I. Introduction and Context

Country Context

1. China’s rapid urbanization has been highly successful in supporting high GDP growth, economic transformation, productivity increases, and income and employment creation. Over the next 20 years, urbanization is projected to reach about 65% to 70% adding another 300 million urban inhabitants. By 2030, about one billion people will be living in China’s cities, seeking jobs, housing, infrastructure, and other services.

2. The Government of China has recently launched a “New Urbanization” Strategy to sustain the country’s economy growth through promoting further urbanization, which has substantial potential to trigger and expand the country’s domestic consumption. The New Urbanization Agenda emphasizes the quality of urbanization, equalization of basic urban
services provision to all residents, including migrants, rather than urbanization of land or construction of new cities that end-up with high vacancy rates. It gives higher priority to develop small cities and towns recognizing their role in linking the cities and rural areas and their potential to accommodate rural-urban migration. The policy priorities of the new growth model will be on achieving more efficient, inclusive and environmentally sustainable cities, and key features include: (i) agglomeration of smaller cities and neighborhood towns, which have sufficient specialization and linkages to other urban areas; (ii) compact urban development to limit low density, scattered and fragmented urbanization, encroachment on farmlands and nature reserves, and economic provision of infrastructure and services; and (iii) improved connectivity between cities to facilitate access to local, regional, and global markets for both inputs and outputs necessary for economic activities, attract labor, and market products.

3. China’s coastal regions, in particular the three mega urban systems of Yangtze River Delta (YRD), Pearl River Delta and the Bohai Bay, played predominant roles in the country’s industrialization and urbanization process over the last three decades. The YRD is expected to continue to lead the country’s economic growth and urbanization process in the coming decades. Compared with the scale of rural-to-urban migration, the receiving capacity of the metropolis (first-tier cities) and big cities (second-tier cities) in YRD is relatively limited. Provincial and municipal governments in YRD regions have identified and determined that the small cities (third-tier cities), in particular the county seats will play a critical role in diverting the rural-to-urban migration pressure from the big cities in YRD which already have been over-crowded. As a result, local government in YRD is promoting the development of small cities and county seats through policy reforms and incentive policy instruments.

Sectoral and Institutional Context

4. Ningbo is located in the northeastern part of Zhejiang Province; it has a sub-provincial administrative and separate state-planning status. As of the 2010 census, the municipality had a population of 7.6 million people, with 3.5 million residing in the main urban area. The rural area is subdivided into two counties, Xiangshan (508,000 people) and Ninghai (646,000 people), and three county-level cities, Yuyao (1.01 million people), Cixi (1.46 million people) and Fenghua (492,000 people). In May 2008, the Hangzhou Bay Bridge opened connecting the municipalities of Shanghai and Ningbo, reducing travel time between the cities to about two hours. This will help strengthen the economic integration of Ningbo Municipality with Shanghai and the Yangtze River Delta Metropolitan Region. The project investments will focus on Xiangshan County, but can be expanded to include investments in other counties in Ningbo Municipality in the future.

5. Xiangshan County is representative of many smaller cities and towns in Eastern China that experienced rapid economic growth, a very rapid spatial expansion, but a relatively moderate urban population growth. The County is located on a peninsula along the coast, it has an area of 1,382 km² and a total registered Hukou population of 540,300, but the actual population is about 508 thousand people. In 2012, Xiangshan County reported a slow growth in urban residents, but an overall decline in population of 6%, while all other ten sub-municipal units in Ningbo recorded population gains. The County has over 21% of its registered population living in urban areas, and this urban share of the total population is substantially lower than those of the Ningbo Municipal average (36.6%), Zhejiang Provincial average (63.2%), and the national average (52.6%). At the same time, Xiangshan County has experienced a strong economic growth over the last decade (2001~2011) with an average GDP growth rate of 14.5% per year, although lower than Ningbo municipal average growth rate of 16.5% and the national average of 15.7% during the same period.
6. Despite a very gradual growth in urban population, Xiangshan has invested considerably in expanding the urban area and building basic infrastructure and roads. The conversion of rural to urban land has provided the local revenues needed to finance new infrastructure and other services. The new roads with multiple lanes have clearly prioritized motorized traffic and fragmented the city, despite the fact that about 69% of the daily trips by local resident are still made by bike or foot, and only 18.5% of the trips are by car. To reduce the decline in non-motorized trips and increasing motorization, it is critical that the County reinvests in the existing old town area and improves the quality of transport infrastructure and safety of pedestrians, bikes and electric bikes, and provides a more efficient and accessible public transport system for the longer journeys. Elderly, children and lower income families would especially benefit from improved access by walking, biking and public transport to jobs, education services and health facilities.

7. Urban flooding has significant impacts on urban transport infrastructure and the overall livability of cities as Ningbo is hit every year by typhoons and storms. The resulting flooding of streets slows traffic, block access and increases the risk of accidents. Standing water on streets also erodes road surfaces and exacerbates pothole formation. In the winter, water from flooded streets can freeze and form hazardous driving conditions. Especially at intersections, street flooding makes crossing streets and walking difficult for pedestrians and bicyclists. Even a short high intensity storm event can overwhelm the city infrastructure’s capacity to handle the resulting flooding causing transport and other service interruptions. Historically, the government has attempted to reduce street flooding by channeling rain water run-off into fixed capacity drains and pipes. These methods pose problems, because as the amount of paved (non-porous) surface in the city increases, the amount of water the pipes must handle also increases, resulting in overwhelmed drainage network and subsequent flooding. Integrated flood risk management strategies that involve good water management, protection of green space and roadway drainage design solutions can reduce the volume and slow down the rate at which rain water runs off roads and other paved surfaces, reducing the possibility of floods.

8. This project was selected to implement some of the key recommendations of China’s new Urbanization Plan that was released in early 2014 focusing on human-centered and environment-friendly urbanization, and key recommendations of the joint World Bank and DRC report on China’s urbanization that emphasize the need to have a people-centered development with a shift towards more compact and mixed-use land development patterns to contain urban sprawl, maximize resource efficiency, curtail the negative externalities of pollution and congestion, and create more livable and productive cities. Urban spatial expansion should be carefully managed, and higher-density, contiguous development, with functionally and socially mixed neighborhoods, and walkable, human-scale local urban environments should be encouraged that are connected by good public transport systems. Denser development should be complemented by public green spaces to maintain livability, and more compact urban growth should be achieved through redevelopment of existing urban areas. In addition, there is a need to improve city financing by greater budgetary control, better asset management, enhanced creditworthiness, introduce land value capture mechanisms, municipal bonds, and more private capital to finance urban infrastructure and deliver basic services.

9. According to the new Urbanization Plan, the lack of access to public services should also be eased and eventually removed altogether in towns and small cities. Full access to public services is key to unleash the consumption potential of lower income residents and migrants, but, along with
the expansion of urban infrastructure, it will entail large costs. Those will need to be financed by giving sub-national government’s greater taxing power, through larger transfers from the central government and via sub-sovereign bond issues.

10. The national 12th Five-Year Plan clearly prioritizes the need to invest more in public transport and clean transport systems, including pedestrian and bike facilities. There is also a strong mandate by the Chinese Government to better protect water resources, increase the efficiency of water use, reduce the pollution of water, and reduce the risks to floods in cities. The 12th Five-Year Plan calls for reducing water use by 30 percent for every new dollar of industrial output. A similar water conservation goal under the 11th Five-Year Plan was achieved and helped maintain the growth in water use to around one percent annually. The 12th Five-Year Plan also calls for a reduction in water pollution and vulnerability of cities and towns to natural disasters, such as floods and typhoons.

11. While many issues affect the livability of communities, this project will focus on building more livable small towns by improving the connectivity between housing, jobs, civic sites, retail centers and local and regional transportation systems. The project will assist the government in implementing policies and plans that encourage more compact development with a variety of housing densities, attractive public spaces, environmentally sensitive development, and mixed land use. The project will also help catalyze additional development by making more efficient use of existing land and infrastructure and diversify financing sources.

Relationship to CAS

12. The project is consistent with the Bank’s Country Partnership Strategy (CPS) for 2013-2016 (Report No. 67566-CN) dated October 11, 2012, and focuses on two strategic themes: (i) supporting greener growth, and (ii) promoting more inclusive development. The proposed project supports the two CPS themes, and will contribute to three outcomes of enhancing urban environmental services, enhancing opportunities in rural areas and county towns, and improving transport connectivity for more balanced regional development. The project is also aligned with the WBG’s goal of promoting shared prosperity.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The objective of the project is to demonstrate more sustainable urbanization approaches for small towns by improving transport connectivity and resilience to floods.

Key Results (From PCN)

14. The achievement of the PDO will be measured through the following Key Performance Indicators:

(1) Percentage of jobs (disaggregate by income) in the county accessible within 30min by public transport.

(2) Satisfaction level of pedestrians, cyclist and beneficiaries using improved roads and public space in the downtown area (%) – Citizen Engagement Indicators

(3) Reduction in number of injuries and fatalities along project financed roads and intersections.

(4) Area provided with new and improved drainage services – (adapted) Core Sector Indicator.

(5) Reduction in flooded area that is free of water within 24hours after a major 1 in 50years rain event (ha)
(6) Adoption of multi-year capital investment and asset management plan for road maintenance and operation (yes/no).

III. Preliminary Description

Concept Description

15. The project is being designed following a framework approach. During project preparation, the overall objectives, scope and framework for identification, preparation and implementation of infrastructure investments will be prepared and agreed with the municipal and county governments. The first batch of specific infrastructure investments will be identified and appraised during project preparation. The size of the first batch will depend on the indebtedness capacity and financial sustainability of Xiangshan County (preliminary financial assessment indicates that the first batch will be around US$ 50 million in IBRD financing). Subsequent phases of financing will be triggered on the basis of good progress with the implementation of the previous batch of subprojects, identification of eligible projects in line with the PDO and adequate capacity of the County to manage and finance additional subprojects. Other counties in Ningbo Municipality could be considered in future batches of the project. Infrastructure investments will be selected based on eligibility criteria under the following project components focusing on urban livability, public transportation and flood risk management:

16. Component 1. Urban livability. This component will focus on an integrated approach to create a more livable urban environment by enhancing clean transportation choices and connecting people to jobs, employment centers, educational institutions and health care facilities and improving access to public spaces. Eligible investments include: (i) improvements to pedestrian and bicycle infrastructure; (ii) rehabilitation and construction of urban streets; (iii) improving public spaces including landscaping and scenic beautification of the inner city; (iv) developing safer street crossings; (v) intelligent transport systems, (vi) improvements in access and connectivity between walking, biking and public transport; (vii) traffic management and safety measures. Special attention will be given to the affordability of different transportation options and improving the access of migrants and low-income households and students to employment centers and educational institutions.

17. Component 2. Public transportation. This component will focus on investments to improve the access, quality and efficiency of the urban bus system. The bus operations in the county have very low ridership and the connectivity between local and regional transport being reviewed and support will be provided to improve bus service capacity and reliability; increase coverage and accessibility of the system. Eligible investments include new and replacement buses and related equipment, rehabilitation and new bus stops, intermodal terminals and bus depots and maintenance facilities. These investments are closely linked to Component 1 and ensure an integrated system is created that would increase overall efficiency of the urban transport system within the city by better integrating non-motorized systems at the neighborhood level with public bus systems for longer-distance trips within the county.

18. Component 3. Flood Risk Management. This component will focus on reducing the vulnerability of the county to the risks of floods. A combination of structural and non-structural measures will help the city better prepare and protect critical assets and vulnerable people to potential floods in the future. An important aspect will be to increase opportunities for the water to infiltrate into the ground rather than (or before) channeling it to the fixed capacity drains and pipes.
Infiltration trenches, filter strips, vegetated swales and planter beds all work by retaining water. Eligible investments will be designed with the following principles and features: protection of natural water systems, reduction of storm water runoff and peak flows, protection of water quality and ecosystem by increasing filtration and retention, and upgrade of flood protection and drainage infrastructure. The subcomponent will also assist in the emergency preparedness and response systems, urban planning and protection of green space.

19. Component 4. Technical Assistance and Capacity Building. This component is closely linked to the previous components and aims at creating more livable local communities and supporting local governments in finding cost-effective solutions based on sound financing plans. This component is divided into the following subcomponents:

- Subcomponent 4.1. Sustainable local development and planning. This subcomponent will support local governments in reviewing and possibly updating policies, codes, and capital investment plans to integrate transportation, housing, and economic development; support local real estate markets; and stimulate private investment. Activities can include analyzing and reviewing local master plans, zoning codes, and building codes, either on a county level or in a specific community, district, or corridor to promote mixed-use development, affordable housing, the reuse of existing buildings and structures for new purposes, and street and corridor revitalization.

- Subcomponent 4.2. Capital Investment and Asset Management. Given the large fixed asset investments made by counties in the last decade, annual spending on managing and maintaining these assets will increase substantially in the near and medium-term. Most existing infrastructure is not well operated and maintained and their value is depreciating quickly. There is a lack of incentive in proper asset management and limited knowledge of full project-cycle asset management. This component will support counties in Ningbo to develop information and tools for full-cycle management of infrastructure assets, including asset inventory, valuation, planning and budgeting. It will be complemented by capital investment plans that help municipal governments focus on local development goals and public service needs, encourage more efficient program administration, identify the most economically sound means of funding, and enhance credit ratings.

- Subcomponent 4.3. Innovative financial mechanisms for public service delivery. This component will help develop innovative financing mechanisms to improve the public finance systems and attract private investments in infrastructure and service delivery. Options that will be considered are concessions, PPPs, public-private finance facility at Ningbo municipal level will be evaluated, and Capital Investment and Asset Management Plan will be established for both the transport and water sectors.

- Subcomponent 4.4. Project Management and Supervision. This subcomponent will support the implementation of the OM and strengthen the institutional capacity of the implementing agencies. Specifically, it supports (i) monitoring and evaluation activities; (ii) training and study tours to enhance both project management skills and the technical capacity of the PMOs and implementation agencies at all levels; (iii) financial management, procurement, safeguards, supervision and other consulting services; and (iv) additional operating costs. An Operational Manual (OM) will be prepared for the selection, appraisal and supervision of subprojects during project implementation.

IV. Safeguard Policies that might apply
### Safeguard Policies Triggered by the Project

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### V. Financing (in USD Million)

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