

**TEN - YEAR WQMA Implementation Plan for
Sabang Bay Water Quality Management Area (SB-WQMA)
2018- 2028
Puerto Galera, Oriental Mindoro**

Problems:

1. Pollution load accounts for coliform exceeding the water quality guidelines set forth for Class SB.
2. Non-existence of municipal wastewater treatment facilities.
3. Non-compliance of majority of industries to other DENR environmental laws and regulations.
4. Issues on the encroachment of establishments within legal easement area

Time Frame: 2018- 2023

GENERAL OBJECTIVE : IMPROVE THE WATER QUALITY OF SABANG BAY

OBJECTIVE 1. REDUCTION OF COLIFORM LOAD OF SABANG BAY BY AT LEAST 10% PER YEAR

Specific Objectives	Actions	Sub-actions	Output	Responsible Agency	Time Table
Primary Measures					
1)Area characterization of every monitoring station in the coastal area of the WQMA	A detailed map must be prepared showing the ecological profile, socio economic profile, land use / zoning, bay characteristics and drainage pattern and the activities / establishments within the area	Baseline data acquisition Profiling every station showing the specific sources of pollution	Database of all the residential, industrial and commercial establishments that are geographically situated in that specific monitoring station	Municipal Health and Sanitation Department and MENRO In coordination with NEDA	March - April 30, 2018
2)Evaluation of the areas or monitoring stations	The analysis of oil and grease at pier station Additional monitoring stations for total and fecal coliform determinations (5 meters from the shore and at the dive areas)	Capacitate Bantay Dagat on water sampling and clean-up activities	Trend analysis on the extent of coliform pollution produced	EMB in coordination with MENRO and PNP Tourist Police	2018 - 2023 To be presented annually to the board

<p>3.a)Monitoring of the local initiatives to address the issues on wastewater discharges</p> <p>Formulation of a Special Task Force: <i>Task Force Sabang</i></p> <p>3.b) Evaluation and monitoring of the Installation/Construction of the Sewerage Treatment Facility by the Local Government of Puerto Galera</p>	<p>Close coordination with the local multi-partite monitoring team on the strict enforcement of the local ordinances</p> <p>To conduct monitoring of compliance of all establishments to pertinent environmental laws</p> <p>Close coordination with the project proponent</p>	<p>Adopt an “improved design” of septic tank and strictly monitor compliance to building permit requirements</p> <p>Development of other wastewater management strategies / system.</p> <p>Sabang Bay Wastewater Treatment Facility (Metro Pacific)</p>	<p>Annual wastewater monitoring of the industries located near the identified areas</p> <p>Report on the trend on fecal coliform concentration per monitoring station</p> <p>By early 2018, there should be a definitive decision on the sewerage master plan and construction of the sewerage treatment plant</p>	<p>EMB MENRO Municipal Engineering Dept</p> <p>MENRO DPWH, Municipal Engineering Office in coordination with Puerto Galera Waterworks</p>	<p>2018-2026</p>
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<p>4) Conduct IEC campaigns to ensure awareness of every citizen regarding the rehabilitation activity</p>	<p>Identification of target audience</p> <ul style="list-style-type: none"> ➤ Students ➤ Youth Groups ➤ Women's Groups ➤ Other groups recognized by the Municipal Government ➤ Other NGOs that wishes to participate in the WQMA Program ➤ Other Stakeholders 	<p>Conduct capacity building activities to those who wanted to take part in the WQMA Program</p> <p>Conduct fora at schools, different youth groups, women's group, etc and present the steps to be done in the rehabilitation program</p>	<p>Distribute IEC materials like brochures and flyers loaded with the latest update on the water quality</p>	<p>EMB PIA DepEd Oriental Mindoro DepEd Puerto Galera Stairway Foundation</p>	<p>2018 - 2023</p>
<p>5) Issuance of a Board Resolution urging the LGU to expedite the formulation of the Local Health and Sanitation Code</p>	<p>The local ordinance will raise knowledge and awareness on the importance of clean water and sanitation and how this helps in the improvement of the water quality of Sabang Bay</p>	<p>Drafting local sanitation ordinance allows better enforcement of the Sustainable Sanitation Plan and to keep every citizen abide in the environmental laws</p>	<p>Monitoring and Evaluation Reports on the improved water quality of the bay because everybody has an access to an improved sanitation facilities</p>	<p>DILG MENRO EMB MHO DOH MPDO</p>	<p>2018 - 2023</p>
<p>Secondary Measures</p>					
<p>1) Foster solid waste management with emphasis on the improvement of water quality in Sabang Bay</p>	<p>Review and implement the ecological solid waste management plan of the Government</p>	<p>Practice the 3Rs (Reduce, Reuse, Recycle) right from the source</p> <p>Conduct Clean up Drives</p> <p>Conduct of Regular collection of garbage</p> <p>Provide appropriate facilities for solid wastes such as but not limited to sanitary landfill</p>	<p>Reduction of solid wastes in the bay</p> <p>MRFs should be made available and visible in every corner possible</p>	<p>EMB PG ENRO Municipal Government MENRO Brgy Sabang c/o PB Caspe, Kag Jenneth Arago and Kag July</p>	<p>2018 - 2023</p>

<p>2) Address land use problems especially those establishments near the bay</p>	<p>Acquire clearance from PENRO/CENRO with regards to the easement prior to the issuance of ECC / CNC.</p> <p>Coordination with coast guard with regards to the generation of used oil from motorized vehicles</p> <p>Review the CLUP/ Zoning Ordinance of Puerto Galera</p>	<p>Review the relocation and resettlement plan</p>	<p>The beach area or shoreline must serve its most beneficial use. The installation/ construction of tents and other tourist facilities shall be strictly monitored and prohibited.</p>	<p>LGU HLURB</p>	<p>2018 – 2023</p>
<p>3) Mangrove / Tree Planting</p>	<p>Adopt the program of PNP Tourist Police</p>	<p>Every susceptible area to erosion must be planted with mangroves</p>		<p>PNP Maritime LGU EMB CENRO</p>	<p>2018 – 2023</p>

OBJECTIVE 2. REDUCTION OF COLIFORM LOAD IN SABANG BAY BY 30% - THROUGH ENHANCED COMPLIANCE OF INDUSTRIES (INCLUDING COMMERCIAL ESTABLISHMENTS AND INSTITUTIONS) TO DENR GENERAL EFFLUENT STANDARDS

Specific Objectives	Actions/Sub-actions	Output	Responsible Agency	Time Table
Primary Measures				
1) Devising strategies on sustainable pollution abatement and control for all the commercial establishments within Sabang Bay	<p>1. Identification and clustering of the establishments with high coliform. Options on pollution prevention and control strategies must be convened and during GB meetings (end-of-pipe treatments as well as cleaner production options). The GB Members should agree upon which type of technology to be employed or used.</p> <p>2. Preparation of sectoral profiles on the different firms / industries by conducting site visits, sampling and gathering of technical and economic data (pollution management appraisals)</p> <p>a) Ensure that all firms / industries must have an appropriate and effective Wastewater Treatment System where BOD, Coliform and other pollutants are treated. A technology upgrade or improvement must be recommended in cases that the existing treatment systems could not meet the limits of the Effluent Water Quality Guidelines – DAO 2016 - 08</p> <p>b) Require every firm / industry to have an accessible sampling point for their discharges. In cases that the firm/industries claims “No Discharge”, there should be a record showing that the wastewater they generate is collected and treated by a DENR recognized wastewater treatment facility</p> <p>c) The firm / industry must have a Hazardous and Toxic Wastewater Management Plan in accordance to the IRR of RA 6969</p>	Annual Assessment Report	EMB	2018 - 2022

	<p>d) The firm / industry must have a Solid Waste Management Plan in accordance to the IRR of RA 9003</p> <p>3. Preparation of an annual assessment report on the feasibility of the actions taken during the monitoring year</p>			
2) More stringent enforcement of environmental laws	<p>1. Conduct stakeholders' forum and public workshops to disseminate information on enforcement and to encourage voluntary compliance of industries</p> <p>2. Database on the most recent information on the number and list of discharge permits, environmental compliance certificates (ECC) issued, registered hazardous waste generators and industries with pending wastewater-related Notice of Violation (NOV)</p>	<p>- Number and list of discharged permits issued</p> <p>- Number and list of industries with ECC and compliant industries</p> <p>- Number of NOV issued</p>	EMB	2018 – onward (quarterly report to start in 2018)
3) Comprehensive knowledge management system on sources of pollution for the entire Sabang Bay WQMA	<p>1. Keep an updated database of the all the industries including all the information from the submitted Self-Monitoring Reports. Use the information to evaluate their applications for Discharge Permit</p> <p>2. Conduct semi-annual industry survey for the entire WQMA of the Sabang</p> <p>3. Implement stringent enforcement of the discharge permit system and possible enhanced sanctions for non-compliance</p>	<p>Number of Industries applying for Discharge Permit and submitting well accomplished SMRs</p> <p>Resolution from the SBWQMA Governing Board that Sabang would craft an ordinance on the issuance of business permits</p>	<p>EMB</p> <p>LGU DTI</p> <p>EMB</p>	2018-onward

	<p>4. Introduce or propose pollution abatement strategies (end-of-pipe, best management practices & cleaner production) and identify firms that will participate with the pilot testing of the program</p> <p>5. More rigorous water quality monitoring of the bay with focus on the coliform must be implemented. Oil and grease should also be monitored.</p> <p>6. The Discharge Permit status of a firm / industry should be considered in the issuance of business permits by the LGUs / City Government</p>		<p>DOST</p> <p>EMB Municipal Government</p> <p>LGU</p>	
<p>5) Database of firms / industries with the corresponding environmental profile</p>	<p>1. Designate a staff / personnel who will manage the database using the information reported in the SMR and Discharge Permit Applications of all the firms / industries within the WQMA</p> <p>2. Assessment of the data generated on the pilot testing of the proposed pollution abatement strategies</p> <p>3. Recognition of the firm / industry and provide incentives for adopting or participating in the program</p> <p>3. Generate analysis reports of environmental information from the database (i.e., compliance monitoring, effluent loadings, volume of wastewater discharges, hazardous wastes data etc. and quarterly summary reports on environmental performance of the selected firms/industries</p>	<p>Environmental database</p> <p>A model industry that adopts the practice of Effluent Quota Allocation / Effluent Trading</p>	<p>EMB</p> <p>EMB DOST</p> <p>EMB</p>	<p>2018-2020 (quarterly report to start in 2018)</p>

6) Technical capacity improved and partnership fostered among the regional implementing agencies with the national government	<p>1. Forge partnerships (i.e., MOA, MOU) among regulators, industries and LGUs</p> <p>2. Disseminate success stories to the stakeholders within the SB WQMA and the national agencies through workshops, seminar and conferences</p> <p>3. Improve the information, education, and communication (IEC) campaign on clean river and safe water resources.</p>	SB WQMA must take in the conduct of clean-up activities	EMB	2018-2020
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Time Frame: 2023-2028

GENERAL OBJECTIVE : IMPROVE THE WATER QUALITY OF SABANG BAY

OBJECTIVE 1. REDUCTION OF COLIFORM BY 30%

Specific Objectives	Actions	Sub-Actions	Output	Responsible Agency	Time Table
1) Control the direct discharge of households and commercial establishments into the bay to improve the water quality	<p>The municipality must present the sustainable plan of centralized sewerage treatment facility</p> <p>If necessary, amend the ordinance on sanitation to adjust to the current status of septage management of the municipality</p>	Add more sanitation facilities and improve the existing ones	<p>Amended local sanitation ordinance</p> <p>Better water quality of Sabang Bay</p>	LGU	2023-2028

OBJECTIVE 2. REDUCTION OF COLIFORM BY 30%

Specific Objectives	Actions/ Sub-Actions	Output	Responsible Agency	Time Table
1)Continuous and strengthened inspection and monitoring program	<p>Capacitate the members of the SB WQMA GB on technical assessment and water quality monitoring</p> <p>If necessary, revise the monitoring scheme base on the assessment of the first five years of the rehabilitation program of the river</p>	<p>More industries with upgraded wastewater treatment facilities</p> <p>Reducing number of NOVs</p>	<p>EMB</p> <p>DOST</p>	2023 – 2028
2)Encourage more industries including the Small-Medium Enterprises to comply with the different environmental laws	<p>Intensify IEC Campaign and foster sustained partnership with the stakeholders</p> <p>Recognize and provide incentives to industries adopting or participating in the program; these industries will be used as models to other industries</p>	<p>More industries comply with the DENR environmental laws</p>		2023 – 2028