community members in this implementation, urban communities will experience consistent, long-term adaptation benefits. These benefits include increased buffering from extreme weather events, reduced erosion and sedimentation, increased water and food supplies, increased livelihood options, and increased social and human adaptive capacity. This will assist urban communities to recover quickly after extreme weather events as well as adapt to future climate changes.

The SCCF project will build upon the ongoing activities of the baseline projects. The FCAS-ES, KMAWSIP and FCAS-M programmes include activities involving on-the-ground interventions in pilot cities into which the SCCF project will integrate EbA. The exact budget allocations of each of these programmes towards these activities is yet to be confirmed. However, it is estimated that: i) US\$ 4 800 000 (5% of total budget) of the FCAS-ES budget; ii) US\$ 7 550 000 (5% of total budget) of the KMAWSIP budget; and iii) US\$ 2 800 000 (5% of total budget) of the FCAS-M budget can be used as cofinancing for this component. The exact value of these baseline project activities relevant to the SCCF project will be determined during the PPG phase. Additionally, it is estimated that US\$ 234 000 of the co-financing provided by CE-SIDS is relevant to this component. The total cofinancing is therefore estimated to be US\$ 15 384 000 for this component. The additional cost for implementing urban EbA interventions within pilot cities is estimated to be US\$ 4 600 000. It is important to note that the majority of the additional costs requested and budget allocated for component two will be directed towards on-the-ground implementation of EbA interventions under Outputs 2.1.4 and 2.1.5 (see Table B).

Component 3: Knowledge and awareness of urban EbA throughout the region.

Baseline scenario:

Climate change programmes and initiatives currently underway in the LAC region, such as CCCI, Making Cities Resilient and EUROCLIMA, are increasing awareness of the effects of climate change in national governments. This knowledge, however, is often not effectively communicated to local governments. Furthermore, when knowledge and awareness is disseminated, it is often focused on climate change mitigation rather than on adaptation. At present, therefore, relevant local government entities, city management authorities and other stakeholders in El Salvador, Jamaica and Mexico have a limited knowledge of EbA in general, and almost no knowledge of urban EbA. This lack of information and awareness is one of the main barriers to the implementation and integration of urban EbA into development planning.

Alternative scenario:

With SCCF funding, the proposed project will strengthen the knowledge base for supporting the design of urban EbA interventions in the LAC region. Knowledge on urban EbA will be generated by: i) reviewing and synthesising existing knowledge on effective adaptation to climate change in an urban context; ii) monitoring and assessing the performance of urban EbA interventions in pilot cities; iii) collating the lessons learned during the

implementation of urban EbA interventions in pilot cities; iv) synthesising the new knowledge generated through the project on integrating urban EbA approaches into development planning; and v) designing a long-term research programme to quantify the costs, benefits and opportunities offered by urban EbA. This knowledge will be used to develop reports, policy briefs, and implementation toolkits that will be distributed to local, sub-national, national and regional authorities. A communication strategy will also be developed to disseminate all of this information to local, national and regional stakeholders. In addition, the knowledge generated by the SCCF project will be made available through the UNEP REGATTA network.

SCCF funding will also be used to introduce public awareness programmes in pilot cities. These programmes will use a variety of media, including print, radio and mobile phone formats, to disseminate information to the public. Workshops will also be held to train local communities on the effects of climate change, options and techniques for urban EbA interventions and the benefits associated with these interventions. Increased public awareness and the dissemination of knowledge generated in the SCCF project will facilitate the upscaling of urban EbA interventions by guiding the choice of EbA interventions in other cities in the LAC region.

The SCCF project will build upon the ongoing activities of the baseline projects. The BES, FCAS-ES and PROSSAPyS programmes include knowledge-sharing objectives to which the SCCF project will contribute. The exact budget allocations of each of these programmes towards knowledge-sharing is yet to be confirmed. However, it is estimated that: i) US\$ 50 000 of the BES budget; ii) US\$ 480 000 (0.5% of total budget) of the FCAS-ES budget; and iii) US\$ 2 150 000 (0.5% of total budget) of the PROSSAPyS budget can be used as cofinancing for this component. The exact value of these baseline project activities relevant to the SCCF project will be determined during the PPG phase. Additionally, it is estimated that US\$ 233 000 of the co-financing provided by CE-SIDS and US\$ 200 000 of the co-financing provided by REGATTA are relevant to this component. The total cofinancing is therefore estimated to be US\$ 3 013 000 for this component. The additional cost for disseminating knowledge and increasing public awareness of urban EbA is estimated to be US\$ 500 000.

Appendix A provides a summary of the baseline projects, climate hazards, the predicted effects of these hazards on the baseline projects, targeted ecosystem services, and adaptation measures proposed by the project.

A.1.5. Adaptation benefits

The urban EbA interventions to be implemented under Component 2 of the SCCF project will provide numerous adaptation benefits at the local level. Community and household-level interventions such as improved rainwater harvesting and water recycling systems will increase the supply of potable water, which will reduce the negative effects of droughts and general water shortages. By increasing vegetative cover within a city, urban reforestation and urban agriculture will reduce heat stress, air pollution and the associated public health risks. Soil erosion will be reduced and water infiltration enhanced by selectively planting climate-resilient species with extensive root systems and wide canopies that bind soil and reduce raindrop impact. Furthermore, storm water flows will be reduced because of the additional water storage capacity of reforested areas and the increased infiltration of excess water. These interventions will provide the additional benefits of increased food security and diversified livelihoods. The restoration of wetlands and riparian corridors in urban areas using climate-resilient plant species will slow water flow and thus serve to reduce flooding and erosion. Restored wetlands and riparian corridors will also aid in the maintenance of water quality and availability. Healthy wetlands and rivers support a greater abundance of fish and waterfowl, which can be sustainably harvested to improve food security for vulnerable urban communities. Other benefits associated with the protection and restoration of ecosystems are their social and cultural value, potential economic advantages (tourism and job opportunities) and biodiversity conservation.

The adaptation benefits associated with the SCCF project's urban EbA interventions will initially accrue within each of the three pilot cities. However, the strengthening of institutional and technical capacity under Component 1 will allow national governments to plan and implement urban EbA in other cities. Furthermore, the knowledge generated and disseminated under Component 3, and in the development of an upscaling strategy, will promote the sustainable expansion and replication of interventions throughout the region. This will enable the benefits of the SCCF project's climate change adaptation interventions to cover greater geographic scales and persist long after project completion.

A.1.6. Innovation, sustainability and potential for scaling up

A growing body of research indicates that EbA is an innovative and cost-effective means of adapting to climate change^{36,37}. The SCCF project will integrate EbA into baseline programmes/projects in three pilot cities to enable them to adapt to climate change hazards, thereby increasing ecosystem benefits provided to urban communities. Up until now, EbA approaches have been applied predominantly in rural settings. The SCCF project shows additional innovation by implementing EbA in an urban context and in a medium-long term urban setting.

To facilitate the sustainability and the replication of the proposed interventions, an upscaling strategy — including funding mechanisms — will be developed. The sustainability of the SCCF project will further be enhanced by:

- proposing revisions to relevant national policies, pilot city plans and budget allocations to mainstream urban EbA into urban development plans;
- building and strengthening institutional and technical capacity of local, sub-national and national governments to plan and implement EbA;
- designing policy briefs and decision-making tools to mainstream EbA into development planning of cities in the LAC region;
- demonstrating the benefits of urban EbA to local communities in pilot cities;
- disseminating information through workshops and regional information networks;
- catalysing a long-term research programme to quantify the costs, benefits and opportunities offered by urban EbA; and
- developing and implementing public awareness campaigns on the effects of climate change and the cross-sectoral benefits of EbA for the target countries and the LAC region.

A.2. Stakeholder Engagement

The SCCF project will be designed and implemented through a participatory approach. Important stakeholders of the SCCF project include local communities, civil society organisations, city management authorities, relevant government agencies and other UN and international agencies such as UNHABITAT and ICLEI. Stakeholder participation and validation of major processes is expected for all activities. Stakeholder consultations around proposed activities will mobilise local communities, initiate discussions and promote buy-in from local communities. This project will create active partnerships with NGOs at the local, national and regional level, with private sector partners in the pilot cities, and with relevant ongoing initiatives and projects. Research institutions, both national and international, will be engaged to provide the scientific basis for designing and implementing the urban EbA interventions. Furthermore, these research institutions will play an important role in assessing and monitoring the long-term societal and ecological benefits of these interventions.

The SCCF project will increase the climate resilience of vulnerable, marginalised populations living in urban areas. Slum dwellers, people renting accommodation in low-income neighbourhoods, women and female-headed households, people who depend on urban agriculture, recent migrants and daily wage labourers are among the target beneficiaries for this project. Targeting these groups will ensure that the representation of women and other vulnerable demographics is emphasised when selecting pilot sites.

At the commencement of the PPG implementation phase, an inception workshop will be convened for all major stakeholders. During this workshop, a project steering committee will be formed. A range of urban EbA interventions will be identified during the PPG phase, as well as the selection criteria for choosing the pilot cities and appropriate interventions. The selection of interventions and project sites will take place during mapping

³⁶ Jones, H.P., D. G. Hole & E. S. Zavaleta. 2012. Harnessing nature to help people adapt to climate change. *Nature Climate Change* 2: 504-509

³⁷ UNEP/STREP 2012. A comparative analysis of ecosystem-based adaptation and engineering options for Lami Town, Fiji: Synthesis Report.

workshops, where community members, government officials and experts in fields related to the project interventions (e.g. hydrology, socio-economic development, civil engineering, agriculture, restoration ecology, forestry and urban planning) will assess the potential adaptation interventions, the selection criteria and the process for selecting appropriate demonstration communities. The inception and mapping workshops will also enable the: i) collection of baseline information; ii) documentation of ongoing initiatives and potential areas of collaboration; and iii) the initiation of discussions with potential implementing and co-financing partners.

A.3. Risks and mitigation measures

Risks to the successful implementation of the SCCF project are assessed and summarised in Table 1 below. In addition, this table summarises the appropriate counter-measures and management responses to minimise the potential threats posed by the identified risks. Risks will be validated and re-assessed during the PPG phase.

Table 1: Risks, rating and mitigation measures

Identified Risks	Risk rating	Mitigation Measures
Resistance of local governments to adopt urban EbA instead of hard engineering interventions. This will result in low return on investment and failure to achieve the project's main objectives.	High	Stakeholders will be consulted and will participate in the: i) selection of city-specific interventions designed specifically for local conditions; ii) design of the implementation protocols; and iii) implementation process. The benefits (both cost and other) of appropriate urban EbA will be demonstrated in pilot cities. Local government in each of the three pilot cities will be trained in the design, planning and implementation of urban EbA interventions.
Resistance of local communities in pilot cities to adopting urban EbA during and/or after project implementation. This will prevent the immediate and long-term benefits of the project from being achieved.	High	Public awareness programmes on the effects of climate change and the benefits of urban EbA interventions will be established. The benefits of urban EbA interventions will be demonstrated in pilot cities. Capacity building and training of relevant stakeholders (e.g. local authorities and communities) will be conducted to increase their understanding and awareness of the benefits of urban EbA, and their ability to effectively implement, use and maintain urban EbA measures.
Variation in technical capacities among the targeted countries, which will reduce efficiency in project execution and impede coordination.	Medium	Local and sub-national government in each of the three pilot cities will be trained in the design, planning and implementation of urban EbA interventions. International experts will be engaged to assist local authorities in implementing urban EbA interventions. Existing national coordination committees, such as inter-ministerial commissions on climate change, will be engaged in each of the three countries to facilitate knowledge-sharing and capacity-building. A regional committee will also be established to oversee and promote dialogue between all three countries.
Limited capacity and mandate constraints of local institutions, which will limit the ability to undertake the required research/assessments and project interventions.	Medium	Collaboration and knowledge exchange between local, national and regional institutions will be initiated. Human resource capacity will be developed as required. International experts will be engaged to assist local researchers and institutions.
Unfavourable climatic conditions, including current climate and seasonal variability and/or extreme	Low	Climatic variability of each country will be taken into account in the selection of the appropriate urban EbA interventions. Appropriate climate-resilient plant species will be selected for: i) all

weather events, which will hinder project activities.		reforestation and wetland/riparian corridor restoration activities; and ii) protection of water-related infrastructure from floods. Interventions involving the use of infrastructure, e.g. water recycling, rainwater harvesting, organic matter recycling and ecological sanitation, will be designed to be resilient to climate hazards, e.g. flooding and/or strong winds.
Upscaling of interventions is limited as interventions implemented are found not to be cost-effective or not to be supported by sufficient resource allocation.	Medium	Cost-effectiveness will be a core principle in the selection and implementation of all interventions. Research programmes to quantify the costs, benefits and opportunities offered by urban EbA will be established. The financial mechanisms identified under Output 1.1.4 will be designed taking resource allocation policies into account.

A.4 Coordination with other GEF-financed and other initiatives

The SCCF project will build on and coordinate with several ongoing projects and initiatives in the LAC region (see list below). To facilitate coordination between the SCCF project and other related initiatives, three national committees will be established in El Salvador, Jamaica and Mexico, respectively. In addition, a regional committee will be established to: i) promote dialogue between national committees; ii) facilitate coordination of the project throughout the LAC region; and iii) strengthen collaboration with existing projects and initiatives in each country and the region. The national and regional committees will meet every three and six months respectively. During these meetings they will receive updates, share experiences on urban EbA and provide recommendations, if necessary, to improve interventions. Further details of the roles of the committees will be determined during the PPG. The committees will comprise the main stakeholders and various project coordinators from the list (of ongoing project/initiatives) presented below.

- The **Coastal EbA in Small Island Developing States (CE-SIDS)**³⁸ programme, funded by UNEP, will run from 2014–2016 with an overall budget of US\$ 2 000 000 and is provided 700,00 US\$ of co-finance to this project. This programme aims to strengthen the resilience and adaptive capacity of tropical coastal ecosystems and human communities that depend upon coastal environmental goods and services in SIDS. This is achieved by adopting EbA policies and approaches, as well as applying lessons learned in SIDS in other regions. Specific outputs of this programme include the following: i) vulnerability scenarios and cost-benefit analysis for EbA planning; ii) enhanced capacities for the implementation of EbA; iii) implementation of EbA options and dissemination of lessons learned; and iv) integration of EbA into planning processes and policies.
- The **Regional Gateway for Technology Transfer and Climate Change Action in Latin America and the Caribbean (REGATTA)**³⁹ (US\$ 5 000 000) project is funded by UNEP and the governments of Spain, Norway and Sweden and is providing 400,000 co-finance to this project. This project has been implemented in the LAC region since 2011, and will run until 2015, with the possibility of an extension. The project has established a methodological framework for assessing community vulnerability to climate change, which will facilitate the design of SCCF project interventions. Furthermore, the regional network established by REGATTA will be used to disseminate knowledge on EbA generated by the SCCF project.
- The campaign “**Making Cities Resilient: My City is Getting Ready**” of the United Nations Office for Disaster Risk Reduction (UNISDR). The first phase of this campaign (2010–2011) focused primarily on raising awareness of governments around the necessity of building resilient city to climate-related hazards and any other risks. The second phase (2012–2015) is ongoing and shifts the focus from awareness raising to implementation. The SCCF project will benefit from this campaign, particularly from the toolkits that UNISDR has already designed to promote resilient cities.

³⁸ <http://ebaflagship.org/ecosystems/coastal>. Accessed 10 December 2013.

³⁹ <http://www.unep.org/energy/Activities/REGATTA/tabid/79490/Default.aspx>. Accessed 10 December 13.

- **ICLEI - Local Governments for Sustainability** is an association of cities and local governments dedicated to sustainable development throughout Latin America. ICLEI provides technical assistance, training and information services to build capacity and share knowledge as well as support the implementation of sustainable development at the local level. Collaboration between the SCCF project and ICLEI will provide improved linkages with the technical staff of local governments. In particular, it will promote the inclusion of EbA interventions into sustainable development plans and policies. If ICLEI implements on-the-ground interventions in the SCCF project's pilot cities, there is potential to include ICLEI as a baseline project. In this case the SCCF project interventions would build directly on ICLEI interventions.
- The **Emergent and Sustainable Cities Initiative (ESCI)** by the IADB aims at helping medium-sized cities in Latin America and the Caribbean to prioritise infrastructure investment and find specific solutions to problems identified using a participatory methodology. The initiative focuses on three pillars: environmental sustainability and climate change, integrated urban development, and fiscal sustainability and governance.
- The **UN-HABITAT Cities and Climate Change Initiative (CCCI)** is a global project that targets medium-sized cities in developing countries. It focuses on good governance and practical initiatives for municipalities and their citizens to address climate change. The initiative began in 2008 and has a budget of US\$ 8 million.
- The **EUROCLIMA** programme is a regional partnership between the European Union and Latin America, focused on climate change. Its objective is to improve the knowledge of decision-makers and scientists in Latin America on the effects of climate change in order to strengthen sustainable development strategies. Specifically, at present, the programme aims to facilitate the integration of climate change mitigation and adaptation into Latin American national and (sub-)regional public development policies and plans. EUROCLIMA will run until 2016 and has a budget of €10 million.
- The **Caribbean Biological Corridor (CBC)** project is designed to reduce environmental degradation and poverty in Haiti and Dominican Republic, but also in the Caribbean sub-region and the American Neotropics. The CBC is promoting environmental rehabilitation, and the alleviation of poverty as a means of: i) reducing human pressure on biological resources; ii) and regulating water flow.
- UNEP is currently implementing **Risk and Vulnerability Assessment Methodology Development Programme (RiVAMP)** to assess the role of ecosystems for: i) disaster risk reduction (DRR); ii) climate change adaptation (CCA); and iii) other benefits for sustainable development. RiVAMP was initiated since 2009 as a pilot study in Jamaica.
- UNEP's **EbA Flagship programme**, which is being implemented in diverse ecosystem settings around the world. Outcomes of the project include knowledge support, capacity building, demonstration, and integration of EbA into national development and adaptation plans.
- **Urban EbA in Asia programme:** UNEP are currently working in partnership with UN-Habitat and UNDP to develop the Urban EbA in Asia programme that supports the adoption of EbA approaches at city level to build resilience among urban poor communities to climate change. It will be implemented in six cities: Colombo in Sri Lanka; Davao and Manila in Philippines; Khulna in Bangladesh; Kathmandu in Nepal; and Makassar in Indonesia. The programme will provide targeted support to local governments in urban areas to ensure the delivery of financially viable and sustainable EbA solutions that build long-term resilience of urban poor communities. It will complement existing urban development and climate change adaptation (CCA) efforts by integrating EbA into planning, budgeting and implementation processes.

The SCCF project will also learn lessons from past projects conducted in the LAC region, particularly those implemented by UNEP. Such projects include:

- The "**Haiti Regeneration Initiative Website**" programme (2009–2010). This was a programme implemented by UNEP to promote the restoration of mountain and coastal ecosystems, poverty reduction and disaster risk reduction. The goal of this project in Haiti consists in the development of an online platform to facilitate knowledge sharing. The SCCF project will build on this UNEP past experience in the LAC region, particularly for the implementation of activities in Component 3.
- The "**Ecosystem based Approaches for Climate Change Adaptation in Caribbean Small Island Developing States**" project implemented between January and June 2013.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1. National strategies and plans or reports and assessments under relevant conventions

The SCCF project is consistent with the following strategies/programmes/plans.

At the regional level

- The Latin America and the Caribbean Regional Programme of Action known as “**Integrated Management of Water and Coastal Resources**” (IMWCR). By restoring urban catchments and building technical capacity of local authorities to plan urban EbA for watershed restoration, the SCCF project is aligned with IMWCR programme.
- The **Campeche Declaration on the Mesoamerican Strategy for Environmental Sustainability** (2008). This strategy provides a framework to promote regional cooperation in the strategic areas of biodiversity, forests and climate change.
- The Caribbean Community (CARICOM) **Implementation Plan for the Regional Framework for Achieving Development Resilient to Climate Change**.
- The SCCF project will restore urban catchments to increase water availability for local communities and aquatic biodiversity. It will also entail reforestation of degraded ecosystems. As such, the project is also consistent with: i) the **Convention on Biological Diversity**; and ii) the **Ramsar Convention on Wetlands**.

At a national level

The SCCF project is consistent with El Salvador’s National Five-year Development Plan (2010). One strategic line of this plan focuses on “reversing the environmental degradation process and making El Salvador an environmentally exemplary country, with lower vulnerability to natural phenomena and human actions”. In 2012, El Salvador approved its National Environmental Policy, to which climate change adaptation is central. The National Programme for Ecosystem and Landscape Restoration was produced as a result of this policy. This programme aims to introduce climate-resilient agricultural practices and restore ecosystem services, such as water regulation and provision, in key landscapes. The SCCF project will also build on the “Roof and Water Programme” (2004), which aims to provide access to potable water to vulnerable communities.

In Jamaica, the SCCF project is consistent with the **Jamaica National Environmental Action Plan** (JaNEAP). JaNEAP is the government’s strategic action plan for environmental and physical planning. In particular, JaNEAP is designed to address all broad thematic questions highlighted in a number of multilateral agreements. These agreements include: i) the **Mauritius Strategy of Implementation** (MSI); ii) the **Johannesburg Plan of Implementation** (JPI); and iii) the **Millennium Development Goals** (MDGs). In addition, these agreements provide the government an overarching framework for tracking the government objectives on environment and sustainable development.

The SCCF project is consistent with Mexico’s National Climate Change Strategy (2013). In particular, it is aligned with strategic objectives A1 and A3, which aim to “reduce vulnerability and increase resilience of the social sector towards climate change effects” and “conserve and manage ecosystems sustainably to maintain the environmental services they provide”, respectively. In addition, Mexico’s General Climate Change Law (2012) mandates municipalities to “formulate and apply policies to address climate change in agreement with the National Development Plan, the National Climate Change Strategy and Special Climate Change Programmes at national and state levels”. This law places particular emphasis on, *inter alia*: i) water and sanitation service provision; ii) land use planning; and iii) natural resource conservation. Many municipalities are currently elaborating their respective Municipal Climate Action Plans, to which the SCCF project will contribute by mainstreaming urban EbA.

B.2. GEF Focal area and/or fund(s) strategies, eligibility criteria and priorities

The SCCF project has been developed using the: i) Updated Operational Guidelines for the SCCF for Adaptation and Technology Transfer (GEF/LDCF.SCCF.13/05 October 16, 2012); ii) the Adaptation Monitoring and Assessment Tool (GEF/LDCF.SCCF.9/Inf.4 October 20, 2010); and iii) the Operational Guidelines on

Ecosystem-based approaches to Adaptation (GEF/LDCF.SCCF.13/Inf.06 October 16, 2012). As a result, the proposed project meets the eligibility criteria and programming priorities of the SCCF. In addition, it fits with the strategic objective of the SCCF to promote cross-sectoral development that takes climate change into account. This objective will be achieved by: i) integrating risks associated with climate change into development planning; ii) demonstrating the implementation of EbA interventions in the pilot cities; and iii) building local and national capacity to plan and implement interventions that reduce community vulnerability to the effects of climate change.

The SCCF project is consistent with the 'Revised Programming Strategy on Adaptation to Climate Change for the LDCF and SCCF' and follows the Results-Based Management Framework (RBM). Overall, the SCCF project corresponds with Objective CCA-1 "Reducing Vulnerability: Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level", specifically, CCA-1 Outcome 1.2 "Reduce vulnerability in development sectors". Furthermore, the SCCF project corresponds with CCA-2 "Increasing Adaptive Capacity: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level", specifically, CCA-2 Outcome 2.1 "Increased knowledge and understanding of climate variability and change-induced risks at country level and in targeted vulnerable areas". Finally, the SCCF project corresponds with CCA-3 "Adaptation Technology Transfer: Promote transfer and adoption of adaptation technology", specifically CCA-3 Outcome 3.2 "Enhanced enabling environment to support adaptation-related technology transfer".

B.3. UNEP's comparative advantage for implementing this project

UNEP has considerable experience implementing climate change adaptation projects and providing scientific guidance in the field of climate change. To date, UNEP has implemented more than 90 adaptation projects (GEF and non-GEF) at global, regional and national levels. Through the implementation of those projects, UNEP works to develop innovative solutions for national governments and local communities to adapt, in an environmentally sound manner, to climate change. As such, the SCCF project is consistent with UNEP's comparative advantage in: i) demonstrating on-the-ground application of EbA; and ii) using the best available science and knowledge to inform decisions related to climate change adaptation.

The SCCF project will implement EbA interventions to increase the resilience of urban communities to climate change. UNEP has taken the lead in developing knowledge of ecosystems and adaptation technology, and therefore the SCCF project is in line with the UNEP's core business of providing technical advice on ecosystem management. The project will also benefit from UNEP's expertise and active network of local practitioners focused on municipal level environmental issues through on-going Geo Cities processes. Furthermore UNEP's role with regard to creating resilient and sustainable cities for the future has been solidified through a recent meeting with the Executive Director of UNEP, and the Director-General of UNHABITAT at which they agreed on a 'greener cities' joint program of work for the next three years led by 'resilient, resource efficient cities' programme.

UNEP have also been extremely active with regard to cities and climate change mitigation related tools/programmes. The Build Environment Unit in the Division of Technology Industry and Economics has developed the Quick Scan Tool - to assist governments in understanding how the building sector influences sustainable development in their respective countries and what barriers and opportunities exist for adopting policy tools in support of sustainable construction and buildings. Additionally, they have been involved in creating an online repository called the Knowledge Centre on Cities and Climate Change (K4C) which provides the latest reliable information on how cities cope with and adjust to climate change.

UNEP's Flagship Ecosystem-based Adaptation Programme represents a ground-breaking shift in focus in the realm of climate change adaptation, which has been commended by the Conference of the Parties to the UNFCCC (CoP). The EbA approach is multidisciplinary in nature, and involves managing ecosystems to build their resilience, and use ecosystem services to promote climate change adaptation and disaster risk management. This approach has been endorsed by GEF, IUCN and the EC, and will provide a platform to engage a broad range of stakeholders and sectors in the adaptation process. Through the SCCF project, UNEP will demonstrate a new

approach to increasing the climate resilience of cities and providing multiple societal and environmental benefits through EbA.


Through its regional office (ROLAC), UNEP has a long-standing engagement with many Latin American and Caribbean countries in helping them to address climate change impacts. This includes, *inter alia* i) the promotion of ecosystem restoration, poverty reduction and disaster risk reduction through the Haiti Regeneration Initiative; ii) ecosystem-based approaches for climate change adaptation in Caribbean Small Island Developing States; and iii) the development of risk and vulnerability assessment methodologies in Jamaica. UNEP's proven experience implementing adaptation projects in LAC region provides the foundation for the SCCF project.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

NAME	POSITION	MINISTRY	DATE(MM/dd/yyyy)
Mr. Herman Rosa Chavez	Minister	MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES - EL SALVADOR	12/06/2013
Ms. Leonie Barnaby	Senior Director	MINISTRY OF LAND AND ENVIRONMENT - JAMAICA	12/06/2013
Ms. Margarita Perez Villasenor	Deputy Director General	MINISTRY OF FINANCE AND PUBLIC CREDIT - MEXICO	12/06/2013

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/SCCF/SCCF/NPIF policies and procedures and meets the GEF/SCCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Maryam Niamir-Fuller Director GEF Coordination Office		10 January 2014	Ermira Fida Manager, UNEP-GEF Adaptation Portfolio	+254-20-762-3113	Ermira.fida@unep.org

Appendix A: Climate change vulnerabilities of the baselines projects versus the adaptation alternative under the SCCF project being implemented in El Salvador, Jamaica and Mexico.

Baseline projects • Goals and activities	Climate change hazards affecting the project area	Impacts to the baseline projects and targeted populations as a result of climate change	Ecosystem services targeted by the SCCF project	Adaptation measures supported by SCCF project	How the SCCF project will contribute towards increasing the resilience the baseline projects
<p>Project targeted vulnerable sites and communities: Poor urban communities in 3 pilot cities; 1 city in each of El Salvador, Jamaica and Mexico.</p>					
<p>IADB Biodiversity and Ecosystem Services (BES) Programme</p> <ul style="list-style-type: none"> • Integrate the value of biodiversity and ecosystem services into key economic sectors. • Protect priority regional ecosystems. • Develop effective environmental governance and policy. • Create new sustainable business opportunities. 	<p>Increased frequency of heavy rains and floods.</p> <p>Increased frequency of droughts, as a result of increased temperatures and decreased precipitation.</p> <p>Increased temperatures, causing increased heat stress.</p> <p>Increased frequency of landslides.</p>	<p>Reduced functioning of ecosystem services, such as those involved in water provision for domestic use and sanitation.</p> <p>Contamination of water sources during flooding, leading to negative effects on human populations and biodiversity.</p> <p>Local community activities, including agriculture and tourism, affected by water scarcity and/or flooding.</p> <p>Increased spread of disease because of damage to sanitation infrastructure by floods and landslides.</p> <p>Increased heat stress leading to a decreased resilience to disease.</p> <p>Increased degradation of natural ecosystems and loss of biodiversity because of decreased ability of local communities to sustain themselves through agriculture and/or livelihoods.</p>	<p>Fresh water provision.</p> <p>Water purification.</p> <p>Flood mitigation.</p> <p>Maintenance of soil fertility.</p> <p>Food provision.</p>	<p>Increasing the capacity of city management authorities to restore ecosystems and ecosystem services.</p> <p>Revising policies to facilitate restoration of ecosystems and ecosystem services.</p> <p>Facilitating investment in the restoration of ecosystems and ecosystem services.</p> <p>Strengthening the information base of scientific knowledge to support the design of urban EbA interventions.</p> <p>Demonstrating urban EbA interventions and their associated benefits, particularly with respect to resource /water provision and sanitation.</p>	<p>City management authorities and the public are aware of climate change and the potential benefits of urban EbA, and incorporate this into their decision-making regarding ecological restoration activities and investments.</p> <p>Local stakeholders are aware of climate change hazards and their effects on water provision and quality.</p> <p>Urban reforestation and urban wetland/riparian corridor restoration interventions with climate-resilient plant species enhance ecosystem services and reduce the negative effects of climate change on water availability.</p> <p>Urban EbA interventions reduce the urban heat island effect,</p>

Baseline projects <ul style="list-style-type: none"> • Goals and activities 	Climate change hazards affecting the project area	Impacts to the baseline projects and targeted populations as a result of climate change	Ecosystem services targeted by the SCCF project	Adaptation measures supported by SCCF project	How the SCCF project will contribute towards increasing the resilience the baseline projects
					thereby reducing heat stress.
AECID Cooperation Fund for Water and Sanitation (FCAS-ES) <ul style="list-style-type: none"> • Improve the lives of suburban and rural communities in El Salvador. • Enhance, rehabilitate and expand water supply systems and infrastructure. • Strengthen the institutional capacity of implementing agencies and local government to promote sustainable development in the water sector. 	Increased frequency of heavy rains and floods. Increased frequency of tropical storms.	Frequent floods and extreme rainfall events damage water supply and sanitation infrastructure. Flooding leads to contaminated water supplies and increases the incidence of water-borne disease. Tropical storms damage water supply and sanitation infrastructure.	Flood mitigation through restored wetlands and riparian corridors. Fresh water provision through water recycling and rainwater harvesting. Micro-climate regulation.	Increasing the climate resilience of urban communities to the effects of climate change through urban EbA interventions. Demonstrating urban EbA interventions and their associated benefits, particularly with respect to resource/water provision and sanitation. Increasing the capacity of local government to plan and implement appropriate urban EbA interventions.	Local stakeholders are aware of climate change hazards and their effects on water and sanitation infrastructure. Urban EbA interventions will reduce climate change effects (such as floods and tropical storms) on water and sanitation infrastructure. Local populations have increased food security because of urban interventions. Government capacity strengthened to plan and implement urban EbA interventions, which climate-proof water supply and sanitation activities.
<ul style="list-style-type: none"> • IADB Kingston Metropolitan Area (KMA) Water Supply Improvement Project (KMAWSIP) • Rehabilitate water supply systems in the KMA. • Improve energy efficiency. 	Unpredictable rainfall patterns, leading to increased incidence of flooding, droughts and landslides. Increased frequency of tropical storms.	Unpredictable rainfall patterns decrease the food security of vulnerable urban populations. Floods, landslides and tropical storms damage infrastructure.	Food provision. Flood mitigation through restored wetlands and riparian corridors. Erosion	Increasing the climate resilience of urban communities to the effects of climate change through urban EbA interventions. Demonstrating	Local stakeholders are aware of climate change hazards and their effects on water and sanitation infrastructure. Urban EbA interventions will reduce the effects

Baseline projects • Goals and activities	Climate change hazards affecting the project area	Impacts to the baseline projects and targeted populations as a result of climate change	Ecosystem services targeted by the SCCF project	Adaptation measures supported by SCCF project	How the SCCF project will contribute towards increasing the resilience the baseline projects
<ul style="list-style-type: none"> Strengthen the institutional capacity of the National Water Commission. 		<p>Frequent floods and extreme rainfall events damage water supply and sanitation infrastructure.</p> <p>Tropical storms and floods leads to contaminated water supplies and increases the incidence of water-borne disease.</p> <p>Droughts reduce water availability for local populations.</p>	<p>control.</p> <p>Soil stabilisation.</p> <p>Fresh water provision.</p>	<p>urban EbA interventions and their associated benefits, particularly with respect to water provision and sanitation.</p> <p>Increasing the capacity of local government to plan and implement appropriate urban EbA interventions.</p>	<p>of climate change (such as floods and tropical storms) on water and sanitation infrastructure.</p> <p>Local populations have increased food security because of urban interventions.</p> <p>Government capacity strengthened to plan and implement urban EbA interventions, which climate-proof water supply and sanitation activities.</p>
<ul style="list-style-type: none"> IADB Programme for the Sustainability of Water Supply and Sanitation Services in Rural Communities (PROSSAPyS) Improve access to drinking water and sanitation across Mexico. Strengthen institutional capacity to manage water resources. Improve water supply infrastructure. Involve communities in the provision and maintenance of water supply and sanitation services. 	<p>Increased frequency of heavy rains and floods.</p> <p>Increased frequency of droughts, as a result of increased temperatures and decreased precipitation.</p> <p>Increased temperatures, causing increased heat stress.</p>	<p>Frequent floods and extreme rainfall events damage water supply and sanitation infrastructure.</p> <p>Flooding leads to contaminated water supplies and increases the incidence of water-borne disease.</p> <p>Droughts reduce water availability for local populations.</p> <p>Heat stress, as a result of increased temperatures, negatively affects the health of local communities.</p>	<p>Flood mitigation through restored wetlands and riparian corridors.</p> <p>Fresh water provision.</p> <p>Micro-climate regulation.</p>	<p>Increasing awareness of the benefits of EbA measures.</p> <p>Developing national upscaling strategies to promote urban EbA approaches.</p> <p>Catalysing long-term research programmes to increase regional knowledge of urban EbA.</p>	<p>Urban development plans consider climate change risks and appropriate adaptation measures, including urban EbA.</p> <p>Local government and the public are aware of climate change and the potential benefits of urban EbA, and incorporate this into their decision-making regarding new investments.</p>

Baseline projects <ul style="list-style-type: none"> • Goals and activities 	Climate change hazards affecting the project area	Impacts to the baseline projects and targeted populations as a result of climate change	Ecosystem services targeted by the SCCF project	Adaptation measures supported by SCCF project	How the SCCF project will contribute towards increasing the resilience the baseline projects
<ul style="list-style-type: none"> • AECID Cooperation Fund for Water and Sanitation (FCAS-M) • Construct and improve water supply and sanitation systems. • Increase the technical capacity of water management institutions. • Promote the operational and financial sustainability of water management systems. 	<p>Increased frequency of extreme rainfall events and floods.</p> <p>Increased frequency of droughts, because of increased temperatures and decreased precipitation.</p> <p>Increased temperatures, causing increased heat stress.</p> <p>Increased frequency of landslides.</p>	<p>Frequent floods and extreme rainfall events damage water supply and sanitation infrastructure.</p> <p>Flooding leads to contaminated water supplies and increases the incidence of water-borne disease.</p> <p>Droughts reduce water availability for local populations.</p> <p>Heat stress, as a result of increased temperatures, negatively affects the health of local communities.</p>	<p>Flood mitigation in restored wetlands and riparian corridors.</p> <p>Fresh water provision.</p> <p>Micro-climate regulation.</p> <p>Erosion control.</p> <p>Maintenance of soil fertility.</p>	<p>Increasing the climate resilience of urban communities to the effects of climate change through urban EbA interventions.</p> <p>Demonstrating urban EbA interventions and their associated benefits, particularly with respect to water provision and sanitation.</p> <p>Increasing the capacity of local government to plan and implement appropriate urban EbA interventions.</p>	<p>Local stakeholders are aware of climate change hazards and their effects on water and sanitation infrastructure.</p> <p>Urban EbA interventions will reduce the effects of climate change (such as floods and tropical storms) on water and sanitation infrastructure.</p> <p>Local populations have increased food security because of urban interventions.</p> <p>Government capacity strengthened to plan and implement urban EbA interventions, which climate-proof water supply and sanitation activities.</p>