

Calapan River Rehabilitation and Eco-tourism

Green-Gray Partnership Project for Philippine Cities and Municipalities

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With support from:

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About the Green-Gray Partnership

Climate change can no longer be ignored. The raging waters of typhoons Ondoy in 2009 and Haiyan 2013 are seared in Philippine collective memory. In the span of three weeks in 2020, three typhoons battered the country, inflicting over a hundred fatalities and at least PHP 25 billion (USD 518 million) worth of damage. The Philippines urgently needs to harness nature to uplift communities not just because it's better for the planet, but because making the most of available resources is an economic necessity.

In the last quarter of 2021, just as the Philippines was reining in the pandemic, Conservation International and AECOM began the Green-Gray Partnership Project with eleven local cities and municipalities to kickstart the adoption of nature-based solutions.

Integrating green natural systems into gray infrastructure provides multi-function and costeffective solutions. Green-gray combines natural elements with hard infrastructure to protect and restore natural processes and create healthier urban environments. The combination allows the creation of natural habitats or system functionality (green infrastructure) in a resilient and optimized manner (gray infrastructure). Many green-gray solutions incorporate wetland and forest habitats. As with all habitat creation/restoration projects, the success of these initiatives depends on an understanding of the ecological structure and function of the target habitats.

Green-gray infrastructure approaches can apply in coastal, freshwater, and terrestrial settings and accomplish a variety of project goals. The typical infrastructure services such as flood management, costal protection, and improving water quality are delivered alongside other benefits such as safeguarding biodiversity, providing livelihoods, increasing public space, and even financial returns to local communities through carbon credits.

A key reference for this engagement is the *Practical Guide to Implementing Green-Gray Infrastructure* by the Green-Gray Community of Practice, which is led by Conservation International. The guide, published in 2020, provides green-gray case studies and walks

readers through the process of project preparation, design, and implementation. It also defines the critical elements of the green-gray approach:

- 1. Using science and engineering to produce operational efficiencies;
- 2. Using natural processes to maximize benefits (i.e. ecosystem services);
- Increasing the value provided by projects by including social, environmental, and economic benefits; and
- Using collaborative processes to organize, engage, and focus interests, stakeholders, and partners.

Conservation International selected the pioneer batch of Green-Gray partner cities and municipalities based on the following criteria:

- Commitment to a Resilient Future Good track record and strong interest for pursuing a climateresilient future for their locality;
- **Drivers of Change** Positioned as municipal leaders for a sustainable future for the Philippines;
- Rich and Diverse Natural Assets Representation of the abundant biodiversity of the Philippines; and
- Vulnerability to Impacts of Climate Change Exposure to the impacts of climate change.

The Green-Gray Partnership Project was meant to equip local governments units (LGUs) with capacities to identify opportunities for the adoption of naturebased solutions and prepare concept notes to rally support for pilots. At the beginning of the project, it was essential to transfer knowledge of green-gray infrastructure through the guide and workshops focusing on case studies. This built a base from which the local governments drew from in order to craft a Statement of Intent and a Concept Design Note (Annex 1), both of which are contained in this document.

This document, containing a high-level design and assessment, may be used by the local governments to seek support for project preparation (in which the concept should be refined with further studies), detailed design, and implementation. Support may be sought from national government, financing institutions, grant giving foundations, and private sector partners.

Calapan City, Oriental Mindoro, Philippines Calapan River Rehabilitation and Eco-tourism

Mitigating the impacts of river flooding and boosting eco-tourism in Calapan City through green-gray infrastructure



5,932 Benefitting Residents source: Census, 2015

447 M Increase

in Tourism Revenue (in PhP)

579 Metric tons of Improved Biodiversity

Based only on assumptions and estimates; for verification in next stage

Location Calapan City, Oriental Mindoro, Visayas Proposed Site Calapan River System Key Thematic Area Riverine Key Issue Flooding along the river Green-Gray Solution River Embankment and Biodiversity Enhancement Proposed Implementation Timeframe 2-3 years

Executing Agencies

- City Planning and Development Office
- City Environment and Natural Resources Office
- City Tourism Office

Project Aim

As the Calapan City continues to develop, it also aims to boost its tourism industry while protecting the community against flooding. The city currently has proposed a river rehabilitation project for the Calapan River but focusing mainly on economic growth through the establishment of river edge development and activities, relocation of informal settlements, and integration of tourism activities. This provides an opportunity to incorporate green-gray infrastructure that will also address flooding and riverbank erosion while enhancing biodiversity. The proposed Green-Gray solution will compliment the eco-tourism development project of the city.



Calapan Location Map



Calapan Green-Gray Partnership Project Location Map

CONSERVATION AECOM



Overview

Calapan City straddles two watersheds with a topography marked by lakes and meandering rivers. The city is prone to flooding, which is now more pronounced with more frequent and more intense typhoons. A city-wide drainage system is still in the planning stage. It is therefore imperative that the city implements river embankments to prevent inland flooding and river protection against further erosion.

Calapan City has already selected four potential sites along Calapan River, which traverses downtown, where mitigation strategies can be employed. Focusing two sites selected by Calapan City, the green-gray infrastructure concept utilizes the existing open spaces as collection areas for excess runoff water during heavy rainfall thus reducing the flood level in the surrounding areas. These dedicated collection points can be designated as nature parks to enhance biodiversity and at the same time become tourist destinations at the heart of the city.

Sustainable Development Goals (SDG) Targets



Rationale

Calapan City is situated on the vast northeastern floodplain of Oriental Mindoro. The overall land character is that of a wide plain with meandering rivers interspersed with wetlands at the seacoast periphery. The pervasive flat terrain is interrupted only by the elongated Bulusan Hill (highest elevation: 187 masl) at the city's northeastern portion.

The city's economy is dependent on agriculture and fishing. However, growing machinery industry and tourism sectors have contributed well to the city's annual income making it one of the fastest growing new cities in the country for the last 10 years.

The city straddles two watershed areas. A big part of it is part of the Malaylay Watershed (33,630 ha) that it shares with the municipality of Baco and portions of San Teodoro and Puerto Galera. Its eastern sector is part of the Mag-Asawang Tubig Watershed (43,700 ha) that it, in turn, shares with the municipality of Naujan. Downtown Calapan is traversed by the Calapan River, a major river.

The total land area of the city which has a high susceptibility to flooding is 2,572.05 ha (13.82% of the total land area). Floods are expected to reach a depth of higher than or equal to one (1) meter and a likelihood of occurrence that ranges from 10 to 30 years. Fifty-five (55) out of the 62 barangays are highly susceptible to the said hazard. On the other hand, 3,312.52 ha (17.79%) have moderate susceptibility while 7,782.56 ha (41.81%) have low susceptibility; with an expected flood depth of less than one (1) meter which have a likelihood of occurrence that ranges from 100 to 200 years. Areas which are susceptible to flood are usually those located in low-lying areas, along the coastline and major river systems.

Typhoons and heavy rains usually flood the city, damaging families near the rivers and agricultural lands. In 2005, most of the barangays in the city were flooded due to heavy monsoon rain and Tropical Depression Quedan. The combined volume of the rain caused the Bucayao River to overflow and the dike in Bucayao to collapse. The city remained flooded for two weeks.

In December 2016, Typhoon Nina affected 8,290 people and caused PhP 8 million worth of damages to rice production while Typhoon Yolanda (Haiyan) in 2013 distressed 1,426 families and at least PhP 700 thousand worth of damages were documented. More recently, Typhoon Tisoy in December 2019 damaged PhP 13 million worth of agriculture, plus infrastructures. The lack of drainage systems was identified by the barangays as a cause of flooding. Calapan City is currently in the final stages of formulating its Drainage Master Plan.

Dredging, desiltation and clearing of obstructions in Calapan River are periodically undertaken to mitigate flooding. Furthermore, more measures are needed to lessen the challenges encountered every time a typhoon or heavy rains strike. Special species of mangroves are planted on some parts of the riverbanks along with the endemic fishes in the Philippines but are rarely found in different provinces only.

Calapan City has already selected four potential sites along Calapan River where mitigation strategies can be employed. Presently, Site 1 has informal settlers along the banks who should be relocated soon. Although they have their individual septic tanks, garbage may be thrown into the river any time by those residing at the site. The case is similar in Site 3, with 300 households occupying such settlements.

Site 1 has a boardwalk now being constructed by the Department of Public Works and Highways from the mouth of the river to enhance slope protection against soil erosion and to protect residents living along the banks. There are also bridges traversing the river from Site 1 to Site 3 located at Barangay Ibaba East, Brgy. San Vicente North, Brgy. Lumangbayan and Brgy. Lalud. The mangrove forests in Calapan City is endowed with floral and faunal diversity of species. There are 20 documented mangrove flora species.



River rehabilitation to boost tourism



Project Proposal

The proposed project is the start of an effort to revive the natural beauty of the city of Calapan and ensure its sustainable development. It aims to restore Calapan River back to its glorious state—beautiful and clean, reflecting Mindoro's noble history and socio-economic progress. This green-gray infrastructure will provide new green spaces for recreational opportunities and will promote healthy ecology. It will create more jobs along the proposed areas.

Taking cues from Singapore, Calapan City has identified the Promotion of the ABC (Alive, Beautiful, Clean) River Management and Development Program as one of its environmental development strategies. Taking cues from Singapore, Calapan City has identified the Promotion of the ABC (Alive, Beautiful, Clean) River Management and Development Program as one of its environmental development strategies. The local government officials are preparing a Calapan City River Rehabilitation and Eco-Tourism Development Projects Proposal in response to the Department of Tourism's open call to assist in the upcoming development of their Comprehensive Land use Plan.

Focusing on Sites 3 and 4 selected by Calapan City, the green-gray infrastructure concept uses the existing open spaces as collection areas for excess runoff water during heavy rainfall thus reducing the flood level in the surrounding areas. These dedicated collection points can be designated as nature parks to enhance biodiversity and at the same time become tourist destinations at the heart of the city.

The solution aims to mitigate the impact of flooding within the residential developments along the Calapan river while also promoting nature-based eco-tourism activities and infrastructure. Local planning and public consultations are needed to encourage local interest and foster new insights and partnership with the private sector.

Green-gray infrastructure impact

Rehabilitating Calapan River using green-gray infrastructure may unlock multiple benefits including:

- Reduce the impact of inland flooding
- Improve water quality
- Restore the riverine ecosystems and biodiversity
- Increase public park area per capita
- Generate jobs associated with eco-tourism
- Relocation of vulnerable informal settlements

Ultimately, the pilot can make a case for the municipality wide adoption of nature-based strategies to:

- Make the city inclusive, safe, resilient and sustainable
- Conserve Calapan's river network and riverine ecosystems



Four potential sites for Calapan River's rehabilitation



Proposed floodable spaces and eco-tourism parks

Sustainable Development Goals (SDG) Targets



Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities



By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

Strengthen efforts to protect and safeguard the world's cultural and natural heritage

By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including waterrelated disasters, with a focus on protecting the poor and people in vulnerable situations

By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

Substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels



By 2030, achieve the sustainable management and efficient use of natural resources

Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products





Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Integrate climate change measures into national policies, strategies and planning

Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities



Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection

Mobilize additional financial resources for developing countries from multiple sources

Adopt and implement investment promotion regimes for least developed countries

Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed

Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation

Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

Indicative Implementation Arrangements

Precise implementation arrangements remain to be determined at the pre-design preparation phase, but it is foreseen that the project shall be led and monitored by the City Planning and Development Office and City Environment and Natural Resources Office.

Support may be sought from the City Tourism Office. Partnership with the national government may happen through the Department of Environment and Natural Resources, Department of Public Works and Highways, and Department of Tourism.

Monitoring and Evaluation Plan

To establish the GGI as an effective solution to substitute conventional infrastructure projects, a set of metrics should be established to evaluate its results:

- Monitoring of flood level in the surrounding Barangays within the area of the river
- Inventory of casualties during flooding along the river
- Periodic monitoring of silt accumulation within the river
- Tourism activities and survey to understand the impacts of the attractions to the overall tourism plan of the city

Due Diligence

This document contains a green-gray infrastructure design concept and high-level assessments. More details are required in order to refine this concept into a robust and detailed proposal; thus, the project preparation phase for this project should include:

- Feasibility Study
- Environmental and social impact assessment or environmental and social management framework
- Stakeholder consultations at national and project level implementation including with indigenous people, if relevant
- Gender assessment and action plan
- Operations and maintenance plan, if relevant
- Loan or grant operation manual, as appropriate
- Co-financing commitment letters

If required, the preparation of this project may include the following studies:

- Diagram of the theory of change
- Economic and financial model with key
 assumptions and potential stressed scenarios
- Pre-feasibility study
- Evaluation report of previous project
- Results of environmental and social risk screening

Conservation International's Diversity, Equity, and Inclusion (DEI) framework

At Conservation International (CI), we are committed to promoting human rights by reducing equity gaps and facilitating the enhancement of social and environmental sustainability. All of our projects are held to strict social and environmental principles as agreed upon and laid out by internationally accepted standards such as the Community, Biodiversity, and Carbon standard, as well as the Global Environmental Fund (GEF) and Green Climate Fund (GCF) safeguards. However, CI is taking our responsibility to communities and the environment even further with a commitment to tracking and monitoring Diversity, Equity, and Inclusion (DEI) benefits through our Environmental and Social Safeguards System (CISS), a system that exceeds international standards. To achieve maximum socio-environmental and climate benefits plus long-term sustainability of any project, we believe that communities must be at the center and actively participate in the design of any conservation initiative in which we engage. Central to this, CI engages communities in:

- Developing the project components, including governance, management processes, and distribution mechanisms in a consultative, transparent and participatory manner with relevant stakeholders (Conservation Agreements ensure that all parties are heard and decisions are made jointly).
- 2. Addressing gender inequality in all of our conservation programming, monitoring, and reporting efforts.
- 3. Guaranteeing the long-term financial viability of the project through optimizing project implementation while maximizing benefits.
- 4. Prioritizing non-monetary benefits whenever possible to increase the number of beneficiaries and better guarantee long-term project success.



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ANNEX Design Note

Statement of Problem and Thematic Area

The Calapan River System runs through the core of the city and all the way to its agricultural lands. Due to its geographical location, the river is one of the major discharge points of Mt. Halcon, causing flooding within the city as well us a catchment of sediments from the upstream. According to the LGU's observations, flooding in the areas along the river can reach up to hip level during torrential rains. The flooding is worsened by the silt that has accumulated through time and disrupts the waterflow to the coast.

Project Aim

As the Calapan City continues to develop, it also aims to boost its tourism industry while protecting the community against flooding. The city currently has proposed a river rehabilitation project for the Calapan River but focusing mainly on economic growth through the establishment of river edge development and activities, relocation of informal settlements, and integration of tourism activities. This provides an opportunity to incorporate green-gray infrastructure that will also address flooding and riverbank erosion while enhancing biodiversity. The proposed Green-Gray solution will compliment the eco-tourism development project of the city.



Accumulation of sediment and waste on waterways



Existing Informal Settler Families (ISFs) for resettlement



Current state of Calapan River requiring rehabilitation





Sites 1-4 of Calapan City's Proposed River Rahabilitation and Eco-tourism Development Projects; Sites 3 and 4 proposed for inclusion in Green-Gray Partnership Project

Green-Gray Infrastructure Strategy

The proposed Calapan River Rehabilitation Project would divide the river into four (4) segments based on the function and activities that the city has envisioned. The Green-Gray design proposal will only focus on Sites 3 and 4 as these provide more opportunity to integrate GGI into the available lands as well as integrating the solution with the proposed ecotourism plan of the city.

A river embankment is proposed to be built along the edges Sites 3 and 4 to protect the surrounding barangays from the upstream flooding. This will also prevent further riverbank erosion as the embankment will be designed to incorporate vetiver grass for erosion control. The river embankment is proposed to be built using the sediments collected from the dredging of the river (note: subject to further study to identify if the sediments have the capacity to support the embankment). A further study is required to identify the height of the embankment to accurately address the upstream flooding. A linear park is proposed to be on top of the embankment that will allow pedestrians and cyclists to traverse through the city using the river edge.

There are two (2) locations along the river in Sites 3 and 4 that are currently unused and are considered green spaces. A few informal settlements have been identified to be residing in these areas but are proposed to be relocated once the project has begun. These areas are proposed to be an eco-tourism zone that will incorporate various attractions as well as become a haven of biodiversity. These areas are also proposed to be catch basins during heavy rains to reduce flooding as well as reducing the peak flow rate of the water flow in the river to avoid sudden flooding. As a floodable space, these areas are not accessible during heavy rains. As the rain subsides, the catch basin will gradually release the stormwater back to the river.



Calapan GGI Concept Strategy Plan



1.6 ha

0.6 km

total land area for floodable space

total length of embankment

0.6 ha total land area with ISF for resettlement



Calapan GGI Concept Strategy Blow-up Plan



Green-Gray Infrastructure Concept Strategy

Calapan GGI Concept Strategy Section



Weir

Under normal conditions the weir is above river levels and the pipe and flap valve drain the flood overflow area. During flooding the use of a weir automatically allows the flood water to enter the overflow area, thus reducing the volume of river flood water entering the downstream river reaches. The water in the overflow area then flows back into the river, through the drainage pipe and flap valve, once river levels fall. Alternatively, a manual or automatic sluice gate could be used.



Embankment

River embankments, sown with vetiver grass to protect against currents and waves, can be constructed above river flood levels to protect against flooding. They can also be constructed around a flood overflow area.



Floodable space

Collection point for excess water from waterways during wet season. Same space acts as eco-tourism park for general public during dry season. Footpaths and cycle tracks line the periphery atop proposed embankments.



Benefits of a GGI Solution

The proposed GGI solution is complimentary to the eco-tourism plan of the city. Sites 3 and 4 have been previously designated by the LGU to be a Wilderness Park and Recreational Park respectively. The catch basins can integrate the park to the river to further enhance biodiversity as well as the experience of tourists. This will also activate the surrounding communities as it provides tourism nodes for economic activities. Aside from this, the community will also have better public amenities in the form of parks and pedestrian walkways. All of these are additional incentives for the green-gray solution compared to the proposed flood protection and river embankment project.

Integrated Holistic Approach

The proposed GGI Solution is a pilot project that is envisioned to be potentially scaled-up or replicated to the other parts of the city and the province. Whilst, the proposed solution is addressing the key issue at hand, it is important to note that addressing the root cause of the flooding is essential—in this case, protecting the upstream areas and the watershed from degradation.

A Stage 2 of the River Rehabilitation Project is proposed to focus on Sites 1 and 2 within the compounds of the urban core of the city. This proposal will focus more on riverbank protection and incorporating GGI strategies to address the issue of water quality coming from the discharge of the surrounding developments along the river.

Additionally, the city has identified that infrastructure solutions should also be incorporated with the upstream areas to mitigate riverbank erosion to reduce the amount of silt accumulation within the city's river and estuary.

Implementation Period

Based on the LGU's infrastructure prioritization plan, they are proposing a timeline of 2-3 years to prepare, implement and construct this GGI solution. Due to lack of data and information readily available, additional studies and scoping work shall be required to validate and collect more information regarding the key issues identified by the LGU and the assumptions that have provided during the concept design stage. The proposed project timeline shall cover the following phases:

1. Predesign Phase

estimated at 3-6 months; potentially varies due to data collection and surveying

This will include all the necessary study, scoping and data collection needed to establish, verify, and gather information required to proceed with a detailed engineering design.

2. Design Phase

estimated at 2-4 months

A detailed engineering design shall be required to fully develop the conceptual design after using the verified data to accurately design the infrastructure according to the required specifications to address the key issue.

3. Implementation Phase

estimated at 12-36 months

This will include compliance with required regulations/ standards, seeking approval of concerned agencies, and observance of due diligence. Upon obtaining the necessary approvals and permits, the construction of the infrastructure or implementation of the prescribed program shall be done.

4. Operation, Maintenance and Adaptive Management periodical

This shall include periodic monitoring of the infrastructure, maintenance and repair if required, evaluation of the impacts to surrounding communities, rehabilitation and retrofitting if required.

AECOM

Facts and figures

1.

AECOM launched when a handful of employees from design and engineering companies shared a dream of creating an industry-leading firm dedicated to making the world a better place.

2.

AECOM became an independent company formed by the merger of five entities. While our official founding was in 1990, many of our predecessor firms had distinguished histories dating back more than 120 years.

3.

Since then, more than 50 companies have joined AECOM and, in 2007, we became a publicly traded company on the New York Stock Exchange.

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As the world's trusted infrastructure consulting firm with an unrivaled heritage delivering design, planning, engineering, consuing and construction management solutions.

AECOM in the Philippines

Established in 1996, AECOM in the Philippines has grown into a 200+ strong team of planners, engineers, environmental scientists, geologists, landscape architects and technical management specialists driven by a common purpose to deliver a better world.

Creating Sustainable Legacies

We are leading the change towards a more sustainable and equitable future by partnering with our clients to provide solutions that help them achieve their environmental and social value ambitions and advancing sustainable business operations to help prevent the worst impacts of climate change.



47,000 people



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Work across seven continents



2 Million Work Hours Awards



100% Rating on Corporate Equality Index / Best Places to Work for LGBT Equality 2021

Accolades

- ENR rankings No 1
- Environment Firm
- Transportation Design Firm
- Facilities Design Firm
- Mixed-Used Buildings
- Education Buildings
- Aviation
- Highways
- Chemical Remediation
- Top 10 Military Friendly company 2020
- Military Friendly[®] Top 10 Company
- Military Friendly® Top 10 Supplier

- Diversity Program
- Military Friendly[®] Top 10 Employer
- Military Friendly® Top 10 Spouse Employer
- National safety council:
 155 Perfect Record Awards
- Achieved a minimum of 12 consecutive months without a recordable injury or illness.
 For each award, achieved a minimum of one million consecutive hours without an injury or illness that resued in days away from work and zero fatalities.







Since 1987, Conservation International (CI) has worked to spotlight and secure the critical benefits that nature provides to humanity.

Combining fieldwork with innovations in science, policy and finance, we've helped protect more than 6 million square kilometers (2.3 million square miles) of land and sea across more than 70 countries. Today, with offices in more than two dozen countries and a worldwide network of thousands of partners, our reach is truly global. But we couldn't have made it this far without you. Your contributions support our work to protect nature for the benefit of us all.

Cl's work in Asia-Pacific began in 1989 with a pledge to protect some three dozen of the Earth's biodiversity hotspots, including the Philippine archipelago and the Sundaland rainforests of Southeast Asia.

Since then, our focus in Asia-Pacific has expanded across the region to include other ocean and forest areas considered critical to human well-being. We help improve food security, support innovative financing for conservation projects and establish protected area networks that encompass essential ecosystems.

Cl's unique combination of experience with ecosystem conservation and restoration, community co-design, and stakeholder leadership allows us to advise and lead <u>green-gray initiatives</u> around the world in collaboration with local, regional and national governments and engineering partners.

Priorities

- Stabilizing our climate by protecting and restoring nature
- Doubling ocean protection
- Expanding planetpositive economies

About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a *Fortune 500* firm and its Professional Services business had revenue of \$13.2 billion in fiscal year 2020. See how we are delivering sustainable legacies for generations to come at aecom.com and @AECOM.

