

2015 Annual Audit Report for Environmental Management Bureau (EMB)

Adopt-an-Estero/Water Body Program's objectives not fully attained

The goal to achieve cleaner, safer and healthier environment by reducing the water pollution through the Adopt-an-Estero/Water Body Program has not yet been attained for the past five years in the NCR, Regions 3, 6 and 11 due to: (a) non-abatement of the dumping of domestic wastes and that only 10 percent of the total water body in Metro Manila was adopted as of December 31, 2015; (b) the terms and conditions of the MOA are not fully observed; (c) non-involvement of the residents in the management of the estero; and (d) low enforcement of ordinance on solid waste management in the barangay level.

One of the goals under the Philippine Development Plan (PDP) 2011- 2016 is improved environmental quality for a cleaner and healthier environment. In order to provide communities with a healthier environment, the quality of the air, land and water must improve.

One of the strategies to reduce water pollution and to improve water quality is to undertake a massive clean-up and rehabilitation of esteros in partnership with Department of Interior and Local Government (DILG), Local Government Units (LGUs), and other government agencies through partnership agreements such as the Adopt-an-Estero program.

Hence, EMB embarked on a serious nationwide campaign to rehabilitate rivers and creeks in many parts of the country known as the "Adopt-an-Estero/Water Body Program" in 2010. The year 2015 marks the 5th year of its implementation.

This Program is a collaborative undertaking between and among the Estero Community, Donor-Partner, Local Government Unit/s, other government agencies and the DENR. It is also a response to the continuing mandamus by the Supreme Court for agencies led by the DENR to clean up Manila Bay, particularly through the esteros and waterways that empty into it.

The objectives of the program are (a) Clean the esteros of wastes, debris and silt starting 2010 until all have been cleaned up; and (b) Mobilize estero communities in cleaning the estero and enlist their active participation in the actual clean up, and in implementing and preparing plans to sustain a clean estero in the future years.

The Program engages the stakeholders and partners in order to:

- a. institutionalize the Program within the LGUs particularly barangays, towards community empowerment;
- b. ensure sustainability of the program and benefits derived; and
- c. boost public-private partnership

The responsibilities of the parties in the program are spelled-out in a Memorandum of Agreement (MOA) among EMB, LGUs concerned, donor partner, Metropolitan Manila Development Authority (MMDA) and Department of Public Works and Highways (DPWH).

The program's effectiveness is assessed by monitoring the water quality on the adopted areas by using Dissolved Oxygen (DO) and Biochemical Oxygen Demand (BOD) as parameters to determine its

compliance with the Water Quality Criteria of DENR Department Administrative Order (DAO) No. 34 series of 1990.

In the initial implementation of the program in CY 2010 up to CY 2012, EMB did not set-up a target for the number of esteros to be adopted, however, starting CY 2013, each EMB Regional Office targeted four esteros to be adopted yearly.

In NCR, Regions 3, 6 and 11, the Program's objectives has not yet been attained for the past five years due to:

- a. non-abatement of the dumping of domestic wastes in the estero/water body and that only 10 percent of the total water body in Metro Manila was adopted.

EMB-NCR was able to accomplish 100 percent of its targeted number of estero/water body to be adopted from CYs 2013 to 2015. As of December 31, 2015, 33 esteros had been adopted by 40 donors in NCR. Likewise, the agency had accomplished fully their undertakings embodied in the MOA, however, despite the initiatives undertaken by EMB-NCR for the Adopt-an-Estero/Water Body Program, the water quality of most of the adopted water body still do not conform with the criteria of the quality of water as required under DAO No. 34.

An examination of the results of the water quality analyses conducted by EMB-NCR on these adopted bodies of water as of December 31, 2015 disclosed that of the 87 sampling stations monitored, only 13 or 15 percent posted an improved water quality, in terms of its BOD, compared to the CY 2012 level, however the results are still way below the standard as provided for under DAO No. 34 series of 1990. On the other hand, the results of DO disclosed that there were no improvements in the quality of water.

Ocular inspection and interview with donor partners disclosed that wastes are lessened every year and that most of the waste are domestic wastes coming mostly from the informal settlers residing along the esteros/water bodies. The non-abatement of the dumping of domestic waste contributed much to the trash in the water bodies, hence, non-improvement of the water quality.

Moreover, only ten percent (33 adopted estero/water body ÷ 321 total river and creeks in Metro Manila) of the water bodies in Metro Manila was adopted as of December 31, 2015, hence, contributing to the minimal improvement in water quality.

Management commented that the pollution load coming from the household domestic waste is beyond the control of the EMB-NCR, and contributed a lot to the increase in BOD value in the waterways. This could only be controlled and reduced within the Water Quality Criteria Guideline Values of DENR DAO 34 with the following interventions: (1) the LGUs should start the relocation of Informal Settlers (ISF) residing along water body/ies; (2) Engineering interventions should be initiated by DPWH and MMDA e.g. de-silting and dredging of the water body/ies that will improve the stagnant flow that prevents the self re-oxygenation of the water bodies; and (3) connection of the households to the sewerage system of the two concessionaires (Maynilad and MWCI) under the 2037 Septage Program of Metropolitan Waterworks and Sewerage System (MWSS).

b. inability of the Donor-Partners in EMB Region 3 to fully implement the terms and conditions of the MOA and non-involvement/cooperation of the residents

Donor-Partners were not able to comply fully with the terms and conditions of the MOA like the frequency of the clean-up activities, conduct of Information Education Campaign (IEC) and submission of status report of implementation, thus, resulted in the non-involvement and participation of the estero communities that contributed to the non-attainment of the objectives of the program as evidenced by the result of the ocular inspections conducted at Sapang Matua, Quebiawan and Ugong Creeks. Sapang Matua and Quebiawan creeks showed that there were still domestic wastes around the creek caused by undisciplined constituents while the Ugong Creek showed that it is in bad state as it exhibited strong odor and dark color.

Interview conducted by the audit team disclosed that the constituents were not fully aware of the Adopt-an-Estero/Water Body Program of EMB-Region 3 and concerned Private Entities. They were not involved in the clean-up planning sessions and most of them did not participate in the clean-up activities. Although they were advised on the implementation of Solid Waste Management practices, still, they were not mobilized to enlist their active participation which is one of the objectives of the Program.

The result of the water sample tests for the DO showed that, out of the ten samples, eight passed the test while for the BOD, out of the ten samples, only three passed the test.

c. Inadequate strategies, ineffective information educational campaign and non-involvement/cooperation of the residents in the management of the estero in Region 6

In Region 6, concerned barangays are not signatories to the MOA. The residents are only recipients of the clean-up activity but were not directly or actively involved in the cleaning of the adopted water bodies, thus, out of the 40 respondents interviewed, 32 or 80 percent were not aware of the Program. The lack of IEC materials and campaign on the proper waste segregation, cleanliness and maintenance of creeks/rivers and the like contributed to the non-attainment of the objectives of the Program.

Had the residents of the barangays living in the vicinities of the adopted water bodies been directly involved, giving them direct responsibility in the maintenance and cleaning of the rivers and creeks, the program could have realized its objective of mobilizing estero communities in cleaning the estero and enlisting their active participation in the actual clean up, and in implementing and preparing plans to sustain a clean estero in the future.

d. Low enforcement of ordinance on solid waste management in the barangay level in Region 11

Analysis of the data gathered from the Annual Accomplishment Reports for the years 2010 to 2015 submitted by the EMB Region 11 disclosed the following:

- The volume of garbage gathered from esteros and rivers during clean-up drives from CY 2010 up to 2015 disclosed no noticeable reduction especially in the rivers and esteros of Davao City. The volume of garbage collected remained constant, or had even increased

in some waterbodies in the year 2015, thus, giving an impression that the Program did not have a significant impact on the awareness and consciousness of the residents particularly those living beside the rivers and esteros.

- There is low participation of the barangay constituents particularly among the informal settlers in the estero communities during clean up drives. The Annual Reports showed that the clean-up drive activities were mostly participated by the private partner adopters, employees from private establishments, National Service Training Program (NSTP) students from various schools and universities in the city, barangay officials and some constituents, and EMB 11 employees.

The foregoing observations were confirmed during validation conducted with the residents living within the estero communities. They admitted not participating in any clean-up drive that was conducted around 3 to 4 times a year and did not even know who conducted these activities in their area.

Despite existing barangay and city ordinances prohibiting dumping of garbage in the esteros and rivers, many residents still continue to throw garbage in the water although they admitted or were aware of the benefits brought about by the clean-up drives to their community such as preventing flooding and clogging of waterways, minimizing incidence of waterborne diseases, and cleaning the rivers of floating garbage and wastes.

The report also disclosed that IEC on Solid Waste Management were conducted in the barangays either by the EMB 11 personnel, barangay officials, or by the private partner adopters. However, these information campaigns were not taken seriously as evidenced by the continuous presence of garbage thrown in the rivers and esteros.

It was observed that the residents of the estero community has become passive and has gotten used of other people cleaning their garbage for them.

The above observations hindered the effective implementation of the program.

It is noteworthy to mention that the following observations were made in the other regions:

- In Region 8, five or 25 percent of the 20 water bodies being monitored have shown significant improvement in terms of the DO while 10 percent manifested improvements in terms of the BOD.
- Region 2 is presently monitoring 21 esteros where water samples were collected and analyzed and the results were presented to the Donor-Partners to include in their action plan the strategies on how to improve the water quality of the esteros/water bodies, thus, contributing to the success of the program.
- In Region 10, the Program was able to attain its targeted improvement of four water bodies in coordination with the donor-partners and derived the following benefits:
 - good sanitation and solid waste management practices;
 - reduction of water-borne diseases particularly among children and vulnerable groups;

- reduction of incidence of risks of prolonged flooding caused by impeded water flow; and
- minimization of additional pollution loads into receiving water surface e.g. lakes and seas.

We recommended and the Director agreed to:

- a. increase the targeted number of estero/water bodies to be adopted per year by exerting more efforts to solicit more donor-partners (EMB-NCR);**
- b. require the donor-partners to fully comply with all the undertakings, terms and conditions of the MOA (Region 3);**
- c. include the LGUs among the parties to the MOA to enlist the cooperation/involvement of the concerned residents in the clean-up drive (Regions 3 and 6);**
- d. conduct intensive periodic IEC seminars especially on livelihood projects that will benefit the concerned residents (Regions 6 and 11); and**
- e. request the LGU partners to strengthen the implementation of the ordinance on solid waste management (Region 11).**