

**TC Annex**

**Country:** Jamaica

**Program Name and Number:** Integrated Management Of The Yallahs & Hope Watersheds –  
JA-T1060

<b>Date</b>	June 2, 2011
<b>Relationship to Loan</b>	Operational Input/Project Preparation Grant (PPG)
<b>Project Team</b>	Sergio Ardila –Team Leader (INE/RND), Carolina Jaramillo (INE/RND), Inés Angulo (INE/RND), Rebecca Goldman (INE/RND), Mateo Molina (RND/CJA), Javier Jimenez (LEG/SGO), y Elizabeth Chavez (INE/RND).
<b>Responsible Division</b>	INE/RND
<b>Executing Agency</b>	BID, INE/RND
<b>Unit of Disbursement Responsibility</b>	INE/RND
<b>Objective</b>	The objective of the OI is to prepare a full project proposal to be financed with GEF, including project componente design, a results framework with detailed timeline, indicators and targets, budget, procurement plan and plan of action. The preparation will also help identify the institutional arrangements needed for project implementation, and linkage with other initiatives to secure co-financing as requested by the GEF (donor). The proposal will show the project's contribution to the GEF Focal Areas and national sustainable development objectives and detail the expected global environmental and national benefits. To achieve this, the PPG phase will collect baseline data on key outcome indicators in the areas pertaining to the project's objectives of the national response, elaborate the "business as usual scenario" and quantify the incremental activities described in general terms in the PIF.
<b>Description</b>	<p>Key areas of work for the preparation of the project are:</p> <ol style="list-style-type: none"> <li>1. Determine needs of government (national and local) and community groups (Local Forest Management Committees (LFMC) &amp; Water Users' Associations (WUA)) for collaborating in watershed management. Assess institutions in terms of policy, capacity including capacity for data management, ensuring compliance and implementation of Sustainable Land and Forest Management (SLFM) in priority sites. This will involve institutional analysis, policy/legal framework analysis, and identifying gaps in awareness, capacity and data collection and management. From this, the needs for institutional strengthening, capacity building, training and raising awareness will be determined.</li> <li>2. Assess needs and feasibility in implementing an agro-forestry</li> </ol>

	<p>system, reforestation and other management techniques for Sustainable Land Management (SLM), including mapping land use, estimating the number of hectares the project can reforest and defining criteria and developing tools to locate areas where project interventions will most effectively benefit watershed management, biodiversity conservation and alternative livelihoods. Define the specific areas within the watersheds where project activities will take place.</p> <p>3. Determine requirements for natural resource valuation and financial instruments. The activity will agree on methods and protocols for valuing the natural resources within the designated project area, including deciding which resources can be valued, assess current systems for financing biodiversity and watershed management, and identify requirements to establish a sustainable financing system for the watersheds. This activity will also recommend which sources of support have the most potential and should be developed by the project.</p> <p>4. Prepare final project proposal, including the GEF Tracking Tools, confirm co-financing &amp; budget. This component will manage the PPG process and ensure satisfactory completion of outputs within time and budget and coordinate consultants and stakeholder inputs. This activity will involve stakeholder liaison, preparing drafts of action plans and the final detailed Project Proposal using the outputs of the consultants, other documentation and data collected during the PPG.</p>
<b>Activities</b>	<p>The TC will finance the following activities:</p> <p><b><u>Activity 1:</u></b> Determine needs of government and community groups, including:</p> <ul style="list-style-type: none"> <li>- Institutional analysis report including policy and institutional requirements for collaboration in watershed management; Report on capacity gaps and needs for capacity building &amp; training; Requirements for data management for SLFM; Institutional strengthening component of project document; Report on community groups' capacity building &amp; training needs for livelihoods, watershed management &amp; SLM; Community awareness &amp; training component of project document.</li> </ul> <p><b><u>Activity 2:</u></b> Assess needs &amp; feasibility in implementing agro-forestry system, reforestation and other SLM management techniques, define project locations, including:</p> <ul style="list-style-type: none"> <li>- SLM implementation component of project document; Maps of data on land use; Alternative livelihoods and demonstration project components of proposal; Tools for determination of project areas; Designation &amp; size of areas for project activities.</li> </ul> <p><b><u>Activity 3:</u></b> Determine requirements for natural resource valuation and financial systems, including:</p> <ul style="list-style-type: none"> <li>- Report on needs for resource valuation and financing biodiversity &amp;</li> </ul>

	<p>watershed management</p> <ul style="list-style-type: none"> <li>- Financial sustainability component of project proposal</li> </ul> <p><b>Activity 4:</b> Prepare final project proposal, confirm co-financing and budget, including:</p> <ul style="list-style-type: none"> <li>- Final fully-developed project proposal; Work plan; Financial analyses &amp; detailed component budgets; Co-financing defined and agreed; Monitoring and Evaluation plans; Communications strategy &amp; Plan</li> </ul>
<b>Expected outputs</b>	Each consultant will present three reports: a work plan, an intermediate report about seven weeks after the beginning and a final report at the end of week 12. The Lead consultant is responsible for assembling the full project proposal using as input the reports prepared by all consultants.
<b>Expected Outcome</b>	The result of the OI is the full project proposal for GEF, detailing all activities of the project, costs, execution program, institutional analysis, economic analysis, monitoring and evaluation plan, tracking tools, as well as procurement plan.
<b>Timeline</b>	It is expected that the execution time is 12 weeks and the disbursement period of 6 months.
<b>Estimated Administrative Budget of execution by year of the execution</b>	This OI will be funded through a Project Preparation Grant of the Global Environment Facility (or GEF), for a total of \$151,400. Please see Annex IV for a detailed budget.
<b>Budget</b>	See Annex IV.
<b>Procurement/contracting plan</b>	See Annex V.
<b>Conditions for disbursements</b>	None
<b>Revolving Fund</b>	NA
<b>Evaluation</b>	NA
<b>Reports</b>	Each consultant will present three reports: a work plan, an intermediate report about 7 weeks after the beginning and a final report at the end of week 12. The Lead consultant is responsible for assembling the full project proposal using as input the reports prepared by all consultants.
<b>Audits</b>	NA
<b>Terms of Reference</b>	See Annex V.

## SAFEGUARD POLICY FILTER REPORT

This Report provides guidance for project teams on safeguard policy triggers and should be attached as an annex to the PP (or equivalent) together with the Safeguard Screening Form, and sent to ESR.

1. Save as a Word document. 2. Enter additional information in the spaces provided, where applicable.
3. Save new changes.

PROJECT DETAILS	IDB Sector	ENVIRONMENT AND NATURAL DISASTERS-EROSION CONTROL AND DESERTIFICATION
	Type of Operation	Other Lending or Financing Instrument
	Additional Operation Details	
	Investment Checklist	Generic Checklist
	Team Leader	Ardila, Sergio (SERGIOAR@iadb.org)
	Project Title	Integrated Management of the Yallahs-Hope Watershed Management Area
	Project Number	JA-G1001/ JA-T1060
	Safeguard Screening Assessor(s)	Angulo, Inés (iangulo@IADB.ORG)
	Assessment Date	2011-06-07
	Additional Comments	

SAFEGUARD POLICY FILTER RESULTS	Type of Operation	Investment Grants	
	Safeguard Policy Items Identified (Yes)	Activities to be financed in the project area are located within a geographical area or sector exposed to natural hazards (Type 1 Disaster Risk Scenario).	(B.01) Disaster Risk Management Policy– OP-704
		The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy– OP-102
		Does this project offer opportunities to promote <a href="#">gender equality</a> or <a href="#">women's empowerment</a> through its project components?	(B.01) Gender Equality Policy– OP-270
		The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	(B.02)

		The operation (including associated facilities) is screened and classified according to their potential environmental impacts.	(B.03)
		Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation of women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups.	(B.06)
		The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.	(B.07)
		Any part of the investment or component(s) is being co-financed.	(B.15)
		In-country systems are being used based on performed equivalency and acceptability analysis.	(B.16)
		Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.	(B.17)
	<b>Potential Safeguard Policy Items(?)</b>	No potential issues identified	
	<b>Recommended Action:</b>	<p>Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.</p> <p>The project triggered the Disaster Risk Management policy (OP-704).</p> <p>A more limited and specific Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for</p>	

		guidance.
	<b>Additional Comments:</b>	

<b>ASSESSOR DETAILS</b>	<b>Name of person who completed screening:</b>	Angulo, Inés (iangulo@IADB.ORG)
	<b>Title:</b>	
	<b>Date:</b>	2011-06-07

## SAFEGUARD SCREENING FORM

This Report provides a summary of the project classification process and is consistent with Safeguard Screening Form requirements. The printed Report should be attached as an annex to the PP (or equivalent) and sent to ESR.

1. Save as a Word document. 2. Enter additional information in the spaces provided, where applicable. 3. Save new changes.

<b>PROJECT DETAILS</b>	<b>IDB Sector</b>	ENVIRONMENT AND NATURAL DISASTERS- EROSION CONTROL AND DESERTIFICATION
	<b>Type of Operation</b>	Other Lending or Financing Instrument
	<b>Additional Operation Details</b>	
	<b>Country</b>	JAMAICA
	<b>Project Status</b>	
	<b>Investment Checklist</b>	Generic Checklist
	<b>Team Leader</b>	Ardila, Sergio (SERGIOAR@iadb.org)
	<b>Project Title</b>	Integrated Management of the Yallahs-Hope Watershed Management Area
	<b>Project Number</b>	JA-G1001
	<b>Safeguard Screening Assessor(s)</b>	Angulo, Inés (iangulo@IADB.ORG)
	<b>Assessment Date</b>	2011-06-07
	<b>Additional Comments</b>	

<b>PROJECT CLASSIFICATION SUMMARY</b>	<b>Project Category:</b> C	<b>Override Rating:</b>	<b>Override Justification:</b>
			<b>Comments:</b>
	<b>Conditions/ Recommendations</b>	<ul style="list-style-type: none"> <li>No environmental assessment studies or consultations are required for Category "C" operations.</li> <li>Some Category "C" operations may require specific safeguard or monitoring requirements (Policy Directive B.3).Where relevant, these operations will establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural,</li> </ul>	

		<p>health and safety etc.).</p> <ul style="list-style-type: none"> <li>• The Project Team must send the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports.</li> </ul>
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SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS	Identified Impacts/Risks	Potential Solutions
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DISASTER SUMMARY	Details	Actions
	<p>The Project should include the necessary measures to reduce disaster risk to acceptable levels as determined by the Bank on the basis of generally accepted standards and practices. Alternative prevention and mitigation measures that decrease vulnerability must be analyzed and included in project design and implementation as applicable. These measures should include safety and contingency planning to protect human health and economic assets. Expert opinion and adherence to international standards should be sought, where reasonably necessary.</p>	<p>A more limited and specific Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p>

ASSESSOR DETAILS	Name of person who completed screening:	Angulo, Inés (iangulo@IADB.ORG)
	Title:	
	Date:	2011-06-07

## **SOCIAL AND ENVIRONMENTAL STRATEGY**

It is not anticipated that the activities to be financed in this program will have negative direct social or environmental effects; however, the development of the legal and procedural framework will comprise efforts towards the adoption of environmentally responsible procurement practices, which could lead to indirect environmental benefits. Based on the afore-mentioned, and according to the ESR Safeguard Classification toolkit, the operation has been classified as “C”.

Detailed Budget

Item	GEF					
	daily rate	Weeks	\$ / week	Salary	Travel	TOTAL GEF
Lead Consultant (Watershed Management Specialist)	360	12	1800	21600	400	22000
Community/Rural Development Specialist	300	7	1500	10500	400	10900
Institutional/Financial Specialist	630	6	3150	18900	4166	23066
Data Mapping Specialist	300	4	1500	6000	400	6400
Natural Resource Economist	500	8	2500	20000	400	20400
Communications Specialist	300	4	1500	6000	400	6400
Hidrologist	500	6	2500	15000	4166	19166
Agroforestry/Biology Specialist	600	8	3000	24000	4166	28166
Data Adquisition	0	0	0	0	0	4000
Workshops	0	0	0	0	0	2000
Office facilities / Project management	0	0	0	0	0	0
Other (imprevistos)					2100	8902
TOTAL				122000	16598	151400

	days	per diem	Total	ticket	No. missions	Total
Travel	10	262	2620	773	2	1546

PROCUREMENT PLAN AND TERMS OF REFERENCE

TABLE OF PROCUREMENT OF CONSULTANCY SERVICES<sup>1</sup>

Consultancy Description	Estimated Cost (USD)	Procurement method <sup>2</sup>	Revision Ex ante Ex post	Funding Source	Pre-qualification	Estimated Start Date	Estimated Closure Date
<b>Lead Consultant</b> -Prepare final Project Proposal. Coordinate other consultants. Liaison with stakeholders.Provide input into activity 2 to develop criteria and decision-making tools & identify critical locations and scope for reforestation and agroforestry. Create M&E plan -Assess needs for reforestation and other techniques for reducing soil erosion.	22,000	<b>QCNi</b>	Ex post	IDB/GEF 100%	No	3T 2011	3T 2011
<b>Rural Development Specialist</b> -Assess capacity building needs for Local Forestry Management Councils (LFMC), Water Users' Associations (WUAs) and other community groups Analyse readiness for potential roles in watershed management and implementation of alternative sustainable livelihood activities. Assess training needs.	10,900	<b>QCNi</b>	Ex post	IDB/GEF 100%	No	3T 2011	3T 2011
<b>Institutional / Financial Specialist</b> - Calculate ongoing & planned costs of project activities to create detailed budget including co-financing. Support International finance expert in defining requirements for	23,066	<b>QCII</b>	Ex post	IDB/GEF 100%	No	3T 2011	3T 2011

sustainable finance system for SLM. - Institutional assessment of data & capacity needs of existing institutions, assess policy frameworks & mandates against needs for collaborating in watershed management.							
<b>GIS Expert</b> - Collect and map data on Land use, biodiversity and ground cover distribution. Identify gaps & data management requirements	6,400	<b>QCNI</b>	Ex post	IDB/GEF 100%	No	3T 2011	3T 2011
<b>Natural Resources Economist</b> - Assess needs for natural resource valuation, agree methods and protocols, identify requirements and components for sustainable financing systems for biodiversity & watershed management	20,400	<b>QCII</b>	Ex post	IDB/GEF 100%	No	3T 2011	3T 2011
<b>Communication Specialist</b> - Create communications strategy & plan	\$6,400	<b>QCNI</b>	Ex post	IDB/GEF 100%	No	3T 2011	3T 2011
<b>Hydrologist</b> - To provide estimates of the possible impacts of observed land use changes on the quality and quantity of water availability for downstream users, and how these impacts will be ameliorated with the actions that would be implemented with the project; define indicators and baseline.	\$19,166	<b>QCII</b>	Ex post	IDB/GEF 100%	No	3T 2011	3T 2011
<b>Agroforestry Specialist</b> - Assess capacity needs for implementation of agro-forestry activities	\$28,166	<b>QCII</b>	Ex post	IDB/GEF 100%	No	3T 2011	3T 2011

1. If there are a number of similar individual contracts to be executed in different places or at different times, these can be grouped together under a single heading, with an explanation in the comments column, indicating the average of individual amount and the period during which the contracts would be executed. For example: an education project that includes school construction might include an item labeled “School Construction” for an estimated cost of US\$20 million and an explanation under the Comments column such as this: “This item encompasses some 200 contracts for school construction averaging US\$100,000 each, to be awarded individually by the participating municipal governments over a three-year period between January 2006 and December 2008.”

<sup>2</sup> **Goods and Works:** **ICB:** International competitive bidding; **LIB:** limited international bidding; **NCB:** national competitive bidding; **PC:** price comparison; **DC:** direct contracting; **FA:** force account; **PSA:** Procurement through specialized agencies; **PAs:** Procurement agents; **IA:** Inspection agents; **PLFI:** Procurement in loans to financial intermediaries; **BOO/BOT/BOOT:** Build, own, operate/build, operate, transfer/build, own, operate, transfer; **PBP:** Performance-based procurement; **PLGB:** Procurement under loans guaranteed by the Bank; **PCP:** Community participation procurement; **Consulting Firms:** **QCBS:** Quality- and cost-based selection; **QBS:** Quality-based selection; **FBS:** Selection under a fixed budget; **LCS:** Least-cost selection; **CQS:** Selection based on the consultants’ qualifications; **SSS:** Single-source selection; **Individual Consultants:** **QCNI:** Selection based on comparison of qualifications of national individual consultants; **QCII:** Selection based on comparison of qualifications of international individual consultants.

## TERMS OF REFERENCE

**Preparation of the project:  
“Integrated Management of the Yallahs River and Hope River Watersheds”  
(JA-T1060)**

**Terms of Reference  
Hydrologist**

### **I. BACKGROUND**

- 1.1 The Government of Jamaica has requested the IDB to support the preparation and execution of the project “Integrated Watershed Management for the Yallahs and Hope Rivers Watersheds”<sup>1</sup> to be financed with resources from the Global Environment Facility (GEF). The Yallahs River and Hope River Watershed Management Units (WMUs) are adjoining hydrologic basins on Southern slopes of the Blue and John Crow Mountain ranges and east of the capital city of Kingston (population 667,000). Together, these WMUs extend for 44,486 ha and supply 37% of Kingston’s water. The Yallahs River also recharges the aquifers and provides irrigation water for farmers in the rural Yallahs Valley. This water is vital for the livelihoods of the farmers because the competitiveness of agriculture in the Yallahs watershed is affected by water supply which is mainly rain-fed and limited. The area contains 7% of the island's farmland and has more poor households (29%) than the national average (19%). The Department of Forestry estimates that flood-prone areas make up 8% of the area of the WMUs, 49% is prone to landslides while 65% of the two WMUs are subject to soil erosion due to the steep slopes and poor land use and agricultural practices (at 163 tons/ha/year in the Hope watershed). Approximately 10% of the forest in the Blue and John Crow Mountains National Park is located on the upper slopes of these two watersheds.
- 1.2 The Blue and John Crow Mountain ranges are found in eastern Jamaica, holding an extension of nearly 52,000 hectares of primary broadleaf forest in remote areas and higher altitudes, with increasing disturbed forested coverage as one descends the mountains. Numerous rivers flow from these ranges, and they also contain very high levels of endemism in most taxa of flora and fauna. The area is also known for its value as a transit destination for seasonal migrant birds from North America. This unique combination of flora and fauna is why the ranges are declared as a Forest Reserve and a National Park (Blue and John Crow Mountains National Park), are one of the WWF Global 200 Ecoregions, and were recently nominated as a potential World Heritage Site.
- 1.3 The mountains provide water for domestic, agricultural and industrial uses to 40% of Jamaica's population. Rainfall ranges from over 7000mm per annum on the northern

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<sup>1</sup> See Project Information Document at:  
[http://www.gefonline.org/ProjectDocs/Multi%20Focal%20Area/Jamaica%20-%20284454%29%20-%20Integrated%20Management%20of%20the%20Yallahs%20River%20and%20Hop/4-7-11%20GEFID%204454\\_PIF\\_04062011.pdf](http://www.gefonline.org/ProjectDocs/Multi%20Focal%20Area/Jamaica%20-%20284454%29%20-%20Integrated%20Management%20of%20the%20Yallahs%20River%20and%20Hop/4-7-11%20GEFID%204454_PIF_04062011.pdf)

slopes, to less than 1200 mm on the lower southern slopes. High intensity rainfall in the upper watersheds contributes to soil erosion, and landslides and debris flows are common.

- 1.4 Threats to Biodiversity and watershed integrity in the Blue Mountains include subsistence and commercial agriculture, extraction of timber and fuelwood, mining and quarrying, and the clearing of land for housing. The major effect of human activity in the upper watersheds is deforestation and degradation of high-biodiversity habitats, increased the vulnerability of rare and endemic species in the upper watersheds and of the forest to invasive species. It has also been associated to reduced water available from surface and underground sources, increased soil erosion, and debris flows. Increased sediment load and the excessive use of agricultural chemicals in the watersheds reduces the water available for domestic use and results in higher levels of sediment and pollution entering the Caribbean Sea and the Palisadoes-Port Royal Protected Area, damaging marine and coastal biodiversity.
- 1.5 Although reducing deforestation and restoring forests are priorities for the GoJ, the primary weaknesses and threats to natural resources within watersheds have not been tackled.
- 1.6 The IDB-GEF project aims to overcome such deficiencies through four main components: (i) Institutional strengthening & capacity building for integrating biodiversity and watershed management; (ii) Creating economic and financial incentives to support sustainable biodiversity and watershed management; (iii) Improving community awareness sensitivity and understanding of Sustainable Land Management techniques; and (iv) Implementing Sustainable Agriculture, Forestry and land management practices in watershed communities. At the same time, the project seeks to contribute to the improvement of the economic conditions of the local population in the medium and long term.
- 1.7 With these activities, the IDB-GEF project will supplement current efforts of key agencies involved including the National Environment and Planning Agency (NEPA), the Forestry Department (FD), the National Irrigation Commission (NIC), the Water Resources Authority (WRA) and the Ministry of Agriculture and Fisheries (MOAF).

## **II. OBJECTIVES OF THE CONSULTANCY**

The objective of this Consultancy is to provide: i) estimates of the possible impacts of observed land use changes on the quality and quantity of water availability for downstream users, and how these impacts will be ameliorated with the actions that would be implemented with the project; and ii) the main elements of a monitoring plan to assess the hydrological impacts of the projects. The information provided by this consultancy would be key to the economic analysis as well as to the definition of impact indicators and the overall monitoring plan.

## **III. CHARACTERISTICS OF THE CONSULTANCY**

1. Type of Consultancy: Individual Consultant, contracted for a lump sum for professional services. The payment scheme is stipulated in Section V of these Terms of Reference.
2. Duration and dates: The Consultant will work for 20 discontinuous days between 07/01/2011 and 10/01/2011.

3. Duty station: The Consultant will work in Jamaica at least 50% of the time and from his office with access to internet connection, skype or other VOI and other instruments which will facilitate communications with the consultants, government institutions and the Bank.
4. Travel: At least 2 missions to Jamaica will be carried out by the Consultant in case he doesn't reside there. Dates for the second mission would be defined in accordance with the work plan that will be prepared during the first week of the studies, and with previous agreement with the Bank and NEPA.
5. Qualifications: The consultant will be Civil Engineer with an Ms in Hydrology and experience of at least 5 years in the estimation of hydrological impacts of land use changes on the quality and quantity available in watersheds. The consultant should have experience in the use of models to perform these estimates, the required calibration procedures and sources of information to estimate the required parameters for watersheds with scarce information. Familiarity with Jamaica's land use and hydrological information is desirable.

#### IV. ACTIVITIES

The consultant will work in close collaboration with the other consultants working on agricultural and agroforestry issues, as well with the natural resource economist and the GIS consultants. In order to achieve the objectives of the work, the consultant will carry out at least the following activities:

- a. Prepare a work plan in coordination with all consultants working in the project, detailing deliverables and dates. The work plan should take into account the availability of information which would be critical to select the model(s) that will be used to estimate the hydrological impacts.
- b. Participate in project preparation workshops as agreed in the work plan.
- c. Prepare the following sets of projections of land use changes on key hydrological variables such as annual means, variance, minimum/maximum flows, sediment loads and other water quality parameters, for the following scenarios: i) current and projected land use changes up to 20 years without the project; and ii) projected land use with the project, assuming complete success as well as a sensitivity analysis to partial implementation of some of the recommended practices and/or partial success of the incentives provided by the project. These projections should be based on existing land use and hydrological information for areas of intervention by the project, and the estimated time profile of adoption of practices recommended by consultants on agriculture and agroforestry issues in the project. The level of detail of the analysis will depend on the information available, which should be explored in great detail during the first week of the work.
- d. Provide the basic elements of a plan for monitoring the hydrological impacts of the projects, indicating variables to be measured and suggested locations for hydrological measures as well as frequencies. The plan should include a budget and identification of

a national/local agency that could be responsible for its execution in a way that is consistent with the overall plan for project execution.

## **V. REPORTS AND PAYMENTS**

### **A. Reports**

The Consultant will be responsible for generating the following individual reports:

- a. A detailed work plan, at the end of the first week of work.
- b. An initial report, with the proposed methodology to carry out the work, identification of data sources and calibration procedure for the model proposed. This report should include an indication of the results that would be provided for each of the projections mentioned in II-b.
- c. A final report addressing all comments made to a draft version of this document. The draft version of the document should be presented a week after the consultant receives the required information about land use projections with the proposed practices to be implemented with the project from the lead consultant.

All reports will be presented to IDB's team leader Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) in electronic format and hard copy. All reports and documents will be presented in English. The consultant should include in the reports the relevant information/data used during the consultancy such as: technical and statistic reports, maps, minutes and any other relevant information in hard copy and/or digital format. The consultant will be available to provide answers to comments from the Project Team and the GEF Secretariat during project approval, even after final payment has been received.

### **B. Payments**

The payments to the Consultant will be conducted as follows:

- a. 10% upon signature of the Consultancy contract.
- b. 15% at the delivery and approval of the work plan by the Team Leader
- c. 35% the delivery and approval of the initial report by the Team Leader
- d. 40% at the delivery and approval of all final reports by the Team Leader.

## **VI. COORDINATION AND SUPERVISION**

The consultant will work under the supervision of Mr. Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) Project Team Leader (INE/RND). The consultant must work in close coordination with the rest of the project team as well as with the counterparts designated by NEPA. The consultant will have the support from and must coordinate closely with Mr. Edwin Mateo Molina ([edwinm@iadb.org](mailto:edwinm@iadb.org)) at the IDB Country Office in Jamaica (RND/CJA).

## **Terms of Reference RURAL DEVELOPMENT SPECIALIST**

## I. OBJECTIVES OF THE CONSULTANCY

The overall objective of this consultancy is to identify community-level capacity, awareness, understanding and training needs for sustainable livelihoods, watershed management and SLM techniques and design the intervention activities and related requirements of Component III (see Project PIF) of the Integrated Management of the Yallahs River and Hope River Watersheds Project (The Project Area).

## II. CHARACTERISTICS OF THE CONSULTANCY

- 2.1 Type of Consultancy: Individual Consultant, contracted for a lump sum for professional services. The payment system is stipulated in section V of these Terms of Reference.
- 2.2 Duration and dates: The Consultant will work for 30 discontinuous days between 07/01/2011 and 10/01/2011.
- 2.3 Duty station: The Consultant will work from Kingston, Jamaica, with access to internet connection, skype or other VOI and other instruments that will facilitate communications with the consultants, government institutions and the Bank.
- 2.4 Travels: At least 3 visits to the project intervention area will be carried out by the Consultant at the early and advanced stages of the project preparation, previous agreement with the IDB and NEPA.
- 2.5 Qualifications: Professional of the Agricultural Sciences, Forestry, Rural Sociology with a Masters, Ph.D preferred, in related fields, with at least 10 years of experience in the design and implementation of rural development and extension services in watershed management and conservation projects. Experience in project design financed with by multilateral organisations (e.g. IDB, World Bank), including preparation of detailed design of project components, budget, procurement requirements, terms of reference and action plan. Excellent written English is a requirement. Demonstrated capacity to engage and work with rural communities and local government and non-government entities is desired. Knowledge of Jamaica's watershed management institutions and rural agricultural practices is preferred.

## III. ACTIVITIES

The Consultant will work in close collaboration with the other specialist in the project team, particularly the Watershed Management Specialist, the Agroforestry/Biology Specialist, and the Communications Specialist. In order to achieve the objectives of the consultancy the consultant will have to carry at least the following activities:

- a. Identify the current extension methodologies being applied in the project area by RADA, NGO's and/or private sector organizations, emphasizing Sustainable Land Management (SLM)<sup>2</sup> (including soil and water conservation, natural resources management, integrated ecosystem management with emphasis on biodiversity conservation). Conduct a rapid assessment on the effectiveness and replicability of these methodologies, including a gender perspective.
- b. Participate in project preparation workshops as agreed in the work plan
- c. Select the most appropriate set of SLM extension methodologies that could be needed to implement the proposed agricultural and forestry activities of the project to enhance biodiversity and soil

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<sup>2</sup> SLM encompasses other established approaches such as soil and water conservation, natural resources management, integrated ecosystem management and involves an holistic approach to achieving productive and healthy ecosystems by integrating social, economic, physical and biological needs and values.

conservation by integrating social (including gender), economic, physical, and biological needs and values.

- d. Using secondary data (agricultural census, living conditions survey, land tenure), determine the socio-economic profile of farmers within the Project Area (income, land ownership structure, land use patterns, main cash crops, production and productivity) and identify the project target population (beneficiaries) for Component III, in coordination with the economist, the lead consultant and the agroforester.
- e. Assess existing organizations (Local Forestry Management Councils, Water User Associations, and other community groups and/or producers organizations) in terms of their capacities for implementing SLM and other sustainable land and watershed management techniques, including those to enhance biodiversity conservation. Identify lead land use managers that could eventually spearhead the implementation of SLM within the project area.
- f. Based on the assessment conducted, the consultant will identify capacity and training needs for SLM implementation within the Project Area and effective extension and communication methods to reach the target population. This activity is to be done in coordination with the Communications Specialist.
- g. Participate in the design of incentive mechanisms to be used by the Project with the team of consultants.  
Elaborate a proposal for the extension mechanisms to be used for the project, based on the capacity and training needs identified from activities (a) and (b) above. The proposal should include, at least:
  - Detailed description of the proposed extension mechanisms to be implemented by the project and their expected results/impacts. These practices should take gender issues into consideration.
  - Terms of Reference for the consultants needed for each activity.
  - Design criteria and pre-selection of participating farms, community groups, land owners and other relevant beneficiaries, using a participatory approach with an emphasis on gender issues.
  - Procurement plan for the execution of the activities.
  - Timeline for implementation of activities.
  - Detailed budget by activity and year
  - Indicators and targets to monitor progress and project results.

In addition to these specific activities, the Consultant will collaborate with all the consultants that will be hired for the preparation of the project in any other activities that will be reasonably asked when necessary for the successful completion of the objectives of the Consultancy.

#### **IV. REPORTS AND PAYMENTS**

##### **A. Reports**

The Consultant will be responsible for generating the following individual reports:

- e.A first report to be submitted one week after signing the contract that includes a work plan and identification of the approach to community and local government engagement for the execution of the consultancy.
- f.A baseline report with inputs of the diagnosis and preliminary proposal for the results framework workshop and first drafts of project documents listed in activities III-a to III-e under section IV.
- g.A final report with the final drafts of all project documents assigned and the records of the communities, organizations and government staff interviewed during project activities.

The reports will be presented to IDB's Team Leader Sergio Ardila (sergioar@iadb.org) in electronic format and hard copy. The consultant will work in English. The consultant should include in the reports the relevant information/data used during the consultancy such as: technical and statistic reports, maps, minutes and any other relevant information in hard copy and/or digital format. The consultant will be available for comments from the Project Team and the GEF Secretariat after the final payment is received.

## **B. Payments**

The payments to the Consultant will be conducted as follows:

- B. 10% upon signature of the contract
- C. 15% at the delivery of the work plan and approval by the Team Leader
- D. 35% at the delivery of the first baseline report and approval by the Team Leader
- E. 40% at the delivery and approval by the Team Leader

## **V. COORDINATION AND SUPERVISION**

- 5.1 The consultant will work under the supervision of Mr. Sergio Ardila (sergioar@iadb.org) Project Team Leader (INE/RND). The consultant must work in close coordination with the rest of the project team as well as with the counterparts designated by NEPA. The consultant will have the support from and must coordinate closely with Mr. Edwin Mateo Molina (edwinm@iadb.org) at the IDB Country Office in Jamaica (RND/CJA).

## **Terms of Reference NATURAL RESOURCES ECONOMIST**

### **I. OBJECTIVES OF THE CONSULTANCY**

The objectives of the Consultancy are: (i) to carry out the economic analysis of the interventions proposed for the project and provide input to the design of project components; and (ii) to elaborate a proposal with the design of component II of the PIF, including the design a payment for ecosystem services scheme to finance the conservation costs of the watershed. The consultant would work in close collaboration with the team of consultants and particularly with the Watershed Management consultant, the Agroforestry/Biologist specialist and the Hydrologist.

### **II. CHARACTERISTICS OF THE CONSULTANCY**

1. Type of Consultancy: Individual Consultant, contracted for a lump sum for professional services. The payment system is stipulated in section V of these Terms of Reference.
2. Duration and dates: The Consultant will work for a total of 40 discontinuous days between 07/01/2011 and 10/01/2011.

3. Duty station: The Consultant will work from his own location and will have to visit Jamaica/the project area at least twice, for a combined total of 20 working days. While working from his usual office he will have to be accessible through internet connection, skype or other VOI mechanism which will facilitate communications with the consultants, government institutions and the Bank.

4. Travels: At least 2 missions to the project's intervention area will be carried out by the Consultant, an initial trip to meet with local counterparts and collect necessary information and a final trip to discuss the results (project results framework workshop) of the consultancy, previous agreement with the IDB and NEPA.

5. Qualifications: Agricultural, ecological or natural resource economist with a Masters, PhD preferable, and at least 10 years of experience in the economic analysis of watershed management projects, the design of mechanisms for payment for environmental services, and the economic analysis of projects financed by international financial institutions including the IDB and/or GEF. Excellent written English is a requirement. Knowledge of Jamaica's land use management institutions and rural agricultural and forestry practices is preferred.

### III. ACTIVITIES

The Consultant will work in close collaboration with the other specialist in the project team, particularly the Watershed Management Specialist (or Lead Consultant), the Rural Development Specialist, the Agroforestry/Biology Specialist, the Data Mapping Specialist and the Hydrologist. In order to achieve the objectives of the consultancy he would have to carry at least the following activities.

1. Obtain all the relevant economic information that will be needed to assess the potential economic benefits of the activities proposed by the project to the main economic agents in the watershed (agricultural producers, water users that are not agricultural producers, other members of society) and produce a justification of the main economic benefits and costs that will be used in the economic analysis. This justification will have to use economic as well technical arguments.
2. Carry out a detailed economic analysis to assess the incentives that would have to be provided to agricultural producers in the watershed to implement the proposed sustainable agriculture, forestry and land management practices. Taking into account the inputs from the Rural Development Specialist and other members of the team, the analysis will have to present the current economic conditions for the main stakeholders and how these conditions would change with the project.
3. Identify the main externalities that will be generated by the proposed sustainable agriculture, forestry and land management practices, and their beneficiaries working in coordination with the hydrologist, the agriculture and agroforestry specialists. The identification will use existing information to provide quantitative estimates of the externalities that could be generated by the project and their estimated time profile for a reasonable planning horizon. This identification would be the base for the design of the mechanism of Payment for Environmental Services (PES) that would be implemented with the project.

4. Based on a rapid analysis of credible and demonstrable benefits from the externalities, potential financial flows and feasible charging mechanism, select the main environmental benefits that could be included in a Payment for Environmental Services, and propose a design for such a mechanism in coordination with the financial consultant. Identify information gaps, and design all the relevant elements of the payment for environmental services proposal, including: the criteria for the selection of intervention sites and participants, identification and diagnosis of intermediaries, local capacity to implement payment arrangements, agreements and contracts required, negotiation and payment schemes, monitoring and evaluation and the need for additional information and legal work and provide estimates of their costs.
5. Participate in project preparation workshops as agreed in the work plan.

#### **IV. REPORTS AND PAYMENTS**

##### **A. Reports**

The Consultant will be responsible for generating the following individual reports:

- a. A detailed work plan to be delivered at the end of the first week.
- b. A baseline report. This report will provide a summary of the main sources of costs and benefits that will be used in the economic analysis and the design of incentives to promote the use of sustainable practices, as well as an identification of the main externalities that would be used as base for the design of the PES (see activities III–a and III–c above).
- c. Final report. This report will include all the products needed in the consultancy (see activities III–b and III–d).

All reports will be presented to IDB's team leader Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) in electronic format and hard copy. All reports and documents will be presented in English. The consultant should include in the reports the relevant information/data used during the consultancy such as: technical and statistic reports, maps, minutes and any other relevant information in hard copy and/or digital format. The consultant will be available to provide answers to comments from the Project Team and the GEF Secretariat during project approval, even after final payment has been received.

##### **B. Payments**

The payments to the Consultant will be conducted as follows:

- 10% upon the signature of the contract
- 15% at the delivery and approval of the work plan by the Team Leader.
- 35% at the delivery and approval of the initial report.
- 40% at the delivery and approval of all final reports by the Team Leader.

## V. COORDINATION AND SUPERVISION

The consultant will work under the supervision of Mr. Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) Project Team Leader (INE/RND). The consultant must work in close coordination with the rest of the project team as well as with the counterparts designated by NEPA. The consultant will have the support from and must coordinate closely with Mr. Edwin Mateo Molina ([edwinm@iadb.org](mailto:edwinm@iadb.org)) at the IDB Country Office in Jamaica (RND/CJA).

### Terms of Reference LEAD CONSULTANT AND WATERSHED MANAGEMENT SPECIALIST

## II. OBJECTIVES OF THE CONSULTANCY

The objective of the Consultancy is to lead the preparation of the project and the documentation needed by the IDB and the GEF to approve the operation of concern, based on the inputs provided by other consultancies hired as part of the project preparation phase. In particular, the Consultant will: a) coordinate and review quality of the outputs delivered by the other consultants hired for project formulation, b) provide technical inputs on integrated watershed management approaches in the project design, particularly of Component 4 of the PIF(see reference above), c) based on the inputs provided by other consultants, elaborate the Monitoring and Evaluation Plan and Project Execution Plan, and d) prepare a final draft of the Full Size Project Document and its annexes following GEF templates and guidelines.

## III. CHARACTERISTICS OF THE CONSULTANCY

- 1.Type of Consultancy: Individual Consultant, contracted for a lump sum for professional services. The payment scheme is stipulated in section V of these Terms of Reference.
- 2.Duration and dates: The Consultant will work for 60 discontinuous days between 07/01/2011 and 11/01/2011.
- 3.Duty station: The Consultant will work in Jamaica at least 70% of the time and from his office with access to internet connection, skype or other VOI and other instruments which will facilitate communications with the consultants, government institutions and the Bank.
- 4.Travel: At least 3 missions to the project area will be carried out by the Consultant, in accordance with the work plan that will be prepared during the first week of the consultancy and agreed with the Bank and NEPA.
- 5.Qualifications: The consultant will have a Master's degree, preferably a PhD, in areas directly related to watershed management and conservation of natural resources such as forestry/agronomy/natural resource management/agriculture. The consultant will need to have at least 10 years of experience in the design and implementation of watershed management programs, including the design of programs to implement best practices for land/soil management, sustainable agriculture, conservation of forest resources and biodiversity, and experience in the estimation of hydrological impacts of conservation programs oriented to preserve/increase forest cover. Experience in project design financed

with by multilateral organizations (e.g. IDB, World Bank), including preparation of detailed design of project components, budget, procurement requirements, terms of reference and action plan is preferred. Experience with mechanisms for Payment for Ecosystem Services is desirable. Familiarity with Jamaica's Natural Resources base and its management is preferable. Excellent written English is a requirement.

#### IV. ACTIVITIES

In order to achieve the objectives of the work, the consultant will carry out at least the following activities:

1. Prepare a work plan in coordination with all consultants working in the project, detailing deliverables and dates for every consultant in order to prepare the design of all project components as well as activities required to monitor its execution and evaluate its impact.

2. Coordinate the production of all deliverables provided by consultants contracted for project preparation activities and review them to assure high-quality and that they are in alignment with the project framework, as well as with the project preparation timeline. The Consultant will organize the work in principle in three main areas: technical studies (forestry, biodiversity, hydrology and agricultural issues); institutional studies (analysis of public agencies and social institutions, their needs and programs required to guarantee the correct execution of the project), and economic/financial studies (economic and financial analysis).

3. Provide all the technical inputs required to analyze the watershed management and agricultural issues relevant for the project objectives and required for the diagnosis and design of activities that will be part of project component 4. In this respect, the consultant will have to coordinate this work with the Agroforestry/Biology Specialist in order to propose an implementation plan for Component 4.

4. Provide support to the consultants that will work in the economic/financial analysis as well as with those that will work in the institutional analysis and the design of technology transfer/extension activities in order to provide the information needed for their analysis.

5. Support the IDB and the Government in the coordination and preparation of the kick-off workshop (1-2 days), including delivering a presentation of the project framework and the preparation activities to be conducted for the design phase, presentation and finishing of project preparation work plan and timeline, and introduction of the project design team and the information needed from participating agencies.

6. Lead the preparation of the results framework of the project during a 2-day workshop, which should be based on solid analysis of the technical, institutional and economic issues in the watershed, and in accordance with the objectives and expected outcomes of the project's PIF. In order to obtain a coherent results framework, the technical workshop will have to discuss the main conclusions of all the diagnosis and review in detail the proposed project activities. The project results framework will have to be reviewed at the end of the studies to guarantee its consistency with the final designs of all activities.

7. In collaboration with the economist and the consultant working on institutional issues, provide the incremental cost analysis of the project, barriers and risks analysis, coordination

arrangements required with other initiatives and execution mechanism defined amongst the Executing Agency and other participating agencies.

8. Prepare a draft of the Full Size Project Document to be presented for CEO Endorsement to the GEF Secretariat with all of its corresponding annexes based on the inputs prepared by the consultants. See project document template and preparation guidelines in: <http://www.thegef.org/gef/guidelines%20templates%20PPG%20PIF%20PDF%20Endorsement>.

9. Elaborate the Annual Plan of Operations (POA) and Operations Manual with support from other consultancies

10. Elaborate the Monitoring and Evaluation Plan in coordination with consultants working on institutional issues, financial and technical analysis.

11. In collaboration with the consultants working on the technical issues, fill out the required GEF Tracking Tools (for the Biodiversity and Land Degradation Focal Areas). See Tracking Tool templates and guidelines in: <http://www.thegef.org/gef/content/BIO-portfolio-management-tracking-tool> and <http://www.thegef.org/gef/node/4403>

12. Participate in project preparation workshops as agreed in the work plan

In addition to these specific activities, the Consultant will collaborate with the Project Team in any other activities that could be reasonably asked when necessary for the successful completion of the objectives of the Consultancy.

## **V. REPORTS AND PAYMENTS**

### **Reports**

The Consultant will be responsible for generating the following individual reports:

- d. A detailed work plan, at the end of the first week after signing the contract. This plan will be presented at the kick-off workshop and will have to be discussed and approved by the Bank.
  - e. A baseline report with the results framework obtained after the workshop programmed to construct it (see activity e), including a detailed diagnosis of the main issues in watershed management, the technical documents from the consultants to support the analysis, and the proposed activities for each component of the project. End of week 7.
  - f. A final report with all project documents assigned under this consultancy, specifically the full sized project document and all its annexes, the Plan of Operations, the Monitoring and Evaluation Plan, the Operations Manual, and the Tracking Tools. End of week 15. This report will be reviewed by the project team and its observations will be incorporated in a final version.
- 1.8 The reports will be presented to IDB's team leader Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) in electronic format and hard copy. All reports and documents will be presented in English. The consultant should include in the reports the relevant information/data used during the consultancy such as: technical and statistic reports, maps, minutes and any other relevant information in hard copy and/or digital format. The consultant will be available to provide

answers to comments from the Project Team and the GEF Secretariat during project approval, even after final payment has been received.

### **Payments**

The payments to the Consultant will be conducted as follows:

- 10% at the signature of the Consultancy contract.
- 15% at the delivery of the work plan and approval by the Project Team Leader
- 35% at the delivery of the baseline report and approval by the Project Team Leader
- 40% at the delivery and approval of the final report by the Project Team Leader

## **VI. COORDINATION AND SUPERVISION**

The consultant will work under the supervision of Mr. Sergio Ardila (sergioar@iadb.org), project Team Leader (INE/RND). The consultant must work in close coordination with the rest of the project team as well as with the counterparts designated by the NEPA. The consultant will have the support from and must coordinate closely with IDB's country specialist Mr. Edwin Mateo Molina (edwinm@iadb.org) at the IDB Country Office in Jamaica (RND/CJA).

### **Terms of Reference INSTITUTIONAL/FINANCIAL SPECIALIST**

#### **II. OBJECTIVES OF THE CONSULTANCY**

The objectives of the Consultancy are: i) to evaluate the institutional capacity, including the financial management capacity, of the designated executing agency and any other entity potentially involved in a direct manner in the execution of the Yallahs-Hope River Watershed Management and their budgeting process; ii) formulate the Risks Matrix; iii) contribute to the design of the institutional framework for the execution of the Program and determine its institutional viability; iv) develop the corresponding Institutional Strengthening Action Plan; v) prepare the financial plan, the procurement plan, and the plan of operations for the project using inputs provided by other consultants in the team; and vi) support the Natural Resource Economist in the design of the operational mechanisms of the Payments for Environmental Services that would be implemented with project.

#### **III. CHARACTERISTICS OF THE CONSULTANCY**

3.1 Type of Consultancy: Individual Consultant, contracted for a lump sum for professional services. The payment system is stipulated in Section V of these Terms of Reference.

3.2 Duration and dates: The Consultant will work for 40 discontinuous days over a 3 month period between 07/01/2011 and 10/01/2011.

- 3.3Duty station: The Consultant will work from his own location and Jamaica, with access to internet connection, skype or other VOI and other instruments which will facilitate communications with the consultants, government institutions and the Bank.
- 3.4Travels: At least 3 missions to the project's intervention area will be carried out by the Consultant, an initial trip to meet with local counterparts and collect necessary information and a final trip to discuss the results of the consultancy, previous agreement with the Bank and NEPA.
- 3.5Qualifications: Candidates should have a post-graduate degree in economics, administration, financial management or related field, and at least 10 years of experience in the analysis of institutional aspects and of budget management capacity of public institutions as well as in the preparation of procurement plans, budgets, and plans of operations for projects financed by international financial institutions, preferably in the area of agriculture/natural resources. Experience working in Jamaica or other Caribbean countries as well as experience with the application of the Institutional Capacity Assessment (ICA) tool used by the IDB will be considered as a plus. Excellent written English is a requirement.

#### IV. ACTIVITIES

The consultant will work in close collaboration with the Lead Consultant and other consultants working on the design of project components, particularly the Natural Resource Economist. In order to achieve the objectives of the work, the consultant will carry out at least the following activities:

2. Participate in project preparation workshops as agreed in the work plan.
3. Review the national norms and procedures as well as IDB policies regarding planning, budget planning and execution, procurement, accounting, auditing and controls that are relevant for this project. Review ICA methodology, manual and format.
4. Apply the ICA methodology to evaluate the institutional capacity of the designated Executing Agency. In particular, evaluate the following aspects regarding institutional capacity: i) planning and organization, which includes the activities systems; ii) execution, which includes the personnel management system, the goods and services management system, and the financial and budgetary management system; and iii) control, which includes the internal control system and the external control system. The consultant will also include a description/analysis of the other entities potentially involved in a direct manner in the execution of the Project (OPM, PIOJ, FD, WRA, NIC, and RADA).
5. Conduct working sessions with the designated Executing Agency staff responsible for the different areas included in the ICA methodology, and with the staff at the IDB's Country Office in Jamaica responsible for the fiduciary aspects. Analyze the organizational structure for executing the Project (human, physical and financial resources, as well as competencies, responsibilities and coordination) including the mechanisms for transferring resources and delegating activities, both at the central and regional offices.

6. Formulate a Risks Matrix focusing on fiduciary, financial administration, auditing, accounting, and other internal control factors that may affect the execution and achievement of project objectives. Matrix must include a description of proposed measures to mitigate each identified risk. This information will be part of the project's overall Risk Matrix.
7. Propose and determine the viability of the institutional design for the execution of the Project based on the inputs from the other consultants. The consultant should also identify the personnel and resources (financial and infrastructure) needed to support the execution of the Project (Project Executing Unit); describe the profiles needed for all the positions required, regardless of whether they would need to be hired or filled by the designated Executing Agency's own staff; and develop the Terms of Reference for the key positions. The consultant must work with the designated Executing Agency, all other relevant counterparts and the respective consultants to validate the proposed design.
8. Propose and draft of the section on Institutional Coordination and Support (Part III) component of the GEF Request for Endorsement Document, indentifying roles, responsibilities and coordination mechanisms among the different entities involved in the execution of the Project, including the private sector.
9. Propose an internal administrative procedure to facilitate the administrative interaction between the executing agency and the IDB.
10. Develop an Institutional Strengthening Action Plan for the first year of operation, including proposed activities, chronogram, estimated costs and responsible persons. If deemed necessary, identify any additional consultancy needed to support the Designated Executing Agency with the development of manuals and/or training regarding procurement, inventory registry and filing system, administrative procedures, internal control, external auditing procedures, etc.
11. Prepare preliminary versions of all the models and/or forms need for: i) financial plan of the project including disbursement projections; ii) procurement plan, which ought to be linked to the financial projections of the project; and iii) Plan of operations for the first 18 months of the project.
12. Prepare the operational procedures for the mechanism that will be used in the Payment for Environmental Services, in coordination with the work on this subject by the Natural Resource Economist.

In addition to these specific activities, the Consultant will collaborate with the Project Team in any other activities that will be reasonably asked when necessary for the successful completion of the objectives of the Consultancy.

## **V. REPORTS AND PAYMENTS**

### **A. Reports**

The Consultant will be responsible for generating the following individual reports:

1. Work plan (general and specific) to be delivered at the end of the first week.
2. A preliminary report covering the results from the ICA evaluation and a preliminary draft of the Risks Matrix, and including a detailed description of all the models that will be used to fulfill of the tasks, having discussed and agreed with other consultants on all the information that will have to be provided.
3. Final report including all the deliverables. A draft version of the report will have to be submitted one week after obtaining from the Lead Consultant all the information needed to feed the models. The final report must incorporate the IDB and the GOJ's comments on a previous draft.

All reports will be presented to IDB's team leader Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) in electronic format and hard copy. All reports and documents will be presented in English. The consultant should include in the reports the relevant information/data used during the consultancy such as: technical and statistic reports, maps, minutes and any other relevant information in hard copy and/or digital format. The consultant will be available to provide answers to comments from the Project Team and the GEF Secretariat during project approval, even after final payment has been received.

## **B. Payments**

The payments to the Consultant will be conducted as follows:

- F. 10% upon signature of the Consultancy contract.
- G. 15% at the delivery and approval of the work plan by the Project Team Leader.
- H. 35% at the delivery and approval by the Project Team Leader of the preliminary report and first draft of the Risks Matrix
- I. 40% at the delivery and approval by the Project Team Leader of all final reports.

## **VI. COORDINATION AND SUPERVISION**

The consultant will work under the supervision of Mr. Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) Project Team Leader (INE/RND). The consultant must work in close coordination with the rest of the project team as well as with the counterparts designated by the Execution Agency. The consultant will have the support from and must coordinate closely with Mr. Edwin Mateo Molina ([edwinm@iadb.org](mailto:edwinm@iadb.org)) and Mr. Graham Burns Williams ([grahamwi@iadb.org](mailto:grahamwi@iadb.org)) at the IDB Country Office in Jamaica (RND/CJA).

### **Terms of Reference DATA MAPPING CONSULTANT**

## **II. OBJECTIVES OF THE CONSULTANCY**

The objective of the Consultancy is to collect and map data on land use, water resources, biodiversity, ecosystems and ground cover distribution of the Yallahs River and Hope River

Watersheds project area. In addition, the consultant will identify information gaps and the related data for integrated management requirements that will be needed during project implementation.

### III. CHARACTERISTICS OF THE CONSULTANCY

- Type of Consultancy: Individual Consultant, contracted for a lump sum for professional services. The payment system is stipulated in Section V of these Terms of Reference.
- Duration and dates: The Consultant will work for 20 discontinuous days between 07/01/2011 and 10/01/2011.
- Duty station: The Consultant will work from Kingston Jamaica, with access to internet connection, skype or other VOI and other instruments which will facilitate communications with the consultants, government institutions and the Bank.
- Travels: At least 2 missions to the project's intervention area will be carried out by the Consultant, based on prior agreement with the Bank and NEPA.
- Qualifications: Natural Resource specialist or related field with a Master Degree and at least 3 years of experience implementing projects related to sustainable land management, and/or watershed management. Proven expertise in the use of ArcGIS and/or other mapping tools and demonstrated capacity to create and manage large databases is required. Experience in the design of natural resource projects financed by multilateral organisations (e.g. IDB, UNDP, World Bank) is desired. Familiarity with Jamaica's existing land use, forestry, agriculture, biodiversity, water and ground cover databases/maps is preferred.

### IV. ACTIVITIES

In order to achieve the objectives of the consultancy the consultant will carry at least the following activities:

1. Work in close collaboration with the Project Preparation Grant (PPG) Lead Consultant/Watershed Management Specialist, Rural Development Specialist and the Agroforestry/Biology Specialist to define the work plan.
2. Meet with the relevant agencies and individuals in Jamaica to collect existing reports and data on land use, biodiversity, water, soils, ecosystems, and other relevant information as identified in the work plan, of the project area.
3. Participate in project preparation workshops as agreed in the work plan.
4. Produce geographic information system (GIS) data layers depicting land use, biodiversity, ecosystem classification, water resources, slope, land tenure and soils in the project area. A land use classification should be proposed using the land use classification of Jamaica and other classification guided by widely accepted international standards. These data are to be in an Arc/Info- or ArcView-compatible format, georeferenced to the common mapping standard for Jamaica, and accompanied by the appropriate GIS metadata.
5. Using the GIS data described above, produce maps for priority sites in the project intervention area, as agreed with the Lead Consultant. All maps should be on a scale of 1:5000 and are to include a common set of reference features (e.g. roads, settlement areas). A

technical report should be included, describing the structure and content of the maps, the methodology employed in map preparation (including data collection, analysis and final preparation), map use and limitations, metadata and information sources.

6. Prepare a data collection/management plan for the project. This plan must at least include:

- Description of available information relevant to project activities.
- Identification of information gaps that will need to be collected during project implementation.
- Identification of stakeholders who must be involved in the implementation of the plan (specifying roles and responsibilities).
- Identification of activities needed to ensure the sustainability of the collection of biodiversity and natural resource data and its incorporation into national and local GIS databases, the National Spatial Plan, and Sustainable Development Plans and Orders.
- Description of time and budget required to implement the plan.
- Indicators and targets to monitor progress of expected results.

This activity will be done in coordination with the Institutional Specialist in order to ensure consistency with the training activities to be implemented by the project.

In addition to these specific activities, the Consultant will collaborate with the Project Team in any other activities that will be reasonably asked when necessary for the successful completion of the objectives of the Consultancy.

## **V. REPORTS AND PAYMENTS**

### **A. Reports**

The Consultant will be responsible for generating the following individual reports:

1. Work plan (general and specific) to be delivered at the end of the first week after signing the contract.
2. Baseline assessment of existing information and diagnosis of information/data needs related to activity III.b.
3. GIS mapping of the intervention area including:
  - land use types and land management practices (in collaboration with the Rural Development Specialist and the Agroforestry/Biology Specialist),
  - biodiversity,
  - water resources (in collaboration by the Watershed Specialist)
  - ecosystems
  - soils
  - land tenure
  - Other maps as agreed with the Lead Consultant and reflected in the work plan.

4. Report on biodiversity, water, soil, natural resources and land use data collection and management needs (plan) for the implementation phase of the project.

All reports will be presented to IDB's team leader Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) in electronic format and hard copy. All reports and documents will be presented in English. The consultant should include in the reports the relevant information/data used during the consultancy such as: technical and statistic reports, maps, minutes and any other relevant information in hard copy and/or digital format. The consultant will be available to provide answers to comments from the Project Team and the GEF Secretariat during project approval, even after final payment has been received.

## **B. Payments**

The payments to the Consultant will be conducted as follows:

- 10% upon signature of the Consultancy contract
- 15% at the delivery of the work plan and approval by the Team Leader of the work plan.
- 35% at the delivery and approval of the first draft maps and baseline report by the Team Leader.
- 40% at the delivery and approval of all final products by the Team Leader.

## **VI. COORDINATION AND SUPERVISION**

The consultant will work under the supervision of Mr. Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)). The consultant must work in close coordination with the rest of the project team as well as with the counterparts designated by the NEPA. The consultant will have the support from and must coordinate closely with Mr. Edwin Mateo Molina ([edwinm@iadb.org](mailto:edwinm@iadb.org)) at the IDB Country Office in Jamaica (RND/CJA).

## **Terms of Reference COMMUNICATION SPECIALIST**

### **I. OBJECTIVES OF THE CONSULTANCY**

The objective of the Consultancy is to design a communications strategy to encourage effective stakeholder engagement and support of the proposed project and its components by proposing activities to increase awareness and improve knowledge of environmental, biodiversity and sustainable land use issues.

### **II. CHARACTERISTICS OF THE CONSULTANCY**

1. Type of Consultancy: Individual Consultant, contracted for a lump sum for professional services. The payment system is stipulated in section IV of these Terms of Reference.
2. Duration and dates: The Consultant will work for 20 discontinuous days between 07/01/2011 and 10/01/2011.

3. Duty station: The Consultant will work from Kingston Jamaica, with access to internet connection, skype or other VOI and other instruments which will facilitate communications with the consultants, government institutions and the Bank.
4. Travels: At least 2 missions to the project's intervention area will be carried out by the Consultant, an initial trip to meet with local counterparts and collect necessary information and a final trip to discuss the results of the consultancy, previous agreement with the Bank and NEPA.
5. Qualifications: A degree in social/mass communications, promotional marketing, public relations, advertising or related field and at least 7 years of relevant work experience in communication in developing countries, with emphasis on community engagement. The consultant must have experience in conducting communications needs analysis, strategic design, and formulating detailed communication campaigns -including preparation of detailed activities for project implementation, budget, procurement requirements, terms of reference and action plan. Experience working in rural development/natural resource management topics is preferable. Excellent command of English is a must.

### III. ACTIVITIES

The Consultant will work in close collaboration with the other specialist in the project team, particularly the Watershed Management Specialist/Lead Consultant, the Rural Development Specialist, and the Institutional Specialist. In order to achieve the objectives of the consultancy, the consultant will have to carry at least the following activities:

1. Meet with relevant stakeholders (government agencies, community leaders, beneficiaries, other participating institutions, private sector or local NGOs) to gather all necessary data and information needed to design the project's communication strategy.
2. Participate in project preparation workshops (kick-off and results framework) as requested by the Lead Consultant.
3. Prepare a diagnosis of the project stakeholders environmental awareness and identify relevant communications issues to be addressed by the project, including the following tasks:
  - Determine the communication requirements that must be met to support the project's objectives.
  - In coordination with the Institutional Specialist and Rural Development Specialist assess the communication capacities of all implementing partners in support of their individual work plans.
  - In coordination with the Rural Development Specialist and Agroforestry Specialist, assess the awareness of potential project beneficiaries on environmental issues and benefits associated to sound resource management.
4. Based on the target beneficiaries for each of the project components proposed by other consultants, elaborate a communications strategy for the project, including various types of media products and communication channels such as print, video, internet, broadcast, and educational material (formal and non-formal education). The strategy should include a

proposal for an environmental awareness campaign to build awareness and support among decision-makers and other critical stakeholders (component 1 of the project). The proposal will include:

- Activities to elaborate and disseminate educational and informational materials suggested for use as part of the strategy
- Terms of Reference for the consultants needed for each activity (to ensure mainstreaming of Biodiversity into national and sub-national plans, for example).
- Procurement plan for the execution of the activities.
- Identification of stakeholders who must be involved in the implementation of the plan (specifying roles and responsibilities).
- Timeline for implementation of activities.
- Detailed budget by activity and year
- Indicators and targets to monitor progress and project results.

In addition to these specific activities, the Consultant will collaborate with the Project Team in any other activities that will be reasonably asked when necessary for the successful completion of the objectives of the Consultancy.

#### **IV. REPORTS AND PAYMENTS**

##### **A. Reports**

The Consultant will be responsible for generating the following individual reports:

1. Work plan (general and specific) to be delivered at the end of the first week.
2. An interim report including:
  - A gap analysis of the communication needs of the project and communication needs of the activities to be undertaken by the implementing partners
  - A detailed analysis identifying the settings, channels and media for reaching the critical publics for the communication strategy
3. A final report, setting out the detailed communication strategy as specified in III-d,

The reports will be presented to the PPG Lead Consultant and the Team Leader Sergio Ardila (sergioar@iadb.org) in electronic format and hard copy. The consultant will work in English. The consultant should include in the reports the relevant information/data used during the consultancy such as: technical and statistic reports, maps, minutes and any other relevant information in hard copy and/or digital format. The consultant will be available for comments from the Project Team and the GEF Secretariat after final payment is received.

##### **B. Payments**

a. The payments to the Consultant will be conducted as follows:

- 10% upon signature of contract
- 15% at the delivery and approval by the Team Leader of the work plan
- 35% at the delivery and approval by the Team Leader of the interim report

- 40% at the delivery and approval by the Team Leader of all final reports

## **V. COORDINATION AND SUPERVISION**

- 5.1 The consultant will work under the supervision of Mr. Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) Project Team Leader (INE/RND). The consultant must work in close coordination with the rest of the project team as well as with the counterparts designated by NEPA. The consultant will have the support from and must coordinate closely with Mr. Edwin Mateo Molina ([edwinm@iadb.org](mailto:edwinm@iadb.org)) at the IDB Country Office in Jamaica (RND/CJA).

### **Terms of Reference Agroforestry and Biodiversity Specialist**

#### **II. OBJECTIVES OF THE CONSULTANCY**

The objective of the Consultancy is to assess needs for the implementation of agro-forestry, reforestation and SLM activities and identify critical locations and scope of sustainable forest management, reforestation and agroforestry interventions. The consultant will also focus on identifying activities that enhance the biological diversity of the project area and assess the potential reduction and value of Green House Gas (GHG) emissions of the proposed interventions.

#### **III. CHARACTERISTICS OF THE CONSULTANCY**

1. Type of Consultancy: Individual Consultant, contracted for a lump sum for professional services. The payment system is stipulated in Chapter V of these Terms of Reference.
2. Duration and dates: The Consultant will work for 30 discontinuous days between 07/01/2011 and 10/01/2011.
3. Duty station: The Consultant will work from his own location and Jamaica, with access to internet connection, skype or other VOI and other instruments which will facilitate communications with the consultants, government institutions and the Bank.
4. Travels: At least 3 missions to the project's intervention area will be carried out by the Consultant, including an initial trip to meet with local counterparts and collect necessary information and a final trip to discuss the results of the consultancy, previous agreement with the Bank and NEPA.
5. Qualifications: Forester, Biologist or related background with a Ms or Ph.D.; with at least 8 years of experience in implementation of sustainable land and forest management, and agroforestry projects. Proven experience and deep knowledge of design and implementation of Land Use, Land Use Change and Forestry (LULUCF) projects. Expertise in the development of carbon baselines, and carbon flows related to additionality, leakage, uncertainties, and permanence with knowledge of the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guide for the LULUCF sector and development of emissions inventories of non-energy sectors. Proven experience designing community forestry and agroforestry interventions for the enhancement of biodiversity is required. Experience in the design of projects financed by multilateral organisations (e.g. IDB, UNDP, World Bank), including preparation of detailed

activities for project component implementation, budget, procurement requirements, terms of reference and action plan is desired. Excellent written English is a requirement. Knowledge of Jamaica's land use management institutions and forestry, biodiversity and rural agricultural practices, is preferred.

#### IV. ACTIVITIES

The Consultant will work in close collaboration with the other specialist in the project team, particularly the Watershed Management Specialist, the Rural Development Specialist, and the Data Mapping Specialist. In order to achieve the objectives of the consultancy the consultant will have to carry at least the following activities:

1. Meet with relevant stakeholders to gather all necessary data and information needed to identify priority areas for project implementation.
2. Participate in project preparation workshops as agreed in the work plan
3. Work in close collaboration with the Data Mapping and the Watershed Management Consultant in the definition of a baseline of land use by use types (according to the system used by the GoJ), land management practices, and to provide a diagnosis of environmental issues generated by such uses.
4. Elaborate a proposal for sustainable forestry and agroforestry management interventions needed to solve the environmental issues identified in the diagnosis and to be financed by the IDB-GEF project component 4 (Implementing Sustainable Agriculture, Forestry and Land Management Practices in Watershed Communities). This proposal should take into account the project framework developed at PIF level. The implementation Plan must at least include:
  - Detailed description of the proposed forestry/agroforestry practices to be implemented by the project and their expected results/impacts (including planned increases % and # of ha of sustainable forestry and agroforestry). These practices should focus on enhancement of biodiversity.
  - Terms of Reference for the consultants needed for each activity.
  - Procurement plan for the execution of the component activities.
  - Design criteria and pre-selection of participating farms, community groups, land owners and other relevant beneficiaries, using a participatory approach with an emphasis on gender issues.
  - Timeline for implementation of activities.
  - Detailed budget by activity and year
  - Indicators and targets to monitor progress and project results.
5. Develop a carbon stock baseline and perform an analysis of existing methodologies for measuring, monitoring and estimating changes in carbon storage.
6. Develop a proposal for a Carbon Monitoring System that meets the needs and characteristics of the project. This proposal should at least include:
  - Evaluation of the potential carbon stock increase resulting from project activities.
  - Design of the implementation plan for establishing a carbon monitoring system, including:

- Identification of stakeholders who must be involved (roles and responsibilities)
  - ToRs for the recruitment of consultants to implement the carbon monitoring system
  - Detailed time and budget required
7. Formulate a Risks Matrix that identifies the risks that might prevent the project objectives from being achieved as related to the activities identified in points (d) and (f), including climate change risks. Include proposed measures to mitigate each identified risk.
8. Coordinate with the Lead Consultant to fill out the required GEF SP2 Biodiversity Tracking Tool.

In addition to these specific activities, the Consultant will collaborate with the Project Team in any other activities that will be reasonably asked when necessary for the successful completion of the objectives of the Consultancy.

## **V. REPORTS AND PAYMENTS**

### **A. Reports**

The Consultant will be responsible for generating the following individual reports:

- Work plan (general and specific) to be delivered at the end of the first week.
- Technical report of the project's baseline/diagnosis related to land use, land use change, forestry and carbon stock (activities IV-c and IV-e).
- Report of the design for component 4 of the project, including all information detailed above (IV-d).
- Report on a proposed Carbon Monitoring System related to land use change, land use and forestry in the project intervention area (activity IV-f).

All reports will be presented to IDB's team leader Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) in electronic format and hard copy. All reports and documents will be presented in English. The consultant should include in the reports the relevant information/data used during the consultancy such as: technical and statistic reports, maps, minutes and any other relevant information in hard copy and/or digital format. The consultant will be available to provide answers to comments from the Project Team and the GEF Secretariat during project approval, even after final payment has been received.

### **B. Payments**

The payments to the Consultant will be conducted as follows:

- 10% at the signature of the Consultancy contract.
- 25% at the delivery of the work plan and approval by the Project Team Leader.

- 35% at the delivery and approval by the Project Team Leader of the technical report and first draft for reports V.A.c and V.A.d
- 30% at the delivery and approval by the Project Team Leader of all final reports.

## **VI. COORDINATION AND SUPERVISION**

The consultant will work under the supervision of Mr. Sergio Ardila ([sergioar@iadb.org](mailto:sergioar@iadb.org)) Project Team Leader (INE/RND). The consultant must work in close coordination with the rest of the project team as well as with the counterparts designated by NEPA. The consultant will have the support from and must coordinate closely with Mr. Edwin Mateo Molina ([edwinm@iadb.org](mailto:edwinm@iadb.org)) at the IDB Country Office in Jamaica (RND/CJA).