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**WATER RESOURCES MANAGEMENT PLAN FOR THE MASHCÓN
AND CHONTA WATERSHEDS, WITH EMPHASIS ON ENSURING
WATER AVAILABILITY IN THE SUB-BASINS PACCHA, AZUFRE
AND RÍO GRANDE**

(PE-T1054)

PLAN OF OPERATIONS

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BASIC SOCIOECONOMIC DATA

For basic socioeconomic data, including public debt information, please refer to the following address:

http://www.iadb.org/countries/home.cfm?id_country=PE&Language=English

INFORMATION AVAILABLE IN THE FILES OF INE/RND

Terms of Reference for Consulting Services

<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1128432>

ABBREVIATIONS

PCM	Presidencia del Consejo de Ministros
ESR	Environmental and Social Review
GOPE	Government of Peru
TC	Technical Cooperation
PBL	Policy Based Loan
SNIP	Sistema Nacional de Inversión Pública
WRMP	Water Resources Management Plan
JCF	Japanese Trust Fund for Consultancy Services
INRENA	National Institute for Natural Resources
APCI	Agencia Peruana de Cooperación Internacional
TOR	Terms of Reference
INE/RND	Environment, Rural Development and Natural Disaster Division of the Infrastructure and Environment Department
COF/CEC	IDB Country Office in Peru
IFC	International Finance Corporation

PLAN OF OPERATIONS

Water Resources Management Plan for the Mashcón and Chonta Watersheds, with Emphasis on Ensuring Water Availability in the Sub-basins Paccha, Azufre and Río Grande

(PE-T1054)

I. GENERAL INFORMATION

Beneficiary:	Republic of Peru	
Letter of request:	September 7th, 2006 from <i>Presidencia del Consejo de Ministros</i> (PCM)	
Executing agency:	Inter-American Development Bank (INE/RND)	
Target Beneficiaries:	Local communities, local government and mining operations in the Mashcón and Chonta Watersheds.	
Financing:	IDB: (JCF)	US\$1,200,000
	Local:	<u>US\$ 300,000</u>
	Total:	US\$1,500,000
Objectives:	To contribute to good water resource management practices in the Mashcón y Chonta watersheds, thereby fostering a resolution of the existing tensions over water usage, as well as promoting improved sectoral and cross-sectoral planning processes and better cohesion between the public policies, legal agreements and institutional arrangements that govern the sector.	
Execution timetable:	Execution:	12 months
	Disbursement:	18 months
Special contractual conditions:	None	
Exceptions to Bank Policies and Procedures:	None	
Environmental and social review:	The TC profile was reviewed by the ESR Secretariat on July 20 th , 2007. The recommendations made were included as appropriate in the TC Profile (paragraphs 3.4 – 3.7), as well as in the Terms of Reference accompanying this Plan of Operations, specifically in Chapter 9 (Consultation & Citizen Participation). The ESR requested verification of the Plan of Operations and the TOR by the ESR Secretariat.	
Coordination with other Official DFIs:	Not applicable.	

II. BACKGROUND AND JUSTIFICATION

A. Main Issues to be addressed by Program

- 2.1 The Mashcón and Chonta watersheds, with a combined area of approximately 716 km², are located in the Department of Cajamarca, northern Peru. The two watersheds contain five sub-basins, namely Paccha, Azufre, Río Grande, Yanatotora and Bajo Chonta. They supply water to local communities as well as agricultural, industrial and mining activities. The city of Cajamarca, located in the Mashcón watershed, is the region's capital and has approximately 153,500 inhabitants. A second major settlement is the Community of Combayo in the Chonta watershed.
- 2.2 Relations between major stakeholders in the two watersheds are tense, due to problems related to water management. The tension arose from competition for water between the mining sector, small scale farming needs, and urban water supply, generating conflicts over the quantity and quality of available water from surface and groundwater sources, as well as over temporal fluctuations in water availability for consumptive and non-consumptive uses for domestic, agricultural and livestock, industrial, and mining purposes. Water is particularly scarce during the annual dry period; even though annual precipitation in the region averages 1,200 mm/year, there is little rainfall between May and September. This pattern strongly influences agricultural and livestock activities, which are crucial for the subsistence of the rural communities in the watersheds. The two key concerns related to water management are: (i) that water flows of surface waters are diminishing in the lower parts of the watershed, to the extent that some surface water bodies are disappearing altogether; and (ii) that the available water is not used efficiently by the various users, which in turn may generate undue pressure on the resource.
- 2.3 The absence of straightforward solutions to the current problems has exacerbated tensions. The most recent attempt to resolve the existing conflicts resulted in an agreement between the Government of Peru (GOPE), the Yanacocha Mine and the Community of Combayo, signed on September 23rd, 2006. Based on this agreement, the GOPE has solicited the involvement of the IDB, in a capacity of "Honest Broker", in the preparation and coordination of a Water Resources Management Plan for the Mashcón and Chonta Watersheds, with emphasis on ensuring water availability in the Sub-basins Paccha, Azufre and Río Grande.

B. Link to Country Strategy

- 2.4 This Technical Cooperation (TC) is consistent with the current Bank Country Strategy for Peru, paragraphs 3.19 (environment), 3.12 (water) and 3.17 (science and technology). It is also consistent with the new Country Strategy for Peru that is currently in preparation.
- 2.5 Furthermore, the Bank has recently approved a Water Resource Policy Program (PE-L1024, a PBL with a 1st programmatic loan of US\$200 million) in Peru. The

policies and reforms contemplated by this Program include: (i) implementing the National Water Resource Management Strategy; (ii) improvements in the institutional and normative framework for the water sector; and (iii) the creation and strengthening of water management capacity at the national and regional governments' level. The work carried out under the present TC will be coordinated with the Policy Program and it will serve as an important input in concretely applying and testing the guidelines of the National Water Resources Management Strategy.

C. Value added of Program Financing

- 2.6 Peru's mining sector is of highest economic importance¹, yet the associated environmental and social problems are a growing concern, having resulted in serious conflicts in various areas, including the project area of the present TC. These conflicts are contributing to create an adverse socio-political climate that might discourage new private investments in the mining sector in Peru. The financing of this project would enable the Bank to assist the Government of Peru (GOPE) and the other stakeholders in the Region with its extensive technical expertise in watershed management. Better management of the existing resources will be a key-contributing factor to easing the current tensions in the area. Furthermore, it is expected that, if this initiative is successful, it could be replicated in other problematic mining areas in Peru. For this reason, the GOPE has awarded this TC the highest degree of priority. This approach could also be replicated in other Latin American and Caribbean countries. Moreover, the program financed through this TC will result in the preparation of the Project to Ensure Water Availability. This project will be prepared to the level of feasibility and in accordance with the requirements of Peru's *Sistema Nacional de Inversión Pública* (SNIP). Having this key output at their disposal will help the communities access the substantial existing resources for investment in mitigation and compensation, assigned to the Department of Cajamarca by the Fund created by the royalties paid by the Mining Sector in Peru.

III. PROGRAM DESCRIPTION

A. Program Goal and Purpose

- 3.1 The goal of this Technical Cooperation is to contribute to good water resource management practices in the Mashcón y Chonta watersheds, thereby fostering a resolution of the existing tensions over water usage, as well as promoting improved sectoral and cross-sectoral planning processes and better cohesion between the public policies, legal agreements and institutional arrangements that govern the sector.

¹ In 2006 the total value of exports in the mining sector was US\$14.71 billion. This represents about 62% of the of Peru's total exports.

- 3.2 The purpose is to prepare a broadly-supported Water Resources Management Plan (WRMP) that defines the appropriate technical, economic, social, environmental, legal and institutional measures to be taken in the short- and medium-term to resolve current water management problems in the Mashcón and Chonta Watersheds, with emphasis on ensuring water availability in the Sub-basins Paccha, Azufre and Río Grande de Chonta.

B. Components

- 3.3 This TC finances the selection and contracting of a consulting firm to develop two major products: (i) the WRMP for the Mashcón and Chonta Watersheds; and (ii) a Project to Ensure Water Availability in the Sub-basins Paccha, Azufre and Río Grande. This work will also include the implementation of a Public Consultation Program, as well as the preparation of an Implementation Plan for the transition to the new institutional structure proposed by the WRMP.

- 3.4 Water Resources Management Plan: The Water Resources Management Plan will contain the following elements:

- a. Detailed analysis of the current, past and future situation regarding the availability and use of water resources (supply and demand) in each of the watersheds, and the identification of critical problems.
- b. Evaluation of alternative solutions for each of the critical problems identified and definition of the required actions, considering both structural and non-structural measures and including mechanisms for conflict resolution.
- c. Design of economic incentives and control mechanisms to ensure the proposed management scheme's long-term sustainability.
- d. Development of a broadly-supported WRMP that includes institutional, legal, environmental, social, cultural, technical and economic aspects, and takes into account relevant national, regional and local policies and strategies.
- e. Definition of the operational structure and of the program of activities required to implement the Water Resources Management Plan.
- f. Preparation of detailed budgets and timelines for the implementation of the WRMP.
- g. Development of a broadly-supported Implementation Plan to guide the transition to the new governance structure required to implement the WRMP.

- 3.5 Project to Ensure Water Availability in the Sub-basins Paccha, Azufre and Río Grande: The Project to Ensure Water Availability will contain the following elements:

- a. Preparation of a broadly-supported Project, developed to the level of a Feasibility Study, including the engineering designs of the hydraulic structures (such as small

reservoirs and irrigation canals) to ensure water availability in the Sub-basins Paccha, Azufre and Río Grande. This document will comply with the requirements of Peru's SNIP.

- b. Preparation of detailed budgets and timelines for the implementation of the Project for the Sub-basins Paccha, Azufre and Río Grande.
- 3.6 The Terms for Reference provide extensive detail on the particular activities involved in the various analyses, evaluations and recommendations required as part of the TC.
- 3.7 The principal outputs of this TC are the Water Resources Management Plan, the Project to Ensure Water Availability in the Sub-basins Paccha, Azufre and Río Grande, and the Implementation Plan for the WRMP. These documents will have been extensively consulted with the relevant stakeholders and beneficiaries in the context of the Public Consultation Program. A key indicator of the project's success will be the stakeholder's approval of, and support for, these outputs.

IV. COST AND FINANCING

- 4.1 Cost and financing: The development of the WRMP and the Project to Ensure Water Availability has an estimated total cost of US\$1.5 million, of which US\$1.2 million is to be financed by the Japanese Trust Fund for Consultancy Services (JCF) and US\$300,000 comes from local counterpart funding provided by INRENA, Peru's National Institute for Natural Resources. Table IV-I summarizes the TC's estimated costs. Annex II presents a detailed budget.

TABLE 1 -SUMMARY COST (IN US\$)

Product / Type of Expense	Person-Months	Avg. Cost/Month	JCF	Local Counterpart	TOTAL
Preparation of a Water Resources Management Plan (honoraria)	52.5	8,000	370,000	50,000	420,000
Development of Water Availability Project (honoraria)	50	6,000	250,000	50,000	300,000
Administrative Costs & Materials (travel, rent, supplies, maps, photographs, equipment, etc)			190,000	200,000	390,000
Overhead			270,000	0	270,000
Auditing			45,000	0	45,000
Contingencies			75,000	0	75,000
TOTAL			1,200,000	300,000	1,500,000

- 4.2 Sustainability: The WRMP includes the development of financial mechanisms aimed at ensuring the sustainability of the institutional structure to be created. In addition, the

Project to Ensure Water Availability includes the development of designs (to the level of feasibility) for the physical structures required to ensure water availability. These designs will allow the stakeholders to access the substantial existing resources for investment in mitigation and compensation, assigned to the Department of Cajamarca by the Fund created by the royalties paid by the Mining Sector in Peru. These royalties, combined with others from the private sector and/or the government, will provide the funds for building, operating and maintaining the required physical structures, as well as associated activities. However, stakeholders are not currently able to access these funds, given that there is insufficient capacity locally to prepare projects in such a manner that they fulfill the national requirements for approval of public investment projects. The present project will thus contribute to removing one of the major obstacles that stakeholders currently face with respect to accessing public funds.

V. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 5.1 Executing agency: In accordance with the requirements of the JCF, the Bank will be the executing agency of this TC. This is also in line with one of the major agreements reached with the communities and other stakeholders.
- 5.2 Executing mechanism: The project will be executed under the coordination of the Environment, Rural Development and Natural Disaster Division of the Infrastructure and Environment Department (INE/RND). The consulting services will be carried out by a consulting firm or association of firms, consisting of both Japanese and Peruvian specialists, as required by the rules of the JCF.
- 5.3 Program implementation readiness: The project is ready to enter the procurement process for the required consulting services as soon as approval by the Bank has been granted, since (i) counterpart resources have already been budgeted by INRENA for 2008; (ii) the project has been ratified by the Agencia Peruana de Cooperación Internacional (APCI); and (iii) the Terms of Reference (TOR) for the consulting services to be contracted have been agreed with the project's stakeholders and finalized.
- 5.4 Execution period and disbursement schedule: It is anticipated that the project will have an execution period of 12 months and a disbursement schedule of 18 months.
- 5.5 Procurement: The project will finance a single procurement process, namely the selection and contracting of a consulting firm or association of firms to carry out the entire work required for the present TC, as stipulated in the Terms of Reference. Procurement of these services will be carried out by the Bank's project team under the rules governing the Japanese Trust Fund for Consultancy Services (JCF), using a quality and cost-based selection process. The short-list will be finalized and the Request for Proposals sent out in October, with a final selection and the negotiation anticipated for early December.

VI. MONITORING AND EVALUATION

- 6.1 Monitoring: The work of the consulting firm and its compliance with the Terms of Reference for this project will be monitored by INE/RND in close coordination with INRENA, based on the submission of intermediate and final products as required in the TOR.
- 6.2 Technical and basic responsibility: Technical and basic responsibility for the project rests with the Environment, Rural Development and Natural Disaster Division of the Infrastructure and Environment Department (INE/RND). Additional support will be provided by the Bank's Country Office in Peru (COF/CEC).
- 6.3 Evaluation: This project will be evaluated based on the intermediary and final products listed in the Terms of Reference. Given that the project has an execution period of 12 months, no logical framework will be developed. Nevertheless, the TOR clearly detail the contents of the various reports, and strict adherence to the requirements in the TOR will be ensured by the project team, as well as verified during the consultations with stakeholders.
- 6.4 Auditing, financial management of the resources and reporting: Standard Bank procedures will be followed with respect to auditing, financial management of the resources and reporting.

VII. PROGRAM BENEFITS AND RISKS

- 7.1 Program benefits and development impacts: The principal benefit of this TC will be the development of a sound water resource planning process in both watersheds. Moreover, the products of this TC will enable local communities to access the existing funds that have been allocated to support development in mining areas. All three parties involved (local communities, government and the mining sector) will benefit in the long-run: (i) the communities will be able to access public and private funds for their projects, therefore increasing their incomes and improving their livelihood; (ii) the GOPE will be able to allocate funds and maintain social peace; and (iii) the mining industry will be able to continue their operations creating jobs and contributing to the general economy. Furthermore, the experience gained by all actors throughout the execution of the TC is likely to foster greater understanding between different stakeholders and thus reduce existing tensions. Thereby, all three parties will benefit, because this will contribute to creating a socio-political environment that is favorable for private investment in the mining sector, which in turn generates an economically highly important export commodity at the national level as well as jobs at the local level.

- 7.2 Target beneficiaries: The principal beneficiaries of the proposed TC will be the local communities, the local government and the mining operations in the Mashcón and Chonta Watersheds.
- 7.3 Risks: There has been an on-going conflict and lack of trust between the local communities and the mining sector in Cajamarca. Due to expansions in gold production at the Yanacocha mine, tensions worsened in past years, leading to the creation of Roundtable mediated by the IFC's Office of the Ombudsman. Yet, discussions terminated in 2006 without resolving the conflict. Recent improvements in the area are based on a tripartite agreement by the GOPE, the Community of Combayo and the Yanacocha Mine. As part of this agreement, the GOPE solicited the Bank's assistance with developing the WRMP. However, new incidents between the mining sector and local communities, unrelated to the current project, might affect the execution of the project.
- 7.4 To mitigate these risks to the extent possible, the Bank is adopting a very participatory and transparent approach for this TC. As part of these efforts, all parties recently agreed on the scope and contents of the TOR to be used in hiring the consultancy firm to prepare the WRMP. Furthermore, an extensive Plan of Consultation and Citizen Involvement will be developed and implemented throughout the execution of the TC.

VIII. ENVIRONMENTAL AND SOCIAL IMPACTS

- 8.1 The TC Profile was reviewed by the ESR Secretariat on July 20th, 2007. The recommendations made were integrated as appropriate into the Profile, the Plan of Operations and the Terms of Reference.
- 8.2 Given that this TC finances the development of a Management Plan by means of a strongly participatory process, the current project is not expected to have any negative social or environmental impacts. Indeed, the project is a critical step in addressing current conflicts over water usage in the area as well as promoting improved sectoral and cross-sectoral planning processes and better cohesion between public policies, legal agreements and institutional arrangements that govern the sector. Based on this assessment, the project team proposes that this TC be classified as a category "C" project.
- 8.3 The Bank has already hired a Peruvian expert in participatory and consultation processes to design a Public Consultation Program, which will be in compliance with all Bank policies on public participation. This Program will be executed as part of this Technical Cooperation.

IX. CERTIFICATION

- 9.1 I hereby certify that this operation was approved for financing under the Japanese Trust Fund for Consultancy Services (JCF) through a memorandum dated June 11, 2007 and signed by Keisuke Nakamura (Deputy Manager, RE2/FSS). Also, I certify that resources from the Japanese Trust Fund for Consultancy Services (JCF) are available for up to US\$1.2 million in order to finance the activities described and budgeted in this document. This certification reserves resources for the referenced project for a period of ten (10) calendar months counted from the date of signature below. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled, except in the case a new certification is granted. The commitment and disbursement of these resources shall be made only by the Bank in US dollar. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who shall have their remuneration defined and paid in the currency of such country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this Plan of Operations. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, for which the Fund is not at risk.

Marguerite Berger
VPC/GCM

Date

Goro Mutsuura
VPC/GCM

Date

**WATER RESOURCES MANAGEMENT PLAN FOR THE MASHCÓN AND CHONTA WATERSHEDS,
WITH EMPHASIS ON ENSURING WATER AVAILABILITY IN THE SUB-BASINS PACCHA, AZUFRE AND RÍO GRANDE
(PE-T1054)**

Logical Framework

Narrative Summary	Indicators	Means of Verification	Assumptions
Goal Statement			
To contribute to good water resource management practices in the Mashcón y Chonta watersheds	<p>Impact (2 year after project completion):</p> <ol style="list-style-type: none"> 1. The technical, economic, social, environmental, legal and institutional measures recommended through the WRMP for the short-term have been or are in the process of being implemented under the leadership of the Regional Government of Cajamarca 2. The communities, through the Regional Government, have formally presented the required documentation for accessing public and/or private (mining related) funds for mitigation and compensation projects 	<ol style="list-style-type: none"> 1. Certification by the community 2. Certification by the GOPE 	<ul style="list-style-type: none"> ▪ Continued political (locally, regionally and nationally) support resolving water resource conflict in the Mashcon and Chonta watersheds, and specifically for the implementation of the WRMP and Water Availability Project
Purpose			
The necessary instruments for resolving current water management problems in the Mashcón and Chonta Watersheds and ensuring water availability in the Sub-basins Paccha, Azufre and Río Grande de Chonta have been developed and are broadly-supported by stakeholders.	<p>Outcomes at project completion:</p> <ol style="list-style-type: none"> 1. A WRMP has been completed in accordance with Terms of Reference (TOR) and is broadly supported by relevant stakeholders 2. Water Availability Project has been completed in accordance with TOR and is broadly supported by relevant stakeholders 	<ol style="list-style-type: none"> 1. Final WRMP Document 2. Final Water Availability Project Document 3. Survey of representatives from community, Mine, local government and INRENA. 	<ul style="list-style-type: none"> ▪ Continued trend toward stabilization of relations between stakeholders in project area ▪ Stakeholders are willing to assume their respective roles in supporting the implementation of the WRMP and Water Availability Project

Narrative Summary	Indicators	Means of Verification	Assumptions
Components			
1. WRMP for the Mashcón and Chonta Watersheds completed	Within 12 months of consultancy start-up: <ol style="list-style-type: none"> 1.1. Problem diagnostic and critical problems identified 1.2. Alternative solutions for each critical problems evaluated and corresponding actions defined 1.3. Economic incentives and control mechanisms designed 1.4. WRMP document developed and consulted with stakeholders 1.5. Operational structure and program of activities for implementation of WRMP defined 1.6. Detailed budgets and timelines for implementation of WRMP prepared 1.7. Implementation Plan for WRMP prepared and consulted with stakeholders 	<ol style="list-style-type: none"> 1. Consultancy Progress Reports 2. Draft and Final WRMP Document 3. Reports on stakeholder consultations 	<ul style="list-style-type: none"> ▪ INRENA ensures that counterpart resources are committed as scheduled ▪ All key stakeholders participate in a constructive and organized manner according to their respective roles in the development of the WRMP and Water Availability Project ▪ Bidding process results in the hiring of a highly qualified consulting firm to develop the WRMP and Water Availability Project in a highly participatory and timely manner
2. Project to Ensure Water Availability in the Sub-basins Paccha, Azufre and Rio Grande completed	Within 12 months of consultancy start-up: <ol style="list-style-type: none"> 1. Water Availability Project prepared in accordance with TOR and requirements SNIP, and consulted with relevant stakeholders 2. Detailed budgets and timelines for implementation of the Project prepared and consulted with stakeholders 	<ol style="list-style-type: none"> 1. Consultancy Progress Reports 2. Draft and Final Water Availability Project Document 3. Reports on stakeholder consultations 	
Activities			
<ol style="list-style-type: none"> 1. WRMP for the Mashcón and Chonta Watersheds 2. Project to Ensure Water Availability in the Sub-basins Paccha, Azufre and Rio Grande 	<p>US\$420,000 (excludes admin costs, overhead, contingencies and final audit costs)</p> <p>US\$300,000 (excludes admin costs, overhead, contingencies and final audit costs)</p>	<p>Budget and Progress Reports submitted by Consultants</p>	<ul style="list-style-type: none"> ▪ All key stakeholders participate according to their respective roles in the development of the WRMP and Water Availability Project

**WATER RESOURCES MANAGEMENT PLAN FOR THE MASHCÓN AND CHONTA WATERSHEDS
AND PROJECT TO ENSURE WATER AVAILABILITY
(PE-T1054)**

ITEMIZED BUDGET

OUTPUT 1: Management Plan

Item	Unit	Number	Unit price (US\$)	Total
Cartography				
National Consultant	Days	40	250	10,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	10	200	2,000
Climatology				
National consultant	Days	30	250	7,500
Domestic fares	Trip	3	250	750
Domestic per diem	Days	15	200	3,000
Hydrology and hydrometeorology				
International consultant	Days	50	1,000	50,000
National consultant	Days	80	250	20,000
International fares	Trip	2	3,000	6,000
Domestic fares	Trip	4	250	1,000
International per diem	Days	20	200	4,000
Domestic per diem	Days	20	200	4,000
Geology, geomorphology, and sedimentology				
National consultant	Days	60	250	15,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	10	200	2,000
Hydrogeology and groundwater				
International consultant	Days	50	1,000	50,000
National consultant	Days	70	250	17,500
International fares	Trip	2	3,000	6,000
Domestic fares	Trip	3	250	750
International per diem	Days	10	200	2,000
Domestic per diem	Days	15	200	3,000
Ecology				
National consultant	Days	50	250	12,500
Domestic fares	Trip	3	250	750
Domestic per diem	Days	15	200	3,000
Soil science				
National consultant	Days	30	250	7,500
Domestic fares	Trip	3	250	750
Domestic per diem	Days	15	200	3,000
Water quality				
National consultant	Days	50	250	12,500
Domestic fares	Trip	2	250	500
Domestic per diem	Days	10	200	2,000

Item	Unit	Number	Unit price (US\$)	Total
Social and cultural conditions				
National consultant	Days	40	250	10,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	10	200	2,000
Sociology - anthropology				
National consultant	Days	50	250	12,500
Domestic fares	Trip	3	250	750
Domestic per diem	Days	9	200	1,800
Basic infrastructure				
National consultant	Days	50	250	12,500
Domestic fares	Trip	2	250	500
Domestic per diem	Days	6	200	1,200
Economic activities				
National consultant	Days	45	250	11,250
Domestic fares	Trip	2	250	500
Domestic per diem	Days	10	200	2,000
Institutional and legal considerations				
National consultant	Days	50	250	12,500
Domestic fares	Trip	3	250	750
Domestic per diem	Days	15	200	3,000
Political and administrative organization				
National consultant	Days	40	250	10,000
Domestic fares	Trip	3	250	750
Domestic per diem	Days	15	200	3,000
Land use and occupancy				
National consultant	Days	40	250	10,000
Domestic fares	Trip	6	250	1,500
Domestic per diem	Days	30	200	6,000
Existing socioeconomic programs and projects in the region				
National consultant	Days	40	250	10,000
Domestic fares	Trip	3	250	750
Domestic per diem	Days	15	200	3,000
Monitoring water quality and quantity				
National consultant - sociologist	Days	60	250	15,000
Domestic fares	Trip	8	250	2,000
Domestic per diem	Days	40	200	8,000
National consultant - social communicator	Days	70	250	17,500
Domestic fares	Trip	8	250	2,000
Domestic per diem	Days	35	200	7,000
Balance of water supply and demand				
International consultant	Days	35	1,000	35,000
National consultant	Days	50	250	12,500
International fares	Trip	4	3,000	12,000
Domestic fares	Trip	5	250	1,250
International per diem	Days	40	200	8,000
Domestic per diem	Days	30	200	6,000

Item	Unit	Number	Unit price (US\$)	Total
Evaluation of alternative solutions				
International consultant	Days	30	1,000	30,000
National consultant	Days	50	250	12,500
International fares	Trip	1	3,000	3,000
Domestic fares	Trip	2	250	500
International per diem	Days	10	200	2,000
Domestic per diem	Days	10	200	2,000
Sustainability mechanisms				
National consultant	Days	25	250	6,250
Domestic fares	Trip	2	250	500
Domestic per diem	Days	9	200	1,800
Total - Output 1				549,550
International fees				165,000
International fares				27,000
International per diems				16,000
National fees				255,000
Domestic fares				17,750
Domestic per diems				68,800

OUTPUT 2: Project to Ensure Water Availability

Item	Unit	Number	Unit price (US\$)	Total
Geology and geotechnics				
National consultant	Days	20	250	5,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	8	200	1,600
Hydrology and hydrometeorology				
National consultant	Days	20	250	5,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	8	200	1,600
Balance of water supply and demand				
National consultant	Days	20	250	5,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	8	200	1,600
Water quality				
National consultant	Days	10	250	2,500
Domestic fares	Trip	2	250	500
Domestic per diem	Days	8	200	1,600
Ecology				
National consultant	Days	20	250	5,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	8	200	1,600
Agrological study				
National consultant	Days	20	250	5,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	8	200	1,600

Item	Unit	Number	Unit price (US\$)	Total
Agro-economic study				
National consultant	Days	20	250	5,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	8	200	1,600
Evaluation of existing infrastructure				
National consultant	Days	20	250	5,000
Domestic fares	Trip	2	250	500
Domestic per diem	Days	6	200	1,200
Monitoring water quality and quantity				
National consultant - sociologist	Days	30	250	7,500
Domestic fares	Trip	3	250	1,000
Domestic per diem	Days	20	200	4,000
National consultant - social communicator	Days	35	250	8,750
Domestic fares	Trip	3	250	1,000
Domestic per diem	Days	18	200	3,600
Analysis of options				
International consultant	Days	20	1,000	20,000
National consultant	Days	30	250	7,500
International fares	Trip	2	3,000	6,000
Domestic fares	Trip	2	250	500
International per diem	Days	20	200	4,000
Domestic per diem	Days	10	200	2,000
Complementary research				
Topography	Overall	1	60,000	60,000
Geotechnics	Overall	1	35,000	35,000
Water quality	Overall	1	20,000	20,000
Soil science	Overall	1	30,000	30,000
Design of the interventions				
International consultant	Days	20	1,000	20,000
National consultant	Days	30	250	7,500
International fares	Trip	1	3,000	3,000
Domestic fares	Trip	2	250	500
International per diem	Days	10	200	2,000
Domestic per diem	Days	8	200	1,600
Economic assessment				
National consultant	Days	20	250	5,000
Domestic fares	Trip	1	250	250
Domestic per diem	Days	5	200	1,000
Risk analysis				
National consultant	Days	15	250	3,750
Domestic fares	Trip	1	250	250
Domestic per diem	Days	10	200	2,000
Environmental and social impact study				
National consultant	Days	20	250	5,000
Domestic fares	Trip	1	250	250
Domestic per diem	Days	10	200	2,000

Item	Unit	Number	Unit price (US\$)	Total
Management scheme				
National consultant	Days	20	250	5,000
Domestic fares	Trip	1	250	250
Domestic per diem	Days	10	200	2,000
Implementation plan				
International consultant	Days	20	1,000	20,000
National consultant	Days	30	250	7,500
International fares	Trip	1	3,000	3,000
Domestic fares	Trip	1	250	250
International per diem	Days	10	200	2,000
Domestic per diem	Days	8	200	1,600
Total - Output 2				360,450
International fees				60,000
International fares				12,000
International per diems				8,000
National fees				95,000
Domestic fares				8,250
Domestic per diems				32,200
Subcontracts				145,000