

Member's Annual Report 2005

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Name of the editor: Dolora N. Nepomuceno

1. About the organization

(1) Name of the organization

Laguna Lake Development Authority

(2) Purpose and roles of your organization

a) Historical background of the organization

The management and control over the Laguna de Bay and its watershed or Region, is vested upon the Laguna Lake Development Authority (LLDA) by virtue of legislation (Republic Act 4850 as amended) in 1966. Because of its unique legal and institutional framework, the LLDA operates as a government-owned and controlled corporation (GOCC) and exercises policy, regulatory and development functions covering the entire lake and its watershed as a result of the amendatory laws (Presidential Decree 813 and Executive Order 927) to its original Charter. The LLDA is a self-sustaining organization. Its operation is financed through revenues from regulatory fees and pollution charges, resource users fee such as those from aquaculture operation and water abstraction, and from its corporate investments and marketable securities. In 1983, the LLDA was placed under the administrative supervision of the Philippine Department of Environment and Natural Resources (DENR) through Executive Order 149. However, it maintains its separate policy-making functions through its Board of Directors. Because of the nature and scope of its regulatory and developmental functions, LLDA coordinates with over 30 ENR and water-related agencies/ offices and of course the 66 LGUs within the watershed, each with environment and fishery-related functions by virtue of the 1991 Local Government Code.

b) Purpose and role of the organization

LLDA was mandated to lead, promote and accelerate the development and balanced growth of Laguna de Bay within the context of national and regional economic development, and to carry out the sustainable development of the Lake Region with due regard and adequate provisions for environmental management and control, preservation of the quality of human life and ecological systems, and the prevention of undue ecological disturbances, deterioration and pollution.

(3) Outline of the organization

1) Number of staff

As of June 2006, the total manpower complement is 309, breakdown as follows:

Top Management 2

Supervisory 14

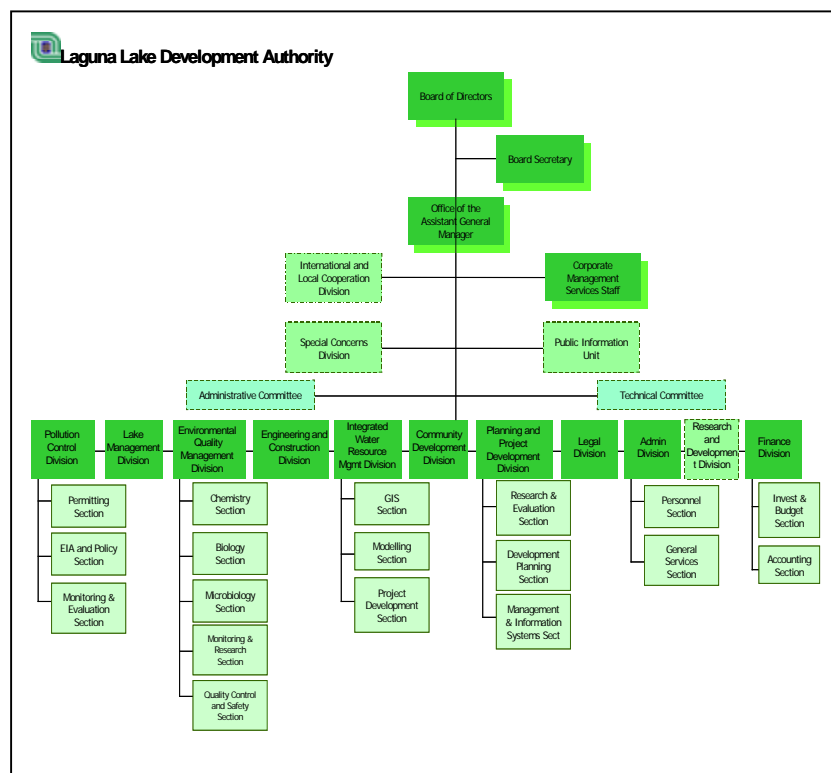
Technical 147

Non-technical 146

2) Amount of the annual budget

The LLDA is a self-sustaining organization subsisting on its own corporate operating revenues. For the last five (5) years (2000) to 2005, the average annual budget is PhP 178.043 million. For 2005, its corporate operating budget was PhP 249.268 million.

3) Organizational chart



4) Ongoing projects

LLDA has been implementing various programs and projects in line with its thrusts and priorities. Presented below are the flagship programs and projects being implemented by LLDA.

Flagship Programs

1. Environmental User Fee System

A pioneer market-based instrument for pollution control and abatement in the Philippines, implementation of the EUFS started in January 1997 as Phase 1 of the National Program. Applying the "Polluters Pay Principle", the EUFS was designed in a manner that integrates and harmonizes command and control (CAC) and economic instruments with the objective of generating mechanism to improve environmental enforcement and compliance status of firms located in the Laguna de Bay Region. The system now forms an integral part of LLDA's Environmental Management Program.

The EUFS is primarily aimed at reducing the pollution loading into the Laguna de Bay. It makes all dischargers of liquid waste directly accountable for environmental damages brought about by their day-to-day operations by internalizing the cost of environmental degradation and enhancement into their business decisions and actions. Eventually, the foremost goal of the EUFS is to limit point sources wastewater discharges to a level that would ensure that water bodies within the Laguna de Bay system would be protected and made suitable for their intended uses.

The fee system is composed of a fixed fee and a variable fee. The fixed fee covers the administrative costs of implementing the system based on volumetric rate of discharge, while the variable fee depends on whether the BOD concentration is above or below the concentration threshold which corresponds to the existing effluent standard for BOD of 50 mg/L, regardless of total BOD load. This scheme has induced firms to be more cost effective in trying to comply with standards and in effect made the EUFS a model of mixed regulatory and economic instrument. An enterprise is required to obtain a Discharge Permit (DP), renewable annually, from the LLDA. The DP is a legal authorization for the enterprise to discharge their wastewater of acceptable concentration set under DENR DAO 35 to the lake or its tributary rivers.

2. River Rehabilitation Program

The continuing pollution of the lake waters from contamination of the tributaries from communities, industries and other sources threatens the essential resources whose loss could lead to conflict. Thus, the LLDA in 1996 started the River Rehabilitation Program covering the rivers and streams flowing through the 24 hydrological sub-basins. Starting as a mere physical clean-up of rivers, the program now adopts a more comprehensive and sustainable approach by encouraging broad-based multi-sectoral

and multi-agency support and involvement.

Various stakeholders from each sub-basin were organized into River Rehabilitation and Protection Councils or Foundations to form partnerships among LLDA, Local Government Units (LGUs), Peoples (POs), civic organizations and non-government organizations (NGOs) to sustain the program. This paved the way for the formation of “River Basin Councils” in all sub-watersheds in Laguna de Bay Region. The LLDA through its Board institutionalized the RBCs in 1996 and federated them in 2001 into the Federation of River Basin Councils/Foundations through LLDA Board Resolution No. 167. A seed money of Php50,000.00 per Council was given as seed money to staff up their river rehabilitation activities. They were also taught fund raising mechanisms.

A systematic approach is being followed by the RCs in community organizing and drawing up the River Rehabilitation Plan that includes mapping, comprehensive survey and assessment, visioning and plan formulation.

The physical clean-up of the rivers, a component of the rehabilitation plan is led by the Environmental Army, a volunteer organization consisting of fisherfolks, farmers and other community residents. The men and women of the EA are exemplars of voluntarism who play a vital role in raising environmental awareness and heightening motivation among various sectors. The program is so successful that it is recognized by the international community as center for excellence in community-based environmental program. Because of this, RCs and EA have been recipients of various donor support, such as USAEP, Asia Foundation, World Bank, among others.

3. Lake Fishery Management Program

Regulation and control of aquaculture operation in Laguna de Bay is based on the Laguna de Bay ZOMAP, which by far, is considered the most feasible management system for equitable allocation of the lake’s fishery resources. The plan aims to a) reduce fishpen area from 25,000 to 10,000 hectares and 5,000 hectares for fish cages that is considered the lake’s ecological carrying capacity; b) adopt a water resource pricing mechanism for aquaculture development through public bidding process; and c) reduce the possibility of pollution from aqua structures within and around the lake area. It is a plan that provides for the zoning of the lake for various uses – fishcage, fishpen, fish sanctuary, navigational lanes, and open fishing. Fishpen and fishcage belts were delineated in specific locations in the lake with a total of 10,000 and 5,000 hectares respectively. The area allocation was determined through the estimated carrying capacity of the lake for aquaculture operation, based on the long-term primary productivity data from different locations in Laguna de Bay. Also, limits were set for

corporate (50 hectares), cooperative (25 hectares) and individually (5 hectares) owned fishpens. The maximum area for fishcage is one hectare. Vacant fishpen area within the belt is awarded through public bidding.

The ZOMAP also prescribes the criteria, guidelines and procedures for proper allocation of fishpen/cage areas

4. Shoreland Management Program

The LLDA implements its mandate on the management of the lake's 14,000 hectares of shoreland. This buffer zone is defined in R.A. 4850 as amended as that area lying below elevation 12.50 meters. The policy framework which was derived from its Charter has been translated into specific policy guidelines, rules and regulations governing the use/ occupancy of the shoreland areas, lease of untitled areas around the lake.

In consonance with these policies and regulations, the LLDA exercises administrative jurisdiction and regulatory control on land use and/or occupancy within the context of its approved plans and programs and along desirable environmental considerations, with due respect to rights of legitimate titleholders obtained prior to the promulgation of the law defining the Laguna de Bay shoreland.

Other initiatives

1) Laguna de Bay Institutional Strengthening and Community Participation (LISCOP) Project

The LISCOP project is an affirmation of LLDA's continuing commitment for the espoused sustainable development of the Laguna Lake and its watershed. More specifically, the LISCOP is an endeavor to contribute to improving overall environmental quality, and ensuring coordinated and effective development governance for the Lake. The LLDA hopes to be able to fully optimize the level of interaction of the environmental, economic, and institutional dimensions of resource use and management, through a combination the following strategic interventions, which also form integral components of the LISCOP. These are: a) Co-managed Investments for Watershed Development (Component 1); and b) Strengthening Institutions and Instruments (Component 2). To be implemented over a 5-year timeline, the LISCOP is being financed out of loan proceeds from the World Bank with co-financing from the Netherlands Government.

In preparation for the implementation of sub-projects, the conduct of comprehensive and participative micro-watershed planning through the Laguna de Bay Watershed

Environmental Action Planning (LEAP) in the 24 micro-watersheds. The micro-watershed planning activity is part of the capacity building support to the Local Government Units, the River Councils (RCs) and other major stakeholders that will be provided under LISCOP. So far, 12 microwatersheds covering 33 LGUs have participated in the LEAP.

To date 16 project feasibility studies have been developed by proponent-LGUs and 7 have been approved and awaiting implementation, while two are on-going construction, namely: (a) Tanay Micro-watershed Enhancement Sub-project, and (b) Cavinti Eco-Tourism Development Sub-project.

For institutional strengthening component, the two-year development studies is about to be completed with key policy initiatives/reforms to be instituted to expand regulatory tools and market-based instruments, improve permitting, monitoring and enforcement, improve water and sediment quality monitoring, expand application of Decision Support System and establish the Laguna de Bay Resource Information System.

2) Laguna de Bay Community Carbon Finance Project

As a parallel and complementary initiative of the LISCOP Project, the Japanese Government has provided a grant for the development of an enabling environment for a carbon market for small-scale environmental interventions in the Laguna de Bay watershed. This will be done through: (a) building the capacity of the Laguna Lake Development Authority (LLDA) as an intermediary to enable small-scale environmental projects to result in certifiable emission reductions; (b) piloting the implementation of carbon emissions reducing interventions that address priority environmental issues such as waste management and erosion reduction; and, (c) prepare a set of environmental projects from which emissions reductions credits could be purchased by the World Bank's Community Development Carbon Fund (CDCF).

In November 2005, LLDA and World Bank have signed the Letter of Intent of which LLDA will sell to the World Bank verified emission reduction (VERs) on behalf of the LGUs and the World Bank will buy the VERs in behalf of the investors. Subsequently, the LLDA and the Bank would signed the Emission Reduction Purchase Agreements (ERPAs) in 2006. These ERPAs will support and encourage the participation of LGUs and other stakeholders in the global effort to reduce greenhouse gas emissions under the Kyoto Protocol and the Clean Development Mechanism. Under these agreements, participating LGUs, private groups and local communities will be provided with financial incentives to implement environmental protection measures in the Laguna de Bay Region.

Other programs and projects being implemented by LLDA are the following:

- 1) Water Quality Management Program aims at collecting water quality data needed to assess accurately the sustainability of the Lake for all its present and intended beneficial uses and evaluate the impact of the development activities on the lake's water quality that will serve as important tools to environmental planning, legislation and management. Under the said program, LLDA conducts regular monitoring of the water quality of the lake through Laguna de Bay Sampling and Monitoring; Laguna de Bay Primary Productivity Studies wherein LLDA measures lake productivity in four stations strategically located in the lake. LPP data are very useful in assessing the quantity of natural food supply in the lake and predicting fish yields or the lake's carrying capacity; Fish Diseases Monitoring, among others.
- 2) Pollution Control Program – the LLDA regulates and controls pollution from point sources within its area of jurisdiction to prevent the discharge of pollutants and improve the quality of the environment. LLDA issues legal orders such as Ex-Part Orders and Cease and Desist Orders and imposes fines and penalties for all industries which continue to discharge pollutive wastewater and fail to comply with the prescribed environmental standards despite several notices.
- 3) Under the Water Resources Management Program, the LLDA designs/ reviews and implements its Raw Water Pricing policies and mechanisms. It makes inventory of all raw water uses/ users within the lake and rivers and monitors compliance to administrative, fiscal and other requirements.
- 4) Fisheries Development Program supplements and complements the ZOMAP implementation in terms of fish seeding, fish sanctuary management, partnership building with the small fisherfolks, capacity building and deputation of local fisherfolks for monitoring and enforcement of fishery laws, fishery researches and experimentation to find beneficial uses for the Janitor Fish population that has proliferated in the lake.
- 5) Information, Education and Communication Program – aims to increase the stakeholders' awareness and engage them to support LLDA's development thrusts. LLDA continues to instill understanding of the policies, plans, programs and projects of the LLDA. IEC contributes in the advocacy and development of environmental actions that will lead to stakeholders' commitment and responsible stewardship of the lake's resources. The LLDA implements the IEC Program with the active involvement of Information Officers from stakeholders' organizations.

(5) Big events in 2005

In May 2005, the Philippines through the tripartite partnership known as 'Conservation

of Laguna de Bay's Environment and Resources (CLEAR) composed of LLDA, Unilever Philippines and the Society for the Conservation of Philippine Wetlands (SCPW) in collaboration with the Global Nature Fund (GNF) hosted the 10th Living Lakes Conference on 15-19 May 2005 at Taal Vista Hotel, Tagaytay City, Philippines. The conference featured the interaction between the lake and its people in densely populated lake region, seeking balance between complex resource uses and sustainable development. Her Excellency Gloria Macapagal Arroyo graced the occasion and delivered her message of support to the conference and the objectives of the Living Lakes Partnerships.

The LLDA co-hosted with the International Lake Environment Committee Foundation (ILEC) based in Kusatsu City, Japan the Conference on the Sustainable Utilization and Management of Asian Basins. It was also the first global consultation meeting on the promotion and implementation of GEF Lake Basin Management Initiative (LBMI) which was launched in the 11th World Lake Conference held in Nairobi, Kenya from October 31 to November 4, 2005. The conference objectives are as follows: (a) to accelerate learning and implementation of effective lake and reservoir management and (b) to share results and findings from the GEF Lake Basin Management Initiative with Asian lake managers and stakeholders.

The Federation of River Basin Councils in Laguna de Bay has elected a new set of officers of Board of Trustees. They also formulated Operations Manual which was funded by the Asia Foundation. Successfully launched a first ever fun run dubbed as "Takbo para sa Lawa" a fund raising activity that has generated approximately Php 280,000.00.

In October 2005, the anti-illegal fishing operation led by LLDA in close coordination with the Philippine Coast Guard (PCG), Criminal Investigation and Detention Group (CIDG), the Fisheries and Aquatic Resources Management Council (FARMC) and the media apprehended 20 fishermen for using sakag/sudsud, and snail gathering activity, which are clear violations of the RA 8550 otherwise known as Fisheries Code of the Philippines.

A total of 85 Notices of Violation were issued to Fishcage Operators for illegal construction and 5 Notices of Demolition for operating fishpens in the Laguna de Bay without permit.

The "LLDA sa Barangay" is an advocacy program of LLDA which aims to make the people aware of the program and projects of LLDA geared towards the sustainable

development of the Laguna de Bay Region and the protection and conservation of the Laguna de Bay ecosystem. Under this program, the LLDA launched the Janitor Fish Catching Competition among the Fisheries and Aquatic Resources Management Councils (FAMRCs). The janitor fish caught will be used as raw material in liquid fertilizer formulation.

About NARBO activity

(1) Activities your organization implemented in 2005 as the member

The LLDA as a founding member of NARBO has participated actively in major NARBO activities including the first General Meeting in February 2004, workshops/seminars/training on Benchmarking, IWRM, water pricing and modeling held from 2004-2005. NARBO's implemented activities have indeed contributed in our efforts to achieve IWRM in the Laguna de Bay basin, and in strengthening the institutional and organizational capacity and effectiveness of the LLDA as a lake basin organization. NARBO's activities have also given the LLDA an appropriate venue to share information, experience and lessons learned on best practices and innovations on IWRM in the Laguna de Bay Region or basin to our counterpart organizations in Asia and beyond.

The Role of the Laguna Lake Development Authority on Water Allocation and Water Right

The Laguna Lake Development Authority (LLDA), a government owned and controlled corporation under the Department of Environmental and Natural Resources, is given the authority to exercise water rights over public waters within the Laguna de Bay Region, to develop water supply from ground and/or surface water resources for municipal, agricultural and industrial usages, and to enter into agreements with municipalities, government agencies and the private sectors to supply, distribute and market such water.

With the LLDA's mandate to lead, promote and accelerate the development and balanced growth of the Laguna de Bay Basin, it has been pursuing the comprehensive rationalization through judicious management and optimum utilization of the surface waters. One approach was to establish a water resource price structure for equitable utilization among surface water users.

Water Allocation Under the Philippine Water Code

The right for water is the privilege granted by the government to appropriate and use water. As explained in the Philippine Water Code, water may be allocated for the following purposes: domestic, municipal, irrigation, power generation, fisheries, livestock raising, industrial, recreational, and other purposes.

The Experiences on Water Allocation and Water Right

The LLDA has been selling raw water to a private corporation, Ayala Land Property Management Corporation (ALPMC) since 1994 at a rate of P 2.91 per cubic meter to a maximum volume of 300,000 cubic meters per month. This agreement was enforced due to inadequate supply of ground water. ALPMC deemed that tapping the water from Laguna de Bay would answer the need for water supply of their clients. The price applied for ALPMC's water abstraction from the lake was based on a "*willingness to pay principle*" such that the true economic value of the water was not fully derived. This experience with ALPMC prompted the LLDA to establish a price structure that would result to efficient and equitable use of the lake.

To come up with the bases for appropriate charges for the use of the lake water, the LLDA conducted the Water Resource Pricing Study in 1999 where I was deeply involved. Through this study, the Authority was provided with the following essential information: (1) existing and potential users of the lake water; (2), the current and future demand for surface water and (3) estimated economic rent for each surface water use. The study also aimed at determining the feasibility of adopting a tradable water user right system. However, this objective was not realized. The study revealed that the system may not work because the number of buyers and sellers was not enough to make the market competitive.

(2) The contact person and organization's web-site

1) The name of the contact person and contact number (including e-mail address)

Dolora N. Nepomuceno

Assistant General Manager

(632)637-9748

dnnepomuceno@llda.gov.ph

2) Your organization's web-site URL (English and local language)

www.llda@gov.ph

(3) Resolutions and expectations for NARBO activities

1) Your organization's resolutions

Being the only institutionalized RBO in the Philippines with a legislated Charter and existing for 36 years, LLDA's can contribute the following to NARBO and its members: as a center of excellence on implementation of the "Environmental User Fee System"; one of the best practices on watershed co-management; showcasing LLDA's approaches for financing IWRM activities; applications of the GIS-based state-of-the-art modeling tools; and Lake Environmental Action Planning (micro-watershed based, demand driven and participative process for ecological assessment, identification and prioritization of problems, issues and measures/ interventions leading towards co-implementation of environmental improvement projects with local government investment and multi-sectoral support). In addition, Laguna de Bay basin may be a venue for study visits, training laboratory and case studies on aforementioned tools, strategies and approaches for IWRM. Aside from IWRM seminars, workshops and training, LLDA could also participate in exchange visits or staff exchange program (such as on-the-job training) that may be organized by NARBO, e.g., on implementation of the Environmental User Fee System for RBOs intending to introduce or are about to implement their own pollution charge system.

2) Expectations for NARBO activities

Because of the shared ownership of the Network among participating/ member organizations, NARBO has become an ideal forum for advocacy, awareness raising and learning on IWRM among RBOs. Unlike similar ODA-funded initiatives where targets and commitments are tied up to loan/ grant drawdowns, NARBO activities may be accessed/ tapped by member organizations freely or voluntarily, under a co-equal/ mutually beneficial arrangements. While this may be so, NARBO could at the same time link RBOs to bilateral and multilateral development cooperation agencies in support of both the Network as well as RBOs' activities. This makes NARBO unique.

(4) Accessibility to the NARBO web-site (<http://www.narbo.jp>)

Please write about;

- 1) Whether you can access to the NARBO web-site? Yes
- 2) Whether you can access to the ADB's web-site (<http://www.adb.org/>) and the ADBI's web-site (<http://www.adbi.org/>)? Yes
- 3) Who can accesses NARBO web-site usually? Dolora N. Nepomuceno, Assistant General Manager; Alice E. Bongco, Division Chief III, Integrated Water Resources Division

4) The way of the access (Dial up or others)? Dial up) Digital Subscriber Line