

UNIVERSITY OF THE PHILIPPINES-MANILA  
College of Arts and Sciences  
Department of Social Sciences

**A STUDY ON THE STAKEHOLDERS' PERCEPTION OF THE  
/ LAGUNA LAKE DEVELOPMENT AUTHORITY'S  
REGULATORY AND DEVELOPMENT FUNCTIONS**

An Undergraduate Thesis  
In Partial Fulfillment of the Requirements for

Bachelor of Arts  
Major in Political Science

Presented to

**Dean Josefina G Tayag**

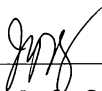
By

**JOSEPH NORLEY Y. CAPISTRANO**  
//

April 2000

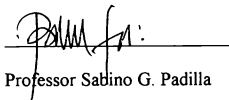
**APPROVAL SHEET**

The undergraduate thesis entitled “A Study on the Stakeholders’ Perception of the Laguna Lake Development Authority’s Regulatory and Development Functions” by Joseph Norley Y. Capistrano has been approved in partial fulfillment of the requirements for the Degree of Bachelor of Arts Major in Political Science.



Doctor Josefina G. Tayag

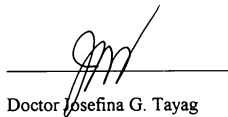
Thesis Adviser



Professor Sabino G. Padilla

Head

Department of Social Sciences



Doctor Josefina G. Tayag

Dean

College of Arts and Sciences

## ABSTRACT

The problems of pollution due to rapid urbanization and industrialization, together with the introduction of new fisheries methods posed threats to subsistence fisherfolks. In response to these concerns, the government has undertaken various steps to protect the environment as well as the latter's interests. Thus, it passed laws and created specialized administrative bodies to address these concerns. Such is the case of the Laguna Lake Development Authority (LLDA), which was tasked to manage the activities in the Laguna Lake region. Discussed in this paper are the background of the LLDA and the perceptions of the stakeholders about the said agency's effectiveness. Towards the end, recommendations are also given concerning possible ways of improvement.

The research methods used in this study are the library research and direct interview methods. The sample population was selected purposively and is composed of 18 representatives from the open-sea sector, 12 from the fishpen sector, 3 local government officials and an official spokesperson from the LLDA.

From the research conducted, it was found out that the stakeholders are not satisfied with the LLDA's performance of its environmental and administrative functions, and that they also do not approve the manner in which the Authority formulates and implements its policies. In this light, most of the respondents proposed the abolition of the LLDA in favor of another agency, or the transfer of its powers to the local government units.

## ACKNOWLEDGEMENT

I would like to express my gratitude to the following who helped in the completion of this study.

Firstly, my parents for their moral and financial support that motivated me to pursue this study.

Secondly, Marie for her time and material assistance and for serving as my inspiration.

Mr. and Mrs. Mike del Rosario for their support and patience.

Dean Josefina Tayag for patiently motivating and guiding me as I undertake the study.

The residents of Barangay Sipsipin, Jalajala, Rizal especially Kuya Domeng and Kuya George and their families, for their hospitality and cooperation.

The LLDA, especially Ma'am Racquel, Ma'am Norming, Ma'am Leila and the library officers and other staff members for their hospitality and assistance.

The Pi Sigma Fraternity and the Pi sigma Delta Sorority for their moral support.

All the members of the Pol Sci graduating class especially the members of Block 4-A.

Ate Grace, Ate Zhel, Jay, Anna and Marvin, for their company, time and moral support.

Brod John for his insights and for lending me some of his materials.

Most of all, to Kuya Jess for His guidance and providence.



**DEDICATION**

*This work is dedicated to my family and loved ones.*

## TABLE OF CONTENTS

Approval Sheet	i
Abstract	ii
Acknowledgment	iii
Dedication	iv
Table of Contents	v
Chapter One – Introduction	1
Statement of the Problem	3
Objectives	4
Thesis Statement	5
Review of Related Literature	6
Theoretical Framework	12
Conceptual Framework	14
Research Design	16
Scope and Limitation	18
Significance of the Study	19
Chapter Two – Historical Background	21
General Problems in the Fisheries Industry	21
Ecological Concerns	21
Other Concerns: Full Community Participation	23
Early Beginnings of Fisheries Administrative Policies	26
Contemporary Water Resources Management Policies	28
The Evolution of a Management Agency in the Laguna Lake Region	32
Fishpen Development in the Laguna Lake	35
Current Situation and Problems	37
Chapter Three – Presentation of Data	39
Perception of the Stakeholders	41
LLDA Statement	59
Chapter Four – Summary, Conclusions and Recommendations	65
Summary of Findings	65

Conclusions	67
Recommendations	70
Bibliography	vii
Appendices	viii

## **CHAPTER ONE**

### **Introduction**

One of the world's biggest problems during these times of rapid technological and industrial achievements concerns the degradation of the environment. It is indeed true that people currently enjoy some comfort, if not luxury, in life. Nevertheless, these conveniences also have their own repercussions and in this case, it is the environment that takes toll of man's carelessness and greed. The places where many industrial centers are situated suffer from flash floods, poor health of the residents, unclean surroundings and other complications that arise from the poor conditions of the environment.

It is worth noticing the urban centers usually have poorly maintained environment. The waste materials are dumped to neighboring areas so the effect is felt by those who live in these places. There seems to be a kind of incompatibility between industrial growth and environmental protection.

Aside from the environment, the subsistence communities, which compose a large part of the population also fall victim to the "evils" of industrialization. As in the case of the fisherfolks, the widespread emergence of fishpens greatly reduces the former's areas of operation, which in turn, reduces their catch and income. This deprivation forces many of them to resort to illegal and harmful ways of fishing such as the use of dynamite, cyanide and the like. While these harmful methods increase their income, they also destroy the natural marine habitat.

One of the best examples is the case of Laguna Lake. Strategically located amidst the country's center of urban and industrial development, namely Metro Manila and parts of Southern Tagalog, the lake suffers from a fast depletion of marine resources and the decreasing quality brought about by the establishment of fisheries businesses and the urbanization of the surrounding areas. It is currently being used for fisheries, as a transport route, as a reservoir for floodwater, for power generation as well as for recreational purposes. The lake is also being eyed to serve as a waste sink, irrigation purposes, industrial cooling, as a source of surface recharge and to provide water for the metropolis and neighboring areas.

It is for reasons of environmental protection and the need to regulate the fishpen industry that the Laguna Lake Development Authority was created. It is an administrative body primarily tasked to raise the per capita incomes of the people within the lake area, increase job opportunities, encourage a more equitable distribution of wealth, increase the productivity in the agricultural, industrial and service sectors, facilitate water supply, power, housing, health, education and to maintain satisfactory environmental quality (LLDA, 1972).

In line with these goals, the LLDA embarks on projects designed to develop the lake for purposes of industrial-municipal water supply, establish an industrial estate and spearhead agriculture and aquaculture development through the extension of financial and technical assistance to cooperatives. It also works for the establishment of a

continuing machinery for regional development planning and statistics gathering and for systematic monitoring and management of the region's resources and major projects.

## **Statement of the Problem**

### *Background*

The main development problem affecting the lake has been the setting up of fishpens. Before the introduction of this method, open-sea fishing was used. The use of fishpens resulted to a decline of the catch through traditional fishing methods and also to the prioritization of particular species for fish culture. These developments affected the subsistence fisherfolk whose catch decreased from an average of 15 to 20 kilos to an average catch of only 1 to 4 kilos per day (Guerrero III, 1991).

The main beneficiaries of the introduction of fishpens are the large-scale fishermen who have the capital to engage in the fisheries business. The small fishermen, on the other hand, were reduced to becoming mere caretakers of the commercial fishermen's farms. They were no longer able to earn from fishing expeditions, thus they had no choice but to become employees of fishpen owners.

The LLDA was the agency tasked by the government to regulate the fishing industry so as not to compromise the welfare of the small fisherfolks as well as the quality of the lake. Among its programs are the limiting of lake areas to be used for

fishpens and the delegation of open-sea capture areas where the small fishermen can fish using other methods of fishing (LLDA, Ibid.). Along these lines, the LLDA is being criticized as being ineffective and useless. As shown by statistics and surveys, many illegal fishpens still proliferate in the lake and the free capture areas were reduced and therefore not enough to enable the traditional fisherfolks to have decent harvests. The water quality of the lake is also said to be deteriorating and the fish breeding grounds are slowly being destroyed (Davies et al, Ibid.).

### *The Research Question*

This study aims to evaluate the effectiveness of the Laguna Lake Development Authority as perceived by the stakeholders namely: the small fisherfolk, the fishpen operators or owners, the lakeshore residents, local government officials and the LLDA officials and/or staff.

### **Objectives**

This study generally aims to determine the Laguna Lake stakeholders' perception of the effectivity and performance of the Laguna Lake Development Authority (LLDA) in terms of its regulatory and developmental functions.

Specifically, the study seeks to:

1. Study the origins, evolution and functions of the LLDA as a developmental agency.
2. Determine whether the LLDA is able to perform its functions as perceived by different stakeholders.
3. Analyze if such assessments coincide with one another's perceptions (small fishermen, lakeshore residents, local government officials and fishpen operators and owners).
4. Determine if there is satisfaction or dissatisfaction with the LLDA's performance.
5. Determine if stakeholders' opinions coincide with that of the LLDA.
6. Give recommendations as to improve the conditions of the stakeholders and on policy changes to make the LLDA more effective.

### **Thesis Statement**

The Laguna Lake stakeholders, namely the small fishermen, fishpen operators and local officials, are not satisfied with the LLDA's performance as a government agency because it has failed to effectively regulate the fishery business in the lake causing no considerable development in the region, and that there is no difference between the small and big fisherfolks' opinions regarding this matter.



## **Review of Related Literature**

Andrew Goudie, as shown by the title of his book *The Human Impact on the Environment* (1993), discusses the impacts of the human development to the environment. He traces the evolution of the ideas of human control of his environment from the biblical claims of the world being divinely created to the development of the ideas of natural selection. In this connection, he relates the development of human thought and technology to the declining conditions of the environment more specifically in the areas of vegetation, the soil, water and climate.

The chapter on the human impact on the waters is important for the purpose of the study as it focuses on the effects of the different human activities on the marine environment. In this chapter, Goudie claims that human factors such as urbanization and the developments that come with them cause an imbalance and disturbance in terms of the natural processes in the aquatic environment. Among those concerns given emphasis are pollution arising from urbanization and industrialization, re-channeling of waterways, deforestation, and agricultural factors.

In 1991, The Legal Rights and Natural Resources Center published the book *Law and Ecology*. This work, edited by Professor Antonio G. M. La Viña, is a collection of laws on ecology in the Philippines and other international documents regarding ecology. It serves as a guidebook of the different statutes that may have a direct or indirect effect

on the environment. This material provides a legal source for all disputes and other matters pertaining to the protection and care for natural resources.

A particular section of the publication covers the area of fisheries. It specified three Presidential Decrees that the Philippine government formulated to be able to protect the environment. PD 1152 or the Philippine Environment Code has a stipulation on natural resources management and conservation, specifically, the fisheries and aquatic resources. PD 704, the Fisheries Decree of 1975, revised and consolidated the laws and decrees affecting fishing and fisheries. The last, PD 1219, provides for the exploration, exploitation, utilization and conservation of coral resources.

The book *Asia's Environmental Crisis* (1993) focuses on the political economy of Asia. The chapters examine the different forces that have generated problems, especially in the political and economic spheres, the different efforts to find solutions, and the economic and political contexts of the proposed solutions. The book identifies Asia's different environmental problems such as forest denudation, "slash and burn" agriculture, mining, high rate of energy consumption and the resort to nuclear energy, as well as different costs of urbanization and industrialization. Apart from these, water pollution, destruction of wildlife, aquaculture development, global warming and even man's leisure activities also pose threats to Asia's environment.

Two chapters discuss the Philippine environmental concerns – chapter 10, which deals on the role of Japan in the environmental degradation in the Philippines, and chapter 11, which deals on the relation of foreign indebtedness and the environment.

In the chapter on Japan and the Philippines, the author Rene Ofreneo primarily argues that Japan's economic expansion contributed to the rapid depletion of Philippines' natural resources. He claims that Japan's economic expansion, which occurred in two stages, has different impacts based on structural adjustments. The first stage (1950s-60s) was focused on Japanese war reparations, while the second primarily focused on economic re-structuring and industrial relocations. After the peace agreement where elements of war damage payments were hammered, Ofreneo claims that the trade between Japan and the Philippines immediately shot up. Japan engaged in the so-called "capital goods reparations" – mainly in the form of old machinery and equipment while the Philippines focused on the exportation of raw materials. Emphasis on the latter paved the way for the growth of logging and mining industries, whose operations have led to so much degradation of the Philippine environment, around the Japanese market. According to Ofreneo, "this is nothing but an advanced appreciation of the importance of restructuring Japan's economy based on the emerging and evolving international division of labor" (Ofreneo, 1993; 209), highlighting Japan's moving out of the low-technology, labor intensive mode. Thus, with the intensification of Japanese involvement in the Philippine economy, the Japanese contribution to environmental degradation in the Philippines has also deepened.

The next chapter, entitled “Debt and Environment: The Philippine Experience” traces the roots of the Philippines’ indebtedness. Rosalinda Ofreneo claims that the country’s debts under Marcos placed the Philippines under the control of international financing institutions, which, in turn, financed projects that would be beneficial to controlling countries at the expense of the Philippines’ rich natural resources. The country’s export-orientedness took its toll on the environment while the debt-related problems forced the natives to resort to environment-harmful practices in order to eke out a living. This result from the withdrawal of the government subsidy that is, in turn, re-channeled to debt servicing. Thus, the cycle begins “Poverty breeds destruction which breeds more poverty” (Ofreneo, Ibid.). This is true in almost all sectors of the society including the fisherfolk.

These works enable the researcher to understand the economic and political roots of environmental degradation in the Philippines, which necessitates the formation of administrative bodies to regulate and facilitate resource exploitation.

In his work *The Philippine Fisheries Sector: Problems and Recommendations*, published in 1991, Rafael D. Guerrero III classifies the fisheries industry as municipal and commercial and aquaculture subsector. In addition, Guerrero says that despite being one of the major industries in the developing economy, “productivity of marine fisheries resources has been declining as a result of the environmental degradation and ineffective natural resources management” (Guerrero, 1991). He also outlines other problems of the fisheries sector including inadequacy of technical and practical skills, conflict of interests

between the so-called subsistence sub-sector and the commercial sub-sector and high costs of equipment and materials.

Finally, Guerrero gives some recommendations on how the different stakeholders can cope with the problems that face them. In general, he suggests the formation of an effective conservation and management program, the exploration and development of new products, technology diversification and status evaluation on the conditions of fishermen and fishfarmers.

This is relevant to the subject under study since the researcher is given a background on the different problems confronting the fisheries sector. It also gives some important suggestions on how the problems of the fisherfolks can be addressed. This can be used as a “gauge” or criteria in assessing the concerned agencies’ efforts to respond to the needs of the situation.

The Media Systems publication *The Philippine Fisheries Industry*, released in 1979, primarily asserts the importance of the fisheries and aquatic resource industries in the Philippine national life. It enumerates the significant contributions of the said industries to the national economy. It also presents the different problems that face the fisheries industry as a whole, including those in the ecological, sectoral and administrative aspects. The book also presents the different action plans and programs of the concerned government and non-government agencies to cope with the said problems.

Especially helpful are the chapters on the production picture of the Philippine fishing industry at the time of the book's release, the ecological considerations, the different ministries involved in the industry development and the laws and regulations enacted by the government in relation to the fishing industry. Through these, the researcher was able to get a grasp of the historical evolution of the problems faced by the government and the citizens involved in the fisheries through comparison with concerns during other periods.

Due to the existing problems encountered by the different sectors claiming interests in the Laguna Lake region, the Haribon Foundation published the whitepaper *Laguna de Bay: Problems and Options* in 1986. The authors Jonathan Davies, Flor Lacanilag and Alejandro Santiago wanted to compile the various studies and compilations regarding the lake to aid its stakeholders and the public into making the right decisions in its proper management. Many of these stakeholders have been pushing for their own concerns that they fail to realize that due to their own selfishness, they make unwise decisions that are harmful to other people. Because of this, there is a need to determine procedures that will enhance the development of the lake which are beneficial to everybody making use of the lake. However, because of the complexities of making policies without inconveniencing the interests of certain sectors, the facts must first be clear. This must be the primary factor in the formulation of the plans regarding the management of the lake. Arguments based on their own set of myths must be set aside to give way to the more pressing issues that will enable policymakers to make the right decisions regarding the problem.

The paper is divided into three sections that provides the data and features on Laguna Lake and contains the facts needed for the formulation of policies. The first one delves on the description of the lake. It is further subdivided into parts. The physical and biological features were given first, followed by the fishpen development and last were the studies done on the lake. The next section tackles the developments that are affecting the lake. The problems caused by the fishpen development were also given, as well as the activities in the watershed. Section 3 concludes the results of the studies and gives recommendations on the development of fishpens, water supply and irrigation use.

The paper enabled the researcher to trace the development of the different concerns in the lake especially through the different studies conducted in the area. The most important development-the existence of fishpens- was also discussed extensively, thus shedding light on questions on its impact on lake activity administration.

### **Theoretical Framework**

The researcher used the theory of "Information for Mission Accomplishment" (IFMA) of the Development Academy of the Philippines, and the participatory approach.

The IFMA simply states that information and its technology and systems plan can be used to enable a government agency to accomplish its mission with greater impacts and results. This requires firstly an understanding of the reason for being of the government agency and the workflow that should result in the accomplishment of its

mandate (LLDA, 1996). It is also necessary that the agency's functions are defined and classified into primary and support categories in order to give attention to immediate concerns. This also includes identification of activities that are critical to mission accomplishment and their related problems and issues and areas for information technology and systems intervention.

Together with the prioritization of issues based on strategic thrusts, strategic responses should also be determined especially to the kind of receipt, processing, storage and transmittal of information necessary for the performance of the strategic functions such as software, hardware, human resource and other organizational requirements, media and substance (LLDA, *Ibid.*).

This was applicable to the study in the sense that the stakeholders' knowledge and opinions of the LLDA's performance were important factors affecting their levels of participation, which in turn, determines the success and impact of LLDA projects.

On the other hand, the participatory approach stresses that citizens' participation is a decisive factor in the success or failure of environmental and developmental efforts, as shown by past experiences (LLDA, *Ibid.*). Its absence causes failure while its active presence not only resulted to meeting immediate targets but also to assured sustainability of positive trends that have been initiated.



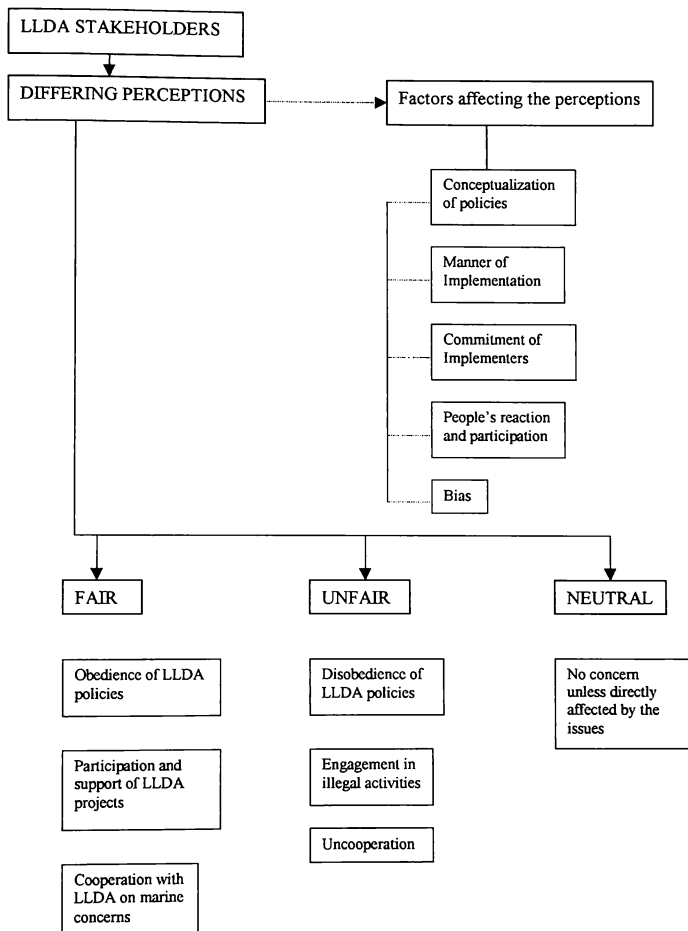
Incorporation of the participatory approach to an organization's communication research, planning and management will ensure support from beneficiaries. It will also facilitate immediate feedback on the social and institutional impacts of development projects being implemented.

**Conceptual Framework** (see chart on next page)

There are a number of factors affecting the perception of the stakeholders in the Laguna Lake region. They are the conceptualization of policies, commitment of the implementers, the manner of implementation and the people's participation and reaction to formulated and implemented policies.

The LLDA policies have different impacts on different sectors as determined by the said factors. Each sector has its own interests and sometimes, these may overlap, or be antagonistic or opposed to those of the other sectors. Thus, LLDA policies perceived to be good for one sector might be bad and offensive for the others. This is where policy formulation and implementation steps in. Adequate research for implications of policies on all sectors, regard for their concerns and sentiments as well as effective implementation based on planned course of action defines the reaction of the stakeholders to attempts of LLDA to address the former's needs.

Fair perception and reaction to LLDA policies generate obedience and cooperation on the part of the stakeholders while unfair perception results to the people's disobedience of policies and engagement in illegal activities such as the use of harmful



methods of earning a living. Neutral reaction, meanwhile, is characterized by lack of concern for any development unless it immediately affects the stakeholder. It all depends on the impact of the LLDA policies on the sector's interests.

This framework was used to test the stakeholders' perceptions which, as discussed earlier, are affected by several factors and whether these perceptions are fair, unfair or neutral determine the stakeholders' reactions.

For the purpose of the study, the following terms were given the respective meanings:

1. *Subsistence fisherfolks* – fisherfolks whose earnings are just enough to sustain their daily needs. Most of them engage in open sea fishing.
2. *Open-sea fishing* – use of free catch methods of fishing such as nets, fish traps and trawls.
3. *Fishpens* – closed cages where fish are raised and grown. They are mostly situated at or near the middle of a body of water.
4. *Laguna de Bay Region* – includes the provinces of Rizal (13 towns) and Laguna (29 towns); the cities of Pasay, Caloocan, San Pablo, Quezon, Manila, Tagaytay, Muntinlupa, Marikina and Pasig; the towns of Malvar and Tanauan in Batangas; Silang and Carmona in Cavite; Lucban in Quezon; Taguig and Pateros in Metro Manila (LLDA brochure)

5. *Lake development and management* – supervision of the proper use and exploitation of lake resources.
6. *Ecological preservation* – the maintenance of the cleanliness of lake's water and its ability to support life.
7. *Napindan channel* – the regulator of the inflow of salt water to the Laguna Lake.
8. *Stakeholders*- sectors whose interests are affected by LLDA programs and projects.  
This includes fishpen operators, small fisherfolks and local officials.
9. *Perception*- approval or disapproval of LLDA policies and implementation shown in the positive or negative responses of stakeholders regarding LLDA efficiency.

### **Research Design**

For the purpose of data gathering, the researcher used different methods of research.

Library research was used to obtain information on the origins, evolution and functions of the LLDA. The researcher used books on fisheries, environmental laws as well as LLDA journals and releases for this purpose.

The direct interview method was used to get the perceptions of the different sectors who served as the respondents of the study. The sectors were composed of open-water fisherfolks with 18 representatives, fishpen operators with 12, and local government officials with 3 respondent-representatives.

The interview questions included the respondents' known objective/s of the LLDA, the projects they were aware of and their perceived process of policy formulation and implementation. They were also asked whether they agree or not with policy processes, as well as their perceived effectiveness of the LLDA in terms of its performance of its regulatory, administrative and ecological functions. (Please see attached interview scheme in appendix A.)

Purposive sampling method was used to obtain the sample population since only sectors involved in lake activities have knowledge of the subject. The respondents were divided into three sectors: the open-sea fisherfolks, the fishpen operators and local government officials. The first two was important for the purpose of determining the uniformity of impacts of LLDA policies on different sectors. The two were selected since they were the sectors having the most activities in the lake, thus, they are most affected by LLDA policies. Also, developments in one sector affects the other so, the LLDA's ability to reconcile sectoral differences are seen.

In the sampling process, the researcher chose representatives from the different areas of the barangay. In most cases, there are only a few fisherfolks available for interview in one area, thus, the researcher interviewed those who were available and willing to talk. There are only two instances when the researcher was turned down, while the rest of the interviews proceeded smoothly.

On the part of the local officials, they serve as the refuge of the stakeholders in times of crisis, so they have sufficient knowledge on the LLDA's ability to respond to different situations. However, only three officials were available for interview since they also had jobs outside their barangays. Nevertheless, the three officials are active fishermen so they were willing to share their sentiments and opinions about the LLDA with the researcher.

### **Scope and Limitation**

The first chapter contains the introductory parts.

The proceeding chapter consists of the origin, evolution and functions of the Laguna Lake Development Authority as a developmental agency.

The next chapter covers the perception of the stakeholders, namely the small fisherfolks, fishpen operators and owners, lakeshore residents and local government officials, and assesses if their opinions coincide with one another's. It also examines if said stakeholders are satisfied with the LLDA's management of the lake. This chapter also includes the LLDA's statement and reaction to the stakeholders' opinions.

The fourth and last chapter contains the summary and conclusions of the research. The researcher also gives recommendations that can be done to improve the conditions of

the stakeholders and the policy changes to make the Laguna Lake Development Authority more effective.

The researcher attempted to produce a study involving as many as possible sectors and respondents. However, due to time, resource and other constraints, only 33 respondents made up of 18 from the open-water sector, 12 respondents from the fishpen sector and 3 local officials, were included in the study. Thus, the results of the study are held as partial findings applicable only among LLDA stakeholders in Barangay Sipsipin, Jala-jala, Rizal.

### **Significance of the Study**

The study is useful in the following ways:

Firstly, the effectiveness of the LLDA as a government agency is assessed based on the perception of the stakeholders. This study hopes to come up with the stakeholders' perception and hopefully enable the LLDA leadership to know the sentiments of the stakeholders and through this, adjust and reorient their programs in response to the latter's needs. This also enables the LLDA to identify its popular projects and determine its weak points so that it can work on improving its performance in these areas.

Secondly, the results of this study may enable the stakeholders to realize their shortcomings, thereby urging them to do their part in the management of lake resources.

Thirdly, the study provides future researchers with a background of the LLDA's performance ratings, thus, allowing them to concentrate on other angles of the issue.



## **CHAPTER TWO**

### **Historical Background**

The management of the country's fisheries and aquatic resources is a formidable task. Judicious management is important, considering that the Philippines is a developing and has a fast-growing population. This cannot be less emphasized because they reinforce and fortify other aspects of conservation, utilization and administration of other natural resources. All plans and programs to manage fisheries and aquatic resources should take into consideration the requirements of ecology; the economic and physical constraints; the social, and political impacts. Also, these plans and programs should be properly embodied in legislations which the people should obey faithfully and which administrators should enforce effectively and efficiently (de Sagun, 1993)

### **General Problems in the Fisheries Industry**

#### *Ecological Concerns*

Pollution control in relation to the Fisheries dates as far back as 1932. Republic Act No. 4003 categorically prohibits the dumping of obnoxious materials into the country's fisheries resources. The provisions in this act was practically ignored for three decades until the government, through Republic Act No.3391 provided for the undertaking of a concerted study on water pollution. However, by 1973, works were still confined in the Manila area. Gauging stations were set up in the Meycauayan River area where samples were regularly collected and bio-chemically tested.

Pollution was seen as a threat in urban areas as well as in rural communities where there were industrial and agricultural plants and activities such as mining operations, sugar mills and refineries, distilleries, and the use of fertilizers, pesticides, herbicides and fungicides (Media Systems, 1979). Among the areas of concern were Baguio, Bacolod, Cebu and Iligan. The research agency confirmed the causes of water pollution as domestic sewage from population centers and industrial waste from industries (Media Systems, Ibid.).

Indiscriminate pollution not only endangered public health; it also made impacts on the national economy as reflected in agriculture and fisheries. Harvests in areas supplied by polluted river systems declined dramatically, resulting to losses estimated at millions of pesos. Fish production in rivers was reduced by about ten percent. The same is true for the harvests of lakes and other bodies of freshwater. Thus, the mining firms found to be responsible for the pollution were penalized and required to put up lagoons and sedimentation ponds. Suspended solids and other materials were found to have selective effects on the biota of the water body, suffocating the fish and making them susceptible to diseases and infections (Media Systems, Ibid.).

Another type of pollution seen as a threat to aquatic resources was thermal pollution caused by thermal electric plants erected near bodies of water. Excessive heat causes an overwork of the metabolic organs, which in turn causes internal disorder on the organisms. Other detrimental effects of thermal pollution are susceptibility to toxic materials, exceeding stenothermal periods, replacement of desirable algal populations

with undesirable ones, greater demand for oxygen and the posing of barriers to fish migration (Goudie, 1993). As a result, fish kills were prevalent in areas where there are thermal plants such as in Bataan and Laguna (Media Systems, Ibid.).

#### *Other Concerns: Full Community Participation*

The community serves as the primary implementor in maintaining, utilizing and restoring of the resources in the locality. The success of community-based efforts is often associated with greater level of participation among target beneficiaries. However, the planners and implementors must grapple with a number of constraints in community-based programs which limit the identification of problems to those arising from socio-cultural and political influences. Any attempt to introduce or implement any innovation must take into account the perspective of the local fisher. Some practices perceived to be wrong by the planners may mean survival to the subsistence fisherfolk. It is therefore necessary for a program planner to fully understand the situation in the context of the target beneficiaries.

Constraints to full community participation arise from “factors that are lodged within and from without the persons” (Abregana, 1996). These factors are classified into socio-cultural and political categories, and are viewed as interactive forces.

There are a number of traits that need to be addressed in any attempt to implement a program of action based on community participation. Among these are: extreme

personalism, extreme family centeredness, lack of discipline, passivity and lack of initiative, colonial mentality, kanya-kanya syndrome, and the lack of self-analysis and self-reflections (Abregana, Ibid.).

Extreme personalism “necessitates the establishment of a personal relationship before the establishment of a working relationship” (Abregana, Ibid.). This trait makes it difficult for a group to function effectively as their working efficiency depend largely on their personal relationship.

Extreme family-centeredness is shown in the Filipinos’ tendency to promote the interest of the family or in-group (Abregana, Ibid.). This results to factionalism, patronage, political dynasties, and protection of erring family members. This is usually done at the expense of the concerns of the wider community.

Lack of discipline is manifested in the Filipinos’ lack of precision and compulsiveness, in procrastination and inability to endure delay of the fulfillment or reward. These practices pave the way for the use of “shortcuts” in the achievement of a target, often at the expense of the interests of the majority. In the fisheries industry, this is demonstrated in the use of dynamites and other explosives in fishing as well as other destructive fishing methods (Abregana, Ibid.).

Passivity and lack of initiative refer to a strong reliance on others, especially the leaders, in the pursuit of a goal (Abregana, Ibid.). In the fisheries sector, this is

demonstrated in the fisherfolks knowledge of only a few skills, in their having many dependents and their lack of a sense of urgency.

Colonial mentality is the “lack of patriotism” and appreciation of indigenous things (Abregana, Ibid.). It is the preference for foreign things as against native knowledge and skills.

The kanya-kanya syndrome results in the “dampening of the cooperative and community spirit” and explains the Filipino’s inability to act together (Abregana, Ibid.). This is characterized by a feeling of envy towards others’ achievements and the resort to destructive means to pull others down.

People’s participation can also be blocked by extraneous factors such as the relationship between the government agencies and the rural residents. “Lack of communication between levels of the government and cumbersome bureaucratic procedures are major obstacles in the path of community-based resource management” (Abregana, Ibid.). The various levels of governance-national, regional, provincial, municipal and barangay- all share the same general responsibility for community development efforts but residents and community facilitators note little or no coordination of efforts. Thus, the need for a single agency with full responsibility and authority over Philippine fisheries has earlier been identified.

In reports regarding community-based organizations, it was found that very little time on the part of the program facilitators were spent in field assistance. Most of their time was devoted to paperwork, thereby marking a relative weakness as far as assistance program is concerned.

Another area of concern is the implementation of laws. Given that the Philippines has many laws concerning the fisheries and the environment, it is said that the difficulty of implementing them uniformly created a notion that laws are biased in favor of the moneyed and the powerful (Abregana, Ibid.). The perception that big-time fishing operations are freely encroaching municipal waters makes subsistence fisherfolks feel that the rules on fishing are not applied equally. It was suggested, therefore, that emphasis on the specific guidelines in laws be made, as compared to the traditional practice of giving emphasis on generalities.

### **Early Beginnings Of Fisheries Administrative Policies**

Philippine fisheries laws and regulations have a long history, which can be traced well into the Spanish era. The first legislation on fisheries was the “Laws of Waters” (1866), a royal decree by Queen Isabella II (Tagarino and Kick, 1993). Legislation more specific to fisheries was enacted in 1932, the Philippine Legislative Act No. 4003, known as the Fisheries Act of 1932. This Act along with the Philippine Constitution of 1935 provided the basis for the evolution of the numerous policies on fisheries and aquatic resources of the country. The said Act authorizes the Secretary of the Department of Agriculture to issue instructions as well as grant licenses and contracts. He also

exercised supervisory powers as all ordinances passed in the barangay, municipal and provincial levels were all subject to his approval. Public fisheries was also classified into: insular fisheries which included deep-sea fishing; reserve fisheries mainly consisting of communal fisheries and fishery farms; and municipal fisheries which includes exclusive fishing privileges and the operation of fishpens. The municipal government had jurisdiction over these areas.

Republic Act 177 came into effect in 1947 to create the Bureau of Fisheries under the Agriculture and Commerce department as a replacement to the Division of Fisheries of the Bureau of Science (Tagarino and Kick, Ibid.).

In 1950, Republic Act 428 was enacted. It prohibits the possession, sale or distribution of fish and aquatic animals that were killed through explosive and toxic means. This includes the use of dynamites. The said act provided penalties to parties found violating the rule, as well as persons found buying the animals with knowledge of how these were killed.

The Philippine Fisheries Commission was made through Republic Act 3512 in 1963. It was made to advocate the conservation of fisheries and other resources to keep the supply adequate for the growing number of people. The office is also in charge of the development, improvement and management of the aforementioned resources. The commission was given seven more powers aside from the ones granted to the Director of Fisheries in RA 177 (Tagarino and Kick, Ibid.).

The Fishery Industry Development Decree was promulgated in 1972. It promotes the development of the fishing industry in the country, as well as serve as the policy-formulating body. This particular legislation calls for the “promotion, assistance and integration of persons, associations, cooperatives and corporations involved in the industry” (NLRC, 1991). This shall be a pioneer project of the Board of Investments. It also pushes for the diversification of exports and markets so they may enhance the development of the country’s economy. The government shall also provide financing, training, extension services, technical assistance and infrastructure for the production, storage, processing, transportation, marketing and distribution of fish and fishery products.

### **Contemporary Water Resources Management Policies**

During the dictatorial regime, “policy formulation and promulgation was said to be much easier” than under a democratic form of government (Tagarino and Kick, Ibid.). With the avowed aim of accelerating the development of the fisheries industry, a number of policies were promulgated during the Martial Law regime:

1. Presidential Decree (PD) 704, known as “the Fisheries Decree of 1975 became the basic law on fishing and fisheries for the Philippines”. It was amended by PD 1058 in 1975 and PD 1015 in 1976 (Tagarino and Kick, Ibid.).
2. “The 200 nautical mile Exclusive Economic Zone (EEZ) that increases the Philippine marine waters to 652,600 sq. nautical miles, about 132,000 sq. nautical miles more than the limits set by the Treaty of Paris” (Tagarino and Kick, Ibid.).



3. A variety of institutional developments and reforms were instituted which included the Philippine Fisheries Marketing Authority, created to “promote the development of the fishery industry’s post-harvest and marketing component” (Tagarino and Kick, Ibid). It was later transformed into the Philippine Fisheries Development Authority (PFDA), a body mandated to improve efficiency in the processing of fishery and aquatic products and to establish and operate fishing ports and fish markets, harbors and other marketing facilities.

Another was the creation of the Fishery Industry Development Council (FIDC) which was “primarily responsible for the formulation of fisheries resources policies, projects and programs” (Tagarino and Kick, Ibid.). However, it was abolished and its functions were transferred to the Department of Agriculture.

The different specific policies that form the Philippine fisheries policy were promulgated to address various development concerns, particularly “the protection of national patrimony and territorial rights, proper administration and management of the resources, provision of support services to resource users, the efficient exploitation and utilization of resources so as to achieve higher productivity on stable, sustainable and equitable basis, and other related concerns” (Tagarino and Kick, Ibid.).

Few of the promulgations explicitly focused on the protection of national patrimony and territorial rights. However, these were general policy statements, which were complemented by other promulgation.

A significant number of public policies promulgated over the years dealt with the exploitation and utilization of the country's fishery resources. Equitable allocation or distribution of resource use, rights and benefits appears as a primary or secondary concern in a limited number of promulgations. An appreciable number of promulgations dealt with fishery productivity. Productivity is often a secondary concern of the promulgations on exploitation and utilization, although fishery resources stability and sustainability is emphasized more often.

The number of promulgations relevant to institutional support services such as marketing organizations, technology transfer agencies, post-harvest, transport and infrastructure facilities, and credit lag behind the other two categories. Although there were limited number of promulgations on institutional support services, other support services for the fisheries industry were included in other Presidential Decrees and Letters of Instruction.

Except for the decree on the 200 nautical mile EEZ, most of the policies promulgated were oriented to municipal fisheries or the near-shore and inshore fisheries and aquatic resources. Public policies to enhance capabilities for the exploitation of the deep sea resources were not yet formulated. Emphasis on resource stability and sustainability is reflected in the policies providing for the delegation of barangay and municipal officials as fishery wardens for more effective enforcement of fishery conservation policies. Despite this, reports on resource depletion in most fishing grounds continued (NLRC, *Ibid.*).

With regards resource administration and management, PD 704 defined the policy governing the public lands for fishponds, lease and size of fishponds and issuance of license to operate fishpens. It also mandated the powers, duties and Function of the Bureau of Fisheries and Aquatic Resources which includes among others: “a) responsible for the management, development and utilization of all fishery and aquatic resources; b) the issuance of licenses, permits and leases and revokes the same for cause; and, c) conducts fisheries training programs and assists the training efforts of other agencies (NLRC Ibid.).

In this connection, regulating bodies were encouraged to take part in the management of the marine resources as shown by some administrative directives.

In June 1977, the Secretary of the Department of Environment and Natural Resources was directed to coordinate with his counterpart in the Interior and Local Government Department to prepare training programs for barangay officials to qualify them as fish wardens. In September of that year, the officials of the Labor Department and other concerned agencies were directed to accelerate the formation and organization of small fishermen’s associations. The Defense ministry was likewise instructed to conduct intensive campaigns against illegal fishing. Small fishermen were also deputized as fish wardens (Tagarino and Kick, Ibid).

A decree issued in the same month required all entities engaged in the exploration, development and exploitation of the natural resources, or in the construction

of infrastructure projects to restore and rehabilitate areas affected by their operations. This is particularly pertinent to local governments wherein construction permits were required (NLRC, Ibid.)

### **The Evolution of A Management Agency in the Laguna Lake Region**

The complications resulting from rapid urbanization, pollution from industrialization and a growing population have led to the evolution of a resource management institutional framework for the Laguna Lake (LLDA, 1996). Alarmed by the fast decline in the character of the lake during the early 1960s, the political leaders in the region sought the enactment of legislation to control and manage the use of resources of the lake. Specifically, the perceived problems were; the observed decline in catch among fishermen, the proliferation of industries around the lake, the deteriorating water quality as a result of the existence of factories and algal bloom and a rapidly increasing population coupled with the deterioration of the living conditions (LLDA, Ibid.).

Representatives Frisco San Juan and Wenceslao Rancap Lagumbay presented the bill proposing the creation of an agency to address the concerns in the area. It gained favorable acceptance during the deliberations in the House of Representatives of the Philippine Congress. This motivated Senators Helena Benitez and Lorenzo Sumulong to present the bill to the Philippine Senate. In the upper chamber, there were practically no arguments presented against the bill. On 18 July 1966, through a concerted effort, the bill was finally approved as R. A. 4850, thereby creating the Laguna Lake Development Authority (LLDA).

The LLDA charter was precisely intended to create an instrument to facilitate rational utilization of the lake resources. It was believed that the creation of an agency would facilitate cooperation and unity and a pooling of resources among national government agencies, local government units and the private sector. In response to the problems in the region, as well as national goals for economic development, the LLDA was created. It was primarily tasked to “lead, promote and accelerate the development and balanced growth of the Laguna de Bay area and the surrounding cities and towns within the context of the national plans and policies for social and economic development” (LLDA, *Ibid.*).

The LLDA was created as a quasi-government agency with the powers and functions of a corporation. It held its first board elections on 6 October 1969, which resulted to, then Governor Isidro Rodriguez’s election to the top post (LLDA, *Ibid.*).

The Act gave the LLDA jurisdiction over the Laguna Lake region comprised of the provinces of Rizal and Laguna and the cities of Manila, Pasay, Quezon and Caloocan. Through this empowering legislation, LLDA was able to establish its legal and administrative bases and slowly developed its technical abilities. In 1970, LLDA took over the function of the cooperating agency in the UNDP feasibility survey for the hydraulic control of Laguna de Bay complex and other related developments.

The findings of the researches paved the way towards a more responsible role for the LLDA in terms of planning and development in the region. The study recommended

further evaluation of vital programs which included lake fishery, lake water quality, water supply, industrial estate planning and irrigation. Among the major issues that justified the need for in-depth studies of the lake were those related to water quality hazards which hindered utilization of the lake's resources for development purposes (Davies et al, 1986).

In 1968, growing concern for environmental awareness had been developing among leaders and politicians in the country. In August 1969, the Seventh Congress approved a Joint Resolution providing for the establishment of a comprehensive system of environmental planning through which social and economic policies enunciated by Congress may be achieved (LLDA, Ibid.).

Two years later, on October 1971, Senator Helena Benitez introduced in the Philippine Senate a proposal to amend Republic Act 4850 in accordance to the policies of environmental planning. However, the move to amend the said Act was only realized on October 1975, by the issuance of Presidential Decree 813 which takes into consideration the urban expansion in Metro Manila, The continuing deterioration of the lake as a result of the inflow of Pasig River waters, the floods in Metro Manila and lakeshore towns, ambiguities in the provisions in R. A. 4850 and the overlapping functions of different agencies exercising jurisdiction in the lake.

On 16 December 1983, the President issued Executive Order No. 927 to further improve the charter for Lake Management. It was directed to improve the institutional

capabilities of the LLDA and further defined certain functions and granted more powers to the said agency. Moreover, it allowed the Authority to modify and improve its organizational structure and gave it the power to issue standards pertaining to aspects of pollution control.

### **Fishpen Development in the Laguna Lake**

Perhaps one of the most important developments in the Laguna Lake was fishpen development. Before 1970, most of the harvest from the lake was used for animal feed. The main species caught such as *biya* and *ayungin* were small and of low market value. A U. N. study recommended that a high quality species be introduced for human consumption (Davies et al, Ibid.).

Thus, in 1970, the LLDA pioneered a new type of fish culture using fishpens and a 38-hectare pilot project was set up at Looc in Central Bay. *Bangus* was the species recommended for fishpen culture since it commanded a high market value and it directly feeds on phytoplankton and is therefore a more efficient converter of energy than any carnivorous or omnivorous species (Davies et al, Ibid.).

This demonstration project yielded very encouraging results. It proved that *bangus* could be cultured and subsist purely on natural food supply. Due to these findings, many businessmen engaged in fishpen culture and the area of fishpen increased rapidly (Davies et al, Ibid.).

As of 1983, over a third of the lake area was covered by a disorderly arrangement of fishpens. Accompanying the vast and uncontrolled spread of fishpens was the fall in the yield of *bangus* and the extension of their rearing period.

The proliferation of fishpens produced many severe problems. The yield in both the fishpens and the open sea declined as a result of the overpopulation in the lake, thereby causing competition for food (Davies et al, 1986). The development was not also made available to small fishermen, but confined to those who have capital resources. Besides, regulations governing the development of fishpen were hardly enforced. Still, many fishpen operations continue to be illegal despite LLDA limiting and regulatory policies.

The quality of the water of the lake also suffered as a result of the poor fish growing conditions. This forces the fishpen operators to resort to supplementary feeding, which in turn, adds to the nitrogen content of the lakewaters (Davies et al, 1986).

### **Current Situation and Problems**

In general, it can be said that the fisheries sector is growing in both quantity and value. Both the commercial and the municipal fisheries subsectors have significant contributions to the country's food production. However, this comes with the overexploitation of all trawlable areas (Guerrero III, 1991)



As of 1983, over a third of the lake area was covered by a disorderly arrangement of fishpens. Accompanying the vast and uncontrolled spread of fishpens was the fall in the yield of *bangus* and the extension of their rearing period.

The proliferation of fishpens produced many severe problems. The yield in both the fishpens and the open sea declined as a result of the overpopulation in the lake, thereby causing competition for food (Davies et al, 1986). The development was not also made available to small fishermen, but confined to those who have capital resources. Besides, regulations governing the development of fishpen were hardly enforced. Still, many fishpen operations continue to be illegal despite LLDA limiting and regulatory policies.

The quality of the water of the lake also suffered as a result of the poor fish growing conditions. This forces the fishpen operators to resort to supplementary feeding, which in turn, adds to the nitrogen content of the lakewaters (Davies et al, 1986).

### **Current Situation and Problems**

In general, it can be said that the fisheries sector is growing in both quantity and value. Both the commercial and the municipal fisheries subsectors have significant contributions to the country's food production. However, this comes with the overexploitation of all trawlable areas (Guerrero III, 1991)

Aquaculture proved to be one potential area for growth with the region's large natural resource base, research manpower and facilities availability, huge local and export market potentials, organized fisheries sector and high returns for investments (Guerrero III, Ibid.).

However, this growth in the fisheries sector has its costs on the industry as a whole. The productivity of fisheries resources has continuously declined while degradation of the marine environment as facilitated by the use of illegal fishing methods poses grave threats to the country's waters in general (Guerrero III, Ibid.). This also affects the aquaculture sector since they are dependent on the wild fish supply and broodstock (Davies et al, Ibid.). The abuse of land resources has resulted to pollution, erosion and siltation in the lake. "The livelihood of fisherfolks has been greatly affected and the health of the consuming public, endangered" (Guerrero III, Ibid.).

To sum up, the preceding discussion, it can be seen that various steps have been undertaken by the government in response to different marine concerns brought about by urbanization, industrialization and the advent of new techniques of aquaculture, together with flaws within fishing communities. Many laws have been enacted to address these concerns such as those which provide guidelines for proper resource utilization and those establishing administrative mechanisms in specific growth areas.

One example is the establishment of the LLDA, which is primarily tasked to preserve Laguna de Bay's ecological well being in the midst of industrialization and

urbanization, and other developments that come with them such as pollution, the use of illegal fishing methods and reduced fishing grounds.

### **CHAPTER THREE**

#### **Perception Of Stakeholders: Data Presentation**

The subject of the study were the fisherfolks, fishpen operators, officials and residents of Barangay Sipsipin, Jala-jala, Rizal. The said barangay was chosen as the venue for the study since it is one of the localities most affected by any development in the Laguna Lake area, specifically by the projects undertaken by the Laguna Lake Development Authority. Among these developments are the proliferation of fishpen and the presence of industrial plants in the area, both of which involve action and facilitation from the LLDA. The lake is the people's primary source of livelihood as most of them earn their living either by engaging in fishpen operation, or through open-sea fishing methods.

In this connection, the residents of the said barangay are active in lobbying for governmental action vis-a-vis their concerns, especially those involving their source of livelihood. In recent years, the community was struck by at least two fish kills believed to be caused by the presence of harmful chemicals from a petroleum plant in a nearby town. The residents claimed that they already submitted a formal complaint, complete with all the required documents and samples. However, to their dismay, the case did not progress as far as they are concerned.

This chapter gives a presentation of the data gathered from the interviews conducted on the stakeholders of the Laguna Lake Development Authority. The stakeholders were divided into three sectors.

The open-sea fisherfolks are those who use free-catch methods of fishing such as nets, fish traps and trawls and operate within the 200-mile offshore zone. Fishermen belonging to this sector earn just enough for their daily needs. The sample population for this sector is the highest at 18 or 54.54% of the total respondents.

The fishpen operators are those with fish cages in the Lake. They usually have capital for their operations and earn more than their subsistence counterparts especially at harvest time. The sample population for this sector is slightly lower than the subsistence fisherfolks with 12 respondents, chosen purposively according to area of operation and availability.

The Local Government Unit (LGU) officials are elected officers in the barangay and municipal area. For this study, three local officials was interviewed composed of two barangay and one municipal councilors out of nine officials residing in the said barangay.

In order to triangulate the findings, the LLDA, through its Public Information Unit (PIU), was asked to comment on the questions and some results of the survey.

Table 1  
Perceived Objectives of the LLDA

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Ecological Preservation	7	38.89	5	41.67	1	33.33	13	39.39
<b>Lake Management (general)</b>	<b>7</b>	<b>38.89</b>	<b>4</b>	<b>33.33</b>	<b>3</b>	<b>100</b>	<b>14</b>	<b>42.42</b>
Protection of small fisherfolk	6	33.33	1	8.33	0	0	7	21.21
Fishpen management	3	16.67	7	58.33	0	0	10	30.3
Issuance and collection of permit fees	2	11.11	3	25	0	0	5	15.15

Table 1 shows that among open-sea fisherfolks, the ones most perceived as the objectives of the LLDA were lake management in general and ecological preservation, both answered by seven of 18 or 38.39% of the open-sea respondents. These are followed by the protection of small fisherfolks with 6 or 33.33%, fishpen management with 3 or 16.67%, and the issuance of permits and collection of rental fees mentioned by 2 or 11.11% of the respondents from that sector.

Among the fishpen operators, the objective most perceived was fishpen management with 7 or 58.33%, followed by ecological preservation with 5 or 41.67%, Lake management answered by 4 or 33.33% of the respondents, and the collection of fees and the issuance of permits with 3 or 25% . On the other hand, only 1 or 8.33% of

the operator-respondents perceived the LLDA protector of the welfare of small fisherfolks.

Meanwhile, among the local government officials, LLDA was perceived to be created to manage the activities as well as to preserve ecological balance in the lake. The former was mentioned by all of the three respondents while only one or 33.33 mentioned the latter.

It is evident from the given data that the perceptions of the stakeholders are dictated by their interests and concerns. This is true in the case of the stakeholders' perceived objectives. For the open-sea fisherfolks, they believed that the LLDA was created to address their needs and protect their welfare against all the other developments in the lake including the proliferation of fishpen, environmental degradation and the presence of different industrial plants around the lake. Their perceived objectives also depended much on the LLDA activities they are aware of such as the imposition of fines from erring companies, demolition of illegal lake structures and the assignment of regions especially for open-sea fishing.

The same is true with the fishpen operators who consider fishpen regulation and ecological preservation as the primary functions of the LLDA. This is reinforced by the annual collection of fees and the regulation of the inflow of saltwater which facilitates faster fish growth. These are their main concerns thus; it was shown that they do not consider too much the protection of small fisherfolks as an objective of the LLDA.

For the part of the local government officials, their perceived LLDA objectives are the management of the lake in general and the preservation of its ecological well-being. It can be seen that they have particular concerns neither, which are different from the welfare of the fisherfolks or the plight of fishpen operators. Their major concerns were that lake activities were properly facilitated and that the cleanliness of the lake is maintained. They see the LLDA more as being made for the lake's preservation and not so much for the people living around it.

Table 2

Specific Programs and Projects Known and Heard of

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Issuance and collection of rental fees	8	44.44	5	41.67	0	0	13	39.39
Control of the Napindan Channel	1	5.56	6	50	2	66.67	9	27.27
Dispersal of fingerlings in Sanctuaries	3	16.67	2	16.67	1	33.33	6	18.18
Seminars	1	5.56	4	33.33	1	33.33	6	18.18
<b>Fishpen regulation</b>	<b>6</b>	<b>33.33</b>	<b>10</b>	<b>83.33</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>48.48</b>
Regulation of waterways	2	11.11	0	0	0	0	2	6.06
Technical assistance	2	11.11	0	0	0	0	2	6.06
No Knowledge	3	16.67	0	0	1	33.33	4	12.12



It can be gleaned from Table 2 that the most perceived program or project of the LLDA among the open sea fisherfolks was the issuance and collection of rental fees with 8 or 44.44% of the respondents agreeing, followed by fishpen regulation named by 6 or 33.33% of the respondents. Three or 16.67% knew about LLDA dispersal of fingerlings and breeders in sanctuaries while two or 11.11 knew of the said agency's efforts to regulate the waterways and to provide technical assistance to fisherfolks. Only one or 5.56% mentioned seminars and LLDA control of the Napindan Channel; while three or 16.67% of the open-sea respondents did not have knowledge of any project of the LLDA.

On the part of the fishpen operators, the most known LLDA activities were both connected to fishpen development. Ten or 83.33% of the operators were aware of LLDA jurisdiction over fishpens while 5 or 41.67% knew that the LLDA issued permits and collected fees for use of lake spaces. Half of the operator-respondents were aware of the LLDA regulation of the inflow of saltwater through the Napindan Channel; four or 33.33% of them knew of LLDA seminars while 2 or 16.67% claimed knowledge of the dispersal of fingerlings in sanctuaries.

Similarly, two of the respondents were aware of the LLDA control of the Napindan among local officials, while one named seminars and fingerlings dispersal. One official denied knowledge of any LLDA activity in the Lake.

As earlier mentioned, the stakeholders are mostly aware of developments directly affecting them. However in this case, the regulatory activities of the LLDA are more

popular as they top the lists among all sectors. This means that the LLDA's regulatory activities are more pronounced than its other programs. Client-oriented projects also fail to generate awareness, because either the people cannot see the agency's sincerity, or the projects are not implemented properly. Most fisherfolks and residents already have negative bias when a project is LLDA-sponsored mainly because they saw the agency's inaction and ineffectivity in previous cases of fish kills caused by toxic wastes from industrial establishments

Table 3.1

Perceptions on Whether Consultations were Held or Not

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
<b>Yes and suggestions are considered</b>	7	38.89	5	41.76	1	33.33	13	39.39
Yes but suggestions are not given weight	3	16.67	2	16.67	1	33.33	6	18.18
Yes but consultation is limited to some sectors	2	11.11	0	0	0	0	2	6.06
No	6	33.33	2	16.67	1	33.33	9	27.27
Does not know	0	0	3	25	0	0	3	9.09

Concerning policy formulation, most of the respondents claimed that they were consulted by LLDA representatives and their concerns were taken into account. A substantial part, namely nine, of the total sample nullified this claim while the rest replied

that there were consultations but these were limited and selective. Three respondents coming from the fishpen operators sector did not know whether or not there were consultations.

It will be noticed that most of the fishpen operators came up with affirmative responses while the subsistence sector was almost split between the affirmative and the “no” responses. This implies that majority of those who were consulted were fishpen operators. This is further supported by responses from the open-sea fisherfolks claiming that consultation was limited to some sectors. This also implies that even in the subsistence sector, consultation was limited, despite the fact that they were well organized. There was also discontent regarding the consultation, as some believed that their sentiments were not considered despite their attempts to make their voices heard. Most of the meetings called by the LLDA were merely for letting the people know of their new policies as said by interviewees 2,9 and 18. Most dwell on fishpen fee increases and other regulatory matters. Except for these, the other projects were not implemented well.

The sectors concerned can no longer question these policies as these were ready for implementation and the formulation phase was finished. Thus, the people felt they could no longer do anything but to accept the policies without hoping for further changes.

Table 3.2

## Agreement or Disagreement with the Process of Policy Formulation

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Completely agree	4	22.22	2	16.67	0	0	6	18.18
Agree with some reservation	3	16.67	1	8.33	0	0	4	12.12
Disagrees but gives way	2	11.11	4	33.33	0	0	6	18.18
<b>Completely disagree</b>	<b>9</b>	<b>50</b>	<b>5</b>	<b>41.67</b>	<b>3</b>	<b>100</b>	<b>17</b>	<b>51.52</b>

It is shown by the table above that most of the respondents completely disagree with the whole policy formulation, including half of the open-sea fisherfolks, almost half of the fishpen operators and all of the local officials. On the other hand, only six of the total number of respondents completely agreed with the whole process, while the same number of respondents disagree but give in. Four respondents agree to the process with reservations with three coming from the open-sea sector.

This implies that most of the respondents from all the sectors disagree with the whole policy-formulation process. They express this disagreement by refusing to talk to LLDA agents, noncooperation in LLDA projects and lobbying for reforms. This indifferent reaction was primarily triggered by LLDA's failure to act on the villagers' protest on the fish kills that struck them in recent years. Up to the present, their demand

for compensation is still unanswered while the companies blamed for the disaster are still in operation, despite all the evidences presented.

Those who agree but give in to the implementation of LLDA policies come mostly from the fishpen operators' sector. This is so because as tenants in the lake, they are required to comply with LLDA requirements; otherwise, they will lose their means of living.

As compared to those in disagreement with the formulation process, those who agree are relatively fewer, mostly open-sea fisherfolks. This implies that these people were not very much affected by the negative effects of LLDA policies that affect their co-fisherfolks. Fishpen operators, as earlier said do not have a choice but to comply with LLDA policies, unlike their open-sea counterparts who can resist or even ignore these policies.

Table 3.3

Perception of Accomplished Objectives of Projects

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Yes	3	16.67	0	0	0	0	3	9.09
No	12	66.67	12	100	3	100	27	81.82
Partially	3	16.67	0	0	0	0	3	6.06

As shown, an overwhelming majority believed that the objectives set by the LLDA for their projects were not met. This includes 66.67% of the subsistence sector and all of the respondents from the fishpen and local government sectors.

This is connected to the perceived objectives and effects of LLDA projects to different stakeholders. This perceived failure on the part of the LLDA can be explained by the worsening ecological condition of the lake, operations of companies believed to be behind the release of harmful chemicals and the proliferation of illegal structures in the lake. The said agency's failure to take control of the fish kill incidents also contributes to this perception as shown in all interview results, except with interviewers no. 1, 5, and 7.

The respondents who claim that project objectives are partially met, argue that not all sectors benefit from LLDA projects. Policies were also not equally enforced as there were some people who get away with offenses related to these policies. Some fishpens are larger than the others while their offshore distance were not uniform. There were also some fishermen who use illegal fishing methods as well as trawlers who catch fish fry for their own fishpens.

The negative responses of the local officials, in the light of their broad perception of LLDA objectives, were also triggered by the fish kills that struck their waters. They were the ones who actively pursued the cases and apparently, they saw no further development. They also organized fisherfolks into organizations and directed lake

activities in their area. Apparently, they saw no effort on the part of the LLDA to support their activities as they stated in the interviews.

Table 3.3

## Perception of Accomplished Objectives of Projects

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Yes	3	16.67	0	0	0	0	3	9.09
No	12	66.67	12	100	3	100	27	81.82
Partially	3	16.67	0	0	0	0	3	6.06

To the question regarding perceived hindrances for the effective implementation of projects, corruption tallied as the highest obstacle, obtaining seven responses from both the open-sea and fishpen sectors. The respondents supported this with accusations of bribery of LLDA officials by big industrial companies and by the lack of transparency in the utilization of revenues and budgetary allocation. This is shared by all the local official-respondents. Next in line was the slow or lack of action of the LLDA with a total of six responses, followed by the presence of big corporations with five, and patronage and disregard for complaints with 4 responses. Lack of trust in the LLDA, information dissemination deficiencies and hidden operations follow with 3 responses and the presence of trawlers and the confinement of projects to some areas follow with one response each.

Three open-sea fisherfolks replied that there were no hindrances to implementation

It will be noticed that the perceived hindrances are connected with the LLDA's failure to respond to environmental calamities. Most of them were also flaws within the LLDA ranks, while a few dwelled on the shortcomings of the residents themselves.

Corruption in the LLDA, as reflected in the interviews, was perceived to be the major hindrance to effective policy implementation since despite the change in leadership, no program was seen as benefiting the stakeholders. Their complaints were not acted upon and this is attributed to the money-orientedness of the officials. In fact, some believed that the LLDA favors those who have money since capitalists were "untouchable" when it comes to policy offenses.

Lack of/or slow action, seen as the next major hindrance, was evident in the oil spill incidents. The residents demanded LLDA presence during those times and representatives came much later, thus allowing the offenders to get away from their culpabilities. This is connected to the presence of plants of industrial corporations in the area. These plants pose threats to the environment and the residents attribute their continued operation to their power and connection as well as to the acceptance of officials of bribes from these corporations. This system of hidden operations and patronage were primarily blamed for the residents' woes.



The little participation obtained from stakeholders was also believed to be due to the defective information campaign or their confinement of projects and information efforts to some areas. Still, there are some residents willing to cooperate and participate in LLDA activities but unfortunately, information about these activities do not reach them. Most residents claim to hear of the LLDA projects only from their companions. A few obtained information from the barangay while fewer pointed to the LLDA as the source of information. Thus, as far as the residents in the barangay are concerned, the LLDA fell short in its efforts to disseminate information.

The residents also have negative feelings towards LLDA projects because of their complete disbelief in its ability to manage the lake. Most of them refuse to cooperate and talk to LLDA officials as previous projects of the agency proved to be complete failures.

Table 4

## Perception of Stakeholders on Benefits Accruing to the People

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Yes	4	22.22	1	8.33	0	0	5	15.15
No	13	72.22	10	83.33	3	100	26	78.79
Maybe	1	5.56	1	8.33	0	0	2	6.06

The table shows that most of the respondents including 72.22% of the open-sea fisherfolks, 83.33 of the fishpen operators and 100% of the local officials believe that the

people do not receive the benefits of the LLDA projects. On the other hand, only 22.22% of the subsistence sector and 8.33% of the fishpen operators believe otherwise while two respondents answered “maybe”.

It is shown that a bigger percentage of the fishpen operators believe that they do not receive the benefits of the projects, as compared to the open-sea sector. This is because they regularly pay fees for their use of the lake while the subsistence fisherfolks do not. Thus, they have the right to expect more. Generally, the benefits mentioned by the respondents include the percentage of the lake's earnings that accrue to the municipality and the allotment of offshore areas for open-sea fishing as well as areas for waterways.

The awareness of the local officials of the supposed projects enabled them to see if such projects were indeed undertaken. In addition, based on what they see, no significant activity was conducted on the Lake, prompting them to have unfavorable comments on the LLDA in this regard.

Table 5

Perception on the Culpability of the LLDA to Regulate the Fishpens in the Lake

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
<b>Yes</b>	<b>12</b>	<b>66.67</b>	<b>10</b>	<b>83.33</b>	<b>2</b>	<b>66.67</b>	<b>24</b>	<b>72.73</b>
No	4	22.22	2	16.67	1	33.33	7	21.21
Sometimes	2	11.11	0	0	0	0	2	6.06

Most of the sectors think that the LLDA is able to manage the fishpens in the lake. Twelve of the open-sea fisherfolks, ten of the fishpen operators and two LGU officials affirmed this perception. Only seven of the total respondents contested this. Two open-sea fisherfolks answered that sometimes, the LLDA is able to manage the fishpens in the lake.

The popular perception of the LLDA as being merely the regulator of fishpens and the confinement of their visible projects to issuance of permits for fishpen operation, their collection of fees and demolition of structures upon failure to pay, explains the favorable response of the said agency's regulation efforts. Their policies on the said aspects were all clear and they are implemented well as shown by the high percentage of favorable responses especially among fishpen operators sector. Furthermore, according to most operators, they did not see any extra favor granted to operators who would like to expand their domain. They added that the LLDA was very good in the collection of fees and demolition of the fishpen of those who cannot pay. This is shared by the rest of the respondents in both sectors.

On the other hand, there were also some who saw unequal treatment of clients and varying sizes of fishpen. They also resented LLDA's limiting of the fishpen sizes as this discourages the entry of big capitalist operators, as mentioned by interviewee number 9. They see this as unfavorable as they also depend on these capitalists for bigger catches. In times of calamities, especially typhoons, the fishpens of these capitalists are destroyed and the escaping fish become anybody's property. In the absence of these big-time

operators, there are less fishpen that will be destroyed; thus, they have smaller chances of earning more. Besides, small fishpen are usually well maintained and there is a lower possibility of the cages being swept and torn down, according to the said respondent

Comparison with LLDA operations in other areas was the reason for those who took the middle position in this issue. While claiming that fishpens in their area are well regulated, the respondents from the subsistence group argued that those in other areas are not. These fishermen go far in their fishing expeditions and they noticed some discrepancies in cage sizes, inter-fishpen distance, offshore distance and waterway sizes.

Table 6

Perception on Whether the LLDA is Able to Safeguard the LLDA's

Ecological Well Being

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Yes	2	11.11	0	0	0	0	2	6.06
No	14	77.78	12	100	3	100	29	86.87
Sometimes	2	11.11	0	0	0	0	2	6.06

An overwhelming majority of the respondents including 77.78% of the subsistence fisherfolks and 100% of both the fishpen operators and local officials replied that the LLDA was not effective in preserving the ecological well-being of the lake. This is in contrast with the 11.11% of the open-sea fisherfolks who believed that the LLDA is doing well in this aspect consistently and occasionally.

Primarily declining catch resulting from oil spills and other forms of pollution triggered the overwhelming negative response. Elderly interviewees claim that before the founding of the LLDA, they had generous catches. There was a greater variety of fish species in the Lake. With the formation of the LLDA and its inability to control the rise of industries, coupled with other factors such as urbanization, the fisherfolks' catch declined dramatically. They argued that fishpen development was not their primary concern during that time.

At present, the water quality continues to decline, with this development, the growth period of fish is lengthened, while their meat quality also declines.

The closure and control of the Napindan Channel affects the clarity of the water in the Lake. This prevents the fish from seeing food and this results to their malnutrition, or even death.

The positive responses imply that some open-sea fishermen were able to have good catches while those who replied "sometimes" occasionally benefit from the Lake resources. This is because open-sea fishermen's activities are not confined to just one area unlike their counterparts in the operators sector as shown in the background information in the questionnaire. They have the freedom to explore different regions and this includes regions where the unfavorable conditions in their area do not apply.

Table 7

Perceptions on the Performance of the LLDA and Recommendations for Improvement

RESPONSE	OPEN-SEA FISHERFOLK		FISHPEN OPERATOR		LGU OFFICIALS		TOTAL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
LLDA is doing well	0	0	1	8.33	0	0	1	3.03
LLDA should be improved	8	44.44	2	16.67	1	33.33	11	33.33
LLDA budget should be increased	1	5.56	0	0	0	0	1	3.03
LLDA should be replaced with another agency	2	11.11	2	16.67	0	0	4	12.12
<b>LLDA should be abolished and its jurisdiction given back to LGUs</b>	<b>8</b>	<b>44.44</b>	<b>7</b>	<b>58.33</b>	<b>2</b>	<b>66.67</b>	<b>17</b>	<b>51.52</b>

When asked to comment on the LLDA as a government agency, the majority of the respondents proposed the abolition of the LLDA and the transfer of its functions and jurisdiction to the local governments. This is backed by 44.44% of the open-sea fisherfolks, 58.33% of the fishpen operators and 66.67% of the local officials. On the other hand, 44.44% of the respondents from the open-sea sector, 16.67% of the fishpen operators and 33% of the officials believe that LLDA should only be improved while a total of 4 respondents advocated for the replacement of the LLDA with another agency. Only one recommended the increase of the LLDA budget and another one claimed that the LLDA was doing well.

It is evident that the majority of the respondents from all the sectors see the need for the abolition of the LLDA. Their loyalty rests with their local government, which according to them, is their refuge in times of troubles, even in matters involving the lake. They see the LLDA as more of a problem than a solution to their subsistence needs. Granting that the Authority has been effective in regulating the fishpen industry, it failed to act on the people's most urgent need- the protection from the pollution-causing industrial plants. The people even perceive it as a collaborator, a partner-in-crime. Thus, they no longer believe that reforms would solve the problem, which is rooted deep within the system.

They are also reminded of the pre-LLDA era when their harvests were plentiful and the water was clean. Then, jurisdiction of the lake rested with the municipal government, which was able to maintain its ecological well being.

In contrast, there are still people who see the necessity of having a central agency to direct the activities in the Lake. They claim that the replacement of the LLDA with another agency will eliminate all the negative perceptions in the minds of the people, provided that they put the Lake and the people first before anything else. They also believe that the delegation of the agency's function to the local governments would result to corruption and inefficiency. Adding Lake Management to the local government's numerous tasks would result to disorganized actions and policies inconsistent with those of the other units.

Still, some believe that there is no need to abolish the LLDA or to transfer its functions to the local governments. These people, mainly subsistence fisherfolks, were willing to give the agency another chance. They believed the corrupt system could still be reformed, given the proper treatment and opportunity.

#### LLDA Statement

According to the LLDA as represented by the head of its Public Information Unit, Ms. Raquel Austria, the LLDA objective is threefold:

First is the preservation of the environmental well being of the Laguna Lake. It ensures the maintenance of the water quality level that can sustain life through measures against pollution by domestic, industrial and other parties.

Secondly, it also manages the activities in the lake, particularly those involving the proliferation of fishpen and related developments and concerns.

Thirdly, the LLDA is also mandated to uplift the socio-economic conditions of different stakeholders in the Laguna Lake area, particularly the subsistence fisherfolks who are affected most by any development in the Lake.

In pursuit of these objectives, the LLDA embarks on different projects and programs. The LLDA flagship projects are:



1. Environmental User Fee System- This is primarily based on the “Polluters Pay Principle” and serves as an economic means to encourage or force polluters to reduce water pollution while at the same time instituting remedial measures within their establishment. In the system, a fee is paid for the amount of pollution that one discharges in the Laguna Lake. The first phase of the system would cover big companies and would later include food chains, subdivisions, other commercial establishments and finally ordinary households.
2. River Rehabilitation Program- the cleaning of the tributary rivers of the Laguna Lake through multi-sectoral effort. The LLDA believes that the rivers should first be cleaned before the Lake itself since the water of the latter comes from them.
3. The Implementation of the Revised Fishery Zoning and Management Plan (ZOMAP)- the allocation and designation of specific areas for fishpen operation, open-water fishing and as fish sanctuaries. This follows the multiple use policy in the development and utilization of the lake water resources.
4. Shoreland Management- the restriction placed on the construction of structures within the 12.5-meter elevation zone in order to preserve the area as well as to prevent any accident related to unpredictable change of water level in the Lake.

The LLDA policy formulation process includes consultation of stakeholders for their opinions and comments on LLDA proposals through community meetings, dialogues and workshops. According to the interviewee, their consultation process was pretty extensive, and that the stakeholders were eager to cooperate and participate in their consultation efforts. She denied the allegation that there were no consultations or such consultations were limited to some sectors. In this regard, she commented that maybe the parties denying the presence of any consultations either lack trust or were not enlightened on the LLDA's jurisdiction. She added that the Authority does not have the power to compel erring companies to pay damages to affected parties- one of the stakeholders' main concerns, arguing that their task is merely to identify deserving claimants. However, she claimed that despite this limitation, the LLDA does its best to help these sectors regarding their claims.

Regarding policy implementation, the interviewee claimed that LLDA policies were implemented, despite setbacks and difficulties. Among the hindrances mentioned were the incooperation of the LGUs, and the people's disobedience and ignorance of these policies. The former results from the demand of the local governments for shares in the revenue collected from the Lake, particularly from fishpen operators. On the other hand, the latter refers to offenses committed by different stakeholders such as the local fishermen's establishment of illegal fishpen and inability to pay dues, and the industrial companies' disobedience of the LLDA's guidelines for operation. The LLDA's lack of manpower, finances and surveillance equipment are also included in the said agency's main concerns.

As shown by the LLDA's flagship projects, it concentrates on the environmental protection and preservation. All of the projects were oriented towards the improvement of Lake Water quality, which, according to the LLDA, is currently classified as Class C or suitable for fisheries.

Offenders such as those responsible for oil spills are penalized and punished accordingly, while all industrial establishments around the Lake and along its tributaries are required to have waste treatment facilities as soon as possible.

As a government agency, the interviewee commented that the LLDA should be improved and strengthened. Its fiscal powers should be increased, as well as its jurisdiction on industries. More emphasis should also be given to its socio-economic livelihood projects through additional funds from corporate revenues and government allocations.

It can be seen in the comparison of the stakeholders' and the LLDA's responses that their main point of conflict are: the issue regarding the alleged lack of visibility of LLDA projects and the subsequent absence of benefits from those projects, the Authority's jurisdiction in and its inability to resolve cases involving fish kills caused by the dumping of toxic wastes by industrial establishments.

With regard to LLDA projects, it can be observed that the stakeholders are not aware of them, except only those involving the collection of fees. What the stakeholders

expect are development undertakings related to fisheries such as the maintenance of the clarity of the lake waters, which in turn would boost their incomes. The control and regulation of the Napindan Channel by the LLDA, according to the stakeholders, prevents this, hence, their negative comments. Probably the most visible LLDA project is included in fishpen regulation-the demolition of illegal fishpen. While the Authority admitted doing this as a part of its zoning program, the stakeholders saw it as part of the said agency's income-generating scheme.

It is worth noting that the LLDA projects are all inclined to the improvement of the lake's ecological well being but despite this, the stakeholders still complain of poor water quality and declining harvests. A possible explanation is that industrialization and urbanization cannot be prevented and these developments, together with the proliferation of fishpen, resulted to the decline of water quality, and consequently, to declining catches. The stakeholders hope and expect the LLDA to arrest this problem while the Authority tries to reconcile the interests of all concerned. As a result, it was not very successful in fully facilitating the recovery of the Lake.

While the stakeholders denounce the LLDA for its inaction in cases of fish kills, they also do so on the basis that the companies responsible have not yet paid the compensation for the damages inflicted on them (stakeholders). This is a misconception on the stakeholders' part, as the LLDA, as earlier mentioned, does not have any jurisdiction as to whether the offenders would comply or not with the accompanying responsibilities resulting from the offenses they committed. Its function ends with the

identification of rightful claimants. It is up to the companies to fulfill their responsibilities. However, the stakeholders put the blame on the LLDA. This is the reason for their refusal to participate in LLDA projects as well as consultations.

## **CHAPTER FOUR**

### **Summary, Conclusions And Recommendations**

#### **Summary of Findings**

The findings of the study show that there are no significant differences among the perceptions of the stakeholders regarding LLDA policies, except in their views regarding the agency's objectives, and projects undertaken in line with these objectives. It was shown that a sector's perceived LLDA objectives and projects depend on its specific activities and level of involvement in lake activities. This reflects bias based on sectoral interests. Thus, more fishpen operators are aware of the LLDA's regulatory functions as compared to open-sea fisherfolks, who, in turn, are more aware of the LLDA's role as the protector of small fishermen's welfare.

One of the factors cited in the framework, as affecting the stakeholders' perceptions is the conceptualization of policies. This includes, in a participatory approach, consultation of concerned parties. In this regard, more respondents affirmed the presence of consultations than those who did otherwise. This is consistent with the LLDA statement about consultations done prior to the implementation of policies.

However, most of them do not agree with the whole formulation process as consultations were said to be either confined to some sectors, or seen merely as being done for formality's sake and not for the genuine purpose of uplifting the stakeholders'

conditions. Consequently, most of the respondents perceived LLDA projects as failures as far as objective achievement is concerned.

As shown by the interview results, all of the hindrances believed to contribute to the projects' failure are all on the LLDA's part. Among the top responses are corruption especially in transactions with big business companies, and lack of or slow action. The latter reflects the perceived inefficiency of the LLDA in implementing its policies and fulfilling its duties, another factor affecting sectoral perceptions, since there was no mention of any shortcoming on the part of the stakeholders.

In addition, the lack of trust in the LLDA can be seen as reflective of the lack of commitment on the LLDA's part as well as flaws in the agency's implementation methods.

While it can be said that fair perception of LLDA policies yield the stakeholders' obedience, cooperation and support of its projects, a negative perception does not necessarily result to disobedience, non-cooperation and engagement in illegal activities as shown by those who claimed to oppose policies but still follow them in the end. Their opposition is limited to mere expressions of objection but since their livelihood depends on the realm of the LLDA, they are forced to live by its rules.

## Conclusions

Based on the research conducted on the different stakeholders regarding their perception on the effectivity of the Laguna Lake Development Authority, the following conclusions are hereby drawn:

1. Ecological degradation was a problem perceived even before the advent of a development agency in the Laguna Lake. In the Philippines, ecological degradation came with urbanization and industrialization, as pollution became prevalent in urban and industrial centers.

Other major concerns were the Filipino values that hinder their cooperation and participation in efforts to preserve the environment. Traits such as colonial mentality, the *kanya-kanya* system, extreme personalism and family-centeredness, lack of discipline and initiative were seen as hindrances to community participation and cooperation. Meanwhile, there were also social and political influences that resulted to non-cooperation. These forces were considered as interactive forces that determine the people's responses to ecological issues.

Another development was the advent of the aquaculture or fishpen method. The success of pilot programs prompted many big businessmen and ordinary fisherfolks to engage in fish farming as this generates more income than the open-sea methods. Bodies of water, specifically lakes, were later crowded with disorderly fishpens. This decreased



the area for free-capture fishing, thereby resulting to declining catches for subsistence fisherfolks.

All these concerns were attempted to be addressed by the Philippine government through its promulgation of laws on fisheries and the environment. Most of these laws, dating back to as early as the Spanish era, provided for the formation and improvement of agencies to oversee the fisheries industry while some dealt on the protection of marine resources from pollution caused by industrialization. Some of these laws were implemented while some were simply ignored.

Pollution caused by rapid urbanization and industrialization and the proliferation of fishpens resulting to congestion in the Laguna Lake prompted the local legislators to propose the creation of a central authority to manage the activities in the Lake. Thus on 16 July 1966, the Laguna Lake Development Authority was formed by virtue of RA 4850. It was primarily tasked to carry out developmental projects within the area of environmental management and control, preservation of human life and ecological systems and the prevention of undue ecological disturbance, deterioration and pollution.

At present, it engages in the zoning, realignment, and rationalization of fishpens, the demolition of illegal structures and the reduction of fishpens based on the natural carrying capacity of the Lake. It also collects fees from companies that discharge wastewater to the Lake as a part of its maintenance efforts

2. Regarding the perception of the LLDA policies, it was found that the stakeholders' opinions generally coincide with one another's except those on their perceived LLDA objectives and projects. In these areas, it was evident that the different stakeholders were mostly aware of developments affecting their sector.

In terms of their perceived LLDA objectives, most open-sea fisherfolks mentioned Lake Management in general while majority of the fishpen operators answered fishpen management. This is because subsistence fisherfolks and fishpen operators are concerned with Lake activities in general and fishpen development, respectively. Local government also considered Lake Management as the agency's objective due to their awareness of the variety of proposed LLDA programs in the regulatory and ecological fields which, according to them, were not fulfilled.

Most of the respondents also believe that they do not receive the benefits allotted to them by the LLDA, as the target beneficiaries of the latter's projects. This is more pronounced among the fishpen operators since they regularly pay fees for their use of the Lake.

3. It was also found that the majority of the stakeholders are not contented with the LLDA's manner of policy formulation and implementation. Most of them believe that the LLDA is not effective in exercising its delegated functions, except for fishpen regulation, where most of the respondents claimed to be the strongest point of LLDA performance. The primary determinant of reactions was the Authority's inability to act

on the stakeholders' immediate concerns, more specifically, the fish kills that happened in recent years.

Because of this, most of the respondents from all sectors propose the abolition of the LLDA and the transfer of its functions to the local government. This view was driven by the fisherfolks' dissatisfaction with the efforts exerted by the latter to protect their welfare.

Little differences were also seen on the stakeholders' perceived hindrances to policy implementation but corruption was still the overwhelming response. Most of the perceived hindrances were on the part of the LLDA while only a few were due to the shortcomings of the other stakeholders.

### Recommendations

The problems of the fisheries industry, particularly concerning the stakeholders in the Laguna Lake area can be addressed through adequate research and development programs and the improvement of institutional and support services. Specifically, the recommendations are as follows:

1. The LLDA and other concerned government agencies should develop a comprehensive program on monitoring and assessment of the country's fisheries resources which involves gathering of reliable and adequate data on the major

marine fisheries resources and analyzing them to estimate maximum sustainable yields as bases in formulating management and conservation measures. This will enable the LLDA to effectively conserve and manage the country's fisheries resources.

In addition, the LLDA should also analyze the socio-economic, cultural and political constraints of their policies and assess the impact of these policies and measures on the stakeholders.

2. The LLDA should promote environmental protection and rehabilitation of coastal areas through a stricter enforcement of policies on marine protected areas that serve as replenishment areas for fish breeding and spawning.
3. The LLDA should engage in the improvement of methods and products that will allow the intensification of existing aquaculture technologies using locally available materials.
4. The social and economic status of fishermen should be evaluated and the existing policies analyzed in order to generate new information on the fisheries industry.

To achieve these desired outcomes, studies are needed to evaluate fishing practices and perception of coastal communities. Existing fisheries industry policies should be reviewed and realigned to present needs and realities. Methods for gathering fisheries statistics and technology information dissemination should be improved.

5. The private-public sector cooperation should be strengthened through the pilot testing of new technologies. Private sector groups, particularly production-oriented fishfarmers and fisher's organizations, can be tapped as partners in implementing projects to showcase technology packages for faster adoption. They can also actively participate in scientific meetings, symposia and workshops for information exchange in planning programs attuned to their needs.
6. The enforcement of fisheries laws in the Laguna Lake should be strengthened through the LLDA's strict enforcement and monitoring, community-based action programs, or both. Unless enforcement of fisheries laws is effective, the objectives of aquatic resources conservation and management cannot be achieved
7. Concerning fishpen development, substantial and gradual reduction of fishpen areas should be made in order to stimulate open water fish production for the benefit of small fishermen. The implementation, however, should be done gradually and with proper consideration as to its impact on fish supply. The small fishermen, through consultation, have a say in the relative importance given to fishpen culture and open water fishing.
8. Fishpen regulations should strictly be implemented. Ownership of fishpen and occupied area should be reevaluated and those with violation as to size should be sequestered.
9. A task force composed of technical personnel and representatives of fishermen should be created to serve as technical advisers for proper fishpen management. Also, the consultation body composed of representatives from all stakeholders should be strengthened and its membership democratized.

10. Anti-pollution measures required of factories and other industries around the Lake and along its tributaries should strictly be enforced.
11. A monitoring program should be worked out by concerned agencies including the LLDA, the local government units, fisherfolks' and other non-governmental organizations (NGOs).

## BIBLIOGRAPHY

- Abregana, Betty C. "Community-based Resource Management and Development: Problems Arising from Socio-cultural and Political Influences." In Romeo D. Fortes and Lian Catedrillo, ed. Philippine Fisheries Policy. Laguna: Center for Policy and Development Studies, 1993.
- Alip, Eufonio M. Political and Cultural History of the Philippines. Manila: Alip and Sons, Inc., 1967.
- Davies, Jonathan, Flor Lacanilao and Alejandro Santiago, eds. Laguna de Bay: Problems And Options. N. p: Haribon Foundation for the Conservation of Natural Resources, 1986.
- Development Plan for the Laguna de Bay Region. Pasig City: Laguna Lake Development Authority, 1972.
- Duyan ng Magiting: The Folk Culture of the Southern Tagalog Region. 1<sup>st</sup> ed. Diliman: Instructional Materials Corp., 1989.
- Goudie, Andrew. The Human Impact on the Natural Environment. 4<sup>th</sup> ed. Oxford: Blackwell Publishers, 1993.
- Laguna Lake Development Authority Master Plan. Pasig City: LLDA, 1996.
- Laguna Lake Development Authority brochure.
- La Viña, Antonio G. M., ed. Law and Ecology. Quezon City: The Legal Rights And Natural Resources Center, 1991.
- Ofreneo, Rene E. "Japan and the Environmental Degradation of the Philippines." In Michael C. Howard, ed. Asia's Environmental Crisis. Colorado: Westview Press, Inc., 1993.
- Ofreneo, Rosalinda Pineda. "Debt and Environment: The Philippine Experience." In Michael C. Howard, ed. Asia's Environmental Crisis. Colorado: Westview Press, Inc., 1993.
- Primer on the Laguna de Bay Master Plan. Pasig City: LLDA, 1996.
- The Philippine Fisheries Industry. Makati: Media Systems, Inc., 1979.
- Tagarino, Rogelio N. and Charles G. Kick. "The Philippine Fisheries Policy: Awareness and Compliance." In Philippine Fisheries Policy. Ed. by Romeo D. Fortes and Lian C. Catedrilla. Laguna Philippines: Center for Policy and Development Studies, UP Los Banos, 1993.





## Survey Questionnaire

Pangalan: \_\_\_\_\_

Edad: \_\_\_\_\_

Kasarian: \_\_\_\_\_

Natapos: \_\_\_\_\_

Estimated Monthly Income: (Please check)

\_\_\_ P 500.00-1,000.00

\_\_\_ P1,001.00-5,000.00

\_\_\_ P5,001.00-10,000.00

\_\_\_ P10,001 and higher

1. Anu-ano po ang alam niyong obhektiba ng LLDA?  
\_\_\_\_\_
2. Anu-ano ang mga spesipikong programa at proyekto ng LLDA ang alam nyo o narinig niyo na?  
\_\_\_\_\_  
\_\_\_\_\_
3. Ano po ang masasabi niyo sa mga programang ito batay sa mga sumusunod:
  - a. Pormulasyon:  
May konsultasyon po ba? \_\_\_\_\_  
\_\_\_\_\_  
Kanino nanggagaling ang inisyatibo? \_\_\_\_\_  
\_\_\_\_\_  
Sumasang-ayon po ba kayo sa kabuuan ng proseso ng pormulasyon ng polisiya?  
\_\_\_\_\_  
\_\_\_\_\_
  - b. Implementasyon:  
Nakakamit ba ang itinakdang obhektiba ng bawa't proyekto? \_\_\_\_\_  
\_\_\_\_\_  
May mga balakid po ba sa implementasyon? Pakibanggit lang po. \_\_\_\_\_  
\_\_\_\_\_
4. Sa tingin po ninyo, naipapamudmod po bang nang maayos sa mga taong bayan ang mga gustong makamit ng LLDA? \_\_\_\_\_  
\_\_\_\_\_
5. Sa inyong pananaw, nare-regula po ba ng LLDA ang mga fishpen sa lawa, ganundin ang wastong paggamit ng Laguna Lake? \_\_\_\_\_  
\_\_\_\_\_
6. Napapangalagaan po ba ng LLDA ang pang-ekolohiyang kapakanan ng lawa?  
\_\_\_\_\_
7. Ano po ang masasabi ninyo sa LLDA bilang isang ahensya ng gobyerno?  
\_\_\_\_\_  
\_\_\_\_\_

## QUESTIONNAIRE FOR LLDA REPRESENTATIVE

1. Anu-ano po ang obhektiba ng LLDA?
2. Anu-ano ang mga spesipikong programa at proyekto ng LLDA?
3. Ano po ang masasabi niyo sa mga programang ito batay sa mga sumusunod:
  - a. Pormulasyon:  
May konsultasyon po ba?  
  
Kanino nanggagaling ang inisyatibo?  
  
Ano po ang masasabi niyo sa pagtanggap ng mga tao sa inyong mga polisiya?
  - b. Implementasyon:  
Nakakamit ba ang itinakdang obhektiba ng bawa't proyekto?  
  
May mga balakid po ba sa implementasyon? Pakibanggit lang po.
4. Naipapamudmod po ba ng maayos sa mga taong bayan ang mga gustong makamit ng LLDA?
5. Ano po ang inyong masasabi sa pagre-regula ng LLDA ng mga fishpen sa lawa?
6. Ano naman po ang pangangalaga ng LLDA sa pang-ekolohiyang kapakanan ng lawa?
7. Ano po ang masasabi ninyo sa LLDA bilang isang ahensya ng gobyerno?
8. Ano po ang masasabi niyo sa mga komento ukol sa hindi pagiging epektibo ng LLDA sa ilang mga bagay partikular na sa pangangalaga sa kalinisan ng lawa at sa pagtataguyod ng mga interes ng maliliit na mangingisda?

