

**BOARD
OF
DIRECTORS**

ASIAN DEVELOPMENT BANK

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**TECHNICAL ASSISTANCE TO TAJIKISTAN FOR CAPACITY BUILDING
FOR ENVIRONMENTAL ASSESSMENT AND MONITORING
(FINANCED BY THE GOVERNMENT OF FINLAND)**

The attached Report is circulated for the information of the Board. The President approved the technical assistance on 21 December 2000.

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ASIAN DEVELOPMENT BANK

TAR: TAJ 33183

**TECHNICAL ASSISTANCE
(Financed by the Government of Finland)**

TO THE

REPUBLIC OF TAJIKISTAN

FOR

CAPACITY BUILDING FOR

ENVIRONMENTAL ASSESSMENT AND MONITORING

December 2000

CURRENCY EQUIVALENTS

(as of 1 December 2000)

Currency Unit	-	Tajik ruble (TJR)
TJR1.00	=	\$0.000613
\$1.00	=	TJR1.631

Currency Unit	-	Somoni (TJS)
TJS1.00	=	\$
\$1.00	=	TJS

The new national currency, the somoni, has been circulated since 30 October 2000. The old currency, the Tajik ruble, will be effective until 1 April 2001.

ABBREVIATIONS

ADB	-	Asian Development Bank
EIA	-	environmental impact assessment
MOE	-	Ministry of Environment
TA	-	technical assistance
UNDP	-	United Nations Development Programme
UNEP	-	United Nations Environment Programme

NOTES

- (i) The fiscal year ends on 31 December.
- (ii) In this report, "\$" refers to US dollars.

I. INTRODUCTION

1. The Government of Tajikistan has requested Asian Development Bank technical assistance (TA) to build capacity for environmental assessment and monitoring. The TA Reconnaissance Mission visited Tajikistan from 14 to 19 February 2000. In a meeting of ADB staff with senior representatives of the Government on 17-18 October 2000, an understanding was reached on the TA objectives, scope, cost estimates, and implementation arrangements. This report is based on the understandings reached with the Government.¹ The TA framework is presented in Appendix 1.

II. BACKGROUND AND RATIONALE

2. Tajikistan joined ADB in 1998, after suffering a five-year civil war that erupted after independence from the former Soviet Union in 1991. Recent progress in achieving macroeconomic stabilization is impressive, considering the shocks the country suffered. After independence, real gross domestic product contracted by almost 60 percent by 1996. Production decreased dramatically because of the lack of inputs and trade partners.² Recently, economic development has been encouraging. The average monthly wage increased by 47 percent between September 1997 and December 1998. In Tajikistan, 83 percent of the 6.1 million population are considered poor.

3. Tajikistan is located in the heart of the Pamir mountains, covering a territory of 143,000 square kilometers. Rugged, extreme mountains characterize the geography, with altitudes ranging from 300 to 7,495 meters. The landlocked country comprises 6 percent of the total discharge area of the Aral Sea, but produces almost 50 percent of the flow to the sea. Between the pasture, reserved, and forested areas, vast territories are virtually unoccupied, reflecting the harsh physical environments in a large portion of the country. Agriculture is the dominant land use (65 percent), mainly because grazing is a prominent activity. Only 7 percent of Tajikistan's territory is arable. According to 1998 data, 14 percent of agricultural lands are cultivated, with two thirds of that land intensively irrigated.

4. Major environmental problems in Tajikistan include (i) natural disasters, (ii) land degradation, (iii) deforestation and desertification, (iv) limited availability of drinking water, (v) low levels of water treatment, and (vi) deterioration of wildlife habitat and protected areas. The Government faces considerable challenges in improving environmental management, given the priority currently placed on reforming the economy, reconstructing physical damage inflicted by the war, and satisfying the social needs of an impoverished population. The poor are often both victims and unwilling agents of environmental degradation. For lack of alternatives, poor and displaced people pollute water resources with wastewater, cut already scarce forest resources for fuelwood, and attempt to keep herds of livestock that exceed the carrying capacity of the land. Improved environmental conditions are a fundamental requisite for achieving sustainable economic growth. The creation of an adequate management framework to achieve improved environmental conditions is imperative and must be carried out in tandem with other recognized priorities.

5. Primary responsibility for environmental management in Tajikistan resides with the Ministry of Environment (MOE). Directly under the minister and deputies are 11 small core offices. Some provide administrative support to MOE itself (personnel, legal, accounting, planning, and financial divisions); and others provide technical support services, such as the

¹ The TA first appeared in *ADB Business Opportunities* on 9 October 2000.

² ADB. 2000. *Environmental Profile of Tajikistan*. Manila.

standards divisions. The remaining offices provide administrative support to larger functional departments, such as the Control and Inspection Department, and Hydromet Militarized Service Division. The State Control Special Inspection Department (GosInspeksia) of MOE is responsible for preparing and reviewing environmental impact assessments (EIAs), determining permissible levels of pollutants for entities and issuing permits, and monitoring the activities of permit holders to make sure that they are in compliance. Despite a cadre of dedicated specialists at MOE, its effectiveness is compromised by a number of institutional weaknesses. Many specialists have advanced degrees, but they have not been exposed to modern environmental management techniques. Staffing is inadequate, particularly at regional offices. Each of the four major regions has an average of 15 staff members who are expected to implement MOE's full complement of environmental management mandates. Communication is limited by technological and institutional deficiencies. Information management systems and databases that would enable MOE to share information internally and with other agencies are lacking.

6. In terms of country strategy, ADB has identified agriculture, transport, energy, and social sectors as its main sectors for assistance. It has also identified a two-pronged approach to environmental improvement that includes integrating environmental considerations into all sector development projects, as well as directly strengthening environmental management capacity. The ADB environmental profile of Tajikistan gives highest priority to capacity building for environmental management, including improving MOE's planning capacity. The needs for capacity building have both strategic and physical dimensions. The three most critical components of strategic planning capacity are (i) redefining MOE's mission and revising its organizational structure, functions, and staffing patterns; (ii) preparing action plans by identifying, elaborating, evaluating, and prioritizing activities related to the international conventions to which Tajikistan belongs; and (iii) conducting economic analysis on behalf of MOE officials and others in the Government so that they can evaluate and appropriately prioritize environmental problems and their potential solutions. To improve physical planning capacity, TA is needed to introduce holistic planning and assessment methodologies, as well as geographic information systems training and equipment. TA is also required to assist MOE in improving its EIA capacity, together with the other agencies involved, private sector, and nongovernment organizations. Latest concepts and state-of-the-art standards of EIA should be introduced to the staff through a hands-on training experience. Improvement of the environmental planning, assessment, and monitoring capacity of the Government can be seen as a precondition to successful infrastructure investments in Tajikistan. Otherwise, based on experience in other developing member countries, the lack of adequate information and procedures will make it difficult to comply with the environmental commitments and policies of ADB and the Government.

7. Capacity building for planning, environmental assessment, and monitoring have been addressed under TA in the neighboring countries of Kazakhstan, Kyrgyz Republic, and Uzbekistan.³ Tajikistan has given priority for similar assistance but the request of the Government still remain unmet. Tajikistan is participating in two ongoing environmental TAs.⁴ Other funding agencies are supporting the Aral Sea environmental programs. Environmental

³ TA 3350-KAZ: *Strengthening Environmental Management*, for \$700,000, approved on 20 December 1999; TA 2934-KGZ: *Environmental Monitoring and Management Capacity Building*, for \$598,000, approved on 11 December 1997; TA 3499-KGZ: *Environmental Monitoring and Management Capacity Building II*, for \$650,000, approved on 11 September 2000; and TA 2859-UZB: *Strengthening of Institutions Engaged in Environmental Protection*, for \$675,000, approved on 8 September 1997.

⁴ TA 5878-REG: *Regional Cooperation for Sustainable Mountain Development in Central Asia*, for \$380,000, approved on 16 December 1999; and TA 5934-REG: *Regional Environmental Action Plan in Central Asia*, for \$500,000, approved on 19 September 2000.

activities of other assistance organizations in Tajikistan are limited to approaches financed by the United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP) to improve the management of natural resources, and to strengthen environmental information systems. Most investment projects also contain a minor component to address the necessary concern of environmental feasibility.

III. THE TECHNICAL ASSISTANCE

A. Objective

8. The objective of the TA is to build MOE capacity to ensure environmentally sustainable development, by strengthening environmental institutions for improving environmental planning, assessment, and monitoring.

B. Scope

9. The objective will be achieved by (i) proposing organizational and functional improvements based on a review of the current conditions and practices; and (ii) implementing a training-of-trainers program for environmental management, assessment, and monitoring. The organizational and functional analysis will include all of MOE's responsibilities and environmental legislation, with comments on other relevant agencies in close cooperation with UNDP and UNEP. Pilot case studies will be carried out to accomplish hands-on training and meet urgent assessment needs. Plans, guidelines, and manuals for environmental management and monitoring will be included and introduced in workshops and seminars. The case studies will cover environmental planning, assessment, and related field activities such as baseline surveys and monitoring of water, air, and soil. Regional management and monitoring plans will cover one of the four oblasts in detail, and provide an outline plan for the whole country. A data network will be established within MOE, with tentative plans for expansion to connect with other agencies.

10. Organizational and functional improvements of MOE will initially require a comprehensive review and analysis of current duties, resources, and practices. Alternatives will be developed and proposed, as appropriate, for more efficient organization and operation, based on models in other countries. Those proposals will be presented and discussed in a workshop. The functional relationships between MOE and other relevant organizations will be reviewed, and communicated in an interagency workshop. A proposal for a new organization for MOE, and operational cooperation with the other relevant agencies will be prepared, including a human resource development plan.

11. The training-of-trainers program will start with the selection of suitable candidates (24 persons) who currently work in the environmental management sector of Tajikistan, half of them from the local government units. The trainees will attend a one-month practical introductory training seminar covering the following fields: environmental management in transition to a market-oriented economy; market-based tools of environmental policy, highlighting economic analysis; environmental planning at different levels; environmental assessment, risk based and other methods; selection of mitigation measures and monitoring parameters; environmental information strategy and networking; geographical information system and other geophysical systems; monitoring of air quality; monitoring of water quality; monitoring of soil quality; quality control and accuracy of data; preparation of monitoring programs; preparation of monitoring reports; review of environmental applications; review of environmental assessment reports; environmental standards, affordability; and environmental legislation.

12. During the introductory training seminar, outside the above program, an opportunity will be provided to improve personal computer and English language skills. Performance will be taken into account when 12 trainees will be selected for the next phase, where four training case-studies will be carried out by teams of trainees. Comprehensive training-of-trainer manuals will be prepared in English and Russian. Training case studies will include planning, assessment, and monitoring cases from the real-life operational field of the trainees, so that the work will contribute to their everyday practical duties. The program will cover the whole life span of those cases, starting from plans, up to preparation of a report, depositing the results into a database, and presentation in a workshop. The results of the training cases will form the core of databases, which will be designed on the principle of computer networking (five work stations and peripherals in a customized, decentralized network).

13. The Government will be assisted in developing up to four sets of sector guidelines for environmental management, including planning, assessment, and monitoring for the most urgent investment sectors. Monitoring plans for one oblast will be prepared in detail to address the (i) permanent monitoring regime, (ii) fixed-term approaches to address particular environmental concerns, and (iii) emergencies. Outlines for the whole country will be prepared including estimates of human and other resources that are needed.

14. Workshops will be organized inside MOE to introduce the results of the organizational and functional recommendations, and to present the outcome of the case studies. Interagency workshops will be organized to communicate the institution development recommendations with other relevant agencies, and to present the final results of the TA. All essential materials will be translated into Russian.

C. Cost Estimates and Financing Plan

15. The TA is estimated to cost \$750,000 equivalent, consisting of \$424,000 in foreign exchange cost and \$326,000 equivalent in local currency cost (Appendix 2). The Government of Finland will provide \$600,000 equivalent to cover all of the foreign exchange costs and \$176,000 equivalent of local currency costs, through the channel financing agreement with ADB. The Government of Tajikistan will finance \$150,000 equivalent, covering such expenses as salaries of counterpart staff, cost of training space and facilities, furnished office space, communications, electricity, transport, and secretarial services, as in-kind contribution.

D. Implementation Arrangements

16. The TA will be implemented over 12 months, from April 2001 to March 2002. The TA provides 10 person-months of international consulting services. An international consulting firm will be recruited in accordance with ADB *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants, using the simplified technical proposal procedure. The outline terms of reference are attached as Appendix 3. The international team leader will be appointed for 6 person-months and will have expertise in institutional capacity building and environmental management training in different sectors, as well as in institution building. Another international expert will provide 4 person-months expertise in environmental assessment, monitoring, and data management. Three domestic consultants will assist the international consultants for 12 person-months each: (i) a training specialist, (ii) an environmental assessment and monitoring specialist, and (iii) a data management and information specialist.

17. MOE, the Executing Agency, will appoint a TA director as counterpart to the consultant team leader, and a TA manager to take care of the day-to-day managerial activities. MOE will

provide the consultants with all the documents required for the review work, and maps for fieldwork. MOE will also provide furnished office space, training space, training facilities, electricity, telecommunications, local transport, counterpart staff, and secretarial and security services. The Government will assist in importing the mobile monitoring unit and equipment free of taxes and duties. At TA completion all equipment and materials will be handed over to MOE.

18. A mobile monitoring unit will be provided for sampling and fieldwork. Essentially it is a four-wheel driven simple vehicle, which can be loaded with portable sampling and analytical field instruments. MOE will carry out the assembly works to customize it to a mobile monitoring unit. Samples for sophisticated analyses will be submitted to MOE's laboratory. The laboratory will take care of the maintenance and supply of the instruments. Equipment and materials such as computers, printers, photocopy machine, telefax, video, mobile phones, whiteboard, overhead projector, chemicals, radiometer, spectrophotometer, atomic absorption spectrophotometer, thermometer, conductivity meter, pH-meter, turbidity meter, filtering equipment and filters, pumps, analytical and sampling manuals, geophysical positioning systems, and samplers for different purposes will be provided for the training. Procurement of equipment will be by the TA consultant in accordance with ADB *Guidelines for Procurement*. Intercalibration and other methods to assure quality of the data will be supported.

19. ADB and MOE will jointly monitor and periodically review TA implementation through monthly progress reports to be prepared by the consultants. In addition, the consultants will prepare the training materials and three reports describing TA progress and outcomes, which will be discussed in tripartite review meetings with ADB, the Government, and the consultants. The reports will be (i) an inception report at the end of the first month of fieldwork, (ii) an interim report 6 months after the start of the fieldwork, and (iii) draft final report 11 months after the fielding of the international consultants. The final report will be submitted two weeks after receiving comments from ADB and the Government. The reports will be written in English, and translated to Russian. The TA will be carried out in coordination with other relevant organizations, like UNDP and UNEP.

IV. THE PRESIDENT'S DECISION

20. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance to the Government of the Republic of Tajikistan in an amount not exceeding the equivalent of \$600,000, to be financed by the Government of Finland on a grant basis, for the purpose of Capacity Building for Environmental Assessment and Monitoring, and hereby reports such action to the Board.

TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p>Goal Provide management capacity building for environmentally sustainable decision making and improved environmental management by strengthening planning, assessment, and monitoring.</p>	<p>Appropriate information available and published for project planning, pollution control, and feasibility consideration</p>	<p>Review and compare new and current quality of decisions</p>	<p>Willingness to incorporate environmental feasibility into decision making</p>
<p>Purpose Conduct organizational and functional reorganization of Ministry of Environment activities. Develop institutional capacity to administer environmental planning assessment and monitoring, and data management. Provide information to government institutions and the private sector in project development.</p>	<p>Two alternatives and final recommendation prepared for the organization of MOE Four training case studies established and carried out appropriately More reliable environmental information available Environmental issues addressed integrated into natural resource and investment decisions</p>	<p>Regular reports and review visits Use of information in ADB loan projects Statistics of productivity in assessment, monitoring, and data management services Follow-up of the trainees' carrier</p>	<p>Changes of staff in the institutes involved Lack of counterpart resources Semantic and other misunderstandings of concepts and policies</p>
<p>Outputs Recommendations on how to improve the organization of MOE and its functional relationships with other relevant organizations 24 local experts trained, 12 of them as trainers, training materials, data of the case studies Four sector guidelines for environmental assessment, monitoring, and data management prepared, including for the transport and energy sectors</p>	<p>Report prepared and communicated appropriately to support decision making, reorganization, and other development of resources All trainees to be adequately trained and equipped to carry out subsequent training program</p>	<p>Review visits and discussions Review of the new organization and functions Review of the progress of case studies and personal capacity by reports and workshops Reviewed during visits Reviewed during visits, including the manuals</p>	<p>Limited availability of data Performance of individuals, language skills Commitment of the institutes and persons involved Lack of transparency Compatibility of systems</p>

<p>Outputs</p> <p>Database established for the monitoring information</p> <p>Outlines prepared on developing human and other resources for the country</p>	<p>The main laboratory of MOE strengthened</p> <p>Three computer workstations operational, including manuals</p> <p>Agencies involved producing and sharing data for case studies</p>	<p>Verified in workshops, review visits, and reports</p>	
<p>Inputs</p> <p>International consultants</p> <p>Domestic consultants</p> <p>Mobile monitoring unit, equipment and instruments</p> <p>Data management equipment</p> <p>Workshops</p>	<p>Team leader and environmental management and institution building expert (6 person-months)</p> <p>Environmental monitoring expert (4 person-months)</p> <p>Three experts: training specialist, monitoring specialist, data management specialist (12 person-months each)</p> <p>Limited but operational capacity to carry out sampling and measurement missions for training purposes</p> <p>Sufficient equipment for case study analyses and sampling</p> <p>Studies and reports shared, information forwarded to decision makers</p>	<p>Regular reports</p> <p>Review visits</p> <p>Review of the results</p> <p>Review visits and reports</p> <p>Review visits and reports</p> <p>Review visits and reports</p> <p>Review visits and report</p>	<p>Change of persons responsible of key activities</p> <p>Communication skills</p> <p>Commitment to the TA as designed</p>

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Foreign Exchange	Local Currency	Total Cost
A. Government of Finland Financing			
1. Consultants			
a. Remuneration and Per Diem			
i. International Consultants	220	0	220
ii. Domestic Consultants	0	72	72
b. International and Local Travel	20	5	25
c. Reports and Communication	14	8	22
2. Equipment			
a. Mobile Monitoring Unit	25	0	25
b. Instruments and Materials	25	8	33
c. Computers, Printers, etc.	15	0	15
3. Training, Workshops, and Seminars	40	45	85
4. Miscellaneous Administration	5	10	15
5. Representatives for Contract Negotiations	10	0	10
6. Contingencies	50	28	78
Subtotal (A)	424	176	600
B. Government Financing			
1. Office Accommodation and Transport	0	60	60
2. Remuneration and Per Diem of Counterpart Staff	0	60	60
3. Others (Training Facilities, Electricity, Secretarial Services)	0	30	30
Subtotal (B)	0	150	150
Total	424	326	750

Source: Staff estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. International Consultants

1. Team Leader (Institution Building and Training Expert)

1. The team leader will be appointed for 6 person-months during the 12 month technical assistance (TA). The consultant will have expertise in institution building, and in environmental planning and management training. The duties will include the following:

- (i) Manage and coordinate all activities in liaison with the Asian Development Bank (ADB), Ministry of Environment (MOE), and other relevant agencies, under the guidance of the TA director, including preparation of detailed work programs for all members of the team during the inception phase. Propose changes to the program when necessary, and coordinate with United National Development Programme (UNDP) and United Nations Environment Programme (UNEP) office in Dushanbe.
- (ii) Assist MOE in reviewing the current organization, functions, duties, practices, and resources of MOE, as well as relevant environmental legislation; and propose two alternatives for a new more efficient organization. Assist the Government, if necessary, to improve legal arrangements for environmental management and protection. Consider how to make the MOE activities more integrated, independent, and streamlined.
- (iii) Assist MOE in preparing human resource development plans: an outline plan for the country's environment sector of the country, and a detailed plan for MOE.
- (iv) Assist MOE in organizing workshops with MOE staff and other relevant institutions and individuals to gain feedback on the proposed new structures and reorganized functions, and to introduce the proposed renovations.
- (v) Prepare an institution building plan for the environment sector in cooperation with the senior officials of MOE, considering particularly the cooperation of MOE with the other national and international institutes, such as the Department of Ecology and Emergency Situations at the Office of the President, Department of Women, Social Problems and Environment at the Parliament, Sustainable Development Commission, working groups related to environmental conventions, Ministry of Emergency Situations and Civil Defense, Ministry of Agriculture, Ministry of Water Resources, State Land Committee, State Forestry Agency, State Industry Committee, Ministry of the Interior, State Mining Agency, Gosgortekhnadzor, and Ministry of Health.
- (vi) Organize practical introductory training, equivalent to a one-month seminar, for 24 persons currently working in the environmental management sector in Tajikistan, half of them from the local government units. Prepare training materials and programs for the following fields: environmental management in transition to a market-oriented economy; market-based tools of environmental

(Reference in text: page 4, para. 16)

policy, highlighting economic analysis; environmental planning at different levels; environmental assessment, risk based and other methods; selection of mitigation measures and monitoring parameters; environmental information strategy and networking; geographical information system and other geophysical system; monitoring of air quality; monitoring of water quality; monitoring of soil quality; quality control and accuracy of data; preparation of monitoring programs; preparation of monitoring reports; review of environmental applications; review of environmental assessment reports; environmental standards, affordability; and environmental legislation

- (vii) Help MOE offer trainees an opportunity to improve their English language skills, outside the proper training program.
- (viii) Recommend 12 trainees to be selected to the training-of-trainers program, for instance half from MOE and half from other institutes, in a gender neutral manner. Prepare training-of-trainers manuals. Assist in selecting the four training case studies. Purchase and import the vehicle and the equipment for the TA. For instance, water supply in rural areas can be considered as a topic of case studies.
- (ix) Prepare monthly progress reports. Prepare the three core reports for tripartite review (inception, interim, final), submit three copies of each to the Government, together with a working copy in Russian, and three copies to ADB for review and approval. Organize three tripartite review meetings in Dushanbe.
- (x) Organize and supervise translation of the reports, and relevant ADB guidelines, particularly the environmental assessment procedures and requirements, in Russian. Assist MOE in organizing open workshops to introduce the outcome of the TA.
- (xi) Take responsibility for the financial administration of the ADB contribution for the budget, as will be agreed in the contract negotiations.

2. Deputy Team Leader (Environmental Monitoring and Data Management Expert)

2. The monitoring and data management expert will be appointed for four person-months to assist the team leader with all relevant activities, and hold the main responsibility for implementation of the training-of-trainers program. The expert will have expertise in environmental assessment, monitoring, and data management. The duties will include the following:

- (i) Assist the team leader in managing and coordinating all activities, and in the absence but under the guidance of the team leader, take full responsibility for the consulting team.
- (ii) Assist in preparing materials for implementing the introductory training seminar for 24 participants. Recommend the 12 candidates for a training-of-trainers program, and prepare a detailed workplan for that program.
- (iii) Assist in preparing the reviews and other reports for tripartite review with ADB and the Government.

- (iv) Supervise and provide tutorial training for the 12 trainees, in their real-life operational fields, where case studies will be selected. The program will cover the whole life span of these cases, starting from plans, up to preparation of the report, depositing the results into a database, and presentation in a workshop. The results of the cases will form the core of databases, which will be designed on the principle of computer networking (five working stations in a customized, decentralized network). The work will include purchase and installation of the computers and software, user manuals (in English and Russian), and testing the system to establish an operational laboratory and sampling information system. The system has to be compatible with the other relevant systems, and easy to expand. A survey of the performance of the trainees will be carried out at the end of training.
- (v) Assist in establishing a mobile monitoring unit for training purposes under the TA. The unit will comprise a robust vehicle with portable equipment for sampling and analyses in the field. Assist the MOE laboratory in maintaining the unit and the database. The tentative list includes equipment and materials such as computers, printers, photocopy machine, telefax, video, mobile phones, whiteboard, overhead projector, chemicals, radiometer, spectrophotometer, thermometer, conductivity meter, pH-meter, turbidity meter, filtering equipment and filters, pumps, analytical and sampling manuals, geophysical positioning system, and samplers for different purposes during the training.
- (vi) Liaise with the relevant institutes and development projects to make the laboratory information system a useful source of knowledge for updating the national and international data networks. Particular attention should be paid to compatibility with other systems, for instance the ongoing upgrading of hydrological monitoring, and the Global Resource Information Database-Environmental and Natural Resources Information Network of UNEP.

B. Domestic Consultants

1. Training Specialist

3. The training specialist will be appointed for 12 person-months to assist the international consultants in preparing the training materials and workplans, implementing the training activities, and drafting reports. The specialist will have expertise in environmental training, or relevant skills.

2. Monitoring Specialist

4. The environmental assessment and monitoring specialist will be appointed for 12 person-months, to assist the international consultants in organizing and implementing the environmental assessment and monitoring training and case studies. He/she will have expertise in environmental assessment and monitoring, or relevant skills.

3. Data Management Specialist

5. The data management specialist will be appointed for 12 person-months, to assist the international consultants with related activities, such as obtaining data from existing sources, producing monitoring data, providing training on data management, and establishing a core network for the TA purposes. He/she will have expertise in environmental data management.