



Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 23-Mar-2020 | Report No: PIDISDSA24018

**BASIC INFORMATION****A. Basic Project Data**

Country China	Project ID P158079	Project Name China: Jiangxi Eco-industrial Parks Project	Parent Project ID (if any)
Region EAST ASIA AND PACIFIC	Estimated Appraisal Date 23-Mar-2020	Estimated Board Date 18-Jun-2020	Practice Area (Lead) Urban, Resilience and Land
Financing Instrument Investment Project Financing	Borrower(s) People's Republic of China	Implementing Agency Fuzhou New Industries Zone, Jiangxi Development and Reform Commission	

Proposed Development Objective(s)

To strengthen Jiangxi's institutional and regulatory framework for eco-industrial parks (EIP) in line with the International EIP Framework and demonstrate its implementation in Fuzhou New Industries Zone.

Components

Provincial-level Eco-Industrial Park standard, framework and monitoring platform
Eco-industrial Park Demonstration and Zero-waste Initiatives
Nature Based Solutions and Eco-system Services Restoration
Technical Assistance, Capacity Building, and Project Management

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	327.31
Total Financing	327.31
of which IBRD/IDA	200.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**



International Bank for Reconstruction and Development (IBRD)	200.00
Non-World Bank Group Financing	
Counterpart Funding	127.31
Borrower/Recipient	127.31
Environmental Assessment Category	
B-Partial Assessment	
Decision	
The review did authorize the team to appraise and negotiate	

Other Decision (as needed)

B. Introduction and Context

Country Context

- China has entered a new stage of development, which focuses more on environmental sustainability.** Double-digit annual growth based on resource-intensive manufacturing, exports, and cheap labor has largely reached its limits and has led to economic, social, and environmental imbalances. Reducing these imbalances requires shifts in the structure of the economy from low-end to higher-end manufacturing and services, and from investment to consumption. China's key medium-term challenge is to manage an orderly transition to a slower but more balanced, equitable and environmentally sustainable growth. This requires the development of institutions that support more environmentally conscious, market-driven, and productive growth, in line with the government's strategy of building an "ecological civilization".¹
- China faces a range of environmental and climate change challenges unique in scale and complexity.** Between 1979 and 2017, energy consumption increased almost eightfold to fuel an economy that grew 32-fold in real terms, with coal still accounting for 60 percent of the energy mix at the end of the period.² Based on 2008 data, the *China 2030* report³ estimated the costs of environmental degradation and resource depletion at almost 10 percent of GDP, of which air pollution accounted for 6.5 percent, water pollution 2.1 percent, and soil degradation 1.1 percent. Since then, despite progress in strengthening environmental governance, reducing the energy intensity of GDP and improving urban air quality, environmental damage continues to harm China's economy. It does so by undermining people's health, degrading ecosystems and

¹ "Ecological civilization" is a Chinese term which refers to material, spiritual and organizational achievements in following laws of harmonious human, social and natural development. It is a concept which realizes harmonious co-existence and sustainable development, both among people and between them and nature and society, reflecting the progress of civilization. Source: UNEP.

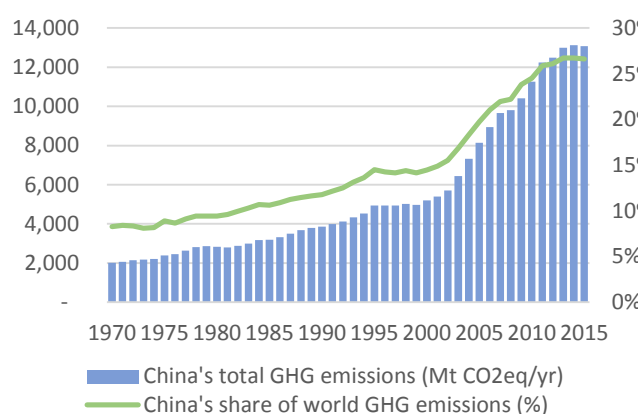
² Source: China Statistical Yearbook 2018, National Bureau of Statistics of China.

³ "China 2030: Building a Modern, Harmonious, and Creative Society" (World Bank and Development Research Center of the State Council of the People's Republic of China, 2013).



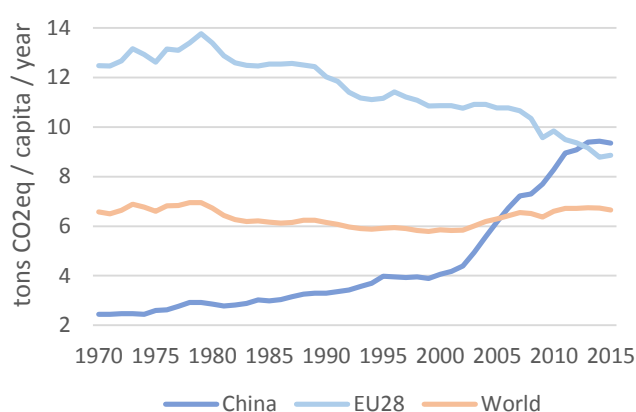
natural resources, and causing losses to agriculture and industry. Moreover, while pollution and resource scarcity affect all citizens, the poor are usually most affected and least able to cope. China's environmental performance is also of global importance. Due to its size and the high share of coal in its energy mix, China has become the world's largest emitter of greenhouse gases (GHGs), accounting for over a quarter of annual global emissions (Figure 1). It is also now a higher GHG emitter per capita than, for instance, the average for the European Union (Figure 2).⁴ Achieving green growth therefore remains a highly relevant goal for China and for the world, and requires a broad mix of policy instruments, investments and behavior change. These include fiscal and tax incentives, pricing measures, green finance, information disclosure, promotion of green technology, environmental standards, and greater public participation.⁵

Figure 1. China's Total and Share of Global GHG Emissions



Source: EDGAR database, European Commission

Figure 2. China's GHG Emissions per Capita in comparison



Source: EDGAR database, European Commission

3. **The province of Jiangxi is one of two provinces identified by the central government to demonstrate implementation of the ecological civilization concept.** It has a special role in the piloting of reforms that would enable China to achieve green growth. Jiangxi, with a population of about 46 million, is also part of the Yangtze River Economic Belt (YREB) initiative launched by the Chinese government in 2016. This initiative, which runs along the Yangtze River through nine provinces and two specially administered municipalities, has been selected as one of the three key growth engines for China's development.⁶ Development of YREB is a key element of the Chinese government's strategy to mainstream the concept of ecological civilization, promote industrial transformation and upgrading along the Yangtze River, and increase the overall competitiveness of the economic belt. The YREB Development Plan 2016–2030 highlights green development, environmental protection, rehabilitation, and management of water resources.

Sectoral and Institutional Context

4. **China needs to green its industrial sector to shift to a more sustainable growth path.** Energy/resource-intensive and polluting sectors, in both heavy and light manufacturing, have historically accounted for a large

⁴ Source: WDI, World Bank (<https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=CN-EU>)

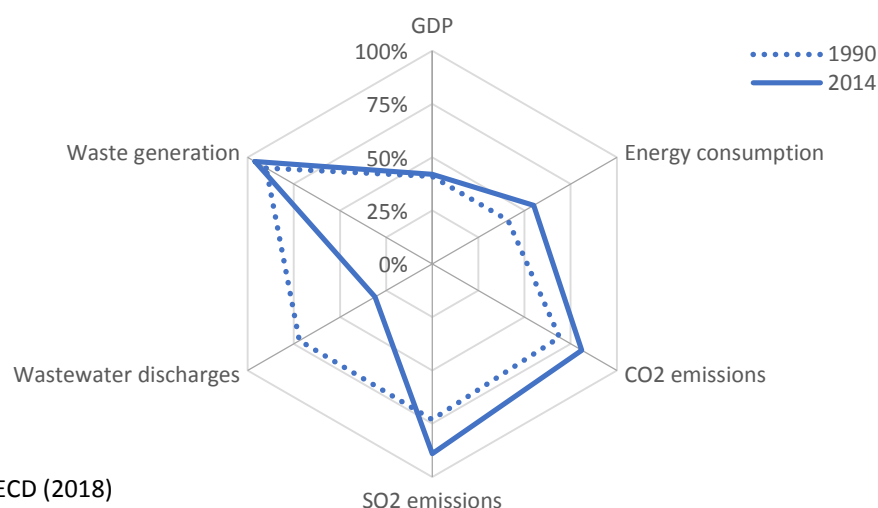
⁵ Green growth can be defined as an economic growth model that fosters economy-wide efficiencies, new markets and innovation, while decoupling growth from the resource use, carbon emissions, and environmental degradation.

⁶ The other two are the Beijing-Tianjin-Hebei Area and the Guangdong-Hong Kong Bay Area.



share of China's industrial sector. Industrial production, combined with the industry and energy sectors' continued reliance on coal, has accounted for a large and growing share of the resource use, pollution and waste challenges facing the country (Figure 3).⁷ China has made unprecedented progress over the past decades in reducing the amount of energy used per unit of industrial value added, but continues to lag behind the energy productivity of high-income countries.⁸ The challenge is that industries lack sufficient incentives and financing to invest in energy efficiency, while local governments lack the capacity to adequately implement energy efficiency regulations. Likewise, industry still accounts for over 80 percent of China's solid waste, CO₂ and sulfur oxides emissions.⁹ Since 2013, the central and local governments have taken active measures to reduce pollution from the power and industrial sectors. However, these efforts have so far largely focused on 'end-of-pipe' regulatory approaches, including thousands of mandatory plant closures. On the other hand, other instruments to foster resource efficiency and pollution prevention have been underutilized, including market-based and information-based ones (e.g., environmental charges and green subsidies, standards and labelling schemes, data disclosure).

Figure 3. Industry's Contribution to Selected Environmental Pressures in China¹⁰



Source: OECD (2018)

5. **Industrial parks (IPs) are a central element of both China's industrial sector and its environmental challenges.**¹¹ IPs have played a major role in China's economic growth and its rise as a global manufacturing powerhouse. This role was made possible by a pragmatic approach to encourage policy and institutional experimentation and subsequent scaling up at the national level, strong commitment and support from the

⁷ As argued in the SCD, industry is the largest end-user of energy in China and consumes as much coal as the energy sector. Industrial sources, from both coal and non-coal emissions, have been the largest sectoral contributor to fine particulate matter (PM_{2.5}); in particular the iron, steel and cement industries. In addition, industries have been a leading source of water pollution, as well as of solid waste.

⁸ Source: "China's progress towards green growth: an international perspective" (OECD, 2018).

⁹ Source: Ibid. It should be noted that an increasing proportion of industrial solid waste is the object of material or energy recovery.

¹⁰ Note: "Industry" refers to the mining and quarrying, manufacturing and energy sectors.

¹¹ IPs is used as a generic term to refer to different categories of industrial zones in China, including special economic zones (SEZs), economic and technological development zones (ETDZs), high-tech industrial development zones (HIDZs), free trade zones (FTZs), and export-processing zones (EPZs).



authorities, and continuous technology learning and upgrading.¹² By the end of 2017, China had a total of 2,543 IPs, including 552 national IPs and 1,991 provincial ones. Regarding Jiangxi, the province currently hosts 107 IPs, out of which 19 are classified as national-level parks. Given that the industrial sector is responsible for around 70 percent of environmental pollution and 72 percent of GHG emissions, and that most industrial production takes place within IPs, IPs likely account for the majority of total resource use, pollution and waste in the country.¹³ Several factors have contributed to IPs' negative environmental impacts, including the use of inefficient and polluting technologies by tenant companies, inadequate enforcement of environmental regulations and management of environmental aspects within IPs, and shortcomings in the availability and utilization of IP-level pollution management infrastructure, such as wastewater treatment plants.

6. **The environmental challenges of IPs result from their large production but also their massive physical footprint, construction activities and maintenance needs.** GHG emissions from buildings and appliances, including production, office and residential buildings in IPs and their surrounding cities, continue to grow rapidly. According to a study by Tsinghua University, construction activities in 2014 accounted for about 16 percent of China's energy consumption, while building operations made up another 20 percent, meaning 36 percent of China's total energy consumption was attributed to the building sector.¹⁴ Another study estimates this share at 44 percent. Improved efficiency in the building and appliance sector could cut the power demand by one-third and the coal demand by half, reducing GHG emissions by half by 2030.¹⁵ Therefore, upgrading the physical environment to meet green building standards presents a major opportunity for resolving environmental issues in IPs.
7. **China has made the promotion of green IPs a central aspect of its strategy to green industries.** While the agglomeration of firms in IPs concentrates environmental challenges, it also offers opportunities to address these issues in a more coordinated manner and to develop efficiency gains and synergies. The last two decades have seen a growing interest in "eco industrial parks" (EIPs) among academics and policy makers in high-, medium-, and low-income countries alike, as a way to improve industries' environmental, economic, and social performances.¹⁶ The management of environmental issues in Chinese IPs was initially fostered through the promotion of environmental management systems (EMS) at the park- and firm-levels in the late 1990s. Building on this, a green park IP demonstration program was launched in the early 2000s to minimize

¹² See: "Building Engines for Growth and Competitiveness in China Experience with Special Economic Zones and Industrial Clusters" (Zeng, ed., 2010, World Bank).

¹³ See: "Enhancing China's Regulatory Framework for Eco-Industrial Parks: Comparative Analysis of Chinese and International Green Standards." (World Bank, 2019).

¹⁴ Sources: "2016 Annual Report on Development of Energy Efficiency Buildings in China." (Building Energy Conservation Research Center, Tsinghua University, 2016, China Construction Industry Press); "Report on Building Energy Efficiency in China 2010." (Center for the Development and Promotion of Science and Technology, Ministry of Housing and Urban-Rural Development, 2010, China Construction Industry Press).

¹⁵ McKinsey. China's Green Revolution.

¹⁶ An EIP is "a dedicated area for industrial use at a suitable site that ensures sustainability through the integration of social, economic, and environmental quality aspects into its siting, planning, management and operations." EIPs are often used to foster exchanges of waste material, waste energy, and wastewater between tenants ("industrial symbiosis"), as well as with surrounding urban areas. Other ways for EIPs to reduce their environmental impacts and improve operational efficiency include (a) investing in common pollution and waste management facilities and services; (b) promoting investments by each tenant company in resource efficiency and cleaner production; (c) promoting resource circularity (e.g., remanufacturing, reuse and recycling); (d) adopting green building and other environmental standards (e.g., ISO 14001 of the International Organization for Standardization [ISO]); (e) increasing access to renewable energy sources; (f) ensuring strategic recruitment of tenants; and (g) investing in environmental and social infrastructure and services (e.g., tree cover and public transportation). For more details, see for instance: "An International Framework for Eco-Industrial Parks" (World Bank, UNIDO, GIZ, 2017).



pollution and waste generation in existing IPs. Three sets of standards were adopted by three separate ministries to define requirements for green IPs and monitor their performances on key dimensions (e.g., economic performances, material and energy efficiency, renewable energy, resource recovery, pollution, green infrastructure, information disclosure).¹⁷ In addition, fiscal and financial instruments have been established to support IPs and their tenants in the transition to the green IP model, especially for infrastructure development.

8. **There is emerging evidence that green IPs certified under one or several of the existing green standards in China have improved their economic and environmental performance.** A recent study estimated that a sample of green IPs in China managed to reduce their energy and water intensity by about a third and increased their cost competitiveness accordingly.¹⁸ This finding echoes the experience from other countries where well-designed and implemented programs following the (EIP model have resulted in large economic, social and environmental benefits. For instance, in Kalundborg (Denmark), exchanges of water, energy/heat and materials generate annual savings of €24 million for all the industrial companies involved and reduce GHG emissions by 635 thousand tons of CO₂ equivalent.¹⁹ In Korea, similar symbiotic exchanges have been developed under the national EIP program since 2005, enabled by about US\$24.3 million in public funding for research and development and US\$591.3 million in private investments over a ten year period. As of end 2014, these projects have generated cumulative cost savings of US\$554 million and new business revenue of US\$779.4 million, while leading to substantial reductions in by-product disposal (3.6 million tons), energy consumption (0.9 million tons of oil equivalent), wastewater (37.3 million tons) and CO₂ (4.7 million tons).²⁰
9. **Multiple shortcomings of the current green IP policies have limited the expansion of green IPs and undermined the quest to build an “ecological civilization”.** Despite much reform efforts, by mid-2018, fewer than 10 percent of over 2,500 IPs in the country had been green certified under at least one standard. This situation may not change rapidly in the future as, for instance, the Ministry of Industry and Information Technology (MIIT) plans that green certified IP would increase from 46 in 2018 to 100 by 2020. While welcome, this would nonetheless keep the green IP penetration rate in China below 10 percent. A recent World Bank report argued that such a low penetration of green IPs results from the fragmentation of the existing IP standards, opaque certification process, underdeveloped monitoring systems and weak incentives and support for IPs to transition to a green IP model.²¹ While some leading IPs in China, such as the Tianjin Economic-Technological Development Area (TEDA), have been able to use efficient environmental management as a competitiveness factor, many other smaller or less advanced IPs in secondary cities have not had the incentives and capacity to do so. There is therefore scope to strengthen China’s policy and institutional framework for green IPs, as well as to pilot implementation mechanisms to foster the greening of all IPs in the country’s different provinces.
10. **The adoption of the “International Eco-Industrial Park Framework” jointly developed by the World Bank,**

¹⁷ These include the Ministry of Ecology and Environment (MEE)’s EIP demonstration program, the National Development and Reform Commission (NDRC)’s Circular Transformation Industrial Parks program, and the Ministry of Industry and Information Technology (MIIT)’s Green Industrial Parks program.

¹⁸ Source: “Ecologicalization Development Report of Chinese Industrial Parks” (Shi, Lei et al., 2016, in *China’s New Town and New District Development Report*, Kui Feng (ed.). Beijing: Enterprise Management Publishing House).

¹⁹ See: <http://www.symbiosis.dk>

²⁰ Source: “Scaling-Up of Industrial Symbiosis in the Korean National Eco-Industrial Park Program: Examining Its Evolution over the 10 Years between 2005-2014” (Park et al., 2018, *Journal of Industrial Ecology* 23(1): 197-207).

²¹ Source: “Enhancing China’s Regulatory Framework for Eco-Industrial Parks: Comparative Analysis of Chinese and International Green Standards.” (World Bank, 2019).

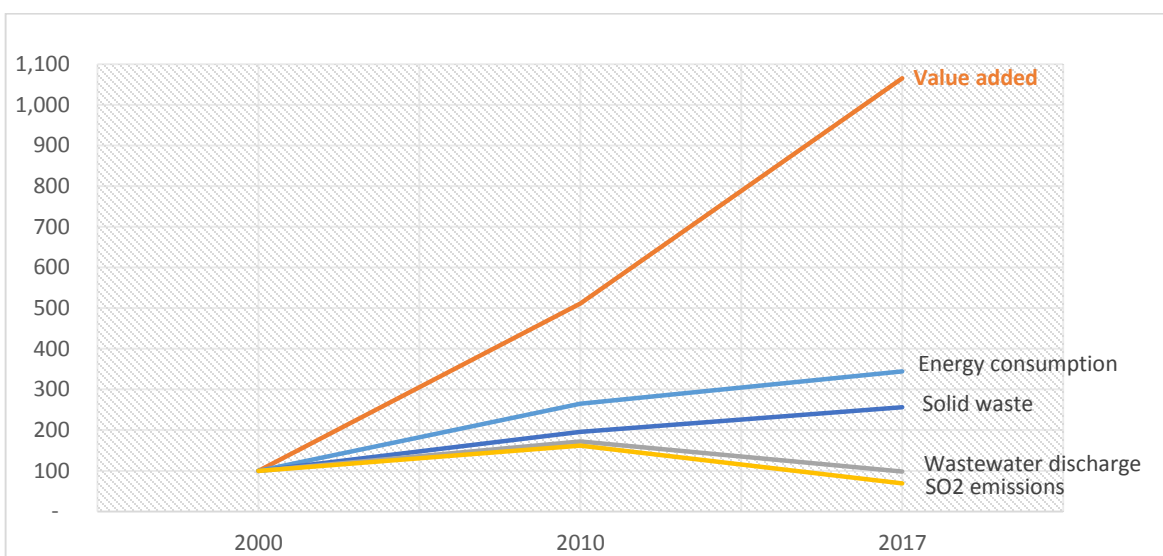


UNIDO and GIZ can help align China's IP framework with international best practice and accelerate the greening of Chinese IPs.²² The EIP framework, adopted in 2017, was developed to provide one global, universal and comprehensive definition of what it means to be a green IP and to encourage countries to adopt consistent regulations. Many countries have already taken steps to adopt the new EIP framework, including Turkey, Vietnam and others. China's regulations have also been upgraded, but continue to fall short of the EIP framework, as documented in the World Bank 2018 report. The gaps relate to all four pillars of the EIP framework, including park management, environmental, social and economic requirements. Closing of these gaps would help China accelerate the expansion of IPs and enhance the economic and environmental advantages of becoming a green IP, providing tangible benefits to China and the world.

11. **An ambitious policy push is needed to green Jiangxi's large industrial sector.** In 2018, almost half of Jiangxi province's gross regional product of about RMB 2.2 trillion (US\$ 308 billion equivalent) came from the industrial sector. Mirroring a similar relative decoupling nation-wide, the growth of industrial value added (including manufacturing, mining, power and construction) over the last two decades far outpaced that of industrial energy consumption and solid waste generation, while discharges of industrial wastewater and emissions of certain pollutants, such as SO₂, declined in absolute terms during this period (**Error! Reference source not found.**). Nonetheless, given the rapid growth of the province's industrial sector, a relative decoupling will not be sufficient to prevent resource use and waste/pollution from growing. Jiangxi's total energy consumption has nonetheless increased more than four times. Industry currently accounts for two thirds of the province's energy consumption, mostly from energy-intensive heavy industries, such as non-metallic minerals, ferrous and non-ferrous metals, and chemicals.

Figure 4. Economic and Environmental Trends in Jiangxi's Industrial Sector (2000 = 100)

²² This framework, adopted in 2017, aims at encouraging IPs to exceed compliance with domestic environmental and social regulations. It considers IP performances on four key dimensions, namely park management, environmental, social and economic. The requirements within each category are divided into "prerequisites" and "performance indicators," that can be verified and measured in qualitative and/or quantitative terms. In addition to complying with all applicable local and national legislation, a park is expected to meet all relevant prerequisites and performance expectations to be deemed an EIP. In recent years, the EIP Framework has been the guiding document for EIP-related projects supported by the World Bank Group and partner institutions in a growing number of countries. See "An International Framework for Eco-Industrial Parks." (World Bank, UNIDO, and GIZ, 2017) and Annex 2 for a brief introduction to the EIP framework.



Source: Jiangxi statistical yearbook 2018

12. **Jiangxi province is an appropriate setting to pilot an improved institutional and regulatory framework for green IPs based on the global EIP framework.** Over the last few years, Jiangxi's provincial authorities have adopted various green IP-related policies and guidelines. An implementation plan to make Jiangxi a national ecological civilization pilot zone was published in October 2017, which reaffirmed the objective to green the industrial sector and foster the circular economy, including by improving environmental management at the IP-level. However, while Jiangxi's IP system constitutes a good basis to build on, a recent World Bank assessment concluded that there was significant potential to improve it to enhance its contribution to the decoupling of industrial growth from resource use and pollution.²³ In particular, the existence of several partially overlapping national and provincial IP standards can generate confusion for IPs and investors. Moreover, an IP performance index adopted by the Jiangxi government in 2018 does not cover all dimensions included in the EIP Framework. The institutional, policy and regulatory framework can also be developed to encourage more IPs to transition to an EIP model and to support the greening of industrial sectors. Finally, synergies with other policies can be sought to align sustainability and competitiveness objectives (e.g. industry 4.0, green finance, climate change).
13. **The Fuzhou New Industries Zone (FNIZ) is a representative case of IP that has been striving to transition to an EIP model but would require a more conducive roadmap and supporting mechanisms.** FNIZ, established in 1992 in the prefecture-level city of Fuzhou,²⁴ is one of the national-level IPs in Jiangxi. Covering 39 sq. km. (of which about 20 sq. km. are currently developed), it is integrated with the city center. FNIZ hosts about 120,000 residents and 260 firms, mainly in the bio-pharmaceuticals, automobile and auto parts, food processing, and IT equipment sectors. In 2016, firms in the zone generated a total value-added of RMB 39.4 billion (US\$5.6 billion equivalent) and employed more than 30,000 workers. FNIZ has strived to meet the national green IP standards, with efforts to date including: (i) the preparation of firm-level cleaner production

²³ Source: "Policy Review and Gap Analysis of Jiangxi Eco-Industrial Parks" (World Bank, 2019, unpublished analytic report).

²⁴ Fuzhou is located in the southeastern part of Jiangxi, about 100 km from the provincial capital city of Nanchang. It has a permanent population of about 4 million, of which more than 1 million in the central urban area. It comprises two districts and nine counties, with an urbanization rate close to 50 percent.



audits and closure of heavily-polluting firms, (ii) the implementation of resource efficiency/pollution-related projects (e.g. common effluent treatment plant, boiler gas conversion), and (iii) the development of a centralized online platform for park performance monitoring. Nevertheless, there is scope to deepen FNIZ's EIP transition. A recent self-assessment by FNIZ suggests it still falls short of several requirements of the MIIT standard and the international EIP Framework, notably related to energy efficiency and renewables, water efficiency and recycling, air pollution and GHGs emissions. Obstacles faced include a lack of data and monitoring capacity on park-level environmental, social and economic performances; shortcomings in systems to promote resource efficiency and environmental management (e.g. use of environmental management systems, GHG monitoring, electricity metering); missing infrastructure (e.g. waste heat recovery, water and waste recycling and reuse); and lack of financial or other forms of incentives and technical support for tenant companies.

Relationship to CPF

14. **The proposed project is fully aligned with the WBG's strategic objective to support China's efforts to promote greener growth.** As argued in the Country Partnership Framework (CPF) for FYs 2020-2025, China's rapid growth exceeded the pace of institutional development, and the Government now recognizes that putting the country on a high-quality and sustainable growth path will require governance and institutional reforms. The CPF shifts the focus of the WBG's engagement to be increasingly selective, with an emphasis on China's remaining institutional gaps and the country's contribution to global public goods.²⁵ The proposed project, which is explicitly mentioned in the CPF,²⁶ directly meets three of its four selectivity criteria, namely *"addressing regional or global public goods"*, *"fostering the private sector"*, and *"strategic piloting of approaches to address key development priorities, especially in areas relevant to other developing countries"*.²⁷ It will primarily contribute to the second of the CPF's three engagement areas (*"promoting greener growth"*), which intends to support China's transition to a lower-carbon energy path, to reduce air, soil and water pollution, and to promote low-carbon cities. This project will contribute to *"fostering the private sector"* by incentivizing private investment in green development and clean production. The project will also contribute to the CPF's first engagement area *"advancing market and fiscal reforms"*, as it aims to strengthen public sector governance and directly support *"achieving more efficient and sustainable subnational fiscal management and infrastructure financing"*. The CPF stresses that upgrading China's institutional and policy framework for environmental management remains key to meet the country's development objectives, including by strengthening local governments' technical capacity, developing regional coordination mechanisms, and improving the availability of critical environmental information for planning, decision making, and public disclosure, all of which will be supported by the project.

²⁵ See: "Country Partnership Framework for the People's Republic of China for the Period FY2020-2025 – Report No. 117875-CN" (World Bank Group, 2019).

²⁶ "IBRD will support the creation of a demonstration green industrial zone in Jiangxi province using guidelines jointly developed with GIZ and UNIDO, aiming to set a standard for other zones to emulate and attract green financing." (p. 28).

²⁷ As argued in the CPF for FY20-25, Bank lending is leveraged when it helps introduce and test new approaches for replication using the government's own resources. Since the 1980s, China has deployed a pragmatic, learning-by-doing approach to development, testing reforms at the sub-national level before rolling them out. Provincial authorities are encouraged to experiment. China has intentionally used Bank-financed projects to pilot new approaches and has requested to continue using lending and technical assistance during the new CPF period as platforms for reform, institution building, and knowledge transfer. Indeed, respondents to the China Country Survey in FY19 identified the WBG's greatest value as piloting innovations that can be scaled up.



C. Proposed Development Objective(s)

To strengthen Jiangxi's institutional and regulatory framework for eco-industrial parks (EIP) in line with the International EIP Framework and demonstrate its implementation in Fuzhou New Industries Zone.

Key Results

- a) Help Jiangxi Province become a demonstration province in China on how to upgrade the regulatory framework to meet international eco-industrial park standard;
- b) Provide evidence that greening of industrial parks can increase competitiveness and enhance investment attractiveness while controlling/reducing the environmental impact;
- c) Contribute to reduction in GHG emissions from the industrial sector in Jiangxi province;
- d) Help Fuzhou New Industries Zone improve its ecological and environmental quality and management capacity, to attract green industries and obtain access to green finance.

Progress towards the achievement of the PDO and implementation results would be monitored by four indicators. At the provincial level: (a) Provincial level EIP policy and regulatory framework, with effective monitoring tools, issued (Y/N). At the FNIZ Project Area level: (b) Beneficiaries' satisfaction rate of environmental quality, social inclusiveness and doing business environment (%); (c) Amount of attracted investment meeting the green industries screening criteria developed under this project (US dollar); and (d) Companies in FNIZ become eligible for greening financing (Y/N).

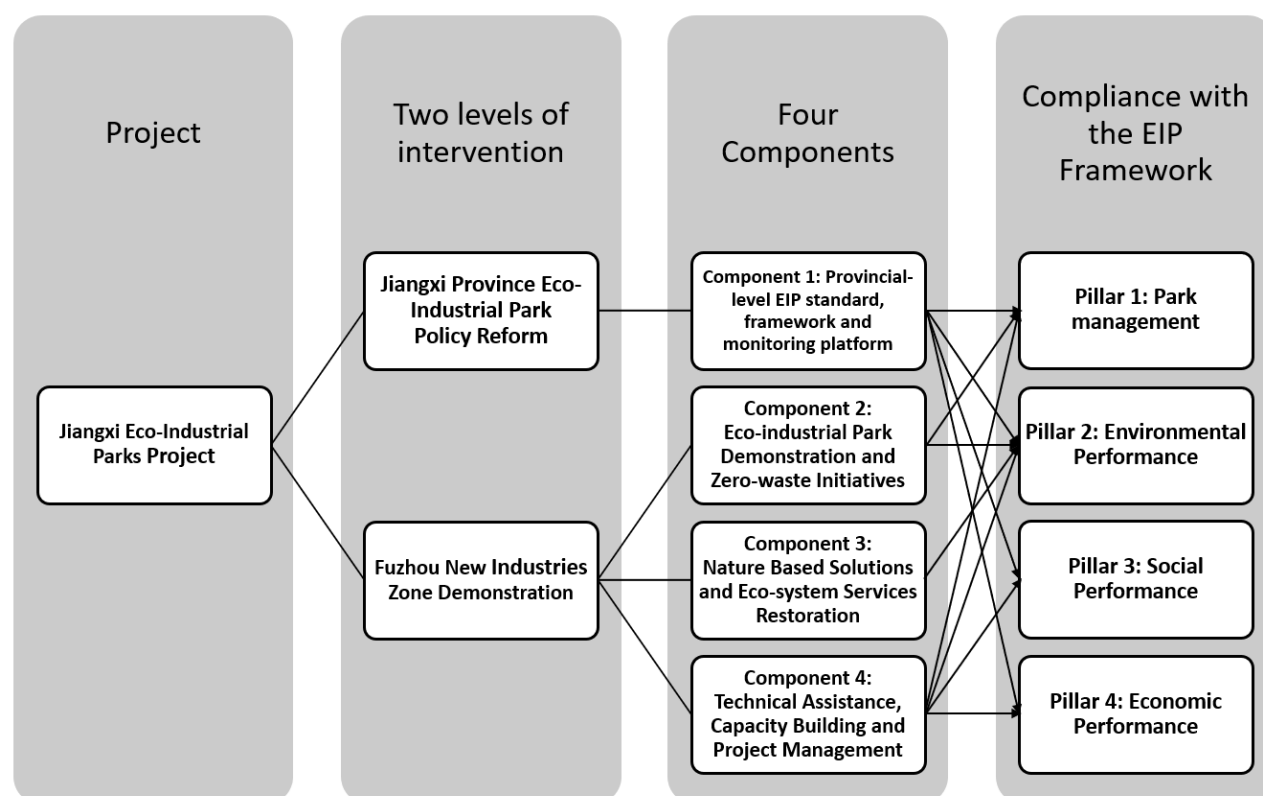
D. Project Description

15. **The proposed project will support Jiangxi province's efforts to upgrade its IPs to decouple economic growth from environmental pollutions and intensive energy use.** The design of the project is informed by the comprehensive policy gap analysis conducted at the provincial level in 2019²⁸ and the quick self-assessment carried out at the zone level in 2018²⁹, both against the UNIDO/WB/GIZ International EIP Framework. Figure 2 below illustrates the overall structure of project design and components, and their contributions to align Jiangxi and Fuzhou NIZ with the international EIP Framework.
16. Component 1 aims at establishing a pioneering Jiangxi province-wide EIP performance management system and reforming Jiangxi Province's institutional and policy framework for EIPs to promote green development. Component 2 will support Zero-waste pilots and the construction of a smart EIP management center and mixed-use green incubators and neighborhoods. Component 3 will support upgrading of public space and landscapes surrounding two existing lakes, pollution reduction and water quality improvement and connecting the lakes to Fu River to increase water volume in dry seasons. Component 4 will comprise TAs covering zero-waste high-tech zone study and action plan, screening criteria for green industries, green buildings survey and ranking, energy consumption and GHG emission accounting as well as capacity building.

Figure 5: Project Design and Components

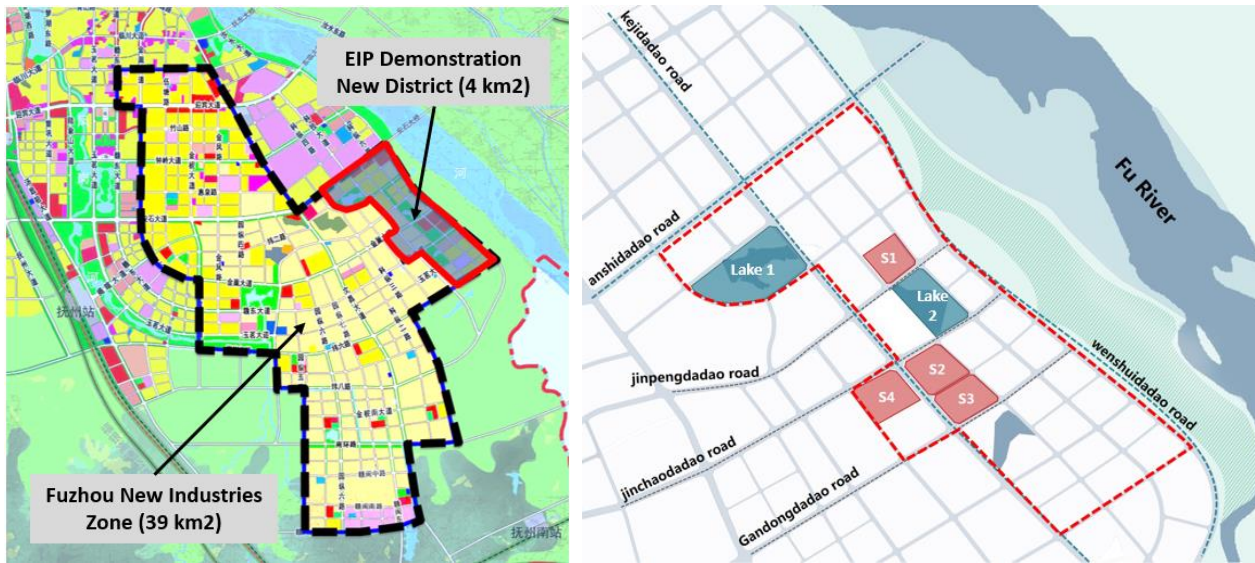
²⁸ "Policy Review and Gap Analysis of Jiangxi Eco-Industrial Parks" (World Bank, 2019, unpublished analytic report)

²⁹ Self-assessment by Fuzhou New Industries Zone against EIP Standards, (World Bank, 2018, unpublished analytic report)



17. **Project Scope and Boundary.** The provincial-level policy subcomponent will cover all 107 industrial parks in Jiangxi. At the Fuzhou zone level, as illustrated in the left map of Figure 6, the proposed project area is the “Eco-Industrial Park Demonstration New District” covering an area of about 4 km² in FNIZ’s northeastern corner, which is about one tenth of the zone’s planned area for development. All civil works would take place within this New District. Specific sites of activities to be carried out under Component 2 and Component 3 can be found in the map on the right.

Figure 6 Location of the EIP Demonstration New District within FNIZ (Left) and project sites (right)



E. Implementation

Institutional and Implementation Arrangements

18. **Jiangxi province level.** A Project Leading Group (PLG) has been established on February 24, 2020 with key committee members from Jiangxi Provincial DRC (PDRC), Finance Bureau, Provincial Department of Industry and Information Technology, Science and Technology Department, Commerce Department, and Ecology and Environment Department. On the same day, the Provincial project management office (PPMO) has been established under the Jiangxi Development and Reform Commission to be responsible for implementation of Project Component 1, including safeguards, finance and administration, procurement matters, and monitoring and evaluation. Specifically, Foreign Capital Utilization and Overseas Investment Division and Industrial Park Management Division of the PDRC will take financial and technical leadership respectively, while the Foreign Capital Utilization Office under PDRC, which has obtained experience from implementing other World Bank funded projects, will function as the Project Implementation Unit (PIU) to provide support in procurement and contract management, financial management, monitoring and evaluation and implementation status reporting.
19. **Fuzhou New Industries Zone level.** The PLG has been established at the Fuzhou Municipality level on March 9, 2020, chaired by the vice mayor responsible for industrial park development to provide overall leadership, strategic oversight, policy guidance, and ensure smooth coordination among different government agencies. The members of the PLG include Municipal DRC, Finance Bureau, City Planning Bureau, Ecology and Environment Bureau and Water Resource Bureau, among others. A PMO headed by the Deputy Director of the FNIZ has already been established in May 2018 and is functioning, including key staff from the Management Committee of the FNIZ, the Economic Development and Technology Bureau and other line Bureaus. FNIZ PMO will be responsible for general management of Components 2-4, including finance and



administration, technical and procurement matters, monitoring and evaluation, and safeguards compliance. In the meantime, there will be two PIUs under the PMO: the FNIZ Development & Investment Group will be responsible for the implementation of the civil works (i.e., component 2 and 3) under this project, while the Economic Development and Tech Innovation Bureau of the zone will be responsible for implementing the technical assistance and capacity building (component 4) activities. See the chart below for details. The FNIZ PMO will appoint a consulting firm to assist with overall project and contract management and review of detailed designs. A procurement agent has already been retained to provide professional support for project procurement.

20. **Institutional Capacity for Implementation.** Significant gaps in institutional capacity have been identified during project preparation. While the provincial-level PMO can benefit from bringing in key staff of the existing PPMO for implementation of other World Bank-financed projects, the FNIZ level PMO and PIUs have very limited experience and no track record implementing WB projects. Risk associated with low institutional capacity will be mitigated through development and enforcement of the Operations Manual; intensified implementation-support missions during the early years; regular training sessions on thematic topics (i.e., technical, environmental and social safeguards, procurement and FM, and contract management, etc.) and hiring of an experienced project management consulting firm to support project implementation. These mitigation measures are expected to reduce the risks associated with low institutional capacity at FNIZ level.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Component 1 of the project will support policy reform at the provincial level via TA activities. Components 2 to 4 will be implemented in Fuzhou City of Jiangxi Province which is in the middle stream of the Yangzi River. In Fuzhou the project will support demonstrative investments to promote green development in the New Industries Zone of Fuzhou city, which is managed by a district-level administration committee. In 2018, the total number of households in Fuzhou City was 1.3731 million, with a registered population of 4.3061 million, a permanent population of 4.031 million and an urbanization rate of 48.22%. According to the City Master Plan of Fuzhou, the approved jurisdiction of FNIZ is around 39 square km, of which 20 square km has already been developed/occupied. The proposed project area is the “Eco-Industrial Park Demonstration New District” covering about 4 square km in FNIZ’s northeastern corner, where all civil works would take place in. TA activities will cover the entire FNIZ area to help the zone narrow the gaps against international EIP standards and to mainstream eco-industrial parks across Jiangxi Province. Though the physical investment of WB will be focused only on about 4 square km, the project boundary covers the entire 39 square km of the FNIZ. The quality of surface water, air and acoustic environment within the FNIZ meet relevant environmental standards. The FNIZ is well planned and professionally managed and there are no known environmental pollution legacy issues. The FNIZ prioritizes location of new generation IT (i.e., big data and cloud computing) and the three pillar industries of the zone are bio-pharmaceutical, automotive assembly and parts, and clean energy and new materials. The employment size in the industrial sector is around 33,000. No firm in the FNIZ is a heavily pollutant. The zone continues to apply high environmental standards for all firms that want to start business there. There is an existing industrial wastewater treatment plant within FNIZ which has a treatment capacity of 20,000 m³ per day. According to the local environmental authority, around 10,000 m³ per day is discharged from 103 existing enterprises in the FNIZ.



The industrial wastewater is pretreated by enterprises, then treated to meet discharge standards by the industrial WWTP, and finally discharged into the downstream of the Fenggang River.

G. Environmental and Social Safeguards Specialists on the Team

Yiren Feng, Environmental Specialist

Shuang Zhou, Social Specialist

Bin Xu, Environmental Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	This project is overall environmental positive. An EIA report, including a separated chapter of ESMP and a a separated chapter of Environmental Due Diligence, was prepared to assess the positive and adverse impacts of the project during the construction and operation phase. A TOR of the Strategic Environmental and Social Assessment and Management Plan covering the whole FNIZ (39km2) was prepared as part of the EIA to include the environmental and social requirements and mainstreamed into the TA activity.
Performance Standards for Private Sector Activities OP/BP 4.03	No	
Natural Habitats OP/BP 4.04	Yes	The project will support construction of a small scale pump station, water diversion pipes and underground culverts, and development of two small reservoirs into Parks. These construction activities will potentially have impacts on the water ecosystem if not well-managed. Ecological survey and an assessment of impacts was conducted in the EIA. Mitigation measures were included in the ESMP. The project will not result in significant conversion or degradation of natural habitats.
Forests OP/BP 4.36	No	OP/BP4.36 is not applicable. The project will not impact any forest ecosystems. Project-supported landscaping activities will take place on existing FNIZ and there is no expansion into forest areas.



Pest Management OP 4.09	No	The proposed project will neither procure pesticides nor result in the increased use of pesticides. This policy is not triggered.
Physical Cultural Resources OP/BP 4.11	No	The project will take place in the undeveloped green land within FNIZ with no physical cultural resource as defined by this OP. This policy is not triggered. Chance finding requirements was included in the EIA and ESMP.
Indigenous Peoples OP/BP 4.10	No	Fuzhou city where the project located, is a core area of Han nationality. Based on the desktop review and onsite interview during the socio-economic baseline survey, there are 35 ethnic minorities scattered in Fuzhou city, in which only contribute 0.02% of the total population. The project will focus on the activities in FNIZ, within which there are some scattered ethnic minority people, merging together with other residents in the urban area. The Social Impact Assessment report confirmed that there is no ethnic minority group in the project area. Therefore, the Bank's Indigenous People Policy OP 4.10 is not triggered.
Involuntary Resettlement OP/BP 4.12	Yes	For project component 2 and 3, the construction of green buildings of EIP demonstration pilot area and green space of eco-system services restoration entails land acquisition and house demolition. Therefore project triggers OP 4.12 Involuntary Resettlement Policy. A Resettlement Action Plan was prepared based on land occupation of the project feasibility study report during the project preparation. The Project's total land occupation area is 900.6mu (60.04ha), including 698.61mu (46.57ha) land acquisition has been completed by the end of 2019 and remaining 200.48mu (13.37ha) collectively owned land and 1.5mu (0.1ha) state owned land have not been acquired. A total of 327 households (1127 people) will be directly affected by the project land acquisition. The project will relocate total 136 households (of which relocation of 130 HH have been completed by 2019 and reviewed in the DD report) and temporarily use 120mu land (8 ha) during the construction. Resettlement Action Plan includes two due diligent reports for both completed land acquisition and resettlement, including those of project direct



occupation area (S1, S2, S3, S4 and two reservoirs) and broadly land acquisition and resettlement activities of Eco-Industrial Park Demonstration New District (4km²) of FNIZ. The DD reports review the land acquisition and resettlement process, consultation and compensation package against Chinese regulations and concludes the compliance with national legislation and no remaining legacy issue. Measures to mitigate adverse resettlement impacts, as well as to rehabilitate livelihoods and restore economic opportunities for affected people are well included in the RAP.

A Social Impact Assessment (SIA) has been carried out during the preparation to explore and refine project alternatives/activities with project design. The SIA establishes socio-economic baselines, conducts information disclosure and public consultation, identify differentiated needs and demands of various stakeholders, particularly pay attention to the poor, women, vulnerable groups, and tailor appropriate mitigation hierarchy for specific social risks and impacts. Design of project activities/alternatives has been refined based on the effective feedback from stakeholders and the outcomes of SIA.

A three stages of GRM has been established to settle complaints over resettlement process. The aim is to respond to the concern and complaints of the affected persons transparently in a timely manner.

Two small existing water reservoirs in the FNIZ will be modified and transformed into wetland parks and connected with existing water network system. The failure of the dams will pose negative impacts on the downstream communities and Bank investments. Therefore OP 4.37 is triggered.

The project will not involve trans-boundary rivers. The policy is not triggered.

The project is not located in any disputed areas. The policy is not triggered.

Safety of Dams OP/BP 4.37

Yes

Projects on International Waterways
OP/BP 7.50

No

Projects in Disputed Areas OP/BP 7.60

No



KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

Three environmental policies are triggered for the project: OP4.01 Environmental Assessment, OP4.04 Natural Habitats, and OP 4.37 Safety of Dams.

OP 4.01. This project is environmentally positive as it aims to design a set of green standards for industrial parks at the provincial level and upgrade FNIZ to achieve the green development following the low-carbon cycle development principle and to serve as a demonstration for the green development of parks in Jiangxi Province. The main activities under this project comprise of 4 components: 1) Provincial-level EIP standard, framework and monitoring platform (TAs); 2) EIP Demonstration and Zero-waste pilot; 3) Nature Based Solutions and Eco-system Services Restoration; 4) technical assistance and capacity building that includes further improving the environment and social management of the FNIZ. Component 2 and Component 3 will involve physical activities that will be taken place in the New District (about 4 square km) of FNIZ and the sites are undeveloped green land that has not been used for any industry purpose in history. The supported physical activities include construction of multi-functional rental buildings, outdoor green area, park roads and related utility pipelines and facilities, small scale of pump station, water diversion pipes from Fuhe River to Qingfeng Reservoir, underground culvert to connecting 2 small Qingfeng and Dingjialong reservoirs and related green development of Qingfeng Park and Dingjialong Park. An EIA, including a separated chapter of ESMP were carried out to determine the key environmental impacts, the mitigation measures and environmental monitoring program and necessary institutional arrangement as well as capacity building development. The EIA was prepared on the basis of Chinese legal and policy framework for environmental protection as well as applicable Bank safeguard policies and Bank group's Environment, Health and Safety Guidelines. Through preparation of the EIA, there was no potential large scale, significant and/or irreversible environmental impacts to be found. Key environmental issues addressed the EIA include: (i) construction-related impacts, such as dust, mechanical equipment and transportation vehicles noise and flushing water, and construction wastes; (ii) impacts related to water ecology, soil erosion, vegetation clearance, disturbance, and risks to underground facilities such as gas pipelines and cables due to earthworks during construction; (iii) operational impacts associated with office and living such as domestic wastewater discharge, canteen wastewater and exhaust underground garage ventilation, noise and office garbage and operational impacts to Fuhe River associated with the water diversion. The impacts are limited, short term and site-specific and can be adequately avoided, minimized and/or mitigated through measures developed either in the project design or in the EIA and the chapter of ESMP. As part of the EIA, environmental due diligence covering the existing industries within the developed 20 km² of the FNIZ was conducted to evaluate the environmental management of the FNIZ. In addition, a TOR of the Strategic Environmental and Social Assessment and Management Plan covering the whole FNIZ (39km²) was prepared as an annex of the EIA to include the environmental and social requirements and mainstreamed into the TA activity.

OP4.04. The project will be in existing FNIZ. The project activities will not affect or involve any critical natural habitats. But the project will support construction of small scale pump station at the bank of Fuhe River and divert water through pipes from Fuhe River to Qingfeng Reservoir and connecting Qingfeng Reservoir with Dingjialong Reservoir through new underground culvert. The two small reservoirs will be greened and developed into Qingfeng Park and Dingjialong Park. These construction activities will potentially have impacts on the water ecosystem if not well-managed. Ecological survey and an assessment of impacts was conducted in the EIA. Mitigation measures was



included in the ESMP. The project will not result in significant conversion or degradation of natural habitats.

OP4.37. Two small existing water reservoirs (each total storage capacity is in the range of 345,000 cubic meters to 728,000 cubic meters and each maximum dam height is in the range of 7.9 meters to 8.4 meters) in the FNIZ will be modified and transformed into parks and connected with existing water network system. The failure of the dams will pose negative impacts on the downstream communities and Bank investments. Therefore OP 4.37 is triggered. The Borrower hired independent dam specialist to conduct dam safety assessment and the results was incorporated into the EIA/ESMP.

OP4.12. For project component 2 and 3, the construction of green buildings of EIP demonstration pilot area and green space of eco-system services restoration entails land acquisition and house demolition. Therefore project triggers OP 4.12 Involuntary Resettlement Policy. To mitigate negative impact to these project affected people due to land acquisition and resettlement, a Resettlement Action Plan was prepared based on land occupation of the project feasibility study report during the project preparation. According to the RAP, the Project's total land occupation area is 900.6mu (60.04ha), including 698.61mu (46.57ha) land acquisition has been completed by the end of 2019 and remaining 200.48mu (13.37ha) collectively owned land and 1.5mu (0.1ha) state owned land have not been acquired. A total of 327 households (1127 people) will be directly affected by the project land acquisition. The project will relocate total 136 households (of which relocation of 130 HH have been completed by 2019 and reviewed in the DD report) and temporarily use 120mu land (8 ha) during the construction. Resettlement Action Plan includes two due diligent reports for both completed land acquisition and resettlement, including those of project direct occupation area (S1, S2, S3, S4 and two reservoirs) and broadly land acquisition and resettlement activities of Eco-Industrial Park Demonstration New District (4km²) of FNIZ. The DD reports review the land acquisition and resettlement process, consultation and compensation package against Chinese regulations and concludes the compliance with national legislation and no remaining legacy issue.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

As designed, the project will strengthen Jiangxi's institutional and regulatory framework for eco-industrial parks in line with international good practice and demonstrate its implementation in an industrial park in Fuzhou. The TA activities financed by the project covers the whole FNIZ and is designed to help improve the environmental and social management of the FNIZ. The water diversion and greening improvement activities under component 3 will not only upgrade of public space and landscapes surrounding two existing small water reservoirs, but also maintain even improve the water quality of the 2 small water reservoirs and increase their water volume from Fuhe river in dry seasons. The environmental due diligence on the existing industries within the FNIZ concluded that FNIZ has established strict environmental criteria (thresholds) to exclude heavy polluting industries entering the park, and the environmental management system of FNIZ functioned well and can meet domestic environmental management requirement but still has gaps compared with the "International Eco-Industrial Park Framework" (EIP) jointly developed by the World Bank, UNIDO and GIZ. The environmental due diligence result has provided basis for environmental treatment or improvement or cleaning production opportunities to further improve the environmental performance of some industries in terms of wastewater and solid waste management, energy utilization efficiency, water consumption, hazard materials replacement, etc. and were included in the action plan of the ESMP and monitored during the implementation phase. A TOR of the Strategic Environmental and Social Assessment and Management Plan covering the whole FNIZ (39km²) was prepared as part of the EIA to include the environmental and social requirements and mainstreamed into the TA activity. This work will benchmark with international best practice and further improve the environmental and social management of FNIZ.

The project is located in the Eco-Industrial Park Demonstration New District of FNIZ and the project implementation



will bring indirectly and long term benefits to local residents of 150,000 people in FNIZ, of which 71,250 are females, and 700 people with vulnerable family difficulties. According to the SIA and FSR analysis, during the project construction period (4 years), 2,500 full-time positions will be directly created, with a total of 29,996 person-months, which will bring 120 million yuan in income and social benefits. During the operation period, 110 new full-time positions will be directly created each year, with a total of 1,320 person-months, and income and benefits of 7.92 million yuan. In addition, the project itself will create 1,000 jobs each year, with income and benefits of approximately 10.02 million yuan, thereby promoting the sustainable development of Fuzhou New Industries Zone. The project can also provide employment for local residents and returnees (Fuzhou people who works outside their hometown). Returnees can find employment nearby and take care of their families. It is especially helpful for women to return to their hometowns to find employment, take care of children to school, and take care of the elderly.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

Technical alternatives were considered for the investment components during the feasibility study and the EIA and SIA to minimize environmental and social impacts. In the EIA and the feasibility study, alternative analysis was carried out on water source selection, water diversion route, scheme of water diversion pipeline crossing road, water reservoirs connection way, water discharge mode for component 3: the Nature Based Solutions and Eco-system Services Restoration, taken into account environmental and social, technical and cost considerations. In general, selected options will be technical feasible and have improvement to local ecosystems and landscape, less impact to community and transportation, less land acquisition, compared with other options considered. The EIA also includes the “without project” scenario in the alternative analysis for component 3. Regarding social impacts, during the feasibility study stage, closed conduit option was selected to connect the water reservoirs to avoid land acquisition and project affected people.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

Environment

An EIA report, including a separated chapter of ESMP, was prepared by the client and their EA consultants in accordance with national requirements, the World Bank safeguard policies and EHS Guidelines to thoroughly address the potential environmental and social impacts envisaged for the project, and developed adequate measures in the ESMP to avoid, minimize, mitigate and compensate the potential adverse impacts. The ESMP summarized the key environmental impacts and mitigation measures, the environmental management organization/institutional arrangement and responsibilities, monitoring plan, training plan, grievance redress mechanism, monitoring reporting mechanism and budget estimates of ESMP implementation. The EIA also includes sets of Environmental Codes of Practice (ECOPs) for small civil engineering, water system engineering, road construction and construction camp which will be incorporated into bidding documents and contracts to ensure effective implementation. As part of the EIA, environmental due diligence on the existing industries within the existing 20 km² concluded that FNIZ has established strict environmental criteria (thresholds) to exclude heavy polluting industries entering the park, and the environmental management system of FNIZ functioned well with proper management organization and can meet domestic environmental management requirement but still has gaps compared with the “International Eco-Industrial Park Framework” (EIP) jointly developed by the World Bank, UNIDO and GIZ. The environmental due diligence result has provided basis for environmental treatment or improvement or cleaning production opportunities to further improve the environmental performance of some industries in terms of wastewater and solid waste management, energy utilization efficiency, water consumption, hazard materials replacement, etc. and were included in the action plan of the ESMP and monitored during the implementation phase. In addition, safeguards policies also apply to the TA component which may have potential downstream Env & Social impacts. A TOR of the Strategic Environmental and Social Assessment and Management Plan covering the whole FNIZ (39km²) was prepared as part of the EIA to



include the environmental and social requirements and mainstreamed into the TA activity.

The construction of a small scale pump station, water diversion pipes and underground culverts, and development of two small reservoirs into Parks supported by the project will potentially have impacts on the water ecosystem if not well-managed. Ecological survey and an assessment of impacts was conducted in the EIA. Mitigation measures, including cofferdam diversion measures adopted during construction and steel trash fences and fish barriers provided to the water intake head on the steel pipe inlet at the water intake pump station, were included in the ESMP. The project will not result in significant conversion or degradation of natural habitats.

To mitigate the risk related to the dams of two small existing water reservoirs (Qingfeng and Dingjialong), the PMO hired independent dam specialist to conduct dam safety assessment. The assessment results indicated that both reservoirs are in good condition and operated well with proper management system, operation maintenance supervision plan and emergency plan. The mitigation measures, mainly improvement of dam safety monitoring, were incorporated into the EIA/ESMP. FNIZ PMO will hire dam experts to conduct annual follow-up evaluation of the dams, track and verify the implementation of the dam action plan and have dedicated person to follow up the dam action plan to ensure the mitigation measures implemented properly.

There are two Project Management Offices (PMOs) under this project regarding implementation arrangement, including Jiangxi Provincial PMO and FNIZ PMO. Jiangxi Provincial PMO has been established and housed under the provincial DRC who is an experienced existing PMO to implement World Bank financed projects. The FNIZ has already been set up under the Management Committee of the FNIZ. FNIZ PMO have not been involved in any projects financed by World Bank, with no experiences on the World Bank safeguards policy. The FNIZ PMO will be expanded to meet the Bank's requirement for project safeguards management. FNIZ PMO will be provided with safeguards training to ensure well preparation and sound implementation compliance. The ESMP in EIA also have included a clear institutional arrangement that defines the environmental management responsibilities, supervision and reporting duties. Independent environmental monitoring consultants will be hired to assist in the two PPMOs in managing environmental safeguards compliance during project implementation.

Resettlement Action Plan was prepared during the project preparation to address the land acquisition and resettlement impact by the project activities. In order to avoid or reduce the negative impact of land acquisition, the site selection of the project has been fully negotiated with the affected village groups and the affected persons (APs) during the feasibility study stage of the project. For adverse impacts unavoidable due to resettlement, measures have been developed to mitigate them as well as to rehabilitate livelihoods and restore economic opportunities for the affected people by providing: 1) full replacement cost compensation for losses of APs; 2) livelihood restoration plan, such as strategic scheme with endowment insurance pension, skill training and employment supports; 3) replacement apartments, including subsidies for their transition or temporary difficulties. Clear organization has been set up for the resettlement work. FNIZ government and village lead are part of the PMO's resettlement office to implement the resettlement activities. Fuzhou PMO is the executing agency of the Project. FNIZ Development Investment Group Co., Ltd is the PIU, and is responsible for resettlement implementation together with the government departments concerned. Staffs of the PMO will be trained on Bank Policy as part of the capacity building plan. In addition, resettlement monitoring system will be established with internal and external monitoring. Internal monitoring will be performed by Fuzhou PMO as well as PIU together, and an internal monitoring report will be submitted to the Bank semiannually. The Fuzhou PMO will appoint an independent agency to conduct external monitoring and evaluation (M&E) semiannually, and M&E costs will be included in the resettlement budget.

Social Impact Assessment (SIA) and Stakeholder Engagement. The project will bring about positive impacts and



benefits to the urban environment and residents in Fuzhou Municipality. A social impact assessment has been carried out through questionnaire survey, public consultation meetings, focus-group discussions, and in-depth interviews, etc. to understand socio-economic baseline, local context, mapping and analyze stakeholders, solicit needs and suggestions from various stakeholders, including government agencies, local employees and community residents. The stakeholder engagement process directly involves 10 institutional meetings, 6 focus group meeting and 71 citizen interviews, as well as 150 questionnaires, therefore improved suggestions and recommendations especially on project design of eco-service park were proposed. The SIA assisted to finalize the FSR and project design to better solicit and respond to residents' opinions and demands in the urban public space. The SIA also enabled to avoid or minimize adverse impacts or social risks potentially resulting from the project.

Gender. Gender issues were analyzed in the project socio-economic survey of SIA and action plan, and covered issues such as education, employment, decision making, rights and interests. For instance, the analysis indicates that women's participation in public affairs is around 31% in the whole project area which was much lower than men's (69%). Women expressed their expectation on jobs opportunities and capacity buildings, in addition, they are more like to involve project design and concern their needs such as separate nursing rooms and parent-child spaces can be incorporated in the FSR and RAP. Based on the findings, the Project has adopted a gender balanced approach through full participation of women, training program of women's awareness of rights or interests protection and their capacity buildings for innovation and entrepreneurship. The external monitoring system will help address any shortcomings during implementation. The following gender-related indicators will be followed and closely monitored in the project implementation stage and will be reflected into the ICR.

- percentage of women are asking for advice/participating on optimizing the design?
- percentage of female workers sign labor contracts?
- The frequency and percentage of female workers involved in providing training in labor laws, contract laws, occupational health and labor protection, innovation/ entrepreneurship and Gender based violence.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Two rounds of public consultations were carried out during the EIA process following Bank Safeguard policies and Chinese regulations. The first round was conducted during October and December 2019 through a combination of questionnaire survey and public meetings with Project-affected persons and other relevant stakeholders. The EIA information was disclosed through public bulletins and sharing documents during public meetings on October 30-31, 2019. The second round was during January 2020 after the complete draft EIA was ready and the EIA information was disclosed through public bulletins and sharing documents during public meetings on January 15, 2020. Opinions and concerns expressed have been addressed in the EIA and ESMP. The EIA report in Chinese was disclosed on February 17, 2020 through the FNIZ website (http://gxq.jxfz.gov.cn/art/2020/2/17/art_8350_3318259.html). The EIA Report in English was disclosed at the Bank website on February 17, 2020.

Different stakeholders, including government authorities, affected communities and villagers, as well as enterprises and employees were consulted during the SIA and RAP preparation. Media, newspapers, meetings, interviews, questionnaires, and focus group discussions were used to share and gather information, as well as to help the project affected people and beneficiary population to understand the project and raise their questions and concerns. Responses to the concerns of affected households, village committees, employees and enterprises have been integrated into the project design and the RAP. Hotline was set up and appointed staff in the PMO would answer any questions related to the project activities and resettlement policy and procedures. Relevant project information such as resettlement policy etc has been provided to the affected villagers through posters, F2F communication and group meetings. Further consultations will be conducted during implementation. Draft Chinese RAP and SIA was locally disclosed to the public on FNIZ's websites on Feb 15, 2020, and both Chinese and English draft RAP and SIA were



disclosed on the WB website on Feb 17, 2020. The updated final Chinese and English versions of the RAP and SIA will be disclosed locally and on Bank's website.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
17-Feb-2020	17-Feb-2020	17-Feb-2020

"In country" Disclosure

China

17-Feb-2020

Comments

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank	Date of submission for disclosure
17-Feb-2020	17-Feb-2020

"In country" Disclosure

China

15-Feb-2020

Comments

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?

Yes

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?

Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?

Yes



OP/BP 4.04 - Natural Habitats

Would the project result in any significant conversion or degradation of critical natural habitats?

No

If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?

NA

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes

OP/BP 4.37 - Safety of Dams

Have dam safety plans been prepared?

Yes

Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?

Yes

Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?

Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes



All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

Yes

CONTACT POINT

World Bank

Wanli Fang
Urban Economist

Marcin Miroslaw Piatkowski
Senior Economist

Borrower/Client/Recipient

People's Republic of China
Jing Fu
Director, IFI Div. I, International Economic and Financial
zjc@mof.gov.cn

Implementing Agencies

Fuzhou New Industries Zone
Shanguo Yang
Deputy Director of the FNIZ
yangshanguo62@163.com

Jiangxi Development and Reform Commission
Tang Tang
Deputy Director of Foreign Capital Utilization Division
412584114@qq.com



FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: <http://www.worldbank.org/projects>

APPROVAL

Task Team Leader(s):	Wanli Fang Marcin Mirosław Piatkowski
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Approved By

Safeguards Advisor:	Peter Leonard	13-Mar-2020
Practice Manager/Manager:	Francis Ghesquiere	13-Mar-2020
Country Director:	Harold L. Bedoya	23-Mar-2020