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# THE MANILA BAY EXPERIENCE



# OUTLINE OF PRESENTATION

- I. Legal Bases
- II. The OPMBCS
- III. Interventions
  - Priority
  - Others



# LEGAL BASES

## **SC ORDER**

*The mandamus agencies are hereby ordered to clean, rehabilitate, and preserve Manila Bay, and restore and maintain its waters to SB level (Class B sea waters per Water Classification Tables under DENR Administrative Order No. 34 [1990]) to make them fit for swimming, skin-diving, and other forms of contact recreation.*

## **DENR AO-2011-01**

*The DENR, through the issuance of Administrative Order No. 2011-01, strengthened the Manila Bay Coordinating Office (MBCO) to facilitate the coordination and monitoring of the implementation of the Operational Plan for the Manila Coastal Strategy (OPMBCS).*

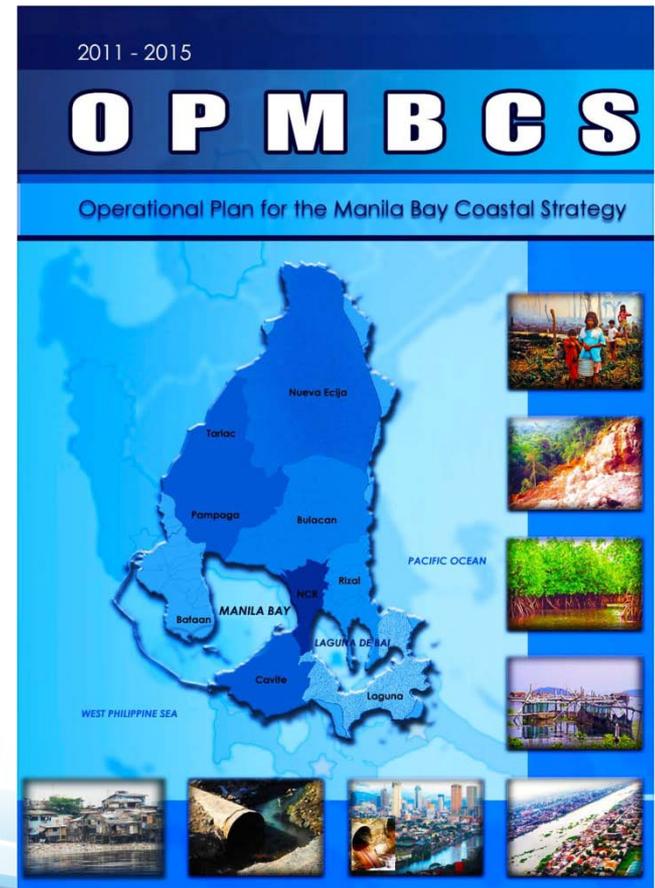
# Supreme Court Mandamus Agencies

1. Department of Interior and Local Government (DILG)
  2. Department of Education (DepEd)
  3. Department Of Environment and Natural Resources (DENR)
  4. Department of Health (DOH)
  5. Department of Agriculture
    - Bureau of Soils and Water Management (DA-BSWM) and
    - Bureau of Fisheries and Aquatic Resources (DA-BFAR)
  6. Department of Public Works and Highways (DPWH)
  7. Department of Budget and Management (DBM)
  8. Philippine Coast Guard (PCG)
  9. Philippine National Police-Maritime Group (PNP-MG)
  10. Philippine Ports Authority (PPA)
  11. Metropolitan Manila Development Authority (MMDA)
  12. Metropolitan Waterworks and Sewerage System (MWSS)
  13. Local Water Utilities Administration (LWUA)
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# The Operational Plan for the Manila Bay Coastal Strategy (OPMBCS)

## Priority Focus:

1. 50% Pollution Reduction by 2015
2. 25% Increase in Vegetative Cover
3. 100% Compliance of All LGUs in the Manila Bay Region to RA 9003
4. 100% Relocation of ISFs by 2015



# PRIORITY INTERVENTIONS





# I. LIQUID WASTE MANAGEMENT CLUSTER

- Water Quality Management and Monitoring
- Pollution Reduction
- Septage and Sanitation Facilities
- Esteros and Waterways Management/Clean-Up Activities



# I. LIQUID WASTE MANAGEMENT CLUSTER

## A. Water Quality Management and Monitoring



### DENR - MBCO

1. Procurement of 2 units of Real-Time Water Quality Monitoring Equipment
2. Engagement of UP NHRC for the determination of Total Maximum Daily Load(TMDL)





# I. LIQUID WASTE MANAGEMENT CLUSTER

## B. Pollution Reduction



LLDA

1. Inspection and monitoring of 237 industries representing new industries covered by Environmental Users Fee System
2. Reduction of pollution loading from regulated enterprises by 15%, from 7,700MT to 6,545MT

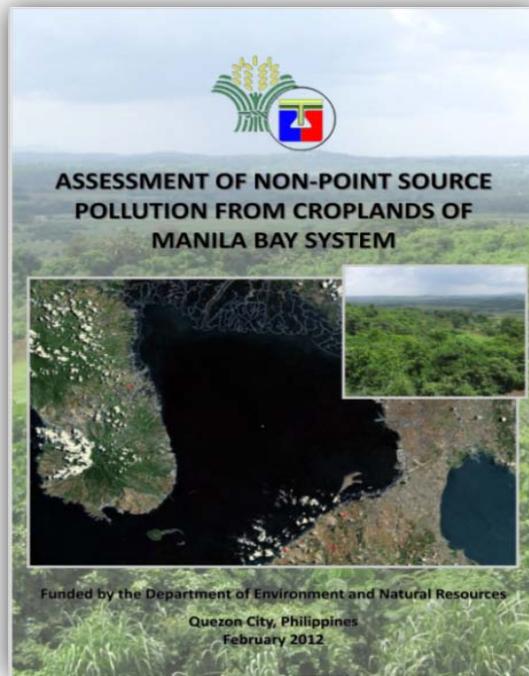


# I. LIQUID WASTE MANAGEMENT CLUSTER

## B. Pollution Reduction



# DA-BSWM



Study on Baseline Data for  
Nutrient Loading from  
croplands



# I. LIQUID WASTE MANAGEMENT CLUSTER

## C. Septage and Sanitation Facilities



# DILG



Inspection of the compliance of 258,354 establishments and homes that construct wastewater treatment facilities/septic tanks in 178 LGUs in the Manila Bay Region.



# I. LIQUID WASTE MANAGEMENT CLUSTER

## C. Septage and Sanitation Facilities



# DILG

*The non compliant are the following:*

### Commercial Establishment

#### Wastewater Treatment Facilities

6,909 out of 21,100 (33%)

#### Septic Tanks

7,100 out of 21,100 (34%)

### Factories

#### Wastewater Treatment Facilities

914 out of 3,866 (24%)

#### Septic Tanks

856 out of 3,866 (22%)

### Private Homes

112,506 out of 233,388 (48%)



# I. LIQUID WASTE MANAGEMENT CLUSTER

## C. Septage and Sanitation Facilities



# DOH

- a) Conducted the National Search for Barangay with best Sanitation Practices – (Winners: Brgy. Coloong, Valenzuela City and Brgy. Sto. Rosario, Silangan, Pateros)
- b) Monitoring of STPs and Health Care Waste Management of 10 Hospitals in Metro Manila on their Environmental Compliance Certificate (ECC)



# I. LIQUID WASTE MANAGEMENT CLUSTER

## C. Septage and Sanitation Facilities



**MWSS**

### Manila Water

- 35 wastewater treatment plants (WTP)
- Total capacity of 112 ,000 cmd
- 260 km of sewer network
- 102,835 households connected
- 16% Sewerage Coverage



### Maynilad

- 8 Sewerage Treatment Plants
- Total capacity of 469,000 cmd
- 480 km of sewer network
- 120,000 households served
- 11% Sewerage Coverage





# I. LIQUID WASTE MANAGEMENT CLUSTER

## C. Septage and Sanitation Facilities



### Manila Water

- 2 Septage Treatment Plants (SpTP)
- Total Capacity: 1.40 million liters per day
- 92 vacuum desludging tankers
- 826,870 households served



### Maynilad

- 1 Septage Treatment Plant (SpTP)
- Total Capacity: 0.45 million liters per day
- 25 vacuum desludging tankers
- 7 mobile dewatering units
- 521,000 households served





# I. LIQUID WASTE MANAGEMENT CLUSTER

## C. Septage and Sanitation Facilities



**DENR-MBCO**

### **ON-GOING IMPLEMENTATION OF SEPTAGE MANAGEMENT PROGRAM**

- In the provinces of Tarlac, Pampanga, Bulacan, Nueva Ecija and Cavite in coordination with the Development Bank of the Philippines (DBP), Philippine Water Revolving Fund (PWRF) and EMB(R3 and R4A).





# I. LIQUID WASTE MANAGEMENT CLUSTER

## D. Esteros and Waterways Management/Clean-Up Activities



**DENR-EMB**

### Adopt-an-Estero Program

• Number of Esteros Covered Within Manila Bay	28
• Number of Partner Companies/Organizations	35
• Adopted esterros nationwide	205





# I. LIQUID WASTE MANAGEMENT CLUSTER

## D. Esteros and Waterways Management/Clean-Up Activities



### DENR – MBCO

1. Deployment of 4 units of trash boats in the following areas:
  - a) 2 in NCR
  - b) 1 in Region 3
  - c) 1 in Region 4a
  
2. Procurement of trash skimmer in 2012





# I. LIQUID WASTE MANAGEMENT CLUSTER

## D. Esteros and Waterways Management/Clean-Up Activities



# MMDA

## Estero Blitz

Started in August 2011, and it removed a total of 1,150 truckloads or 2,237.27 tons of garbage





# I. LIQUID WASTE MANAGEMENT CLUSTER

## D. Esteros and Waterways Management/Clean-Up Activities



**DILG**

### One Day, One Bay Program

Launched last 26 November 2011 in key areas all over the Manila Bay watershed. Subsequently, the DILG urged the other mandamus agencies to participate in this activity.





# I. LIQUID WASTE MANAGEMENT CLUSTER

## D. Esteros and Waterways Management/Clean-Up Activities



# MMDA

## Waterways Management

- a) Dredging of 137,195 linear meters of open waterways to their designated depth
- b) Desilting of 13, 717 linear meters on drainage mains
- c) Declogging of 370, 857 linear meters of drainage lateral





## **II. SOLID WASTE MANAGEMENT CLUSTER**

Compliance to RA 9003



## II. SOLID WASTE MANAGEMENT CLUSTER

### Compliance to RA 9003



# DILG

- a) 2 out of 144 LGUs(Sta. Rosa, Laguna and Quezon City) - approved 10-year SWM plan
- b) 65 out of 144 LGUs (45.14%) - segregate garbage at source
- c) 58 out of 144 LGUs (40.28%)- segregated collection
- d) 64 out of 144 LGUs (44.44 %) – recycled, composted, reused(MRFs)
- e) 32 out of 144 LGUs (22.22%) - disposed residual waste in approved disposal sites





## II. SOLID WASTE MANAGEMENT CLUSTER

### Compliance to RA 9003



# MMDA

- a) Disposed 2,721,085.69 tons of garbage to disposal facilities
- b) Disposed 4,185.76 tons of garbage hauled from pumping stations





# III. INFORMAL SETTLERS CLUSTER

- Tagging of Informal Settlers
- Removal of Informal Settlers/Illegal Structures

# III. INFORMAL SETTLERS' CLUSTER

## A. Tagging of Informal Settlers



**DPWH**



**MMDA**

Surveyed 65,495 informal settlers in the Manila Bay Region

NCR – 50,642 ISFs

Region 3 – 6,819 ISFs

Region 4A – 8,034 ISFs



### III. INFORMAL SETTLERS' CLUSTER

#### B. Removal of Informal Settlers/Illegal Structures



DPWH

Cleared about 4,695 sq. m of fish pens in Bataan, and removed 21 illegal encroachments in Region 4A



### III. INFORMAL SETTLERS' CLUSTER

#### B. Removal of Informal Settlers/Illegal Structures



**PRRC**

1. Provided financial assistance to 150 ISFs from Estero de Paco, Muelle dela Industria, and in Lambingan Bridge
2. Relocated and resettled 244 relocatees from Estero de San Miguel, Estero de Paco, Estero de Uli-Uli and Estero De Aviles to Gaya - Gaya, Bulacan



**ESTERO DE SAN MIGUEL**



# IV. HABITAT AND ECOSYSTEMS MANAGEMENT CLUSTER

- Habitat Restoration
- Law Enforcement



## IV. HABITAT AND ECOSYSTEMS MANAGEMENT CLUSTER

### A. Habitat Restoration(DENR)



**DENR**

Planted 4,861,311 seedlings in 6,205.17 hectares which is 6% higher than the 5,866 or 25% targeted hectares in the OPMBCS in order to increase the vegetative cover in the watersheds of the Manila Bay Region (NGP)





## IV. HABITAT AND ECOSYSTEMS MANAGEMENT CLUSTER

### A. Habitat Restoration



**DENR**

Formulation of an Area-Based Rehabilitation Plan to priority sub-areas/rivers which include the following:

- NCR - Las Piñas, Parañaque, Navotas, Malabon, Manila and Caloocan
- Region 3 – Nueva Ecija, Tarlac, Pampanga, and Bulacan, and
- Region 4A – Rizal, Laguna and Cavite



## IV. HABITAT AND ECOSYSTEMS MANAGEMENT CLUSTER

### B. Law Enforcement



**PCG**



**PNP-MG**



**EMB**

- 1) Conducted 96 patrols and operations which resulted to apprehension of 172 violators
- 2) Industrial monitoring enforcement which resulted to issuance of Cease and Desist Order (CDO) for the three industries to construct wastewater treatment facilities
  - Club Filipino in San Juan, Metro Manila
  - Walter Mart in Gen. Trias, Cavite
  - Hoya Leather Factory in Meycauayan, Bulacan
- 3) Establishment of Environmental Compliance Assistance Center for LGUs

# OTHER INTERVENTIONS



# OTHER INTERVENTIONS

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**A. CONDUCT OF THE REGULAR MANILA BAY INTER-AGENCY MEETING (MBIAM)** - A consultation meeting among mandamus agencies on the status of the OPMBCS implementation.

**B. CREATION OF THE CLUSTER TECHNICAL WORKING GROUPS FOR OPMBCS's IMPLEMENTATION**

- 1) Liquid Waste Management Cluster
  - 2) Solid Waste Management Cluster
  - 3) Informal Settlers Cluster
  - 4) Habitat and Ecosystems Management Cluster
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# OTHER INTERVENTIONS

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## **C. ESTABLISHMENT OF PARTNERSHIP WITH OTHER GOVERNMENT AGENCIES, ORGANIZATIONS AND CIVIL SOCIETY GROUPS**

- National Housing Authority(NHA)
  - Maritime Industry Authority (MARINA)
  - Philippine Fisheries Development Authority(PFDA)
  - League of Cities of the Philippines
  - League of Municipalities of the Philippines
  - Manila Bay SUNSET Partnership Program Incorporated (Landbank of the Philippines, Manila Bay Yacht Club, Manila Ocean Park, Diamond Hotel, Pamantasan ng Lungsod ng Maynila, etc)
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# OTHER INTERVENTIONS

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## **C. ESTABLISHMENT OF PARTNERSHIP WITH OTHER GOVERNMENT AGENCIES, ORGANIZATIONS AND CIVIL SOCIETY GROUPS**

- Sagip Ilog Pilipinas
- Philippine Women University (PWU)
- UP Marine Science Institute
- UP National Hydraulics Research Center
- Philippine Nuclear Research Institute

## **D. CREATION OF PROJECT PREPARATORY TEAM FOR WATER QUALITY MANAGEMENT FOR SHORT AND LONG TERM DEVELOPMENT OF THE MANILA BAY REHABILITATION**



# THANK YOU

