



# Technical Assistance Report

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Project Number: 48028-001  
Policy and Advisory Technical Assistance (PATA)  
December 2014

## People's Republic of China: Policy Advice on Promoting the Circular Economy in Qinghai Province

This document is being disclosed to the public in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 17 November 2014)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.1631
\$1.00	=	CNY6.12

## ABBREVIATIONS

ADB	–	Asian Development Bank
CCEPZ	–	Chaidamu Circular Economy Pilot Zone
CPS	–	country partnership strategy
PRC	–	People's Republic of China
TA	–	technical assistance

## NOTE

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

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## CONTENTS

	<b>Page</b>
POLICY AND ADVISORY TECHNICAL ASSISTANCE AT A GLANCE	
I. INTRODUCTION	1
II. ISSUES	1
III. THE POLICY AND ADVISORY TECHNICAL ASSISTANCE	2
A. Impact and Outcome	2
B. Methodology and Key Activities	3
C. Cost and Financing	3
D. Implementation Arrangements	3
IV. THE PRESIDENT'S DECISION	4
APPENDIXES	
1. Design and Monitoring Framework	5
2. Cost Estimates and Financing Plan	7
3. Outline Terms of Reference for Consultants	8
SUPPLEMENTARY APPENDIX (available on request)	
A. Capacity Assessment Report and Recommendations by OSP2 and PRCM	

## POLICY AND ADVISORY TECHNICAL ASSISTANCE AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number: 48028-001</b>	
<b>Project Name</b>	Policy Advice on Promoting the Circular Economy in Qinghai Province	<b>Department /Division</b>	EARD/EAEN
<b>Country Borrower</b>	China, People's Republic of People's Republic of China	<b>Executing Agency</b>	Qinghai Provincial Finance Bureau
<b>2. Sector</b>	<b>Subsector(s)</b>	<b>ADB Financing (\$ million)</b>	
Industry and trade	Industry and trade sector development		0.35
		<b>Total</b>	<b>0.35</b>
<b>3. Strategic Agenda</b>	<b>Subcomponents</b>	<b>Climate Change Information</b>	
Environmentally sustainable growth (ESG)	Eco-efficiency Natural resources conservation Urban environmental improvement	Climate Change impact on the Project	Low
<b>4. Drivers of Change</b>	<b>Components</b>	<b>Gender Equity and Mainstreaming</b>	
Governance and capacity development (GCD) Knowledge solutions (KNS)	Institutional development Organizational development Public financial governance Knowledge sharing activities	No gender elements (NGE)	✓
<b>5. Poverty Targeting</b>		<b>Location Impact</b>	
Project directly targets poverty	No	Nation-wide	High
<b>6. TA Category:</b>	B		
<b>7. Safeguard Categorization</b>	Not Applicable		
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>0.35</b>	
Sovereign Policy and advisory technical assistance: Technical Assistance Special Fund		0.35	
<b>Cofinancing</b>		<b>0.00</b>	
None		0.00	
<b>Counterpart</b>		<b>0.00</b>	
None		0.00	
<b>Total</b>		<b>0.35</b>	
<b>9. Effective Development Cooperation</b>			
Use of country procurement systems		No	
Use of country public financial management systems		No	

## I. INTRODUCTION

1. During the Asian Development Bank (ADB) country program mission to the People's Republic of China (PRC) in 2013, the government requested ADB assistance in developing a circular economy in Qinghai Province in which materials are recycled, regenerated, and reused to minimize the consumption of natural resources.<sup>1</sup> The technical assistance (TA) project was included in ADB's country operations business plan for the PRC for 2014–2016 under a different name. This was later revised to better reflect the policy and advisory content and scope of the TA.<sup>2</sup> The concept paper was approved on 23 October 2014. During a fact-finding mission in October 2014, an understanding was reached with the government on the impact, outcome, outputs, implementation arrangements, cost, financing arrangements, and outline terms of reference. The design and monitoring framework of the TA for Policy Advice on Promoting the Circular Economy in Qinghai Province is in Appendix 1.

## II. ISSUES

2. The PRC's economy has grown on a yearly average rate of more than 9% since 1982 and is now the second largest in the world. Consumption of the country's natural resources has expanded at an even more rapid pace, and this has caused severe air pollution, water scarcity, and soil degradation. The government recognizes that this resource- and energy-intensive development strategy is not sustainable, as it aims to reduce energy intensity by 16% under its Twelfth Five-Year Plan, 2010–2015. It has also made the promotion of a circular economy—i.e., one that recycles, regenerates, and reuses materials to minimize consumption of natural resources—a major policy objective.

3. Qinghai, located on the Qinghai–Tibet Plateau in the western PRC, is one of the country's largest provinces in area but has a population of only 5 million. Only one other province has a lower gross domestic product. This is despite its importance as a resource base and its abundant mineral and natural resources. The provincial economy is heavily dependent on mineral and natural resource exploitation to produce iron and steel, oil and natural gas, and nonferrous and rare earth metals. These industries have damaged the natural environment, causing soil and vegetation degradation, desertification, increased salinization, and a decline in available underground and surface water. Overexploitation of grassland and declining rainfall have further exacerbated the situation. Qinghai is choosing to promote circular economic activities as a strategy to mitigate this environment degradation and fundamentally transform economic development in the province.

4. The central government instructed provincial governments in 2010 to promote the circular economy model in pilot zones. In response, the Qinghai provincial government established 256,000 square kilometer Chaidamu Circular Economy Pilot Zone (CCEPZ), one of the largest of the 33 zones established in the PRC so far. The CCEPZ is well known for its rich mineral resources and promotes the integrated development of resource-based industries. This involves the use of waste products from one industry in the zone by another industry in the zone.

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<sup>1</sup> In the PRC, circular economy refers to an economic structure based on the recycling, regenerating, and reuse of materials. Use of the model is expected to reduce the consumption of natural resources and create a harmonious exchange of resources between the economic system and the ecological system. A circular economy can generally be implemented at (i) the small enterprise level; (ii) between enterprises; and (iii) in society at large. Qinghai Province has adopted the development of a circular economy as an important strategy and promotes the circular economy at the societal level.

<sup>2</sup> The TA first appeared in the business opportunities section of ADB's website on 24 October 2014. The original TA name was Research on Piloting National Recycle Economy in Qinghai Province.

The CCEPZ has developed salt lake chemical, petrochemical, coal chemical, and metallurgical industries. Industries are now emerging in the biotechnology, renewable energy, and new materials sectors. By 2013, a total of 495 enterprises in nonferrous metal, coal processing, chemical, petrochemical, new material, and renewable energy industries had started operation in the pilot zone. They accounted for one-third of the industrial production of the province in 2013.

5. The CCEPZ is helping the province make more efficient use of its natural resource-based industries, since it has allowed the establishment of natural resource enterprises that exchange resources. CCEPZ is also making greater use of such renewable energy sources as solar and wind power. However, energy intensity—total annual energy consumption divided by gross domestic product—was 44% higher in the CCEPZ than in other similar zones in 2013. The zone's remote location in the western PRC makes it a challenge to integrate multiple resources and relevant industries. Problems such as short industrial value chains, weak processing capacity, and the high consumption of energy need to be urgently addressed. A comprehensive review of the CCEPZ is required to help develop a new strategy and an action plan to develop further resource and energy conservation within pilot zone. This will also help to define a set of benchmark criteria and indicators for similar pilot zones in Qinghai Province and the rest of the PRC, where experience and lessons learned from a review and new approaches subsequently adopted in the CCEPZ are expected to be used and replicated.

6. The successes that have been achieved in the CCEPZ have contributed significantly to government efforts to achieve national ecological security in the PRC and to create a well-rounded, moderately prosperous society. However, the circular economy model is a new concept in Qinghai, and the TA will respond to the need and the government's request for help in developing a comprehensive strategy and action plan to promote it in the province. The TA will also offer opportunities to pilot-test ADB's draft recommendations for the industrial transformation the PRC intends to undertake to promote industry efficiency and technology innovation under its Thirteenth Five-Year Plan, 2016–2020 (13th plan).<sup>3</sup>

7. The TA project aligns well with ADB's country partnership strategy (CPS) for the PRC for 2011–2015.<sup>4</sup> The CPS calls for ADB to support environmentally sustainable growth, which includes assistance to improve environmental management and energy efficiency and achieve sustainable use of land, water, and forest resources. The TA will also provide the support for knowledge solutions highlighted in the CPS by helping to develop the strategy and action plan for circular economy pilot zones in Qinghai Province.

### **III. THE POLICY AND ADVISORY TECHNICAL ASSISTANCE**

#### **A. Impact and Outcome**

8. The impact will be scaled-up circular economic development in Qinghai Province. The outcome will be the implementation of strategy and action plan to expand the circular economy in the province.

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<sup>3</sup> ADB. *Transforming Towards a High Income China: Challenges and Recommendations*. Draft. Manila.

<sup>4</sup> ADB. 2012. *Country Partnership Strategy: People's Republic of China, 2011–2015*. Manila.

## B. Methodology and Key Activities

9. The TA will fully assess the lessons learned in the establishment and operation of the CCEPZ; develop a strategy and action plan for expanding the circular economy in the province; conduct a quantitative assessment of the impact the CCEPZ has had on the local economy since its establishment; formulate a monitoring and evaluation framework for the development of a circular economy in Qinghai; and provide policy recommendations to Qinghai provincial government on circular economic development, which are to be reflected in the province's 13th plan for 2016–2020.

10. The TA aims to deliver three outputs to achieve the intended outcome and impact:
- (i) **Output 1: Comprehensive review of Chaidamu Circular Economy Pilot Zone conducted and strategy and action plan developed.** The TA project will undertake a full analysis of the development process of the CCEPZ and the lessons from the experience so far. The review will identify the economic and social implications of circular economic development in Qinghai. It will formulate a strategy and action plan for circular economic development in the province that will include institutional arrangements and an incentive framework.
  - (ii) **Output 2: Establishment of monitoring and evaluation system for circular economy development in Qinghai Province established.** The TA project will establish quantifiable indicators for a system to monitor and evaluate progress in implementing circular economic development in Qinghai. It will define the key indicators, such as measures of the industrial circular economy ratio, resource consumption intensity, and the output rate of resources.
  - (iii) **Output 3: Policy recommendations on promoting circular economic development in Qinghai Province proposed.** The TA project will provide Qinghai provincial government with recommendations for improving the policy on promoting circular economic development in Qinghai. These are to be reflected in the province's 13th plan.

## C. Cost and Financing

11. The TA is estimated to cost \$500,000, of which \$350,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources). The government will provide counterpart support in the form of counterpart staff, office and housing accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions. The cost estimates and financing plan are in Appendix 2.

## D. Implementation Arrangements

12. The Qinghai Provincial Finance Bureau will be the executing agency. It has sufficient experience to undertake this role, having helped implement previous TA projects funded by ADB.<sup>5</sup> The Qinghai Provincial Policy Research Office, which will be the implementing agency, has no prior experience with ADB-funded TA, and the executing agency will provide it with the necessary assistance during project implementation. Both the executing and implementing

<sup>5</sup> ADB. 2010. *Technical Assistance to the People's Republic of China for Renewable Energy Development in Qinghai*. Manila; ADB. 2010. *Technical Assistance to the People's Republic of China for Strengthening Participatory Irrigation Management and Project Management Capacity in Qinghai Province*. Manila; ADB. 2008. *Technical Assistance to the People's Republic of China for Improvement of Public Employment Service System in the Western Region*. Manila; ADB. 2008. *Technical Assistance to the People's Republic of China for Qinghai Rural Water Resources Management Project*. Manila.

agencies gained experience from World Bank-funded TA projects to develop a provincial poverty reduction strategy during 2006–2009.

13. ADB will delegate administration of the TA to the executing agency, in accordance with a November 2009 memorandum of understanding between ADB and the government on enhanced partnership on TA delegation to the executing agency. The TA is on the list of the TA projects proposed for delegation by the Ministry of Finance, and both the executing and the implementing agencies participated in training on delegated TA projects in April 2014. An ADB assessment confirmed that the implementing agency has the capacity to recruit and supervise the consultants, with the support of the executing agency (Supplementary Appendix A).

14. The TA will be implemented over 17 months from 1 February 2015 to 30 June 2016. A total of 40 person-months of consulting services will be provided, comprising the services of one international consultant for 3 person-months and services of five national consultants for a total of 37 person-months. The terms of reference are in Appendix 3. The consultants will be selected and engaged in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). A consulting firm will be recruited using the consultant qualification selection procedure. This is because the assignment is specialized and geared toward the expertise of academic institutions. To reduce the administrative burden and improve efficiency and value for money, the consulting services under the TA will be engaged on lump sum, output-based contracts. The proceeds of the TA will be disbursed in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

15. The consultants will submit the following deliverables to both the executing agency and ADB: (i) an inception report 2 weeks after commencement of services, (ii) an interim report at an appropriate stage during TA implementation, (iii) a draft final report before the conclusion of the contract, and (iv) a final report 2 weeks after receiving comments from the executing agency and ADB. All reports must be submitted in English and Chinese.

16. The implementing agency will report regularly on major project activities to the executing agency. The TA activities will be monitored by the executing agency and ADB review missions. The consultants' reports will be presented at workshops and seminars organized to validate the TA findings, and recommendations.<sup>6</sup> Reports will be made available on ADB's website in English and Chinese and published in accordance with ADB's Public Communications Policy 2011.

#### IV. THE PRESIDENT'S DECISION

17. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$350,000 on a grant basis to the Government of the People's Republic of China for Policy Advice on Promoting the Circular Economy in Qinghai Province, and hereby reports this action to the Board.

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<sup>6</sup> An advance payment facility, if appropriate, will be provided to the executing agency for the administration of such national workshops and study tours, honoraria and travel expenses for resource persons in the workshops, translation and interpretation services, and the printing of documents and reports.



### DESIGN AND MONITORING FRAMEWORK

<b>Design Summary</b>	<b>Performance Targets and Indicators with Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Assumptions and Risks</b>
<p><b>Impact</b> Circular economic development is scaled up in Qinghai Province</p>	<p>By 2020</p> <p>Proportion of circular economic value addition in the province's industrial value added<sup>a</sup> increased to 85%. Baseline: 66% in 2013</p> <p>Provincial energy intensity of GDP decreased by 18% from 2.004 tce per CNY10,000 of GDP in 2013</p>	<p>Provincial Bureau of Statistics</p> <p>Qinghai yearly books of statistics</p>	<p><b>Assumption</b> Energy saving and efficient resource use will remain a top development priority in the PRC and Qinghai Province</p> <p><b>Risk</b> Policy actions on and the government support for scaling up circular economic development in Qinghai Province are inadequate</p>
<p><b>Outcome</b> Strategy and action plan implemented to further expand circular economy in Qinghai Province</p>	<p>By 2017</p> <p>Strategy and action plan for circular economic development adopted in the provincial's Thirteenth Five-Year Plan for 2016–2020 2013 baseline: None in 12th plan</p> <p>Expansion of circular economy starts (2013 baseline: No expansion yet)</p>	<p>The Qinghai 13th Five-Year plan</p> <p>Qinghai government reports</p>	<p><b>Assumption</b> The provincial government implements the TA project recommendations, and the key stakeholders actively participate</p> <p><b>Risk</b> Progress in implementing the strategy and action plan is slow</p>
<p><b>Outputs</b></p> <ol style="list-style-type: none"> <li>1. Comprehensive review of Chaidamu Circular Economy Pilot Zone conducted and strategy and action plan developed</li> <li>2. Monitoring and evaluation system for circular economy development in Qinghai Province established</li> <li>3. Policy recommendations on promoting circular economic development in Qinghai Province proposed</li> </ol>	<p>Comprehensive review of Chaidamu Circular Economy Pilot Zone conducted and strategy and action plan developed by October 2015</p> <p>Establishment of monitoring and evaluation system for circular economy development in Qinghai by February 2016</p> <p>Policy recommendations on promoting circular economic development in Qinghai Province developed by March 2016</p> <p>Workshop and study tours organized by April 2016</p>	<p>Progress reports and consultants' reports</p> <p>TA review missions</p> <p>Workshops and conferences</p> <p>Material for dissemination of related knowledge</p>	<p><b>Assumption</b> The TA consultants have timely access to records, information, and personnel</p> <p><b>Risks</b> The provincial government buy-in on the TA recommendations is weak</p> <p>Coordination between the relevant provincial government agencies and key stakeholders is poor</p>

<b>Activities with Milestones</b>	<b>Inputs</b>
<p><b>1. Conduct comprehensive review of Chaidamu Circular Economy Pilot Zone and develop strategy and action plan</b> (February 2015–October 2015)</p> <p>1.1 Conduct full analysis of development process, experience, and lessons learned from Qinghai Chaidamu Circular Economy Pilot Zone</p> <p>1.2 Formulate the strategy and action plan for circular economic development in Qinghai Province, including overall arrangements and basic principles</p> <p>1.3 Develop relevant policy recommendations for promoting circular economy in Qinghai</p> <p><b>2. Establish monitoring and evaluation system for circular economy development in Qinghai</b> (February 2015–February 2016)</p> <p>2.1 Define quantifiable indicators, key connotations, and functions in the monitoring and evaluation system for circular economic development of Qinghai</p> <p>2.2 Calculate and analyze the industrial circular economy ratio</p> <p>2.3 Calculate and analyze resource consumption intensity</p> <p>2.4 Calculate and analyze key output rate of resources</p> <p>2.5 Apply system to monitor and evaluate circular economic development in Qinghai</p> <p><b>3. Propose policy recommendations on promoting circular economic development in Qinghai Province</b> (October 2015–March 2016)</p> <p>3.1 Develop the policy notes on scaling up circular economic development in Qinghai to be reflected in the 13th plan for Qinghai Province</p>	<p><b>ADB: \$350,000</b></p> <p>Note: The government will provide counterpart support in the form of counterpart staff, office and housing accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions.</p>

ADB = Asian Development Bank, GDP = gross domestic product, PRC = People's Republic of China, tce = ton of coal equivalent, TA = technical assistance.

<sup>a</sup> Industrial value addition generated by industry sectors related to a circular economy. These include the coal chemical, new energy, new material, salt lake chemical, nonferrous metals and processing, oil and gas chemical, equipment manufacturing, special steel, and featured textile sectors.

Source: Asian Development Bank.

**COST ESTIMATES AND FINANCING PLAN**  
(\$000)

Item	Amount
<b>Asian Development Bank<sup>a</sup></b>	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	60.0
ii. National consultants	148.0
b. Local travel	20.0
c. Reports, translations, and communications	10.0
2. Workshops and conferences, and domestic and international study tours <sup>b</sup>	82.0
3. Miscellaneous administration and support costs <sup>c</sup>	10.0
4. Contingencies	20.0
<b>Total</b>	<b>350.0</b>

Note: The technical assistance (TA) is estimated to cost \$500,000, of which contributions from the Asian Development Bank are presented in the table above. The government will provide counterpart support in the form of counterpart staff, office and housing accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions. The value of government contribution is estimated to account 30% of the total TA cost.

<sup>a</sup> Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-other sources).

<sup>b</sup> An advance payment facility, if appropriate, will be provided to the executing agency for the administration of such national workshops and study tours, honoraria and travel expenses for resource persons in the workshops, translation and interpretation services, and printing of documents and reports. Four workshops—an inception workshop, a midterm review workshop, a draft final report workshop, and a final dissemination workshop—will be held in Xining, Delingha, and Geermu cities. The study tours will be conducted only in ADB member countries.

<sup>c</sup> This includes the translation cost associated with each main deliverable of the TA, report editing, printing, and dissemination.

Source: Asian Development Bank estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The policy and advisory technical assistance (TA) for Policy Advice on Promoting the Circular Economy in Qinghai Province will be implemented over 17 months from 1 February 2015 and 30 June 2016. The Asian Development Bank (ADB) will delegate the administration of the TA administration to the executing agency, which will be Qinghai Provincial Finance Bureau. The consultants will be selected and engaged in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The consulting services will be procured through a consulting firm using the consultant qualification selection procedure. This is because the assignment is specialized and geared toward the expertise of academic institutions.

2. The project will require about 40 person-months of consulting services, comprising the services of one international consultant for 3 person-months and services of five national consultants for a total of 37 person-months. The professional and academic qualifications expected of the experts are detailed in paras. 3–8.

### A. International

3. **Ecological economy expert** (3 person-months). The ecological economy expert should have an academic and work background in energy and resource efficiency in industry, ecological protection, public policy, and environmental economics. He or she should have at least 10 years of experience in providing advisory or consulting services in environmental protection and sustainable development. The expert should have been involved in research on formulation of government policies and regulations on circular economic development.<sup>1</sup> The expert should be familiar with trends internationally and in the People's Republic of China (PRC) in energy efficiency, ecological protection and construction, and sustainable development. She or he should possess the ability to transform theoretical research into governmental policies and suggestions.

### B. National

4. **Regional economy sustainable development expert and team leader** (11 person-months). The regional economy sustainable development expert and team leader should have an academic and work background in energy and resource efficiency, economics and management, or relevant disciplines. He or she must have at least 10 years of experience in providing advisory or consulting services for governments in economic reform and circular economic development. The expert should have been involved in the formulation of relevant governmental administration policies. The expert should be familiar with trends in foreign and domestic circular economic development research and green performance evaluation. She or he should possess the ability to transform theoretical research into governmental policies and suggestions. The expert should be familiar with the current status of circular economic development in Qinghai Province and have extensive knowledge of practical research work. In addition, the expert should have good interpersonal, organization, and coordination skills and be proficient in English.

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<sup>1</sup> In the PRC, circular economy refers to an economic structure based on the recycling, regenerating, and reuse of substances or materials. Use of the model is expected to reduce the consumption of natural resources and create a harmonious exchange of resources between the economic system and the ecological system. A circular economy can generally be implemented (i) at the small enterprise level, (ii) between enterprises, and (iii) in society at large. Qinghai Province has adopted the development of a circular economy as an important strategy and promotes the circular economy at the societal level.

5. **Public administration expert and coordinator** (11 person-months). The public administration expert and coordinator should have an academic and work background in management, governmental administration, or relevant disciplines. He or she must have at least 10 years of experience in providing advisory or consulting services on public sector reforms. The expert should be familiar with foreign and domestic development trends in governmental administration and reform. She or he should possess the ability to transform theoretical research into governmental policies and suggestions. The expert should be familiar with the current status of circular economic development in Qinghai and have extensive knowledge of practical research work. In addition, the expert should have good interpersonal, organization, and coordination skills and be proficient in English.

6. **Ecological environment expert** (5 person-months). The ecological environment expert should have an academic and work background in ecological environment monitoring technology, ecology, or relevant disciplines. He or she should have at least 8 years of experience in providing advice or consulting services on sustainable development. The expert should have been involved in the formulation of policies and systems related to sustainable development. The expert should possess the ability to transform theoretical research into governmental policies and suggestions.

7. **Econometrics expert** (5 person-months). The econometrics expert should have an academic and work background in econometrics or a relevant discipline. She or he should have at least 8 years of experience in providing advisory or consulting services on economic and social development. The expert should have been involved in research on governmental metrological analysis regarding circular economic development. The expert should possess the ability to transform theoretical research into governmental policies and suggestions.

8. **Legal expert** (5 person-months). The legal expert should have an academic and work background in business law, administrative law, or relevant disciplines. She or he should have at least 8 years of experience in providing advice or consulting services for government reform. The expert should be familiar with legal codes related to circular economic development. The expert should be familiar with foreign and domestic development trends in circular economic law and environmental law and possess the ability to transform theoretical research into governmental policies and suggestions.

9. The services in person-months required from each expert to help deliver each of the TA project's three outputs are summarized in Table A1.

**Table A1: Summary of Consulting Services Requirement**

<b>International Position</b>	<b>Services Required</b> (person-months)	<b>National Positions</b>	<b>Services Required</b> (person-months)
<b>Output 1</b>			
Ecological economy expert	1	Regional economy sustainable development expert and team leader	4
		Public administration expert and coordinator	4
		Ecological environment expert	2
		Econometrics expert	2
		Legal expert	2
<b>Subtotal</b>	<b>1</b>		<b>14</b>

International Position	Services Required (person-months)	National Positions	Services Required (person-months)
<b>Output 2</b>			
Ecological economy expert	1	Regional economy sustainable development expert and team leader	4
		Public administration expert and coordinator	4
		Ecological environment expert	2
		Econometrics expert	2
		Legal expert	2
<b>Subtotal</b>	<b>1</b>		<b>14</b>
<b>Output 3</b>			
Ecological economy expert	1	Regional economy sustainable development expert and team leader	3
		Public administration expert and coordinator	3
		Ecological environment expert	1
		Econometrics expert	1
		Legal expert	1
<b>Subtotal</b>	<b>1</b>		<b>9</b>
<b>Total</b>	<b>3</b>		<b>37</b>

Source: Asian Development Bank estimates.

### C. Consulting Requirements and Scope of Work

10. **Output 1: Comprehensive review of Chaidamu Circular Economy Pilot Zone conducted and strategy and action plan developed.** The tasks to deliver this output will be undertaken by a team of consultants—the international consultant (1 person-month) and national consultants (14 person-months). The consultant services will come from (i) the ecological economy expert (international, 1 person-month); (ii) the regional economy sustainable development expert and team leader (national, 4 person-months); (iii) the public administration expert and coordinator (national, 4 person-months); (iv) the ecological environment expert (national, 2 person-months); (v) the econometrics expert (national, 2 person-months); and (vi) the legal expert (national, 2 person-months). The key deliverables will be reports on an analysis of the current status of circular economy development in Qinghai that will include the experience and lessons learned so far and proposals for a strategy and action plan. The major tasks to be undertaken by the experts include the following:

- (i) The experts will conduct a full assessment of the lessons learned in the development of the Qinghai Chaidamu Circular Economy Pilot Zone. This will require a complete analysis of the development process, the experience so far, and the lessons the experience in this zone have provided. The experts will identify the policy implications of promoting circular economic development in Qinghai in terms of resource conservation, industrial transformation, industrial value addition, and development of an industrial supply chain in circular economic activities.
- (ii) The experts will formulate a strategy and an action plan for circular economic development in Qinghai and propose the strategy and action plan to Qinghai provincial government. The strategy and plan will include proposals for key policy actions; policy incentives; support for infrastructure development; institutional arrangements, including the establishment of dedicated agencies within the provincial government; and key milestones to be achieved.

- (iii) The team of experts will assess the economic and social implications of expanding circular economy in Qinghai, including the need to mobilize appropriately skilled labor, the possibility of retrenchment in some existing industries, and the potential effects of circular economics on income distribution and the balance of development between different regions of the province.

**11. Output 2: Monitoring and evaluation system of circular economy development in Qinghai established.** The tasks to deliver this output will be undertaken by a team of consultants—the international consultant (1 person-month) and national consultants (14 person-months). The team will consist of the (i) ecological economy expert (international, 1 person-month); (ii) regional economy sustainable development expert and team leader (national, 4 person-months); (iii) public administration expert and coordinator (national, 4 person-months); (iv) ecological environment expert (national, 2 person-months); (v) econometrics expert (national, 2 person-months); and (vi) the legal expert (national, 2 person-months). The key deliverables will be reports on a quantitative impact assessment of current circular economy pilot zone in the local economy and accurate monitoring and evaluation of circular economy development. The major tasks to be undertaken by the experts include the following:

- (i) They will develop a detailed monitoring and evaluation system for measuring the progress in developing the circular economy of Qinghai Province. This will include defining the indicators, measuring techniques, and intervals.
- (ii) The experts will develop methodologies to calculate and analyze industrial circular economy ratio over the province's 13th Five-Year Plan for 2016–2020.
- (iii) They will develop methodologies to calculate and analyze resource consumption intensity during the plan period.
- (iv) They will develop methodologies to calculate and analyze the key output rate of resources in a period of time.
- (v) They will analyze the current development stage of circular economy and anticipate application of monitoring and evaluation system of circular economic development in Qinghai.
- (vi) The team will assess the economic cost and benefits of promoting a circular economy in Qinghai and the distribution of these costs and benefits between different groups of population.

**12. Output 3: Policy recommendations on promoting circular economic development in Qinghai Province proposed.** The tasks to deliver this output will be undertaken by a team of consultants—the international consultant (1 person-month) and national consultants (9 person-months). The team will consist of the (i) ecological economy expert (international, 1 person-month); (ii) regional economy sustainable development expert and team leader (national, 3 person-months); (iii) public administration expert and coordinator (national, 3 person-months); (iv) ecological environment expert (national, 1 person-month); (v) econometrics expert (national, 1 person-month); and (vi) legal expert (national, 1 person-month). The key deliverables will be reports to summarize and streamline the results of the TA research project and the development of written policy notes on the development of the circular economy in Qinghai Province. These notes are to be submitted to the Qinghai provincial government and reflected in the province's 13th plan for 2016–2020. The major tasks to be undertaken by the experts include the following:

- (i) They will prepare a detailed policy paper on the introduction of the circular economy in Qinghai Province. The paper will present the (a) present status of circular economic development in the province, (b) challenges of and barriers to developing a circular economy in Qinghai, (c) advantages to the province of circular economic development, and (d) proposals for policy actions and policy

incentives for developing the circular economy to be introduced under the province's Thirteenth five-year plan.

- (ii) The experts will propose strategies to minimize the costs and barriers to introduction of circular economy and to ensure equitable distribution of costs and benefits between different population groups, including the province's rural and urban populations.