



## UNIVERSITY OF GUYANA – THE WORLD BANK

### UNIVERSITY OF GUYANA SCIENCE AND TECHNOLOGY SUPPORT PROJECT (P125288)

#### Environmental Management Framework for the Research Fund

#### GUIDELINES FOR SCREENING PROTOCOLS AND PROJECT MANAGEMENT FOR ENVIRONMENTAL AND AGRICULTURAL RESEARCH, TECHNOLOGY DEVELOPMENT AND INNOVATION.



April, 2011

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## ABBREVIATIONS AND ACRONYMS

<b>EMP</b>	<b>Environmental Management Plan</b>
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<b>ES</b>	<b>Environmental Specialist of the PIU</b>
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<b>GMO</b>	<b>Genetically Modified Organism</b>
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<b>RF</b>	<b>Research Fund</b>
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<b>PIU</b>	<b>Project Implementation Unit</b>
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<b>OP</b>	<b>The World Bank Operational Policies</b>
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<b>UG</b>	<b>University of Guyana</b>
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## ENVIRONMENTAL MANAGEMENT FRAMEWORK FOR THE RESEARCH FUND



### 1. INTRODUCCION

This document represents the Environmental Management Framework (EMF) to be implemented by the Research Fund that will be developed under the Project of “UNIVERSITY OF GUYANA - SCIENCE AND TECHNOLOGY SUPPORT PROJECT” which is financed by the World Bank Group to the country of Guyana. This EMF has been prepared as a Guidelines document to orient both the professionals of the PIU responsible to supervise the environmental management of the projects and for the researchers applying to the UG Research Fund.

This guide will be use as the first screening procedure in the selection of research proposals that will apply to the UG Research Fund. The guide also defines the steps and methods needed to follow during the selection of eligible proposals in order to comply with national environmental regulations and the Safeguards policies of the World Bank.

This instrument sets out the guidelines for environmental management of the Research Fund, ranging from the preliminary stages of research project screening, checking compliance with the national legal requirements for project development, identification of environmental impacts and measures to reduce or prevent negative effects during implementation and final actions for environmental project closure.

Thus guide is also prepared for the professionals responsible for leading the research screening stage, selection of potential environmental mitigation measures, and performing environmental monitoring of projects. The guide provide criteria and tools to guide the efforts to identify, diagnoses potential environmental issues, evaluate project performance, formulate of a plan of action for environmental management measures and develop a final closure of the project. The information and procedures included in this guide could be improved during project implementation and prior approval of the World Bank.

## **2. INSTITUTIONAL ARRANGEMENTS**

Consistent with the assignment of project management responsibilities, environmental and social management responsibilities are distributed among the University of Guyana, the Ministry of Education and the project management team for the World Bank. The University of Guyana will have overall technical responsibility for the management of project activities and in this capacity will be the lead agency for coordinating the application of environmental and social requirements under the project.

The Planning Unit of the Ministry of Education is the Project implementing agency. Project implementation arrangements have been designed to take advantage of existing capacities and comparative advantages within the University of Guyana and Ministry of Education. The Planning Unit of the Ministry of Education will provide fiduciary services (financial management and procurement) and will be responsible for overall contracts management. The University of Guyana would have primary responsibility for Project coordination and for the technical implementation of the Project through a Coordination and Technical Office located in the UG's Vice-Chancellor's office. This would ensure that the University remains responsible for all technical aspects, at the same time as existing (and scarce) fiduciary management capacity within the Ministry of Education is tapped and strengthened.

### **Supervision and Review**

The Environmental Specialist (ES) appointed to the PIU (either in the PUMOE or the UG Technical Office) will be responsible for the application of safeguard requirements and for the evaluation of the proposals and related activities using screening procedures contained in this plan. The UG Research Committee will be responsible to award and supervise the execution of the grant. At an agreed interval, the UG Technical Office will forward a report of grant activities to the PUMOE including safeguard screening reports for their periodic review.

The ES will also be responsible for the screening and evaluation procedures explained in the guide.

### **Communication and Grievance Resolution**

The UG and the PUMOE shall prepare a communication plan detailing specific responsibilities and communication requirements. This plan shall be submitted to the Bank for its No Objection.

Notwithstanding contractual and other legal grievance resolution mechanisms under national and international law, the PUMOE shall be ultimately responsible for the management of any conflicts arising due to Project contract activities. With respect to research grants and curriculum development the UG shall assume the primary role for resolution of grievances.

## **3. OBJECTIVES OF THIS GUIDE**

### **MAIN OBJECTIVE**

To guide and facilitate the implementation of procedures for environmental management of the research projects for research, technological development and innovation at the University of Guyana according to (i) national environmental legislation and (ii) The World Bank Safeguards Policies.

### **SPECIFIC OBJECTIVES**

1. Guide the researchers in the presentation of their projects to the Research Fund and compliance with the National legislation and the World Bank Safeguards Policies.
2. Establish a methodology to select, evaluate and monitor research projects that will be financed by the Research Fund.
3. Provide a clear and standard procedure to enhance transparency and opportunities to participate in this Research Fund.
4. Serve as the consultation tool during preselection of proposals and in the design of mitigation measures to avoid environmental effects of the selected projects.
5. Inform researchers about the Research Fund procedures before presenting a proposal.

### **4. BRIEF INTRODUCTION OF THE RESEARCH ACTIVITIES IN THE UNIVERSITY OF GUYANA**

### **5. RESEARCH CONVOCATIONS**

## 6. EVALUATION CRITERIA

Research proposals will be reviewed in consideration to some important principles and criteria to ensure environmental sustainability of the project.

- 1 Clarity of the project proposal in terms of potential environmental impact, analysis of the positive and negative results of the project.
- 2 Clear identification of possible environmental effects of the project during execution and proposed plan to prevent, mitigate or avoid these impacts.
- 3 Definition of environmental indicators that can be used to monitor project results.
- 4 Potential impact of innovation research upon water, air, soil and biodiversity assets.
- 5 Potential positive and negative effects of future use of research results on the pristine ecosystems of Guyana, current or proposed protected areas or in areas of international environmental significance (e.g RAMSAR sites).
- 6 Consultation with potentially affected or interested parties/stakeholders regarding the research project.

## 7. MID-TERM EVALUATION

The Environmental Specialist together with the Research Committee and the Director of the PIU will perform a self evaluation process of the research projects portfolio during the Mid-Term evaluation of the project. This evaluation will consist of a review of the expected results of the financed research project, implementation of mitigation measures, compliance with the World Bank Safeguards Policies and the National Legal regulations. Lessons learned will serve as the opportunity to improve the processes of selection, evaluation and monitoring and if necessary, previous approval by the Bank, to improve this Guide. Mid-Term evaluation reports will be shared within the University, researchers, stakeholders and The World Bank.

## 8. LEGAL FRAMEWORK THAT APPLIED TO THE RESEARCH PROJECTS FINANCED BY THE RESEARCH FUND

All research projects applying to the UG Research Fund will need to be in compliance with the Guyana environmental legal framework and other applicable legislation and with the requirements set up by the Safeguards Policies of the World Bank Group; (Annex 1).

The Research Fund will provide financial support to a diverse type of proposals coming from the four Science Faculties of the University of Guyana, thus proposals will include research activities in a wide range of scientific fields such as biodiversity, agriculture, forestry, water resources, biotechnology, among others. Thus, applicable national legislation to each project will vary; researchers will need to adapt their project to the national applicable regulations and ensure the request of the needed permits.

In this Guide you will find a list with the main environmental regulations of Guyana. This is not a complete list, since it might lack other important environmental regulations and because included regulations could change through time. Researchers interested to apply to the Research Fund should check for new regulations, decrees or derogations of the applicable regulatory framework for the preparation of their research proposal.

This guide seeks to inform the stakeholders (researchers) who are going to apply to the Research Fund to be informed of the screening process and about their responsibilities to develop their projects in accordance to the Guyana legal framework and the World Bank Groups Safeguards Policies, in order to prevent that financial support from the World Bank Group could promote environmental deterioration.



## **8.1 -Guyana Environmental Framework**

**GUYANA LEGAL FRAMEWORK.** This list is not a complete list of Guyana environmental regulatory framework, since it might be lacked some other important regulations, decrees, etc.

### **National Regulatory Framework**

**Environmental Protection Act, 1996**

**Environmental Protection (Air Quality) Regulations, 2000**

**Environmental Protection (Noise Management) Regulations, 2000**

**Environmental Protection (Water Quality) Regulations, 2000**

**Environmental Protection (Hazardous Waste Management ) Regulations, 2000**

**Forestry Act, 2009**

**Pesticides and Toxic Chemicals Control Act, 2000**

**Pesticides and Toxic Chemicals (Amendment) Regulations, 2007**

**Pesticides and Toxic Chemicals Control (Amendment) Act, 2007**

**Pesticides and Toxic Chemicals Regulation, 2004**

**Occupational Health and Safety Act**

**Food & Drug Act, 1971**

**Amerindian Act, 2006**

**National Trust Act, 1972**

### **INTERNATIONAL TREATIES**

**United Nations Framework on Climate Change (UNFCCC)**

**Kyoto Protocol (and its successor)**

**Convention on Biodiversity**

**Cartagena Protocol on Biosafety**

**Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress**

**Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization**

**International Plant Protection Convention**

**United Nations Convention to Combat Desertification**

**United Nations Law of the Sea Convention**

**International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)**

**Cartagena Convention for the Protection and Development of the Marine Protocols to the Cartagena Convention**

**Ramsar Convention on Wetlands**

**Convention on the International Trade of Endangered Species of Wild Flora and**

**Convention for the Control of Transboundary Movements of Hazardous Wastes**

**Stockholm Convention on Persistent Organic Pollutants**

**Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Treaty of Amazonian Cooperation**

## **8.2- The World Bank Safeguards Policies**

The Project “UNIVERSITY OF GUYANA SCIENCE AND TECHNOLOGY SUPPORT PROJECT” has triggered four of the 10 safeguards policies of the World Bank Group. If during project implementation, another safeguards policy might be needed to be triggered, the ES will inform this situation to the PIU Coordinator and to the World Bank.

In Annex 1, you will find the links to the web sites in the World Bank webpage that describes each of the Environmental Safeguards policies that were triggered for the University of Guyana Project. It is recommended that researchers applying to the Research Fund consult the World Bank web page to get a full understanding of The World Bank Safeguards policies and possible amendments (Annex 1).



## 9. Potential Environmental Effects in the Implementation of the Research Projects financed with the Research Fund.

	POTENTIAL NEGATIVE IMPACTS	POTENTIAL POSITIVE IMPACTS
<b>Water Resources</b>	Water quality of superficial waters is affected.	Improve knowledge of water quality in pristine watersheds.
	Dumping of chemical wastes and heavy metals in superficial waters.	Development of strategies and policies to reduce contamination of water with chemical wastes and heavy metals.
	Generation of solid waste (e.g. plastic)	Improvement of Water resources management
	Contamination of water resources by the use of agrichemicals during studies	Development of biological pest control methods in rice and sugar plantations.
<b>SOIL</b>	Increase erosion	New methods to reduce erosion patterns from current agricultural practices
	Loss of organic matter	Increase understanding of soil fixing bacteria and nutrient cycling
	Contamination of soil with solid waste	Development of methodologies to improve management of solid wastes in the country
	Contamination of soil with chemical wastes, oil, etc.	Implementation of pilot projects to treat toxic and chemical wastes in the country
<b>Biodiversity</b>	Increase collection of fragile amphibians species	Increase knowledge of endangered tropical species
	Extraction of flora endangered species	Development of Field and Taxonomic guides to Guyana Flora
	Collection of unknown aquatic species	Increase knowledge of aquatic insects as biological indicators
	Bioprospecting studies could increase the collection of rare species	Biochemical studies of forest microorganisms could lead to new scientific discoveries
<b>Air</b>	Increase traffic in pristine sites	Students and Faculty increase field knowledge of country ecosystems
	Generation of toxic fumes during laboratory experiments	New scientific discoveries are published by the UG Faculty
	Generation of toxic fumes during fish fixation procedures	Increase understanding of migratory patterns of fish species
	Generation of toxic fume by the use of agrochemicals	Development of methods to reduce application and use of toxic and banned agrochemicals

## 10. METODOLOGY FOR THE SCREENING, EVALUATION AND MONITORING OF RESEARCH PROPOSALS

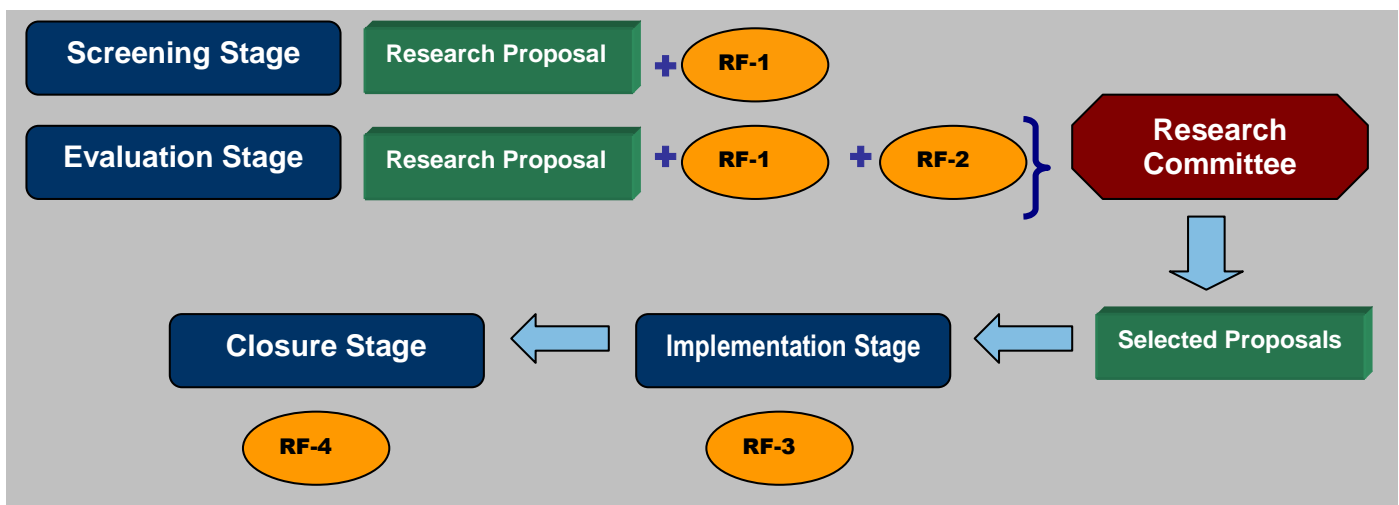
Researchers applying to the Research Fund will follow a screening and evaluation process which is represented in next Figure. Screening, evaluation and monitoring Forms are included in Section 9.

1- In the first stage of Screening, the principal investigator will fill out *Section A* of the Form RF-1 with basic environmental information of the proposed research project and will identify and evaluate the potential negative and positive impacts, if the project is executed. In this same RF-1 Form, the Environmental Specialist of the PIU will fill out *Section B* by assessing the information included in the research proposal, the Form RF-1 and the proposed Environmental Mitigation Plan (according to the Form RF-2), if included.

2-In the second stage, The ES will send to the University Research Committee the screened and evaluated research proposals, with copies of the RF-1 y RF-2 Forms.

3-During project implementation, the selected research proposals will present an Environmental Monitoring Report every six months to the ES and according to the Form RF-3. The ES will also perform on site visits to the projects sites under execution as needed.

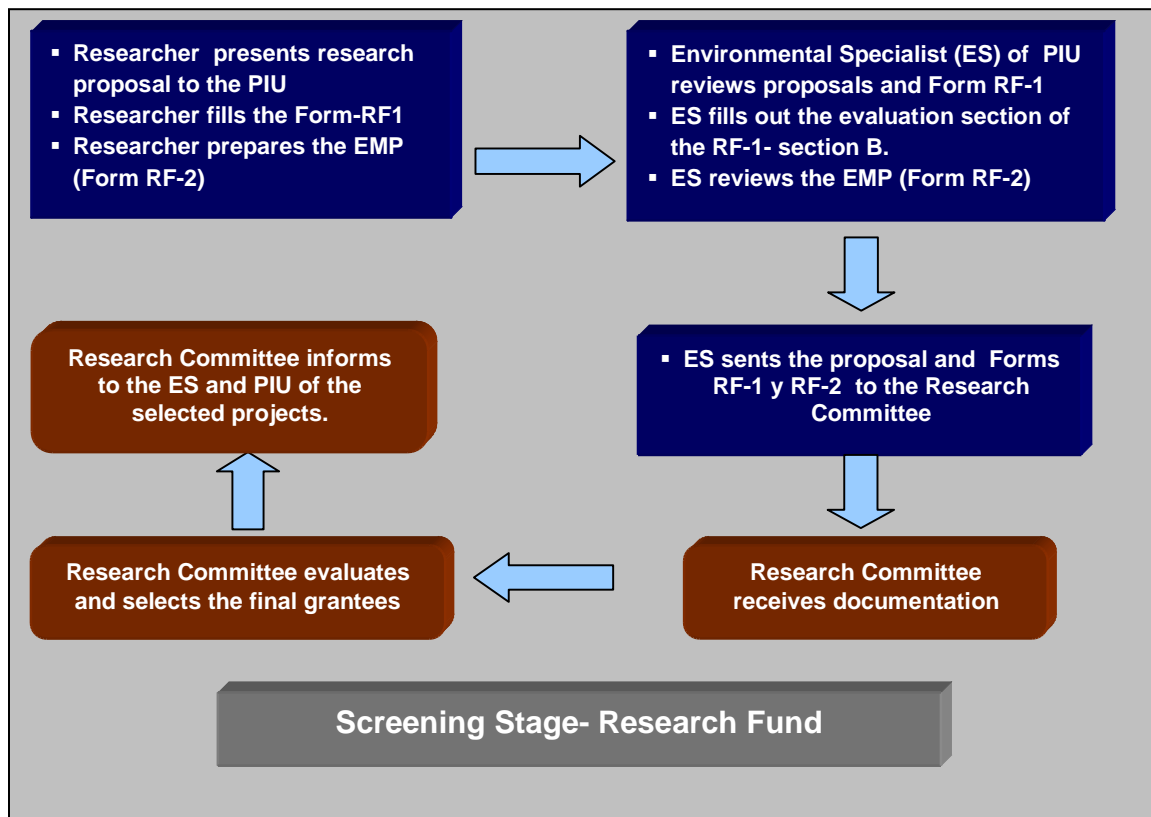
4-Before completing the research project, the Principal Investigator will inform to the ES of the potential day of research closure. The ES will perform an Environmental Audit to the project site and will complete the Environmental Closure Form RF-4. This Form will be signed by the ES and the Principal Investigator.



## SCREENING AND EVALUATION STAGES

In this section, it is described in more detail the Screening and Evaluation stages.

1. Researcher presents the research proposal and the Form RF-1 to the PIU.
2. Research presents the Environmental Mitigation Plan (EMP)-Form RF-2 either together with the proposal and the RF-1 or after the ES reviews the RF1 and the research proposal and provides recommendations for the EMP to the researcher.
3. The ES reviews all project documentation and assesses the potential environmental impact of the project and the scope of the proposed EMP.
4. The ES will screen out high risks research proposals and will send to the UG Research Committee, the medium, low and no risk research proposals.
5. Research Committee receives documentation and evaluations forms. The research committee pursues its normal operation processes.
6. Research Committee selects the final grantees and informs about the selected proposals to the ES in the PIU.



**Impact Assessment and evaluation (FORM RF-1)**

1. In the RF-1 form, the research will do a self evaluation of the potential positive and negative effects of the project.
2. Researcher will indicate the potential negative and positive impacts that the project could cause to the water, biodiversity, air and soil resources (*Item 4. Identification and assessment of potential impacts*)
3. Researcher will sum individually all negative and positive impact (*Item 5. Total Sum*)
4. Research will identify the Index value for Potential Negative Impact (*Item 6. Index of Potential Negative Impacts*) according to the following table:

<b>Index Value for Potential Negative Impacts</b>		
<b>High impact</b>	≥8	Project will have high needs to implement environmental measures
<b>Medium impact</b>	5-7	Project will have medium needs to implement environmental measures
<b>Low impact</b>	2-4	Project will have low needs to implement mitigation measures
<b>No impact</b>	0	Project will not require to implement environmental measures

5. The ES will fill out Section B (items 7, 8, 9) of the Form RF-1 and will assess the potential environmental risks according to the activities proposed in the research proposal and the information given in the Form RF-1.
6. The ES will review and graded the project as High, medium, low and No risk, according to the potential negative effects of the project on the environment and to any potential safeguards issues.
7. The ES will transfer the project documentation of the Medium, Low and No risk research proposals to the UG Research Committee.

**Environmental Mitigation Plan (FORM RF-2)**

1. The Researcher prepares an EMP (filling the Form RF-2) with measures to prevent, mitigate and reduce any potential environmental impact that the implementation of the project could produce.
2. The EMP contains the measures, environmental indicators, timing, people responsible to implement each measures and the cost. The cost of the EMP must be included in the final budget of the research proposal.

3. Research selects appropriate measures to reduce, prevent and mitigate impacts, according to Guyana environmental framework and the Environmental Mitigation Criteria included in this Guide. Research also implements measures recommended by the ES of the PIU and the World Bank Environmental Guidelines (Annex 2).

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#### Environmental Mitigation Criteria

1. Research projects will pursue knowledge and understanding of the natural resources Guyana avoiding environmental impact and contributing to the sustainable development of the country.
  2. All selected research Projects will be responsible to implement appropriate measures to manage solid, biological and chemical wastes, as well as any hazardous or toxic waste produced during research project implementation.
  3. All selected research projects will consult with local communities or interested stakeholders if recommended by the ES.
  4. All selected research project will request the necessary permits to collect or implement the research project in private, public or local communities' forest lands as needed.
  5. Research activities will not cause harm or irreversible damages to the populations, communities and species of endangered, endemic, vulnerable, critical endangered and rare species.
  6. Research activities will try to reduce and avoid the contamination of superficial or subterranean waters.
  7. Researchers will not leave in the field sites, tags, containers, samples vials, flagging tapes, etc.
  8. Researchers will select appropriate field methods that are applicable to the research objectives and could reduce environmental impacts (e.g. use of Fogging techniques vs. light trapping to collect arthropods).
  9. Research activities will respect intellectual property of biodiversity knowledge of local communities. Please refer to the Indigenous Screening Checklist for guidance.
  10. Any project applying to Research Fund must comply with the Convention of Biological Diversity, Cartagena Protocol and the Nagoya Protocols (since Guyana is a signatory party of this Convention).
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### **Monitoring (FORM RF-3)**

1. The Research will prepare a Monitoring Report (Form RF-3) every six months and will send it to the ES at the PIU.
2. The ES will perform as needed environmental audits to selected projects to assess the success of the mitigation in reducing impacts.
3. The ES could organize periodic activities to inform the stakeholders about the results of the on going research projects.

### **Environmental Closure of the Project (FORM RF-4)**

1. Researcher informs to the ES of the potential date to finish its project.
2. ES and RS agree on a date to perform an Environmental Audit of the project. The ES fills out the Form RF-4 and the form is signed by both the ES and the researcher.

## 11. RESEARCH FUND FORMS

 <b>The University of Guyana – Research Fund</b> <b>Environmental Screening Checklist (ESC)- Form RF-1</b> <b><u>SECTION A</u></b> 		
<b>Name of Principal Researcher:</b>		
<b>Names of other researchers and assistants</b>		
<b>Department, Faculty:</b>		
<b>Project Name:</b>		
<b>Project Code:</b>		
<b>Project expected duration (months):</b>		
<b>Date :</b>		
<b>1-Location</b>		
<p>a. Describe all locations where the project will be executed (field, lab, cities sites). Include maps if possible.</p> <p>b. Attached a Google Earth –KML o KMZ- file to this form indicating all project locations.</p>		
<b>2-Legal environmental requirements. Indicate the required permits to execute your project.</b>		
a.		
b.		
c.		
<b>3- Environmental Characteristics of the Research Project. Please respond the following questions.</b>		
<b>Questions</b>	<b>Yes/No</b>	<b>Explain, if yes</b>
1. Will the project include the collection or extraction of species of flora or fauna from forest, water or coastal sites?		
2. Will the project include activities in protected areas, RAMSAR sites and/or other critical habitats?		
3. Will the project collect samples from protected, endangered, rare species?		
4. Exotic species or GMO will be used, manipulated or introduced in the project sites?		
5. Will the project required the used of any kind of agrochemicals?		
6. Will the project generated any hazardous waste due to the use of lab chemicals?		

7. Will the project could affect the quality of the water (superficial and groundwater)?			
8. Will the project cause any possible effect to the livelihood of the local communities?			
9. Will the project promote the use of water resources in energy, irrigation or mining development?			
10. Will the project generate any kind of wastes or air pollutants?			
<b>4. Identification and assessment of potential impacts</b>			
<b>Resource</b>	<b>Negative Effect</b>	<b>Value (*)</b>	<b>Positive Effect</b>
<b>Water Resources</b>			
	<b>SUM **</b>		<b>SUM</b>
<b>Resource</b>	<b>Negative Effect</b>	<b>Value</b>	<b>Positive Effect</b>
<b>Biodiversity</b>			
	<b>SUM</b>		<b>SUM</b>
<b>Resource</b>	<b>Negative Effect</b>	<b>Value</b>	<b>Positive Effect</b>
<b>Soil</b>			
	<b>SUM</b>		<b>SUM</b>
<b>Resource</b>	<b>Negative Effect</b>	<b>Value</b>	<b>Positive Effect</b>
<b>Air</b>			
	<b>SUM</b>		<b>SUM</b>
<b>5. TOTAL SUM of all potential effects: (***)</b>			<b>TOTAL SUM of all potential effects: (***)</b>
<b>6. Index Value of Potential Negative Effect indicating the requirements of implementing an EMP (****)</b>		<b>High</b>	<b>Medium</b>
		<b>Low</b>	<b>No impact</b>
<b>7. SECTION B- This section will be fill out by the Environmental Specialist of the Project Implementing Unit (PIU)</b>			
1. Research Proposal is complete and it has been revised.		<b>Yes</b>	<b>No</b>
		<b>Indicated if missing sections</b>	

2. The Section A has been completed by the researcher.			
3. The researcher has already included the RF-2 form proposing an environmental mitigation plan.			
<b>8. Final evaluation</b>	<b>Yes</b>	<b>No</b>	<b>Explain</b>
According to the revision of (i) the research proposal, (ii) the environmental information included with this form, the project requires the implementation of a EMP.			
The EMP presented by the researcher is adequate.			
The researcher will present a new EMP or a revised EMP.			
<b>9. Overall Safeguards Risks</b>	<b>High</b>	<b>Medium</b>	<b>Low</b> <b>No Risk</b>
Name of Environmental Specialist:			
Date:			
Signature:			
Date that Research proposal documents will be sent to the UG Research Committee:			

**Notes:**

\* The value of an impact can be either



<b>Negative</b>	<b>-1</b>
<b>Positive</b>	<b>+1</b>
<b>Neutral</b>	<b>0</b>

\*\*Sum all the impact values for all the potential negative and positive effects.

\*\*\*Sum all the impact values estimated for all four types of resources.



\*\*\*\* Negative Impact Index value:

Index Value for Potential Negative Impacts		
<b>High impact</b>	≥8	Project will have high needs to implement environmental measures
<b>Medium impact</b>	5-7	Project will have medium needs to implement environmental measures
<b>Low impact</b>	2-4	Project will have low needs to implement mitigation measures
<b>No impact</b>	0	Project will not require to implement environmental measures

 <b>University of Guyana - Research Fund</b> <b>The World Bank</b> <b>Environmental Management Plan</b> <b>FORM RF-2</b> 						
Name Principal Investigator:						
Name of Other Researchers and Project Assistants:						
Department, Area, Faculty:						
Project Name:						
Project Code:						
Component	Impacts	Measure	Indicator	Responsible	Timing	Cost (US\$)
<i>Water Resources</i>						
	1.					
	2.					
	3.					
	4.					
	Impacts	Measure	Indicator	Responsible	Timing	Cost (US\$)
	1.					
	2.					



<b>Biodiversity</b>	3.					
	4.					
<b>Soil</b>	<b>Impacts</b>	<b>Measure</b>	<b>Indicator</b>	<b>Responsible</b>	<b>Timing</b>	<b>Cost (US\$)</b>
	1.					
	2.					
	3.					
	4.					
<b>Air</b>	<b>Impacts</b>	<b>Measure</b>	<b>Indicator</b>	<b>Responsible</b>	<b>Timing</b>	<b>Cost (US\$)</b>
	1.					
	2.					
	3.					
	4.					
<b>Other</b>						
<b>Total Cost (US\$)</b>						
	<p><b>Principal Investigator:</b> _____</p> <p><b>Signature:</b> _____</p> <p><b>Date:</b> _____</p>					

**MONITORING**

 <b>The University of Guyana – Research Fund</b> <b>Research Monitoring Report - Form RF-3</b> 		
<b>Name of Principal Researcher:</b>		
<b>Names of other researchers and assistants:</b>		
<b>Department, Faculty:</b>		
<b>Project Name:</b>		
<b>Project Code:</b>		
<b>Reporting Period:</b>		
1.Summary of Research Results		
2. Implementation of Environmental Management Plan. Please attach a copy of your RF-2 form.		
Mitigation Measures	Indicator	% Accomplished

<b>3. Indicate if any component or activities described originally in the Research proposal and in the form RF-1 has been changed.</b>		
<b>4. Report processing</b>		
<b>1. Environmental Specialist receiving report:</b>		
<b>2. Date of reception:</b>		
<b>3. Actions to be taken:</b>		
<b>None</b>	<b>Monitoring Visit</b>	<b>Meeting</b>
		<b>Other</b>
<b>5. Comments</b>		

**ENVIRONMENTAL CLOSURE**

 <b>University of Guyana -Research Fund</b> <b>The World Bank</b> <b>Environmental Closure Form (RF-4)</b> 			
<b>Name Principal Investigator:</b>			
<b>Project Name:</b>			
<b>Project Code:</b>			
<b>Date of Visit:</b>			
<b>1-Legal environmental requirements</b> <i>(provide copy of permits):</i>			
<b>Permits, authorizations, others (if applicable)</b>		<b>Entity granting the permit and date:</b>	
<b>2-Verification of Environmental Documentation</b>			
<b>TOOLS</b>	<b>Yes</b>	<b>No</b>	<b>If “No”, Why?</b>
Environmental Screening Checklist (RF-1)			
Environmental Management Plan (RF-2)			
Environmental Monitoring Reports (RF-3)			
Other documentation			
<b>3-Verification of environmental management measures applied</b>			
<b>Main Impacts</b>	<b>Measures compliance (%)</b>		<b>Comments</b>

<b>Recommended Actions:</b>		
<b>Project Director:</b>  _____ <b>Signature:</b> _____ <b>Date:</b> _____	<b>Environmental Specialist monitoring project:</b>  _____ <b>Signature:</b> _____ <b>Date:</b> _____	

## **Annex 1. Environmental Safeguards. The World Bank**

<http://go.worldbank.org/WTA1ODE7T0>

### **OP 4.01 Environmental Assessment**

<http://go.worldbank.org/OSARUT0MPO>

### **OP 4.04 Natural Habitats**

<http://go.worldbank.org/GIFQKJA130>

### **OP 4.09 Pest Management**

<http://go.worldbank.org/B7525J6000>

### **OP 4.36 Forests**

<http://go.worldbank.org/T22VSH6ZE0>

## **Annex 2. Important Guidelines and links for proper management of research projects.**

### **IFC Environment, Health and Safety**

<http://www.ifc.org/ifcext/sustainability.nsf/Content/EHSGuidelines>

### **Convention of Biological Diversity**

<http://www.cbd.int/>

### **Nagoya Protocol**

[http://www.aseanbiodiversity.org/index.php?option=com\\_content&view=article&id=569:access-to-genetic-resources-and-the-fair-and-equitable-sharing-of-benefits-arising-out-of-their-utilization-abs&catid=136:thematic-areas-of-cooperation&Itemid=61](http://www.aseanbiodiversity.org/index.php?option=com_content&view=article&id=569:access-to-genetic-resources-and-the-fair-and-equitable-sharing-of-benefits-arising-out-of-their-utilization-abs&catid=136:thematic-areas-of-cooperation&Itemid=61)

