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ENVIRONMENTAL COMPLIANCE MONITORING CHAPTER VI

Bagtingon Small Reservoir Irrigation Project (BSRIP)

Barangay Bagtingon, Buenavista, Marinduque

6 Environmental Compliance Monitoring

The Environmental Compliance Monitoring section signifies the commitment of the Proponent to self-monitoring related to the following objective as set in Section 2.3. of the Revised Procedural Manual:

- Project compliance with the ECC conditions
- Project compliance with the Environmental Management Plan
- Evaluating effectiveness of environmental measures on prevention and mitigation of actual project impacts vis a vis the predicted impacts used as basis for the EMP design
- Continual updating of the EMP for responsiveness to project operations and project impacts.

6.1 Self-Monitoring Plan

The self-monitoring plan will be conducted to monitor the requirements set in the ECC. The general categories to be monitored are land, water, air, noise, and people environments. Generally, the self-monitoring plan will contain the following:

- Parameters to be monitored per module
- Methodology or instruments to be used
- Schedule of monitoring
- Impacts required to be monitored
- Responsible parties
- Cost of monitoring
- Goals based on applicable environmental laws and standards.

An initial Environmental Monitoring Plan (EMoP) is presented in Table 6-1. The EMoP will be updated accordingly to sustain its applicability with project operations. The results of the monitoring will be detailed in the Quarterly Self-Monitoring Report (SMR) and/or Compliance Monitoring Report (CMR) by a designated Pollution Control Officer (PCO)

Upon the acquisition of the ECC, the proponent will be committed comply with the conditions set for the project. The proponent will ensure that it has sufficient resources (manpower, institution, physical, and economic) to be able to comply with the ECC conditions, IMP, and EMMoP commitments.

Moreover, the proponent will acquire all the necessary permitting requirements prior project development and will continue to operate the project in accordance with relevant environmental and social laws and international standards such as the following:

- R.A. 6541 National Building Code
- R.A. 9147, Wildlife Resources Conservation and Protection Act of 2001;
- R.A. 9003, the Ecological Solid Waste Management Act of 2000;
- R.A 9275, the Philippine Clear Water Act of 2004
- R.A. 8749, the Philippine Clean Air Act of 1999
- R.A 9710, Magna Carta of Women
- Relevant labor and occupational health and safety laws

Table 6-1 Environmental Monitoring Plan (EMoP) with Environmental Quality Performance Levels (EQPLs)

Key Environmental Aspects per Project Phase	Potential Impacts per Environmental Sector	Parameter to be monitored	Sampling and Measurement Plan			Responsibility	Annual Estimated Cost	EQPL Management Scheme					
			Method	Frequency	Location			EQPL Range			Management Measure		
								Alert	Action	Limit	Alert	Action	Limit
Construction and Operation Phase													
Land	Generation of spoils, excavated materials, and other construction wastes	Spoils and wastes	Visual observation	Daily	Within the project construction	NIA/ Contractor	Php 50,000						
	Loss of habitats and species indicators	Biological indices of wildlife	Re-vegetation and transect/quadrat method	Quarterly	Project area	NIA/ Contractor	PhP 30,000						
	Soil exposure and soil quality/fertility	Soil erosion and siltation and soil quality/fertility	N, P, K, pH, organic matter, micronutrients	Semi-annual	Project area	NIA/ Contractor	PhP 34,000						
	Timber stand	Timber inventory	Re-vegetation and transect/quadrat method	Quarterly	Project area	NIA/ Contractor	PhP 50,000						

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Key Environmental Aspects per Project Phase	Potential Impacts per Environmental Sector	Parameter to be monitored	Sampling and Measurement Plan			Responsibility	Annual Estimated Cost	EQPL Management Scheme					
			Method	Frequency	Location			EQPL Range			Management Measure		
								Alert	Action	Limit	Alert	Action	Limit
	Alteration/ destruction of habitat of terrestrial ecology	Biological indices of terrestrial species	Quadrat method	Quarterly	Bagtingon	NIA/ Contractor	PhP 50,000						
Water	Potential degradation of water quality due to oil spill, improper management of wastes	Ph, Temperature, DO, TSS, TDS, BOD, turbidity, and color	In-situ and lab analysis method	Quarterly	Bagtingon	NIA/ Contractor	PhP 100,000						
Air	Degradation of air quality	TSP, NO2 and SO2	1 hour averaging period	Quarterly	Project area	NIA/ Contractor	PhP 60,000			2300 g/Ncm			
	Intermittent noise	Noise level		Quarterly	Project area	NIA/ Contractor	PhP 30,000						
People	PEOPLE: Employment; taxes	Local employment, taxes, community projects initiated by the proponent	Household survey (only if necessary) Workers demographics	Quarterly	Project affected barangays	NIA/ Contractor	PhP 20,000						

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Key Environmental Aspects per Project Phase	Potential Impacts per Environmental Sector	Parameter to be monitored	Sampling and Measurement Plan			Responsibility	Annual Estimated Cost	EQPL Management Scheme					
			Method	Frequency	Location			EQPL Range			Management Measure		
								Alert	Action	Limit	Alert	Action	Limit
		, and other social issues and benefits of the community from the project											
	Health and Safety	Health condition of the employees and personnel Number of project-related incidents (near emergency scenarios due to potential dam failures, etc.)	Complaints received	Daily	Project affected barangays	NIA/ Contractor							

6.2 Multi-sectoral Monitoring Team (MMT)

A Multi-partite monitoring team is a community-based multi-sectoral group organized for the purpose of monitoring the Proponent's compliance with ECC conditions, EMP, and applicable laws, rules, and regulations. This shall be formed immediately. The purpose of organizing MMT is to promote public participation and stakeholder vigilance and to provide appropriate check and balance mechanisms in the monitoring of project implementation. The specific functions of the MMT are as follows:

1. Conduct quarterly site visit to validate if project operation complies with ECC conditions and Environmental Management and Monitoring Plan (e.g. conduct self-monitoring and submit corresponding reports regularly)
2. Conduct sampling activities and observe sampling activities undertaken by the proponent MMT may observe sampling activities conducted by the project proponent.
3. Prepare and submit quarterly monitoring report to the concerned EMB Regional Office
4. Establish an environmental emergency and grievance mechanism for recording recommendations related to regulatory compliance of the project

As much as possible, MMT shall be composed of a representative from DENR, the proponent, and from the stakeholders' group, including representatives from concerned LGUs, directly affected vulnerable/marginalized groups (e.g., women, youth, and fisher folks) as may be represented by locally accredited NGOS/POS, the community, concerned EMB Regional Office, and other sectors or relevant government agencies. The team shall be tasked to undertake to monitor compliance with the conditions stipulated in the ECC as well as the commitment made by the proponent in the EMP. The multi-sectoral monitoring framework is presented in Table 6-2 which shows the proposed members of MMT, the sectors they represent, the basis of their selection, and their specific roles.

Table 6-2 Proposed members of MMT

Members	Type	Basis of Selection	Role
DENR DOT Representative	Government Agency	National Government regulatory function	Team leader, provide overall supervision in implementing the environmental monitoring plan (EMoP) of the Project.
Provincial Environment and Natural Resources Office (PENRO)	Provincial DENR	Regional Government regulatory function	Member, assist in implementing the EmoP and provide guidance on the laws and standards of the DENR at the regional level.
City Environment and Natural Resources Office (CENRO)	Local DENR	Government regulatory function	Member, assist in implementing the EmoP and provide guidance on the laws and standards of the DENR at the local level.
Municipal LGU Representative	Municipal LGU	Municipal government regulatory function	Member, assist in implementing the EmoP and provide guidance on the laws and standards of municipal LGU

Members	Type	Basis of Selection	Role
Representative from Barangays Bagtingon, Daykitin, Caigangan, Uno, Dos, Tres, Quatro, Malbog, and Tabionan	Barangay LGU	Political head of the affected barangay	Member, assist in implementing the EmoP and provide guidance on the laws and standards of Barangay LGU, and serve as the link between the community and the MMT.
Representative from the business groups	Business sector	Directly affected by the ecotourism	Member, assist in implementing the EmoP and serve as the link between the business groups and the MMT. Suggest measures to improve the EMOp to suit the needs of farmers.
Representative from the NGO	NGO	To achieve transparency in the dissemination of environmental information	Member, assist in implementing the EmoP and provide guidance/ suggestions on the most effective and efficient modes of information dissemination.
Representative from the local media	Local media	To achieve transparency in the dissemination of environmental information	Member, assist in implementing the EmoP and provide guidance/ suggestions on the most effective and efficient modes of information dissemination.
Representative from MHO	Local Municipal Health Office (MHO)	To achieve transparency in the dissemination of health, sanitation and applied nutrition	Member, assist in implementing the EmoP and provide guidelines on health and nutrition standards to make the monitoring system more effective.
Representative from Project Proponent	Proponent	To enhance technical land financial support to make EMOp more effective.	Member, assist in implementing the EmoP, and provide guidance/ suggestions to make the monitoring system more effective. Provide funds required to implement the EMOp.

6.3 Environmental Guarantee and Monitoring Fund Considerations

6.3.1 Environmental Monitoring Fund (EMF)

The Environmental Monitoring Fund (EMF) is a fund that NIA shall commit to support the monitoring activities of the MMT for compliance. The EMF will be proposed and established as agreed upon and specified in a Memorandum of Agreement (MOA) between DENR—EMB and NIA with conformity of the MMT members. As an EIS-based project, the Bagtingon SRIP is required to have such fund.

The initial estimation of the EMF will be included as part of the Environmental Management and Monitoring Plan and as established the project's ECC. However, the actual amount will be determined on the basis of the Annual Work and Financial Plan (AWFP)-- agreed upon by the MMT, derived from the Proponent's Environmental Monitoring Plan (EMoP).

Thus, the Proponent will allocated an initial amount of Php 250,000 EMF for the formation and operationalization of the MMT. Note that the actual budget will depend on the proposed programs of the MMT based on the guidelines set in Annex 3-5 of DAO 2003-30 Revised Procedural Manual or prevailing guidelines of EMB, outlined, as follows:

- A. Management and Administration of EMF
- B. Guidelines for the Disbursement of EMF
- C. Allowable Expenses under the EMF
 - Cost of Transportation
 - Board and Lodging
 - Monitoring Costs
 - Allowances
 - Other Costs

6.3.2 Environmental Guarantee Fund (EGF)

An Environmental Guarantee Fund (EGF) is required to be established for projects that pose potentially significant impacts to the environment and thus require rehabilitation or restoration.

The EGF will be set up by NIA and shall be made accessible and disbursable for the immediate cleanup and/or rehabilitation of the areas affected by the project's construction, operation, or abandonment. The EGF is also intended to be used for the following purposes:

- Just compensation of parties and/or communities that were affected by the negative impacts of the project
- Conduct of research studies that will aid in preventing and rehabilitating accidents and risk-related environmental damages
- Contingency for clean-up activities, environmental enhancement measures, damage prevention and IEC programs, among others

DAO 2003-30 has not explicit provision requiring the valuation of potential impacts that result in project activities. However, the guidelines note that factors such as the EIS committed programs, degree of environmental risk involved, valuation of resources most likely to be affected and the proponent's ability to provide the funds for the EGF.

Based on the project's costing detailed in Table 1-13, the project is proposing an initial amount of Php 2,300,000 trust fund and Php 2,300,000 cash fund will be allocated for the EGF until a

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more detailed study regarding potential dam collapse and other impacts is conducted. The amount is mainly based on NIA MIMAROPA Field Office's budget allocated for contingencies for the Bagtingon SRIP.