



# Technical Assistance Report

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Project Number: 39647  
December 2005

## Technical Assistance People's Republic of China: Institutional Development of SEPA's Regional Supervision Centers

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 9 December 2005)

Currency Unit	–	yuan (CNY)
CNY1.00	=	\$0.1238
\$1.00	=	CNY8.1002

## ABBREVIATIONS

ADB	–	Asian Development Bank
DHRMIA	–	Department of Human Resources Management and Institutional Affairs of SEPA
EPB	–	environmental protection bureau
FECO	–	Foreign Economic Cooperation Office
PRC	–	People's Republic of China
RSC	–	regional supervision center
RSDD	–	Regional and Sustainable Development Department of ADB
SEPA	–	State Environmental Protection Administration
TA	–	technical assistance
USEPA	–	United States Environmental Protection Agency

## TECHNICAL ASSISTANCE CLASSIFICATION

<b>Targeting Classification</b>	–	General intervention
<b>Sector</b>	–	Agriculture and natural resources
<b>Subsector</b>	–	Environment and biodiversity
<b>Themes</b>	–	Environmental sustainability and capacity development
<b>Subthemes</b>	–	Environmental policy and legislation (mainstreaming environmental consideration in economic growth)

## NOTE

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

<b>Vice President</b>	G. van der Linden, Knowledge Management and Sustainable Development
<b>Director General</b>	B. N. Lohani, Regional and Sustainable Development Department (RSDD)
<b>Director</b>	N. Ahmad, Environment and Social Safeguard Division, RSDD
<b>Team leader</b>	X. Ma, Senior Environment Specialist, Environment and Social Safeguard Division, RSDD

## I. INTRODUCTION

1. On 26 October 2005, the Director General of the Regional and Sustainable Development Department (RSDD) of the Asian Development Bank (ADB) met with senior ministerial officials of the State Environmental Protection Administration (SEPA) of the People's Republic of China (PRC) in Beijing. During the meeting, SEPA requested ADB to provide technical assistance to support establishing and developing SEPA's regional supervision centers (RSCs), which are top priorities in SEPA's 11th 5-year plan. SEPA's proposal for establishing RSCs was approved by the State Council on 20 September 2005. SEPA is planning to start recruiting staff and operating the RSCs in 2006. In response to the Government's urgent need, ADB fielded a Fact-Finding Mission to Beijing on 14–18 November 2005 and held meetings with officials from SEPA and the Ministry of Finance. During the discussions, the impact, outcome, outputs and activities, implementation arrangements, cost estimates, and consultants' terms of reference of the technical assistance (the TA) were confirmed. The TA framework is presented in Appendix 1.

## II. ISSUES

2. As part of the integrated package of policies, investment, and institutions to enable the PRC to make further progress towards achieving sustainable development, the draft 11th national 5-year plan for environmental protection identifies establishing and developing SEPA's RSCs as a priority to improve the effectiveness of environmental management in the PRC.

3. Rapid economic development in the past 20 years and a large and still growing population have persistently placed enormous pressures on the PRC's environment and natural resources. The country's environmental problems and priorities increasingly correlate with the geographic pattern of social and economic development, as the decentralization process deepens. For example, the environmental challenges in arid, landlocked rural areas in the northwest include sustainably using water and forest resources and restoring ecosystems, while the main concerns in heavily populated, industrializing and urbanized eastern coastal provinces are preventing and controlling industrial and urban pollution. The increasing disparity in economic development and environmental problems across the regions underscores the need to (i) integrate environmental considerations into regional economic development decision making and (ii) generate regional environmental management strategies and institutions.

4. It has been recognized that the existing institutional setting and related policies cannot meet emerging challenges. The traditional approach of national programs for the control of pollution emphasized limiting emissions or discharges firm-by-firm, but did not sufficiently address the importance of choices made regionally and locally about land use and its development. While SEPA has promulgated various laws concerning pollution control and natural resources conservation, institutional and financial arrangements for helping provinces and cities to implement laws and programs has been lacking. As a result, large gaps in implementing laws and regulations appear to exist provincially and locally.

5. Linkages among entities concerned with environmental management at the different levels of government have been weak regarding environmental policymaking and implementation. Because environmental protection bureaus (EPBs) are branches of provincial, city, and country governments, their budgets and executive appointments are decided by local governments, not by SEPA. While the EPBs are supposed to control pollution emissions within their jurisdictions, they are often reluctant to strictly enforce national regulations, as local governments are more interested in attracting investment to improve their economies.

6. In addition, the existing SEPA lacks both adequate numbers of professional staff and the skills needed to carry out their expanding mandates. While SEPA's regulatory and enforcement role has expanded exponentially since the 1990s, its workforce of about 2,200 employees (219 in SEPA's administrative staff and about 2,000 staff working at various national offices and centers affiliated to SEPA) is basically unchanged since 1995. The number of SEPA employees as a percentage of total population is very low compared to that of environmental protection agencies in developed countries. The United States Environmental Protection Agency (USEPA), for example, has 18,000 employees, the Australian Ministry of Environment 3,000, and the Canadian Ministry of Environment 5,000.

7. Given the huge territorial area of the PRC and inadequate numbers and skills of professional staff, SEPA faces great challenges in managing information regionally and locally, fielding its staff, providing technical support and oversight, and responding in a timely way to transjurisdictional environmental issues. The increasing incidence of environmental accidents without timely response has caused significant economic losses and is typical of weak regional environmental management capacity. Technically and politically astute environmental managers for regions are urgently needed.

8. Recognizing these challenges and the need for institutional development and reform, SEPA established two RSCs in 2002 on a trial basis. The East Regional Supervision Center is associated with the East PRC Environmental Research Institute located in Nanjing, and the South Regional Supervision Center is associated with the South PRC Environmental Research Institute located in Guangzhou. However, the development of the two RSCs is still at a very early stage. A recent report by SEPA concluded that the authority and responsibilities of the two RSCs have not been clearly defined, and that their staff urgently needs training to be effective.

9. In 2000, ADB approved a cluster TA for Transjurisdictional Environmental Management in the PRC.<sup>1</sup> An important finding of Component B of this TA was a strong recommendation to establish and develop SEPA regional offices to strengthen water-quality management at the river-basin level. This recommendation has reinforced SEPA's proposal to establish RSCs.

10. On 20 September 2005, the Office of the Public Service Reform Committee of the State Council approved SEPA's proposal to establish three additional RSCs—one each in the northwest with 30 staff positions, the northeast with 30 staff positions, and the southwest with 40 staff positions—to further strengthen SEPA's institutional capacity and regionalize its structure. The overall functions of the RSCs are preliminarily defined as supervising, enforcing, coordinating environmental management and responding to environmental accidents and incidents. SEPA is planning to start recruiting staff and opening the RSCs in 2006. It has become increasingly clear how the balance is struck between development and environmental consequences regionally and locally is a fundamental consideration for environmental management. The decision to establish SEPA regional offices is an important move, but the decision itself will not automatically solve the problems. The next critical test is whether the RSCs can be designed to effectively foster wise choices by the local governments about development and its environmental consequences.

11. To improve environmental management capacity regionally in the PRC is both technically challenging and administratively contentious. Given the limited experience of SEPA in this area, this TA will provide timely and necessary support to help SEPA design and develop

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<sup>1</sup> ADB. 2000. *Technical Assistance to the People's Republic of China for Transjurisdictional Environmental Management*. Manila.

its RSCs and build institutional mechanisms to link environmental plans with regional and local economic development policies. This is also in line with ADB's country strategy and program, which emphasizes environmental management as an important pillar for achieving sustainable development in the PRC. The experience and lessons drawn from the TA can be also used for reference in other Asian countries.

### III. THE TECHNICAL ASSISTANCE

#### A. Impacts and Outcome

12. The impact of TA will be improved environmental management capacity regionally in the PRC. The expected outcome is that SEPA's RSCs will be established and begin functioning according to the strategic roadmap and institutional development plan developed under TA, and that staff members of SEPA, the RSCs and EPBs will apply the knowledge and skills acquired from the training conducted under TA.

#### B. Methodology and Key Activities

13. The main outputs of TA will be

- (i) a strategic roadmap for the RSCs' establishment and development (the strategic roadmap);
- (ii) an institutional development plan for establishing the RSCs;
- (iii) better understanding of regional environmental management issues and gained knowledge and skills to staff members of SEPA, the RSCs, and local EPBs regarding regional environmental management; and
- (iv) a policy proposal to be submitted to the State Council recommending policy innovations and further institutional development and reform for effective regional environmental management.

14. **Output I.** The strategic roadmap will (a) define the overall roles, authority, and responsibilities of the RSCs, as well as intergovernmental mandates, especially regarding the SEPA, RSCs, and provincial and local EPBs relationship; (b) provide guidance on policy orientation for regional environmental management, and (c) develop overall short-, medium-, and long-term goals and targets for regional environmental management and the RSCs' development. The development of the strategic roadmap will be based on the vision and rationale for the RSCs' establishment and an overall analysis of key environmental management issues regionally and priority areas for improvement. The strategic roadmap will be drawn in accordance with existing environmental legislation and in line with the 11th 5-year plan.

15. **Output II.** The institutional development plan will cover (a) specific environmental management functions of the RSCs in the areas of supervising, enforcing, and coordinating environmental management, as well as in responding to environmental accidents and incidents; (b) a staffing and recruitment plan, including job descriptions and a recruitment schedule; (c) a capacity-building program with a training plan; (d) an information-flow and reporting arrangement; (e) cost estimates and budgets for establishing and operating RSCs; and (f) a phased development schedule from initial establishment through full operation. The institutional development plan will be drawn up based on a comprehensive study of the key institutional, financial, administration, and coordination challenges and opportunities created by the establishment of the RSCs.

16. **Output III.** Staff from SEPA, the RSCs, and local EPBs will better understand regional environmental management issues and gain knowledge and skills through (i) on-the-job training and (ii) pilot testing of new organizational models at one or two selected RSCs. The training will be designed in accordance with an assessment of the most pressing needs. Two national training workshops and on-the-job training at the RSCs will be carried out. The pilot studies at selected RSCs will focus on the issue of emergency responses to environmental accidents and incidents.

17. **Output IV.** A policy proposal will be prepared and submitted to the State Council based on TA findings. This proposal will recommend policy and institutional changes for effective regional environmental management.

18. TA implementation will also emphasize the transfer of international experience and knowledge to government staff. A report on the international experience and its implications for the development of SEPA's RSCs will be prepared. A study tour to a developed country or other developing countries with good practices will be organized. The study tour participants will be senior staff of SEPA (the Executing Agency), the newly established RSCs, and other related government agencies as needed.

19. As milestones, three consultation workshops will be held to discuss RSC design, solicit comments on the strategic roadmap and the institutional development plan, and reach consensus among key stakeholders. Representatives from related ministries and provincial and local EPBs will be invited. The first workshop will discuss the guiding principles and methodologies for developing the strategic roadmap and institutional development plan. The second workshop will discuss the draft strategic roadmap and institutional development plan. The third workshop will assess the outcomes of TA implementation and discuss the draft policy proposal to the State Council and follow-up steps for further developing RSCs.

20. USEPA has expressed strong interest in cooperating with ADB in TA implementation. USEPA will be able to make a valuable contribution through staff inputs and by providing training based on its 35 years of experience and knowledge accumulation gained during the establishment and development of USEPA regional offices. Given that this TA cannot cover all aspects needed for the development of RSCs, the possibility exists that the World Bank will provide support to further develop RSCs in a later stage, as SEPA has requested.<sup>2</sup> If this comes to pass, SEPA, ADB, USEPA, and the World Bank will coordinate with each other in a timely fashion and work closely to avoid any potential duplication of effort and to maximize the benefits derived from financial and human resources.

### **C. Cost and Financing**

21. The total cost of TA is estimated at \$710,000 equivalent. ADB will finance \$550,000 equivalent. TA will be financed on a grant basis by ADB's TA funding program. The Government will finance the remaining \$160,000 equivalent. Cost estimates and financing plan are presented in Appendix 2.

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<sup>2</sup> During its visit to the World Bank in November 2005, a senior delegation of SEPA asked the World Bank to support to the development of RSCs, and the World Bank has expressed interest.

#### **D. Implementation Arrangements**

22. SEPA will be the Executing Agency for TA. A steering committee chaired by the Minister or a vice minister of SEPA will be established, comprising a senior official from each of SEPA's departments and offices: Department of Human Resources Management and Institutional Affairs (DHRMIA), Department of Supervision, International Cooperation Department, and Foreign Economic Cooperation Office (FECO). The steering committee will meet at the three TA workshops and provide overall guidance to TA.

23. A TA management office to carry out day-to-day operations will be established in SEPA. A deputy director general of DHRMIA will serve as the head of the TA management office and function as overall TA coordinator. FECO and DHRMIA will work closely together and be jointly responsible for operational matters and day-to-day communications among ADB, consultants, and concerned government agencies.

24. A team of international and domestic individual consultants will be recruited and engaged by ADB in accordance with the *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. TA implementation will require 5.5 person-months of international consulting services and 30 person-months of domestic. The international consultants will be experts in (i) environmental policy and institutional development (4.0 persons-months) and (ii) environmental capacity building and training (1.5 person-months). The two consultants should have extensive experience in the PRC and knowledge about developing regional environmental management offices. The required expertise for domestic consultants includes (i) environmental management and institutions (9 person-months), (ii) public administration (5 person-months), (iii) environmental capacity building and training (5 person-months), (iv) environmental law and enforcement (6 person-months), and (v) environmental information management (5 person-months). One of the domestic consultants will serve as team leader, and one of the international consultants will serve as the deputy team leader. Outline terms of reference for the consulting services are provided in Appendix 3. The equipment to be provided under TA will be procured in accordance with *ADB's Guidelines for Procurement*.

25. To effectively manage the consultant team, a staff member of DHRMIA will be responsible for day-to-day technical communication with the team leader and other consultants, and a staff member of FECO will be responsible for the overall management of consultants.

26. The Environment and Social Safeguard Division (RSES) of ADB's RSDD will be responsible for TA administration in close collaboration with the Agriculture, Environment, and Natural Resources Division of ADB's East and Central Asia Department. Implementation of TA will take 14 months, from January 2006 to February 2007.

#### **IV. THE PRESIDENT'S DECISION**

27. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$550,000 on a grant basis to the Government of the People's Republic of China for the Institutional Development of SEPA's Regional Supervision Centers, and hereby reports this action to the Board.

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p><b>Impact</b> Improved environmental management capacity regionally in the PRC</p>	<p>Goal and targets specified in the strategic roadmap are reached, and tasks specified in the institutional development plan for the 11th 5-year plan period are fulfilled.</p>	<p>SEPA's <i>Annual Environmental Statistic Report 2006-2010</i><sup>a</sup></p> <p>SEPA's annual reports on overall PRC environmental management</p> <p>RSCs' annual reports to SEPA</p> <p>ADB's project review missions</p> <p>Dialogue with the Government</p>	<p><b>Assumption/Risk</b></p> <ul style="list-style-type: none"> <li>• Governments at various levels are committed to improved regional environmental management.</li> </ul>
<p><b>Outcome</b> SEPA's RSCs established and functioning in line with the strategic roadmap and institutional development plan developed under TA; knowledge and skills acquired from the training under TA applied by staff of SEPA, the RSCs and EPBs</p>	<p>All five RSCs are established by July 2006, with 30% of positions filled, and start operating in 2006 in accordance with the strategic roadmap and the institutional development plan.</p> <p>All five RSCs are fully operative with 95% of staff positions filled by the end of 2008 in accordance with the strategic roadmap and the institutional development plan.</p> <p>RSCs start to respond to environmental accidents and incidents in 2006 and, by 2010, respond to 80% of environmental accidents and incidents in the PRC, which was originally SEPA's responsibility.</p> <p>RSCs start to supervise, oversee, and establish databases on key polluting sources in 2006 in accordance with the institutional development plan. By 2010, 90% of key polluting sources are under the RSCs' supervision, and comprehensive databases and information systems are established.</p>	<p>SEPA's annual working reports</p> <p>Provincial EPBs' annual reports</p> <p>Annual reports submitted by the RSCs to SEPA</p> <p>TA review missions</p> <p>Dialogue with the Government</p>	<p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>• Strong commitment from SEPA and the RSCs to establishing RSCs and improved environmental protection regionally and locally</li> </ul> <p><b>Risk</b></p> <ul style="list-style-type: none"> <li>• Delay of RSC establishment and staff recruitment due to financial, personnel, or coordination issues</li> </ul>
<p><b>Outputs</b> (i) Strategic roadmap</p>	<p>A draft strategic roadmap on the establishment and development of RSCs satisfactory to SEPA is prepared by June 2006 and finalized by September 2006.</p> <p>Three consultation workshops are held and consensus on the strategic roadmap is reached.</p>	<p>TA review missions and reports</p> <p>Reports and documents related to the strategic roadmap for discussions at the three consultation workshops</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• SEPA's senior authorities make TA implementation a priority.</li> <li>• The steering committee for TA implementation provides timely advice and guidance.</li> </ul>

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p>(ii) Institutional development plan</p> <p>(iii) Better understanding of regional environmental management issues and gained knowledge and skills of staff members of SEPA, the RSCs, and local EPBs.</p> <p>(iv) A policy proposal to be submitted to the State Council</p>	<p>A draft institutional development plan satisfactory to SEPA is prepared by June 2006 and finalized by September 2006.</p> <p>As a basis for the development of the institutional development plan, a report is completed by May or June 2006 that summarizes the comprehensive policy and institutional analysis of environmental management regionally and provincially, as well as identifies pressing needs and priority areas for regional environmental management.</p> <p>As a supporting document, a report on international experience and its implications to the PRC is prepared in April or May.</p> <p>Two national training workshops held, including one before May 2006 for 20–25 senior officials of SEPA and the SRCs, and another in August or September 2006 for 40–50 working-level officials of SEPA and the SRCs and EPBs.</p> <p>On-the-job training supported by the USEPA team and consultants is carried out at least once at each RSC during TA implementation.</p> <p>Pilot tests designed in April and implemented in May–October 2006; pilot study findings documented and shared at the third workshop.</p> <p>The policy proposal is drafted in October 2006, discussed at the third consultation workshop, and submitted to the State Council within 3 months of TA completion.</p>	<p>Documents and reports to be discussed at the three consultation workshops to be supported by TA</p> <p>Consultants' reports</p> <p>Dialogue with SEPA, the RSCs, EPBs, and other agencies</p> <p>Training evaluation results</p> <p>Pilot test reports</p> <p>Consultants' reports</p> <p>TA review missions</p> <p>Presentations and training materials at the two national training workshops</p> <p>TA review missions</p> <p>Documents and reports to be discussed at the third consultation workshop</p> <p>Dialogue with the Government</p>	<p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>• Consensus is reached through consultations among key stakeholders.</li> </ul> <p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>• SEPA, RSC, and EPB staff have strong incentives for participating in training and pilot tests, and apply the knowledge and skills acquired to their operations.</li> </ul> <p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>• Consensus reached through consultations among key stakeholders</li> </ul>
<p><b>Activities with Milestones</b></p> <p>(a) Conduct a comprehensive policy and institutional analysis of environmental management regionally and provincially, and document the findings in a study report by June 2006.</p> <p>(b) Review and assess international experience in establishing regional offices for environmental management, identify its implications for the PRC, and documented the findings in a report by April or May 2006.</p> <p>(c) Define the roles, authority, and responsibilities of the RSCs and intergovernmental mandates, especially the roles of SEPA, the RSCs, and provincial and local EPBs and their relationship.</p> <p>(d) Draft the overall strategic roadmap and institutional development plan by June 2006 and finalize them by September 2006.</p> <p>(e) Recruit key staff at all RSCs.</p>		<p><b>Inputs</b></p> <p>ADB:</p> <p>(a) Consultant services: \$275,000</p> <p>(b) Training, workshops, study tours, and pilot studies: \$195,000</p> <p>(c) Contingency, miscellaneous, equipment, and dissemination: \$80,000</p> <p>(d) Staff time for TA administration</p> <p>The Government:</p> <p>(a) Office accommodation and transport: \$20,000</p> <p>(b) Counterpart staff time: \$60,000</p> <p>(c) Counterpart travel and training: \$80,000</p>	

<p>(f) Conduct pilot studies at one or two selected RSCs.</p> <p>(g) Hold three consultation workshops, the first in February 2006, the second in June 2006, and the third at the end of 2006.</p> <p>(h) Provide on-the-job training at all RSCs and organize two national training workshops.</p> <p>(i) Conduct study tours in relevant countries.</p> <p>(j) Draft a policy proposal to the State Council based on TA findings.</p> <p>(k) Report and disseminate TA findings.</p>	
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ADB = Asian Development Bank, EPB = environmental protection bureau, SEPA = State Environmental Protection Administration, PRC = People's Republic of China, RSC = regional supervision center, TA = technical assistance, USEPA = United States Environmental Protection Agency.

<sup>a</sup> State Environmental Protection Administration. *Annual Environmental Statistic Report*. Beijing.

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

Item	Total Cost
<b>A. Asian Development Bank Financing<sup>a</sup></b>	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	110.0
ii. Domestic Consultants	120.0
b. International and Local Travel	40.0
c. Reports and Communications	5.0
2. Equipment <sup>b</sup>	8.0
3. Training, Workshops, and Conferences	
a. Resource Persons <sup>c</sup>	40.0
b. Consultation Workshops and Conferences	45.0
c. Training	45.0
d. Study tour	40.0
4. Pilot Studies	25.0
5. Miscellaneous Administration and Support Costs	2.0
6. Dissemination	10.0
7. Contingencies	60.0
<b>Subtotal (A)</b>	<b>550.0</b>
<b>B. Government Financing</b>	
1. Office Accommodation and Transport	20.0
2. Remuneration and Per Diem of Counterpart Staff	60.0
3. Counterpart Travel	40.0
4. Training	40.0
<b>Subtotal (B)</b>	<b>160.0</b>
<b>Total</b>	<b>710.0</b>

<sup>a</sup> Financed by the Asian Development Bank's technical assistance funding program.

<sup>b</sup> Equipment includes two computers, software, and peripherals.

<sup>c</sup> This will cover the travel costs and per diem of United States Environmental Protection Agency staff who serve as resource persons.

Source: Asian Development Bank estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### A. International Consultants

#### 1. Deputy Team Leader/Environmental Policy and Institutional Development Specialist (4.0 person months)

1. The deputy team leader will work closely with the team leader to coordinate the teamwork of the international and domestic consultants, as well as liaise with other international agencies, especially the United States Environmental Protection Agency (USEPA) and World Bank. The following technical responsibilities will be carried out:

- (i) Review and assess international experience in establishing and operating regional environmental offices in developed and other developing countries. Special attention should be paid to the roles and functions of environmental regional offices in supervising, enforcing, and coordinating environmental management; responding to environmental accidents and incidents; and related policies and programs for improved regional environmental management.
- (ii) Review and analyze the reports and information provided by the State Environmental Protection Administration (SEPA) and domestic consultants on the existing institutional setting, related policies, and main issues for regional environmental management in the People's Republic of China (PRC).
- (iii) Based on the two analyses above, prepare a report on international experience in institutional development for regional environmental management and its implications for establishing and operating RSCs in the PRC.
- (iv) Based on the report above and inputs from SEPA and international and domestic consultants, prepare an overview of key issues that need to be considered in formulating the strategic roadmap and the institutional development plan for establishing and operating RSCs, which will be a baseline reference for preparing the strategic roadmap and institutional development plan.
- (v) Review and provide timely supervision to domestic consultants for drafting and finalizing (a) the strategic roadmap, (b) the institutional development plan and other related reports, and (c) TA inception, midterm and final reports, and revise chapters and sections if necessary to ensure that TA outputs are adequate in scope and quality.
- (vi) Participate in designing and carrying out the pilot studies, make presentations at the workshops, and play a lead role in designing and organizing the study tour.
- (vii) Provide editing of the final English reports.

#### 2. Environmental Capacity Building and Training Specialist (1.5 person months)

2. The expert will perform the following tasks:

- (i) Review and assess international experience in developing regional offices for environmental management and its implications for the PRC, paying special attention to the needs of human resources development and capacity building.
- (ii) Working together with other consultants, draft the following sections of the institutional development plan: (a) a staff and recruitment plan including job descriptions and a recruitment schedule, (b) a capacity-building program with a training plan, (c) an information-flow and reporting arrangement, and (d) a phased development schedule from initial establishment through full operation.
- (iii) Working together with the domestic capacity-building and training specialist and USEPA staff, prepare training materials, organize the two national training

workshops, and provide on-the-job training to meet the urgent needs identified during TA implementation.

- (iv) Help the deputy team leader to design and organize the study tour, design and carry out the pilot studies, review the draft strategic roadmap and other related reports, and prepare related chapters and sections of the reports specified as deliverable outputs of TA.
- (v) Participate in other work assigned by the team leader.

## **B. Domestic Consultants**

### **1. Team Leader/Environmental Management and Institution Specialist (9 person-months)**

3. The team leader shall have overall substantive and administrative responsibility for the effective and timely implementation of TA. The team leader will lead the team; foster close coordination among the seven individual consultants regarding the coordination of inputs, quality control of reports, financial management, and technical guidance; and coordinate with SEPA, other concerned government agencies, ADB, and other international organizations, especially with USEPA and the World Bank. The team leader will periodically report on progress to SEPA and ADB and submit high-quality, consolidated reports to ADB as specified in the terms of reference. In addition to performing these duties as team leader, the following technical responsibilities will be carried out:

- (i) Help the international consultants to identify what SEPA needs to learn from international experience and review and comment on reports prepared by international consultants on international experience and its implications for the PRC.
- (ii) Working with SEPA and other consultants, prepare an overview of economic development patterns, their environmental consequences, and the challenges they pose to regional environmental management, including specific issues for each of the regions in the PRC (northwest, northeast, southwest, south, east, and central).
- (iii) Identify key issues and challenges for establishing and operating the RSCs, including the areas of policies, legislative aspects, institutional capacity, and financial arrangements, that would need to be addressed and considered in formulating the strategic roadmap and the institutional development plan. Lessons learned from the experience of the two existing RSCs should be assessed and documented.
- (iv) Based on the three analyses above, prepare a comprehensive report analyzing key regional environmental management issues and priority areas for improvement, covering the following aspects: (a) the existing policies and institutional setting for regional environmental management and their limitations; (b) the vision and rationale for RSCs establishment; (c) lessons learned from the two existing RSCs; (d) key policy, institutional, financial, legal, and administration challenges created by the establishment of the RSCs; and (e) priority areas to be addressed when establishing and operating RSCs. Special attention should be paid to preventing and controlling air and water pollution, as well as to environmental issues related to nuclear equipment, products and wastes.
- (v) Assisted by other consultants, help SEPA draft and finalize the strategic roadmap for developing the RSCs. The strategic roadmap will (a) define the roles, authority, and responsibilities of the RSCs; (b) define the RSCs' administrative relationships with SEPA and the provincial and local EPBs; (c) provide guidance on policy orientation for regional environmental management and RSC development; and (d) develop overall short-, medium-, and long-term goals and targets for regional environmental management and RSC development.

- (vi) Assisted by other consultants, help SEPA draft the institutional development plan, which will include (a) the specific functions of RSCs in the areas of supervising, enforcing, coordinating environmental management, and in responding to environmental accidents and incidents; (b) a staff and recruitment plan, including job descriptions and a recruitment schedule; (c) a capacity-building program with a training plan; (d) an information-flow and reporting arrangement; (e) cost estimates and a budget for establishing RSCs and their ongoing operation; and (f) a phased development schedule from initial establishment through full operation.
- (vii) Design and carry out the pilot studies and prepare a report on the results of each pilot test; organize the two national training workshops.
- (viii) At the end of TA implementation, help SEPA draft a policy proposal to be submitted to the State Council recommending further policy and institutional changes for effective regional environmental management.
- (ix) Review international consultants' work and provide consolidated comments.
- (x) Organize and hold the three consultation workshops, engage the active participation of the steering committee members, and give presentations.

## **2. Public Administration Specialist (5 person-months)**

### 4. The specialist will perform the following tasks:

- (i) Review and assess existing PRC public administrative policies applied to the development of RSCs, and review and assess (a) existing intergovernmental arrangement and mandates, (b) the existing budget system for environmental management, and (c) ongoing public sector reform in the PRC, particularly as it relates to decentralizing government functions, the public fiscal system, and governmental employee quota management.
- (ii) Identify key actors to be involved in regional environmental management and their roles and interaction in economic planning as well as in environmental planning, and prepare an analysis highlighting the policy-level and working-level strengths and weaknesses of existing public administration; gather and analyze the information on experiences and lessons learned from other regional offices established under other national agencies and ministries.
- (iii) Based on the assessment above, identify the main institutional and financing challenges and opportunities that should be addressed in the strategic roadmap and institutional development plan.
- (iv) Provide key inputs to preparing the strategic roadmap, especially in the areas of defining the authority and responsibilities of the RSCs, and the roles of SEPA, the RSCs, and the provincial and local EPBs in regional environmental management, as well as their relationship.
- (v) Recommend a budget and financial arrangement for RSC development and draft the related chapters and sections of the institutional development plan.
- (vi) Give presentations at workshops, participate in designing and implementing the pilot studies, prepare related chapters and sections of TA documents and reports, and perform other work as assigned by the team leader.

## **3. Environmental Capacity Building and Training (5 person-months)**

### 5. The expert will perform the following tasks:

- (i) Collect and analyze information to make possible assessing the overall needs for human resources development and training to support establishing the RSCs, and identify region-specific needs and priority areas for capacity building and training

based on the specific environmental problems and the socioeconomic context of each region. Organize the analysis in a way that facilitates review and analysis by SEPA and the international capacity-building and training specialist.

- (ii) Working with the international capacity-building and training specialist and other consultants, recommend directions for human resources development and capacity building as an input to the strategic roadmap.
- (iii) Draft the capacity-building program and training plan as a key input to the institutional development plan, emphasizing specific training needs in supervising, enforcing, and coordinating environmental management, as well as in responding to environmental accidents and incidents.
- (iv) Working with the international capacity-building and training specialist and USEPA team, prepare training materials and organize two national training workshops and on-the-job training at the five RSCs, and serve as a resource person.
- (v) Participate in the design and implementation of the pilot studies; give presentations at workshops as needed; prepare related chapters and sections of TA documents and reports; and perform other work as assigned by the team leader.

#### **4. Environmental Law and Enforcement Specialist (6 person-months)**

6. The expert will perform the following tasks:

- (i) Review and assess the existing laws and enforcement system, and identify the potential challenges and opportunities for RSCs' enforcement of environmental requirements.
- (ii) Identify needs for new legislation or the revision of existing laws and regulations on establishing and operating RSCs.
- (iii) Review and assess international experience, paying careful attention to regional offices' roles and responsibilities in environmental enforcement, especially in controlling air and water pollution, as well as environmental management issues related to nuclear equipment, products and wastes, and its implications for RSC development.
- (iv) Collect and analyze information to make possible assessing the needs of information flow, including access to environmental monitoring data to support RSCs' functions in supervising and enforcing air and water pollution controls, as well as regarding environmental management issues related to nuclear equipment, products and wastes.
- (v) Provide key inputs for preparing the strategic roadmap and institutional development plan, especially recommendations on new legislation, the authority and responsibilities of RSCs in environmental supervision and enforcement, and intergovernmental arrangements for supervision and enforcement by SEPA, the RSCs, and local EPBs. This should be done in close consultation with the National People's Congress, SEPA, local EPBs, and other key stakeholders.
- (vi) Participate in designing and implementing the pilot studies; give presentations at workshops as needed; prepare related chapters and sections of TA documents and reports, and perform other work as assigned by the team leader.

#### **5. Environmental Information Management Specialist (5 person-months)**

7. The expert will perform the following tasks:

- (i) Review and assess the needs and gaps in information management potentially undermining the RSCs' supervision, enforcement, and coordination of environmental management and their responses to environmental accidents and incidents.

- Organize this information in a way that facilitates its review and analysis by SEPA and other consultants.
- (ii) Analyze and assess the roles and functions of existing national, provincial, and local environmental information management centers and offices, and identify the challenges and opportunities of establishing regional environmental information management systems built upon the existing system.
  - (iii) Provide key inputs for preparing the strategic roadmap by recommending the direction and steps to be taken toward establishing and developing regional environmental information management systems, and how responsibilities and coordination among SEPA, RSCs, and provincial and local EPBs should be organized. This should be done in close consultation with SEPA, local EPBs, and other key stakeholders.
  - (iv) Provide key inputs for preparing the institutional development plan by recommending activities for establishing and developing regional environmental information management systems, especially regarding enforcement and responses to environmental accidents and incidents. This should be done in close consultation with SEPA, local EPBs, and other key stakeholders.
  - (v) Identify needs for training in regional information management and incorporate them in the capacity-building and training program.
  - (vi) Participate in the design and implementation of the pilot studies, give presentations at workshops as needed; prepare related chapters and sections of TA documents and reports; and perform other work as assigned by the team leader.

### **C. Deliverable Outputs and Reporting Requirements**

8 The consultants will help SEPA draft and finalize three documents as the main outputs of TA: (i) a strategic roadmap for RSC development; (ii) an institutional development plan for establishing and operating the RSCs; and (iii) a policy proposal to be submitted to the State Council on policy and institutional changes for improving regional environmental management.

9. The consultants will deliver in a timely way three reports during TA implementation as a basis for preparing the three documents above: (i) a report on international experience and its implications for establishing and developing the RSCs; and (ii) a comprehensive report analyzing major issues in existing policies and the institutional setting for regional environmental management; policy, legal, financial, and administrative challenges for establishing and developing RSCs; and direction and priority areas for RSC development; (iii) a report summarizing the results of the pilot studies at one or two selected RSCs.

10. The consultants will help SEPA organize three workshops, as well as prepare training materials; hold two national training workshops attended by staff members of SEPA, the RSCs, and provincial and city EPBs; and deliver on-the-job training at the five RSCs.

11. The team leader and deputy team leader are jointly responsible for drafting and finalizing the inception, midterm, and final TA reports. The inception and midterm reports will report on TA progress, identify potential problems, and recommend solutions. The final report will summarize the main findings of TA implementation and the lessons learned and recommend further action for improving regional environmental management. These reports should be no longer than 20 pages, in both English and Chinese, and submitted to ADB and SEPA.