



Operational Plan
for the Manila Bay
Coastal Strategy
(2017-2022)

GOAL

Manila Bay cleaned-up, rehabilitated, and preserved, and its waters restored and maintained at SB level

Class SB sea waters per Water Classification Tables under DENR Administrative Order No. 34 [1990]) – fit for swimming, skin-diving, and other forms of contact recreation.

Outcome Statements for Each Cluster

Outcome	Outputs	Cluster	Cluster Head
1. Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines	14	Liquid Waste Management	DENR-EMB
2. Solid waste ending up in Manila Bay reduced	10	Solid Waste Management	DILG
3. Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed	10	Informal Settler Families and Illegal Structures	DILG
4. Soil loss in Manila Bay Watershed reduced	3	Habitat and Resources Management	DENR-BMB
5. Existing biodiversity areas within Manila Bay Region protected and conserved	5		
6. OPMBCS properly implemented	9	Institutional Arrangement/ Partnership & Governance	DENR-MBCO

Outcome 1 :

Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Indicators:

- ❑ *__% reduction of liquid waste loading to Manila Bay from point sources (BOD, COD, and Fecal Coliform)*
- ❑ *__% reduction of Nutrient loading to Manila Bay from non-point (agricultural)sources*

with 14 Outputs

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	Objectively Verifiable Indicators (OVIs)	Means of Verification (MOVs)	Assumption	Lead Agencies
<p>Output 1.1 Industrial and commercial including institutional (e.g. healthcare facilities) establishments discharging waste water into the Manila Bay in compliance with the general effluent standards determined</p>	<ul style="list-style-type: none"> ▪ Pollution load from point sources determined by 2018 ▪ Nutrient load from non-point sources (agricultural) determined by 2019 ▪ 40,000 industrial, commercial and institutional establishments (<i>wet industry/10m³</i>) compliant with effluent standards by 2022 <ul style="list-style-type: none"> • LLDA – 20,000 • EMB – 20,000 ▪ 100% of establishments surveyed and mapped, and volume of pollution loading from establishments with or without discharge permits determined by 2018 ▪ # of establishments regularly monitored 	<ul style="list-style-type: none"> • Survey, inventory and maps of industrial and commercial pollution sources • Monitoring Reports • Research Study Report (Nutrient Loading) 	<ul style="list-style-type: none"> • Budgetary requirements • Manpower • Calamities • There is a complete list of industrial and commercial establishments. 	<p>DENR-EMB; DENR-EMB Regional Offices (ROs); LLDA; DILG</p> <p>DOH DEPED</p>

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 1.2</u> Water-served population connected to sewerage and sanitation services</p>	<ul style="list-style-type: none"> ▪ 100% Water-served population connected with the sewerage and sanitation services by 2040 ▪ By 2022: <ul style="list-style-type: none"> ○ <u>Maynilad</u> <ul style="list-style-type: none"> ○ 47% connected to sewerage system ○ 80% served with sanitation services ○ <u>Manila Water</u> <ul style="list-style-type: none"> ○ 43% connected to sewerage system ○ 100% served with sanitation services ○ <u>LWUA</u> <ul style="list-style-type: none"> ○ 15% water-served population within Manila Bay area ○ 15% of water-served population offered sanitation services 	<ul style="list-style-type: none"> • Accomplishment Report • Monitoring • Report 	<ul style="list-style-type: none"> • Sites and ROW for the construction of treatment facilities are available. • Households are compliant with the septage/sanitation standards and accept desludging services offered • Issuance of sewerage and sanitation ordinance • Availability of funds/budget for LWUA 	<p>MWSS and its concessionaires, LWUA, DILG, LGUs</p>

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p>Output 1.3 Monitoring and Compliance to General Effluent Standards Enforced</p>	<ul style="list-style-type: none"> ▪ Surveyed wet establishments are monitored in compliance with the General Effluent Standards ▪ 90% of all Issuances of Notice of Violation issued on time ▪ All NOV's issued subjected to Technical Conference/ADR ▪ ___% of compliance to notices/elevation to PAB 	<ul style="list-style-type: none"> • Monitoring Report • Copy of the Notice of Violation issued • Report/Copy of the ADR issued • Copy of referral/endorsement to PAB 	<ul style="list-style-type: none"> • GES-DAO 2016-08 is followed. (5-year grace period/subject for request) 	<p>EMB, LLDA</p>

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVI	MOVs	Assumption	Lead Agencies
<p>Output 1.4 Policy on pollution prevention and control issued</p>	<ul style="list-style-type: none"> Policy, guidelines, MC or DAO on Waste Minimization (recycling/reuse) developed and issued by 2020, and compliance monitored thereafter 	<ul style="list-style-type: none"> Copy of the approved policy Monitoring Report 		All concerned agencies
	<ul style="list-style-type: none"> Mathematical Model developed by 2018 	<ul style="list-style-type: none"> Technical Report of the Study 		DENR-MBCO, LLDA
<p>Output 1.5 Marine environmental protected laws, rules and regulations enforced (PD 979, RA 9993 and other laws/regulations addressing marine pollution within Manila Bay)</p>	<ul style="list-style-type: none"> 100% compliance of marine environmental laws, rules and regulations by 2022 All vessels entering Manila bay inspected All land-based facilities inspected Seaborne patrol operations regularly conducted All violators apprehended 	<ul style="list-style-type: none"> Monitoring and Inspection Report 	<ul style="list-style-type: none"> Good weather condition 	PCG (lead), DILG PNP-Maritime, BFAR

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 1.6</u> Operation of Shore Reception Facilities (SRF) for ships' wastes</p>	<ul style="list-style-type: none"> ▪ 100% of vessels docked in MBR subjected to waste collection and proper waste disposal ensured ▪ 100% of all commercial vessels entering the Manila Bay Region recorded ▪ Volume of liquid waste from commercial vessels collected and recorded ▪ Shore Reception Facilities (SRF) for liquid waste constructed/installed in every port 	<ul style="list-style-type: none"> • Record/Report of: <ul style="list-style-type: none"> ▫ # of vessels entering Manila Bay ▫ Volume of wastes collected and disposed monthly ▫ Inventory of SRF facilities viz. PPA ports 	<ul style="list-style-type: none"> • Coordination with other concerned agencies properly in place 	<p>PPA</p>

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVis	MOVs	Assumption	Lead Agencies
<p><u>Output 1.7</u> PNP Maritime Operations fully enforced</p>	<ul style="list-style-type: none"> ▪ Number of monthly seaborne patrol operations conducted ▪ Number of violators apprehended ▪ 100% apprehension with appropriate legal actions undertaken 	<ul style="list-style-type: none"> • Monitoring Report 		PNP Maritime
<p><u>Output 1.8</u> Pollution load from livestock and Poultry reduced</p>	<ul style="list-style-type: none"> ▪ Volume of pollution loading estimates from livestock, poultry and others within the Manila Bay region determined by 2019 ▪ Inventory/survey of livestock/poultry and others completed by 2018 	<ul style="list-style-type: none"> • Terminal Report of the Study/Pollution Load Report • Monitoring Report 	<ul style="list-style-type: none"> • Availability of budget 	DA-BAI LGUs

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVI	MOVs	Assumption	Lead Agencies
<p><i>cont.</i></p> <p>Output 1.8 Pollution load from livestock and Poultry reduced</p>	<ul style="list-style-type: none"> ▪ 90% of inventoried livestock/poultry/others without wastewater treatment/pollution prevention facilities with installed facilities by 2022 	<ul style="list-style-type: none"> • Monitoring Report 		EMB/LLDA
<p>Output 1.9 Nutrient Load From crop lands within the manila bay region determined</p>	<ul style="list-style-type: none"> ▪ Volume of nutrient loading from crop lands within the Manila Bay region determined by 2019 ▪ # of sampling sites monitored in compliance with the water quality guidelines ▪ Isotope studies within the Manila Bay Region completed by 2019 	<ul style="list-style-type: none"> • Report on nutrient load from croplands • Monitoring Reports • Isotope Study Terminal Report 	<ul style="list-style-type: none"> • Availability of funds • Good/Favorable weather conditions • Prompt turnover of sample results (samples are analyzed abroad) 	DA-BSWM

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p>Output 1.10 Volume of nutrient loading from aquaculture farms in the Manila Bay region maintained within water quality criteria</p>	<ul style="list-style-type: none"> ▪ Nutrient loading of aquaculture farms within the Manila Bay Region determined by 2019 ▪ Inventory of aquafarm (private and public including hatcheries) conducted and audited by 2018 ▪ Aquaculture practices of inventoried aquaculture farms monitored ▪ Nutrient levels, as well as heavy metals and pathogenic bacteria, and other pollution indicators in accordance to Section 7.1 of DAO 2016-08 (BOD, TSS, Ammonia, Nitrate, Phosphate, Sulfate regularly monitored ▪ Technical studies conducted and policy issued to ensure that volume of nutrient loading is maintained 	<ul style="list-style-type: none"> • Inventory and Monitoring Reports • Study Terminal/ Progress/ Accomplishment Reports • Copy of policy issued 		<p>DA-BFAR, DA-NFRDI</p>

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 1.11</u> Water Ways maintained and freed from obstructions</p>	<ul style="list-style-type: none"> ▪ Number of identified sites for dredging/desilting/declogging established ▪ 80% of identified sites programmed for dredging/desilting ▪ 100% of programmed sites dredged/desilted, and waste materials disposed properly ▪ 100% of declogging activities conducted vis-à-vis targets 	<ul style="list-style-type: none"> • List of proposed sites and schedule for dredging/desilting/declogging • Accomplishment Reports 	<ul style="list-style-type: none"> • Availability of budget and manpower • Proper disposal of dredged materials in place • Guidelines for disposal of dredged/silt/cleaned-up materials shall be provided by the DENR. 	<ul style="list-style-type: none"> • DPWH (Region 3 and 4A) • MMDA-Flood Control Sewerage Management Office (NCR) • DILG through the sewerage and septage ordinance (LGUs)

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 1.12</u> Water Bodies Monitored and Water Quality Parameters Assessed in compliance with the water quality guidelines (DAO 2016-08)</p>	<ul style="list-style-type: none"> ▪ # of water bodies regularly monitored & water quality parameters assessed <ul style="list-style-type: none"> • 19 bathing beaches • 9 bay wide stations • 21 river systems monitored (NCR-3; R3-14; R4A-4) • Laguna Lake 	<ul style="list-style-type: none"> • Monitoring Reports 	<ul style="list-style-type: none"> • Accessibility to laboratory/testing centers • Budgetary Requirements for new policies • Availability of laboratory equipment for new standards 	<p>DENR-EMB LLDA, PRRC</p>

Outcome 1: Liquid waste discharging into Manila Bay in compliance with effluent (General Effluent Standard) and/or ambient water quality with the water quality guidelines

Outputs	OVI	MOV	Assumption	Lead Agencies
<p><u>Output 1.13</u> Principal rivers draining into Manila Bay designated as WQMA with Governing Board created</p>	<ul style="list-style-type: none"> ▪ 66 principal rivers draining into Manila Bay designated as WQMA and with governing board created by 2022 ▪ All WQMA areas with Master Plans addressing storm water, municipal, agricultural run-off prepared and approved 	<ul style="list-style-type: none"> • Department Administrative Order designating a certain area as WQMA • Copy of the Master Plan 	<ul style="list-style-type: none"> • Sufficient Budget 	<p>EMB, DILG-ROs (LGUs)</p>
<p><u>Output 1.14</u> Water Bodies/Estero within the Manila Bay Region Adopted</p>	<ul style="list-style-type: none"> ▪ 60 water bodies/esteros within the Manila Bay Region adopted by 2022 <ul style="list-style-type: none"> • NCR-20 • R3-20 • R4A-20 	<ul style="list-style-type: none"> • Copy of MOU/MOA • Monitoring report 	<ul style="list-style-type: none"> • Participation of donor partner is ensured 	<p>EMB, DILG-ROs (LGUs)</p>

OUTCOME 2:

Solid waste ending up in Manila Bay reduced

Indicator:

Solid waste ending up in Manila Bay reduced by _____% in 2022

Note: CY 2018 volume of solid wastes regularly collected from pumping stations baseline data for the determination of the % reduction of waste ending up in Manila Bay

with 10 Outputs

Outcome 2: Solid waste ending up in Manila Bay reduced

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p>Output 2.1 Republic Act No. 9003 enforced</p>	<ul style="list-style-type: none"> ▪ 70% of LGUs complied with R.A. No. 9003 by 2020 and 100% by 2022) ▪ 70% of barangays with established waste collection system, practiced segregation at source, and segregated collection by 2020, and 100% by 2022 ▪ Ordinance on regulating junkshops and ambulant waste collectors drafted and endorsed to respective Sanggunian by 2018 	<ul style="list-style-type: none"> • Environmental Compliance Audit (ECA) and SCMAR Results, and SGLG • Copy of ordinance and endorsement to Sanggunian • Copy of MOA of established solid waste management facilities • Copy of complaints filed 	<ul style="list-style-type: none"> • All concerned agencies and LGUs duly cooperate • DILG to issue memorandum to LGUs to regulate junkshops and ambulant collectors including draft/pro forma ordinance 	<p>DILG, EMB-Solid Waste, NSWMC/S, MMDA-SWMO</p>

Outcome 2: Solid waste ending up in Manila Bay reduced

Outputs	OVI	MOVs	Assumption	Lead Agencies
<p><i>cont.</i> Output 2.1 Republic Act No. 9003 enforced</p>	<ul style="list-style-type: none"> ▪ Annual awards/incentives provided to LGUs with best practices (ECA, SCMAR and SGLG) ▪ 100% of non-compliant LGUs have been subjected to legal action ▪ ___% diversion target for the MBR 	<ul style="list-style-type: none"> • Environmental Compliance Audit (ECA) and SCMAR Results, and SGLG • Copy of ordinance and endorsement to Sanggunian • Copy of MOA of established solid waste management facilities • Copy of complaints filed 	<ul style="list-style-type: none"> • All concerned agencies and LGUs duly cooperate • DILG to issue memorandum to LGUs to regulate junkshops and ambulant collectors including draft/pro forma ordinance 	DILG, EMB-Solid Waste, NSWMC/S, MMDA-SWMO

Outcome 2: Solid waste ending up in Manila Bay reduced

Outputs	OVI	MOVs	Assumption	Lead Agencies
<u>Output 2.2</u> Solid Waste Management Plans (SWMPs) prepared and approved	<ul style="list-style-type: none"> 100% of LGUs with approved plans by 2019 	<ul style="list-style-type: none"> NSWMC Report 		DILG, NSWMC Secretariat
<u>Output 2.3</u> Materials Recovery Facility/System and other resource recovery facilities established and sustained	<ul style="list-style-type: none"> 100% of barangays served with MRF/MRS established and sustained by 2019 10 resource recovery facilities established (NCR-4; R3-3; R4A-3) 	<ul style="list-style-type: none"> ECA Result MOA/MOU and Accomplishment Reports re resource recovery facilities 	<ul style="list-style-type: none"> 500 Million fund allocated to EMB-SWMD. Technical and financial assistance provided 	EMB-SWMD, EMB-NSWMC, DILG, LLDA
<u>Output 2.4</u> Residual wastes managed	<ul style="list-style-type: none"> 70% of residual wastes disposed to accredited final disposal facilities, resource recovery facilities, or alternative technologies 	<ul style="list-style-type: none"> ECA Result 	<ul style="list-style-type: none"> Resource recovery facilities (10: 4-NCR; 3-R3; 3-R4A) are already established DBM provides fund 	DILG, EMB-NSWMC

Outcome 2: Solid waste ending up in Manila Bay reduced

Outputs	OVI	MOVs	Assumption	Lead Agencies
<p>Output 2.5 Open and controlled dumpsites in the Manila Bay Region closed and rehabilitated</p>	<ul style="list-style-type: none"> ▪ All open dumpsites closed and rehabilitated by 2022 ▪ 75 LGUs (50-R4A; 25-R3) provided with financial assistance for the closure and rehabilitation of open and controlled dumpsites 	<ul style="list-style-type: none"> • Validation Report from DENR-EMB • Copy of MOA, Memorandum of Receipts, Safety Closure and Rehabilitation Plans 		EMB
<p>Output 2.6 Solid wastes from waterways, pumping stations and vessels regularly removed and disposed of in accordance with current rules and regulations</p>	<ul style="list-style-type: none"> ▪ Volume of solid wastes regularly collected from pumping stations recorded (for CY 2018 for the establishment of the baseline data re reduction ending up in Manila Bay) 	<ul style="list-style-type: none"> • Record Book/Report 		MMDA
	<ul style="list-style-type: none"> ▪ Regular cleanup of waterways, esteros and pumping stations conducted ▪ Volume of solid wastes collected during clean-up ▪ All collected waste disposed properly 	<ul style="list-style-type: none"> • Activity Reports • Record of actual volume of solid waste collected and disposed during clean-ups 	<ul style="list-style-type: none"> • Guidelines for disposal of collected wastes issued by DENR. • Availability of Funds 	All agencies

Outcome 2: Solid waste ending up in Manila Bay reduced

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 2.6</u> Solid wastes from waterways, pumping stations and vessels regularly removed and disposed of in accordance with current rules and regulations</p>	<ul style="list-style-type: none"> ▪ All solid wastes from commercial vessels entering Manila Bay collected and disposed properly <ul style="list-style-type: none"> • # of commercial vessels entering the Manila Bay Region • Constructed/Installed Shore Reception Facilities (SRF) for solid waste in every port • Volume of collected segregated solid wastes from commercial vessels at MBR 	<ul style="list-style-type: none"> • Reports/Records of vessels arriving at the MBR • Actual inspection/inventory of Solid Waste Reception Facilities at MBR • Records/ reports of solid waste collected and disposed 	<ul style="list-style-type: none"> • Coordination with other concerned agencies properly in place. 	PPA
<p><u>Output 2.7</u> Institutional set-up for solid waste management within LGUs established/ strengthened</p>	<ul style="list-style-type: none"> ▪ 90% of LGUs (160) with regular offices/units handling waste management or with established institutional set-up for SWM 	<ul style="list-style-type: none"> • Copy of LGU resolution/circular/ ordinance or any legal instrument 		DILG, LGU

Outcome 2: Solid waste ending up in Manila Bay reduced

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 2.8</u> Policies to address issues on SWM formulated and issued</p>	<ul style="list-style-type: none"> ▪ Policy formulated and recommended to appropriate body in response to issues/concerns <ul style="list-style-type: none"> • dredging guidelines not covered by ECC • Disposal of dredged materials and materials collected during cleanups ▪ Number of SWM policies drafted and recommended for approval ▪ Number of approved SWM policies disseminated 	<ul style="list-style-type: none"> • Copy of draft policy and endorsement • Copy of memo disseminating approved policies 		<p>DENR-MBCO, NSWMC, DILG, and other concerned technical agencies</p>
<p><u>Output 2.9</u> Marine Environmental Protection Laws, Rules and regulations compliance enforced</p>	<ul style="list-style-type: none"> ▪ All vessels entering Manila bay and all land-based facilities inspected ▪ Seaborne patrol operations to ensure enforcement of PD 979, RA 10654, and RA 9993 and other laws design to prevent marine pollution regularly conducted ▪ All violators apprehended and appropriate legal actions carried out 	<ul style="list-style-type: none"> • Daily/Weekly/Monthly Accomplishment Reports • Adjudication Reports 	<ul style="list-style-type: none"> • No accidental disposal of waste due to "Force Majeure" 	<p>PCG</p>

Outcome 2: Solid waste ending up in Manila Bay reduced

Outputs	OVI	MOVs	Assumption	Lead Agencies
Output 2.10 Healthcare wastes properly managed	<ul style="list-style-type: none">▪ Volume of healthcare wastes managed▪ Number of hospitals and LGUs within the MBR compliant with the healthcare waste management policy issued by DOH	<ul style="list-style-type: none">• Monitoring Report	<ul style="list-style-type: none">• Appropriate policy on Healthcare Wastes Management issued	DOH DOH-RHOs DILG (LGUs)

OUTCOME 3:

Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed

Indicator:

Houses, structures and other encroachments on easement areas (within public lands) in rivers, waterways, esteros, and lake and bay coastlines reduced by ___% by 2022

with 10 Outputs

Outcome 3: Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 3.1</u> All structures, constructions, and other encroachments established or built in violation of RA 7279, and other applicable laws in the Manila Bay Region identified and mapped</p>	<ul style="list-style-type: none"> ▪ 100% of the structures, constructions, and other encroachments along waterways identified and mapped by CY 2020 ▪ 100% of barangays along waterways identified and with geo-hazard maps by 2018 ▪ 80% of easement areas along waterways delineated on ground by 2020; 100% by 2022 ▪ 100% of affected LGUs, illegal structures, constructions, and other encroachments geo-tagged and inventoried 	<ul style="list-style-type: none"> • MBDS 	<ul style="list-style-type: none"> • LGUs define and adopt their own danger area measurements through ordinances and/or policies • DENR duly delineates the easement areas along MBR as this will serve as the basis for the census to be conducted by NHA • Cut-off year is followed. 	<p>DILG, DENR-RO, LGUs, NHA, PRRC</p>

Outcome 3: Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed

Outputs	OVI	MOVs	Assumption	Lead Agencies
<p><u>Output 3.2</u> Identification of actual occupant-households within the delineated easement areas in the Manila Bay Region thru Tagging and Census Operations/ Validation (TCOs/TCVs) and encoding in the Manila Bay Database System (MBDS) for LGUs and DILG</p>	<ul style="list-style-type: none"> ▪ 100% of actual occupant-households within the delineated easement areas in the Manila Bay Region identified, surveyed (census) and tagged, and data/results encoded in the Manila Bay Database System (MBDS) for LGUs and DILG 	<ul style="list-style-type: none"> • Census report 	<ul style="list-style-type: none"> • DENR delineates the easement areas within the MBR 	NHA, LGUs, DILG, PRRC

Outcome 3: Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 3.3</u> Finalization and approval of the list of families, qualified vs. disqualified</p>	<ul style="list-style-type: none"> ▪ Master Lists covering all identified, surveyed (census) and tagged ISFs (qualified/disqualified) finalized/approved by LGUs/other concerned agencies 	<ul style="list-style-type: none"> • Final List of qualified and disqualified ISFs 	<ul style="list-style-type: none"> • NHA to be the focal unit • Standardized qualification provided by NHA for the identification of ISF is being followed • "No double award" policy is duly implemented.; 	<p>NHA, LGUs, DILG, PRRC</p>

Outcome 3: Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed

Outputs	OVI	MOV	Assumption	Lead Agencies
<p><u>Output 3.4</u> Formulation and implementation of Relocation and Resettlement Action Plans (RRAPs) for areas covered and not covered by government projects</p>	<ul style="list-style-type: none"> ▪ # of RRAPs prepared and implemented by LGUs/concerned agencies 	<ul style="list-style-type: none"> • Copy of RRAPs 	<ul style="list-style-type: none"> • LGUs duly coordinate with NHA and other concerned agencies • Cut-off date is set 	<p>DILG and PCUP for areas not covered by government projects:</p> <p>NHA, MMDA (for NCR), DPWH (for Regions 3 and 4A), PRRC, and other concerned agencies for areas covered by government projects</p>
<p><u>Output 3.5</u> Compliance to the mandatory requirements of UDHA prior to resettlement</p>	<ul style="list-style-type: none"> ▪ 100% compliance to the mandatory requirements of UDHA and other related laws/legal issuance: a) Consultation with affected ISFs, b) Issuance of 30-day Dismantling Notice, c) Adequate Relocation/resettlement 	<ul style="list-style-type: none"> • Monitoring and Evaluation Reports • List of identified resettlement sites • List of developed resettlement sites 	<ul style="list-style-type: none"> • LGUs coordinate with concerned agencies (DPWH, MMDA, NHA) • LGUs conduct consultation with affected ISF • Adequate relocation/resettlement provided by NHA 	<p>LGUs, NHA, DILG; DPWH; MMDA, PRRC, and other concerned agencies</p>

Outcome 3: Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed

Outputs	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 3.6</u> Dismantling and removal of structures, constructions, and other encroachments established or built in violation of RA 7279, and other applicable laws in the Manila Bay Region</p>	<ul style="list-style-type: none"> ▪ 100% of structures, constructions, and other encroachments established or built in violation of RA 7279, and other applicable laws in the Manila Bay Region removed and dismantled by CY 2022. 	<ul style="list-style-type: none"> • Reports; Ground Validation 	<ul style="list-style-type: none"> • Sufficient manpower is provided • Dismantling of structures will only commence after the RRAP has been prepared by the NHA and LGUs • Resettlement sites of ISFs are constructed/ developed by NHA. 	<p>DPWH (Region 3 and 4a) and MMDA (NCR), PRRC in coordination with LGUs</p>
<p><u>Output 3.7</u> Relocation and resettlement of affected informal settler families, and removal of disqualified ISFs</p>	<ul style="list-style-type: none"> ▪ 100% of qualified ISFs resettled by CY 2022 ▪ 100% of disqualified ISFs subjected to appropriate legal action by 2022 	<ul style="list-style-type: none"> • Approved RRAP • Monitoring and Validation Reports 	<ul style="list-style-type: none"> • Only ISFs located in public lands will be resettled 	<p>DILG, LGUs, NHA, MMDA (for NCR), DPWH (for Regions 3 and 4A), PRRC</p>

Outcome 3: Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed

Outputs	OVI	MOVs	Assumption	Lead Agencies
<p>Output 3.8 Structures/obstructions in easement areas but within privately-owned lands cleared</p>	<ul style="list-style-type: none"> 100 % of illegal structures in easement areas within privately-owned lands subjected to appropriate legal actions by CY 2022 	<ul style="list-style-type: none"> Monitoring and Validation Reports Copy of legal action 	<ul style="list-style-type: none"> DENR has already completed the delineation of the easement areas Legal opinion is sought from the DOJ 	<p>DILG, DENR, DPWH (Region 3 and 4a) and MMDA (NCR), PRRC in coordination with LGUs</p> <p>DENR-MBCO re communication with DOJ</p>
<p>Output 3.9 Monitoring, assessment and evaluation of resettlement activities</p>	<ul style="list-style-type: none"> 100% of LGUs and agencies have access to the MBDS by 2019 All resettlement activities monitored and reported/logged/encoded in the MBDS # of reports and evaluation reports submitted 	<ul style="list-style-type: none"> Monitoring and Evaluation Reports 	<ul style="list-style-type: none"> MBDS functioning and data in consistent with the actual count 	<p>DILG, NHA, PRRC, LGUs</p>

Outcome 3: Houses, structures, construction and other encroachments along easement areas in rivers, waterways, esteros, lake and bay coastlines within the Manila Bay Region permanently removed

Outputs	OVI	MOVs	Assumption	Lead Agencies
<p><u>Output 3.10</u> Turn-over of cleared areas to barangays/ LGUs/other concerned government agencies</p>	<ul style="list-style-type: none"> ▪ All cleared areas protected and free from returnees and other illegal entrants ▪ Appropriate administrative case against non-compliant LGUs filed 	<ul style="list-style-type: none"> • MOA • Copy of administrative cases filed 		DILG, LGUs, NHA, PRRC

OUTCOME 4:

By 2022, soil loss in Manila Bay Watershed reduced

Indicator:

Reduction by _% of the sedimentation rate from the whole Manila Bay Region from 2018 baseline

with 3 Outputs

Outcome 4: Soil loss in Manila Bay Watershed reduced

Objectives	OVIs	MOVs	Assumption	Lead Agencies
<p>Output 4.1. Ecosystem and resources vulnerable to landslides/ erosion and flooding rehabilitated</p>	<ul style="list-style-type: none"> ▪ 150,662 hectares of highly vulnerable areas to landslides have been <u>vegetated</u> and <u>conservation measures</u> and <u>technologies</u> instituted to mitigate soil erosion and landslides <ul style="list-style-type: none"> • # of sites established as soil conservation guided farms • Established plantations (Area/hectares) and existing habitats with soil erosion control measures • 70% of all apprehended violators are subjected to appropriate legal actions • Construction, maintenance/ protection of new and existing structural soil erosion control measures 	<ul style="list-style-type: none"> • Annual Accomplishment/P rogress report • Terminal Reports of researches and adaptive studies • Map and database • Geo-tagged photo 	<ul style="list-style-type: none"> • Target hectares will decrease after considering the 2015 Land Cover from NAMRIA and site assessment and ground validation. • Peace and order and possible conflict with ancestral domain claims • continuing eNGP • Full acceptance and support from stakeholders • National Government pays the cost of the exercise of eminent domain • FS and vulnerability assessment conducted for projects • Availability of funds (DPWH) 	<p>DENR-ROs DENR-SMOs BMB FMB LLDA DPWH</p>

Outcome 4: Soil loss in Manila Bay Watershed reduced

Objectives	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 4.2</u> Stakeholders (e.g. LGUs, household, POs, farmers) in targeted highly vulnerable areas in Manila Bay watershed adopting soil conservation in their practices</p>	<ul style="list-style-type: none"> ▪ # of POs (or percentage of population) in targeted areas adopting soil conservation measures and agro-forestry practices ▪ # of soil conservation practitioners supported ▪ # of biodiversity-friendly enterprises established ▪ 10 ecotourism sites established and developed (R3-3, R4-6, NCR-1) ▪ # of environmental enforcers deputized ▪ # of livelihood programs identified and developed 	<ul style="list-style-type: none"> • Survey Report • Geo-tagged Maps 	<ul style="list-style-type: none"> • Proper transfer of knowledge (echoing of trainings) 	<p>DENR-ROs/SMOs LLDA DA-BSWM</p>

Outcome 4: Soil loss in Manila Bay Watershed reduced

Objectives	OVI	MOVs	Assumption	Lead Agencies
Output 4.3 Enabling research-based policies on soil conservation and management developed, reviewed, harmonized and monitored	<ul style="list-style-type: none">Relevant policies/Guidelines formulated and endorsed for approval by appropriate authority and studies conducted in response to issues/concerns related to soil conservation and management	<ul style="list-style-type: none">Copy of research studies and draft policies recommended		DENR-BMB

OUTCOME 5:

Existing biodiversity areas within
Manila Bay Region protected and
conserved

with 5 Outputs

Outcome 5: Existing biodiversity areas within Manila Bay Region protected and conserved

Objectives	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 5.1</u> Management effectiveness of biodiversity areas in Manila Bay region improved</p> <ul style="list-style-type: none"> • Fish sanctuaries and artificial reefs • Sea Turtle Conservation Center • Marine Habitats (Mangrove, Mudflats, Seagrass and coral reefs) • Locally managed MPAs 	<ul style="list-style-type: none"> ▪ # of management effectiveness assessment (MEA) conducted by 2019 ▪ Number of Management Plans enhanced and operationalized as a result of the MEA 	<ul style="list-style-type: none"> • MEAT, METT, NEAT, SEAT, REAT reports 	<ul style="list-style-type: none"> • Availability of budget 	DENR-BMB BFAR DENR-SMOs

Outcome 5: Existing biodiversity areas within Manila Bay Region protected and conserved

Objectives	OVI	MOV	Assumption	Lead Agencies
<p><u>Output 5.2.</u> ICM/CRM Plans formulated in all coastal communities</p>	<ul style="list-style-type: none"> 90% of LGUs assisted with ICM/CRM Plans submitted for approval to Sanggunian by 2022 	<ul style="list-style-type: none"> Municipal Fisheries Profile Copy of ICM/CRM Plans endorsed to the Sanggunian 	<ul style="list-style-type: none"> Willingness of the LGUs 	DENR-BMB DENR-SMOs BFAR DILG (LGUs)
<p><u>Output 5.3.</u> Ordinances enacted</p>	<ul style="list-style-type: none"> 50% of Coastal LGUs assisted in the formulation of Basic Municipal Fisheries Ordinance (BMFO) with draft ordinance endorsed to Sanggunian by 2022 # of Fish Sanctuary and/or Artificial Reefs Management Plans formulated 	<ul style="list-style-type: none"> Municipal Fisheries Profile Copy of draft ordinance endorsed to the Sanggunian 		DENR-BMB BFAR DILG (LGUs)

Outcome 5: Existing biodiversity areas within Manila Bay Region protected and conserved

Objectives	OVIs	MOVs	Assumption	Lead Agencies
<p><u>Output 5.4.</u> Strict implementation of Fisheries, Marine/Maritime Laws, Rules, Regulation</p>	<ul style="list-style-type: none"> ▪ Increase Maritime Patrol Operations by 10% per annum from 2017-2022 <ul style="list-style-type: none"> • # of seaborne operations • # of violators apprehended • %age of apprehended violators brought to legal action • # of appropriate cases filed and monitored ▪ # of examiners deputized ▪ # of fish wardens appointed ▪ # of IEC produced and distributed 	<ul style="list-style-type: none"> • Daily, Weekly, Monthly Accomplishment Reports of the PCG and PNP-MG • BFAR's Quarterly/Annual Reports 	<ul style="list-style-type: none"> • Adequate Logistical Support 	DENR-BMB PNP-MG PCG BFAR

Outcome 5: Existing biodiversity areas within Manila Bay Region protected and conserved

Objectives	OVI	MOVs	Assumption	Lead Agencies
<p><u>Output 5.5.</u> Enabling research-based policies on biodiversity conservation and management developed, reviewed, harmonized and monitored</p>	<ul style="list-style-type: none">▪ Appropriate policy recommendation formulated to address emerging issues and concerns▪ Research studies identified and carried out to provide scientific bases to policies to be recommended			DENR-BMB DENR-MBCO

OUTCOME 6:

OPMBCS properly implemented

with 9 Outputs

Outcome 6: OPMBCS properly implemented

Objectives	OVIs	MOVs	Assumption	Lead Agency
<p><u>Output 6.1</u> Appropriate institutional arrangement for Manila Bay management and OPMBCS implementation established</p>	<ul style="list-style-type: none"> ▪ Organizational structure set up and operational by the end of CY 2017 ▪ Annual training plan prepared and implemented for Mandamus and partner agencies by 2018 ▪ Manila Bay Office in each Mandamus and concerned agency created/established by 2020 	<ul style="list-style-type: none"> • Copy of the document/legal instrument establishing the operational structure of the mandamus agencies • Copy of the communication to mandamus and concerned agencies requesting for the creation of a Manila Bay Office 	<ul style="list-style-type: none"> • New organizational set-up is approved and ratified by the Department. • Mandamus agencies cooperate and accomplish their commitments • Sufficient funds 	<p>DENR-MBCO</p>

Outcome 6: OPMBCS properly implemented

Objectives	OVis	MOVs	Assumption	Lead Agency
<p><u>Output 6.2</u> All existing Manila Bay database systems (MBDS, MiShare, WQRCS) integrated into one (1) front-end system (iMBDS)</p>	<ul style="list-style-type: none"> ▪ Program developed by 2018 and pilot testing conducted by 2019 ▪ System fully operational and accessible by 2020 ▪ MBDS enhanced by end of CY 2017 and accessible to all partners by CY 2018 	<ul style="list-style-type: none"> • Website 	<ul style="list-style-type: none"> • 100% of LGUs updating their system 	DENR-MBCO DILG
<p><u>Output 6.3</u> Operational policies in place</p>	<ul style="list-style-type: none"> ▪ Appropriate policy recommendation formulated or legal instruments issued to address emerging issues and concerns ▪ Approved policies disseminated to concerned parties 	<ul style="list-style-type: none"> • Copy of policy recommendation endorsed to approving authority • Technical bulletins • Copy of communication disseminating approved policies 	<ul style="list-style-type: none"> • DENR approves the operational policies drafted. 	DENR-MBCO and other concerned agencies

Outcome 6: OPMBCS properly implemented

Objectives	OVIs	MOVs	Assumption	Lead Agency
<p><u>Output 6.4</u> Communication plan/IEC Framework for all Mandamus Agencies prepared and adopted</p>	<ul style="list-style-type: none"> ▪ Plan/framework developed by end CY 2017, disseminated by 1st quarter of 2018, and implemented starting 2nd half of CY 2018 ▪ Annual submission of communication plan consistent with the approved framework of mandamus agencies 	<ul style="list-style-type: none"> • Published communication plan/ framework • Accomplishment Reports • Copies of IEC materials developed 	<ul style="list-style-type: none"> • All Mandamus agencies adopt the communication plan. 	<p>DENR-MBCO</p>

Outcome 6: OPMBCS properly implemented


Objectives	OVIs	MOVs	Assumption	Lead Agency
<p>Output 6.5 Manila Bay concerns incorporated in basic education curricula in support of the Environmental Education law</p>	<ul style="list-style-type: none"> ▪ Manila Bay concerns and the <i>mandamus</i> order incorporated in the basic education curricula in support of the Environmental Education law by 2020 	<ul style="list-style-type: none"> • Copy of the DepEd Circular re instruction to include the Manila Bay concerns and the <i>mandamus</i> order in the environmental education • Copy of the updated school curricula 		DepEd
<p>Output 6.6 Decision support system (DSS) established and operationalized</p>	<ul style="list-style-type: none"> ▪ On-going studies needed to support OPMBCS updating and implementation completed by 2018 ▪ At least one (1) research supported in response to emerging issues ▪ All baseline data needed in support to OPMBCS established by 2019 (except ISF baseline: 80% by 2022) 	<ul style="list-style-type: none"> • Copy of the Research • Terminal Reports 	<ul style="list-style-type: none"> • Concerned agencies cooperate and finish the studies identified and proposed. 	DENR-MBCO

Outcome 6: OPMBCS properly implemented

Objectives	OVI	MOVs	Assumption	Lead Agency
<p><u>Output 6.7</u> Area-Based Management sites (outside WQMA areas) established and monitored</p>	<ul style="list-style-type: none"> ▪ # of ABM sites established ▪ ABM Plans formulated for each ABM ▪ # of existing ABM plans monitored 	<ul style="list-style-type: none"> • ABM plan • Monitoring Reports 	<p>LGUs duly cooperate.</p>	<p>DENR-MBCO DENR-SMOs</p>
<p><u>Output 6.8</u> OPMBCS (2017-2022) updated based on scientific evidence</p>	<ul style="list-style-type: none"> ▪ OPMBCS updated incorporating the results of baseline data into by end of 2019 	<ul style="list-style-type: none"> • Monitoring reports • Copy of updated OPMBCS 	<ul style="list-style-type: none"> • All the concerned agencies and the MBAC approve and adopt the OPMBCS. 	<p>DENR-MBCO <i>Mandamus</i> agencies</p>

Outcome 6: OPMBCS properly implemented

Objectives	OVIs	MOVs	Assumption	Lead Agency
<p>Output 6.9 OPMBCS Monitoring and Evaluation system in place</p>	<ul style="list-style-type: none"> ▪ OPMBCS M&E system in place by end of 2017 and disseminated to concerned agencies/offices ▪ Periodic monitoring and evaluation of OPMBCS implementation (Agency Score Card) implemented by 2018 ▪ Quarterly monitoring reports on the status of the OPMBCS implementation submitted to SC/MBAC 	<ul style="list-style-type: none"> • Monitoring and evaluation reports 	<ul style="list-style-type: none"> • Concerned agencies duly comply and cooperate. 	DENR-MBCO
	<ul style="list-style-type: none"> ▪ Mechanism for filing of cases against non-compliant LGUs developed 			DILG



Operational Plan for the Manila Bay Coastal Strategy (OPMBCS)

2017-2022