



# Report and Recommendation of the President to the Board of Directors

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Project Number: 45021-002  
January 2014

Proposed Loan  
People's Republic of China: Anhui Intermodal  
Sustainable Transport Project

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 30 January 2014)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.16511
\$1.00	=	CNY6.0566

## ABBREVIATIONS

ADB	–	Asian Development Bank
APDOT	–	Anhui Provincial Department of Transport
dwt	–	deadweight ton
EIA	–	environmental impact assessment
EMP	–	environmental management plan
GDP	–	gross domestic product
IWT	–	inland waterway transport
km	–	kilometer
NMT	–	nonmotorized transport
PRC	–	People's Republic of China
WDZ	–	Wanjiang Demonstration Zone

## NOTE

In this report, "\$" refers to US dollars.

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## PROJECT AT A GLANCE

<b>1. Project Name:</b> Anhui Intermodal Sustainable Transport Project		<b>2. Project Number:</b> 45021-002	
<b>3. Country:</b> China, People's Republic of		<b>4. Department/Division:</b> East Asia Department/Transport and Communications Division	
<b>5. Sector Classification:</b>			
		<b>Sectors</b>	<b>Primary</b>
		Transport, and information and communication technology	√
			<b>Subsectors</b>
			Road transport
			Water transport
<b>6. Thematic Classification:</b>			
		<b>Themes</b>	<b>Primary</b>
		Economic growth	√
			<b>Subthemes</b>
			Widening access to markets and economic opportunities
			Promoting economic efficiency and enabling business environment
		Environmental sustainability	Natural resources conservation
		Capacity development	Institutional development
<b>6a. Climate Change Impact</b>		<b>6b. Gender Mainstreaming</b>	
Adaptation	Medium	Gender equity theme (GEN)	
Mitigation	High	Effective gender mainstreaming (EGM)	
		Some gender elements (SGE)	
		No gender elements (NGE)	
<b>7. Targeting Classification:</b>		<b>8. Location Impact:</b>	
<b>General Intervention</b>	<b>Targeted Intervention</b>		
	<b>Geographic dimensions of inclusive growth</b>	<b>Millennium development goals</b>	<b>Income poverty at household level</b>
√			
		National	
		Regional	
		Rural	
		Urban	
		High	
		Low	
		Medium	
		Medium	
<b>9. Project Risk Categorization:</b> Complex			
<b>10. Safeguards Categorization:</b>			
		Environment	A
		Involuntary resettlement	A
		Indigenous peoples	C
<b>11. ADB Financing:</b>			
<b>Sovereign/Nonsovereign</b>		<b>Modality</b>	<b>Source</b>
Sovereign		Project loan	Ordinary capital resources
Total			200.0
			200.0
<b>12. Cofinancing:</b>			
No cofinancing available.			
<b>13. Counterpart Financing:</b>			
<b>Source</b>		<b>Amount (\$ Million)</b>	
Government		434.1	
Total		434.1	
<b>14. Aid Effectiveness:</b>			
Parallel project implementation unit		No	
Program-based approach		No	

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the People's Republic of China (PRC) for the Anhui Intermodal Sustainable Transport Project.<sup>1</sup>

2. The project will (i) upgrade sections of provincial and national highways in Anhui Province and improve the safety features on these roads; (ii) develop new highway sections designed to support public and nonmotorized transport (NMT); (iii) improve the capacity of the province's inland waterway network, (iv) construct an intermodal inland river port on the upgraded inland water channel, and (v) strengthen institutional capacity for road and inland water transport (IWT).<sup>2</sup>

## II. THE PROJECT

### A. Rationale

3. Development in the central PRC province of Anhui has lagged behind that in neighboring eastern and coastal provinces. About 56% of the province's 59.7 million people lived in rural areas in 2011, but population density, at 430 inhabitants per square kilometer, is much higher than the national average (138) and land availability is limited. Despite economic growth, the province's gross domestic product per capita remains much lower than those of the adjacent coastal provinces of Jiangsu and Zhejiang.<sup>3</sup> Anhui has had some success in its efforts to capitalize on the advantages of its physical proximity to these more affluent provinces owing to its large, skilled, and less costly labor force. It is gradually attracting new investments and maintained double-digit annual gross domestic product (GDP) growth during 2011–2012. Production has grown faster than the national average, and Anhui's consumption per capita reached 77% of the national average in 2011, up from 70% in 2005.

4. To harness Anhui's geographical advantage and cost competitiveness and promote new investment in manufacturing and services, the PRC State Council approved a plan in January 2010 to create the Wanjiang Demonstration Zone (WDZ). The plan aims to attract equipment manufacturing, textile, information technology, and agricultural industries to the urbanized areas along the Wanjiang River, which is the name given to the stretch of the Yangtze River that flows through Anhui. The WDZ covers fifty nine counties and nine cities, including Hefei and Wuhu, and is expected to facilitate the expansion of existing Anhui-based companies as well as encourage companies to relocate from elsewhere in the Yangtze River Delta, including Anhui's neighboring provinces.

5. The city of Xuancheng is the nearest point in the WDZ to the Yangtze River Delta, and borders Jiangsu and Zhejiang provinces. Only 283 kilometers (km) west of the city of Shanghai, it is the closest major center in the WDZ, making it a favorable destination for industries relocating from the coast.

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<sup>1</sup> The design and monitoring framework is in Appendix 1.

<sup>2</sup> The Asian Development Bank provided technical assistance to help prepare the project. ADB. 2011. *Technical Assistance to the People's Republic of China for Anhui Intermodal Sustainable Transport Project*. Manila.

<sup>3</sup> In 2011–2012, Anhui had a GDP per capita of \$4,200, much lower than those of the adjacent provinces of Jiangsu (\$11,000) and Zhejiang (\$10,200).

6. Xuancheng is developing an industrial park to capitalize on Anhui's comparative advantages and to attract industries that are seeking to move from neighboring provinces.<sup>4</sup> For the city and the WDZ to succeed in these efforts, however, the Xuancheng industrial park and the WDZ need to be served by a well-developed transport network.

7. Anhui's inadequate transport network is currently a major obstacle to rapid industrial and economic development and, as a result, to poverty reduction. The capacity and quality of the province's roads need significant improvement to meet growing requirements and to link Anhui to the Yangtze River corridor. Most roads have only two lanes and some should be upgraded to four or six. Of the 149,535 km of roads at the end of 2011, expressways and high-standard class I and II highways comprised only 9.5% (14,276 km), which is lower than the national average of 11.5%. The percentage of paved roads provides an indication of the general quality of the road infrastructure, and in Anhui this is lower than in the six surrounding provinces (44.2%).

8. Any expansion of the province's road network must be accompanied by carefully designed measures to enhance the level of road safety and prevent traffic accidents. Particularly important is the need for road designs to contribute to the safety of NMT by providing segregated pedestrian and cycling lanes. An estimated 210,000 crashes led to 62,000 traffic fatalities in the PRC in 2011, making road safety a national concern. Accidents and injuries have risen rapidly along with the expansion of the road network and the growth in the number of motor vehicles. During 2000–2005, more than 600,000 people were killed and around 3 million injured in crashes—equivalent to a fatality every 5 minutes. These accidents are estimated to have affected the lives of more than 20 million people in the country, either directly or as family members of the victims involved. The most vulnerable road users—pedestrians, motorcyclists, and cyclists—account for the majority of deaths.

9. Like the PRC in general, Anhui has great potential for the development of inland waterway transport (IWT), which is clean, safe, and the most energy-efficient of all the major modes of transport. The PRC has more than 5,600 navigable rivers and an inland waterway system of 119,000 km in total navigable length. IWT can provide a cost-effective alternative to road transport for moving freight, and thereby help alleviate the traffic congestion on the country's highways, reduce energy consumption, and avoid rapidly growing emissions that are exacerbating local air pollution and contributing to global climate change. Despite recent fast growth, IWT is still greatly underused. Its share in total transport in the PRC, measured in ton-kilometers, was only 4% in 2008.

10. Most of the PRC's navigable waterway network is located within the courses of the Heilongjiang, Huaihe, Yangtze, and Zhujiang rivers. The Yangtze River and its tributaries alone account for one-half the national total, or 58,000 km. The Yangtze runs through Anhui, and provides a high-class deep river channel for IWT. Its network of small associated river and tributary channels also offer potential for IWT, but past underinvestment in navigation has left many of them navigable only by small vessels during the wet season. Investments to upgrade the river channels to enable year-round IWT by larger vessels at lower unit operating costs can play an important role in achieving the WDZ's aim of attracting industries from coastal and neighboring provinces to cities along the Yangtze in Anhui.

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<sup>4</sup> The development of Xuancheng industrial park is supported by a World Bank loan. World Bank. 2013. *China–Anhui Xuancheng Infrastructure for Industry Relocation Project*. Washington, DC.

11. The 44 km Shuiyang River channel connects the Xuancheng industrial park within the WZD to the Wushen Canal,<sup>5</sup> which in turn connects to Shanghai. This would offer potential investors in the industrial park the effective transport route they want and need, except that the Shuiyang's current shallow depth, sharp bends, and flooding during the wet season prevent it from accommodating vessels above a very low capacity of 300 deadweight ton (dwt). This not only discourages more extensive use of the waterway, but also increases unit transport costs for shippers that have no better option. Rehabilitation of the Shuiyang River channel under the project will allow passage for vessels of up to 1,000 dwt, and provide a much shorter route for transporting goods from Anhui to the Yangtze River Delta.<sup>6</sup> The river port to be built by the project will facilitate a shift from road to inland waterway transport for cargo moving to and from the Xuancheng industrial park.

12. By supporting IWT, the project will also help the PRC develop the low-carbon transport modes needed to stem the rapid growth in the country's emissions that contribute to global climate change. The PRC is now the world's largest producer of greenhouse gases. These emissions, including those related to constantly expanding use of motorized transport, will continue to increase for the foreseeable future. Given the priority accorded to the challenge of climate change internationally, providing assistance to the country for developing low-carbon transport is a matter of urgency. The project's planned flood control measures, including flood walls and river bank protection, integrate protection and resilience into the design and construction of vulnerable infrastructure investments. This will meet the need to adapt to effects of climate change such as changing precipitation patterns, more frequent and intense storms, and flash floods.

13. The scope of the project's inland waterway component and the need for it to include an intermodal port at Xuancheng to serve the industrial park emerged from policy dialogue between ADB and the government during project preparation. The project preparation also included a study on climate change resilience, which helped in identifying the need for project flood protection works and developing preliminary designs of embankments on the Shuiyang River. Assessments of the project roads led to recognition of the road safety issues that are to be addressed through the project's design features, which will include segregated lanes for pedestrians and cyclists.

14. This will be the second ADB project to support IWT in the PRC, and follows approval in 2012 of the Hunan Xiangjiang Inland Waterway Transport Project, now in the early stages of implementation.<sup>7</sup> The project design incorporates lessons from recent road projects in the PRC, one of which was the need to include capacity building support for implementation units, particularly in procurement and safeguards.<sup>8</sup> During project preparation, ADB provided guidance to the executing agency and the implementing agencies on ADB's safeguards and procurement procedures. Further capacity building on resettlement is planned for the project implementing agencies.

15. The project is consistent with ADB's country partnership strategy for the PRC for 2011–2015.<sup>9</sup> The emphasis on traffic safety issues and the development of IWT are in line with ADB's

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<sup>5</sup> The Wushen Canal is an ancient waterway that branches off from the Yangtze River and provides a connection between the city of Wuhu in Anhui Province and Shanghai.

<sup>6</sup> The Yangtze River Delta comprises Shanghai, southern Jiangsu Province, and northern Zhejiang Province.

<sup>7</sup> ADB. 2012. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of China for the Hunan Xiangjiang Inland Waterway Transport Project*. Manila.

<sup>8</sup> ADB. 2011. *Completion Report: Guangxi Road Development II Project in the People's Republic of China*. Manila.

<sup>9</sup> ADB. 2012. *Country Partnership Strategy: People's Republic of China, 2011–2015*. Manila.

Sustainable Transport Initiative Operational Plan, which includes road safety and addressing climate change in transport development (including mitigation and adaptation) as two major opportunities for scaled-up ADB support.<sup>10</sup>

## B. Impact and Outcome

16. The project's impact will be the establishment of an environmentally sustainable multimodal transport system in Anhui Province. The outcome will be the development of a more efficient, safe, and affordable multimodal transport system in the WDZ.

## C. Outputs

17. The proposed project will include five outputs for ADB financing: (i) road network and safety improvement; (ii) public transport improvement of highways; (iii) inland waterway network upgrade; (iv) intermodal port; and (v) institutional strengthening and capacity building.

18. **Output 1: Road network and safety improvement.** The project will (i) upgrade approximately 31 km of the S319 road (Erba–Wuwei section) from class II to class I and add a new 5.77 km road section, (ii) upgrade approximately 47 km of the S367 Ma'anshan North Passage Road from class IV to class II, and (iii) improve the safety of these roads by introducing such measures as central dividers, pedestrian bridges, road markings, signage, and a speed-controlled junction design.

19. **Output 2: Highways and public transport improvement.** The project will (i) construct approximately 16 km of a new class I highway section (G206) between Dongliu and Yaodu, and (ii) upgrade approximately 22 km of G318 and the S320 Yimu Highway from class II to class I. The improvements on these highways will include provisions for public transport and NMT, such as priority bus lanes and bus stops, and segregated and dedicated lanes for pedestrians and cyclists.

20. **Output 3: Inland waterway network improvement.** The project will (i) widen, dredge, and provide bend realignment and slope protection for approximately 44 km Shuiyang River channel; (ii) build and install two low-water rubber dams;<sup>11</sup> (iii) construct one ship lock;<sup>12</sup> and (iv) build a new road bridge over the channel at Xiaohekou.

21. **Output 4: Intermodal port.** The project will build (i) a new intermodal port northeast of Xuancheng industrial park, and (ii) four 1,000 dwt berths. This Shuiyang River inland port will cater to the future traffic demand from the Xuancheng industrial park, and facilitate a shift from the transport of cargo by road to use of the inland waterway network.

22. **Output 5: Institutional strengthening and capacity building.** The project will provide (i) consulting services and equipment for intelligent shipping, (ii) road safety audits, and (iii) domestic and overseas training. The consulting services and equipment for intelligent shipping will help develop automatic river traffic data collection systems, search and rescue technologies, and systems to monitor pollution by marine vessels.

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<sup>10</sup> ADB. 2010. *Sustainable Transport Initiative Operational Plan*. Manila.

<sup>11</sup> Rubber dams are inflatable, cylindrical rubber fabrics placed across channels to raise the upstream water level when inflated.

<sup>12</sup> A lock is a device for lowering and raising vessels between stretches of channel that have different water levels.



## D. Investment and Financing Plans

23. The project is estimated to cost \$634.1 million, including taxes and duties (Table 1).

**Table 1: Project Investment Plan**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Road network and safety improvement	224.1
2. Highways and public transport improvement	215.2
3. Inland waterway network improvement	66.5
4. Intermodal port	29.0
5. Institutional strengthening and capacity building	1.5
<b>Subtotal (A)</b>	<b>536.3</b>
<b>B. Contingencies<sup>c</sup></b>	<b>80.6</b>
<b>C. Financing Charges During Implementation<sup>d</sup></b>	<b>17.2</b>
<b>Total (A+B+C)</b>	<b>634.1</b>

<sup>a</sup> Includes taxes and duties of \$18 million, which will be partly financed by the Asian Development Bank loan.

<sup>b</sup> In mid-2013 prices.

<sup>c</sup> Physical contingencies computed at 5% for civil works, field research and development, training, surveys, and studies. Price contingencies computed at 8.1% on foreign exchange costs and 10.4% on local currency costs.

<sup>d</sup> Includes interest and commitment charges. Interest during construction for the ADB loan has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.4% and a maturity premium of 0.1%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount.

Source: ADB estimates.

24. The Government of the PRC has requested a loan of \$200.0 million from ADB's ordinary capital resources to help finance the project. The loan will have a 23-year term, including a grace period of 5 years, an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, a commitment charge of 0.15% per year (the interest and other charges during construction to be capitalized in the loan), and such other terms and conditions set forth in the draft loan and project agreements. Based on the loan terms and the government's choice of 5% annuity repayment option, the average loan maturity is 15.57 years and the maturity premium payable to ADB is 0.10% per annum. The government will finance contingencies to cover any shortfall in the finances that may arise during implementation, including non-availability of a domestic bank loan. ADB's loan will cover civil works, equipment, institutional strengthening and capacity building, financing charges during implementation, and taxes and duties on the expenditures financed by ADB.<sup>13</sup> The Ministry of Transport, the Anhui Provincial Department of Transport (APDOT), the Anhui Provincial Port and Shipping Construction Investment Group, and the five county governments will provide \$434.1 million to finance civil works, resettlement, detailed design, supervision, and contingencies.

25. The borrower will be the Government of the PRC. The Ministry of Finance will make the loan proceeds available to the Anhui provincial government. The Anhui Provincial Department of Finance on behalf of the Anhui provincial government will onlend the proceeds to the APDOT and implementing agencies. The APDOT and implementing agencies will assume the risk of foreign exchange and interest rate variation for the ADB loan. The financing plan is in Table 2.

<sup>13</sup> The amount of taxes and duties to be financed by the project has been determined based on the principles that (i) the amount of taxes and duties financed by the ADB loan does not represent an excessive share of the project, and (ii) taxes and duties apply only with respect to ADB-financed expenditures.

**Table 2: Financing Plan**

<b>Source</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank		
Ordinary capital resources (loan)	200.0	31.5
Government <sup>a</sup>	393.1	62.0
Bank of Communications	41.0	6.5
<b>Total</b>	<b>634.1</b>	<b>100.0</b>

<sup>a</sup> Includes domestic loans for the inland waterway component.

Source: Asian Development Bank estimates.

26. The government has confirmed that all counterpart funds will be funded by the government and subject to the shortfall assurance described in para. 24. Anhui Provincial Port and Shipping Construction Investment Group will supplement government funding with a domestic bank loan for inland waterway and port components.

### **E. Implementation Arrangements**

27. The executing agency will be the Anhui provincial government, acting through the APDOT. The existing foreign funds project management office of the APDOT will serve as the provincial project management office, oversee overall project implementation, and represent the APDOT. Each project county will have a local project management office responsible for the day-to-day implementation of individual project road components. The county governments of Dongzhi, Hanshan, Hexian, Nanling, and Wuwei will be the implementing agencies for the road sector outputs. Anhui Provincial Port and Shipping Construction Investment Group will be the implementing agency for the IWT output. The project will be implemented over 5 years.

28. All procurement to be financed under the ADB loan will be carried out in accordance with ADB's Procurement Guidelines (2013, as amended from time to time). All consultant services will be engaged in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual.<sup>14</sup>

<sup>14</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

**Table 3: Implementation Arrangements**

Aspects	Arrangements		
Implementation period	Oct 2013–Sep 2018		
Estimated completion date	31 Oct 2018 (Loan closing date: 30 Apr 2019 )		
Management			
(I) Oversight body	APG		
(II) Executing agency	APG through APDOT		
(III) Implementing agency	Dongzhi county government, Hanshan county government, Hexian county government, Nanling county government, and Wuwei county government will be the implementing agencies for the road sector outputs. APPSCIG will be the implementing agency for the intermodal port and the IWT output.		
Procurement	International competitive bidding	Works: 15 contracts	\$432.59 million
		Goods: 1 contract	\$2.91 million
	National competitive bidding	Works: 3 contracts	\$15.24 million
		Goods: 4 contracts	\$2.53 million
Consulting services	Individual consultant selection and consultant's qualification selection		\$0.25 million
Training	Domestic		\$0.2 million
	Overseas		\$0.5 million
Retroactive financing and/or advance contracting	Advance contracting and retroactive financing will apply to up to 20% of the ADB loan amount, with respect to expenditures incurred prior to loan effectiveness but not earlier than 12 months before signing of the loan agreement. Retroactive financing will apply to all the road network improvement, the waterway dredging and new road overbridge, and the road safety audit consulting services.		
Disbursement	The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, APG = Anhui provincial government, APDOT = Anhui provincial department of transport, APPSCIG = Anhui Provincial Port and Shipping Construction Investment Group, IWT = inland waterway transport.

Note: The contract value estimates exclude contingency costs.

Source: Asian Development Bank.

### III. DUE DILIGENCE

#### A. Technical

29. The designs for project roads and highways will be based on the PRC's highway standards, with some adjustments, particularly for safety features. Road safety audits will be conducted on the detailed designs and during and after construction to ensure compliance with required road safety standards. Based on performance on past projects, the technical capacity of the executing and implementing agencies is considered adequate to implement the project's technical aspects. The design of the project's IWT output was also found to be appropriate and technically sound. The PRC has considerable experience and proven performance in the design and installation of similar facilities.

#### B. Economic and Financial

30. **Economic evaluation.** The project is economically viable, with an estimated economic internal rate of return of 16.7% and a net present value of \$194.7 million at a 12.0% discount rate. The estimate was based on the four transport-related outputs for which economic benefits could be quantified. The estimated costs include investment in civil works and equipment, land acquisition and resettlement, and operation and maintenance. The estimated benefits include

savings in the costs of operating vehicles, travel time, traffic accidents, and the carbon dioxide emissions to be avoided when freight shifts from road transport to IWT as a result of the project. Sensitivity analysis employing scenarios of cost overruns and benefit reductions demonstrated that the project's economic viability is robust.

31. **Financial evaluation.** The project has both revenue-generating and nonrevenue components. The nonrevenue components include the road network upgrades. The government has confirmed that none of the project roads will be subject to tolls. The financial analysis assessed the financial sustainability of the road components and found that the executing agency will have sufficient revenues to repay the loan and finance the operation and maintenance of the project roads. The inland waterway and port components will generate revenue. The financial internal rate of return after tax was estimated to be 2.49%. As the financial internal rate of return is higher than the 1.89% weighted average cost of capital, the inland waterway and port components are considered financially viable.

### **C. Governance**

32. All procurement to be financed under the ADB loan will be carried out in accordance with ADB's Procurement Guidelines (2013, as amended from time to time). The relevant sections of ADB's Anticorruption Policy (1998, as amended to date) will be included in all procurement documents and contracts. ADB's Anticorruption Policy was explained to and discussed with the government, the executing agency, and the implementing agencies. The specific policy requirements and supplementary measures are described in the project administration manual. An assessment of financial management capacity indicates that the executing and implementing agencies carefully follow PRC policies and procedures for accounting and financial management. The executing agency has strong accounting and financial management capacity, as well as experience in managing multiple large construction projects.

### **D. Poverty and Social**

33. A social and poverty analysis was conducted in accordance with ADB guidelines. Per capita GDP in Anhui province was only 69% of the national average in 2010. One of the 19 state-level poor counties in the province—Wuwei County—lies within the project area. Poverty incidence in the project area is 13.29%, based on the current national rural poverty line of CNY2,300.<sup>15</sup> Inadequate road infrastructure is a major obstacle to economic development and poverty reduction in Anhui. The project will result in better road connectivity, reduce several transport-related costs, cut travel times, and improve access to economic and employment opportunities and social services. The project design addresses the needs of all social and income groups through specific features to improve public transport and NMT. Its measures to improve road safety further strengthen the design's social inclusiveness. The project will stimulate investment in the project area, promote industrial growth, and open up new opportunities for nonfarm employment. Local people will directly benefit through access to skilled and unskilled employment created during project construction.

### **E. Safeguards**

34. **Environment.** The project is category A for environment. An environmental impact assessment (EIA) and an environmental management plan (EMP) have been prepared for the project roads and the waterway. These documents comply with the PRC's regulatory

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<sup>15</sup> Rural poverty line was raised to CNY 2,300 per capita in year 2011.

requirements and ADB Safeguard Policy Statement (2009) and were disclosed on the ADB website on 31 July 2013. Public consultation was carried out to inform the design and EIA processes, and will continue throughout project implementation. The EIA showed that only modest environmental impacts and risks can be expected, and that they can be limited to an acceptable level through the implementation of the EMP and compliance with loan covenants. The EMP addresses potential impacts of the project outputs and sets out mitigation and monitoring measures, institutional arrangements, training requirements, and a budget for implementing the EMP that represents 1.95% of the overall project budget. Capacity development and institutional strengthening are planned to minimize environmental risks. Environmental complaints will be handled through a grievance redress mechanism established for the project. Key environmental impacts, risks, and the associated mitigation measures are presented in the EIA.<sup>16</sup>

35. **Resettlement.** The project is category A for involuntary resettlement. It will result in acquisition of 285.1 hectares of land, including 251.7 hectares of collective land and 33.5 hectares of state-owned land. Land acquisition and house demolition will affect 4,408 households and 17,342 people overall. Of this total, 877 households and 3,605 people will be affected by house demolition. The project will also result in relocation of 33 enterprises, affecting 111 persons. A total of 2,496 households with 9,584 people will be affected by physical displacement or loss of more than 10% of their land and other productive assets.

36. The executing agency will oversee resettlement implementation. It has considerable experience in ADB safeguards procedures, is executing an ongoing ADB-financed transport project, and has previously implemented three World Bank projects. The implementing agencies will assist with day-to-day resettlement implementation. Five resettlement plans have been prepared that adequately address the potential impacts of land acquisition and resettlement and set out mitigation measures, including livelihood restoration. The resettlement plans have been prepared in consultation with the affected people. Public consultations were undertaken during project preparation and will continue throughout the project cycle, as per the public consultation schedule under the resettlement plans. A grievance redress mechanism will be established to address the concerns of affected peoples. The resettlement plans have been endorsed by the executing and implementing agencies, disclosed to the affected peoples, and posted on the ADB website. Resettlement implementation will also be monitored through independent external monitors.

37. The executing agency has assured ADB that adequate counterpart funding will be made available for land acquisition and resettlement, in line with the annual funding requirements stipulated in the resettlement plans.

38. **Indigenous people.** The project is classified as category C for indigenous peoples. Han Chinese, the PRC's majority ethnic group, make up 99% of Anhui Province's population.

## F. Risks and Mitigating Measures

39. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>17</sup>

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<sup>16</sup> Environmental Impact Assessment (accessible from the list of linked documents in Appendix 2).

<sup>17</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
Procurement could be delayed.	The PPMO will hire an external procurement agency to handle all bidding. Training in ADB procedures will be provided by an ADB procurement specialist during loan preparation, and further training will be conducted during implementation.
Delays may occur in the provision of counterpart funding.	The fiscal situation of the executing agency has been assessed and found to be adequate for project financing. Through a loan assurance, the Anhui provincial government has agreed to ensure timely provision of counterpart funding. In liaison with the executing agency and the implementing agencies, the PPMO will closely monitor the funding requirements of the project components.
Lack of interprovincial coordination may delay the upgrading of the portion of the Shuiyang River channel in Jiangsu province and reduce the overall project benefits.	An inter-provincial agreement between Anhui and Jiangsu provinces has been signed according to which Jiangsu province has agreed to carry out the work of upgrading the portion of the river within its boundaries.

ADB = Asian Development Bank, PPMO = provincial project management office.

Source: Asian Development Bank.

#### **IV. ASSURANCES**

40. The government and the APDOT have assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the project administration manual and loan documents.

41. The government and the APDOT have agreed with ADB on certain covenants for the project, which are set forth in the loan agreement and project agreement.

#### **V. RECOMMENDATION**

42. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of \$200,000,000 to the People's Republic of China for the Anhui Intermodal Sustainable Transport Project, from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 23 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao  
President

31 January 2014

### DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b> An environmentally sustainable multimodal transport system is established in Anhui Province</p>	<p>By 2020 The total traffic carried by the inland waterway system in Anhui Province measured in tons and ton-km increases by 20% from levels in 2012.</p> <p>The traffic accident rate, measured by road crash fatalities per 10,000 vehicles in Anhui, is reduced from 2.61 in 2012 to 1.50.</p>	<p>Anhui Provincial Department of Transport statistics</p> <p>Anhui Provincial Department of Public Security</p>	<p><b>Assumptions</b> Traffic law enforcement is effective.</p> <p>The WZD develops as planned by the national government.</p>
<p><b>Outcome</b> An efficient, safe, and affordable multimodal transport system developed in the WZD</p>	<p>By 2018 Vessel handling capacity on Shuiyang River increased from 300 dwt in 2012 to 1,000 dwt</p> <p>Average travel time on project roads reduced by one-third from a total of 147 minutes in 2012.</p>	<p>Data from Anhui Provincial Port and Shipping Construction Investment Group Co. Ltd.</p> <p>Traffic speed and commuter surveys</p>	<p><b>Assumption</b> Work to improve sections of the Wushen Canal is completed.</p>
<p><b>Outputs</b></p> <p>1. Road network and safety improvement</p> <p>2. Highways and public transport improvement</p> <p>3. Inland waterway network improvement</p>	<p>5.77 km of new class I highway (S319) built</p> <p>Approximately 31 km of highways upgraded from class II to class I (S319)</p> <p>Approximately 47 km of highways upgraded from class IV and III to class II (S367)</p> <p>Road safety assessment recommendations incorporated in road design (with particular attention to needs of women, children, and the elderly)</p> <p>Approximately 16 km of new class I road constructed with bus stops, a bus priority lane, and segregated cycle and pedestrian lanes (G206)</p> <p>Approximately 22 km of highways upgraded from class II to class I with bus stops, bus priority lane, segregated cycle and pedestrian lanes (Yimu)</p> <p>Approximately 44 km of inland waterway upgraded from class VI to restricted class IV channel</p>	<p>Project implementation progress reports</p> <p>Crash statistics from the provincial government</p> <p>Project implementation progress reports</p> <p>Project implementation progress reports</p>	<p><b>Risk</b> Implementing agencies lack capacity to comply with ADB procurement procedures.</p> <p><b>Risk</b> Implementing agencies have difficulties complying with ADB safeguards.</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
4. Intermodal port	1 ship lock built 2 rubber dams installed New intermodal port built Four 1,000 dwt berths built	Project implementation progress reports	Inter-provincial coordination for implementing IWT component.
5. Institutional strengthening and capacity building	Staff in the executing agency and implementing agencies trained in intelligent shipping and road safety		
<b>Activities with Milestones</b> <b>1. Road network and safety improvement</b> 1.1. Complete road safety audit (by Nov 2013) 1.2. Draft detailed design (May 2014–Jul 2014) 1.3. Complete final design and bidding documentation (Jun 2014–Mar 2015) 1.4. Carry out land acquisition and resettlement (Apr 2014–Jun 2015) 1.5. Award contract (Mar 2015–Jun 2015) 1.6. Undertake and complete civil works (Apr 2015–Jun 2018)  <b>2. Highways and public transport improvement</b> 2.1. Conduct road safety audit (by Dec 2013) 2.2. Develop public transport master plans (by Jan 2014) 2.3. Draft detailed design (Nov 2013–May 2014) 2.4. Complete final design and bidding documentation (Dec 2013–Jan 2015) 2.5. Carry out land acquisition and resettlement (Apr 2014–Jun 2015) 2.6. Award contract (Jul 2014–Feb 2015) 2.7. Undertake and complete civil works (Aug 2014–Jun 2017)  <b>3. Inland waterway network improvement</b> 3.1. Draft detailed design (Jul 2014–Dec 2014) 3.2. Complete final design and bidding documentation (Aug 2014–Dec 2015) 3.3. Carry out land acquisition and resettlement (Apr 2014–Jun 2015) 3.4. Award eight civil, earthworks, M&E, and other contract over extended period (Feb 2015–Mar 2016) 3.5. Undertake and complete civil works (Mar 2015–Jun 2018)  <b>4. Intermodal port</b> 4.1. Draft detailed design (Apr 2014–Jul 2014) 4.2. Carry out land acquisition and resettlement (Feb 2014–Apr 2015) 4.3. Complete final design and bidding documentation (May 2014–Apr 2015) 4.4. Award two civil and one M&E contracts (Dec 2014–Mar 2015) 4.5. Undertake and complete civil works (Jan 2015–Jun 2017)  <b>5. Institutional strengthening and capacity building</b> 5.1. Recruit consultants (Feb 2014–July 2014) 5.2. Provide project management support (Jan 2014–Oct 2018) 5.3. Oversee detailed design and ensure that safeguard measures are implemented, monitored, and reported (Jan 2014–Oct 2018) 5.4. Provide training on road maintenance and road safety (by Jun 2014) 5.5. Provide training on environmental conservation and protection (by Jun 2014) 5.6. Implement EMP, resettlement plans, and SDAP (Apr 2014– Oct 2018)			<b>Inputs</b>  <b>Loan</b> <b>ADB: \$200.0 million (OCR)</b> <b>Government: \$393.1 million</b> <b>Bank of Communications: \$41.0 million</b>

ADB = Asian Development Bank, dwt = deadweight ton, EMP = environmental management plan, IWT = inland waterway transport, km = kilometer, M&E = monitoring and evaluation, SDAP = social development action plan, WDJ = Wanjiang Demonstration Zone.

Source: Asian Development Bank.



**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=45021-002-3>

1. Loan Agreement
2. Project Agreement
3. Sector Assessment (Summary): Transport, and Information and Communication Technology
4. Project Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Economic and Financial Analysis
8. Country Economic Indicators
9. Summary Poverty Reduction and Social Strategy
10. Environmental Impact Assessment
11. Resettlement Plan: S319 Highway Erba to Wuwei Section Improvement Subproject
12. Resettlement Plan: Yimu Highway Kedian to Mujiating Section Improvement Project
13. Resettlement Plan: G206 Dongliu to Yaodu Section Construction Project
14. Resettlement Plan: Shuiyang River Channel Improvement Subproject
15. Resettlement Plan: Ma'anshan North Tourist Road Subproject-S367
16. Risk Assessment and Risk Management Plan

**Supplementary Documents**

17. Technical Note on Highway Classification System in the People's Republic of China
18. Financial Management Assessment
19. Procurement Capacity Assessment