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## SOCIAL SCIENCE INFORMATION

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## SOCIAL SCIENCE INFORMATION



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## Editorial

# NGOs AS EFFECTIVE CHANGE AGENTS FOR ENVIRONMENTAL PROTECTION

It is with a feeling of disenchantment that we write this piece, thinking of the seemingly low priority given by government to the massive resource depletion and environmental degradation transpiring in the Philippines today. Last June 5, the country observed World Environment Day and the whole month of June was declared Philippine Environment Month. But the month passed by with little visible and sustained moves from both the public and private sectors to reverse the trend toward environmental crisis.

It has been observed that the Philippines does not only suffer from but also contributes to the following global events stemming from the historic depletion and degradation of natural resources: worldwide desertification of 6 million hectares of agricultural lands annually; annual destruction of 11 million hectares of the earth's tropical rainforests; global atmospheric warming; acid rain; the ozone hole in Antarctica and resultant rise in cancer incidents; the El Niño phenomenon; the acute shortage of firewood; the slow demise of oceans and seas; and the pervasive and chronic poverty in famine-stricken Third World countries.

As to the state of the Philippine environment, the reader is referred to the articles contained in this issue. The apocalyptic facts they reveal need to be repeated if only to drive home the point that now is the time for drastic and sustained action, before national and global ecological imbalance becomes irreversible and irremediable. Unless Filipinos stop depleting their resources at the current rate deemed by experts faster than nature's regenerative capacity, the Philippines may become a wasteland in 20 years. By that time, not all our piety nor our wit can bring back the once-pristine and relatively bountiful state of our environment. There is a need then to disabuse the minds of our countrymen that at present the country is brimming with untapped resources. We used to be fairly rich in resources even during our exploitative colonial history, but now, sad to say, we can no longer claim this.

Reasons have been forwarded for this sorry state of our environment and resources: a rampaging population growth rate; unecological orientation of industrial/corporate activities; lack of knowledge of ecological principles among the citizenry; poverty and the need to survive; and lackluster implementation by the government of natural and human re-

source management and environmental protection policies and programs. It is becoming clear that government should take a large part of the blame for its indecisiveness with regard to the present environmental disturbances.

Let us briefly take up the causes one by one. As Malthus says, population tends to outrun resources (until decimating factors come in) and the sheer number of people in the archipelago has resulted to an increasingly high man-land ratio which is demonstrated by people now spilling over to the uplands and contributing to their denudation. The national government as a sovereign institution should not allow itself to be swayed over by the Catholic Church to its population program advocating the use of natural birth control methods. Since we have to live with the Western-influenced, free enterprise and high-technology economic system with its greed and obsession for ever-increasing GNPs [instead of increasing net human benefits (NHBs)], the government should have been firm in regulating the pollutive and degradational activities of the unconscionable purveyors of this system. A strategy of selective closure should have been also exercised with regard to pollutive and extractive (i.e., in the raw material, labor and capital sense) activities of multinational companies. The ignorance of our people about life support systems could have been lessened had environmental education been ingrained both early in time (at least in 1972 when the Club of Rome and the UN Stockholm Conference on the Environment dramatized the limits to growth) and in the school curricula. The poverty that pushes people to the uplands and to urban areas because of lessened agricultural opportunities in the rural lowlands could have been avoided had the government been more resolute in implementing its programs of rural entitlement through land reform and rural empowerment in terms of local freedom in resource and tax use.

The government could have dealt with the above causes effectively if it had the requisite political will. It is also observed that in a developing country like the Philippines, questions about ecological balance pale beside issues of slow economic growth and unequal distribution of wealth as she strives to become a newly industrialized country (NIC) soon. But environmental quality should be given equal treatment within this triad of essential development concerns. A sustainable development cannot be

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# POPULATION, NATURAL RESOURCES AND ENVIRONMENT: PRESENT CRISIS AND ALTERNATIVE PATHS TO SUSTAINABLE DEVELOPMENT

by Candido A. Cabrido, Jr.

## Introduction

Sound businesses are not run by paying dividends out of capital. We have drawn heavily on our capital in such a way that we have depleted it. "Mining" our environmental/natural resources beyond their thresholds has irreversibly damaged most of them. Our present environmental problems are due to four major reasons: 1) corporate greed for profit; 2) ignorance of ecosystem dynamics and its negative feedback system; 3) poverty and human survival; and 4) anemic performance of the past administration in the enforcement of resource conservation and environmental protection measures and implementation of resource development programs.

This paper discusses the effects of poverty and human survival on population and resource balance.

## Problems and Issues on Environment and Resource Use

Today, we can no longer claim that we are rich in natural resources. The following states of the environment and natural resources support this contention:

1. About 21.12 million hectares or 73 per cent of the total land area of the country are currently suffering from various degrees of soil erosion<sup>1</sup>. Severe erosion of topsoil is occurring in 5.3 million hectares of land mostly located in steeply sloping hilly lands and uplands. Eroded soils in these areas are no longer fit for crop cultivation. Accelerated erosion is caused by logging, shifting cultivation and grazing in hilly and upland areas. The removal of

vegetative cover exposes the soil to the impact of raindrops which detach soil particles and carry them downstream through water run-off. Increasing population pressure in the uplands increase erosion rates during the rainy season.

2. Out of the total forest area (i.e., classified forest lands) of about 15.8 million hectares, it was estimated that only about 7.1 million hectares (45 percent)<sup>2</sup> are with forest cover, a large portion of which consists of younger and less productive secondary growth. Only a minimal area of 1.2 million hectares are old-growth dipterocarp forests (i.e., commercially valuable species dominated by hardwoods known as the Philippine mahogany)<sup>3</sup> which used to cover about 10 million hectares in the 1950s. A wide gap exists between the rate of deforestation which was reported to average to about 120,000 hectares per year and the rate of reforestation which only stands at an average of about 50,000 hectares per year. Massive deforestation is attributed to the indiscriminate logging by private concessionaires, illegal logging, and the rapid increase of upland population. Today, about 18 million people (70 percent are landless) live in the upland areas of which about 8 to 10 million are farming on forest land. Many of the upland immigrants are impoverished people with an average annual per capita income of P2,168 in 1985 which was way below the poverty line. The lack of security of most of the upland dwellers resulted to the extensive cultivation of the land without the adoption of any conservation measures, thereby degrading the land. With the

land degraded, the success of reforestation program even becomes more difficult.

3. The recent statistical trend (1983-1986) in fishery production<sup>4</sup> shows that municipal fisheries' catch is levelling off and declining in some areas which indicates that the maximum sustainable yield has been or almost reached. This means that further increase in yield is not possible without hurting the stock. Municipal fisheries production grew from 640,000 metric tons in 1973 to 1,146,000 metric tons in 1983. However, the succeeding years (1984-1986) registered a decline in municipal fisheries production by an average of 77,000 metric tons per year. Overexploitation of fishery resources is a result of intensive fishing effort which is brought about by an increase in the number of fishermen and boats, and destructive fishing methods. The fisheries sector employs about 1 million persons of which around 773,000 are engaged in municipal fishing. Most of the fishing households (about 75 percent) are poor and have few alternative livelihood, thus driving them to overfish and employ destructive methods (e.g., dynamite fishing) when catch per unit effort begins to decline.

4. Mangroves and coral reefs which are vital ecosystems for coastal fisheries have been depleted at alarming rates. Mangrove stands are down to 149,000 hectares as compared to 450,000 hectares in 1918<sup>2</sup> while coral reefs remaining in excellent to good conditions were reported to be only 30 percent in a survey conducted by the MNR (now DENR) in 1976 to 1981 and have

further deteriorated during the late eighties due to chemical and sediment pollution of coastal waters, and destructive fishing practices such as dynamite fishing, *muro-ami* fishing and trawling. Mangrove destruction was attributed to rampant cutting for charcoal and fuelwood production and forest clearing to give way to fishpond development. The growth of the coastal communities also brought about the clearing of mangrove forest for residential, commercial and industrial establishment.

5. The major rivers in Metro Manila such as the *Pasig*, *Tullahan-Tinajeros* and *San Juan* rivers were reported to be biologically dead (i.e., dissolved oxygen content is below the minimum standard of 5 milligrams per liter) due to pollution from industries and household wastes. Only about 12 percent of Metro Manila's population of about 8 million (of which about 35 percent live below the poverty threshold) are served by waste disposal. Nationwide, about 40 major rivers out of 120 surveyed in 1978 were classified as "dead" or heavily polluted due to domestic sewage, industrial waste, agricultural wastes and community refuse<sup>5</sup>. These rivers now pose a health hazard to the population.

6. Rapid urbanization has encroached mostly on prime agricultural lands, thereby reducing further our productive lands. This fact has not been properly documented because of the difficulty of monitoring the slow but steady land use conversion. In Metro Manila alone, a 35 percent decrease in ricelands due to urban encroachment was noted to occur from 1972 to 1976. The total potential agricultural lands in the country is about 14.7 million hectares<sup>6</sup>. Presently, 11.6 million hectares are actively being cultivated leaving an area of only 3.1 million hectares for potential expansion. The productive soils in the lowlands are threatened if the trend in urban encroachment is not arrested.

## Conclusions and Recommendations

1. Environmental and natural resources degradation are inextricably linked to population and poverty. Soil erosion in the uplands, mangrove deforestation, coral reef destruction and overfishing are among the environmental problems attributable to the activities of resource-based impoverished communities. The quantity, quality and behavior of these populations were grossly incompatible with the quantity, quality and behavior of the environment/natural resources in their locality such that a crisis in their interactions has resulted. The strategy for sustainable development should therefore address simultaneously the problems and issues of poverty and population growth — the major determinants of environmental and natural resources degradation. Unless the root causes of rural poverty are known and solved, environmental resources will remain under population pressure.

2. On the basis of population-environment-natural resource balance, the country is presently confronted with several crises: soil quality, forestry, coastal fishery and river quality. There is no single and simple solution to these crises. Formulation of policies and other measures to address critical environmental problems should, however, consider the intricate relationships between population-environment-natural resources. In order to achieve sustainable development, the basic principle is to balance the rate of exploitation with the rate of resources regeneration or renewal either through natural or artificial means. Achieving this would mean establishing a sustainable level of population in a given ecosystem. Sustainable population level could be brought about by policies and programs on:

- a. improving access of poor rural communities to resources through structural reforms (i.e., land reform,

community resource management) and proper pricing of resource rents to discourage private firms from over-exploiting environmental goods and services;

- b. strengthening the rights of local communities (including ethnic groups) to manage and benefit from communal natural resources (this will promote rural development and counteract excessive urbanization and rural emigration);
- c. developing appropriate technology (technologies which increase production while simultaneously conserving the resources);
- d. improving access to family planning services and other social services (health, nutrition, education, etc.);
- e. providing the necessary support services to increase productivity (such as extension, credit, infrastructure and market support);
- f. informing and educating the target population on the aspects of production with conservation;
- g. providing other sources of livelihood, especially non-farm livelihood (to absorb surplus labor and excess population);
- h. intensifying lowland agriculture through multiple cropping (to absorb surplus labor and prevent upland migration);
- i. other poverty alleviation-oriented projects such as *Integrated social forestry*, *Industrial Tree Plantation*, *fish Processing*, etc.

The aforementioned is the minimum set of policy measures which should be undertaken simultaneously in order to attain the goal of sustainable development.

3. In support to the foregoing, various researches need to be undertaken to establish the "missing links" and fill the data gaps in the frame-

work for population-environment-natural resource balance. The relevant research subjects are as follows: *sustainable population or optimum population; population carrying capacity of ecosystems or resources; resource conservation technologies; and resource-access management by local communities.*

4. It is commonly observed that women were oftentimes taken as mere quantities or static organisms in resource development planning. It should be recognized that women are potential resource managers owing to their traditional role in the family. Household activities (e.g., washing, water harvesting, firewood gathering, backyard vegetable gardening, backyard livestock raising, marketing of produce, food processing of farm and fisheries produce, and others) are mostly undertaken by the female population, thereby making them primary users of environmental resources. Women also play a key role in reducing losses and wastage of farm and fisheries produce (e.g., post-harvest losses of rice and other crops, and fisheries), thus increasing income of the family while conserving the supply of resources. Women therefore should also be the target of resource management policies and resource development programs of the govern-

ment in order to improve their status as resource managers. The provision of training, credit and better access to income-generating activities (e.g., food and other resource processing) and technology will enhance the role of women in rural development and resource conservation.

5. Integration of population, environment and natural resources in development plans calls for comprehensive planning at the regional and local levels. The key agencies to implement the integrated approach should be multi-sectoral in perspective and institutional structure. Thus, integrated planning can be best done by local governments in close collaboration with NEDA and DENR regional offices. Population-environment-natural resource planning should ideally be decentralized and done at the regional and local levels. It is likewise proposed that regional and local planners be trained on population-environment-natural resource planning. In population-environment-resource planning, whether sectoral or multi-sectoral, it is essential that the planners should have the following basic data/information as inputs:

- a. how many people are involved (i.e., population size);
- b. where they are or will be

located (i.e., spatial distribution);

- c. age and sex distribution;
- d. socio-economic status (health, education, nutrition, employment, income, etc.);
- e. access to resources
- f. activities (livelihood and household);
- g. technology and management schemes employed;
- h. environment/natural resources inventory (potentials and limitations) and status; (resource use and environmental problems).

6. On the basis of the above-mentioned data/information inputs, population-environment-balance can be evaluated and projected using certain tools and techniques. Four major tasks should be undertaken by the planner in planning for population-environment balance:

- a. identification of the main threats to sustainability of a given resource;
- b. determination of the importance of the resource to the livelihood of the population;
- c. projections of resources (e.g., land and water) availability for the production of food and other basic needs

(Continued on page 11)

## NOTES

<sup>1</sup> Agricultural Land Management and Evaluation Division (ALMED), Bureau of Soils and Water Management, *Erosion Distribution, Philippines, 1988.*

<sup>2</sup> Swedish Space Corporation, *Mapping of the Natural Conditions of the Philippines* (Solna Sweden, 1988).

<sup>3</sup> Gulmático, *Results of the Forest Resource Inventory Project*, RP-German Resources Inventory Project.

<sup>4</sup> Bureau of Fisheries and Aquatic Resources, *Philippine Fisheries Profile, 1986.*

<sup>5</sup> National Environmental Protection Council, *Philippine Environment 1979, Third Annual Report.*

<sup>6</sup> Bureau of Soils and Water Management, *1983 Report.*



This article is a part of the paper presented to the "National Conference on Population and Development" sponsored by the Population Commission (POPCOM) and the Bureau of Local Government (DLG), held at the Manila Hotel on September 4, 1989.

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# SOCIAL SCIENCE AND ENVIRONMENTAL ISSUES

by Rachel Angela P. Anosan

The purpose of this paper is to describe the type of involvement of Filipino social scientists in environmental issues. It will identify the issues on which social scientists have focused their efforts and describe the type of research and policy advice they have undertaken.

Social science activities including research programs and centers working on these issues will be identified. The documentation will not be exhaustive but is merely meant to give examples of the type of involvement in environmental issues. Most of the discussion will concentrate on upland studies since this is one area that seems to have drawn the heaviest involvement from the social sciences.

A brief discussion of several systems model for development planning will also be presented.

## UPLAND STUDIES

As mentioned earlier, Filipino social scientists involved in environmental research have concentrated primarily on upland development. The motivation for involvement in upland development is both environmental and social, i. e., the concern for the worsening problem of upland ecological imbalance and for the plight of upland occupants, most of whom are pioneer shifting cultivators. Social scientists have been concerned with the interaction among the changing upland ecosystems, migrant settlers and other small scale farmers in the uplands as well as with government policies regarding upland settlers and forest resource use.

## Research Approach

Most of the research described in this paper explore the adequacy and appropriateness of government policies and development programs for the forest settlers and for the

forest ecosystem. Researchers have attempted to recommend ways by which these policies and programs could benefit the settlers in terms of increased productivity and equitability and at the same time promote ecosystems sustainability. Research is usually done at the micro-level with the household and the community as units of analysis. The approach is to examine the interaction between the upland ecosystem and human resource use. Analyses usually focused on the upland community in its ecological, physical and socio-cultural environments.

Upland research has also been done by multidisciplinary teams where social scientists collaborate with natural scientists, agriculture and forestry experts, among others. Such an approach is encouraged in view of the fact that the uplands represent a complex system of social, biophysical, cultural, and political elements. It is believed that collaborative research would pave the way for a more holistic understanding of and eventually, better development for the uplands.

The following discussion includes an enumeration of some research programs/centers for upland development where social scientists have been actively involved and a brief description of some of their significant research projects:

1. The Bureau of Forest Development Upland Development Program is an agency-based program of research, training, and experimentation designed to develop participatory approaches to upland development. It uses a working group approach, combining people of varied disciplines (including the social sciences) from different institutions.

2. The Institute of Environmental Science and Management of the UP Los Banos pioneered an

inter-disciplinary approach to upland hydro-ecology and agroecosystems research and training. It maintains a network of upland field projects as part of its research and training programs. It has often been able to forge linkages with line agencies and other policymaking bodies.

3. The Cordillera Studies Center of the UP College Baguio is aimed at developing interdisciplinary research and training focusing on the lands and peoples of the Cordilleras.

4. The De La Salle University Integrated Research Center has programs for research and training in participatory approaches to development and management of upland resources. It is developing a data bank, clearing house and a policy study center to help teachers, students, researchers, and policymakers concerned with upland resources.

5. The Silliman University Research Center has programs for developing upland agroforestry models using a multidisciplinary approach.

6. The Institute of Philippine Culture of the Ateneo de Manila University has conducted a number of upland studies. Some members of its research staff also served in the Upland Development Working Group of the Bureau of Forest Development.

## Some Research Projects

One research program directly concerned with formulating the integrated social forestry policy is the Upland Development Program of the Bureau of Forest Development. Interested mainly on levels and types of people's participation, the BFD has often contracted research aimed to generate data that serve as inputs to the Integrated Social Forestry policy.

In its initial phase, the program called for case studies of eight pilot forestry projects (Aguilar, 1986; 1982). Four of these were studied by the Institute of Philippine Culture of the Ateneo de Manila University and the other four by the Integrated Research Center of the De La Salle University.

The studies utilized a three-pronged approach. First, a description of the socio-economic, cultural and biophysical conditions of the community was made. Second, the circumstances surrounding the formulation, introduction, and establishment of the project were traced. Data on these two areas provided the context in which the structure, strategies, management, and impact of the forestry projects were assessed. Third, the extent of popular participation in the decision-making, implementation, and sharing of benefits among participants and the relationship between participation and project results were looked into.

The findings from these studies were then crystallized into "lessons learned" (policy and development implications) which served as inputs to the conceptualization and planning of the integrated social forestry policy (ISFP).

The second phase of the upland development program centered on the design and implementation of several pilot participatory upland development projects that carry out appropriate strategies learned in the initial phase. Agroforestry and community appraisal, community organizing, and process documentation research were conducted in these pilot sites. Social scientists worked in multi-disciplinary teams with agriculture and social forestry experts and BFD project field coordinators to design a rapid community appraisal for upland agroecosystems. With this method, the team obtained baseline data on the physical, biological and socio-economic profiles of each community, determined community problem and potentials and identified research questions that can be addressed in future commu-

nity appraisals. Information generated were used in designing site-specific development projects. Same information was also utilized by community organizers in assisting upland settlers formulate development projects that address their needs (Lamug, 1985).

Process documentation research were then conducted in three pilot projects by the Ateneo de Manila Institute of Philippine Culture and the De La Salle University Integrated Research Center. The main thrusts of the research were to elicit the processes by which specific project activities were planned and carried out with the participation of upland farmers and to identify the strategies that ensured this participation. This is to determine the critical procedural and policy issues that must be attended to under the program (Chiong-Javier 1987, Borlagdan 1987).

Some studies were also conducted to evaluate the integrated social forestry policy (ISFP). Fujisaka (1986 b) examined the settlement shifting cultivation, evolving patterns of resource use, and effects on the ecosystem in four upland communities in the Eastern Sierra Madre Mountain. Likewise, he documented the experience of several ISFP projects. Data obtained were used to evaluate the ISFP in terms of potential effects on people and ecosystems. The factors evaluated included land tenure, size of individual holdings and land availability, design and implementation of the social forestry program, the participants to the program, their organizations, levels and type of their participation, forest resource use, shifting cultivation and other cropping practices. The author then pointed out some research and policy gaps in the program.

The Cordillera Studies Center (Botengan, et. al. 1985) studied one social forestry project site to find out the factors that determine participation in social forestry programs and reasons for reluctance to participate. The paper recommended ways to make social forestry sustainable.

Social and biological scientists from the International Rice Research Institute and the Department of Agriculture conducted a research at Claveria, Misamis Oriental. This was to address the problems of low productivity and the possibility that rice-based cropping systems may not be sustainable in such environments and to develop methods for on-farm adaptive research. One report on this project described upland soil conservation techniques practiced in the area and elaborated on a farmer-to-farmer method of technology transfer. (Fujisaka, no date a).

An interdisciplinary field research was undertaken in an upland swidden agricultural community aimed at understanding local, social, economic, and ecosystem dynamics of the studied community (Fujisaka and Capistrano, 1986). Specific topics dealt with were local patterns of migration and settlement, local social organizations and extant systems of cooperation and conflict, strategies of resource management and utilization, and the local ecosystem and the effects of human activities on it. The researchers examined the interaction among the ecosystem, the social system and national policy on upland development and then provided suggestions for a limited-cost, locally-appropriate and participatory social forestry or upland development strategies. Instructive recommendations for the continued implementation of such projects in the Philippines were also issued.

One significant aspect of the research was the description of the interaction between pioneer shifting cultivators and the tropical forest ecosystem and an examination of potentials for systems sustainability (Fujisaka, 1986c). The study proceeded from the premise that the farmers' practices which are based on their perceptions and knowledge about the local agro-ecosystems have evolved as a result of their experiences and experimentation. These practices, in turn, have transformed the local ecosystem. Research then was conducted to ex-



amine farmer practices, knowledge, perceptions and the interactive effects of these on the local ecosystem and to identify those factors probably leading to systems breakdown as well as aiding sustainability. Some implications of the findings to upland development were articulated.

Another interdisciplinary study illustrated the use of community and site-specific preliminary "diagnosis and design" research for upland technology (agroforestry) development (Torres and Raintree, 1986). The study is an example of more rapid and focused initial diagnosis and design work followed by further field experiments and testing of appropriate technologies. Focusing on an upland land reform area in Tabango, Leyte, the study started from the statement that if land reform is to succeed in upland communities where farmers actually till small tracts of land (usually under two hectares) technologies must be developed to make small holder upland farming sustainable.

The adoption of any introduced change or technology is largely determined by the acceptability of the new system by the farmers. A case study in an upland community in Negros Oriental demonstrated the importance of knowing the criteria used by farmers in land use decision-making with regard to changes and development programs in the uplands. The study was conducted to determine the system of land classification, household land use strategies, and actual land use. The influence of risk, site factors, and time allocation on the understanding of farmer land use decision-making can contribute to the design and implementation of alternative technologies and agroforestry schemes for development (Wollenberg, 1985).

Among the factors that threaten the long-term stability of the upland environment are the increase in upland population and the consequent decline in man-to-land ratio. Overexploitation of resources usually results as the migration into the

upland exceeds available resources. From a demographic viewpoint, other environmental studies have sought to explain ecosystems sustainability vis-a-vis population pressure.

Ma. Concepcion Cruz (1986) examined population pressure in Philippine upland communities with respect to conditions affecting migration. She presented a conceptual foundation for a study of the relationship between demographic pressure and environmental constraints including implications for technical and institutional change. This framework is useful in understanding the problems of population growth and migration in the uplands. Also presented were studies on the determinants of migration and the historical and social circumstances of movement. Major migration flows and patterns and the general characteristics of the migrants were discussed. An estimate of upland population was also presented.

Germelino Bautista (1989) explored the nature and causes of the forestry crisis in the Philippines as well as some issues that need to be addressed in the short and medium term. He discussed the role of the different agents i.e., the state, the loggers, and the upland migrants, in deforestation. He also presented and examined two conflicting positions with regards to the nature of the forestry problem, namely, the timber shortage view and the ecological crisis view.

### **Evolution of Research Strategies for the Uplands**

Some research strategies for studying the uplands have evolved from these previous studies and continue to be the models for other related research work on ecosystem studies.

#### **A. Farmer participatory research**

Among researchers interested in agroecosystems, there is a growing emphasis on on-farm farmer participatory research. It was expressed

that in terms of farming systems methodologies, a simple alternative for on-farm research and technology transfer might consist of understanding farmer practice, perception, and technical knowledge, using these and farmers experiments to help identify technical possibilities and research issues, and doing back-up research on a menu of alternatives that integrate farmer and researcher concerns and contributions.

Farmers participation is crucial at all stages of the research. In such a manner, problems are appreciated by both the farmers and the researchers. Farmer participation should not be limited to site description or merely asking them their problems. Local problems, farmer perceptions, practices and approaches to problems need to be carefully assessed so that changes in the research agenda and strategy may be undertaken following redefinition of basic problems. Findings from diagnostic research may be used to refine methods for assessing the situation of the farmers and their farming systems.

Drawing from research conducted in several upland communities in the Philippines and from an examination of some forestry projects and policies in some Southeast Asian upland communities, Fujisaka (1986c; no date a; b; 1987) presented a number of examples to demonstrate that much of the traditional technical and ecological knowledge and practices of farmers are systematic, rational, and technically sound given local conditions. Understanding these can facilitate identification of potentially beneficial and farmer-adoptable problem solving technologies or of research leading to such technical alternatives. A significant aspect of farmer participatory research is the attempt to understand the language and terms used by upland farmers to describe their environment and their practices. Environmental information is not perceived similarly by different upland cultural groups. Cognitive frameworks evolve within cultures to dis-

tinguish among environmental phenomena and these frameworks are all reflected in the language used by the members of the group. For example, land use terms employed by shifting cultivators reflect the limits of their environmental knowledge, as well as the categories and criteria used to evaluate land types (Wollenberg, 1985).

Specific data-gathering methods prescribed for this approach draw upon ethnographic techniques and includes questions about farmer categories and corresponding perceptions and practices (Fujisaka, 1987).

#### **B. Assessment for development potentials in technology (ADEPT)**

The farming unit as a system of human activity (operating in a cycle from planning to implementation, sustenance, evaluation of results and back to the initial phase) is used as the research point of entry in this methodology.

Three complementary research activities are recommended. Quick upland observation technique is designed to identify critical socio-cultural and biophysical areas that have to be studied in detail for the next phase of the research. This is done in an informal manner by a team of socio-cultural and biophysical researchers using a two-day quick ocular and interview survey techniques. The second step is the community profiling which gets a general picture of the community in the context of a planned development program, which in turn basically serves as a benchmark information for the community to where changes in the macro-level can be measured later. The last step is the case study thrust which emphasizes capturing micro-level data about the decision-making process within households monitored in one agricultural cycle.

The development of this research strategy was due to its facility for rapid collection and timeliness of data, cheapness, valid and reli-

able data and usefulness of data to upland development efforts. (Cadelina, 1985).

#### **C. Ecosystems model for upland change and development**

Drawing from lessons learned, issues, and problems raised in various research on the uplands, Fujisaka and Sajise (1986) developed a systems model for understanding change and development in the uplands. Conceptually, the model starts with the interaction among the tropical rainforest, the predominant upland ecosystem, and human activities within that ecosystem.

The tropical rainforest has been characterized as a dynamic and stable system in which human settlement, exploitation, and overuse of resources have led to degradation and destruction.

The current dynamic situation in the Philippine uplands involves several interacting factors, namely 1) an ecosystem or various agroecosystems in interaction with human groups; 2) increasing population; 3) different, naturally changing cultures, societies and technologies; and 4) efforts to develop improved technologies and to introduce and guide changes for upland development. Such changes may lead to continued ecological damage, resource depletion, and eventual systems collapse combined with severe negative downstream or downslope effects. Systems degradation and increasing population may, however, lead to the emergence of systems-adaptive resource use practices. These practices may either be naturally occurring agricultural intensification or research-based development of productive, stable, sustainable, and equitable technologies and strategies. Successful application of the latter requires associated institutional change, rationalization of natural resource use policies, adequate political will and economic change in the lowlands that would decrease migration to the uplands. These are presented in the diagram in Appendix A.

### **STUDIES ON POPULATION, RESOURCES, AND ENVIRONMENT**

While the population issue is a well-researched topic in the Philippines, efforts to study this in relation to the environment and natural resources are quite limited.

An exception is a major interdisciplinary study entitled *Population, Resources, Environment and the Philippine Future (PREPF)*. The PREPF was a future-oriented research undertaken by the Development Academy of the Philippines, and the School of Economics and the Population Institute of the University of the Philippines. It inquired into historical trends in Philippine society with respect to population, resources, environment, health, education and income sharing. It focused on the year 2000 in order to identify necessary policy actions at the present time by which to secure the "best" possible future out of a set of feasible and foreseeable futures.

As regards resources and environment, PREPF inquired into trends which characterize the use of the country's vital natural resources such as minerals, forestry and fisheries. It also looked into environmental pollution, energy and water adequacy. Drawing from data gathered from 1975 to 1977, scenarios for, as well as recommendations on how these resources can adequately meet the country's needs in the year 2000 and beyond, are presented.

Similarly, PREPF also examined population trends and presented alternative population projections. Projections are based on varying sets of assumptions on fertility, nuptiality, mortality, and migration.

Though the PREPF studied population, resources, and environment, no attempt was made to establish their interrelationship.

Earlier, the paper by Cruz (1986) presenting a conceptual framework for studying the relationship between population pressure and environmental constraints in the uplands was described.

## **Some systems models for sustainable development planning**

Following is a description of two systems models being developed for environmental research and development planning. These models draw upon human ecology principles and seek to depict the behaviors of and interactions of the social system with the natural ecosystem. The development of these models was prompted by the concern for the lack of appropriate paradigms for explaining the consequences on the social and ecological system of resource exploitation and development planning efforts. The emphasis is towards natural resources and ecosystem productivity, sustainability, and stability. The models discussed concerns the interrelationship among population, resources, and environment and land use planning.

### **A. Interrelationship Among Population, Resources, and Environment**

A model is being developed for the study of the interrelationships among population, resources, and environment and is meant to depict alternative scenarios towards sustainable development for countries relying heavily on their natural resources to propel economic growth (Cabrido 1988).

Sustainability is multi-dimensional consisting of socio-economic, ecological, and political dimensions. In ecological terms, sustainable development refers to exploitation without degradation; i.e., the rate of resource use is equal to the rate of resource renewal or the equilibrium between off-take and regeneration. In socio-economic terms, it means that the available/exploitable natural resources have the capacity to provide for the basic requirements of the population. This is based on the premise that there is equitable access to resources and sharing of

the fruits of production. Politically, sustainability involves the continuing political will and social responsibility in protecting and conserving environmental quality and natural resources integrity. Sustainability involves intergenerational equity-ensuring adequate supply for future generations.

A simple way of expressing the interrelationship between population, resources, and environment is needed for a better understanding of the factors or elements, processes, interactions and outcomes involved in a dynamic system. The following framework was developed in order to lay the groundwork for the future development of quantitative models. It depicts the interlocking relationships among population, resources and environment. Founded on the theory of systems dynamics which focuses on the immediate, intermediate and long term behavior of the system under investigation, the framework caters to the fact that the quality of relationships determines the quality of the environment and of life.

Two categories of variables drive the system of relationships. The first includes on one hand, status variables such as those on population dimension like size, age/sex structure, spatial distribution, and future projections and, on the other, population requirements of basic materials, resources stock, and environment quality. The second group of variables are those that drive the system like consumption habits, resource utilization, management and technology inputs, and other exogenous factors such as climate and environmental pollution. Under given inputs, the model will project the trends and ultimate outcome of a system under study. The model depicts the system's behavior under sustainable and non-sustainable development.

By plotting the maximum sustainable production of any renewable resource and the current level of production of that resource in the

proposed model, a development planner is in a position to determine the possible increment in production without hurting ecological or environmental quality and resource generating capacity. Surplus produced from surplus production at a particular time and the surplus that could be produced if production is increased to its optimal level may also be determined. This information generated from the model which can become the basis for determining the nature and magnitude of investments required and the amount of revenues that could be generated. Likewise, it will also be known whether the maximum sustainable level of a particular renewable resource has been exceeded.

This model is still being developed by the author. The functional relationships of the variables involved are still being defined and quantified.

### **B. Systems approach to land use planning**

Integrating the ecological dimension in physical and land use planning ensures the long-term sustainability of our natural resources and life-support system. This has often been neglected in the development planning of an area.

A systems approach to land use planning shows the strategic position and role of ecological parameters in the formulation, evaluation, and reformulation of a realistic and sound land use. This approach is interdisciplinary in nature as it tries to blend ecological factors with socio-economic, cultural, and political motives, objectives and targets in order to ensure short, medium, and long term viability of the land use plan (Cabrido, 1985).

There are two crucial factors that have to be considered in land use planning: ecosystem compatibility and resource carrying capacity. Ecosystem capability is concerned with possible alterations or disruptions that may be brought about by certain patterns of land use which



could significantly affect, in the long term, the integrity of ecological processes such as material and energy flow, diversity patterns, food chains, and ecological control. Meanwhile, resource carrying capacity is concerned with the natural capacity of a given resource (land, forest, energy, space, water, fisheries, minerals) to support present and future human populations on a sound environmental basis.

Optimum production and sustained productivity of an area under a given pattern of land use will be determined, more or less, by resource carrying capacity and ecosystem compatibility, respectively.

The systems approach works along the following basic principles: that land use should be ecologically sound and should be socio-economically, culturally and politically desirable and attainable. Ecological desirability and viability of a land use plan is screened first so that necessary adjustments for the plan to meet established ecological criteria can be made. The modified plan is then tested against the socio-economic and cultural considerations to isolate any incompatibilities. Alternatives are then designed to buffer or resolve these incompatibilities.

Input, process, output, methodology, sources and/or processing centers of data/information involved in land use planning are clearly defined in the systems approach. Process defines what should be done with the inputs and the outputs arising from the analysis. Outputs of one process could serve as inputs to the next succeeding process. Methods employed in the model include carrying capacity, environmental impact assessment, ecological profiling, social benefit cost-analysis, and constraints analysis. (Please see Appendix B for a graphical illustration of the model.)

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Ms. Anosan is a project leader of the Research and Training Division of the PSSC Secretariat. This paper was prepared for the conference of the Association of Asian Social Science Research Councils (AASSREC) held in New Zealand in September 1989.

## APPENDIX A

### ECOSYSTEMS DEGRADATION

migration to uplands  
greater population  
increased land demand  
more cropping, burning,  
and weeding per plot

increased timber demand  
destructive logging  
practices, more logging/  
deforestation, forest  
conversion, some  
commercial cropping  
systems

shifts to some commercial  
cropping systems, breakdown  
traditional systems,  
greater stratification,  
factions, resource strife,  
greater land and resource  
privatization, greater  
demand on land

use and adoption of  
inappropriate  
technologies

confused or ambiguous  
resource jurisdiction,  
lack of political will  
to enforce good policy

inappropriate introduced  
technologies and strategies  
for working with local  
communities

### TROPICAL FOREST-BASED AGROECOSYSTEMS

#### DEMOGRAPHIC HUMAN PRACTICES

#### ECONOMIC, HUMAN PRACTICES

#### SOCIAL CHANGE

#### CULTURAL CHANGE

#### INSTITUTIONAL LEGAL POLICY

#### UPLAND DEVELOPMENT

### ECOSYSTEMS SUSTAINABILITY

regeneration  
adequate fallows  
plot shifting,  
current shifting  
cultivation

decreased migration  
to the uplands

alternatives in  
the lowlands,  
decreased timber  
demands, less  
logging & destruc-  
tive practices

emergence of new,  
adaptive social &  
economic structures

innovation/experi-  
mentation, indi-  
genous knowledge,  
adoption of new re-  
source use & farming  
practices

implementation  
holistic and  
enlightened policy  
settle jurisdiction  
ambiguities

appropriate stra-  
tegies to work with  
uplanders, appro-  
priate technologies,  
technology testing  
and development,  
continued research

*(Continued from page 3)*

of the population (e.g., en-  
ergy, water, shelter, etc.) and  
projections of population re-  
quirements of food and other  
basic necessities;

- d. formulation of policies and  
programs (including invest-  
ment plans) needed to en-  
sure the sustainable use of  
the resource.

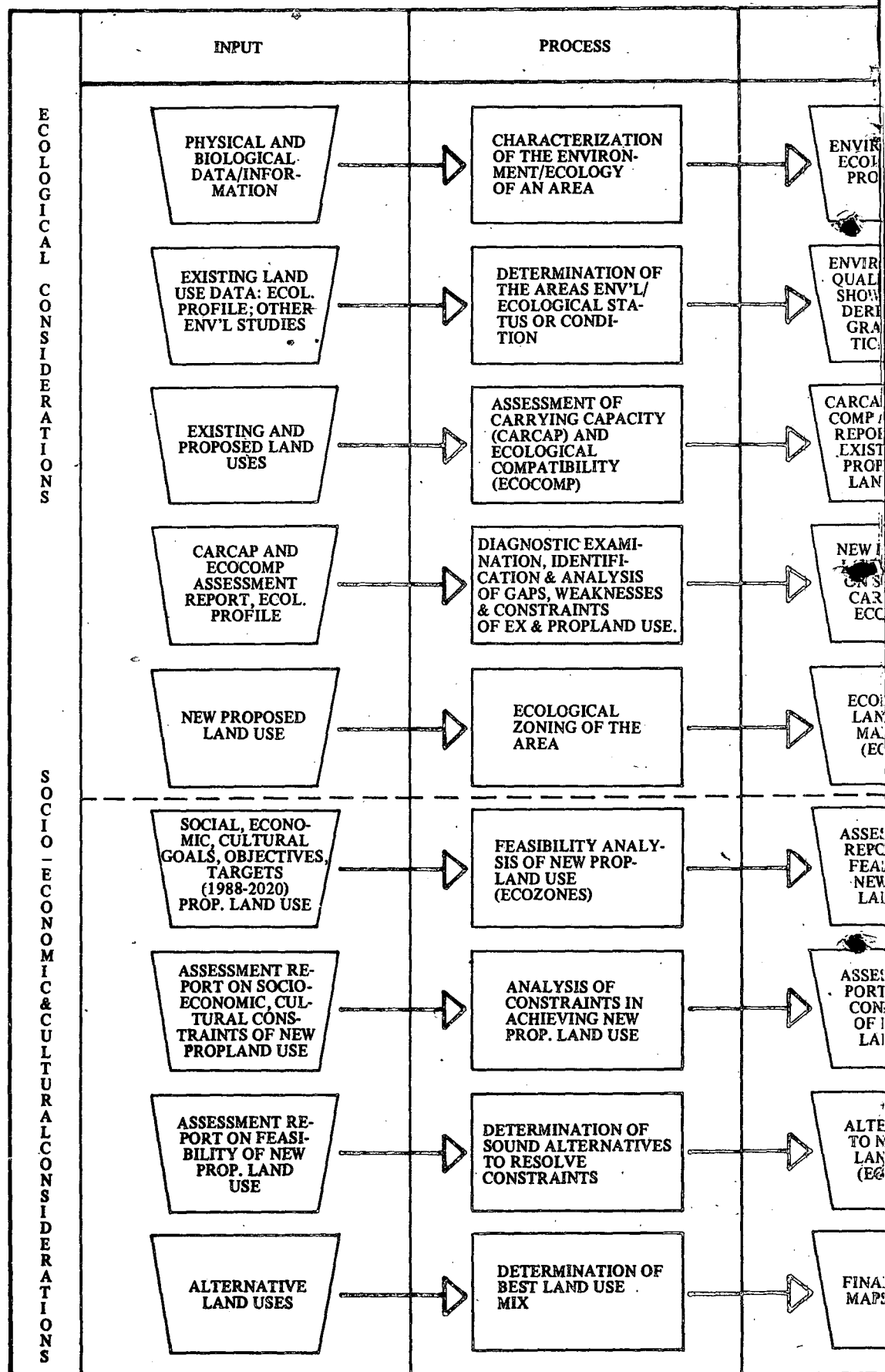
7. Another approach in the  
implementation of population-envi-  
ronment-natural resource integration  
is to incorporate family planning in  
the extension work of DA, DENR,  
DAR and other line agencies. Criti-  
cal environmental areas should be  
given priority in the extension work  
on family planning.

8. In order to protect our prime  
agricultural lands from slowly being  
eaten up by urban expansion and  
industrial uses, an agroecological  
zoning of the country should be  
undertaken and strictly enforced.  
Moreover, the system for monitoring  
agricultural land use conversion  
which is currently lodged under the  
Department of Agrarian Reform  
should be further strengthened and  
decentralized to involve other con-  
cerned agencies.

A clear understanding of the  
dynamics between population, envi-  
ronment and natural resources is a  
pre-requisite for sound decision and  
policy making.



**SYSTEMS  
APPROACH  
TO  
LAND  
USE  
PLANNING**



OUTPUT	APPROACH/METHODOLOGY	SOURCES AND/OR PROCESSING CENTERS OF DATA/ INFORMATION
ENVIRONMENTAL/ ECOLOGICAL FILE	ENVIRONMENTAL ASSESSMENT AND PROFILING	BS, BFD, NRMC, NEPC, NPCC, BL, PAGASA NSTA, BM, NWFC, PCARRD UP SYSTEM, OTHER INSTITUTIONS
ENVIRONMENTALITY MAP ING ELICT, DE- DED & CRI- AL ENV'T.	SCANNING OF ENV'L/ECOLOGICAL STATUS/ CONDITION	HRC, NEDA, NEPC NPCC, BM, BS NRMC, NSTA, RESEARCH INSTITUTIONS
P AND ECO-ASSESSMENT RT OF ING AND POSED D USES	CARRYING CAPACITY MODELS, ENVIRONMENTAL IMPACT ASSESSMENT MODELS	NACIAD, NEPC HSRC, BS, NEDA NRMC, MLG
PROPOSED USE BASED OUND CAP AND COMP	CARCAP MODELS, EIA MODELS	NACIAD, NEPC, NEDA
LOGICAL D USE PS (OZONES)	OVERLAY METHOD/ ECOZONING	NACIAD, NEDA
SSMENT RT ON THE SIBILITY OF / PROP ND USE	SOCIO ECONOMIC, CULTURAL, COMPATIBILITY ASSESSMENT, SBCA	NEDA, BAECON, MECS, OMACM
SSMENT RE- ON STRAINTS NEW PROP. ND USE	CONSTRAINTS ASSESSMENT	NEDA LUC
ERNATIVES EW PROP. D USE (OZONES)	FEASIBILITY ANALYSIS OF ALTERNATIVES BASED ON CARCAP AND ECOCOMP	NEDA-LUC, NEPC, NACIAD
LAND USE	ALTERNATIVE LAND USE MIX DETERMINATION BASED ON GIVEN SOCIO-ECONOMIC CUL. OBJECTIVES	NEDA-LUC

For CY-1989 the Social Issues Committee of the PSSC decided to undertake a series of consultation forums and roundtable discussions on the theme "Towards More PSSC Involvement in Policy Making" as a concrete activity in dealing with today's social issues. The discussions are seen as an initial step in recommending measures to address some of the major issues confronting Philippine society.

The Forum on Environmental Issues was held on 21 June 1989 at the PSSC Auditorium and was spearheaded by the Philippine Geographical Society. This is a transcription of the first part of the forum with the following participants: Dr. Domingo Salita as Moderator; Dr. Celso Roque, Undersecretary of the Department of Environment and Natural Resources; Atty. Domingo Abadilla, Society for Better Environment; Dr. Nicomedes Briones of the Institute of Environmental Science and Resource Management, UP Los Baños; Atty. Wilfredo Baylon of the Committee on Natural Resources, House of Representatives; Atty. Norman Kalagayan, HARIBON Foundation; and Dr. Socorro Reyes, Chairperson of the Social Issues Committee.

## FORUM ON ENVIRONMENTAL ISSUES

DR. SOCORRO REYES:... This is a forum consultation being held by the Social Issue Committee of the Philippine Social Science Council. The first two fora that we had were on agrarian reform; the second one was on price rise, the Letter of Intent and the national debt..

The objectives of these fora are:

1. To provide a venue where the social scientist, the policy makers and representatives from non-government organizations can exchange views about current issue.
2. To provide inputs for policy-making for both the executive and legislative branches.
3. To evaluate existing programs.
4. To provide a framework for analysis of current social issues.

To moderate our discussion this afternoon is Dr. Domingo C. Salita who is President of the Philippine Geographical Society and concurrently Chairman of the Council.

Before I turn over the floor to Dr. Salita, I would like to acknowledge the presence of representatives from the various organizations.

1. We have our participants from De La Salle University.
2. We have the representatives of the following offices of members of the Senate and Congress: Senator Shahani's Office; the office of Senator Saguisag; the office of Senator Heherson Alvarez; the office of Congressman Jer-

ome Paras; the office of Senator Jerome Paras; the office of Senator Guingona; and also from the House Committee on Ways and Means.

3. Also represented here are various discipline-based organizations, like the Philippine Association of social workers and the Philippine Political Science Association.
4. Also non-governmental organizations like the Tambuyog.
5. We have, of course, people from the Philippine Social Science Council.
6. Also for the Local Initiatives in Science and Technology (LIST), another NGO.

So I'll now turn over the floor to our moderator for this afternoon's forum, Dr. Domingo C. Salita.

DR DOMINGO C. SALITA: Good afternoon, fellow environmentalists.

This afternoon I have been vested the task of introducing our resource speakers and at the same time to moderate the open forum to be sure that it will be finished within the allotted time.

The planners of this social encounter have seen to it that the different groups of persuasion will dissect the various issues involving the environment. As we all know, when we speak of the environment, we mean everything outside the skin of man, but in a more limited sense, the issue would involve two interrelated items. One involves the con-

servation of the natural resources and the other one, the protection of the environment. The environment includes the air, water, soil, land, the plants and animal life.

Now we have here outstanding speakers from the executive, the academe, the legislative and the other concerned private groups. We are still waiting for Dr. Celso Roque who is the Undersecretary to the Department of Environment and Natural Resources. He promised to be in. Starting from there at the end, we have Dr. Nicomedes Briones, head of the Environmental Planning and Information Systems Division, Institute of Environmental Science and Resource Management, UPLB. We have from the House of Representatives, Atty. Wilfredo Baylon, on the Committee on Natural Resources. From our concerned private groups, we have Atty. Domingo Abadilla, who is the President of the Society for Better Environment. Mr. Kalaw is not yet there (the president of the HARIBON Foundation) but we have Atty. Norman Kalagayan, senior lawyer of Tanggol Kalikasan, also of HARIBON Foundation for the Conservation of Natural Resources.

We should start now and I would like to mention that each speaker will be given not more than ten minutes. And after all the speakers have delivered their masterpieces, we shall start the open forum where everyone is free to ask any question. So while they are delivering their speeches, you may take down



notes and determine to whom you'll be shooting the question.

Based on my listing here, we shall start from the academe, Dr. Nicomedes Briones of UP Los Baños.

DR. NICOMEDES BRIONES: Thank you, Dr. Salita. I have prepared a paper that is good for about 8-10 minutes so I'll be on the agreement.

However, the copies are quite limited. (I have about 10 here.) I'll give them to Dr. Reyes for reproduction and dissemination.

The issue that I'll be talking within the 10 minutes or so is on the role of educational institutions for sustainable environment and natural resource management with special emphasis on the Philippine condition. I will just read through the paper, I think it will be more systematic this way, rather than go by an ad hoc basis.

As part of the introduction, I would just point out the more important problems of environmental issues under educational consideration. In the Philippines, for example, a major constraint for the implementation of a comprehensive environment and natural resource management program is the lack of trained manpower. For example, the Department of Education, Culture and Sports (DECS) had estimated in 1983 (the latest figure that I got) that the country has less than 3,000 professional foresters, or roughly about one forester for every 200 square kilometers of forest area. The list of scientists for other natural resource systems is more alarming. For example, there are only 270 marine biologists for every 8,000 square kilometers of coastline. There are about 27 geologists only and about 60 practising environmental planners. Even when professionals are available, there is an acute shortage of technicians and equipment to carry out basic scientific research and testing. The lack of adequate professionals is exacerbated by the shortage of instructors who can continue education and training beyond the current levels.

There is a serious brain drain of professionals that is compounded by the lack of inadequate institutional structure and incentives and the lack of stimulating research that will retain a dedicated core of scientists.

OK, so what is environmental education then? I define it here as a set of activities, materials and approaches that promotes awareness and understanding of the environment and its relations and interactions with human groups and societies. It is an integral element of the development process by promoting the sustainable use of natural resources.

The immediate topic that will follow is the formal education sector. The formal academic sector refers to that in school academic educational programs, including courses offered on a non-degree basis such as training courses which award certificates of completion and have begun to target school teachers as a primary client but the activity remains small-scale to have a wider impact on educational reform.

For terms of the tertiary level curricula, this is what I have to say. The improvements in the tertiary level curricula have been more sustainable. About 12 undergraduate degree programs are presently being offered as interdisciplinary programs on the environment (the data came from a survey we did about a year ago). However, these degree programs are concentrated within Region 4, that is, the Southern Tagalog and the National Capital Region, and there are only two programs that are offered in two other regions; that is, in Regions 1 and 5.

There are numerous graduate degree programs that offer similar interdisciplinary ecological focus. Some programs consider wider or general environmental studies while others concentrate on such fields as environmental planning, management and education. There are few academic institutions offering specific courses in ecology and environmental studies such as the UP, Maryknoll College or Miriam, the Camarines

State Agricultural College and Philippine Women's University. However the field of environmental studies has attracted a few students compared to those in the traditional areas of learning. There is definitely a need to motivate young people to go into professions that fit into the manpower demands of a sound environmental management program of the country. The UP School of Urban and Regional Planning plans to offer graduate studies in environmental management and with the assistance of the unit, the proposal for the development of a professional degree program in environmental management was designed. My institute, the Institute of Environmental Science and Management in UPLB, is offering the Master of Science in Environmental Studies (or MSES) for those who want careers in research and teaching in the field of environmental and resource management. Incidentally, I am also the head of the environmental education division which used to be headed by Mrs. Maria Concepcion J. Cruz who is now in the U.S.A. The program's curriculum prepares students for work in agencies responsible for the planning and development of natural resources such as forests, coastal resources, etc. and the regulation and monitoring of the utilization of such resources. The program started in 1984 and there are already 15 graduates from different government agencies, state colleges and universities, and even from NGOs. Some of these graduates are from other countries such as Thailand, Japan and even China. About 10 students are getting into the program every year, on the average. Knowing the problems on environmental education, I listed some recommendations on how to improve the educational system to give emphasis on sustainable development of our natural resources.

The first one is the integration of environment, conservation and development topics in the existing school curricula. This is easier said than done because our curricula are

already fixed, in a way, so it's very hard to insert or to put as independent courses subjects on ecology. However, there are ways of integrating these considerations into the existing curricula of our educational system. Secondly, we can promote widespread environment and educational awareness program through our existing educational system (that means from the primary to the secondary to the graduate level). The third recommendation that I put here is the strengthening of some decision-making through a more effective information and data system to complement public awareness campaign. This is a big problem because we have a deficient information and data system. In my division at the Institute, I am concerned with compiling all the data on environment from NGOs and from state colleges and universities, and we found out that in each of these regions or specific locations where the NGOs work, they lack information. They have patches of information but they don't have an integrated or a unified way of bringing into the consciousness of the people that such problems occur in the region. My division is acting like a clearing house right now, so when an advocacy point is to be made out, then they can get the details of the needed information and data. And lastly we also have to strengthen the collaborative work among the educational institutions and environmental NGOs to promote environmental awareness. We have a network (this was spearheaded by my Institute about three years ago), the Environmental Education Network of the Philippines (EENP) and right now, EENP has about 16 members all over the nation, and what we are doing right now is to get together (this is a loose network) all the academicians plus some NGOs in some formal meetings to exchange ideas. The last meeting was in Baybay, Leyte and Dr. Manalo of PWU was there. So this is how the education sector is going right now. Thank you.

DR. SALITA: Thank you, Dr. Briones, for giving us a very broad perspective of environmental education to bring awareness among our people.

We have to move to the practical world. We'll call on Atty. Domingo Abadilla who is the president of the Society for a Better Environment.

ATTY. DOMINGO ABADILLA: Thank you, Dr. Salita. I just came from another session like this and it seems that the order of the day is 10 minutes speeches which I think is a good format — let us find out. Of course the complaint from the speaker's side is there is so much to say in so short a time. Well, what about the audience? Remember to listen, it is good to listen to some guide for ten minutes especially since its 2:30 to 3:00 in the afternoon. At any rate, when we are given ten minutes, the best we can do is to tease the subject; so we'll titillate the subject.

Let me start by saying that environmental issues stem from two things: one, the destruction of natural resources, from the forests down to the soil, the croplands, coastal areas to the sea. The destruction of these ecosystems is causing a lot of environmental problems. The other aspect is industrial pollution which has to do with the pollution of air, water and land. Now these are the two big aspects of the environmental issue. Now, let me say that any destruction of the natural resources (for instance, environmental degradation) first translates into economic dimension. Take the case of Calamba Bay. Marcopper a mining company, is discharging mine tailings into the bay which kill the coral reefs which are the habitat and source of nutrients of the fish; therefore, there is a decline in the fish catch. The first impact is on the source of income of fishermen who now have less income because of the declining fish harvest.

But from the economic standpoint, the environmental degradation of today translates further into social

concerns. *Wala ng ibili yaong dating P50 a day na nakikita nila. Ngayon bago yan dalawang piso*, so therefore this extended poverty results into many things on the social side. They cannot send their children to school, they cannot see to it that their children have proper nutrition. Poverty is general; that's a big social issue.

Finally, the environmental degradation which translates first into an economic problem, then to a social problem and ultimately becomes a political problem. When people have nothing to eat, there is a lot of discontent, they'll go to EDSA — people power, in other words. The political aspect of the problem ends in either the Beijing style of confrontation or the EDSA style that we had which was peaceful, and bloodless.

Then I'd like to say this. There are now emerging environmental issues which we did not know about until a couple of years ago. Acid rain, depletion of the ozone layer, global warming. These three issues which are atmospheric in nature were unknown to many of us, but I dare say from hereon we'll be hearing more about this subject because they are the most fearsome environmental problems that are confronting the earth today. For example, there are more studies on acid rain in Western countries than we have here. I just came from another forum and I asked Director Kintanar of PAG-ASA (because he's very familiar and conversant with issues of atmospheric pollution) if there has been any study made on acid rain problems in the Philippines, and he said no. And that to me is significant because I am sure there is a problem but nobody has dared to look into the problem, or to solve the problem of acid rain, at least in the surrounding areas of Metro Manila because of the continuous heavy smoke belching of our transport vehicles — about half a million or so of them for every kilometer. And it is sulfur dioxide, nitrous oxide that cause acid rain, and this was discovered only in the 70s, when

the British factories raised their smoke stacks in order to avoid pollution within London only to find out that at the other end of the equation, which was Western Europe, this pollution from British factories was killing thousands of hectares of forests and thousands of lakes in Germany and in Scandinavian countries. So England was discovered to be the main culprit until they discovered again in Europe that, as between European countries, they were also exchanging air pollutants which were causing acid rain. Nobody can now say that I am innocent, everybody seems to be a culprit because of the high state of industrialization both in Eastern and in the Western of Europe.

The same thing is happening between Canada and the United States, each country exporting acid rain to the other except that America has more as compared to that of Canada, so Canada is at the shorter end of the bargaining. Now this is a type of air pollution that is bothering a lot of countries in industrialized countries. But, as I said, I asked questions about this and nobody seems to be making a study, and I hope I'll be corrected by Dr. Roque on whether or not we have an acid rain problem in the Philippines, at least in Metro Manila.

Global climate change — that is the theme of this year's observance of the World Environment Day celebrated on June 5th of the year — "Global Warming, Global Warning." So look at that problem, what causes the global warming? They say carbon dioxide which is emitted into the air as a consequence of the burning of fossil fuel, coal, gas and oil plus the destruction of forests. Now, I always look at the problem of deforestation from the local point of view of our country and the main difficulty being the conversion of forests into agricultural lands by burning of forests. That was the concentration of our information at some point in time. But now we are trying to relate deforestation to global climate change.

The burning, decay and cutting

of wood results in the release of the carbon in the wood into the air which is oxidized, which becomes carbon dioxide; so that adds to the accumulation of gases in the air. All these gases are supposed to cause global warming. So what's the solution? Reduce the consumption, meaning to say use alternative sources of energy, alternative to the fossil fuel that we are using because the fossil fuel is causing a lot of these problems. We have to go back to the planning board and see what we can do.

The destruction of the ozone layer — we did not know this until five years ago. This was only a mere suspicion, on the part of scientists. But now more and more data are coming to show that indeed there is depletion of the ozone layer. I will just end by saying that the ozone layer is supposed to protect us from harmful ultraviolet rays that penetrate the ozone because the air is attacked by chlorocarbon methane hydrous oxide and other gases that cause the depletion. So what's the solution? Don't use hair sprays or don't smoke. So here ends my 15 minutes talk. Thank you very much.

DR. SALITA: Thank you very much, Atty. Abadilla, for giving us the socio-economic and political impact of the degradation of the environment and for pointing to us also the new discoveries regarding environmental conditions.

Now, we are indeed very fortunate that in spite of his manifold activities our guest speaker who is the Undersecretary for the Environment and Research finally arrived. I understand that he was so busy that he had to send a representative to another forum but here he said, he had to come. So I give you now Dr. Celso Roque, the Undersecretary of Environment and Research of the DENR.

DR. CELSO ROQUE: I was informed that I would be reactor in this forum, so I did not prepare anything.

We environmentalists tend to sound apocalyptic when we talk. We always talk doomsday. We sound like preachers in some of the churches here, fire and brimstone lectures if they don't repent. That's why we have the word apocalypse.

I'll not try to do this but just tell you the facts. I'm often asked in various meetings what are the major environmental problems in the country, and it's very easy to recite these.

First of all, an indicator of environmental quality in the Philippines is the state of our forests, and this is a very good indicator. This is the reason why in meetings and forums like this, people talk about the forest because the original environment in the Philippines was mainly forest. Perhaps if we had satellites at the turn of the century, you'll see that our entire country is almost forest with the exception of a few valleys and plains but even then those were few. So many rough plains, almost the entire country, with the exception of a few islands, were almost totally forested.

Now the situation is very different. Our forests would amount to about 3-4 million hectares. The old growth virgin forests would just be over 1 million hectares and this is a very big change of the original state of our forests. (Because we don't have the parameters to gauge the quality per se because some people will give pollution indicators and so on, but these are only true for specific areas like the atmosphere or perhaps the bodies of water.) But if you want a single measure of environment quality, it should depend on what country you're talking about. If you're talking about the Philippines, it should be the forests. So that is the change in our environment, from roughly 30 million hectares of virgin forests to roughly over a million hectares, and that is a big change. And we are suffering the consequences of this change. Our agricultural productivity has gone down because of the impact of deforestation. If you compare the productiv-

ity of Philippine farmlands, it is the lowest in Southeast Asia, meaning we have not been taking care of the soil because of the constant stresses of floods and high and low periods of dryness and so forth, and consequently we have lost the fertility of Philippine soil. So, although we are not going to hell because of the environmental degradation, the productivity of our resources has been going down, and we can trace the decline of this productivity from the mountain areas, the marginal lands around the forests where the production is very very low. There is nothing that grows around those areas up to the parklands, up to the coastal areas where we have sedimented most of the intertidal areas, mostly coral reefs, and a lot of our fishing ponds.

This deforestation has impact on other economic activities in our country. We are not just looking at the decline of the forest per se but the decline of all the other ecosystems connected with the forest. So that's the first and most important problem.

The second I would consider would be the state of various forms of habitats, the state of our protected areas and the conditions of our wildlife. For example, the national parks and so forth. We have about 60 of these areas in the country intended for sanctuary purposes, and yet I think we are spending only P2 million to take care of these various protected areas.

Maybe I should elaborate a little bit on the importance of our flora and fauna per se as a biological resource other than the forests. Half of the medicine you buy in the drugstore, for instance, could be traced to some forest products, forest plant or even forest animals. That will give you an inkling of how important our biological resources are. The tropical forest is known to be the richest ecosystem in terms of biological diversities.

Second only to the tropical forests are our coral reefs, also known for their richness of biological re-

sources and yet these areas have been neglected by our government during the last few years.

The third major problem is generally classified as the urban pollution, and these are mostly problems of air pollution and water pollution. I will not overemphasize this because we are all from the city. Our biggest problem directly affecting all of us daily is air pollution. Maybe water pollution only to the extent of not being able to use some of the rivers even for navigation. But the most polluted rivers in the Philippines and perhaps in the world are found in Metro Manila.

Now let me mention a little bit about what we are doing. I will not mention forestry, because it has been discussed many, many times in many, many meetings and we could get passionate once we talk about forestry in this country. I'll mention what we are trying to do in terms of the protected areas and the wildlife.

We have now a big program, being assisted by various groups like the World Wildlife Fund, World Bank and Asian Development Bank in putting together a new integrated protected area system for the Philippines. This would mean that they would redesign all our national parks and all the wilderness areas in the Philippines. This is one of our biggest programs, second only to reforestation. I hope within the next five years or so one would see the results already of these efforts. We have lost most of our protected areas. If you look at the Bicol National Park, it's almost totally denuded. If you look at Mt. Apo, it is in a rapid process of deterioration also because of some government activities. The Philippine National Oil Company, for instance, is trying to develop geothermal resource in Mt. Apo, and consequently they have conducted probes and other means of access to the national park, and they were followed by hundreds of thousands of people destroying almost two-thirds of the national park, and the same process is going on almost everywhere. We are losing very

quickly our national parks in Mindoro, in Mt. Pulog in the Cordillera.

What the project is trying to do is to set up ecosystems where we can protect most of the remaining biological resources. One of the major recommendations that we are looking at seriously is the proclamation of the remaining old growth virgin forests as national resources. This is being recommended by a group of consultants now preparing the Master Forestry Plan. What we would like to do is to preserve the remaining virgin lands in all the biogeographical areas in the Philippines, a representative biogeographical area in each region. So, I think, of the one million or so hectares of virgin lands, more than two-thirds of it will be set aside for permanent protection and preservation. I don't know how the industries will react to this, but I'm sure, violently. We are going to undertake researches in breeding of our endangered wildlife. Already there are seminars. Second, projects for the preservation of the Philippine eagle and tamaraw in Los Baños to reactivate some of our projects that are taking place in Mindoro and in Mindanao. With respect to urban pollution we have our anti-smoke belching campaign. When they started this campaign (already they started many years ago, before our administration) they were, on the average, apprehending only about 120 vehicles a day. Now we are escalating this program. We have now reached a level of 250 a day and by the next two weeks will escalate it some more to about 1,000 vehicles a day which unfortunately will result to some of our students in the universities finding it difficult to get rides. Yesterday, we met with the jeepney association and, of course, they don't like it at all, and they are threatening to declare a strike because of this program. But I think you should know the average reading for suspended particulates in Metro Manila's atmosphere.

According to our sampling, it is already 100 percent above the standard as recommended by the World



Health Organization. So that we have to do something drastic. This is going to be very difficult because this is not the ultimate solution to the problem. I will probably mention the ultimate solution later on.

With respect to water pollution, I think you have heard about the *Ilog Ko, Ilog Ko* program, a clean-up program of one of the Metropolitan rivers — the Tullajan River in Navotas and Tenejeros. We are ahead of schedule with respect to this program. The responsibility of our department is to reduce the total pollution load of the river by 50 percent within the next three years, and we have already reduced it to something like more than 10 percent this year simply by disciplining the industries. So these are just a representative sampling of our problems and what the department is trying to do about them. Thank you.

DR. SALITA: Thank you, Dr. Roque, for emphasizing to us the basic environmental problems that we face now and what the government is doing in order to conserve, protect, replenish and restore the beauty and the wealth of our natural resources.

For our next speaker, we have from a concerned private group, Atty. Norman Kalagayan, a senior lawyer of Tanggol Kalikasan of HARIBON Foundation for the Conservation of Natural Resources.

ATTY. NORMAN KALAGAYAN: The recent floods and landslides in Samar, Palawan and nearby Marikina, the declining fish catch, the complaint of foreign diplomats on air pollution in Metro Manila, and the red tide poisoning in Manila Bay, among others, put the issue of environment in the front pages of newspapers today. It is said that this is a new problem, an inevitable consequence of development and population growth especially in Third World countries.

The government, being the protector and agent of the state, has the power to create laws and to im-

plement them. But the government is ever so slow making workable solutions to this growing menace. Here in the Philippines, we have prolific lawmakers but seemingly impotent law enforcers. What could have been the reason behind the present state of the environment when we have three volumes of environmental laws which are presumably one of the best in Asia? Let me try to identify some of the problems: First, it is in the nature of environmental problems and the laws that seek to remedy them. Environmental law is by nature a public interest law. To us lawyers, it means there is no money in it because there are no paying clients. But seriously, it means that an infraction of environmental law violates the right of the collective, the people as a whole, often without a direct target. So, very often nobody minds it until somebody, or a community gets hurt. And the damage often remains unnoticed — until its head lurks out. For example, dynamite fishing hurts none directly (except sometimes the user). The user catches more fish with less effort, the market is supplied, everybody is happy — until the time comes when there is no more fish to catch. The principle of self-help, which is the law in an individualistic and capitalistic society, does not work well in this respect. Environment is a concern of the government, of the collective and the collective-minded.

The government, being the protector of the state, then gets the responsibility to legislate and to implement. More often than not it does a lousy job in the implementation aspect. Perennial problems stand in the way: the present administration spends .01 percent of the budget for the environment, according to DENR. I'm sure most of you know it as a fact that corruption oozes out of the government today, and I have encountered specific instances of it in the environmental sector.

Also, more often than not, the violators are big corporations backed up by politicians, or who have the

resources to buy themselves through or to pay good lawyers.

But I think that all is not lost. Concomitant with the publicity and growing concern on the environment is a blossoming movement to save it. The private sector right now emerges to protect the environment. In this aspect, the government, with all its assumptions and inertia, lags behind in responding to this phenomenon. Old laws remain rigid and unresponsive to the cry of the private sector for more participation. The sooner the government realizes that it cannot do the job alone the better. There is a big potential in tapping the private sector, especially the communities in the implementation of environmental programs and enforcement of environmental laws. The government should therefore seek to refine and use the concept called community-based resource management. Yes, we have provisions for deputization of forest guards, or of marine conservation law enforcers, but these have not been actively applied in the provinces.

There are some laws, however, that have somehow recognized the participation of the private sector. An example of this is the Bantay-Dagat Program where four representatives of the private sector were invited to sit in the committee. In the rules of the PAB, a private party may commence a complaint, but only when directly affected by the pollution complained of. It would have been better if we could incorporate in said rules a provision in the proposed bill by Sen. Alvarez saying "Any private citizen or group of citizens shall have the right and power to institute legal proceedings to prevent or stop violations of this Act or any other laws and regulations relating to ecology and environment." (Sec. 13, proposed bill creating an environmental protection law, etc.). This provision I would strongly endorse.

The problem of the environment is indeed enormous. But if the government will give the people a chance to pitch in, the solution may not be too far.

DR. SALITA: Now we have the last speaker from Congress, a representative of the House of Representatives to give us information regarding environmental laws that are pending in the House of Representatives. I give you Atty. Wilfredo Baylon.

ATTY. WILFREDO BAYLON: A pleasant afternoon to everyone. It is unfortunate that the Chairman of the Committee on Natural Resources of the House of Representatives, Congressman Paras, cannot join us this afternoon, to break bread with us, so to say, on a matter very close to his heart — environmental issues. He is presently indisposed. At any rate, what I will just do is to inform you about the accomplishment of the house for the past year and what it intends to do this coming third regular session in July.

The Committee is composed of four sub-committees, specifically the Forest Resources Sub-committee; Mineral Resources; Land and Environment; and Ecology.

In so far as forest resources is concerned, the House has already on third reading, an act which seeks to fix the specific limits of our forest lands pursuant to the mandate of the Constitution under Article 14 thereon. I need not elaborate on the importance of the bill inasmuch as Undersecretary Roque has already mentioned the state of our forest resources. We have also presently pending with the Committee the ban on the use of chainsaws which are considered to be responsible for illegal logging that we read about in newspapers and also the proposal to make more permanent the ban on lumber exportation.

Now, in so far as the mineral resources are concerned, the House has already passed on third reading the Small Scale Mining Act and with regard to this I'm sure all of us are aware of what which happening right now in the gold rush areas in Mindanao. I mentioned Small-Scale Mining Act because necessarily intertwined with it are environmental

issues especially on the recovery of gold by small-scale miners using mercury. And then, at the committee level we are presently drafting the New Mineral Resources, New Mining Code Act which will also involve environmental issues. A section of the Code is devoted to environmental matters such as the requirements on registration of the mining firm and provision for an environmental action plan for a period of so many years. On matters of environment and ecology we have come up with a bill (1830) also passed by the House on third reading which seeks to amend PD 984, otherwise known as the Pollution Control Law. What has been done is that the penalties and fines have been upgraded and the Pollution Adjudication Board has been empowered to close establishments, firms and similar entities which have been found violating the Pollution Control Law. It is actually the observation of the Congressmen that most of these firms or corporations involved in manufacturing, processing and the like would rather pay the fine on a day-to-day basis rather than implement pollution control devices or observe the law. So as a remedy to that situation, this bill was passed shortening the period within which an establishment found violating the law can pay the fine, and that after so many days of not complying with the requirements of the law, it will be shut down or closed until it has complied with the requirements. Now it has also made the officers of these entities criminally liable, given that they do not observe or they violate the law. Pending also in the Committee is the Toxic Control Substances Act which was recently filed by the Committee, and intends to take it up on the floor in its third regular session.

The Committee has also been engaged in fact-finding matters in the administration, particularly on the situation in the province of Pangasinan regarding the destruction and the siltation of the Bued River system as a result of the tailings com-

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*There is actually no best or real legislation for that matter. What counts is the will among ourselves ... to observe and implement the laws.*

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ing from the mining firms from Baguio which the Committee has found to be the main cause for the destruction of the Bued River system.

With that I hope I have informed everybody of what the House has been doing, and let me end it by saying that in so far as we are concerned, it has come to our mind that there is actually no best or ideal legislation for that matter. What counts is the will among ourselves, from the government sector and from the private sector, to observe and implement the laws. Thank you.

DR. SALITA: Thank you, Atty. Baylon, for giving us a brief on the various bills pending in the Lower House that has some bearing on the conservation of our natural resources and protection of the environment.

With that we are ready now for the open forum. Well, those who are interested to ask questions please raise your hands and if you are recognized, please identify yourself and direct your question to the speaker whom you think can answer it.

(An open forum followed but it is not included here).

# PSSC Activities

## PSSC-RPP Roundtable Discussions

For the period of April to June the Philippine Social Science Council-Resources for People Program (PSSC-RPP) conducted three roundtable discussions.

The first one was held on April 28, 1989 at the PSSC with the theme "The Rights of NGOs to Self-Organization." The discussion focused on the negative and positive experiences of workers from NGOs and GOs as they interact with the military in the field. The invited speaker from the military clarified the role, functions, programmes and limitations of the military in responding to NGOs and POs in the field. The discussion led to the different areas of possible working relationship between military and the NGOs.

The next two were held in Davao City on May 23, 1989 and in Bacolod City on June 27, 1989, both with the theme "NGOs and GOs Collaboration in Development Process." These discussions were attended by several regional directors of government agencies and representatives of NGOs based in Davao and Bacolod. Aside from problem areas identified in NGO-GO collaboration in these provinces, the role of social scientists in the process was made clear. According to the participants, the social scientist should provide scientific data on which decisions and programs for development should be based. Social scientists can act as consultants in regional development councils. Other issues discussed focused on problems brought about by poverty and injustice in Mindanao. The discussions moved to a more concrete and action-oriented planning.

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## Philippine Social Science Encyclopedia

A new project being undertaken by the PSSC is a Philippine Encyclopedia for the Social Sciences. Each Social Science discipline will be discussed according to the following areas: history and current status in the country, famous practitioners, and glossary of concepts.

In this connection regular member associations of PSSC have submitted their nominees to the Editorial Board of the encyclopedia to Prof. Ruben F. Trinidad, PSSC Executive Director. They are:

- Prof. Isabel Panopio,  
Philippine Sociological Society
- Prof. Raul Ingles,  
Philippines Communication Society
- Prof. Esther Viloria,  
Philippine Association of Social Workers
- Dr. Olivia Caoili,  
Philippine Political Science Association
- Mrs. Natalin Cagawan,  
Philippine Statistical Association
- Dr. Telesforo Luna, Jr.,  
Philippine Geographical Society
- Dr. Dante Canlas,  
Philippine Economic Society
- Dr. Alex Brillantes, Jr.,  
Philippine Society for Public Administration
- Prof. Helen Tubangui,  
Philippine National Historical Society
- Dr. Bonifacio Salamanca,  
Philippine Historical Association
- Dr. Amaryllis Torres,  
Psychological Association of the Philippines
- Dr. Lita Domingo,  
Philippine Population Association

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The Social Issues Committee held a roundtable discussion on price rise, the national debt and the LOI last May 24, 1989 at the Concepcion Seminar Room of the PSSC. The guest speakers, and the sectors they represented, were:

- Purita F. Neri of the  
Central Bank and  
Modesta Margallo of the  
Department of Finance,  
Government
- John Cavanaugh of the  
UP School of Economics,  
Academe
- Leonor Briones of the UP  
College of  
Public Administration,  
Freedom from Debt  
Coalition
- Socorro Ballesteros of the  
Church-Based Consumers  
Movement, Consumers
- Florante Roxas of the  
Federation of  
Free Workers, Labor

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The Philippine Sociological Society, in preparation for their National Convention in 1990, will hold the following regional consultations:

October 20-21 1989 at the  
University of St. La Salle in  
Bacolod City

Theme: Peace Initiatives  
October 27-28, 1989 at the  
Ateneo de Naga in Naga City

Theme: Values in Reform and  
Development

November 24-25, 1989 at  
Xavier University in Cagayan

Theme: Sharing on What One  
is Doing

December 1-2, 1989 at Ateneo de  
Zamboanga in Zamboanga

Theme: Dialogue with Cultural  
Communities

December 1989 at  
Ateneo de Davao

Theme: Ecological Concerns

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# Newsbriefs

The Participatory Upland Management Program (PUMP) of the DLSU Research Center hosted a series of seminars on "Strategies for Upland Development: Perspectives from the Provincial Level". Guest speakers were Governor Benjamin I. Espiritu of Mindoro Oriental and Governor Andres R. Bugnosen of Benguet.

Among the participants of the seminars were representatives from the Cooperatives Foundation of the Philippines, TABAK, Northern Cultural Communities, the offices of Sen. Joseph Estrada and Rep. Jesus Punzalan, USAID, FMD/DENR, Ford Foundation at the Jaime Ongpin Foundation.

PUMP was started in 1981. It undertakes activities in furtherance of DLSU's commitment to the development of the country and its people. PUMP determines ways by which disadvantaged rural communities manage their resources and participate in their development process. It still continues to explore alternative avenues to participative development.

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Akademya ng Sikolohiyang Pilipino will hold the twelve (12) sessions of its Piling-piling Huwebes (PPH) from July to December, 1988. PPH is an informal gathering designed to expose its participants to Philippine and Popular culture.

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The Gowing Memorial Research Center (GMRC) of the Dansalan College Foundation hosted the 15th Annual Summer Session on Mindanao and Sulu Cultures held on April 5-8, 1989.

GMRC was one of the convenors of the conference "Reflection on the Muslim Mindanao Organic Act as a non-Violent Alternative," held on March 10-11, 1989 at Laguindingan, Misamis Oriental.

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The Pambansang Samahan ng Sikolohiyang Pilipino (PSSP) has a new Executive committee. The members of this Committee are:

Lilia Antonio, UP,

President

Rogelia Pe-Pua, UP

President-elect

Alma de la Cruz, Ateneo,

Secretary

Benedicto Villanueva,

San Miguel Corporation,

Treasurer

Dolores Garcia, PLM, Auditor

Wilfrido Villacorta, DLSU,

Coordinator (World)

Ma. Angeles Lapena, DLSU,

Coordinator (National)

Violeta Bautista, UP, Member

Daniilo Yanga, UP, Member

Gundelina Almario-Velasco

DLSU, Member

Roberto Galvez, UP, Member

Janet Salazar, PPRTH, Member

Alfredo Lagmay, UP, Member

At present the PSS is making the preparations for its forthcoming 15th Conference on Filipino Psychology which will be held on November 1989. The theme for this conference will be "Graft and Accountability".

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The International Institute of Rural Reconstruction (IIRR) began its Agrarian Reform Information, Education, and Legal Services (ARIES) in Cavite, Bicol and Negros this April. ARIES is intended to help agrarian reform beneficiaries in all social laboratories of IIRR to secure and protect their rights, as well as enable them to know and perform their obligations, under the Comprehensive Agrarian Reform Law (CARL). It provides information on the program as well as legal referral services to farmer-beneficiaries whenever necessary.

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The Philippine Economic Society (PES), in a joint venture with the Friedrich Ebert Stiftung, held a forum, "Economic Recovery and the Working Masses," held at the VIP Hotel in Cagayan de Oro City on May 26, 1989. The speakers and their respective topics were: Winnie Constantino, Economic Recovery under the present Administration; Issues and Problems; Dr. Eduardo Canlas, The Impact of Recovery on the Working Masses; Sixto K. Roxas, the Role of Government and NGOs in the Economic Recovery; and Atty. Geronimo Adaza, Economic Recovery and Democratic Process.

The PES will also host the 14th Annual Convention of the Federation of ASEAN Economic Associations (FAEA) to be held on November 16-18, 1989 at the Manila Hotel. The theme will be "Economic Reforms, Performance, and Prospects in ASEAN." This convention will also serve as the Society's 27th Annual Meeting.

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The American Studies Association of the Philippines (ASAP), in celebration of its 25th anniversary, will hold its general assembly and annual conference on October 13-15, 1989 the venue of which is yet to be decided upon. The theme of this conference is "Trends and Issues in the Asia Pacific Region." American Studies Associations in Korea, Japan, Taiwan, Thailand, Malaysia and other Asian countries will be invited to grace the affair.

For further inquiries interested parties may call the ASAP at 818-5484 or 818-1650, or visit the ASAP office at the Thomas Jefferson Cultural Center in Makati.

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The Philippine Political Science Association held its 10th Annual Convention and election of officers on May 26, 1989 at the PSSC Mercedes Concepcion Seminar Room. The theme was "The New Constitutional Order and its Responsiveness to Contemporary National Challenges: A Preliminary Assessment." UP President Dr. Jose Abueva delivered the keynote address. Chief Justice Marcelo Fernan, Rep. Michael Mastura, UPLB Chancellor Raul de Guzman and DLSU Vice-President Wilfrido V. Villacorta presented papers.

The new elected officers of the PPSA are:

President : Carmencita T. Aguilar, UP  
 Vice-President: Socorro L. Reyes, DLSU  
 Secretary and Journal Editor : Olivia Caoili, UP  
 Treasurer : Shirley Advincula, Ateneo de Manila  
 PRO : Frank Soriano, Lyceum  
 Business Manager : Alex Brillantes, Jr., UP  
 Auditor : Fe Sumilang, FEU

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 The Socio-Politics Of Sugar: Wealth, Power Formation and Change in Negros (1999-1985) by Violeta Lopez Gonzaga, Director of the Social Research Center (SRC) of the University of St. La Salle was launched last June 9, 1989 at the SRC. Bro. Andrew Gonzalez and Bro. Rolando Dizon were the special guests.

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 The Ugnayang pang-Aghamtao (UGAT) will have a mid-year conference this December which will critique prevailing analyses of Filipino attitudes, values and perceptions. The move is to emphasize the role that Philippine socio-political economic structure has played in producing Filipino personality, specially what many identify as Filipino "negative traits" instead of beginning with the allegation that the latter first series, and therefore Filipinos do not progress socially, politically and economically.

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The Research and Statistics Center of Bicol University conducted several workshops during the first half of 1989. Some of these were the In-House Review of Completed and Ongoing Researches in Agriculture, Fisheries and Socio-Economics, Learning Seminar on Significant Research Methodologies and Research Findings, and the Regional R & D Symposium Highlights.

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The Linguistic Society of the Philippines sponsored the 3rd Translation Workshop in History held at the Estrada Seminar Room of De La Salle University on April 1-28, 1989. 15 translators worked on the two volumes of Teodoro Agoncillo's "The Fateful Years: Japan" Adventure in the Philippines." Resource persons were Richard Roe, Rodolfo Barlaan and Elmer Wolfenden of the Summer Institute of Linguistics.

The Society, in cooperation with DECS, The British Council, United States Information Service, and the PNC-Ateneo de Manila-De La Salle Consortium sponsored the Annual Summer Training for Supervisors of English held at the Lara Seminar Room in DLSU on April 17-May 12, 1989. Resource persons were Sylvia Chalker and Dr. Ruth Montalvan for the Secondary and Advanced levels respectively.

Another seminar-workshop will be held on October 2-6, 1989 at the Estrada Seminar Room of DLSU, "Recent Developments in Applied Linguistics." The speaker will be Dr. Chris Candlin.

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The Population Institute of UP conducted the Data Utilization Seminar-Workshop for Program Advocacy. It was held on May 15-19, 1989 at the Conference Room of the UPPI.

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The First National Conference on Philippine History was held on March 27-31 and April 1, 1989 at the Faculty Center and Executive House in UP Diliman. The theme of the conference was "Towards a Nationalist Historiography of the Philippines."

The conference was sponsored by Bahay Saliksikan sa Kasaysayan (BAKAS) and the UP Department of History.

One part of the program was the launching of books and children's magazines on Philippine history with a nationalist perspective, as a response to the needs of many sectors to publish new textbooks especially for public schools.

The conference also aimed for the unity of faculty in private and public institutions so a consensus could be reached on the current state of historiography in the Philippines, and on the developments that occurred on the discipline of history from ancient times to the present.

Part of the discussions were the pending bills on Congress about the proposed Institute for the Study of History and on the changing of textbooks in school. Congress also plans to establish an Archive of Congress, one similar to other countries, with which Filipino writers can finish their research at the earliest time possible.

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The Philippine Rural Reconstruction Movement (PRRM) held a symposium, the "Environmental Crisis in the Philippines: a Challenge to the NGO Community" last June 29, 1989 at the PCED Hostel in UP Diliman. Guest speaker was Dr. Delfin Ganapin, Jr., Chairman of the Philippine Federation of Environmental Concerns, Isagani Serrano of PRRM, led the panel of reactors.

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## New Publications

**Publications from the Social Research Center, University of St. La Salle**

*THE RESOURCE BASE FOR  
AGRARIAN REFORM AND  
DEVELOPMENT IN NEGROS  
OCCIDENTAL*

by Violeta Lopez-Gonzaga, Ph.D.,  
Virgilio R. Aguilar and  
Ferris Fe Demeqilio

A comprehensive presentation of facts about the natural, economic, human and institutional resources of Negros Occidental. This report provides a veritable wealth of data which gives basis for the systematic formulation of an agrarian reform policy, and other programs geared towards the development of Negros Occidental. It also provides interesting facts about the distribution of landholding, patterns of land use, and other statistical data which academics may find useful for comparative analysis. The report also provides some interesting leads for further research investigation on the theme of agrarian reform and development in Sugarlandia.

*THE PHILIPPINE ARCHIPELAGO*  
(1896) by Jose Genova

This is a translation of a little-known document of 1896 which, other than providing notes on the attempts at the formation of agricultural colonies in Negros in the late 19th century, also provides interesting insights into the opening of the Negros Frontier, inter-island migration, evangelization of the natives, the development of the hacienda system and the growth of the sugar industry in the island. This is a useful reference material for students of local history and Philippine studies.

Book from the Ateneo de  
Manila University Press

**UNEQUAL ALLIANCE, 1979-1986:  
THE WORLD BANK,  
THE INTERNATIONAL  
MONETARY FUND AND  
THE PHILIPPINES**

by Robin Broad, Carnegie Endowment for International Peace

**Unequal Alliance** demonstrates why the "structural adjustment" model imposed by the IMF-WB on the Philippines is harmful to the poorer majorities in developing countries. The development model, says the author, is particularly inappropriate in world economy of vastly reduced growth.

Through interviews with dozens of Philippine representatives of government and business, this book chronicles the Philippine experiment with structural adjustment. It explores the process by which the IMF-WB trained technocrats, adapting existing government institutions, and created new ones to mold their version of development.

Even in the late 1980s, this failed Philippine model is the central remedy that the IMF-WB are offering to dozens of countries mired in external debt - and among the countries targeted once again is Corazon Aquino's Philippines.

Cheryl Payer, author of *The Debt Trap*, says "**Unequal Alliance**" is one of the most important books of this, and the next, decade. It should be required reading for anyone concerned about the economic, social and political problems of the Third World." Walden Bello says "This is economic and political analysis at its best... definitely a trailblazer in the study of international financial institutions."

## Books from New Day Publishers

**TRIUMPH OF MORO DIPLOMACY**  
by Ruurdie Laarhoven

From Dutch archival sources Laarhoven documents the Maguindanao polity aforming into a centralized *negeri* (state). She points out that the analysis of the relationship between the Dutch at Ternate and the Maguindanao sultanate is a continuing theme throughout the book.

**COMMUNICATING  
CROSS-CULTURALLY**  
*Towards a New Context for  
Missions in the Philippines*  
Melba P. Maggay, editor.

This book aims to develop some awareness of the process of perceiving the Bible as text and the task of communicating it in widely varying contexts. It attempts to integrate the principles of integrated communication into the practice of cross-cultural mission, and hopes to help in the understanding of the tensions generated in the process.

**These books are now available at the PSSC Central Subscription Service.**

[illegible]

realized if the sustained yield and multiple use principles are not observed with regard to the country's renewable and supposedly inexhaustible resources.

But even in the goals of maximizing economic growth and fairly distributing existing and potential prosperity, the government is also remiss in its implementing duty. The existing laws are adequate, including environmental laws. But the present administration's moves, to put it mildly, hardly leave one breathless with their daring.

Many of the deprived sectors of our society have already reached the winter of their discontent, so to say, already losing hope for a leadership more in the mold of an imperious Lee Kuan Yew or a Quezon to strut high on the development stage. And so amidst a blasé leadership, grassroots people cannot be blamed if they turn to more effective and efficient change agents. Emerging of late into the scene are the nongovernment organizations (NGOs) which have caught the attention of many for their increasing successes in community mobilization. NGOs act as agents through which planning and goal-setting for an area can take place, through which local resources can be mobilized and utilized wisely, and through which local needs and demands can be articulated and processed. With their numbers, now going beyond 10,000, local NGOs present a potentially decisive force in national socio-economic development.

There are moves (e.g., Senate Bill No. 747) that appear to regulate NGOs; but this is suspect, considering that the secret of NGO's success is the freedom they enjoy. Other quarters denigrate NGOs by saying that with their differing goals, they are divisive of Philippine society. Furthermore, they are also accused of fostering a mendicant attitude among our people. Putting these aside as minor inexpediences, the very rationale for encouraging the proliferation of NGOs is the competition they present to the government and the prospect of jolting it out of its stupor.

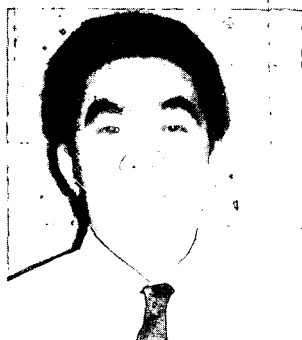
But even this early, people should discriminate among NGOs even though these may profess the non-debatable goals of ecological balance promotion, poverty alleviation, wealth and income redistribution, employment generation and productivity en-

hancement. One group consists of phoney NGOs which at the international level are those that work either for governments or for uncontrolled private organizations and transnational corporations with dubious vested interests. At the national level, these are NGOs set up by business-minded charlatans for the sole purpose of extracting their slice of the growing "development funds" pie.

A second group, constituting the bulk of NGOs, are those whose main activities involve delivering conventional "development" services and since they do a "cleaner" job than many government agencies, their work tends to be more appreciated by their clients. However, these NGOs seldom question the assumptions of the delivery system approach and as such their work departs from a process of self-development that is truly endogenous, participatory and non-socially disruptive.

The third type of NGOs — the most desirable one — are those which hold a holistic view of human groups and practice a non-linear and non-technocratic approach to the solution of people's problems. Conscious of the alienating dependency that a delivery system approach breeds, they diligently seek the participation and support of those they work with. In doing this, they do not impose, but only propose, and the dictum they observe is "development from below, guidance from above." Their participation is only supportive and catalytic in terms of providing their constituents the resources they need in terms of knowledge, funds, linkages and power. Thus, they merely respond to what the grassroots people want from them and in the process allow them to evolve their own alternative approaches to development problems. It is this third type of NGOs then that can catalyze genuine grassroots development which is holistically anchored on ecological, redistributive and growth goals. These are the NGOs whose growth and strong networking should be encouraged by our people, for these are also the ones which do not balk at possible situations of tension and conflict with their government counterparts.

**MELITON B. JUANICO**



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## 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.

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