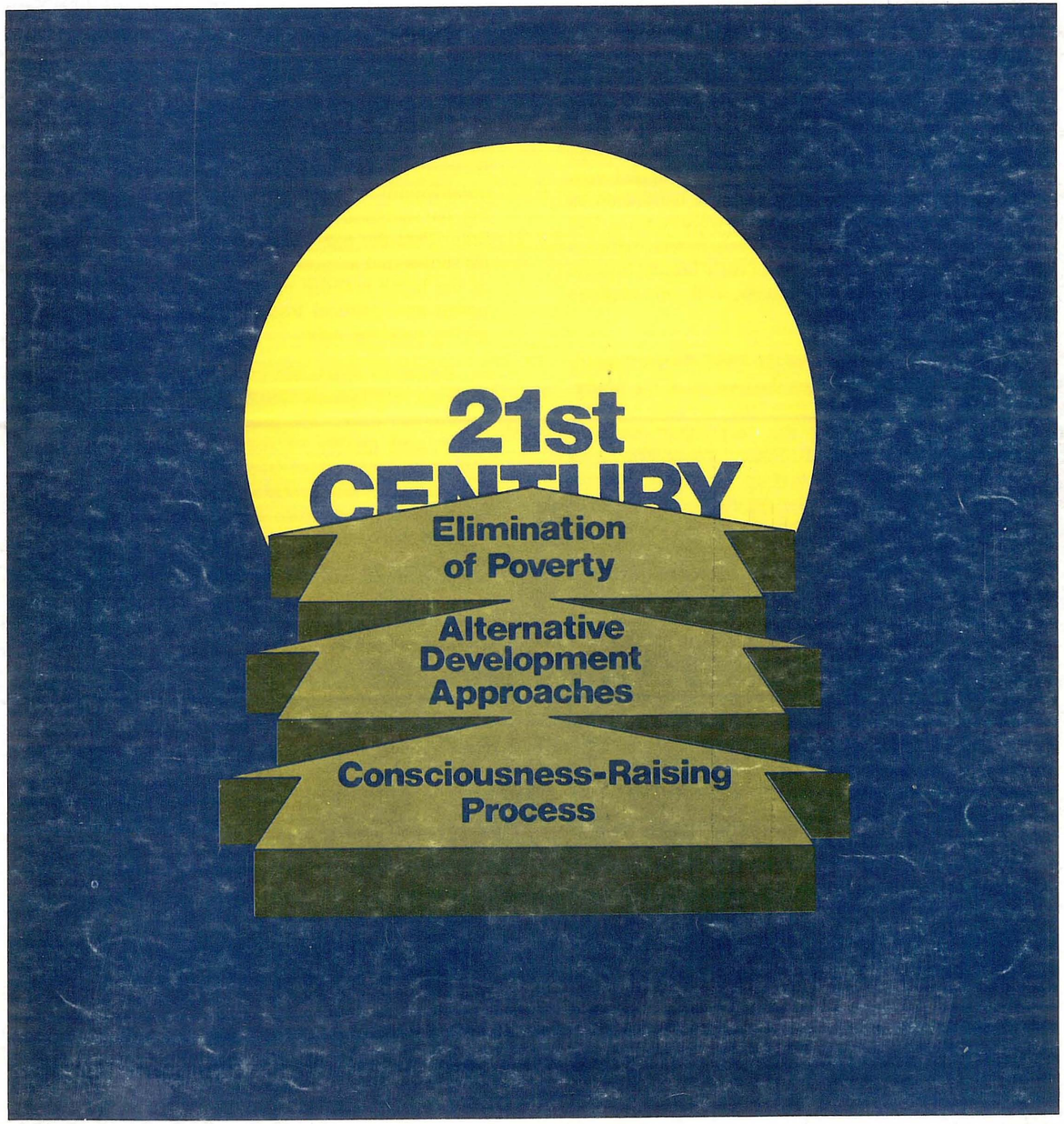
SOCIAL SCIENCE INFORMATION

Philippine Social Science Council
P.O. Box 205-UP Post Office, Diliman, Quezon City, 3004

May be opened for postal inspection

SOCIAL SCIENCE INFORMATION

VOLUME 18 • NO. 2 APRIL-JUNE 1990



Editor's Note

Today, one reads a lot about an increasing focus on the future. Advertisements even ride on this concern as in "The future is here," "The car of the future," and "Children are your future." That we are at the threshold of the 21st century brings a certain anticipation of more than a new year in the year 2000 - that of a new century.

Fascination with the future is the other aspect of the fear of the future, or fear of the unknown. Since the earliest times man (as in humankind) has conjured up visions of dragons and fairies. In a parallel vein of thought, man saw new worlds and continents to conquer. He also believed that stars were running like clockwork to rule man's destiny. Thus, omens, portents and oracles were part and parcel of early human history. Today, projections, trend analysis, and simulations have partly taken over.

The writers in this issue of the **PSSC Social Science Information,** sharing with us their views of the future, are well-grounded in the past and present realities. Varela brings to the fore the "explosive" roots of Futuristics, resulting from the Second World War, with the war efforts of the Allies tied up to futures research. The post-war period saw the proliferation of future-oriented organizations, notably the Rand Corporation and the Association Internationale Futuribles. The tie-up between Multiple Alternative Futures and Cross Impact Among Alternative Futures with decision-making brought about policy research as a new field of interest.

The Philippine experience with the Futuristics starting with Rizal's essay "The Philippines: A Century Hence" to the organization of the Philippine Futuristics Society, Inc. (PFSI), to the national visioning process of future-oriented organizations is briefly presented by Santos. In the context of the world situation and the aspirations of local communities, a document serving as the agenda for development will result from the national visioning project.

The importance of the national visioning exercise is presented in the write-up on the need for a unifying national vision for the 21st century. The contradiction between the official vision with the gloomy realities is clearly stated in terms of the "Gross National Poverty" outstripping "Gross National Product," notwithstanding the statistical decrease of families below the poverty line. That the national visioning project has been set up shows that an optimistic perspective exists in spite of the harsh realities of poverty, deforestation, social unrest and political instability aggravated by a staggering national debt.

Going to a specific case of vital importance for millions of Filipinos, Centeno discusses the future of the Laguna Lake. The problems involved in the utilization and quality of the lake's water requires an integrated approach to lake reform. Such an approach can only be implemented by an agency with an organizational structure conducive to and personnel oriented to efficiency and equity.

This issue contains articles dealing with the basic concepts in Futuristics and the applications of such concepts. The negative aspects of present realities, be it recurring power outages, rumored coup attempts, or increasing number of street children can be projected with dire results into the future. What these articles show is that such negative aspects must be considered in working for a better future.

VICENTE D. MARIANO

Dr. Vicente Mariano is a researcher at the Local Government Center of the UP College of Public Administration, where he is also a professorial lecturer in public administration. He is the editor of the ***Local Government Bulletin.***

ISBN 0115-1169

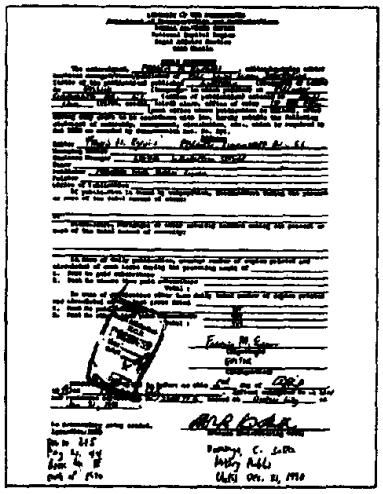
SOCIAL SCIENCE INFORMATION

The PSSC SOCIAL SCIENCE INFORMATION primarily seeks to serve as a clearinghouse for the exchange of information, documentation, research activities, and news on people involved in the social sciences. Since 1973, it has endeavored to be a regular and comprehensive inventory of information and a catalyst of discussion.

Unless so indicated, the views expressed by the authors of articles in this publication do not necessarily reflect the policies of the Philippine Social Science Council, Inc.

A quarterly newsletter published by the PHILIPPINE SOCIAL SCIENCE COUNCIL, INC. (PSSC) with office at PSSCenter, Commonwealth Avenue, Diliman, Quezon City, P.O. Box 205 U.P., Diliman, Quezon City 3004, Philippines.

Editorial:
Francis M. Egenias
Circulation:
Lydia G. Wenceslao
Emily G. Tuzon



CONTENTS

SPECIAL FEATURES

REGULARS

Prepared with the assistance of the Philippine Futuristics Society, Inc.

Futurism: The Business of Tomorrow

Miguel Ma. Varela, S.J.

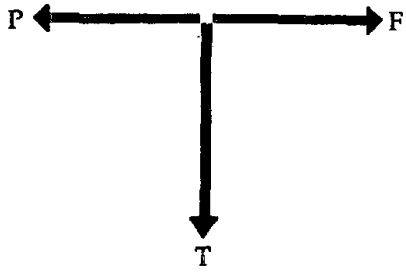
These are the best of times and the worse of them. These are the moments when an old age is dying and a new era is aborning. Indeed, these are the best of times to live in — at the very crossroads of history in the making.

Beset by a multiplicity of crisis situations, many lose enthusiasm, grow gloomy, and opt for the inactivity of the pessimist. Providentially, at this point of human development, technology and inventiveness placed at man's disposal a tool which previous generations knew not of; at least not to the extent that we are able to handle it nor with the degree of versatility we know of. That instrument is the new discipline of *Futurism or Futuristics.*

The environ that accelerated its birth is that of accelerating change to a degree unknown and even undreamt of by previous generations. That phenomenon has likewise spawned an atmosphere of unrest and entropy on a global scale unprecedented in history.

The population explosion is but one such "explosions," and in a way the occasion at least for others concomitant to it: the growth of urbanization, the rapid growth of communications, and the knowledge explosion. If each of them had come at distinct epochs of mankind's history, the synergistic effect may not have shocked us as much as we now are. But since the time that the guns of the Second World War went mute, those "explosions" burst into the world almost concomitantly and at a rate that has caused in many individuals and societies what the futurist Alvin Toffler labels "the future shock."

In the last century, scholars read the past to open doors of understanding for the present. Today, scholars reach out to the future for a better understanding of today.



All that swell of both cumulative crisis situations and new developments has hastened the forging of the scientific tool to manage that very fluid future — Futurism. Moreover, today's youth has to learn to cope with continual change. Futuristics teaches people to function and to cope with change. It is a process by which the individual anticipates change, adapts to it, and perhaps even feel comfortable with it. It helps man become an active participant, a pro-actor even, in shaping tomorrow.

Futuristics is a new field of study. It is not to be confused with science fiction, and less with astrology, which in the past may also have been termed "futurology." This is the reason why this latter term is shunned by those engaged in Futures Study.

Historically, Futuristics, as we know it today, is a by-product of the Second World War. During the latter part of that global conflict, the Allies had to come up with new planning techniques from a system-approach viewpoint. And this, because of the already then growing complexity of science, technology, and civilization. Consequently, the new discipline, from its inception, was interdisciplinary in nature. It takes into consideration economic, political, socio-psychological, cultural, and bio-engineering aspects of a given issue or problem.

During the Second World War, Futures Research was needed in the preparation of amphibious operations, bombing raids, invasion plans, and the production of the atomic bomb. But it was in the 1950s that it began to mature. The Rand Corporation was set up as a semi-private, non-profit "think tank." It thus became the first enduring organization primarily devoted to the systematic ongoing study of the future.

Since the 1950s, other organizations, like the Hudson Institute, the Institute for the Future and the Futures Group, have been founded to explore the array of possible futures for a national, as well as the international community. And the futurists who work in those organizations do not use tea leaves or the crystal ball to study the future. They approach their studies rationally, scientifically, and systematically.

France started organizing its own Association International Futuribles (AIF) as the '40s were coming to a close. Its social scientist, Professor Bertrand de Joevenel, is today regarded as its founder and the intellectual dean of futurists. And as in any other modern field, such as space medicine or holography, futures research has changed almost kaleidoscopically in the past 40 years.

The focus of Futuristics is the examination of the future alternatives and their possible results before they are put into action. It therefore anticipates change, considers the consequences of a range of alternatives, and thus cushions the effects of future shock.

Edward Cornish has given a descriptive definition of Futuristics:

> *"The field of activity that seeks to identify, analyze, and evaluate possible future changes in human life and the world..."*
> *(Allain, Futuristics and Education, p. 11)*

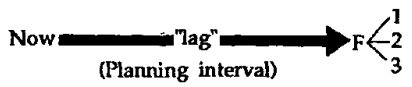
Futuristics implies a rational approach to the future, aided by systems analysis. It also accepts artistic, imaginative, and experiential approaches as useful and valid.

The concept of "alternative futures" is fundamental to Futuristics. Ordinarily, people conceive the future as inevitable, almost static, and unidirectional. As a matter of fact, many regard the tomorrow as but a prolongation of today. And this was the common view until Futures Study came to be.

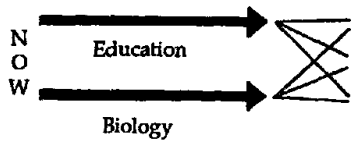
Futurists explicitly point out that there is a variety of futures, not just one single future. These alternative futures are dependent on several factors —

1. History: past events and trends that have an influence on the future.
2. Chance: happenings that we are unable to plan for.
3. Human Choice: personal decisions that affect the future.

There is, therefore, not one single "inevitable" future. There are countless numbers of alternatives in the future. By using Time, Energy, and Money (TEM units) to suit one's purposes the alternative futures could be transformed into fulfilled futures. And in that sense "tomorrow" can be shaped, or at least definitely influenced. Tomorrow is dynamically alterable. This is the model of the future called Multiple Alternative Futures of the mid-60s:



By the 1970s the Cross-Impact among Alternative Future model came to be:



This model was begotten out of "cross-impact analyses" techniques and shows the interdisciplinary nature of Futuristics. It shows, for instance, how a breakthrough in biochemistry's "get smart pills" influences educational futures.

It is, therefore, important to understand that futurists do not claim to "predict" the future. Rather, they attempt to heighten our awareness of (make us more sensitive to) the range of alternative futures that might come about. In that way futurists sensitize us to the role that history, chance, and choice play in influencing any specific future positively or negatively.

It is for this reason that futurist Draper L. Kauffman, Jr. speaks of the future as a "zone of potentiality" rather than "that which is going to happen." For futurists' knowledge about the future is knowledge about possibles. And from possibles, probables are selected. In this way, one thinks of future possibilities and alternatives rather than what is certain or inevitable.

The Qualities of a Futurist

1. *Openness to experience*
2. *Global in perspective*
3. *Long-term time perspective*
4. *Broad concern for humanity*
5. *Rationality*
6. *Pragmatism*
7. *Respect for free will*
8. *Value-concerned*
9. *Optimism*
10. *Sense of purpose*

These perspectives can be illustrated with two metaphors. One is that in life there is not much you can do to change what is going. You are unable to see all the twists and turns of the track in advance. You can only see each part as you come to it. And neither can you change the course of the ride or even get off when you want.

The other is to see the future as the vast Pacific Ocean on which you are navigating a ship. There are many destinations you may sail to. And while navigating there are many factors you have to take into account — currents and cross-currents, meteorological conditions, and unfamiliar waters. But you are free to choose your path and of reaching your haven successfully. This by effective use of foresight, time and energy. Thus, you are able to determine to some extent your own future.

The alternative futures approach and its more complex "cross impact among alternative futures" require the development of several skills. These can be developed through certain techniques for which we have no time to describe. Techniques like scenario building, group opinion through polls and the Delphi technique, cross-impact matrix, and stimulation gaming.

The first of the skills needed in Futures Study is to learn to think with greater imagination about the future so as to avoid the single future trap. This often needs seeing the future from a new perspective, as something capable to be created or invented.

Secondly, one has to evaluate the impact of possible futures. We must not only be aware of alternative courses of action that are open to us. We must likewise choose wisely from among them. A certain degree of perspicacity is needed. And this raises basic questions of what is possible, what is probable, and above all, what is preferable.

The triple basic function of the futurist is to make clear:

- To lay out paths to the future (the Possible)
- To examine those paths in details (the Probable)
- To express preferences for particular paths (the Preferable)

Therefore, the futurist attempts to reach three goals:

- To form perceptions of the future (the Possible)
- To study like alternative (the Probable)
- To make choices to bring about a particular future (the Preferable)

Perhaps, the most explosive growth in recent years has taken place among the practitioners of the Preferable. They are often known as "one-issue" groups. They frequently focus on issues that are of critical interest to them because they hold a stake in the outcome — environmental, consumer safety, employee health, nuclear power, women's rights, and the like.

The futurist then tries to correlate and build a system based on the Feasibility, Desirability, and Probability of future events taking place. Through the environmental scanning of the future, the futurist is able to identify not just one but multiple and interrelated alternatives. Then through the use of analytical technique he comes up with alternative possibilities available to decision-makers.

This link-up of decision-making to Futuristics has given this discipline another name, Policy Research. The hazy future has been tamed and industrialists, military specialists, political scientists, and managers are able to face tomorrow more confidently. And even shape to an extent the quality of their organization in the years ahead.

Characteristics of a futurist

With a description of the characteristics of a futurist and a brief presentation of an academic program on Futuristics, the image of Futuristics can be etched not as a fancy but as a fact of modern life.

The World Future Society of Washington, D.C., in a study it prepared for the National Science Foundation of the United States of America, described the following qualities of a futurist:

1. ***Openness to experience***: A futurist is ever searching for new information about the world. He has preserved the sense of wonder of the child and sharpened it by experience.

2. ***Global perspective***: A futurist seems to think in world rather than national terms. He has learned to outgrow narrow nationalism.

3. ***Long-term time perspectives***: He has developed a sharper and wider mind-view of reality.

4. ***Broad concern for humanity:*** All that live, think and feel are his concern.

5. ***Rationality***: A futurist is open to experience but he quickly rejects notions wanting in adequate rational or scientific basis.

6. ***Pragmatism:*** As a group, futurists seem to be primarily interested in what will "work." The test of effectiveness is not any ideology of left or right, but good data and methods, genuine concern about people, and realistic assessments.

7. ***Respect for free will***: He is deeply conscious of the freedom of individuals to make decisions that will have tremendous consequences for good or ill.

8.***Value-concerned***: Values are the criteria by which the individual decides what to choose.

9. ***Optimism***: A futurist generally seems to believe that mankind will survive and perhaps even prosper in the years ahead.

10. ***Sense of purpose***: A futurist seems to feel that what he is doing is important. That it will help create a better world tomorrow.

And Futuristics is now a part of the educational activities of many nations, and at all levels — elementary, secondary, and tertiary. The University of Houston in Clear Lake City, Texas, has two degree programs in futures research: one general and the other in education. In 1974, it started an innovative approach. It is not organized around traditional academic departments, but rather around program areas, such as individual and social behavior, multicultural studies, resource utilization, and studies of the future. The futures courses include forecasting techniques, educational futuristics, public policy, technology, and apocalyptic image.

As a discipline, Futuristics has still a long way to go to achieve full maturity. It is still much beset by feuds, blatant subjectivism, and problems as any other human activity. But it is becoming a more meaningful and helpful partner of corporate enterprises whether business, military or even ecclesiastical. And it is becoming increasingly apparent that the average person can benefit from Futuristics.

Fr. Miguel Ma. Varela, S.J., is the President of the Association of Nontraditional Educatin of the Philippines (ANTEP), a private nonprofit organization committed to the promotion of nontraditional education in the Philippines.

The Future of the Laguna Lake

Julian D. Centeno, Jr.

Introduction

The "Future of the Laguna Lake" is a topic that conjures up a seemingly portentous and uncertain image of the perennial flooding of Taguig or the periodic occurrence of the so-called "fish-disease". So, rather than develop the discourse in the vein of a Merlin or a Nostradamus reciting a litany of gloom, the future of Laguna de Bay will be discussed from the point of view of an environmentalist and a public servant and in a positive, action-oriented way. Presented in this manner, "The Vision of Laguna de Bay" becomes an apt substitute for the title.

The Laguna de Bay and its Watershed

A brief history. Laguna is a Spanish word for lagoon or pond or lake, and Bay ("Bae") is the lakeshore municipality that was the capital of the province of Laguna until 1688. In 1572, the Spanish explorer Captain Juan de Salcedo who landed in the old municipalities of Bay and Pila, estimated the population of Laguna at 26,000. Pasig River, the lake's only outlet to the sea, was the venue of food products transported from Rizal, Laguna, Cavite and Batangas provinces until the outbreak of World War II in 1941. It was also reported that as early as the 10th century, Chinese junks laden with chinaware, silks and other products sailed up the Pasig River on trading ventures. With the building of more roads and increase of land transportation, river travel today has been convicted to commercial barges, fishing boats and other motorized vessels. Dr. Jose Rizal mentions "a branch of the Pasig River, which, like all rivers of Manila at that time combined the functions of public sewer, laundry, fishery, waterway, and should the water peddler find it convenient, even a source of drinking water."

Physical Features. The Laguna de Bay, a 900 square-kilometer lake is located some 15 kilometers southeast of Manila (Figure 1). The lake, the largest in the Philippines, is surrounded by five relatively flat zones. These discontinuous lowland areas are bounded on the northeast and east by the Sierra Madre mountain range. The southern boundary of the lake basin is a chain of mountains, which include Mt. Banahaw and Mt. Makiling. From an estimated 3.3 million in 1987, the basin population is expected to grow about 4.2 million by the turn of the century. The population is predominantly urban.

Water Uses. Due to its proximity to Manila, the lake has unique contributions to and potentials for economic development. Fishery (open and aquaculture) can have an annual yield of between 1 to 2 metric tons per hectare. The estimated fish yield from culture and capture fishery in the lake totalled 246,121 metric tons in 1986, 41,005 metric tons of which were contributed by culture fishery.

There are extensive lowland areas which are being irrigated from the lake water. Additional areas inside and outside the basin will be irrigated using water from the lake in 1989. It is also the intention of the

National Irrigation Administration to share this water drawn from the lake at a rate of 10.4 cubic meters per second with the Metropolitan Waterworks and Sewerage System (MWSS) for the domestic water supply of Bacoor, Cavite and neighboring municipalities or an approximately 3 million potential water consumers. In addition, the water demand of other basin communities might partly be supplied by the lake.

The lake is also used for personnel and produce movement, industrial cooling, and power generation.

The aforementioned uses are water quality-dependent.

Developmental Issues. The lake serves as a waste sink for the whole basin. Partly treated and untreated solid and liquid wastes from municipalities, industries and farm lands invariably find their way into a lake, either directly or through the tributary rivers and streams.

Further economic development activities in the basin will increase the volume of wastes discharged into the lake, and changes in land use including deforestation may effect the flow regime in the watershed, volume and quality of the lake itself. The recent flooding of the Marikina Valley and lakeshore areas poses the question whether floods of such magnitude are to be expected more frequently and abruptly with little warning, while the actual impacts of the Napindan Hydraulic Control Structure and the Manggahan Floodway on lake productivity and pollution, flooding, and flood control are still to be fully understood, appreciated, or tested in real situations.

There is practically no wastewater works in the basin; the refuse collection, treatment and disposal system is inadequate, and unsystematic. The banks of the rivers and the rivers themselves often become garbage dumps and dung with malodorous results.

The number of industrial establishments around the lake is fast growing, at about one percent per year. In 1988, with 936 establishments, it was around 9 percent. The nature of their activities ranges from power generation and lube oil refining to textile, cement, electronics, chemical and pharmaceutical, paper and food manufacture. However, about a quarter of these plants have properly operating wastewater treatment facilities, even less have adequate air pollution control devices. The managements of industrial firms generally have low regard for the external effects of their wastes and very little incentive/appreciation for resource recovery, recycle and refuse.

Compounding the situation, less than half of the 51 municipalities within the basin have town plans, which are the basis of zoning regulations, most of which are not being enforced. Also there is an absence of up-to-date information to follow land use modifications, although previous data reveal diminishing forest and lowland rice areas. Areas susceptible to erosion have been identified, but the rate of sedimentation is not accurately known.

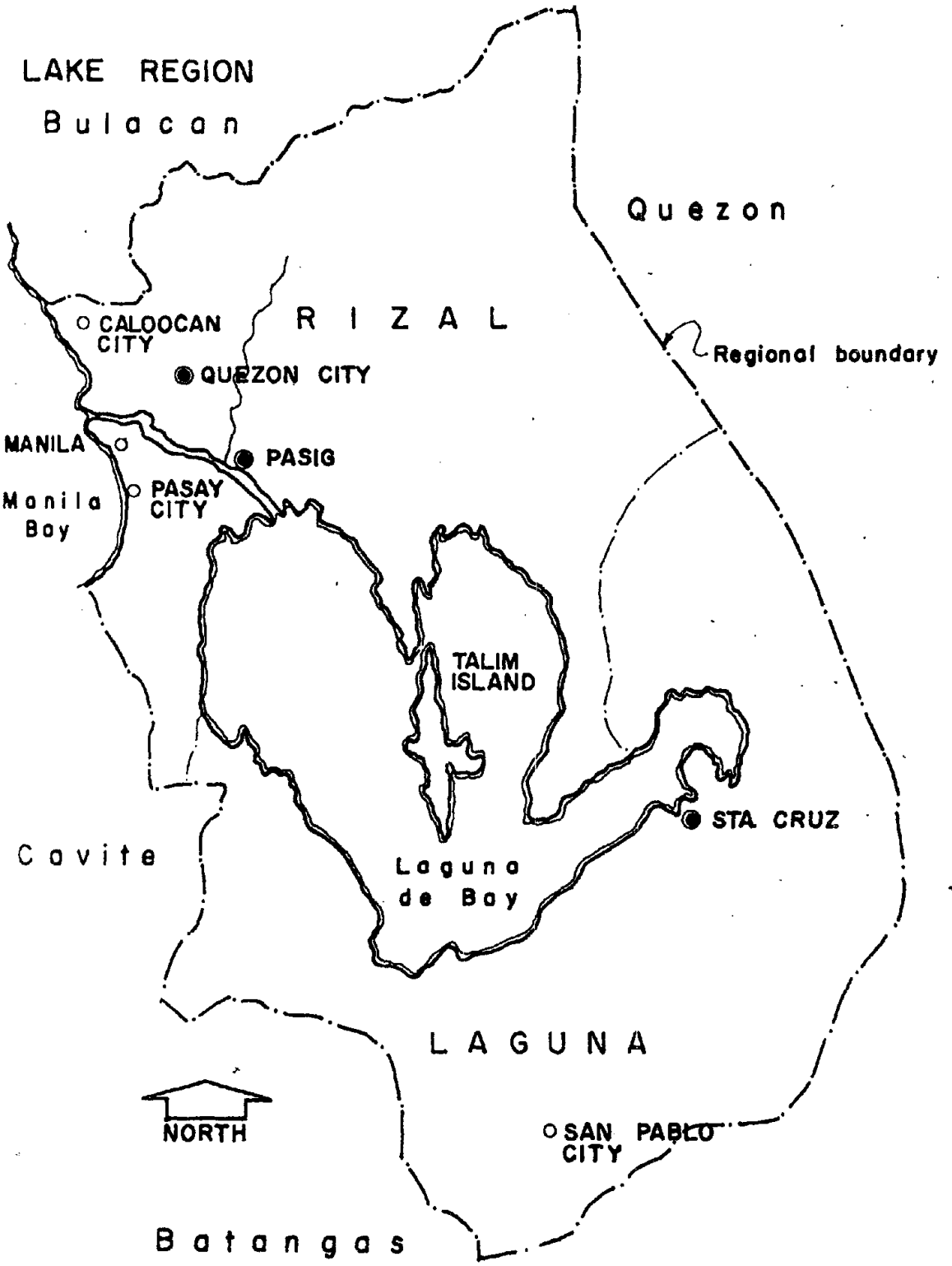
Conflicts among the various uses of the lake are apparent. Aquaculture development and open water (capture) fishery are at odds with respect to lake occupancy. Proliferation of fishpens has also been blamed for declining fish yields, impeding water circulation, and even contributing to the siltation of the lake. There is also a conflict between irrigation and the fishery industry. Irrigation, as practiced, increases the volume of agricultural drainage, which could contain residual toxic pesticides and nutrients from fertilizer application. Excess nutrient, principally nitrogen or phosphorus, contributes to the eutrophication of the lake.

More importantly, contrary to earlier forecasts of lake utilization for domestic water supply around the year 2000 at the earliest and 2040 at the latest, the lake is ready to supply the demand in 1990, according to the MWSS. As a consequence, the lake quality has to be upgraded to Class "A," and very strict pollution control and water conservation measures have to be observed, with which many of the present practices, such as barging of oil products, maintaining fishpen guardhouses where wastes are thrown directly into the lake, intensive feeding, construction of houses on the lakeshore, operating the Hydraulic Control Structure and the Manggahan Floodway without the benefit of a rule curve, may be deemed incompatible. Excessive abstraction from the evaporation of the lake might lower the lake elevation to dangerously low levels that could endanger the operation of the Kalayaan Pumped Storage Project for power generation.

Approaches to Water Resource Development

The Ecosystem Approach. The natural aquatic ecosystem is a delicate and dynamic balance of complex interactions between various kinds of organisms and between those organisms and their environment. The problem of environ-

THE LAGUNA LAKE REGION



mental, specifically water quality management, is inevitably of a regional character. Upstream waste discharges from activities are dissolved in surface water or percolates through the ground during rainfall. When consideration is given to possibilities of large-scale measures for quality improvements, such as regional sewer interceptors, which depend upon the hydrologic and physiographic features of the area, as well as the various cycles of substances such as carbon, oxygen and water, the regional basin (ecosystem) character of the management problem becomes even more apparent.

In England and Wales, for example, the management of water quality and all aspects of the water cycle is in the hands of the regional water authorities. Each of these water authorities is responsible for all water services within a region based on natural catchment area.

In the United States, a compact among four states (New York, New Jersey, Pennsylvania and Delaware) and the federal government in 1959 established the Delaware River Basin Commission, U.S.A., a regional water management agency.

The Commission is charged with developing a comprehensive plan for development of the water resources of the basin. The Commission is granted the power to plan and implement the development of the water resources by acquiring or building and operating and monitoring dams, reservoirs and similar structures to control and develop the water supply; to regulate the flows so as to regulate the water quality; to construct, operate and maintain projects and facilities to control potentially adverse waste discharges and abate or delete existing waste discharges affecting quality of the water resources of the basin; to provide for flood protection; to institute sound practices of watershed management including prevention of soil erosion and promotion of land reclamation and sound forestry practices and fishing and wildlife conservation measures; to promote recreational uses of the river, to develop and operate facilities for the generation and transmission (but not direct distribution to consumers) of hydro-electric power and set rate and charges for such power; and to regulate and control withdrawal and diversion from the waters of the basin.

In 1974, SOGREAH of France, one of the world's leading consulting firms in water resources engineering, and others in the study *Laguna de Bay: Water Resources Development* concluded that "pollution control coupled with control of the lake storage and floods will allow the full development of the Laguna de Bay area."

Integrated Approach to Lake Reform. With the present socio-economic, environmental and political conditions in the Laguna de Bay area and in view of the need to resolve the growing conflicts among various groups of lake users, an integrated program for lake reform is imperative.

It is inevitable that the program should not only be directed towards rationalizing the lake fishery in general but more specifically, to institute social justice in the use of lake resources, to uplift the socio-economic status of small fishermen around the lake, and to involve them in policy formulation and program implementation. Because of the multi-faceted tasks necessary to achieve the above objectives, the responsibility for implementing the program is of regional significance requiring concerted and coordinated efforts.

Decision on the Future of Laguna de Bay

The Lake as a Multi-Use Resource. Since competitive water uses must be considered in the light of economic development goals and the resource allocated to accommodate public preferences (social goals as enshrined in the Constitution), it is myopic and inefficient to adopt a single-use-to-the-exclusion-of-the-other-uses policy on the development and management of the Laguna de Bay. At the other end of the spectrum is a policy which attends to the demands of each legitimate and beneficial use, a rather administratively cumbersome and expensive proposition for a developing country. The idea, for example, of dyking off the MWSS intake point or drawdown area on the lake, while technologically feasible, poses the questions, among others, of how to evacuate the inflow from the myriad of tributaries around the enclosed area to prevent excessive rise in lake levels, what kind of ecosystem would evolve, and could the costs be justified considering the vast area of the lake to be dyked.

Many of the present and potential uses of the lake are compatible within a narrow range of quality, but the use of the lake for excessive waste disposal is likely to have deleterious effect on fisheries and present health risks to consumers of the fishery and water resources. For

public health consideration, therefore, it is necessary to select the lake use with the most stringent quality requirements, i.e., domestic water supply. In the context of a developing country, it is unnecessary to achieve a higher water quality level than is necessary for the dominant use, or uses, if there are no incompatibilities. Nature conservation for sheer aesthetic enjoyment, for example, is a cause that could not be supported for Laguna de Bay.

There is no scientific evidence to prove that salinity in intrusion from the Pasig River is solely responsible for increased primary production in Laguna de Bay, nor is the backflow the only source of salinity in the lake. H. Lenarz, a German limnologist who studied the lake in the 1970s and the 1980s, noted that "algal blooms developed so far independent of a seawater backflow." The chloride concentration (a measure of salinity) and the primary production trends in the West Bay of the Laguna de Bay are incongruous.

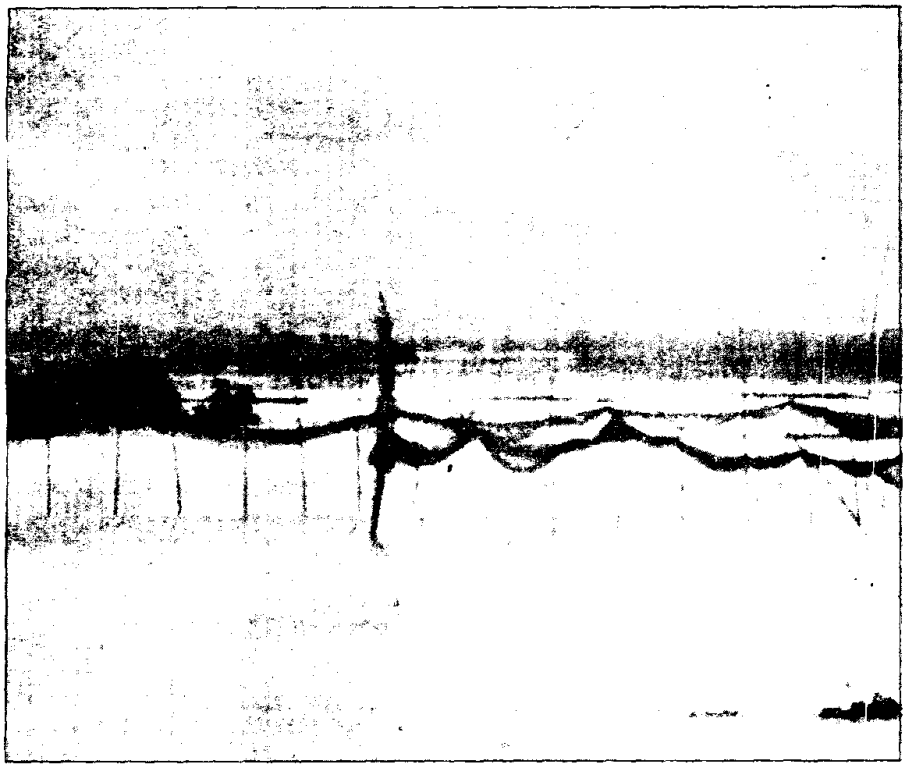
Consequently, restricting salinity inflows from the Pasig River may not be detrimental to lake fishery. It does stop pollution inflows, though, thereby protecting the fishes from death due to lack of oxygen, and due to toxicity and enhancing the utility of the lake as a source of irrigation water for farmers in the watershed and the Cavite area, and as a source of domestic water supply. M. Delmendo stated in a Senate hearing on 15 April 1988 that Class "A" water does not result in the destruction of lake fishery, as many fishermen believe. By ensuring the continuous enjoyment of the beneficial uses of the lake, protecting its quality, therefore, is an investment by society that redounds to public good. For this reason, the Laguna Lake Development Authority (LLDA) launched the "Pangalagaan ang ating Lawa" campaign for its water quality management program.

The quantity and area demands of the various lake uses are simpler to resolve because they involve physical allocation of the water resource. Moreover, the structures for conserving the mass of the lake are in place, i.e., the Napindan Hydraulic Control Structure and the Manggahan Floodway. Lately, however, the public had been critical of these two structures as a result of the flooding of lakeshore towns and barangays brought about by typhoons "Unsang" and "Yoning".

Flood Control. The following concerns have not been given adequate attention, namely: (i) Laguna de Bay floods are due to inflow from the 21 major tributaries around the lake, direct rainfall on the lake, aggravated by the inadequate overflow through the Napindan Channel, and excess inflow from the Marikina River; (ii) the average elevation of Taguig (11.30 meters) is lower than the average lake elevation of 11.32 meters; (iii) the Manggahan Floodway can be operated allowing reverse flow, i.e., from the lake to the Manila Bay through the Marikina and Pasig Rivers, an operation that accelerated the recession of the flood in the Marikina Valley and the lakeshore; (iv) the floods caused by typhoon "Unsang" and "Yoning" demonstrated that the lake level can rise to almost a meter in less than a week, possibly due to land use changes in the watershed removing much of the vegetative cover and reducing the holding capacity of the soil.

Consequently, immediate measures had been proposed, such as the construction of ring dykes and pumping stations, to protect specific areas like the Pasig and the Taguig-Pateros areas. This is now under consideration by the Department of Public Works and Highways (DPWH). Likewise, the operation of the Manggahan Floodway and the Hydraulic Control Structure (HCS) should be well-coordinated following certain rules. Reforestation should be a matter of concern, particularly in the province of Rizal. In this connection, the LLDA coordinated and initiated tree-planting activities in the municipalities of Tanay and Morong with the provincial government of Rizal and the World Ecologists this year. Overall, however, the reforestation of the watershed should fall under the national reforestation program of the Department of Environment and Natural Resources (DENR).

In the long-term, the debate about the Parañaque Spillway to alleviate the lake flood condition should be resolved (this is now being studied under the JICA-assisted Flood Control and Drainage Project in Metro Manila for the DPWH.); the dredging of lake bed should be considered, although the dredging of silted-up waterways, particularly portions of the Napindan Channel and the Pasig River has already been started by the DPWH; the feasibility of constructing small impounding reservoirs in the upper reaches of the major tributaries of the lake should be studied, the zoning of shoreland areas below the normal high lake level of elevation 12.50 meters be undertaken, and a system of flood forecasting be developed. The recommendations on the Parañaque Spillway, the dredging



of the lake, and dyking for flood protection are contained in House Bill 1276 filed by Congressmen R. Javier, D. Tinga, E. Tanjuatco, N. Joaquin, F. Sumulong, J. Chipeco, Jr. and others, and had generally received favorable indorsements, together with the other measures, from the Department of Science and Technology (DOST) Special Task Force for Laguna de Bay.

Coordinated Efforts for an Integrated Lake and Watershed Management. We return to the cycles in nature, in the ecosystem, and realize the myriad possibilities of man's interventions along these cycles through resources utilization and pollution, or conservation.

Water in nature, for instance, as it passes through the cycle of evaporation, condensation and rainfall supports man's agricultural, domestic, and industrial activities, as well as fishery, which may be conflicting or complementary depending on their quality and quantity demands and socio-political and economic factors, while being laden with oxides of sulfur and nitrogen, with sewage, mercury, or cyanide of fertilizers and pesticides along the way. It is now obvious that lake and watershed management is a multidisciplinary effort by a cohesive body capable of implementing collective measures, such as regional treatment plants, and "basin-wide" rules and regulations.

Fishery, for example, is not just a matter of providing fish in Laguna de Bay, although this aspect alone is already a socially, politically and scientifically/technogically volatile issue involving questions of jurisdiction, illegal fishing practices, research and development, coordinating fishermen groups, non-governmental organizations and government agencies in planning and programming. It also involves maintaining a lake quality of Class "C" through environmental protection, and ensuring that there is adequate water in the lake, in the first place.

Although strong arguments have been forwarded for a regional water management agency, the perplexing question still remains on how the agency's political structure can be arranged so that it is conducive to efficiency and equity. It should console us to know that even in the United Kingdom, institutions for water resources management are still evolving and adapting to changing circumstances.

Parting Remarks

It is always tempting to ask what then is the future of Laguna de Bay. The answer lies in our social conscience. For so long as the desire for a better quality of life remains, so long as we value our rivers, streams and lakes as well as the life that is dependent on them for its existence, so long will the lake flow productive and clean.

Julian D. Centeno, Jr. is the Assistant General Manager of the Laguna Lake Development Authority. A graduate of the Asian Institute of Technology in Thailand and the Tokyo Institute of Technology in Japan, he also teaches environmental engineering at the graduate level of the UP College of Engineering. His articles have appeared in ***Water Bulletin, Philippine Water Supply and Management,*** *and* ***The Thomasian Engineer.***

Futurism: A Must for National Agenda

Gil B. *Santos*
Trustee, PFSI

"Personal robots to wake you up and prepare your breakfast... Cars powered by fuels harnessed from ordinary tap water... Millions of financial transactions in a totally cashless society... All levels of formal education accessible right in the comfort of your own home..."

Impossible? Maybe not in the very near future. Even right now, there is continuous search for alternative sources of energy. A 'cashless' society is almost inevitable with proliferation of plastic money. And there have been initial efforts to offer formal education through Non-Governmental Organizations (NGOs). So/ what does the future have in store for us? And how can we make this knowledge for us today? This is what Futurism tries to answer.

Futurism is the modern science of methodology and logical deductive reasoning to deliberately and actively plot the future, so that the necessary steps can be taken to influence this future. Simply putt this means making the future work for us today. For instance, if by all economic indications, the future seems bleak, legislations and policies can be implemented to avoid this economic bad news.

This is what the noted French writer Jean-Jacques Servan Schreiber did when he predicted in the 60/s that the United States would lead Europe in information. technology in the 80/s. The American writer Alvin Toffler, who wrote the *Third Wave* and the *Future Shock*, employed the same method in forecasting.

Dr. Jose P. Rizal was the Philippines' first known articulate futurist because he used the same deductive science when he serialized in the *La Solidaridad* his famous essay "The Philippines: A Century Hence." He was right when he predicted 100 years ago that the Spanish colonial days would end unless the colonial administration reformed; and that the United States was going to be interested in the Philippines in the 20th century.

In 1980,the Businessday Corporation/ publishers of the economic daily newspaper *Businessday*, in technical collaboration with the Filipinas Foundation, Inc., organized a two-day national conference on Futuristics in response to a growing interest in Futurism as a discipline prompted by the government's initiatives in long-term planning. The

conference participants agreed to organize and register the Philippine Futuristics Society, Inc. as a non-profit, non-sectarian and non-political organization as a focal point for developing awareness and options on present Philippine problems affecting the quality of future Filipino life.

But while Futuristics is not a subject in the Philippine educational system now, it is beginning to be a permanent fixture in the academic political and economic landscape. In the past two decades, non-government, non-profit and non-stock "think-tanks" have been organized. Among them are the Philippine Social Science Council (PSSC), the Center for Research and Communications (CRC), the Philippine Development Alternatives Foundation (PDAF) and the Philippine Futuristics Society, Inc. (PFSI).

And the progressive managements of the Catholic Educators Association of the Philippines (CEAP) and the Association of Non-Traditional Education of the Philippines (ANEP) are now considering the inclusion of futurism as a subject in their curriculum.

Introduction of Futuristics to the pre-schoolers in all public and private schools now will bring the Philippines abreast with the other advanced countries where they have started teaching their children futurism subjects — including environmental rehabilitation — as early as five years ago, like Japan, and as early as seven years ago in the Scandinavian countries.

The most important phase of Futuristics applicable in public administration is the evaluation of the human factor, his attitudes, culture and tradition, and to push it as the major portion of the solutions to local problems. These problems range from attitudes, work ethics, values, priorities and productivity.

The Philippine Futuristics Society, Inc. (PFSI), the Foundation for Community Organizations and Management Technology (FCOMT), the Philippine Development Alternative Foundation (PDAF), and the Philippine Social Science Council (PSSC) have joined resources to organize and design a national exercise — including the rural and marginalized sectors of the population — that will determine the Filipino vision of the 21st century, vis-a-vis his immediate surroundings and the international family of nations; and how the nation can win that dream. These three institutions, and others who joined them later, will not have any proprietary claim on the national visioning process which will involve all sectors — economic, social, ideological and political. But the final document from the exercise will serve as the national agenda for development because the visioning process will directly involve both the sovereign people land the political leadership working on it jointly, over a two-year schedule. Specific work programs are expected to be fashioned out of the exercise.

Rizal was right when he predicted 100 years ago that the Spanish colonial days would end unless the colonial administration reformed; and that the United States was going to be interested in the Philippines in the 20th century.

Futurism cannot be practiced by any single group of people or nation in a vacuum. The physical environment and the nations are ultimately interdependent of one another. The destruction of the tropical forests adversely affects the weather in the temperate nations, whose trade policies affect Third World nations in the tropics.

Thus, the futurists' exercises in the provincial level must necessarily include the scenarios of the world situation and the aspirations of the barangay population. A barangay must first be aware of the true developments in the municipality, the province, the region, the Philippines and its international neighbors.

Such scenarios will inform them of the market requirements for products, manufactured goods, services, and the quality of manpower in the next millennium. Then the barangay population can determine their own educational goals — they can tool up as needed — develop computer programmers, social scientists, hi-tech designers, blue collar workers, or traders, so they can be relevant to the future.

Futuristics spells the difference between mediocrity and top-of-the-line, or between mere survival and economic progress in the competitive 21st century.

Gil B. Santos, Trustee and Treasurer of the Philippine Futuristics Society, Inc.(PFSI), is a consultant on political and economic risk analysis. He is a former bureau chief of the Associated Press in Manila and Bangkok.

WANTED: A UNIFYING NATIONAL VISION FOR THE 21ST CENTURY

The political leadership has announced its official vision for the Philippines in the next century: continued investments into the industrial sector (60 percent of total investments with 6 percent to agriculture) will push the Gross National Product to be one of Asia's newly industrialized nations by year 2000; victory over poverty.

But realities show exactly the opposite: there is the centralized urban economy and endemic poverty in the rural areas that 60 percent of the rural populations live below the poverty level; and there is massive migration to the urban centers, swelling the urban poor ranks that 43 percent of the urban populations cannot meet their basic needs.

There is also the 120,000 hectare annual deforestation due to *kaingin* and illegal logging and by year 2000 — at the current rate of denudation — there will be no more rainforests. The croplands are so mangled by erosion that only 7 percent of the agricultural areas are uneroded; 75 percent of our corals and reefs have been destroyed by siltation and dynamite fishing and this in turn has marginalized 800,000 of our coastal fisher-

The social unrest and political instability, compounded by the total national domestic and foreign debt of $37.4 billion, and stagnation in the rural areas (in spite of government measures like the *Kalakalan 20* and rural banks) give rise to multidimensional national security problems.

Clearly we have a paradox. Our Gross National Poverty is outstripping our Gross National Product.

Majority of the population are either indifferent or ignorant of socioeconomic solutions to our problems because they regard these as measures forced on them by the cen-

Sen. Edgardo J. Angara addresses the 1989 Reports Launching of the Philippine Futuristics Society, Inc. (PFSI) at the Asian Institute of Management. PFSI is one of the organizations taking part in the national visioning exercises.

tral government in Manila, or they just do not have the time to think about them because their priority is day-to-day survival.

The country is moving into the last decade of this century. The 1990s can be a crucial watershed decade or it can simply be a replay of the 1970s.

The future depends on what we do as a nation in this next 10 years.

Four NGOs — the Philippine Futuristics Society, Inc. (PFSI), the Philippine Social Science Council (PSSC), the Foundation for Community Organizations and Management Technology (FCOMT) and the Philippine Development Alternative Foundation (PDAF) — believe that OUR 21st century national life depends on the voluntary, intensive and direct participation of our people in implementing a national socio-economic and political agenda.

The growing political awakening of the population, witnessed by the emergence of cause-oriented groups and non-governmental organizations in the countryside, supports the argument that people are the biggest part of our solutions to our problems.

National visioning exercises currently sponsored by the PFSI among corporations, by the Green Forum among six representative groups in Luzon, Visayas and Mindanao, by the Philippine Rural Reconstruction Movement among farmers in the Northern Luzon areas, by the FCOMT among the 40,000 families/households in Negros Occidental, among others, show the growing voluntary participation of our people in looking into the future.

Definitely our people want a better future and they are willing to actively do NOW whatever it takes to achieve that better future for their children.

"We are an archipelagic nation whose highly sectoral development has contributed to the fragmentation of our society over the decades," said Dr. Sixto K. Roxas, FCOMT chairman. He added, "We need to be united by a common vision to move ahead in the 21st century."

The visioning process itself is just as important as the vision or the end-product. The process will use direct consultas and must allow the rural population, including the minority groups and marginalized sectors, to articulate their vision.

At the same time, it must ensure that no one single vision of any group—the intelligentsia, the churches, the ideological sectors, or cause-oriented groups—are forced on the timid or inarticulate majority.

The process will use prospective analysis or futuristics readings of trends by social scientists on the local, national and global levels. These scenarios will be melded with the articulated visions of the people to come up with the workable vision of the Filipino people for the next millennium.

It will entail digging into our historical past, analyzing the current situation and trends, laying out the array of options and coming with possible outcomes.

A starting point of the visioning process is the physical inventory and assessment of the country's natural resources—the environment and its people.

The whole process is a three-stage exercise. The first stage covers a six-month period and some 140 consultas in the country's 13 regions. The second stage will cover an 18-month period with some 4,000 consultas nationwide.

The final stage will be a continuing implementation of the output, the popular de facto national agenda for sustainable development and growth. It should be an institutionalized vehicle of expression for the silent majority free of any political or ideological taint. It should be a bond for the Filipino nation working together to achieve their vision.

The Philippine Futuristics Society, Inc. (PFSI)

ENVIRONMENTAL FILM DOCUMENTARIES

In June 1983, veteran newsman and environmentalist Domingo C. Abadilla, former president of the Haribon Foundation, warned the Philippine Futuristics Society's forum on the Philippine forests:

"We are destroying our forests at the alarming rate of two hectares per hour...we shall have no forests left by the year 2000, a mere 16.5 years away...demand for domestic wood products is rising. There are only 2.7 million hectares of natural timber stand left of the original 16.5 million hectares of forest cover...forest conservation has become necessary for national survival."

The PFSI members got alarmed with Mr. Abadilla's paper and decided to act immediately. There was a need to spread the alarm. The objective was to educate the public about the need to start the conservation and rehabilitation of the ecosystems in which man depends for his life and survival, beginning with the forests, the mother of all ecosystems.

The second ecosystem is the arable areas in the lowlands and uplands dedicated to agriculture, or the croplands. Below the croplands is the third ecosystem: the wetlands or the swamps and mangroves. And the last ecosystem is the corals and reefs—the sea that provides man the marine life for his food.

The choice was made to use the most effective medium to carry out this educational program on the environment. There was no other choice but the 16-mm full-color film documentaries with long storage life so they can be part of the PFSI's data bank for future generations.

Thus, the first film documentary was the **Green Fuse,** on the degraded state of the Philippine forests which was finished in 1987. The Royal Netherlands Embassy and private corporations provided financial grants for this documentary. The second documentary was the **The Croplands: the Closing Frontier.** It was completed in May 1989 with financial assistance also from the Royal Netherlands Embassy and private companies.

Both films have been shown in the PFSI's 1989 international convention on environmental conservation and rehabilitation, on national television programs, in private schools and non-governmental and civic organizations.

They are used as in-house training aids in the Department of Environment and Natural Resources and the Department of Agriculture. They have been used by the urban planning schools of the University of the Philippines and member-schools of the Catholic Educators Association of the Philippines (CEAP) in their campaigns for ecological balance.

The Philippine Information Agency has been showing these films in their regional branches nationwide.

As of December 1989 some 12 million people in the country and abroad have seen these two documentaries.

The PFSI is embarking on the production of the third ecosystem film documentary **The Swamplands and Mangroves.** It is due for premier showing in June 1990 during the PFSI's second international conference cum exhibit on The Philippine Environment: Opportunities in Rehabilitation and Conservation.

Fr. Miguel Varela, S.J., PFSI vice president and CEAP Planning Director, said:

"We are trying to show these documentaries to our young people, especially starting with the grade school children whose formative years need to be influenced towards conservation and rehabilitation of the environment.

"We are mere trustees or borrowers of these ecosystems and our environment. The real owners are our children to whom we must return these resources in a much better state than when we got them.

"There is a dire need for the environmental education drive because we now realize that we have only one earth. We cannot get off it. And the environmental degradation in one continent adversely affects the other continents as well."

Newsbriefs

PNHS activities slated

The Philippine National Historical Society (PNHS) has scheduled several major conferences in 1990. These are:

1. Manila History Conference co-sponsored by the Manila Studies Program of the University of the Philippines (UP) Manila, the Manila Studies Association of the Pamantasan ng Lungsod ng Maynila, Adamson University, and the City Government of Manila.
June 23-25, 1990 in UP Manila.

2. National Conference on Urban History, at the Polytechnic University of the Philippines (PUP). co-sponsored by PUP.
September 19-21, 1990.

3. 11th National Conference on Local History, in Naga City co-sponsored by the Ateneo de Naga, the City Government of Naga, the Provincial Government of Camarines Sur, and the National Historical Institute.
October 24-27, 1990.

NHI Seminar

The National Historical Institute (NHI) sponsored the second "Kasaysayan ng Pilipinas" seminar-workshop on May 7-11, 1990 at the National Library Auditorium and Rizal Shrine in Fort Santiago in Intramuros.

The seminar-workshop was open to all high school, college and vocational students, and out-of-school youths.

Joint Women's Congress

The first Joint GO-NGO Congress for Women was held on March 31, 1990 at the Golden Shell Pavilion in Manila.

Women from the government and NGOs nationwide discussed and finalized a consolidated plan of action to hasten the integration of the Filipina in the development process.

Former NEDA Director-General Solita Monsod gave the keynote speech.

Colloquium on Agrarian Reform held

Distinguished international and local scholars and experts on agrarian reform and studies converged at the Sulo Hotel in Quezon City on March 26-30, 1990 for the International Colloquium on Agrarian Reform.

The gathering touched on the agrarian reform experiences of different countries, with emphasis on technical and operational aspects related to the Philippine Comprehensive Agrarian Reform Program.

President Corazon Aquino was the keynote speaker while UP Los Baños Chancellor Raul de Guzman delivered the welcome address.

The colloquium was sponsored by the Institute of Agrarian Studies of UP Los Baños, the Department of Agrarian Reform, the Asian Non-governmental Organization Coalition and the Food and Agriculture Organization of the United Nations.

PNHS-PUP reach accord

Dr. Leslie Bauzon, PNHS (Philippine National Historical Society) president, and Dr. Nemesio Prudente, president of the Polytechnic University of the Philippines (PUP), signed an agreement on April 18, 1990 to undertake joint activities in 1990 and 1991.

Under the agreement, the PNHS will assist PUP in the evaluation and development of the AB Philippine History course in PUP. They will also jointly sponsor and implement the First National Conference on Urban History and a lecture series on "History of Social Problems." Lastly, PNHS members will contribute articles to various PUP publications, especially to the Journal of Social History.

PSSC Working Committees formed

The Executive Board has announced the members of the PSSC Working Committees for 1990. The Committees are composed of members representing the member-associations: Linguistic Society of the Philippines (LSP), Philippine Association of Social Workers (PASW), Philippines Communication Society (PCS), Philippine Economic Society (PES), Philippine Geographical Society (PGS), Philippine Historical Association (PHA), Philippine National Historical Society (PNHS), Philippine Political Science Association (PPSA), Philippine Population Association (PPA), Philippine Soci-

ety for Public Administration (PSPA), Philippine Sociological Society (PSS), Philippine Statistical Association (PSA), Psychological Association of the Philippines (PAP), and Ugnayang Pang-Aghamtao (UGAT).

Institutional Development Committee

Chairman:
Lourdes S. Bautista (LSP)

Members:
Cynthia B. Bautista (PSS)
Ponciano L. Bennagen (UGAT)
Tito A. Mijares (PSA)
Amaryllis T. Torres (PAP)
Leslie E. Bauzon (PNHS)
Mercedes B. Concepcion (PPA)
Eugene Caccam, Representative of the Philippine Business for Social Progress (PBSP)
Representative of the International Institute for Rural Reconstruction (IRRI)

By-Laws Committee

Chairman:
Leonor M. Briones (PSPA)

Members:
Gabriel U. Iglesias (PSPA)
Rudy B. Rodil (UGAT)
Andrew B. Gonzalez, F.S.C. (LSP)
Raul I. Ingles (PCS)
Eliseo A. de Guzman (PPA)
Ex-Officio: Paterno R. Santos (PGS)

Finance and Business Affairs Committee

Chairman:
Marcelo M. Orense (PSA)

Members:
Pilar R. Jimenez (PSS)
Cayetano M. Paderanga (PES)
Ibarra M. Gonzalez, S.J. (PCS)
Ramon B. Cardenas (PES)
Cesar P. Macuja (PES)
Manuel M. Navarro (PGS)

Membership Committee

Chairman:
Evelina A. Pangalangan (PASW)

Members:
Carmencita T. Aguilar (PPSA)
Georgina R. Encanto (PCS)
Imelda Z. Feranil (PPA)
Bonifacio S. Salamanca (PHA)

Ex-Officio:
Dante B. Canlas (PES)

Research Committee

Chairman:
Hector B. Morada (PPA)

Members:
Robert G. Salazar (PSS)
Telesforo W. Luna (PGS)
Erlinda R. Henson (PAP)
Emy M. Pascasio (LSP)
Alex B. Brillantes, Jr. (PSPA)
Gilberto M. Llanto (PES)
Rosario M. Cortes (PHA)
Anna P. Tabunda (PSA)
Teresa Carino (PPSA)
Teresa H. Stuart (PCS)
Evelina A. Pangalangan (PASW)

Ex-Officio:
Lita J. Domingo (PPA)

Social Issues Committee

Chairman:
Carmencita T. Aguilar (PPSA)

Members:
Ibarra M. Gonzalez, S.J. (PCS)
Imelda K. Villaluz (UGAT)
Domingo C. Salita (PGS)
Leslie E. Bauzon (PNHS)
Amaryllis T. Torres (PAP)
Romulo A. Virola (PSA)
Wilfredo L. Alberca (LSP)
Bonifacio S. Salamanca (PHA)
Renato A. Ocampo, S.J. (PSS)
Gabriel U. Iglesias (PSPA)
Corazon M. Raymundo (PPA)
Gloria A. Gonzalez (PASW)
Benjamin E. Diokno (PES)

Ex-Officio:
Socorro L. Reyes (PPSA)

Publications Committee

Chairman:
Georgina R. Encanto (PCS)

Members:
Ricardo G. Abad (PSS)
Ruperto P. Alonzo (PES)
Leslie E. Bauzon (PNHS)
Victoria A. Bautista (PSPA)
Olivia C. Caoili (PPSA)
Lilia H. Constantino (PSA)
Rosario M. Cortes (PHA)
Andrew B. Gonzalez, F.S.C. (LSP)
Meliton B. Juanico (PGS)
Zelda C. Zablan (PPA)

Ex-Officio:
Michael L. Tan (UGAT)

Nominations Committee

Chairman:
Paterno R. Santos (PGS)

Members:
Ruperto P. Alonzo (PES)
Mercedes B. Suleik (PSA)

Ex-Officio:
Leonor M. Briones (PSPA)

Now available at the Central Subscription Service

SOCIAL SCIENCE AND THE ECONOMIC RECOVERY

Contains the papers and proceedings of the second National Social Science Congress held in 1988.

Editors: Allen L. Tan
Ruperto P. Alonzo
Alex B. Brillantes, Jr.
with the assistance of Rachel Angela P. Anosan

ORDER FORM

Please send me _____ copies of the **Social Science and the Economic Recovery.**
150 pesos (bookpaper) 120 pesos (newsprint)

( ) Enclosed payment of:
Money Order _____
Check No. _____

Please make check and money order payable to the PSSC Central Subscription Service.

( ) Please bill me later

_____
Signature

Name/Company _____

Address _____

Send back this order form with your payment to:

PSSC Central Subscription Service
PO Box 205, Up Post Office
Diliman, Quezon City

SUBSCRIPTION FORM

PSSC Social Science Information

Please check appropriate box:

I. I would like to enter a _____ one year subscription _____ more than a year (specify) _____

II. I am enclosing payment of: _____ money order _____ check

Subscription rates: P50.00 (Philippines) for 1 year US $8.00 (other countries) for 1 year

Name _____
Address _____
Signature _____

Please mail to:
PSSC CENTRAL SUBSCRIPTION SERVICE
PO Box 205, UP Post Office
Diliman, Quezon City

New Publications

A SOURCEBOOK OF ORGANIZATIONS IN PHILIPPINE UPLANDS DEVELOPMENT. Romeo B. Lee. Philippine Uplands Resource Center (PURC). 1990.

A SOURCEBOOK contains relevant information on 193 organizations actively involved in the development of upland communities and people

SOIL EROSION CONTROL MEASURES FOR THE UPLANDS. Valerio T. Rabanal and Domingo M. Ramirez. PURC. 1990.

This book discusses 3 major types of soil erosion control measures suitable for upland communities.

THE ROLE OF SMALL AND MEDIUM-SCALE MANUFACTURING INDUSTRIES IN INDUSTRIAL DEVELOPMENT: The Experience of Selected Asian Countries. Asian Development Bank (ADB). 1990.

This book is the result of an ADB study on the role of small and medium-scale industries (SMIs) in selected developing member-nations of the ADB. The study reviewed the performance of SMIs, analyzed their constraints, examined the strength and weaknesses of SMI support schemes and policies, and identified appropriate strategies for promoting SMIs.

THE AGRICULTURAL DEVELOPMENT COUNCIL: A History. Russell Stevenson and Virginia O. Locke. Winrock International Institute for Agricultural Development. 1989.

Stevenson and Locke put in book form the record of the Council's evolution and work from its inception in 1953 till its merger with the International Agricultural Development Service and Winrock International Livestock Research and Training Center in 1985, to become the Winrock International Institute for Agricultural Development.

STATUS OF WOMEN. RUSHSAP (Regional Unit for Social and Human Sciences) Series on Monographs and Occasional Papers. United Nations Educational, Scientific and Cultural Organization (UNESCO). 1989.

STATUS OF WOMEN is a seven-volume series in which existing researches and statistical data on women are consolidated. The series also contains reports on their present-day situation. The status of women in Afghanistan, China, Laos, the Maldives, Mongolia, Thailand, and Vietnam were surveyed.

INDONESIA: A Socio-Economic Profile. Selo Soemardjan. **INDIA: A Socio-Economic Profile.** Brij Raj Chauhan. Association of Asian Social Science Research Councils (AASSREC). 1988.

These works by Soemardjan and Chauhan constitute part of the Introducing Asian Societies Series, a project of the AASSREC

This series consists of monographs on various Asian nations intended to develop social science teaching materials primarily for secondary school students.

Publishers' Addresses

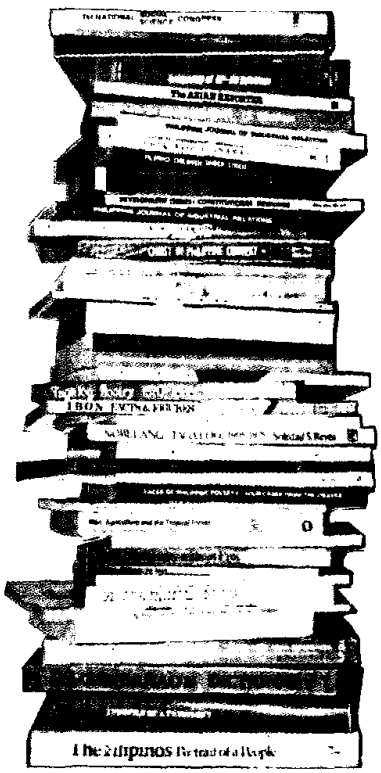
Sterling Publishers Private Ltd.
L-10, Green Park Extension,
New Delhi, India 110016
(Sterling publishes the Introducing Asian Societies in behalf of AASSREC)

Philippine Uplands Resource Center Research Center,
De La Salle University
Taft Avenue, Manila

Economics and Development Resource Center
Asian Development Bank
P.O. Box 789 Manila, Philippines

Winrock International Institute for Agricultural Development
Petit Jean Mountain
Morrilton, AR 72110 USA

RUSHSAP
UNESCO P.O. Box 967
Prakanong Post Office
Bangkok 10110, Thailand



SOCIAL SCIENCE INFORMATION

Philippine Social Science Council
P.O. Box 205 UP Post Office, Diliman, Quezon City, 3004

May be opened for postal inspection