

Government of the Peoples Republic of Bangladesh  
Ministry of Education  
University Grants Commission

Higher Education Quality Enhancement Project  
Environmental Management Framework

**I. Objectives**

1. The objective of Environmental Management Framework (EMF) is to ensure environmental and social considerations and efficient and appropriate address of associated legal compliance requirements during all stages of World Bank-supported Higher Education Quality Enhancement Project (HEQEP) in Bangladesh. It provides general policies, guidelines, codes of practice and procedures to be integrated into the implementation of the HEQEP.

2. The proposed HEQEP would support to the higher education sector of Bangladesh through University Grants Commission (UGC). The key development objectives set for the project are to (i) improve the quality and relevance of the teaching and research environment in higher education institutions, and (ii) strengthen the institutional capacity within the higher education sector. The project development objectives would be achieved through three major components: (i) an innovation fund mechanism open to both public and private universities (Component 1); (ii) capacity building of UGC and universities (Component 2); and (iii) providing better access to global knowledge network (Component 3). In addition, the project will have Component 4 for Project Management and Monitoring. About 61 percent of project financing is targeted for the Component 1. The mechanism selected to reach this objective is the provision of additional resources through an Academic Innovation Fund (AIF). AIF will be accessible to all public and private universities, their faculties, departments, centers and institutions fulfilling eligibility criteria defined in project operation manual on a competitive basis. It would provide incentives to launch initiatives aimed at improving their performance. The AIF resources can only be spent according to approved project proposal that would include defined measurable performance indicators. It would instill emulation and accountability, and help to infuse dynamism in the academic community, without threatening its members. The AIF will introduce the concept that resources follow innovation and performance. It will be accessible to university departments, centers and institutes fulfilling specific eligibility criteria, selection criteria, proposal submission procedures, which will be carefully spelled out in a detailed Operations Manual. About 5 percent of project financing would be used for Component 2, 30 percent for Component 3, and 4 percent for Component 4. Component 2 would reinforce the management capacity of the sector, both at the central level and at the level of Higher Education Institutions (HEIs) and major sub-components would be: (i) UGC Strengthening; (ii) University Strengthening; and (iii) Access to National Research and Education Network (NREN). Component 3 is designed to support the creation of the Bangladesh Research and Education Network (BDREN), a high performance ICT network (Intranet) providing connectivity among education and research

institutions in both public and private sectors to enable academics, scientists and researchers engaged in higher education and research to communicate with their peers within the country. The fourth component of the HEQEP is dedicated to all the activities to be undertaken under the other three components. Its objective is to ensure the proper implementation, management, and monitoring and evaluation of the project.

3. Projects and programs financed with IDA resources need to comply with World Bank Operational Policies. Therefore, activities eligible for funding under this program will be required to satisfy the World Bank's safeguard policies, in addition to conformity with environmental legislation of the Government of Bangladesh (GoB). Consistent with existing national legislation and World Bank's safeguard policies, the objective of the Framework is to help ensure that activities under the proposed education project will address the following issues:

- ❖ Protect human health;
- ❖ Minimize environmental degradation as a result of either individual sub-projects or their cumulative effects;
- ❖ Enhance positive environmental outcomes; and
- ❖ Ensure compliance with World Bank safeguard policies

## **II. General Principles**

4. The proposed HEQEP is expected to support Higher Education Sector from November 2008 to June 2013. The HEQEP will cover University Grants Commission (UGC) and both public and private universities. The possible areas of AIF uses have already been identified and these are: i) Small infrastructure renovation/refurbishing; ii) Library (books, journals); iii) Teaching materials (lab equipment etc.); iv) On-line facilities (including access to digital libraries); v) Teachers' development (training/seminars/conferences); vi) Curriculum development/modernization of curriculum; vii) Research collaboration with foreign universities; viii) Collaboration with industries; ix) Research projects (including publications); x) Development of career centers (for facilitation of internship, job placement); xi) Quality enhancement activities (quality enhancement cell, self-study, etc.); xii) Scholarships and fellowships and xiii) Visiting foreign faculty.

5. It has been agreed that the project will ensure due diligence in screening any potential environmental risks related to the infrastructure renovation/refurbishing and research activities. The environmental framework is based on the following principles:

- a. The project will support multiple sub-projects which may include infrastructure renovation/refurbishing and research activities, the detail design of which may not be known at appraisal stage. To ensure effective application of the World Bank's safeguard policies, the Framework provides guidance on the screening the sub-projects and also on environmental mitigation plan for the sub-projects having substantial environmental negative impact.

- b. The project will not support any new construction and as such no land acquisition and screening for site selection will be applicable here.
- c. The project will follow Bangladesh Labor Law 2006 and Bangladesh National Building Code (including Building Construction Rules 2006) to ensure safety of life and property during renovation/refurbishing of various parts of a building or any other structures.
- d. The contractors for renovation/refurbishing works will meet the requirements/standards pertaining to air, water and noise prescribed in the Environmental Conservation Act 1995 and Environment Conservation Rules 1997.
- e. The project will develop its operational manual, which will describe the institutional responsibility and process for environmental screening and related mitigation plans.
- f. The project will promote sound environmental management and practices within the higher education institutions through the project.
- g. The Project Director will be overall responsible for ensuring environmental safeguard and reporting.

### **III. Environmental Management Framework (EMF)**

6. This EMF has been developed by Ministry of Education of the Government of Bangladesh specifically for the proposed operation to ensure due diligence, to avoid any environmental degradation issues. The purpose of this Framework also includes assisting the Implementing Agency in screening all the sub-projects for their likely environmental impacts, identifying suitable mitigation measures and implementation of these measures through an environmental management plan.

7. **OP 4.01 Environmental Assessment.** The proposed HEQEP is intended to enhance the quality of higher education through restoring the quality of teaching, learning and research, and building institutional planning and management capacity. The activities identified under the project are mainly technical assistance in nature and no major infrastructural activities are proposed. It will not require any acquisition of land, construction of any new institution or building or any major physical expansion. The proposed project may finance, among other things, small infrastructure renovation/refurbishing construction. These small scale construction activities are not anticipated to cause any major environmental impacts considering that all will be done with the existing structures in order to provide better facilities.

8. The proposed project will support six categories research activities under the Academic Innovation Fund (AIF). These are: i) Arts, Humanities and Social Sciences, ii) Business and Management, iii) Physical, Biological, and Earth Sciences, iv) Engineering

and Technology, v) Medical, Health, and Nutritional Sciences, and vi) Agriculture, Livestock and Fisheries. These research activities can be laboratory based or field based. The research activities to be carried out under i) Arts, Humanities and Social Sciences and ii) Business and Management are not expected to create any major environmental impact. However, the research under other four categories may have negative impact on environment.

9. Considering the nature and magnitude of potential environmental impacts from relatively limited scale of the renovation/refurbishing construction works and academic research works, the proposed operation is to be classified as category 'B'. Since the extent and exact locations of reconstruction works and research works are not known at this stage and may not be known at appraisal, the requirement to carry out an environmental analysis as part of project preparation may be waived but, for sub-projects with potential adverse impacts, a limited environmental analysis/screening will be done during project implementation prior to approval for any sub-project.

10. **Environmental Screening:** For any sub-project which will involve infrastructure renovation/refurbishing construction works, the sub-project proponent i.e., public and private universities, their faculties, departments, centers and institutions fulfilling eligibility criteria will use a checklist (Annex-A) to identify activity that may have environmental impacts. Similarly, the applicant of research proposal will use a checklist (Annex-B). In addition to identification of possible environmental impacts, this checklist for research proposal will also provide a simple assessment of laboratory facilities and applicant's experience on laboratory. If any land filling is required for sub-project site preparation such as filling of low lying lands, full Environmental Impact Assessment will be a condition for IDA financing. This will include detail examination of potential negative and positive environmental impacts, comparison of them with those of feasible alternatives, and recommendation for measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

#### **IV. Guidelines for preparation of Environmental Management Plan**

11. The primary objective of the environmental management and monitoring is to record environmental impacts resulting from the sub-project activities and to ensure implementation of the 'mitigation measures' identified earlier in order to reduce adverse impacts and enhance positive impacts from specific sub-project activities. Having identified the potential impacts of the relevant sub-project through screening, the next step is the identification and development of measures aimed at eliminating, offsetting and/or reducing impacts to levels that are environmentally acceptable during implementation and operation of the project through the preparation and implementation of an Environmental Management/Mitigation Plan (EMP). EMP provides an essential link between the impacts predicted and mitigation measures specified. EMP format needs to fit the circumstances in which EMP is being developed. A typical Environmental Mitigation Plan format is presented in Table-1 of Annex-C.

##### *a. Description of mitigation measures*

12. Feasible and cost effective measures to minimize adverse impacts to acceptable levels should be specified with reference to each impact identified. Further, it should provide details on the conditions under which the mitigation measures should be implemented (ex; routine or in the event of contingencies). The EMP should also distinguish between the type of solution proposed (structural & non structural) and the phase in which it should become operable (design, construction and/or operational). Efforts should also be made to mainstream environmental and social opportunities as reasonable.

*b. Monitoring program*

13. In order to ensure that proposed mitigation measures have the intended results and complies with national standards and donor requirements, an environmental performance monitoring program should be included in the EMP. The monitoring program should give details of the following;

- Monitoring indicators to be measured for evaluating the performance of mitigation measure (for example national standards, engineering structures, extent of area replanted, etc).
- Monitoring mechanisms and methodologies
- Monitoring frequency
- Monitoring locations

A typical monitoring plan is shown in Table 2 of Annex-C.

*c. Institutional arrangements*

14. Institutions/parties responsible for implementing mitigation measures and for monitoring their performance should be clearly identified. Where necessary, mechanisms for institutional co-ordination should be identified.

*d. Implementing schedules*

15. Timing, frequency and duration of mitigation measures with links to overall implementation schedule of the project should be specified.

*e. Reporting procedures*

16. Feedback mechanisms to inform the relevant parties on the progress and effectiveness of the mitigation measures and monitoring itself should be specified. Guidelines on the type of information wanted and the presentation of feedback information should also be highlighted.

*f. Cost estimates and sources of funds*

17. Implementation of mitigation measures mentioned in the EMP will involve an initial investment cost as well as recurrent costs. The EMP should include costs estimates for each measure, which will be part of the sub-project cost.

## **V. Environmental Review and Clearance**

18. All the sub-project proposals should be reviewed first at the institutional level and an environmental professional will be part of the review process. The University Grants Commission will engage a qualified environmental professional who along with the Area Review Panels (ARP) and UGC Board for AIF would look into the environmental aspects of the sub-projects and suggest mitigation measures, if required. The measurable environmental indicators will be used along with other indicators for assessing the sub-projects. The institution will submit their proposal for small infrastructure renovation/refurbishing with an environmental checklist (Annex-A). Similarly, the applicant of research proposal will submit the environmental checklist (Annex-B) duly reviewed and signed by proposed supervisor and departmental head. This checklist will be used by the proposal review committee (ARP) at UGC to assess possible environment and safety issues. The ARP will review the mitigation and monitoring plan. The committee can ask for further clarification or strengthening the mitigation and monitoring plan. UGC will hire short-term consultant as needed to monitor the environmental safeguard issues in the selected sub-projects and publish quarterly report on environmental compliance of sub-projects based on agreed monitoring indicators. UGC will develop its own monitoring plan to oversee environmentally critical sub-project. In addition, UGC will also assign 2 professional staffs as additional responsibility to review the environmental safeguard issues in sub-projects.

## **VI. Capacity-Building and Monitoring of Safeguard Framework Implementation**

19. Environment Assessment (EA) in higher education sector project in Bangladesh will be introduced through this project. It is expected that HEQEP will provide an opportunity to the stakeholders involved to understand the overall benefit of EA in respect of sustainable development. As part of the capacity-building on environmental issues in University Grants Commission, selective staffs will receive training in EMF application and environmental management. To assist in this capacity-building, and to provide subsequent guidance and review of the EMF's application, the UGC will contract specialist services for environmental management, as required. During supervision of these operations, the World Bank will assess the implementation of the EMF, and recommend additional strengthening, if required.

## **VII. Consultation and Disclosure**

20. The EMF will be shared by the Ministry of Education with concerned academic institutions, Department of Environment and civil society. As no potential affectees are identified as this stage, such field level consultation will be waived here. It will be disclosed in both Bangla and English by the Ministry of Education on behalf of the GOB in Bangladesh and it will also be made available at the World Bank's InfoShop. Relevant subproject specific safeguard documents/mitigation plans (EMPs) prepared subsequently will also be disclosed to the public.

**Bangladesh Higher Education Quality Enhancement Project**  
***Environment and Safety Checklist for Small Infrastructure and***  
***Renovation/Refurbishing Proposal***

**Instructions:**

The purpose of this checklist is to identify potential environment and safety issues related to the small infrastructure renovation/refurbishing work. This is a generalized checklist format for smaller infrastructure work.

The relevant Engineer of respective institution will fill-up the format, which is expected to be reviewed and signed by an Environmental Professional. However, the checklist must be reviewed and signed by the respective Head of the Department/Institution. If the checklist shows potential negative environmental impacts, the institution will submit a separate sheet for mitigation measures for it (Annex-C).

Title of Sub-project: \_\_\_\_\_

\_\_\_\_\_

Applicant Institution: \_\_\_\_\_

Types of renovation/refurbishing work: \_\_\_\_\_

Estimated cost of renovation/refurbishing work: \_\_\_\_\_

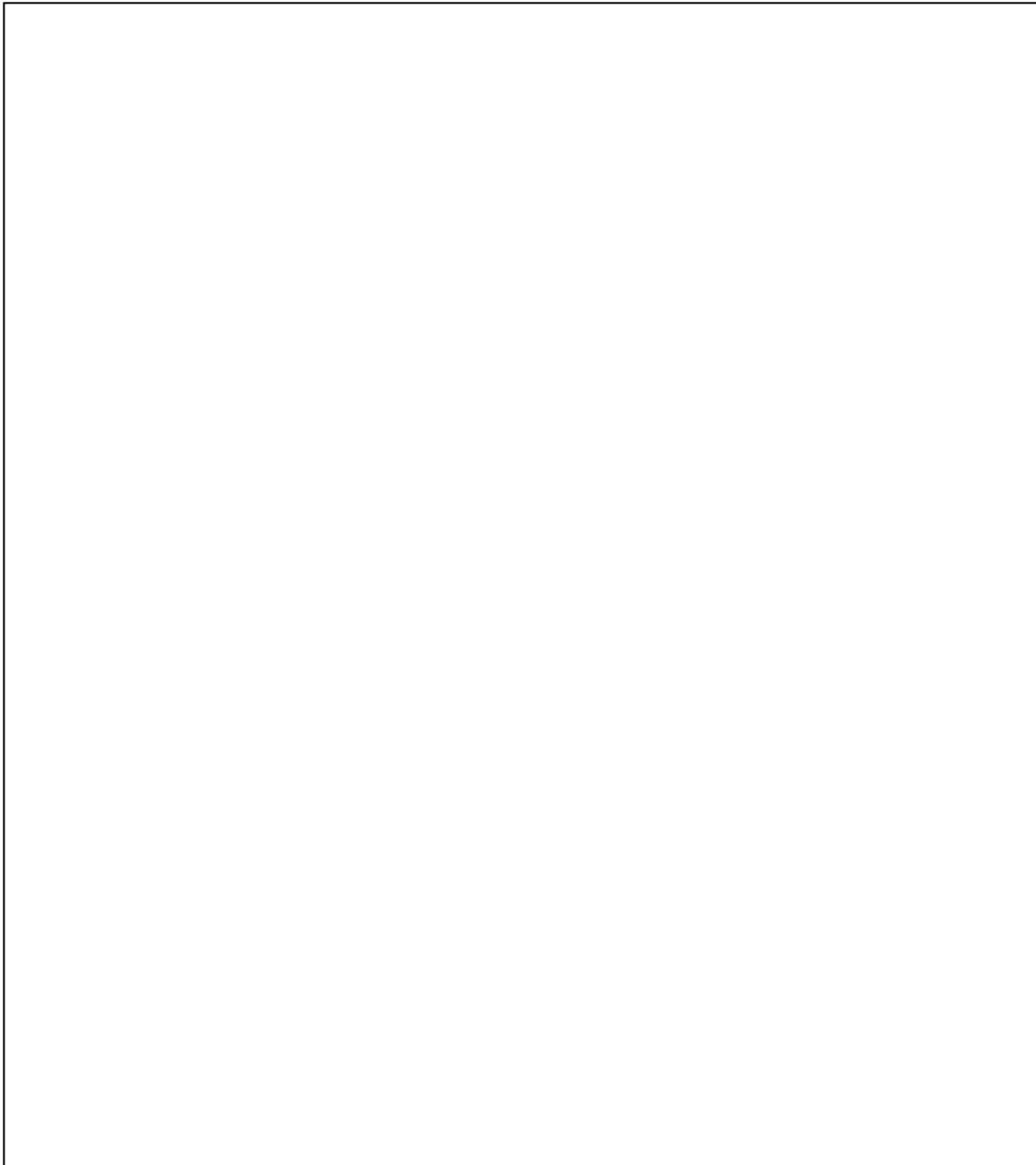
Duration of renovation/refurbishing work: \_\_\_\_\_

Tentative Start Date: \_\_\_\_\_

Name and Designation of the Sub-project Coordinator/Focal Point: \_\_\_\_\_

\_\_\_\_\_

Brief Description of Small infrastructure renovation/ refurbishing work (Within 200 words)



## Checklist

SI #	Screening Questions	Yes	No	Possible Negative Environmental Impact <sup>1</sup>
1	Will the renovation work disturb other academic activities?			
2	Will it create major noise?			
3	Will it create dust problem around the sites?			
4	Will it temporarily stop the water supply and sanitation system?			
5	Will any refrigeration/air conditioning units be removed/disposed?			
6	Will any liquid waste, or an item containing liquids (including oils), need to be transported off-site for reuse, recycle or disposal?			
7	Will equipment containing polychlorinated biphenyls (PCB's) be removed (i.e. transformers, capacitors, hydraulic and heat transfer systems, etc.)?			
8	Will building materials containing asbestos be removed/disposed?			
9	Will any building materials be removed/disposed that are coated with lead-based paint?			
10	Will any building materials be removed/disposed that contain lead, silver or chrome?			
11	Will batteries be removed/disposed (lead-acid or nickel-cadmium batteries from emergency lights and other battery-powered or battery-backup items)?			
12	Will mercury-containing devices (switches, gauges, thermostats) be removed/disposed?			
13	Will an emergency generator set or other aboveground storage tank (AST) be installed or removed?			
14	Will the renovation work have any indirect impact on environment and ecosystem?			

### Signature:

The above answers are true and complete. I understand that the University Grants Commission is replying on them to make its decision.

Sub-project Focal Point Signature & Date: \_\_\_\_\_

<sup>1</sup> If the answer of the questionnaire is 'Yes', please describe the possible negative environmental impact.

Contact Number and E-mail: \_\_\_\_\_

**Please sign below to verify that the information in this document is accurate and complete to the best of your knowledge.**

Environmental Professional Signature & Date (Optional): \_\_\_\_\_

Name: \_\_\_\_\_

Contact Number and E-mail: \_\_\_\_\_

Department/Institutional Head Signature & Date: \_\_\_\_\_

Name: \_\_\_\_\_

Contact Number and E-mail: \_\_\_\_\_

**Bangladesh Higher Education Quality Enhancement Project**  
***Environment and Safety Checklist for Research Proposal***

**Instructions:**

The purpose of this checklist is to identify potential environment and safety issues related to the research proposal. This is a generalized checklist format for all category research works. However, it is anticipated the research proposals under ‘Arts, Humanities and Social Sciences’ and Business and Management’ will not have any environment impact and thus the proposals under these disciplines will not require to submit the checklist unless the review committee request for such checklist.

The applicant will fill-up the format, which will be reviewed and signed by the proposed Supervisor and Head of the Department. If the checklist shows potential negative environmental impacts the applicant will submit a separate sheet for mitigation measures for it (Annex-C).

Title of Research Work: \_\_\_\_\_

Applicant Name: \_\_\_\_\_

Supervisor Name and Designation: \_\_\_\_\_

Department: \_\_\_\_\_

Institution: \_\_\_\_\_

Level of Research Study: Masters/Doctoral/Others (Specify) \_\_\_\_\_

Research Activity: On-going/New Activity

Research Disciplines:

- |   |  |
|---|--|
| <input type="checkbox"/> Arts, Humanities and Social Sciences     | <input type="checkbox"/> Engineering and Technology                |
| <input type="checkbox"/> Business and Law                         | <input type="checkbox"/> Medical, Health, and Nutritional Sciences |
| <input type="checkbox"/> Physical, Biological, and Earth Sciences | <input type="checkbox"/> Agriculture, Livestock and Fisheries      |

Brief Description of Research Activity (Within 200 words)

Duration of Research Work: \_\_\_\_\_ Months

Tentative Start Date: \_\_\_\_\_

## Checklist

SI #	Screening Questions	Yes	No	Remarks
1	Will the research work be laboratory based? [If the answer of question 1 is no, then go to question 6.]			
2	Does the laboratory have			
	i environment, health and safety protocol or guidelines?			
	ii adequate fire safety provision?			
	iii safety provision for gas cylinder handling?			
	iv proper waste disposal facilities?			
	v adequate liquid waste management facilities?			
	vi proper storage facilities for hazardous chemicals, pesticides etc.?			
	vii adequate ventilation system?			
	viii first-aid facilities?			
	ix emergency exit facilities?			
	x trained professional to guide the researchers/students about safety procedures?			
3	Will the laboratory based research work			
	i require procurement of hazardous products (WHO Hazard Class I & II)?			
	ii produce hazardous waste materials?			
	iii generate infectious waste?			
	iv cause significant emissions of gas harmful to health?			
	v generate liquid waste?			
	vi cause any major noise?			
4	Does the applicant have received formal training on laboratory operation and safety rules?			
5	Does the applicant have previous work experience at laboratory on similar works?			
6	Will the research work require interventions at field level?			
7	Will the field based research work			
	i located at or near an environmentally sensitive area?			
	ii require procurement of hazardous products (WHO Hazard Class I & II)?			
	iii discharge any liquid waste in the environment?			
	iv discharge large quantities of waste/used water?			
	v generate hazardous waste?			
	vi impair downstream water quality?			
	vii have any possible degradation in land and			

		ecosystem?			
	viii	cause local air pollution from any plant/system operation?			
	ix	generate excessive noise and/or dust?			
8		Will medical, biophysical or clinical research be conducted using human subjects?			
9		Will the project have any indirect impact on environment and ecosystem?			
10		Will the research work involve permission or clearance of any government department or agency?			
11		Will future expansion or implementation of research finding cause any major environment problem?			

**Signature:**

The above answers are true and complete. I understand that the University Grants Commission is replying on them to make its decision.

Applicant Signature & Date: \_\_\_\_\_

Contact Number and E-mail: \_\_\_\_\_

**Please sign below to verify that the information in this document is accurate and complete to the best of your knowledge.**

Supervisor Signature & Date: \_\_\_\_\_

Contact Number and E-mail: \_\_\_\_\_

Department Head Signature & Date: \_\_\_\_\_

Name: \_\_\_\_\_

Contact Number and E-mail: \_\_\_\_\_

**Bangladesh Higher Education Quality Enhancement Project**  
***Environmental Mitigation and Monitoring Plan***

**Table 1: Typical Environmental Mitigation Plan**

<b>Activity/Issue</b>	<b>Potential Environmental Impacts</b>	<b>Proposed Mitigation Measures</b>	<b>Responsible Parties</b>	<b>Estimated Cost</b>

**Table 2: Typical Environmental Monitoring Plan**

<b>Issue</b>	<b>Parameters</b>	<b>Monitoring Frequency</b>	<b>Monitoring Location</b>	<b>Responsible Parties</b>