People’s Republic of China: Preparing National Guidelines for Eco-Compensation in River Basins and a Framework for Soil Pollution Management (Cofinanced by the Multi-Donor Trust Fund under the Water Financing Partnership Facility)
CURRENCY EQUIVALENTS
(as of 1 December 2008)

Currency Unit – yuan (CNY)
CNY1.00 = $0.1457
$1.00 = CNY6.86

ABBREVIATIONS

ADB – Asian Development Bank
EA – executing agency
FECO – Foreign Economic Cooperation Office
FYP – five-year plan
MEP – Ministry of Environmental Protection
MOA – Ministry of Agriculture
MOF – Ministry of Finance
MOLR – Ministry of Land Resources
NDRC – National Development and Reform Commission
PES – payment for environmental services
PRC – People’s Republic of China
TA – technical assistance
TMO – technical assistance management office

TECHNICAL ASSISTANCE CLASSIFICATION

Type – Policy and advisory technical assistance (PATA)
Targeting Classification – General intervention
Sector – Agriculture and natural resources
Subsector – Environment and biodiversity
Themes – Sustainable economic growth, environmental sustainability, capacity development
Subthemes – Developing rural areas, natural resources conservation, institutional development

NOTES

(i) The fiscal year of the Government and its agencies ends on 31 December.
(ii) In this report, “$” refers to US dollars.

Vice-President  C. Lawrence Greenwood, Jr., Operations 2
Director General  K. Gerhaeusser, East Asia Department (EARD)
Director  K. Kannan, Agriculture, Environment, and Natural Resources Division, EARD
Team leader  F. Radstake, Environment Specialist, EARD
Team member  Q. Zhang, Senior Water Resources Engineer, EARD
I. INTRODUCTION

1. During the 2007 Country Programming Midterm Review Mission, the Government of the People’s Republic of China (PRC) requested the Asian Development Bank (ADB) to provide technical assistance (TA) to support preparing national guidelines for eco-compensation and a framework for soil pollution management. This was included in the 2008 pipeline as a firm TA project. In October 2008, an ADB mission visited the PRC and reached an understanding with the Government on the TA impact, outcome, outputs, cost estimates, financing plan, implementation arrangements, and consultants’ terms of reference. The TA design and monitoring framework is in Appendix 1.

II. ISSUES

2. The Government’s 11th Five-Year Plan (FYP) (2006–2010) emphasizes the need to build a resource-efficient and environment-friendly society. Environmental challenges in the PRC are diverse and growing, including pollution problems adversely affecting water, air, and soil. As a result, ecosystems of major river basins in various regions are severely threatened and the increasing soil contamination is threatening public health. The FYP stressed that eco-compensation mechanisms, also known as payment for environmental services (PES), should be established. The Government has already gained some experience with the establishment of such financial instruments, and the lessons in preparing these mechanisms have demonstrated the urgent need for developing specific national guidelines.

3. The Government has made extraordinary efforts in driving some of the largest public payment schemes for ecosystem services in the world. However, given concerns about the effectiveness and financial sustainability of these efforts, as well as the establishment of equitable standards and appropriate guidelines, policy makers are very keen to seek solutions to improve these programs, to explore and develop other market-based tools and regulatory innovations, and to develop equitable standards and appropriate guidelines to address the PRC’s environmental and development challenges in a better way.

4. In accordance with the FYP, the Government is also committed to addressing increasing concerns regarding soil pollution and the associated risks to food quality and public health. The Government recently established a division in MEP to deal with soil pollution management, and issued a regulation that makes it possible to prosecute and to hold as liable parties responsible for environmental contamination. The Government is currently conducting a nationwide soil pollution survey, which would lead to priority actions to clean up and control the contaminated soils. Up to October 2007, the analysis and tests of 30,590 soil samples in provinces and autonomous regions were completed, and a management information system was established. However, the current legal and policy framework in the PRC is not effective to manage or further prevent soil contamination. Urgent support for revising such a framework has been requested from ADB.

5. Strengthening ecological conservation and pollution management is a core area of operations of ADB’s long-term strategic framework 2008–2020 (Strategy 2020) to “promote environmentally sustainable growth”. The TA will assist in mainstreaming environmental considerations into the PRC’s policies and investment programs; and strengthen the legal, financial, and institutional frameworks to manage environmental risks and promote the sustainable use of natural resources.

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1 The TA first appeared in the business opportunities section of ADB’s website on 2 October 2008.
2 A large number of case studies on payment for ecological services in river basins has been published recently, including for the PRC. These include, for example, Elsevier. 2008. Payments for Environmental Services in Developing and Developed Countries. Ecological Economics. Volume 65, Issue 4, pages 663–852, and various reports of the World Bank Analytical and Advisory Assistance (AAA) Program China: Addressing Water Scarcity-From Analysis to Action. Available: http://go.worldbank.org/XDPEUSSOQ0 (accessed on 26 November 2008).
regulatory, and enforcement capacities of the government agencies. Since 1994, ADB has provided several TA projects to support legal and regulatory reforms on environmental and natural resources management. These demonstrated to be instrumental in mainstreaming conservation and sustainable development into the PRC’s policy and regulatory framework. The proposed TA will build on the lessons learned and experiences gained, and will be closely coordinated with ongoing TA projects.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

6. The proposed TA will contribute to improved environmental management and sustainable development. Specifically, the TA will strengthen the PRC’s policy and regulatory framework, and its institutional capacity to implement PES in river basins and manage contaminated soils. To attain the expected impact, two components have been identified: (i) the preparation of draft national guidelines for PES in river basins, and (ii) the preparation of a draft framework for soil pollution management. Both documents will be submitted to MEP (July 2010) for issuance. These components will contribute to the transition to sustainable agriculture and natural resources management by (i) improving sector governance through helping improve policies, legislation and the regulatory environment, market-based incentives, and institutional arrangements and coordination; and (ii) encouraging public participation and private sector involvement. The proposed TA will indirectly help reduce poverty through supporting the introduction of PES in river basins and strengthening soil contamination management. Through PES schemes, economic incentives are created for a more efficient and sustainable use of ecosystem services. Those who are protecting and sustainably managing ecological and environmental resources will be compensated for their contribution in maintaining these services. Improved soil contamination management will generally improve the quality and value of agriculture products.

B. Methodology and Key Activities

7. Component 1: National Guidelines for Eco-Compensation in River Basins. The TA will facilitate the introduction of market-based PES mechanisms (component 1) to translate external non-market-based values of the environment into real financial incentives for providers of such services. Although various local experiments in protecting and paying for ecological services are promising, additional guidelines are needed to provide necessary guidance for further development of similar instruments throughout the PRC.

8. The specific outputs envisaged under the component 1 include:

(i) an updated overview of methodologies for PES including (a) a report on river basin related PES experiences in the PRC and other countries, and (b) practical recommendations for methodologies to adopt PES systems in the PRC;

4 For example, ADB. 2004. Technical Assistance to the People’s Republic of China for Support for Environmental Legislation. Manila (TA 4553-PRC, approved on 23 December) is building on province level work, conducting a comprehensive review of the existing legislative framework for environmental protection, in particular in relation to nature reserve zones and protection of the soil. A framework for legislation on nature reserves and sustainable soils drawing on international good practices is being prepared, along with legislative plans and procedures. ADB. 2007. Technical Assistance to the People’s Republic of China for National Strategies for Environmental Management and Energy Conservation. Manila (TA 4987-PRC, approved on 13 November) is supporting the Government to develop the TA will support the PRC’s development of the macro environmental strategy and the national strategy for sustainable energy crops development. Under ADB. 2003. Technical Assistance for Poverty and Environment Program. Manila (TA 6150-REG, approved on 16 December), ADB provided support for assessing soil contaminated sites and conducted cost-effective remediation of contaminated sites on a pilot scale in India (Polluted Place in India). This project was successfully implemented by the Black Smith Institute (BSI, www.blacksmithinstitute.org) in close cooperation with the Government of India, currently replicating the project using World Bank finance on a large scale.
(ii) supporting case studies, demonstrating the application of developed PES methodologies in two river basins, to assess the actual impacts, identifying existing technical difficulties, and recommending measures for further replication; 5

(iii) draft national guidelines for PES in watersheds including (a) identification of the objectives and scope for ecological compensation in typical river basins; (b) identification of rights and responsibilities among the stakeholders involved; (c) recommendation of “best practices” and standards for various types of ecological compensation; (d) implementation arrangements and procedures; and (e) a management, monitoring, and evaluation system; and

(iv) recommendations for necessary adjustments in financial and tax systems as well as regulatory frameworks.

9. An international conference will be organized after 6 months to share and benefit from international experiences and development, and to provide guidance for the preparation of the national guidelines. The findings of the TA will be published in Chinese and English language and made available online. The draft national environmental guidelines for PES systems in river basins will be approved by the steering committee and submitted for issuance by MEP.

10. Component 2: Framework for Soil Pollution Management. The TA will also assist the Government in preparing strategic options covering 2008–2020 for developing a revised framework for the management of contaminated soils (component 2). In anticipation of the completion of the national soil contamination survey, the Government still needs to (i) develop practical plans on how to prioritize and proceed with possible cleanup or control of contaminated sites; (ii) establish standards and procedures to be applied; and (iii) assess the institutional, legal, and cost implications.

11. The specific outputs under component 2 will include:

(i) an overview of international experiences relevant to the PRC including (a) an assessment of the feasibility of applying existing national and international technological options for the remediation and management of contaminated sites in the PRC; and (b) a review of existing technologies currently available for containment, remediation, cleanup, disposal, and destruction of contaminated materials and wastes found in contaminated sites;

(ii) an assessment of existing legal frameworks including a review of (a) all key regulations and laws at the provincial and national levels, (b) existing institutional structures at the provincial and national levels for the management of environmental pollution, (c) legal implications resulting from public investments in contaminated sites, (d) potential long-term liabilities of parties involved in environmental cleanup, and (e) regulations that define risk thresholds caused by exposure to hazards and that restrict land use;

(iii) recommendations for cleanup standards specifying (a) the definition of categories of sites for which residual levels of contamination may be allowed after cleanup, given location and potential for population exposure, intended use of the site, and cost-effectiveness of increasing levels of cleanup; (b) establishment of minimum acceptable levels of cleanup required for different types of sites; (c) definition of risk thresholds acceptable for different types of sites; and (d) establishment of long-term monitoring needs for the different type of sites;

(iv) an evaluation of potential financing mechanisms for contaminated site management including an assessment of (a) provincial and national budget allocations; (b) existing provincial and national funds for remediation; (c) tariffs on importing, producing, using, or trading of goods; (d) partnerships between the

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5 The two case studies will be selected during the inception phase in consultation with the consultants.
private and public sectors; (e) institutional requirements for the establishment of a remediation fund with possible international cooperation; (f) market-based incentives to private investment; (g) financial alternatives that have been practiced in other countries; and (h) regulatory measures to ensure that resources from the funding mechanism are used only for purposes related to prevention and cleanup of contaminated sites;

(v) a system to prioritize contaminated sites incorporating criteria to (a) determine the level of risk posed by a contaminated site, (b) assess the relative importance of social and economical aspects associated with each site, (c) account for potential costs of remediation, and (d) rank sites from the national inventory (once this is established); and

(vi) recommendations for necessary adjustments of financial, legislative, and regulatory frameworks.

12. An international study tour will be organized for about four to six government staff to familiarize themselves with foreign experiences in the management of contaminated soil management, and obtain further guidance for the development of the proposed framework. The participants will prepare a training report and present their findings during one of the TA workshops. The findings of the different activities will be published in Chinese and English language and made available online. The draft national framework for soil pollution management will be approved by the steering committee and submitted for issuance by MEP.

C. Cost and Financing

13. The total cost of the TA is estimated at $1,200,000 equivalent, of which ADB will finance $400,000 equivalent from its TA funding program. The Multi-Donor Trust Fund under the Water Financing Partnership Facility\(^6\) will provide cofinancing of $400,000 equivalent on a grant basis,\(^7\) to be administered by ADB. The remaining $400,000 equivalent will be provided by the Government to cover in-kind counterpart costs and services including the provision of necessary data, office space, counterpart staff, local transportation, and other administrative support. The detailed cost estimates and financing plan are in Appendix 2.

D. Implementation Arrangements

14. TA implementation will take 18 months from February 2009 to July 2010. The TA completion date will be 31 July 2010 and the TA closing date will be 31 October 2010. MEP will be the Executing Agency (EA) for the TA. The Government and ADB agree to delegate consultant recruitment and supervision under this TA to the EA.\(^8\) The terms and conditions of the Technical Assistance Framework Agreement executed between the Government and ADB dated 23 December 1996 apply to this TA, except that consultant selection and supervision for firms and individuals under this TA will be undertaken by MEP on behalf of the Government. The consultants will be entitled to the privileges, exemptions, and immunities provided under such Technical Assistance Framework Agreement.

15. An interagency steering committee will be established in MEP, chaired by the director general of the Department of Nature and Ecology Conservation, and senior officials of the departments for international cooperation, pollution control, and Foreign Economic Cooperation Office (FECO). For component 1, the TA implementation will be closely coordinated with the

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\(^6\) Contributors: the governments of Australia, Austria, Norway, and Spain. Water Financing Partnership Facility funds will be front-loaded at the contract commitment level.

\(^7\) The facility will finance component 1: national guidelines for eco-compensation in river basins.

\(^8\) A capacity assessment of MEP conducted by ADB in June 2008 showed that it has the capacity to implement the delegated authority. However, to have the TA implemented efficiently, it was agreed that two full-time staff with sector knowledge and an experienced interpreter will be assigned to process, implement, and administer the proposed TA.
National People’s Congress and key entities such as the National Development and Reform Commission (NDRC), Ministry of Agriculture, Ministry of Finance, Ministry of Land Resource Management, Ministry of Science and Technology, Ministry of Water Resources, and River Basin Management Committee. For component 2, close coordination between NDRC, Ministry of Finance, and Ministry of Land Resource Management is necessary.

16. A TA management office (TMO) will be established in FECO to carry out day-to-day TA operations. The director, Project Management Division 1 of FECO, will serve as the executive director of the TMO. The director of the General Affairs Division of MEP will be responsible for implementation of component 1 and the director of MEP’s Soil Environmental Division will be responsible for implementation of component 2. FECO, through the TMO, will execute the TA implementation and be responsible for day-to-day operational matters among ADB, consultants, and related government agencies. FECO will furnish biannual progress reports to ADB during the implementation period of the TA and will furnish to ADB a TA completion report within 3 months of the TA completion date.

17. A team of international and national consultants will be recruited for each of the two components, with a total of 8 international and 62 national person-months. The consultants for components 1 and 2 will be engaged by the EA through two firms, in accordance with ADB’s Guidelines on the Use of Consultants (2007, as amended from time to time) using quality- and cost-based selection criteria (with a quality/cost weighing rate of 80:20) and simplified technical proposal procedure. Equipment to be purchased under the TA will be procured in accordance with ADB’s Procurement Guidelines (2007, as amended from time to time), and will be handed over to MEP upon completion of the TA. The procurement plan in Appendix 3. The outline terms of reference of the consultants are in Appendix 4.

18. The TA grant proceeds will be disbursed in line with ADB’s Loan Disbursement Handbook (2007, as amended from time to time). Diagrams showing the document and fund flow are given in Supplementary Appendix A. For withdrawal of the TA grant funds, MEP will submit to ADB the original withdrawal application, signed by authorized representative, summary sheet, and copies of supporting documents. The direct payment and reimbursement procedures mainly will be used for withdrawal of TA funds. MEP will maintain separate accounts for the TA grant and have these accounts audited on an annual basis by an external auditor acceptable to ADB. Within 6 months after the completion of the fiscal year, the EA will submit to ADB an audit report. MEP will retain the original supporting documents for expenditures under the TA for 5 years after completion of the TA and make these documents available to the ADB review mission upon request within the indicated TA retention period. MEP has experience in implementing ADB TA projects and has an adequate accounting and records keeping system in place.

IV. THE PRESIDENT’S DECISION

19. The President, acting under the authority delegated by the Board, has approved (i) ADB administering a portion of technical assistance not exceeding the equivalent of $400,000 to be financed on a grant basis by the Multi-Donor Trust Fund under the Water Financing Partnership Facility; and (ii) ADB providing the balance not exceeding the equivalent of $400,000 on a grant basis, to the Government of the People’s Republic of China for Preparing National Guidelines for Eco-Compensation in River Basins and a Framework for Soil Pollution Management, and hereby reports this action to the Board.  

9 MEP is considering a reorganization of the ministry. As a result, MEP informed ADB that component 2 may finally be assigned to a new division. MEP will inform ADB if relevant changes in its organizational structure occur.
### Design and Monitoring Framework

<table>
<thead>
<tr>
<th>Design Summary</th>
<th>Performance Targets and/or Indicators</th>
<th>Data Sources and/or Reporting Mechanisms</th>
<th>Assumptions and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact</strong></td>
<td>• Goal and targets specified in the Government’s 11th FYP (2006–2010) for environmental protection are met by 2010</td>
<td>MEP annual environmental statistics report</td>
<td>Assumption The Government is committed to implementing the environmental strategy</td>
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<td></td>
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<td>The Government’s capacity to create the right incentives to implement PES systems</td>
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<td><strong>Risks</strong> Agencies related to contaminated soil management are reluctant to cooperate and coordinate</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Draft national environmental guidelines for PES systems in river basins are submitted for issuance by MEP (July 2010)</td>
<td>Project document reviews Annual report of MEP Annual reports from MOF, NDRC, MOLR, and MOA</td>
<td>Assumptions The steering committee ensures that the guidelines and framework are completed with adequate consultation and quality control MOA, MOLR, and concerned ministries have a strong commitment and willingness to cooperate</td>
</tr>
<tr>
<td></td>
<td>Draft framework for contaminated sites management is finalized and submitted for issuance by MEP (July 2010)</td>
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<tr>
<td><strong>Outputs</strong></td>
<td>Final technical reports published in Chinese and English language and made available online</td>
<td>Minutes of meetings of the steering committee TA review missions and reports Reports and documents related to the PES guidelines and discussions at the two national workshops</td>
<td>Assumptions High-level authorities within MEP consider TA implementation a priority The steering committee provides timely advice and guidance</td>
</tr>
<tr>
<td></td>
<td>The steering committee endorses the guidelines for the introduction of PES in river basins and national framework for remediation and management of contaminated soils by July 2010</td>
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</tr>
<tr>
<td>Design Summary</td>
<td>Performance Targets and/or Indicators</td>
<td>Data Sources and/or Reporting Mechanisms</td>
<td>Assumptions And Risks</td>
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<tr>
<td></td>
<td></td>
<td>Reports/documents related to the national framework for remediation and management of polluted soils and discussion at the two national workshops</td>
<td>Consensus is reached through consultations among key stakeholders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consultants’ reports</td>
<td>Dialogue with MEP, MOF, and NDRC</td>
</tr>
</tbody>
</table>

### Activities with Milestones

#### 1. General
1.1 Team of experts mobilized, study framework developed, and the first inception workshops organized (by month 2)
1.2 Inception report detailed the approach and implementation arrangements for components 1 and 2 (by month 2)
1.3 Inception workshop organized (by month 2)
1.4 Overall TA report summarizing findings and experiences (by month 18)

#### 2. Component 1
2.1 International conference conducted (by month 6)
2.2 Interim reports prepared on national guidelines (by month 12)
2.3 Final workshop organized (by month 16)
2.4 Final recommendations for the framework for soil pollution management endorsed by the steering committee and submitted to MEP for issuance (by month 18)
2.5 Final reports published (English and Chinese language) and made available online, including recommendations for the national guidelines (by month 18)

#### 3. Component 2
3.1 International study tour organized (by month 6)
3.2 Interim report prepared for the framework for soil pollution management (by month 12)
3.3 Final workshop organized for the framework for soil pollution management (by month 16)
3.4 Final guidelines for the introduction of PES in river basins endorsed by the steering committee and submitted to MEP for issuance (by month 18)
3.5 Final reports published (English and Chinese language) and made available online, including recommendations for the framework for soil pollution management (by month 18)

### Inputs

**Water Financing Partnership Facility:**
- Consulting services: $280,000
- Equipment, training, workshops, and conference: $73,000
- Contingency, reports, dissemination, miscellaneous: $47,000

**ADB:**
- Consulting services: $253,000
- Equipment, training, workshops, and conference: $102,000
- Contingency, reports, dissemination, miscellaneous: $45,000
- Staff time for TA administration

**Government:**
- Office accommodation and transport: $40,000
- Counterpart staff time and travel: $240,000
- Data preparation and processing: $40,000
- Technical consultation committee and others: $80,000

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## COST ESTIMATES AND FINANCING PLAN
($'000)

<table>
<thead>
<tr>
<th>Item</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Multi-Donor Trust Fund under the Water Financing Partnership Facility</strong>&lt;sup&gt;a&lt;/sup&gt; (Component 1)</td>
<td></td>
</tr>
<tr>
<td>1. Consultants and Other Experts</td>
<td></td>
</tr>
<tr>
<td>a. Remuneration and Per Diem</td>
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</tr>
<tr>
<td>i. International Consultants</td>
<td>92.0</td>
</tr>
<tr>
<td>ii. National Consultants</td>
<td>153.0</td>
</tr>
<tr>
<td>b. International and Local Travels</td>
<td>35.0</td>
</tr>
<tr>
<td>c. Reports, Communications, and Translations</td>
<td>9.0</td>
</tr>
<tr>
<td>2. Equipment&lt;sup&gt;b&lt;/sup&gt;</td>
<td>8.0</td>
</tr>
<tr>
<td>3. Training, Workshops, and Conferences</td>
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<tr>
<td>a. Resource Persons</td>
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<tr>
<td>b. Workshops and Conferences</td>
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</tr>
<tr>
<td>4. Miscellaneous Administration and Support Costs</td>
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<tr>
<td>5. Printing and Dissemination</td>
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<td>6. Contingencies</td>
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<td><strong>Subtotal (A)</strong></td>
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<tr>
<td><strong>B. Asian Development Bank (ADB) Financing</strong>&lt;sup&gt;c&lt;/sup&gt; (Component 2)</td>
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</tr>
<tr>
<td>1. Consultants</td>
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<tr>
<td>a. Remuneration and Per Diem</td>
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<tr>
<td>i. International Consultants</td>
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<tr>
<td>ii. National Consultants</td>
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<tr>
<td>b. International and Local Travel</td>
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<tr>
<td>c. Reports, Communications, and Translations</td>
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</tr>
<tr>
<td>2. Equipment&lt;sup&gt;d&lt;/sup&gt;</td>
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<tr>
<td>3. Training, Workshops, and Conferences</td>
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<tr>
<td>a. Resource Persons</td>
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<td>b. Workshops, Study Tour, and Conferences</td>
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<td>4. Miscellaneous Administration and Support Costs</td>
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<td>5. Printing and Dissemination</td>
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<td>6. Contingencies</td>
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<td><strong>Subtotal (B)</strong></td>
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<td><strong>C. Government Financing</strong></td>
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<tr>
<td>1. Office Accommodation and Transport</td>
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<td>2. Data Preparation and Processing</td>
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<td>3. Technical Consultation Committee</td>
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<td>4. Remuneration and Per Diem of Counterpart Staff</td>
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<td>5. Counterpart Travel</td>
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<td>6. Audits</td>
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<td>7. Contingencies&lt;sup&gt;e&lt;/sup&gt;</td>
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<td><strong>Subtotal (C)</strong></td>
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</table>

<sup>a</sup> Contributors: the governments of Australia, Austria, Norway, and Spain. Water Financing Partnership Facility funds will be front-loaded at the contract commitment level.

<sup>b</sup> Standard office equipment for component 1 (two desktop computers, printers, photocopier, and computer accessories).

<sup>c</sup> Financed by ADB’s technical assistance funding program.

<sup>d</sup> Standard office equipment for component 2 (two desktop computers, printers, photocopier, and computer accessories).

<sup>e</sup> Includes local costs of workshops and miscellaneous local expenses.

Source: ADB estimates.
PROCUREMENT PLAN

Project Information

Country: People's Republic of China
Name of Executing Agency: Ministry of Environmental Protection
Project Name: Preparing National Guidelines for Eco-Compensation in River Basins and a Framework for Soil Pollution Management.
TA Reference: To be determined (tbd)
Date of Effectiveness: Tbd
TA Amount ($): $800,000
Of which, Committed: Nil
Executing Agency: Ministry of Environmental Protection
Approval Date of Original Procurement Plan: 10 October 2008
Approval Date of Most Recent Procurement Plan: 27 November 2008
Publication for Local Advertisement: Tbd
Period Covered by this Plan: February 2009–July 2010

Procurement Thresholds and Goods

<table>
<thead>
<tr>
<th>Contract Description</th>
<th>Estimated Costs ($)</th>
<th>Procurement Methods</th>
<th>Expected Date of Advtmnt.</th>
<th>ADB Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consulting Services</td>
<td>551,000</td>
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<td>1. Component 1: Preparation of National Guidelines for Eco-Compensation in River Basins</td>
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<td>QCBS (80:20, STP)</td>
<td>First 3 months</td>
<td>Prior</td>
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<td>2. Component 2: Preparation of a Framework for Soil Pollution Management</td>
<td>262,000</td>
<td>QCBS (80:20, STP)</td>
<td>First 3 months</td>
<td>Prior</td>
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</tbody>
</table>


$1 = CNY6.9 is used.

List of Contract Packages for Goods

<table>
<thead>
<tr>
<th>Contract Description</th>
<th>Estimated Costs ($)</th>
<th>Procurement Methods</th>
<th>Expected Date of Advtmnt.</th>
<th>ADB Review</th>
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</thead>
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<tr>
<td>Goods</td>
<td>16,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Office Equipment  (Component I)</td>
<td>8,000</td>
<td>Shopping</td>
<td>First 3 months</td>
<td>Prior</td>
</tr>
<tr>
<td>2. Office Equipment  (Component II)</td>
<td>8,000</td>
<td>Shopping</td>
<td>First 3 months</td>
<td>Prior</td>
</tr>
</tbody>
</table>

ADB = Asian Development Bank, Advtmnt = advertisement.

$1 = CNY6.9 is used.
OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Component 1: Preparation of National Guidelines for Eco-Compensation in River Basins

1. Component 1 will be carried out by a consulting firm. It is estimated that the technical assistance (TA) will require 4 person-months of international and 34 person-months of national consulting services. The final input of consultants will be decided in the simplified technical proposals to be submitted by the short-listed firms.

2. The indicative terms of reference for the experts are as follows:

   (i) Team leader/environmental economist (national, 10 person-months). The economist will be responsible for the overall coordination and supervision of the project activities and outputs, and for day-to-day liaison with Ministry of Environmental Protection (MEP) and other national government agencies supporting related works. The economist will

   (a) manage and ensure timely implementation of activities for component 1;
   (b) supervise the national and international consultants in drafting and finalizing project reports and other related outputs (transfer procedure, capacity building, and training program, etc.); and review TA inception, interim, and final reports, and revise chapters/sections, if necessary, to ensure that TA outputs are adequate in scope and quality;
   (c) coordinate the individual studies and consolidate individual reports;
   (d) identify and recommend sound and environment-friendly economical approaches for possible payment for environmental services (PES) schemes in the People’s Republic of China (PRC), as related to improving watershed management;
   (e) conduct an economic cost-benefit analysis of these approaches, in cooperation with the other team members;
   (f) assist the Executing Agency (EA) to coordinate potential public relations;
   (g) prepare related chapters or sections of TA documents and reports;
   (h) organize and conduct an inception and national dissemination workshop to discuss the development of the national PES guidelines; and
   (i) participate and present relevant sections in the national workshops.

   (ii) Deputy team leader/PES specialist (international, 4 person-months). The specialist will

   (a) review the current status of PES practices in the PRC, with emphasis on the payment schemes, tariffs, and financial procedures;
   (b) review and ensure the quality of the interim and final reports;
   (c) review and assess national and international experiences on PES with regard to watershed management;
   (d) support the team leader to supervise and provide guidance for the team members of component 1;
   (e) organize and give presentations at other related workshops and seminars; and
   (f) compile and finalize the recommended guidelines for the introduction of PES in the PRC.
(iii) **Environmental economist** (national, 7 person-months). The economist will
(a) identify and recommend sound and environment-friendly economical approaches for possible PES schemes in the PRC, as related to improving watershed management;
(b) conduct an economic cost–benefit analysis of these approaches, in cooperation with the other team members, and prepare related chapters or sections of TA documents and reports;
(c) coordinate and conduct the case studies, with support from the other national experts;
(d) identify and prepare recommendations for the national guidelines for introducing PES in river basins;
(e) prepare related chapters or sections of TA documents and reports;
(f) participate and present relevant sections in the national workshops; and
(g) conduct other related work assigned by the team leader/deputy team leader.

(iv) **River basin management/institutional specialist** (national, 6 person-months). The specialist will
(a) review international experiences and best practices for setting up PES in river basins related to water resources management and institutional arrangements,
(b) review and assess the water management/institutional aspects for existing PES schemes in river basins in the PRC and the case studies,
(c) identify and prepare recommendations for the national guidelines for introducing PES in river basins,
(d) prepare related chapters or sections of TA documents and reports,
(e) participate and present relevant sections in the national workshops, and
(f) conduct other related work assigned by the team leader/deputy team leader.

(v) **Financial specialist** (national, 4 person-months). The specialist will
(a) review international experiences and best practices for setting up financial mechanisms in PES,
(b) review and assess the financial systems for existing PES schemes in the PRC and identified case studies,
(c) identify and prepare recommendations for the national guidelines for introducing PES in river basins,
(d) prepare related chapters or sections of TA documents and reports,
(e) participate and present relevant sections in the national workshops, and
(f) conduct other related work assigned by the team leader/deputy team leader.

(vi) **Environmental law specialist** (national, 4 person-months). The specialist will
(a) review international experiences and best practices for setting up PES,
(b) review and assess the legal aspects for existing PES schemes in the PRC and the identified case studies,
(c) identify and prepare recommendations on the rights and responsibilities of the different stakeholders involved in PES (in close cooperation with the social development specialist),
(d) identify and prepare recommendations for the national guidelines for introducing PES in river basins,
(e) prepare related chapters or sections of TA documents and reports,
(f) participate and present relevant sections in the national workshops, and
(g) conduct other related work assigned by the team leader/deputy team leader.

(vii) Social development specialist (national, 3 person months). The specialist will
(a) review international experiences and best practices for setting up PES,
(b) review and assess the social aspects for existing PES schemes in the PRC and identified case studies,
(c) identify and prepare recommendations for the national guidelines for introducing PES in river basins,
(d) prepare related chapters or sections of TA documents and reports,
(e) participate and present relevant sections in the national workshops, and
(f) conduct other related work assigned by the team leader/deputy team leader.

3. The consultants will submit the following reports: (i) an inception report within 1 month of mobilization, (ii) an interim report 12 months after the TA starts, (iii) a draft final report 16 months after the TA starts, and (iv) a final report at the conclusion of the TA. The final report will reflect comments made by government agencies, Asian Development Bank (ADB), and other relevant parties. The consultants will submit all reports in the English and Chinese languages—six copies each in English and Chinese to the Government, and three copies of the English version to ADB, including one electronic copy in a CD-Rom. The reports will be published in Chinese and English language and made available online.

B. Component 2: Preparation of a Framework for Soil Pollution Management

4. Component 2 will be carried out by a consulting firm. It is estimated that the TA will require 4 person-months of international and 28 person-months of national consulting services. The final input of consultants will be decided in the simplified technical proposals to be submitted by the short-listed firms.

5. The indicative terms of reference for the experts are as follows:

(i) Team leader/environmental remediation fund specialist (international, 3 person-months). The specialist will be responsible for the overall coordination and supervision of the project activities and outputs. The economists will
(a) manage and ensure timely implementation of activities for component 2;
(b) supervise the national and international consultants in drafting and finalizing project reports and other related outputs (transfer procedure, capacity building, and training program, etc.); and review TA inception, interim, and final reports, and revise chapters/sections, if necessary, to ensure that TA outputs are adequate in scope and quality;
(c) coordinate the individual studies, and consolidate individual reports;
(d) prepare related chapters or sections of TA documents and reports;
(e) compile and recommend a framework for contaminated soil management in the PRC; and
(f) participate and present relevant sections in the national workshops.

(ii) Deputy team leader/soil pollution specialist (national deputy team leader, 12 person-months). The specialist will be responsible for day-to-day liaison with MEP and other national government agencies supporting related works. The specialist will
(a) review the current status of contaminated soil management in the PRC;
(b) prepare recommendations for establishing a system for prioritizing contaminated sites incorporating criteria to determine the level of risk posed by a contaminated site, assess the relative importance of social and economical aspects associated with each site, account for potential costs of remediation, and rank sites from the national inventory (once this is established);
(c) organize and give presentations at workshops/seminars;
(d) assist the EA to coordinate potential public relations and media events;
(e) review and ensure the quality of the interim and final reports;
(f) support the team leader to supervise and provide guidance for the team members of component 1;
(g) organize and conduct an inception and national dissemination workshop to present and discuss the findings for the development of the framework for integrated contaminated sites management;
(h) organize and participate in a study tour for government officials; and
(i) compile and finalize the recommended guidelines for the introduction of contaminated sites management in the PRC.

(iii) **Environmental economist/remediation fund specialist** (national, 6 person-months). The specialist will
(a) conduct an evaluation of potential financing mechanisms for contaminated site management, including an assessment of provincial and national budget allocations; existing provincial and national funds for remediation; tariffs on importing, producing, using, or trading of goods; partnerships between the private and public sectors; institutional requirements for the establishment of a remediation fund with possible international cooperation; market-based incentives to private investment; financial alternatives that have been practiced in other countries; and regulatory measures to ensure that resources from the funding mechanism are used only for purposes related to prevention and cleanup of contaminated sites;
(b) prepare related chapters or sections of TA documents and reports;
(c) participate and present relevant sections in the national workshops; and
(d) conduct other related work assigned by the team leader/deputy team leader.

(iv) **Environmental law/institutional specialist** (national, 5 person-months). The specialist will
(a) review international experiences and best practices regarding legal and institutional aspects for integrated contaminated sites management;
(b) review and assess the legal and institutional aspects for the existing soil contaminated sites management in the PRC, including a review of all key regulations and laws at the provincial and national levels, existing institutional structures at the provincial and national levels for the management of environmental pollution, legal implications resulting from public investments in contaminated sites, potential long-term liabilities of parties involved in environmental cleanup, and regulations that define risk thresholds caused by exposure to hazards and that restrict land use accordingly;
(c) identify and prepare legal and institutional aspects for the framework on integrated contaminated site management;
(d) prepare other related chapters or sections of TA documents and reports;
(e) participate and present relevant sections in the national workshops; and
(f) conduct other related work assigned by the team leader/deputy team leader.

(v) **Cleanup technology specialist** (international, 1 person-month). The specialist will

(a) carry out an assessment of the feasibility of applying existing national and international technological options for the remediation and management of contaminated sites in the PRC; and review existing technologies currently available for containment, remediation, disposal, and destruction of contaminated materials and wastes found in contaminated sites;
(b) prepare recommendations for cleanup standards specifying the definition of categories of sites for which residual levels of contamination may be allowed after cleanup, given location and potential for population exposure, intended use of the site, and cost-effectiveness of increasing levels of cleanup; establishment of minimum acceptable levels of cleanup required for different types of sites; definition of risk thresholds acceptable for different types of sites; and establishment of long-term monitoring needs for the different type of sites;
(c) prepare related chapters or sections of TA documents and reports;
(d) participate and present relevant sections in the national workshops; and
(e) conduct other related work assigned by the team leader/deputy team leader.

(vi) **Cleanup technology specialist** (national, 5 person-months). The specialist will

(a) carry out an assessment of the feasibility of applying existing national and international technological options for the remediation and management of contaminated sites in the PRC; and review existing technologies currently available for containment, remediation, disposal, and destruction of contaminated materials and wastes found in contaminated sites;
(b) prepare recommendations for cleanup standards specifying the definition of categories of sites for which residual levels of contamination may be allowed after cleanup, given location and potential for population exposure, intended use of the site, and cost-effectiveness of increasing levels of cleanup; establishment of minimum acceptable levels of cleanup required for different types of sites; definition of risk thresholds acceptable for different types of sites; and establishment of long-term monitoring needs for the different type of sites;
(c) prepare related chapters or sections of TA documents and reports;
(d) participate and present relevant sections in the national workshops; and
(e) conduct other related work assigned by the team leader/deputy team leader.

6. The consultants will submit the following reports: (i) an inception report within 1 month after mobilization, (ii) an interim report 12 months after the TA starts, (iii) a draft final report 16 months after the TA starts, and (iv) a final report at the conclusion of the TA. The final report will reflect comments made by government agencies, ADB, and other relevant parties. The consultants will submit all reports in the English and Chinese languages—six copies each in English and Chinese to the Government, and three copies of the English version to ADB, including one electronic copy in a CD-Rom. The reports will be published in Chinese and English language and made available online.