

INTER-AMERICAN DEVELOPMENT BANK
TECHNICAL COOPERATION PROGRAM (TRUST FUND FINANCING)

TECHNICAL COOPERATION PROFILE

I. GENERAL INFORMATION

Program Name/Number:	Experimental Economics for Water Resources Management (PE-T1051)		
Name of the Trust Fund:	IDB-Netherlands Water Partnership Program (INWAP)		
Beneficiary country:	Republic of Peru		
Beneficiaries:	Water User Organizations, farmers, agribusinesses, local universities.		
Executing agency:	The Bank, through its Environment and Natural Resources Division of the Regional Department 3.		
Team Leader/Members:	Geoffrey Cannock (RE3/EN3), Team Leader; Mark Wenner (SDS/RUR), Alejandra Palma (RE2/EN2), Joseph Mileswski (COF/CPE), Diego Buchara (LEG/OPR); and Gisella Barreda (RE3/EN3).		
Financing plan:	IDB: (INWAP)	US\$150,000 (non reimbursable)	
	Total:	US\$150,000	
Tentative dates:	Execution:	15 months	
	Disbursement:	18 months	

II. BACKGROUND

- 2.1 There is a broad consensus regarding the importance of Integrated Water Resources Management (IWRM). IWRM requires the consideration of all sources and uses of water to achieve the objectives of: (i) conserving water through a more efficient allocation of the resource; (ii) solving conflicts among competing uses and users; (iii) accounting for the social, economic, and environmental value of water; and (iv) increasing the participation of communities and the private sector in decision-making and financing.¹ However, the implementation of a coherent policy across these sometimes conflicting objectives has proven to be a challenge.

¹ Strategy for Integrated Water Resources Management. Inter-American Development Bank. Washington D.C. 1998.

- 2.2 The opportunities for improving IWRM lie not only in the financing of infrastructure to increase water supply but also more critically in the improvement of water management institutions. The central questions to be analyzed by this technical cooperation are how to price water and what types of institutions should be used for its allocation and for the operation and maintenance of water distribution systems. In terms of valuing the resource, governments or market mechanisms can determine price. In terms of institutions, the possible arrangements include: customary rules, informal and formal tradable water rights, entitlements as well as potential hybrids among the listed alternatives. A careful and informed choice among these allocative mechanisms is important since each one has different welfare implications. For example, it has been argued that formal tradable water rights have the greatest potential to achieve efficient allocations, but they have also been criticized because they may not take account of environmental values and may not capture community concerns regarding IWRM decision-making. Either centralized institutions (i.e. government owned entities) or decentralized institutions (i.e. local water user associations) can be used for operation and maintenance of water delivery systems, but similar tradeoffs arise. Local institutions may be more responsive to local preferences, but lack the resources to operate at an efficient scale. Choosing pricing instruments and management structures is fraught with danger because access to water can be a politically sensitive issue. The scarcer the commodity the higher the level of sensitivity and the greater the difficulty in arriving at viable solutions.
- 2.3 The implementation of the pricing and institutional reforms needed for an IWRM entails risk. Institutional change is in general costly, potentially disruptive, and difficult to reverse, constituting what is essentially an uncontrolled experiment on the inhabitants of a watershed or river basin.
- 2.4 This technical cooperation avoids the costly and disruptive aspects of uncontrolled institutional change by investigating the critical elements of alternative institutions for IWRM in a controlled setting. To achieve this objective the technical cooperation makes use of the innovative tool of experimental economics. Experimental economics is a relatively new field in economics that recently received recognition when Vernon Smith received the Nobel Memorial Prize in Economics “for having established laboratory experiments as a tool in empirical economic analysis.” The technique yields insights into economic behavior by systematically changing the conditions faced by the participants of an experiment in a tightly controlled environment. The changing conditions represent the policy variables of interest, and the behavioral reaction of the participants provides insights that enable the analysis of a wide range of policy alternatives. An important advantage of economic experiments is that they are forward looking, providing answers to policy questions for which other approaches can’t give reliable prescriptions. While case studies and econometric studies are useful for understanding existing policies, these have limited applicability about new policies for which data do not yet exist.
- 2.5 The experimental methodology is a replicable approach for policy simulation that provides decision makers with information so that they can avoid the costs of implementing inappropriate policies. Economic experiments are also inexpensive and quick to implement relative to randomized evaluations, and other approaches to empirical policy analysis. These alternative methods require either panel data wherein subjects exposed to two

different policy or treatment regimes, or very long time series datasets. Experiments in general can be done in a few months and require a smaller set of participants.

- 2.6 Experimental economics is a promising tool for improving the design of instruments for water allocation. Experiments are playing an important role in the design and implementation of environmental and water management policies in developed countries, especially in the western arid states of the United States. For example, a group of experimentalists recently developed a prototype of a California water transfer model and used laboratory experiments to test a computer-assisted water market. They found that these “smart markets” could substantially reduce transaction costs and yield highly efficient outcomes while including non-consumptive values (such as environmental values, in stream flows or regional economic impacts) into the water allocation mechanism.²
- 2.7 One of the lessons of the California experiments and of policy experiments more generally is that the particulars of the trading institution can have outcomes on the efficiency of allocations that cannot be predicted by economic theory. Particular concerns in the LAC are likely to be associated with whether the introduction of formal tradable rights will outperform allocation mechanisms associated with existing water user associations. The experimental approach allows for the most informative examination of these and related issues, without imposing undue risks on the welfare of water users.
- 2.8 Water allocation in Peru is still devoted significantly to irrigated agriculture, but competing water uses and environmental concerns associated with irrigation are growing. There is still a lack of truly integrated water resource management systems in Peru. The country has the potential to greatly benefit from the adoption of more economically efficient and environmentally sound practices for water allocation.
- 2.9 Current regulations in Peru regarding irrigation tariffs establish that: (i) all water users be organized in Water Users Associations (WUA) along local irrigation districts; (ii) tariffs be cost-based and should cover operation and maintenance (O&M), secondary infrastructure, watershed works, as well as environmental costs; (iii) tariffs should be split up in three components, namely, revenues for the WUA to carry out the O&M and secondary irrigation works, amortization to cover capital costs reimbursements for the Government, and a natural resources levy paid to the State for being able to use water; and (iv) tariffs should be proposed by the local irrigation authority and approved by the WUA; in case of a disagreement, then an *Ad-Hoc* Commission will establish them. However, these policies are not being applied nor enforced. In practice, WUA have been setting the water tariffs themselves with scant if any supervision. For instance, tariffs should be increase 386% on average to reach international efficiency benchmarks. Delinquencies on the water tariffs range between 10% and 30%.
- 2.10 Property rights for irrigation water have not been defined for Peru yet, except for upcoming irrigation projects under private sector participation schemes to build, operate, and own irrigation infrastructure. Metering facilities are not in place either. Thus, there is still no formal water market nor well-established informal water markets.

2 Murphy, J. J. et al. (2000). The Design of “Smart” Water Market Institutions Using Laboratory Experiments, *Environmental and Resource Economics* 17: 375-394.

- 2.11 Peru has made significant inroads regarding the recognition of water usage. About 162,000 farms have been granted specific rights as water users since the Water Rights Regularization Program was launched in 2004. This administrative recognition may set the foundation for the application of the new water law currently tabled in Congress that would allow the formal adjudication, and registration of water rights.

III. OBJECTIVE

- 3.1 The general objective of this technical cooperation is to contribute to an adoption of sounder irrigation water allocation and management practices in Peru by designing and testing pricing instruments and management structures that take into consideration local water governance conditions and community preferences.
- 3.2 The particular objectives include: (i) developing an experimental design that allows testing of the performance of alternative Peruvian water management arrangements in terms of efficiency, as well as other criteria such as environmental sustainability, conflict reduction, equity, and the participation of communities and the private sector; (ii) transferring to Peruvian researchers and policymakers the necessary knowledge for using the experimental tool in the elaboration of IWRM strategies and plans; (iii) demonstrating the use of the experimental design by applying it to a pilot area in Peru; and (v) formulating recommendations for better water governance that arise from the experiment so that the Governments of Peru, as well as the Inter-American Development Bank can benefit in the design of future projects.

IV. DESCRIPTION

- 4.1 Researchers in collaboration with stakeholders and IDB team project will identify one or two river basins to be used as the pilot area for demonstration purposes in Peru contingent on the availability of data and quality of institutional support. The aim will be to demonstrate the applicability of experimental economics as a means to improve IWRM.
- 4.2 At least two instruments for IWRM will be analyzed and compared to the status quo. These may include water-pricing mechanisms, river basin organizations, water user associations, informal water transfers, and formal water markets. The particular instruments investigated in the experiment will be determined by the consultants according to local conditions and in consultation with stakeholders and IDB team project.

A. Activities

- 4.3 Select location and explain experiment to stakeholders:
- a. The likely pilot sites are linked to current GOP programs currently under preparation, such as the Program for Integrated Water Management, as well as investment projects for the watersheds in Olmos, Majes, among others.

- b. Verify that the selected location meets the minimum requirements for the successful implementation of the experiment in the expected timeline of the TC.
- c. Conduct a multi-stakeholder planning and methodological workshop in Peru to explain the experimental approach to likely participants in the selected river basin and policy makers.

4.4 Develop a controlled and replicable laboratory experiment:

- a. Contact and establish collaboration arrangements with relevant local actors.
- b. Gather secondary information on local institutional contexts for water governance and pricing issues to identify relevant questions to be analyzed.
- c. Organize focus groups in Peru to identify the concerns of local stakeholders regarding water governance and pricing issues and incorporate the critical issues.
- d. Present the initial experimental design to the IDB team project for vetting and approval.
- e. Gather data necessary to parameterize the agreed experimental design; incorporating the relevant local conditions of the pilot river basin area.
- f. Elaborate experimental protocol, computer program and manual instructions.

4.5 Implement the experiment and analyze the results:

- a. Run a test(s) with university students or other appropriate subjects. Revise and perfect the experimental protocol.
- b. Recruit subjects from the stakeholders pool in the selected pilot river basin and run the experiment.
- c. Collect and organize data resulting from the experiment and from the survey questionnaires.
- d. Process the results of the experiment and analyze the performance of the alternative water management instruments under investigation.
- e. Prepare a document with the results and policy recommendations to implement the IWRM instruments arising from the experiment.

4.6 Transfer of Knowledge and Local Dissemination:

- a. Transfer knowledge to Peruvian government authorities, universities, and NGO's, as well as IDB team project in the methods of experimental economics by including interested local parties and Bank team project in the development of the design, the protocols, and the actual testing. The Ministry of Economics and Finance would

facilitate the participation of the The Instituto Nacional de Recursos Naturales (INRENA), and the Universidad Nacional Agraria-La Molina during the execution of the experimental studies.

- b. Organize a workshop in Peru to disseminate results.
- c. Make a final presentation of the methodology and results to IDB staff in HQ.

B. Consulting Services

- 4.7 The consulting services required to carry out the above mentioned activities will be provided by a team of six individual consultants. A specialist in experimental economics designs with knowledge of asset markets experiments will be hired as project coordinator and will be responsible for the development and implementation of the experimental protocol. A specialist in water management policy in Peru will be needed to provide crucial knowledge of in-country geographic, climatic, hydrologic and economic conditions, as well as the institutional characteristics of water governance structures and processes in the selected river basin. Also critical to the parameterization of the experiment will be the participation of a natural resource economics specialist, with recent experience in a similar application to another watershed in the region. A senior expert in experimental economics designs for water management will serve as the project advisor, assuring the technical quality of the project during the design, implementation and analysis of the experiment. Finally, the team of consultants will include a programmer with experience in developing software for economic experiments, as well as the support of a junior consultant.

C. Outputs

- 4.8 The outputs required from the above activities are:
- a. Analytical paper including the results of the experiment, as well as recommendations to improve the design and acceptability of integrated water management instruments for Peru. The annexes should include the computer programming, protocols, statistics, and maps. Five hard copies as well as open access electronic media (Word, Excel files on CD).
 - b. Organization in Peru of two workshops to increase stakeholders' understanding of - and commitment towards- the use IWRM instruments for water allocation. At the final workshop the methodology and results will be presented.
 - c. Presentation of the methodology and results at a workshop in Washington DC for Bank staff and interested parties.
 - d. Experimental design (including model and data utilized), corresponding software, data from experimental results.

D. Duration

- 4.9 The estimated number of consultancy days required by the project is approximately 230 days, allocated between the individual consultants as shown in the table in section VII.

V. JUSTIFICATION

- 5.1 The value of this technical cooperation clearly exists because it supports the Bank's Country Strategy with Peru in the strategic areas of competitiveness, and public sector efficiency and effectiveness. The Government of Peru (GOP) is currently carrying out several policy reforms for improving the management of water resources, and has also started preparing investment programs for watershed management and irrigation projects. Peru has invested US\$3.5 billion in irrigation projects during the last 25 years. However, the infrastructure has been poorly managed, dismal economic returns have been recorded, and there have been negative environmental impacts. As a result, the GOP is implementing a "Program for Integrated Water Resources Management" with the following objectives: (i) improve institutional and regulatory framework to achieve higher efficiency in the delivery of water; and (ii) increase private sector participation, including public-private partnerships, to build, co-finance, operate large-scale irrigation schemes; as well as to increase private sector participation in the secondary irrigation systems to boost high-value exports. During the design and preparation of the project the main challenges to address will be the following: (i) how to encourage private sector participation in secondary infrastructure that may be subject to squatter takeover; (ii) how to allocate irrigated land in new schemes between agribusinesses, existing smallholder farmers in the region, and landless persons and/or migrants from other areas interested in acquiring irrigated land; (iii) how to establish and enforce water tariffs that recoup the full costs of secondary infrastructure and the operation and maintenance costs of the primary irrigation infrastructure; and (iv) how to minimize the cost of the government guarantee to be provided to the private sector investors seeking financing. A multi-stakeholder council has been proposed to address most of these issues but experience has shown that these councils have failed in the past, often ending in a low effort/low efficiency equilibrium. The successful application of field experiments to identify adequate institutional designs would be extremely valuable.
- 5.2 Additionally, the Bank has made it a priority to support its borrower-member countries in the adoption of IWRM. There is still limited experience regarding the implementation of IWRM principles, especially in Latin America and the Caribbean.

VI. ENVIRONMENTAL AND SOCIAL IMPACTS

- 6.1 The technical cooperation is expected to have positive environmental and social impacts since its activities promote the integrated water resources management, which includes environmental sustainability and participatory principles.

VII. COST AND FINANCING

Table 1: Budget (in US dollars)

Type of Expense	Trust Fund
A. Honorarium:	
1. Coordinator (expert in experimental methods and asset markets)	
Honorarium: 50 working days x US\$500	25,000
2. Senior Advisor (expert in experimental designs on water management)	
Honorarium: 25 working days x US\$500	12,500
3. Local Consultant (expert in Peruvian water management policy)	
Honorarium: 45 working days x US\$370	16,650
4. Natural Resource Economist (with experience in a similar application)	
Honorarium: 30 working days x US\$350	10,500
5. Computer Science/Programmer	
Honorarium: 30 working days x US\$400	12,000
6. Junior Consultant	
Honorarium: 50 working days x US\$150	7,500
B. Per diem:	
60 days x US\$200	12,000
C. International Travel Costs (Home base to Peru):	
4 tickets x 3 consultants x US\$1,500	18,000
D. Local Travel Costs (from capital to work sites):	
4 tickets x 2 experts x US\$250 (may include rental of vehicles were applicable)	2,000
E. Operational Costs:	
Experiment implementation (materials and logistics)	17,000
F. Dissemination	
Report production (printing, editing, translation)	3,000
Participatory planning workshop in Peru with stakeholders and researchers	5,000
In-country seminar to Peruvian actors & Presentation in IDB HQ by lead researcher(s)	7,000
G. Other Costs:	
Unforeseen Costs	1,850
TOTAL	150,000

VIII. RESPONSIBILITY IN THE BANK

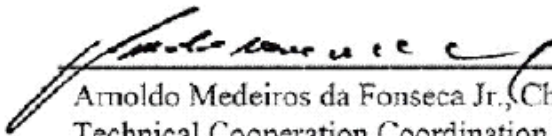
- 8.1 Technical responsibility: The technical responsibility for this technical cooperation, including competitive selection of consultant firms, work supervision, and quality control of reports, will rest with Geoffrey Cannock (RE3/EN3), Tel: (202) 623-1472; Fax: (202) 623-1998; email: geoffreyca@iadb.org.
- 8.2 Responsibility for disbursements: The Bank will be responsible for the selection and hiring of consulting services pursuant to its policies and procedures. Responsibility for the general administration, including contracts and disbursements, rests with RE3/EN3.

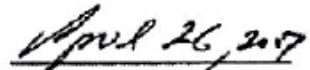
IX. RECOMMENDATION

- 9.1 Geoffrey Cannock, designated team leader for the project of the reference, recommends the approval of this operation and the use of resources from the IDB-Netherlands Water Partnership Program (INWAP) totaling up to US\$150,000 in order to finance the corresponding technical cooperation.

X. CERTIFICATION

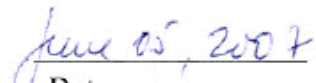
- 10.1 I hereby certify that this operation was approved for financing under the IDB-Netherlands Water Partnership (NWP) through an e-mail dated March 8, 2006 and signed by Alex Gerbrandy, First Secretary of The Netherlands Embassy. Also, I certify that resources from the IDB-Netherlands Water Partnership (NWP) are available for up to US\$150,000 in order to finance the activities described and budgeted in this document. This certification reserves resources for the referenced project for a period of twelve (12) 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 dollars. 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.


Arnaldo Medeiros da Fonseca Jr., Chief
Technical Cooperation Coordination Unit


Date

XI. APPROVAL


Alvaro Llosa, Chief
RE3/EN3 – Regional Operations Department 3


Date

PERU**Experimental Economics for Water Resources Management
(PE-T1051)****Project Coordinator****TERMS OF REFERENCE****I. BACKGROUND**

- 1.1 Water allocation in Peru is still devoted significantly to irrigated agriculture, but competing water uses and environmental concerns associated with irrigation are growing. Given that there is still a lack of truly integrated water resource management (IWRM) systems, the country has the potential to greatly benefit from the adoption of more economically efficient and environmentally sound practices for water allocation.
- 1.2 In this context, the Government of Peru (GOP) and the Inter-American Development Bank (IDB) are collaborating in analyzing IWRM systems according to the technical cooperation “Designing Policy Instruments for Integrated Water Resource Management Using Experimental Economics (PE-T1051)”.
- 1.3 The general objective of the technical cooperation is to contribute to the adoption of sounder irrigation water allocation and management practices in Peru by using economic experiments to design and test pricing instruments and management structures that take into consideration local water governance conditions and community preferences. The particular objectives include: (i) developing an experimental design that allows testing of the performance of alternative Peruvian water management arrangements in terms of efficiency, as well as other criteria such as environmental sustainability, conflict reduction, equity, or the participation of communities and the private sector; (ii) transferring to Peruvian researchers and policymakers the necessary knowledge for using the experimental tool in the elaboration of IWRM strategies and plans; (iii) demonstrating the use of the experimental design by applying it to a pilot area in Peru; and (v) formulating recommendations for better water governance that arise from the experiment so that the Governments of Peru, as well as the Inter-American Development Bank can benefit in the design of future projects.
- 1.4 Current regulations in Peru regarding irrigation tariffs establish that: i) all water users be organized in Water Users Associations (WUA) along local irrigation districts; ii) tariffs be cost-based and should cover operation and maintenance (O&M), secondary infrastructure, watershed works, as well as environmental costs; iii) tariffs should be split up in three components, namely, revenues for the WUA to carry out the O&M and secondary irrigation works, amortization to cover capital costs reimbursements for the Government, and a natural resources levy paid to the State for being able to use water; iv) tariffs should be proposed by the local irrigation authority and approved by the WUA; in case of a disagreement, then an *Ad-Hoc*

Commission will establish them. However, these policies are not being applied nor enforced. In practice, WUA have been setting the water tariffs themselves with scant if any supervision. For instance, tariffs should be increase 386% on average to reach international efficiency benchmarks. Delinquencies on the water tariffs range between 10% and 30%.

- 1.5 During the design and preparation of the technical cooperation the main challenges to address will be the following: (i) how to encourage private sector participation in secondary infrastructure that may be subject to squatter takeover; (ii) how to allocate irrigated land in new schemes between agribusinesses, existing smallholder farmers in the region, and landless persons and/or migrants from other areas interested in acquiring irrigated land; (iii) how to establish and enforce water tariffs that recoup the full costs of secondary infrastructure and the operation and maintenance costs of the primary irrigation infrastructure; and (iv) how to minimize the cost of the government guarantee to be provided to the private sector investors seeking financing. A multi-stakeholder council has been proposed to address most of these issues but experience has shown that these councils have failed in the past, often ending in a low effort/low efficiency equilibrium. The successful application of field experiments to identify adequate institutional designs would be extremely valuable.
- 1.6 Peru has made significant inroads regarding the recognition of water usage. About 162,000 farms have been granted specific rights as water users since the Water Rights Regularization Program was launched in 2004. This administrative recognition may set the foundation for the application of the new water law currently tabled in Congress that may allow the formal adjudication, and registration of water rights.
- 1.7 The activities of the technical cooperation are organized in five phases: (i) select the pilot location (river basin) and establish collaboration with local stakeholders; (ii) conduct a multi-stakeholder workshop in Peru to explain the methodology and benefits of the experimental approach to the stakeholders and policy makers; (iii) develop a controlled and replicable laboratory experiment; (iv) implement the experiment and analyze the results; and (v) transfer of knowledge and dissemination.
- 1.8 The activities will be performed by a team of individual consultants including: (i) an expert in designing and implementing experiments, including asset market experiments, who would also be the project coordinator; (ii) an expert in Peruvian water management policy; (iii) a natural resource economist expert in tradable water markets; (iv) a project advisor expert in experimental economics designs for water management; (v) a programmer; and (vi) a junior consultant.

II. OBJECTIVES

- 2.1 The general objective of the project coordinator is to lead the technical work, assuring the quality and the timely delivery of the technical cooperation's outputs to the IDB and GOP. The specific objectives of this consultancy include: (i) identification and coordination of all the necessary activities; (ii) design and implementation of an adequate economic experiment to

address the selected local water management issues; and (iii) analysis of the experimental results and corresponding policy recommendations to improve the design and political acceptability of integrated water management instruments.

III. CHARACTERISTICS OF THE CONSULTANCY

- 3.1 Type of consultancy: Individual, international consultant under a *lump sum* arrangement. Payments shall be made as established in Section V of these Terms of Reference.
- 3.2 Starting date and duration: a total of 50 non-continuous working days, during the period between [TBD] and [TBD].
- 3.3 Place of work: The work is to be done in the U.S.A. at the consultant's office. Two missions to Peru are expected for a total of 14 days. Tentatively, it is expected that the consultant will make one national travel and two international travels of one-week duration each.
- 3.4 Qualifications: Ph.D. in Economics, Agricultural and Resource Economics or related field, with proven experience in designing and implementing economic experiments, preferably in asset markets, as well as project management experience in developing countries. Minimum professional experience of five years.

IV. ACTIVITIES

A. Coordination

- 4.1 The activities will be the following:
 - a. Develop a work plan and supervise the successful implementation of its activities.
 - b. Assign tasks and responsibilities to the other consultants and facilitate the coordination among them.
 - c. Supervise the progress of the other consultants, providing technical support and recommendations as needed.
 - d. Assure consistency in the activities and outputs of all the consultants.
 - e. Supervise the delivery of outputs by the other consultants to assure that the work plan is met, as well as the requirements set by the Bank and GOP.

B. Development of a Controlled and Replicable Laboratory Experiment

4.2 The activities will be the following:

- a. Define the initial set of data required to design and implement the economic experiment.
- b. Verify that the selected location meets the minimum requirements for the successful implementation of the experiment..
- c. Develop the theoretical model of alternative Peruvian water management institutions for the selected pilot river basin(s) that is necessary to design and implement the experiment.
- d. Present initial treatments of the experimental design for vetting and approval.
- e. Elaborate the experimental design (treatment matrix, protocol and manuals, budget).
- f. Parameterize the experimental design to incorporate relevant local conditions.
- g. Prepare the instructions for the programmer, as well as supervise the programming process and the elaboration of final software and documentation (manuals, etc).

C. Implementation of the Economic Experiment and Analysis of Results

4.3 The activities will be the following:

- a. Run a test(s) with university students or other appropriate subjects. Revise and perfect the experimental protocol.
- b. Supervise the recruitment of subjects from the pool of stakeholders in the selected pilot river basin.
- c. Conduct the experimental sessions in the selected pilot river basin.
- d. Collect and organize data resulting from the experiment and from the survey questionnaires.
- e. Process the results of the experiment and analyze the performance of the alternative water management instruments under investigation.
- f. Prepare a document with the results and policy recommendations to implement IWRM arising from the experiment.

D. Other activities

4.4 Other activities will include:

- a. Participate in a multi-stakeholder planning and methodological workshop in Peru.

- b. Presentation of the methodology and results at a workshop in Washington, DC for Bank staff and interested parties.
- c. The consultant will be available for consultations by other members of the team, IDB and GOP on key technical matters of the project.

V. REPORTS AND PAYMENTS

- 5.1 The consultant shall submit the following reports for approval by the Bank-GOP:
- a. Deliverable #1: A draft of the Work Plan and timetable with all the activities needed to accomplish the objectives of the technical cooperation (within the first ten days of work).
 - b. Deliverable #2: The proposed initial treatments for the experimental design (at the time agreed in the Work Plan).
 - c. Deliverable #3: Intermediate report with the experimental design including model and corresponding software (at the time agreed in the Work Plan, but before the implementation of the experiments).
 - d. Deliverable #4: Analytical paper including the results of the experiment, as well as the analysis and recommendations to improve the design and political acceptability of integrated water management institutions and instruments for Peru. The annexes should include the computer programming, protocols, statistics, and maps. Five hard copies as well as open access electronic media (Word, Excel files on CD).
- 5.2 The schedule of payments will be as follows:
- a. 30% at contract signing.
 - b. 20% upon approval by the Bank of Deliverables #1 and #2.
 - c. 20% upon approval by the Bank of Deliverable #3.
 - d. 30% after approval by the Bank of Deliverable #4.

VI. COORDINATION

- 6.1 The coordination of instructions and advice to the consultant will be through the EN3 with support from the IDB Country Office in Peru and the counterpart coordinator at the MEF. The consultant will work very closely with all the other individual consultants participating in the study.

PERU

**Experimental Economics for Water Resources Management
(PE-T1051)**

Computer Programmer

TERMS OF REFERENCE

I. BACKGROUND

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- 1.4 Current regulations in Peru regarding irrigation tariffs establish that: (i) all water users be organized in Water Users Associations (WUA) along local irrigation districts; (ii) tariffs be cost-based and should cover operation and maintenance (O&M), secondary infrastructure, watershed works, as well as environmental costs; (iii) tariffs should be split up in three components, namely, revenues for the WUA to carry out the O&M and secondary irrigation works, amortization to cover capital costs reimbursements for the Government, and a natural resources levy paid to the State for being able to use water; (iv) tariffs should be proposed by the local irrigation authority and approved by the WUA; in case of a disagreement, then an *Ad-Hoc* Commission will establish them. However, these policies are not being applied nor

enforced. In practice, WUA have been setting the water tariffs themselves with scant if any supervision. For instance, tariffs should be increase 386% on average to reach international efficiency benchmarks. Delinquencies on the water tariffs range between 10% and 30%.

- 1.5 During the design and preparation of the technical cooperation the main challenges to address will be the following: (i) how to encourage private sector participation in secondary infrastructure that may be subject to squatter takeover; (ii) how to allocate irrigated land in new schemes between agribusinesses, existing smallholder farmers in the region, and landless persons and/or migrants from other areas interested in acquiring irrigated land; (iii) how to establish and enforce water tariffs that recoup the full costs of secondary infrastructure and the operation and maintenance costs of the primary irrigation infrastructure; and (iv) how to minimize the cost of the government guarantee to be provided to the private sector investors seeking financing. A multi-stakeholder council has been proposed to address most of these issues but experience has shown that these councils have failed in the past, often ending in a low effort/low efficiency equilibrium. The successful application of field experiments to identify adequate institutional designs would be extremely valuable.
- 1.6 Peru has made significant inroads regarding the recognition of water usage. About 162,000 farms have been granted specific rights as water users since the Water Rights Regularization Program was launched in 2004. This administrative recognition may set the foundation for the application of the new water law currently tabled in Congress that may allow the formal adjudication, and registration of water rights.
- 1.7 The activities of the technical cooperation are organized in five phases: (i) select the pilot location (river basin) and establish collaboration with local stakeholders; (ii) conduct a multi-stakeholder workshop in Peru to explain the methodology and benefits of the experimental approach to the stakeholders and policy makers; (iii) develop a controlled and replicable laboratory experiment; (iv) implement the experiment and analyze the results; and (v) transfer of knowledge and dissemination.
- 1.8 The activities will be performed by a team of individual consultants including: (i) an expert in designing and implementing experiments, including asset market experiments, who would also be the project coordinator; (ii) an expert in Peruvian water management policy; (iii) a natural resource economist expert in tradable water markets; (iv) a project advisor expert in experimental economics designs for water management; (v) a programmer; and (vi) a junior consultant.

II. OBJECTIVES

- 2.1 The main objective of the consultancy is to prepare a computer program for the experimental design.

III. SPECIFICATIONS FOR THE CONSULTANCY SERVICES

- 3.1 Type of consultancy: Individual, international consultant under a *lump sum* arrangement. Payments shall be made as established in Section V of these Terms of Reference.
- 3.2 Starting date and duration: a total of 30 non-continuous working days, during the period between [TBD] and [TBD].
- 3.3 Place of work: The work is to be done at the consultant's office. The consultant will not be required to travel.
- 3.4 Qualifications: MSc. Degree in Computer Science, mathematics, (PhD. preferred), with proven experience in designing programs for economic experiments. Minimum professional experience of 5 years.

IV. ACTIVITIES

- 4.1 The computer programmer will be available for consultation by other members of the team on key technical matters of the project and will be responsible for the following activities:
 - a. Identifying the adequate computer language given the conditions in the local experimental laboratory.
 - b. Programming the experimental design according to the instructions provided by the project coordinator.
 - c. Assisting and training other consultants in running the program, troubleshooting and data retrieving.
 - d. Providing the software for the experiment as well as the corresponding documentation with computer codes and manuals for executing the program.
 - e. Assisting the junior consultant who will translate the program and documentation into Spanish.

V. REPORTS AND PAYMENTS

- 5.1 The consultant shall submit the following deliverables for approval by the Bank-GOP:
 - a. Deliverable #1: A brief report on the technical options for programming the experiment (5-10 pages).

- b. Deliverable #2: A first version of the program for running the pilot experiments according to the specifications provided by the project coordinator.
- c. Deliverable #3: A user's manual and the basic training required by the project team to be able to use the program in implementing the experiment.
- d. Deliverable #4: A final version of the program for running the field experiment according to the specifications provided by the project coordinator. The consultant must either provide the license or make sure that the Bank already has a license to use the software/interface or programming language. The program should be written in the most user-friendly software/interface or programming language as possible.

5.2 The schedule of payments will be as follows:

- a. 20% at contract signature.
- b. 30% upon approval by the Bank of Deliverables #1 and #2.
- c. 30% upon approval by the Bank Deliverable #3 and after the completion of basic training to the project's team members.
- d. 20% upon approval by the Bank of Deliverable #4, which requires the successful data retrieval from the experimental sessions in Peru using the computer program.

VI. COORDINATION

- 6.1 The consultant will coordinate his work with all the other individual consultants participating in the Technical Cooperation by working closely with the Project Coordinator.
- 6.2 The coordination of instructions and advice to the consultant will be through the EN3 with support from the IDB Country Office in Peru and the counterpart coordinator at the MEF. The consultant will work very closely with all the other consultants participating in the study.

PERU**Experimental Economics for Water Resources Management
(PE-T1051)****Expert in Water Resource Management in Peru****TERMS OF REFERENCE****I. BACKGROUND**

- 1.1 Water allocation in Peru is still devoted significantly to irrigated agriculture, but competing water uses and environmental concerns associated with irrigation are growing. Given that there is still a lack of truly integrated water resource management (IWRM) systems, the country has the potential to greatly benefit from the adoption of more economically efficient and environmentally sound practices for water allocation.
- 1.2 In this context, the Government of Peru (GOP) and the Inter-American Development Bank (IDB) are collaborating in analyzing IWRM systems according to the technical cooperation “Designing Policy Instruments for Integrated Water Resource Management Using Experimental Economics (PE-T1051)”.
- 1.3 The general objective of the technical cooperation is to contribute to the adoption of sounder irrigation water allocation and management practices in Peru by using economic experiments to design and test pricing instruments and management structures that take into consideration local water governance conditions and community preferences. The particular objectives include: (i) developing an experimental design that allows testing of the performance of alternative Peruvian water management arrangements in terms of efficiency, as well as other criteria such as environmental sustainability, conflict reduction, equity, or the participation of communities and the private sector; (ii) transferring to Peruvian researchers and policymakers the necessary knowledge for using the experimental tool in the elaboration of IWRM strategies and plans; (iii) demonstrating the use of the experimental design by applying it to a pilot area in Peru; and (iv) formulating recommendations for better water governance that arise from the experiment so that the Governments of Peru, as well as the Inter-American Development Bank can benefit in the design of future projects.
- 1.4 Current regulations in Peru regarding irrigation tariffs establish that: (i) all water users be organized in Water Users Associations (WUA) along local irrigation districts; (ii) tariffs be cost-based and should cover operation and maintenance (O&M), secondary infrastructure, watershed works, as well as environmental costs; (iii) tariffs should be split up in three components, namely, revenues for the WUA to carry out the O&M and secondary irrigation works, amortization to cover capital costs reimbursements for the Government, and a natural

resources levy paid to the State for being able to use water; (iv) tariffs should be proposed by the local irrigation authority and approved by the WUA; in case of a disagreement, then an *Ad-Hoc* Commission will establish them. However, these policies are not being applied nor enforced. In practice, WUA have been setting the water tariffs themselves with scant if any supervision. For instance, tariffs should be increase 386% on average to reach international efficiency benchmarks. Delinquencies on the water tariffs range between 10% and 30%.

- 1.5 During the design and preparation of the technical cooperation the main challenges to address will be the following: (i) how to encourage private sector participation in secondary infrastructure that may be subject to squatter takeover; (ii) how to allocate irrigated land in new schemes between agribusinesses, existing smallholder farmers in the region, and landless persons and/or migrants from other areas interested in acquiring irrigated land; (iii) how to establish and enforce water tariffs that recoup the full costs of secondary infrastructure and the operation and maintenance costs of the primary irrigation infrastructure; and (iv) how to minimize the cost of the government guarantee to be provided to the private sector investors seeking financing. A multi-stakeholder council has been proposed to address most of these issues but experience has shown that these councils have failed in the past, often ending in a low effort/low efficiency equilibrium. The successful application of field experiments to identify adequate institutional designs would be extremely valuable.
- 1.6 Peru has made significant inroads regarding the recognition of water usage. About 162,000 farms have been granted specific rights as water users since the Water Rights Regularization Program was launched in 2004. This administrative recognition may set the foundation for the application of the new water law currently tabled in Congress that may allow the formal adjudication, and registration of water rights.
- 1.7 The activities of the technical cooperation are organized in five phases: (i) select the pilot location (river basin) and establish collaboration with local stakeholders; (ii) conduct a multi-stakeholder workshop in Peru to explain the methodology and benefits of the experimental approach to the stakeholders and policy makers; (iii) develop a controlled and replicable laboratory experiment; (iv) implement the experiment and analyze the results; and (v) transfer of knowledge and dissemination.
- 1.8 The activities will be performed by a team of individual consultants including: (i) an expert in designing and implementing experiments, including asset market experiments, who would also be the project coordinator; (ii) an expert in Peruvian water management policy; (iii) a natural resource economist expert in tradable water markets; (iv) a project advisor expert in experimental economics designs for water management; (v) a programmer; and (vi) a junior consultant.

II. OBJECTIVES

- 2.1 The main objectives of the consultancy are to: (i) provide technical contributions on local water resources management to inform the design and support the parameterization of the economic experiment; and (ii) serve as liaison of the project in the field, establishing collaboration with Peruvian stakeholders, organizing a local workshop and facilitating the implementation of the experiment.

III. CHARACTERISTICS OF CONSULTANCY

- 3.1 Type of consultancy: Individual, national consultant under a *lump sum* arrangement. Payments shall be made as established in Section V of these Terms of Reference.
- 3.2 Starting date and duration: a total of 45 non-continuous working days, during the period between [TBD] and [TBD].
- 3.3 Place of work: The work is to be done in Peru (at the consultant's office). Tentatively, it is expected that the consultant will make 3 national travels for 4 days in each trip.
- 3.4 Qualifications: Degree in Agricultural and Resource Economics or related field (Ph.D. preferred), with proven experience in water resource management policies in Peru (experience with economic experiments will be considered as a plus), as well as project management experience in developing countries. Minimum professional experience of five years.

IV. ACTIVITIES

A. Provide technical contributions on local water resource management issues

- 4.1 The activities will be the following:
- a. Advise in the selection of the pilot river basin(s), likely to be linked to a project that is in development so that the results can benefit the investment programs for coastal watershed planned by GOP.
 - b. Analyze and gather quantitative data on the selected river basin in terms of geography, climate and hydrology, as well as regarding the economic characteristics. The specific data requirements will be determined and agreed upon during an initial methodological workshop, and could include aspects such as: crop profile, household characteristics, assets, etc.

- c. Analyze and gather quantitative data on local water allocation and pricing issues, as well as information on the institutional contexts for water governance. The specific data requirements will be determined and agreed upon during an initial methodological workshop, but could include the following: a detailed description of water allocation rules among users (across sectors, and between farmers), rights and duties regarding water access, irrigation technology (metering, parcel size, large irrigation, underground water, etc.), type of conflicts and externalities, enforcement and conflict-resolution mechanisms (formal and informal), local water culture, economic transfers among agents, etc.
- d. Identify and characterize relevant local current and potential actors.
- e. Describe the current program for regularizing water user's rights, as well as the proposed Peruvian IWRM policies, in a manner such that the information can be useful for the design of the experiment.
- f. Participate in the analysis and elaboration of a final report to IDB with the results and policy implications arising from the experiment, focusing on recommendations for more integrated and efficient water resource management in Peru.

B. Establish collaboration with local stakeholders and facilitate the implementation of the experiment in the field

4.2 The activities will be the following:

- a. Contact and establish collaboration and partnership with relevant local stakeholders.
- b. Conduct (organize and give a presentation) a multi-stakeholder planning and methodological workshop in Peru, where the team of consultants would explain the methodology and uses of the economic experiments to stakeholders and IDB staff.
- c. Organize focus groups in Peru to identify the concerns of local stakeholders regarding water governance and pricing issues to be incorporated in the experiment.
- d. Provide assistance to facilitate the implementation of the experiment in the selected pilot river basin(s) that involves acquiring access to the experimental laboratory, recruiting subjects and conducting the experimental sessions.

C. Other Activities

4.3 Other activities will include:

- a. Organize and deliver a presentation at a final workshop in Peru to disseminate project methodology and results among Bank staff and interested parties.
- b. The consultant will be available for consultations by other members of the team, IDB and GOP on key technical matters of the project.

V. REPORTS AND PAYMENTS

5.1 The consultant shall submit the following deliverables for approval by the Bank-GOP:

- a. Deliverable #1: Elaboration of a work plan with the detailed timeline of activities and deadlines for deliverables (to be elaborated with the project coordinator).
- b. Deliverable #2: Elaboration of a brief first report on the characterization of potential river basins and the key local issues regarding water management, proposing and justifying which would be relevant to address in the experiment. (10 pages plus annexes with the maps, graphs, tables and other data).
- c. Deliverable #3: Elaboration of a second report on the characterization (geographic, climatic, hydrologic, economic, etc.) of the selected river basin and the key local issues regarding water management (20 pages plus annexes with the maps, graphs, tables and other data).
- d. Deliverable #4: Organization of an initial multi-stakeholder workshop in Peru for purposes of planning and methodology transfer, which includes giving a presentation at the workshop.
- e. Deliverable #5: Collection and organization of all the data agreed upon during the workshop and identified as necessary to run the experiment.
- f. Deliverable #6: Facilitation of logistics to run the experiment in the local river basin.
- g. Deliverable #7: Elaboration of a section in the final report to IDB on policy recommendations to improve water management instruments in Peru based on the experimental results.
- h. Deliverable #8: Organization of a final seminar in Peru to disseminate the results of the study among key stakeholders and IDB staff, which includes giving a presentation at the seminar.

5.2 The schedule of payments will be as follows:

- a. 30% at contract signing.
- b. 30% at the initial multi-stakeholder workshop in Peru and upon presentation and approval of the second report (Deliverables #3 and #4).
- c. 25% upon approval by the Bank of the final report (Deliverable #7).
- d. 15% at the final workshop in Peru (Deliverable #8).

- e. In addition, the consultant will receive additional compensation not to exceed US\$5,000 for expenses incurred in organizing an initial planning/methodological workshop and a final dissemination workshop in Peru.

VI. COORDINATION

- 6.1 The consultant will coordinate his work with all the other individual consultants participating in the Technical Cooperation by working closely with the Project Coordinator.
- 6.2 The coordination of instructions and advice to the consultant will be through the EN3 with support from the IDB Country Office in Peru and the counterpart coordinator at the MEF. The consultant will work very closely with all the other consultants participating in the study.

PERU**Experimental Economics for Water Resources Management
(PE-T1051)****Natural Resource Economist in Chilean Water Markets****TERMS OF REFERENCE****I. BACKGROUND**

- 1.1 Water allocation in Peru is still devoted significantly to irrigated agriculture, but competing water uses and environmental concerns associated with irrigation are growing. Given that there is still a lack of truly integrated water resource management (IWRM) systems, the country has the potential to greatly benefit from the adoption of more economically efficient and environmentally sound practices for water allocation.
- 1.2 In this context, the Government of Peru (GOP) and the Inter-American Development Bank (IDB) are collaborating in analyzing IWRM systems according to the technical cooperation “Designing Policy Instruments for Integrated Water Resource Management Using Experimental Economics (PE-T1051)”.
- 1.3 The general objective of the technical cooperation is to contribute to the adoption of sounder irrigation water allocation and management practices in Peru by using economic experiments to design and test pricing instruments and management structures that take into consideration local water governance conditions and community preferences. The particular objectives include: (i) developing an experimental design that allows testing of the performance of alternative Peruvian water management arrangements in terms of efficiency, as well as other criteria such as environmental sustainability, conflict reduction, equity, or the participation of communities and the private sector; (ii) transferring to Peruvian researchers and policymakers the necessary knowledge for using the experimental tool in the elaboration of IWRM strategies and plans; (iii) demonstrating the use of the experimental design by applying it to a pilot area in Peru; and (iv) formulating recommendations for better water governance that arise from the experiment so that the Governments of Peru, as well as the Inter-American Development Bank can benefit in the design of future projects.
- 1.4 Current regulations in Peru regarding irrigation tariffs establish that: (i) all water users be organized in Water Users Associations (WUA) along local irrigation districts; (ii) tariffs be cost-based and should cover operation and maintenance (O&M), secondary infrastructure, watershed works, as well as environmental costs; (iii) tariffs should be split up in three components, namely, revenues for the WUA to carry out the O&M and secondary irrigation works, amortization to cover capital costs reimbursements for the

Government, and a natural resources levy paid to the State for being able to use water; and (iv) tariffs should be proposed by the local irrigation authority and approved by the WUA; in case of a disagreement, then an *Ad-Hoc* Commission will establish them. However, these policies are not being applied nor enforced. In practice, WUA have been setting the water tariffs themselves with scant if any supervision. For instance, tariffs should be increase 386% on average to reach international efficiency benchmarks. Delinquencies on the water tariffs range between 10% and 30%.

- 1.5 During the design and preparation of the technical cooperation the main challenges to address will be the following: (i) how to encourage private sector participation in secondary infrastructure that may be subject to squatter takeover; (ii) how to allocate irrigated land in new schemes between agribusinesses, existing smallholder farmers in the region, and landless persons and/or migrants from other areas interested in acquiring irrigated land; (iii) how to establish and enforce water tariffs that recoup the full costs of secondary infrastructure and the operation and maintenance costs of the primary irrigation infrastructure; and (iv) how to minimize the cost of the government guarantee to be provided to the private sector investors seeking financing. A multi-stakeholder council has been proposed to address most of these issues but experience has shown that these councils have failed in the past, often ending in a low effort/low efficiency equilibrium. The successful application of field experiments to identify adequate institutional designs would be extremely valuable.
- 1.6 Peru has made significant inroads regarding the recognition of water usage. About 162,000 farms have been granted specific rights as water users since the Water Rights Regularization Program was launched in 2004. This administrative recognition may set the foundation for the application of the new water law currently tabled in Congress that may allow the formal adjudication, and registration of water rights.
- 1.7 The activities of the technical cooperation are organized in five phases: (i) select the pilot location (river basin) and establish collaboration with local stakeholders; (ii) conduct a multi-stakeholder workshop in Peru to explain the methodology and benefits of the experimental approach to the stakeholders and policy makers; (iii) develop a controlled and replicable laboratory experiment; (iv) implement the experiment and analyze the results; and (v) transfer of knowledge and dissemination.
- 1.8 The activities will be performed by a team of individual consultants including: (i) an expert in designing and implementing experiments, including asset market experiments, who would also be the project coordinator; (ii) an expert in Peruvian water management policy; (iii) a natural resource economist expert in tradable water markets; (iv) a project advisor expert in experimental economics designs for water management; (v) a programmer; and (vi) a junior consultant.

II. OBJECTIVES

- 2.1 The main objectives of the consultancy include: (i) developing the underlying model and parameterization for the experiment, and (ii) knowledge transferring, including the lessons from the Chilean experience with tradable water rights.

III. CHARACTERISTICS OF THE CONSULTANCY

- 3.1 Type of consultancy: Individual, international consultant under a *lump sum* arrangement. Payments shall be made as established in Section V of these Terms of Reference.
- 3.2 Starting date and duration: a total of 30 non-continuous working days, during the period between [TBD] and [TBD].
- 3.3 Place of work: The work is to be done in Chile at the consultant's office, and in Peru. It is expected that the consultant will make three international trips with a five-day stay each.
- 3.4 Qualifications: Degree in Agricultural and Resource Economics or related field (Ph.D. preferred), with proven experience in the functioning of tradable water markets (experience with economic experiments will be considered as a plus), as well as project management experience in developing countries. Minimum professional experience of five years.

IV. ACTIVITIES

A. Developing the underlying model and parameterization for the experiment

- 4.1 The activities will be the following:
- a. Participate in focus groups in Peru to identify the issues that should be incorporated in the model, taking into account the concerns of local stakeholders regarding water governance and pricing.
 - b. Based on: (i) the Chilean experience; and (ii) the review of current and proposed technical and institutional arrangements for Peru; support the development of the theoretical model of alternative Peruvian water management institutions for the selected pilot river basin(s) that is necessary to build the experiment.
 - c. Support the gathering of the required data to incorporate the relevant local conditions of the pilot river basin in the model.

B. Knowledge transferring, including the lessons from the Chilean experience with tradable water rights

4.2 The activities will be the following:

- a. Present empirical models on IWRM based on the Chilean experience in a multi-stakeholder planning and methodological workshop in Peru.
- b. Participate in the analysis and elaboration of the final report to IDB with the results and policy implications arising from the experiment, providing a comparative analysis on the Chilean experience with tradable water rights.
- c. Give a presentation at a final workshop in Peru to disseminate project methodology and results among Bank staff and interested parties.

C. Other Activities

4.3 Other activities will include:

- a. Provide assistance to facilitate the implementation of the experiment in the selected pilot river basin(s) that involves recruiting subjects and conducting the experimental sessions.
- b. The consultant will be available for consultations by other members of the team, IDB and GOP on key technical matters of the project.

V. REPORTS, DELIVERABLES AND PAYMENTS

5.1 The consultant shall submit the following deliverables for approval by the Bank-GOP:

- a. Deliverable #1: Elaboration of a report on the model outline for the Peruvian case, including a suggested parameterization of the theoretical model for water management in the selected river basin.
- b. Deliverable #2: Elaboration of a section in the final report to IDB focusing on the lessons learned regarding tradable water rights based on the experimental results.

5.2 The schedule of payments for honorarium and travel expenses will be as follows:

- a. 30% at contract signature.
- b. 40% upon approval of the model outline (Deliverable #1).
- c. 30% upon approval by the Bank of the final report (Deliverable #2).

VI. COORDINATION

- 6.1 The consultant will coordinate his work with all the other individual consultants participating in the Technical Cooperation by working closely with the Project Coordinator.
- 6.2 The responsibility for the technical coordination within the Bank corresponds to RE3/EN3 with support from the IDB Country Office in Peru and the counterpart coordinator at the MEF.



MINISTERIO DE ECONOMIA Y FINANZAS
SECRETARIA GENERAL

Lima, 20 ABR. 2007

CARTA N° 750 -2007-EF/68.01

Señor
ALVARO LLOSA
Jefe de División
División de Recursos Naturales y Medio Ambiente
Banco Interamericano de Desarrollo
Washington

Asunto: *Diseño de Instrumentos de Política para la Gestión Integrada de Recursos Hídricos utilizando la Economía Experimental (PE-T1051)*

Referencia: a) Carta N° 938-2006-EF/68.01
b) Carta BID S/N, 9 de junio 2006.

Me dirijo a usted con la finalidad de reiterar el interés de la Dirección General de Programación Multianual del Sector Público, por la realización del estudio "Diseño de Instrumentos de Política para la Gestión Integrada de Recursos Hídricos utilizando la Economía Experimental (PE-T1051)".

Nuestro interés radica en que actualmente el Perú está diseñando una estrategia nacional de gestión de recursos hídricos a la vez que existen proyectos de ley de aguas que plantean la creación de un sistema de gestión del agua en el cual se conjugan diversos sectores con varios actores, roles y niveles de interacción, con la finalidad de avanzar en la gestión multisectorial y participativa del agua con base en la gestión de cuencas y en el reconocimiento del valor social, económico y ambiental del agua. En tal sentido, consideramos que la realización del referido estudio puede hacer importantes contribuciones al diseño de la estructura de gobierno del recurso agua en el ámbito de cuenca.

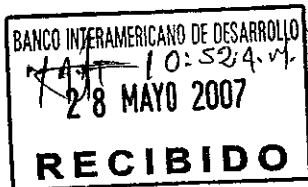
De otro lado, en el marco del Sistema Nacional de Inversión Pública el Perú viene haciendo importantes esfuerzos para mejorar la calidad y sostenibilidad de las inversiones en infraestructura y manejo de los recursos hídricos, por tanto consideramos que los resultados del estudio permitirían incorporar elementos para mejorar la participación de los diversos actores tanto en las nuevas inversiones como en la operación y mantenimiento de la infraestructura resultante de los proyectos de inversión pública. En tal sentido, comunico a usted que luego de haber revisado el documento Perfil de Cooperación Técnica manifestamos que estamos de acuerdo con el planteamiento y sus términos de referencia y que por tratarse de un estudio no requiere cumplir el ciclo del Sistema Nacional de Inversión Pública.

Finalmente, estamos de acuerdo que el Banco lleve a cabo la ejecución técnica y administrativa de la Cooperación Técnica y que la única contrapartida de parte del Gobierno Peruano será el apoyo de esta Dirección General con las coordinaciones institucionales necesarias para la realización de las actividades del estudio.

Atentamente,

rd/MPU


MIGUEL PRIETO UGARTE
DIRECTOR GENERAL
Dirección General de Programación
Multianual del Sector Público



Agencia Peruana de Cooperación Internacional

http://www.apci.gob.pe

"Año del Deber Ciudadano"

Lima,

OFICIO N° 344 - 2007/APCI-DGNI

Señor

Juan Manuel Leño

Especialista Sectorial

Banco Interamericano de Desarrollo

Presente.-

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LOPEZ, GUILLERMO		
MARINO, ARTHUR		
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MILESKE, JOSEPH		
ADMINISTRACION		
ARCHIVO		

Asunto: No Objeción a CT del BID "Diseño de Instrumentos de Política para la Gestión Integrada de Recursos Hídricos mediante la Economía Experimental"

Refsu: Carta N°1779/2007

Tengo el agrado de dirigirme a usted con relación a la solicitud de Cooperación Técnica no reembolsable para el "Diseño de Instrumentos de Política para la Gestión Integrada de Recursos Hídricos mediante la Economía Experimental" que el Ministerio de Economía y Finanzas (MEF) viene gestionando ante su Representada, la misma que ha presentado a la Agencia Peruana de Cooperación Internacional para su No Objeción.

Al respecto, habiendo concluido con el análisis de la documentación recibida y teniendo en cuenta que la operación objeto de la referida solicitud de CT se enmarca en lo dispuesto por la Ley N° 27692, cuenta con la requerida declaración de que no esta sujeta a las normas del Sistema Nacional de Inversión Pública emitida por la Dirección General de Programación Multianual del Sector Público del MEF, así como con su opinión favorable, esta Agencia expresa su No Objeción con la citada solicitud de cooperación técnica.

Hago propicia la oportunidad para expresar a usted las seguridades de mi mayor consideración.

Atentamente,


Jacqueline Mori Chávez
 DIRECTORA DE GESTIÓN Y NEGOCIACIÓN INTERNACIONAL
 Agencia Peruana de Cooperación Internacional