Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 20-May-2020 | Report No: PIDC29386

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
China	P173316		GEF China Sustainable Cities - Supporting Green and Low Carbon Urban Development (P173316)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EAST ASIA AND PACIFIC	Jan 15, 2021	Feb 26, 2021	Urban, Resilience and Land
Financing Instrument	**Borrower(s)**	**Implementing Agency**	**GEF Focal Area**
Investment Project Financing	Zhou Tao,Zhu Xiaowen	Zhou Huiling	Multi-focal area

Proposed Development Objective(s)

support participating cities to develop a systematic and integrated approach to the green and low carbon strategies and planning.

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	26.91
Total Financing	26.91
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	26.91
Global Environment Facility (GEF)	26.91

Environmental and Social Risk Classification	Concept Review Decision
Substantial	Track I-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **China's successful transformation into the world's second largest economy has come with high environmental costs.** Urbanization and infrastructure expansion amid rapid economic growth has led to a huge consumption of natural resources, aggressive land conversion to urban and industrial uses and insufficient waste management, among others. Heavy consequences including spikes in greenhouse gas (GHG) emissions[1], biodiversity loss[2] and environmental and land degradation have followed. As a result, Chinese cities where most people and economic activities concentrate are becoming less livable and sustainable.

2. **To address its environmental and ecological challenges, China has shifted focus from high−rate GDP growth to high quality.** The Chinese leadership has explicitly emphasized preserving ecological resources as an essential part of the new modality of growth.[3] The government has made some efforts to actualize this declaration. In the case of urban development, China's newly initiated territorial and spatial planning system[4] operationalizes ecological preservation and environmental protection by requiring all urban planning maps to clearly demarcate three areas: "red lines" are mandated to be drawn to show the boundaries of ecological protection, farmland preservation and city expansion.

Sectoral and Institutional Context

[1] China is the largest emitter in the world with CO2 emissions at 7.5 metric tons per capita in 2014 (Euro Area: 6.5) and total greenhouse gas emissions 12,454,711 kt of CO2 equivalent in 2012. Source: World Bank Data
[2] 2140 of species listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) were in danger of extinction in 2011; from 15 to 20 % of China's species of higher plants are endangered. (Zheng et al. 2015)
[3] A famous quote on this is from President Xi Jinping in which he said: "Clear waters and lush mountains are as precious as silver and gold mountains."
[4] China initiated the process of formulating its first "territorial and spatial plan" at national scale in 2019. It is still ongoing as this note is written.

3. **High quality growth is incumbent upon action taken in Chinese cities**. As of 2019, urban residents in China account for about 60% of its population.[5] The top five city clusters out of China's 19 government-designated clusters account for 54% of its national GDP.[6] Urban development has been at the core of China's growth, and cities now contribute to 85% of the country's total CO_2 emissions[7] from industrial and urban activities. The government recognizes that its cities remain key in their next stage of growth and are focal points in the fight against climate change.

4. **Green and blue urban infrastructure assets play an important role to help cities deal with climate change and biodiversity loss. Amid the COVID-19 pandemic, urban biodiversity has become even more vital as it is linked to an increased quality of life, public health and climate change adaptation.**[8] "Green" and "blue" infrastructure assets include grasslands, parks, greenways, rivers, lakes, canals, coastal water systems and wetlands, among others. These ecological urban assets can support physical and social resilience. They can reduce the impacts of extreme weather events, improve food and water security, regulate air pollution, microclimate and noise reduction, enhance wellbeing and support carbon sequestration, thus managing GHG emissions. In China, a biodiverse-rich country hosting four major biodiversity hotspots[9], rapid urbanization has increased the amount of impervious surfaces, rendering urban development and its pressures as a threat to biodiversity loss. If this type of green development were to be prioritized in urban planning, green and blue infrastructure assets, together with peri-urban areas, can form an integrated ecosystem to support and enhance biodiversity. This would strengthen overall resilience and improve quality of life for the country. The health of the biodiversity in urban ecosystems provides the foundation for a city's livability and resilience.

5. **China has made commitments under global agreements on climate change and biodiversity.** China has set a goal to peak its GHG emissions by 2030, and is identifying options to accelerate its ambitions as required under Paris Agreement.[10] To implement the Convention on Biological Diversity (CBD), the government has enacted China Action Plan for Biodiversity Conservation. It will host a major biodiversity summit in Kunming in October 2020, where the international community will set commitments for a post-2020 biodiversity framework. Chinese cities must play a central role in supporting the national government to raise ambitions, implement integrated solutions to climate change and biodiversity loss and demonstrate that green and low carbon development lie at the core of quality growth.

[5] Source: National Bureau of Statistics of China
[6] Source: Statista
[7] 85% of China's GHG emissions are attributed to urban economic activities. Source: Maximilian Auffhammer, The Decomposition and Dynamics of Industrial Carbon Dioxide Emissions for 287 Chinese Cities in 1998–2009, Journal of Economic Survey
[8] Song X, Chang KT, Yang L, Scheffran J. Change in environmental benefits of urban land use and its drivers in Chinese cities, 2000–2010. Int J Environ Res Public Health 2016; 13: 535.
[9] China hosts, mostly or partially, four of the world's 36 biodiversity hotspots (Myers et al. 2000, CEPF 2019). The hotspots in China range from the arid northwest of the country, across Qinghai-Tibet Plateau, the highest and largest plateau of the world, to the tropical and subtropical southern China. (Cai et al. 2019)
[10] China commits a peak in carbon dioxide emissions by 2030, including 20% of non-fossil share in energy use and reduction of emission of 60% to 65% below year 2005. The Paris Agreement includes a ratchet mechanism or ambition mechanism, requiring governments to resubmit a new set of "nationally determined commitment - NDC" every five years, which should be more ambitious than the country's previous NDC.

6. **Although China is making an effort towards high quality growth, Chinese cities face a few major constraints at the policy and institutional levels. First, the concept of quality growth remains as a high-level policy guidance.** It is unclear as to how this concept and its prioritization on green and low carbon has been operationalized in local policies and incorporated into planning, monitoring and evaluation. While many local governments are in the process of developing a set of indicators that define high quality growth, the proposed indicator system still largely focuses on traditional economic performance, with limited emphasis on preserving urban ecological assets to enhance ecosystem services and address climate change. From an institutional standpoint, different line ministries or local agencies often do not apply the same approach in defining and measuring the identical indicators, resulting in methodological inconsistencies and incomparable data sets. Furthermore, there exist few incentives to share data among different agencies, posing an institutional challenge to integrated planning, implementation and monitoring and evaluation.

7. **Second, in spite of the strong push by the central government, ecological conservation is yet to be supported by a city's spatial strategy.** Land use decisions still highly prioritize "gray" urban infrastructure, and ecological planning is yet to be fully integrated into the urban spatial planning process. When local governments do invest in green and blue assets, they are mostly for aesthetic and beautification purposes for their cities. There is limited attention to and understanding of the ecosystem services provided by the natural assets, their relation to wellbeing and the importance of preserving urban biodiversity and applying nature-based solutions for physical and social resilience.

8. **Ecological planning is even more challenging at the regional scale.** The decentralized governance structure in China has resulted in fragmented policy implementation at the local level; ecological systems, however, respect no administrative boundaries. Integrated and coherent ecological planning that connects cities and rural areas and work across jurisdictions is critical to forging a common frontline to preserve nature.

9. **Finally, low carbon development has yet to be incorporated into spatial planning and realized through sustainable land use.** Many Chinese cities have set the climate goals in the form of either emission intensity targets or early emissions peaking compared to the national target. While it is widely accepted to reduce emissions in energy and transport sectors, spatial planning is also important because it shapes a city's layout and people's behaviors. For example, urban design and urban regeneration that encourages compact urban development and walkable/cyclable cities can reduce automobile trips, thus reducing the demand for energy and associated carbon emissions. Studies show that cities with more compact urban forms, higher densities, and human-scale neighborhoods can reduce the GHG emissions by 50% or more.[11] As Chinese cities start to redevelop old neighborhoods and communities, the government should take the opportunity to incorporate low carbon considerations into neighborhood planning and design to demonstrate that low carbon actions can create win-wins: improving livability while bringing climate benefits.

10. **In sum, as China strives to achieve high quality development, the next phase of urbanization must balance economic growth, restoration and rehabilitation of urban ecological systems and the reduction of its carbon footprint.** Achieving this balance requires a systematic value chain response on multiple fronts: at a policy level – setting a green urban policy framework that supports the measurement of "green" performances of cities; at

[11] IPCC 2014.

the institutional level – integrating ecological conservation and low carbon footprint into the spatial planning process; and at the investment level – prioritizing green urban infrastructure and applying nature-based solutions to enhance a city's ecology and ecosystem services.

Relationship to CPF

11. This project is well aligned with World Bank's Country Partnership Framework (CPF) for China (FY2020-2025). Of the three areas of engagement identified in the CPF, this project falls in "Engagement 2: Promoting greener growth." More specifically, it contributes to two objectives of the CPF, "Objective 2.4: Strengthening Sustainable Natural Resource Management" and "Objective 2.5: Promoting Low-Carbon Transport and Cities." The CPF also stresses the cross-cutting theme of cooperation on global knowledge and development, which the project addresses as well. As detailed in description below, an important component of the project is to create a knowledge sharing platform for sustainable cities. This platform serves to bring global best practices to China as well as to share experiences of the project cities with other cities in China and the developing world.

C. Proposed Development Objective(s)

Support participating cities to develop a systematic and integrated approach to the green and low carbon strategies and planning.

Key Results (From PCN)

Outcome/PDO-level Indicators	i. Cities incorporate green and low carbon development indicators into existing high-quality growth indicator system for monitoring the implementation of city's 14th Five Year Plan (# of cities) ii. Ecological conservation integrated into spatial planning (# of spatial plans or # cities) iii. Cities incorporate low carbon considerations into urban strategy (# of cities)
Intermediate Results Indicators	**Results Area 1 – Expanding high-quality growth to include green growth** i. Green and low carbon development indicators developed (#) ii. Methodology for data collection and measurement for indicators developed iii. Data-sharing platforms established or enhanced (#) iv. Agencies participating in data-sharing platform trainings (#) **Results Area 2 – Incorporating green development into cities' planning and strategy** i. Cities/territories established an inventory of natural assets (e.g. wetlands, parks, river, lakes, etc) and ecosystem services provided by these assets (#) ii. Biodiversity strategy prepared for the select territories (#) iii. Options for using nature-based solutions identified for the select sites (#) iv. Area of landscapes under improved practices (hectares; excluding protected areas (#) v. GEP assessment provided by cities/districts (#) vi. Options for green financing modality identified (y/n)

	Results Area 3 – Developing low carbon city strategy and embedding low carbon into urban regeneration i. Low carbon roadmaps, including carbon neutrality, developed in the selected cities/districts (#) ii. Urban regeneration schemes incorporating low carbon options (# of urban schemes) iii. Low carbon investment plan developed for the selected cities/districts (y/n) iv. Carbon emissions potentially avoided or reduced (# tons of Co_2) **Results Area 4 – Strengthening knowledge and engagement** i. Cities in China and other developing countries participating in knowledge exchange activities on urban sustainability (# of cities) ii. Trainings and workshops (#) iii. Participation by the relevant ministries in policy dialogue with cities in the relevant area (#)

D. Concept Description

12. **The project funding comes from the Global Environmental Facility's (GEF)-7 Sustainable Cities Impact Program.** GEF seeks to support cities and sub-nationals in their effort to fight against climate change, biodiversity loss and other global environmental challenges through sustainable and integrated urban planning.

13. **China was one of the nine countries[12] that were competitively selected** for the second phase of the GEF Sustainable Cities Impact Program in December 2019, with the total recipient grant funding of USD 26,909,050.

14. **The project includes three participating cities: Chongqing, Chengdu and Ningbo. In addition, two clusters of cities are under consideration: Chengdu-Chongqing Corridor and Yangtze River Delta Demonstration Zone for Ecological and Green Integrated Development (YRD Demonstration Zone)[13].** The table below summaries the basic information of the cities and two clusters. Annex I includes specific information on these cities and clusters.

Table 1 Overview of project cities and areas

	City	Population (millions)	Size (km^2)	Key City Features and Vision
1	**Chongqing** *(part of Chongqing-Chengdu corridor)*	33.92	82,400	- A gateway to China's less developed western region - Aims to become a green city and restore the image

[12] Other countries include Argentina, Brazil, Costa Rica, India, Indonesia, Morocco, Rwanda and Sierra Leone.
[13] As the YRD Demonstration Zone was recently established, the institutional arrangement is yet to be fully functional. The World Bank task team will further determine the viability of incorporating YRD Demonstration Zone during the project preparation stage.

				of “a mountainous and river city.”
2	**Chengdu** *(part of Chongqing-Chengdu corridor)*	13.98	14,335	**-** The capital city of Sichuan Province and endowed with rich biodiversity - Aims to become a garden city and a city in the parks
3	**Chengdu-Chongqing Corridor** *(including 27 counties in Chongqing and 15 cities in Sichuan Province adjacent to Chengdu)*	95.00	185,000	- The Corridor identified as “Double City Circles” by NDRC in its newly released urban strategy. It is one of top priorities for the national government to develop urban agglomerations.
4	**Ningbo**	8.20	9,816	- A middle size city known for its very proactive and innovative local government -Aims to become a green and livable city
5	**YRD Demonstration Zone for Green and Ecological Integrated Development** *(metropolitan area around Shanghai)*	3.10	2,300	- First ever such demonstration zone for regional integration of ecological management in China. - Aims to break institutional and jurisdictional boundaries to leverage region-wide ecological resources for economic and social development

I. Project components

15. **The project includes four components to achieve the PDO.** These components are also designed to support the two focal areas under the GEF: biodiversity and climate change, for which the resources were allocated by the GEF to deliver global environmental benefits.

16. **Specifically, Component 1** would support the policy framework and strengthen institutional processes of the cities—this will be achieved by enhancing a performance indicator system supported by data sharing platforms across various agencies to ensure that green and low carbon development can be translated into measurable

progress in urban planning and development. Such a measurable framework provides guidance and basis for the work under Components 2 and 3.

17. **Component 2** will then focus on "green" – supporting ecological planning through stocktaking and enhancing of "green" and "blue" assets of a city. **Component 3** would help cities reduce their carbon footprint by supporting a low carbon strategy and exploring options to achieving carbon neutrality. In both Components 2 and 3, modalities of green finance will be explored, including leveraging the private sector to invest in biodiversity and low carbon options. Finally, **Component 4** is designed, through a knowledge platform, to bring many other cities in China and around the world to share the experience gained from the project. The intention is to engage them in the broad dialogue on urban sustainability, with the objective of making the platform become the center of excellence on urban knowledge and innovation.

18. **While the project activities are largely implemented by the participating cities, the project will also support policy development led by relevant national ministries.** National policy will guide cities to implement green and low carbon. At the same time, lessons and experience generated from the project implementation will inform national policy making led by the ministries.

19. **The four components are described in detail and relationships between them are shown in the chart, both below**. The three Participating Cities and the clusters will undertake either all or part of the activities, depending on the policy priorities and the status of their existing work in each city/cluster.

Component 1: Support policy frameworks and institutions

- *Strengthening the government's indicator system on high-quality development and data-sharing platforms*

Background and Rationale

20. **The Chinese government uses indicators to guide its project planning and monitor implementation, but its current indicators to measure "green" and "high quality" are insufficient.** In pursuing high quality development, cities have been in the process of modifying their system to include more environmental indicators, to expand from their focus on project approvals and government performance evaluation. This is a positive and promising change, yet the added environmental indicators are too conventional, such as air quality, energy intensity, and area of green spaces; while these can be useful as a foundation, a systematic set of indicators that help cities monitor urban ecology and support the transformation to low carbon pathway are still lacking.

21. **The second challenge is lack of data sharing among different agencies. Indicators need to be backed by good data.** Currently, each city agency tends to establish its own data system and collect their own data, often with varied definitions, methodologies and even sources, and they have little incentives to coordinate or share with others. This inconsistency and fragmentation makes cross-sector joint decisions difficult and benchmarking challenging. To overcome such institutional barriers, a data sharing platform can be created that connects the data systems from the key agencies. The system would use a consistent and unified methodology and can provide a common basis for an integrated planning and decision-making, and monitor performance and progress made towards achieving indicators.

Project Activities

22. To address these challenges, specific project activities under Component 1 include the following:

    a. **Support the development of green and low carbon indicators**: Building on the existing work by cities on high quality development planning, support cities in developing a set of comprehensive indictors with the focus on green and low carbon growth. These indicators may include the following dimensions: (i) green economy; (ii) environment and ecology; (iii) green and human centered urban spatial form; and (iv) low carbon footprint. The project will assist cities to develop the relevant indicators and standardized methodology for collecting data, measurement, monitoring and evaluation and support the implementation of city-level 14th Five-Year Plans.

    b. Establish or enhance data-sharing platforms: Supporting data sharing platforms that connect the databases of key government departments. These platforms will be consistent in their approach for data collection, analysis and presentation/visualization, which will facilitate policy makers in project approval, especially with decisions related to spatial planning and natural resource management.

    c. Engage relevant ministries of the national government: The National Development and Reform Commission (NDRC) is working on indicators for high quality development as part of the government's overall strategy of promoting high quality development. The project will engage with NDRC and other relevant ministries to ensure that national ministries provide guidance and feedback on local experiments while useful lessons and experience from this project can inform policy making at national level.

Component 2: Support green urban development

- *Strengthening ecological planning process through developing an urban biodiversity strategy, and applying nature-based solutions to enhance "green" and "blue" assets*

Background and Rationale

23. **Despite the strong push by the central government on ecological conservation, urban spatial planning still prioritizes "gray" infrastructure, often at the cost of a city's natural assets, such as green spaces, lakes, wetlands, etc**. Furthermore, civil works by cities tend to focus on investing in individual sites without adopting a system or network approach that enables "green connectivity," which can link natural assets in both urban and peri-urban areas to maximize the benefits delivered by the ecosystems to people while also enriching biodiversity. In addition, interventions on the sites tend to be driven by an engineering approach without due consideration of applying nature-based solutions that incorporate ecosystem services.

Project Activities

24. To address these challenges, specific project activities under Component 2 include the following:

    a. **Mapping urban natural assets to support ecological planning and transition from GDP to GEP** (Gross Environmental Product): This activity will use the **natural capital accounting (NCA)** methods and tools to map urban natural assets and assess the value of ecosystem services. Urban natural assets include both "green" and "blue" spaces. Ecoservices are the benefits and functions that these natural assets provide to

people, including but not limited to contribution to public health, climate, urban cooling, and biodiversity. The NCA will provide an important basis for shifting from measuring growth by GDP to GEP.

b. **Biodiversity strategy**: Support the development of biodiversity strategy and monitoring in the selected cities/project sites

c. **Nature-based solutions**: Support the preparation for using nature-based solutions[14] to enhance green urban infrastructure (for example, eco-embankment of rivers or lakes, wetland preservation and leisure infrastructure)

d. **Exploring urban financing modality and private sector involvement** in investing in and supporting of biodiversity and nature-based solutions.

e. **Engaging relevant ministry of the national government.** Natural capital accounting has been identified by the national government as one of the important tools that support the transformation from GDP to GEP. Currently various ministries such as Ministry of Finance and Ministry of Natural Resources (MNR) are working on NCA. MNR is also the leading ministry that supports ecological planning. MEE lead on biodiversity strategy. This project will engage with these ministries to conduct policy dialog and exchanges to support the national government's efforts in developing national framework and standard setting.

Component 3: Support low carbon urban development

- *Integrating a low carbon strategy to urban regeneration and exploring net zero emissions in the selected districts and communities.*

Background and Rationale

25. **China is committed to peak its carbon emissions by 2030 and is identifying options to accelerate ambitions as required under the Paris Agreement.** Cities have a major role to play in reducing emissions by optimizing land use and spatial layouts and improving energy efficiency of buildings. An area that has not received adequate attention is the significant difference the urban spatial form can make in reducing emissions. To achieve a compact urban development pattern that uses less energy and emits less GHGs, it is essential to integrate low carbon strategies into urban spatial planning, including considerations of reducing urban heat island effects. Regenerating existing urban neighborhoods, rather than outward expansion, should become an important strategy in reducing city's carbon footprint.

26. **Many cities in the advanced economies have declared targets for net zero emission or carbon neutral.** The concept is still novel to many Chinese cities. More analytical work, including the methodology, needs to be conducted to build a foundation for supporting Chinese cities toward a low carbon development pathway, to ultimately become carbon neutral.

27. **Furthermore, achieving emission targets needs to be backed by a comprehensive low carbon investment plan.** Such plan identifies a city's climate investment opportunities based on GHG impacts and an economic cost

[14] Nature-based solutions (NBS), or "nature-based infrastructure" is an approach that uses natural systems to provide critical services, such as wetlands for flood mitigation or mangroves to reduce the impact of waves, storm surge, and coastal erosion. These solutions can also synergize with grey infrastructure, forming so-called "hybrid" solution (World Bank, 2019)

analysis of existing municipal infrastructure to help the municipalities prioritize potential investments across different urban sectors. As a result, a pipeline for climate financing, including green bonds and green loans, can be initiated to support the low carbon investment. The work will be done in close collaboration with IFC by leveraging its EDGE tool[15], for example, to help cities develop low carbon investment pipelines that can utilize both public and private financing.

Project Activities

28. To address these challenges, specific project activities under Component 3 include the following:

a. **Support select cities/districts to develop a roadmap toward carbon neutrality,** including:
   - Develop or update a GHG inventory;
   - Analyze strategies for reducing and offsetting emissions (both sectoral and spatial planning strategies)
   - Develop a roadmap to achieve carbon neutrality

b. **Pilot urban regeneration that integrates low carbon strategies in the selected communities** under the government's urban regeneration program, designing and piloting low carbon strategy, which may include:
   - GHG emission sources from the selected communities
   - Options to reduce or offset the emissions
   - Estimates of urban heat island (UHI) effects on the communities/neighborhoods and strategy to address UHI
   - Design strategy that regenerates communities to improve livability while reducing emissions
   - Exploring financing modality and private sector engagement

c. Develop low carbon investment plans and pipelines, including exploring green bonds and other innovative financing modality.

d. **Engage relevant ministries of the national government.** Ministry of Environment and Ecology (MEE) is the leading ministry on climate actions, including an ambition of low carbon city program. The project will build on the strong existing relationship with MEE in the area of climate change to support the national government's overall effort to promote low carbon cities.

Component 4: Share knowledge:
- *China Sustainable City Platform (CSCP)*

29. **The GEF project directly finances activities in the three participating cities/areas, but its knowledge and practices generated can be shared with many other cities.** The CSCP will be established to serve as a platform to provide technical support to at least 30 other cities. The Platform, which will be managed by an institution under the National Development and Reform Commission, will also serve as major learning and knowledge sharing platform to:
   - Conduct regular trainings on good urban practices, including on topics that support the implementation of this project;
   - Promote exchanges among Chinese cities as well as with cities around the world, especially in developing countries with similar challenges; and
   - Serve as a "liaison" to support the dialogue and policy interaction with the various national ministries.

[15] IFC EDGE tool

30. **The CSCP will be managed in close collaboration with the Global Platform for Sustainable Cities (GPSC)** led by the World Bank and the platform led by UNEP under GEF-7.

31. While all project cities will participate in Component 4, **for Components 1 through 3, each city will implement a tailored package of activities** which are selected to best address the specific challenges facing that city. The program for each city is summarized in the table below.

Table 2 Summary of Project Activities by City

	Component 1: Support policy framework and institutions	**Component 2: Support green urban development**	**Component 3: Support low carbon city development**
Chongqing	***Policy/Institutional level*** - Develop a comprehensive performance indicator system on green and high-quality development - Establish a data sharing platform that connects different agencies	***Policy/Institutional Level*** - Establish an inventory of natural assets for ecological planning ***Site Level*** - Bishan District: ○ Develop urban biodiversity strategy and index ○ Conduct natural capital accounting - Green Finance Modeling	***Policy/Institutional Level*** - Strengthen GHG inventory - Integrate low carbon strategies into spatial planning - Develop mitigation strategy on achieving zero net emissions - Prepare a low carbon investment plan ***Site Level*** - Yuzhong district ○ Piloting low-carbon community urban regeneration ○ Develop for low carbon cooling guidelines
Chengdu	***Policy/Institutional Level*** - Strengthen the high-quality development indicator system - Improve the existing cross-agency data sharing platform	***Policy/Institutional Level*** - Establish an inventory of natural assets for ecological planning - Formulate technical guidelines for the conservation, restoration and utilization of urban wetland biodiversity; formulating report on the ecological value accounting for urban wetland - Develop nature-based solutions and regional blue and green spatial system planning ***Investment Level*** - Develop green finance modality	***Policy/Institutional Level*** - Strengthen GHG inventory - Develop mitigation strategy on achieving zero net emissions - Develop inclusive low carbon strategy related to renewable energy and ecological carbon sink - Develop low carbon action roadmap and transformation options

		for sustainable investment for urban ecological services and construction ***Site Level*** - Tuojiang River Basin ○ regional blue-green spatial system planning ○ Develop studies on biological species resources along the river basin	supported by investment plan
Chongqing-Chengdu Corridor	***Policy/Institutional Level*** - Coordinate high-quality development indicator systems to support coordinated regional development	***Policy/Institutional Level (tbc)*** - Conduct green/blue assets mapping to support regional ecological planning and promote green connectivity	
Ningbo	***Policy/Institutional Level*** - Strengthen the high-quality development indicator system - Strengthen data sharing across sectors	***Policy/Institutional Level*** - Develop biodiversity strategy, index and information system - Develop studies on green assets and healthy cities ***Site Level*** - Ninghai County ○ Establish biodiversity strategy and index ○ Conduct natural capital accounting for GEP - Green Finance ○ Exploring co-financing of green investment ○ Developing PPP in biodiversity preservation	**Policy/Institutional level** -Strengthen the existing low carbon action plan and preparing a roadmap to achieve net zero emissions - Preparing and low carbon investment plan
YRD Demonstration Zone (tbc)	***Policy/Institutional Level*** - Establish indicator system and M&E for green assets for the Zone	***Policy / Institutional Level*** - Map natural assets for the Startup Area within the Zone - Conducting natural capital accounting for Qingpu and Changning Districts of Shanghai - Design and preparing for applying green and nature-based infrastructure solutions	***Site Level*** - Pilot zero net emissions in the selected communities in Changning District of Shanghai.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

The project is designed to facilitate the incorporation of green growth and low carbon strategy into the urban planning and policy development of participating cities, which will involve no civil works but focus on Technical Assistance (TA) activities. Overall, the project is expected to have significant environmental and social benefits by enhancing the biodiversity and climate resilience of selected project cities, and such positive influence will be further enhanced through the project-supported knowledge sharing activities in China and beyond. The project will be implemented in three selected cities and two city clusters, all in the Yangtze River Basin including its upper reach in Chongqing Municipality and Sichuan Province (which Chengdu is the capital city of) with recognized ecological importance; however, the project will only target highly urbanized areas where it is unlikely to be highly ecologically sensitive. Furthermore, screening criteria will be established under the Environmental and Social Management Framework (ESMF) to avoid high environmental and social risks under project activities, which will be consistent with the existing Ecological Redline Policy (ERP) of China that provides unbridgeable geographical boundary for ecological conservation. Also, under Component 2, appropriate measures for the conservation of natural habitat and local biodiversity will be developed as part of the biodiversity strategy and natural-based solutions to address potential adverse impacts on the environment and local communities resulting from rapid urban development. To conclude, the project is unlikely to result in significant conversion and degradation of natural habitats and will be designed and implemented to assure its positive environmental impacts in consistence with both national environmental protection strategies and the World Bank?s ESF policy requirements.

Though the project will not finance any form of construction activities, some TA activities under Component 2 and 3 will likely lead to future investments on green infrastructure in project cities or low carbon solutions at the community level. While TA activities are not envisaged to cause significant direct environmental impacts, the future implementation of supported plans and investments prepared under the project is expected to have direct or indirect environmental impacts. Thus, the project?s environmental risk is classified Substantial at this stage.

From social perspectives, the project investment will only support the technical assistance activities on strategies, plans, policies and practices. Based on the initial screening of PCN stage, no land acquisition and land property change will be involved under this project since there will be no civil work directly planned under the project activities. Additionally, ethnic minorities are deemed a low probability of presence in participating cities of Chengdu, Chongqing and Ningbo. Based on the initial review, potential impacts will be mainly on the downstream implications from piloting design of green and low carbon development in selected residential communities of participating cities. For example, using more permeable pavement for better storm water management, linking patches of green areas to form networked green space and ecosystem, in order to enhance biodiversity and maximize carbon sequestration, adding greenery to building facades and roofs. For these potential downstream social impacts, detailed analysis for proposed project activities will be conducted under preparation of ESMF. The selection of the pilot communities will be managed under a selection criteria

and due process defined in the ESMF. These potential impacts can be further assessed and managed under ESMF which can be mitigated through formulating a screening criterion for project selection and enforcing a culturally appropriate stakeholder engagement approach to ensure broadly and effective consultation.

An ESMF is proposed as the E&S management instrument to cover all the project activities and associated facilities (if any) in compliance with both domestic regulations and the ESF, including the World Bank Environmental Health and Safety (WBG EHS) guidelines when applicable. The ESMF will set out the principles, rules, guidelines, and procedures to assess the environmental and social risks and impacts. In the case of this project, the ESMF will focus on: (a) evaluation of potential downstream E&S risks/impacts and the recommendation of mitigation mechanism for different types of project-supported TA activities; (b) review of China?s E&S regulatory framework in comparison to applicable ESSs; (c) E&S management procedures to support the screening, preparation and implementation of project-targeted TA activities; (d) the E&S related exclusion list for selection of project activities; (e) review of existing institutional capacity on E&S management and arrangements for institutional strengthening as needed; (f) a plan for stakeholder engagement and grievance mechanisms; and (g) land use due process of piloting activities at community level.

To maximize positive impacts and minimize any risk of unintended adverse consequences, the TA delivered through this project will require diligent supervision and quality control, supported by meaningful stakeholder consultation throughout preparation and implementation. Thus, the project-supported TA activities will be designed and implemented with the integrated environmental and social objectives, and national PMO/city PMO will be required to incorporate reference to relevant ESSs in the Terms of References (TORs) for studies to ensure that activities and outputs are consistent with the requirements of ESF. In addition, the ESMF will establish E&S related screening criteria to ensure the exclusion of high-risk activities and provide guidance on the principles for green designs and environmental considerations in spatial planning and new financing mechanisms, which would then be mainstreamed into the project?s deliverables where they would be detailed and customized for the specific investments/locations or the issues addressed by the TA. The ESMF will also support ?greening? of the future investments by exploring alternatives through early involvement in a design process. The quality of environmental and social risk management-relevant documents (Feasibility Studies, integrated spatial plans, land suitability studies, biodiversity strategies, etc.) prepared during the implementation of the TA must be satisfactory to the Bank.

It is understood from the PMOs of three project cities that the ongoing Strategic Environmental Impact Assessment (SEIA) for Yangtze River Economic Zone (YREZ) has covered all three project cities and the two city clusters under consideration, and some interim outcomes will be published in the second half of 2020 during project preparation. The project investments will be designed and implemented in compliance with the existing environmental protection plans, and the key SEIA findings and recommendations (including interim findings and outcomes) will be reviewed and integrated into the project design and environmental instruments in collaboration with local environmental protection authorities. During preparation, the participating cities will coordinate to develop their respective ESMFs and Stakeholder Engagement Plans (SEPs), and the Environmental and Social Commitment Plan (ESCP) consistent with the ESF requirements. The E&S documents should be disclosed as early as possible before appraisal locally and at the World Bank website to seek views of stakeholders.

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