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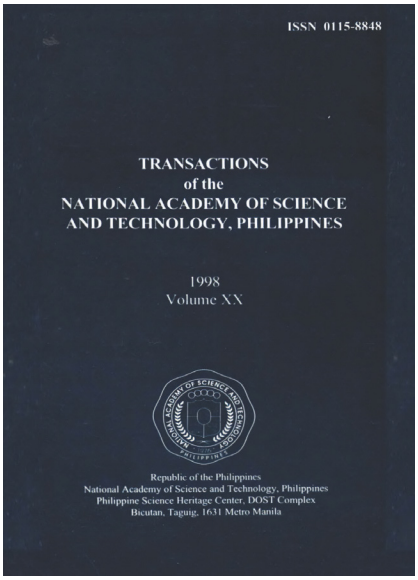

Population, Resources, and Environmental Policy in the Social Sciences

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PLENARY SESSION III

"POPULATION, RESOURCES, AND ENVIRONMENTAL POLICY IN THE SOCIAL SCIENCES"

POPULATION, RESOURCES, AND ENVIRONMENTAL POLICY IN THE SOCIAL SCIENCES

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INTRODUCTION

In 1975, three institutions: the Development Academy of the Philippines (DAP), the UP School of Economics (UPSE), and the UP Population Institute (UPPI), pooled their various staffs into a research consortium to collaborate on a future-oriented research program that was known under the acronym PREPF: Population, Resources, Environment and the Philippine Future. PREPF attempted to identify not only historical trends and their implications for the future but also sought a feasible set of alternative, preferred futures for the next generation of Filipinos. In addition, in the light of evidence gathered in 1975-1977, PREPF formulated certain crucial policy actions and communicated them to critical change agents not only to create a fuller understanding of **what conditions must be changed** but also of **what alternative strategies** must be employed for the desired change to occur.

PREPF was funded by a number of agencies including the Population Center Foundation (PCF), the National Science Development Board (NSDB), The National Economic and Development Authority (NEDA), the Commission on Population (POPCOM), the Technology Resource Center (TRC), the Ford Foundation, and the U.S. Agency for International Development (USAID). The research program was an independent study, not a government study. The staff involved researchers who belonged to the generation of students of the late 1960s and early 1970s while the senior project officers were relatively young university academics.

The PREPF started with the proposition that development is for people, and consequently stressed justice, equity, and sharing. Technology and the management of resources and the environment were related to the community's well-being. The study team was concerned with an attainable future, not merely a preferred future. In regarding the future as the legacy of its generation, with its challenges and uncertainties, PREPF researchers found a great deal to criticize in the past.

In the course of the three-year study, 111 technical papers and research notes were generated. The final summary report was embodied in 374 pages containing the study's main findings and policy recommendations. The areas covered by PREPF included:

World Scenarios – World Population, Politics, International Trade, Food and Energy;

Philippine Resources – Water and Air Adequacy, Forestry, Fisheries, Minerals, and Energy;

Philippine Population Dimensions – Fertility, Mortality, Internal Migration and Urbanization, Growth and Structure of the Work Force in the 20th Century, the Filipino Family Today and Tomorrow, and Alternative Population Futures;

Aspects of Filipino Well-Being – the Future Health of the Population, Educational Status, Manpower Development and Occupational Mobility, Towards Equitable Sharing of Income, and a Comprehensive Simulation Model of Philippine Welfare in the Year 2000.

In view of the critical function of research information, transformation, communication, and even pilot application, the PREPF Research Utilization Program was formally initiated in 1977 with DAP and PCF as the program's main sponsors. The NSDB provided funds for the two-year (1978-1979) research utilization schedule. Research utilization took several forms: a conference involving experts from Indonesia, Thailand, Japan, and the United States; multi-agency briefings; circulation of executive memoranda; audio-visual slide presentations; a television documentary, and public lectures. In 1980, the PREPF findings and recommendations were condensed and published in paperback form under the title, **Probing Our Futures: The Philippines 2000 A.D.**

A year ago, the National Academy of Science and Technology (NAST) agreed to take on the theme: **The Philippine Social Sciences in the Life of the Nation** for its 1998 Annual Scientific Meeting. At the same time, the Philippine Social Science Council (PSSC), the UP Center for Integrative Development Studies (CIDS), the National Research Council of the Philippines (NRCP), Pi Gamma Mu International Honor Society in Social Science, and the UP College of Social Sciences and Philosophy (CSSP) were planning the IVth National Social Science Congress (NSSC IV) to assess the role of the social sciences in the life of a nation that is celebrating its centennial. All six agreed to collaborate on a series of round-table discussions and three pre-congresses starting in January 1998 as part of the

NSSC IV which would culminate in the Annual Scientific Meeting of the NAST on 8-9 July 1998. Pre-Congress I took place on 30-31 January 1998 on the theme: The History and Development of Social Science Disciplines in the Philippines. Pre-Congress II, preceded by roundtable discussions, focused on The Social Sciences and Other Branches of Knowledge, and was held on 20-21 March 1998. The Social Sciences and Public Policy and Practice was the theme of Pre-Congress III on 22-23 May 1998. The sessions in all three Pre-Congress will be summarized and presented during the NAST Annual Meeting in July.

As part of Pre-Congress III, the organizers agreed that a session on Population, Resources, and Environmental Policy and the Social Sciences should feature a re-examination of the 1975-1977 PREPF Scenarios to ascertain the extent to which the study's recommendations were acted upon by government and to describe any relevant policies enacted during the 1980s and 1990s. Owing to time constraint and the availability of the original researchers, only three papers dealing with the dimensions of Philippine population – Fertility and Family Planning, Mortality, and Internal Migration – were presented along with another three papers on Health and Nutrition, Philippine Environment and Natural Resources Management, and Politics, Policymaking, and Policy Implementation. Relevant excerpts from these six papers will be featured in the following pages.

THE POPULATION DIMENSION

The PREPF population scenarios were examined to see whether PREPF's understanding of what conditions required changing then were correct; which if any, of PREPF's proposed alternative strategies at that time were used as basis for public policy; and what were the outcomes of those programs that were implemented to carry out relevant public policies.

Fertility and Family Planning

Replacement fertility, i.e., an average of around two children per couple, for the year 2000 was the target of the national family program in the mid-1970s. Differing rates of fertility decline were assumed: *high assumption* – the rate of fertility decline observed during the 1968-1973 period was projected to remain constant; *medium assumption* – fertility was expected to decline at a rate of 10.5 percent every five years; and *low assumption* – a much faster decline in fertility at the rate of 13.3 percent every quinquennium was anticipated. Under the high assumption, only Metro Manila was forecast to attain replacement fertility by the end of the 20th century. By then, 57 percent of married women of reproductive age (MWRAs) in Metro Manila would be effectively practicing contraception while the corresponding proportion nationwide would be 28 percent. Under a medium assumption, the Southern Tagalog and Central and Western Visayas would join Metro Manila in attaining the two children per couple by year 2000. In these four regions, the effective contraceptive prevalence rate was foreseen to be 54, 61,

64, and 51 percent, respectively. With a much faster fertility rate decline (low assumption), Metro Manila was contemplated to achieve the target between 1980-1985 followed by Southern Tagalog during the subsequent quinquennium. By century's end all, save the three Mindanao regions, were predicted to attain replacement fertility.

Zablan[1] attempted to assess the impact or effects of the PREPF recommendations on fertility and population policy and practice. She examined the PREPF fertility scenarios to see how well they captured fertility trends over the 1975-2000 period. She observed that the PREPF Medium and Low Fertility Assumptions were successful in capturing what actually happened to Philippine fertility in 1980 and 1985. The PREPF Medium Fertility Assumption was equally effective in projecting what occurred to fertility between 1990 and 1995. The only period where the PREPF fertility projections was "off" was in 1975, due to the unexpected drastic decline in Total Fertility Rate (TFR) reported in the 1978 National Demographic Survey (NDS). This decline was not due solely to the 17.5 percent of MWRAs, 15-44 years of age, who were practicing contraception at the time but was also the result of increase in age at marriage and the high level of breastfeeding practiced by the mothers.

The fertility section in the PREPF Report noted that while increases in family planning (FP) awareness had motivated married women to try a method, the Family Planning Program (FPP) had been unsuccessful in convincing them to continue using the method. Consequently, the PREPF researchers recommended:

1. **Improvements in FPP service delivery to sustain the motivation of FP acceptors to continue contraceptive use.**
2. **Improvements in FPP administration to facilitate couples' access to information and services.**
3. **Consistency of FP approaches with the socio-economic and cultural milieu.**
4. **Adoption by the FPP of a small family size norm.**
5. **Integration of FP in the country's development strategy.**

A Population Policy Statement was issued by the POPCOM Board in 1987 which recognized the close interrelationship among population, resources, and environment. Among its policy principles were: the linkage of FP with the broader issues of family welfare and the promotion of family solidarity and responsible parenthood, non-coercion, rejection of abortion, coordination and integration, and public-private sector partnerships, all of which were re-statements of the policies in the 1970s. Herrin (1990) criticized the *Statement* for its "explicit avoidance of

[1]Zablan, Zelda C. Dimensions of Philippine population: Fertility and family planning -- A re-examination of the PREPF scenarios: 1975-2000. Paper presented during Pre-Congress III: Philippine Social Sciences and Public Policy and Practice, held at the Philippine Social Science Center, Quezon City, 22 May 1998.

policy advocacy for moderate fertility and population growth" and maintained that its policy thrusts suggested that FP was becoming only a health program.

The *Statement* indeed proved to herald the transformation of PF primarily into a health program. In August 1988, the Department of Health (DOH) became the lead agency for FP. The FP strategy within health was defended as a means of invigorating a stalled program.

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The Medium-Term Philippine Development Plan (MTPDP) 1987-1992 prepared during the Aquino administration, reflected the ambiguity of the government's population policy. In that Plan, the population policy was "to promote the attainment of small family size on a voluntary basis and a reduced population growth rate aligned with replacement fertility level by 2010". However, the strategy specified in the Plan was "to strongly advocate it as a vital component of comprehensive maternal and child health" and to strengthen the "integration of population education at all levels to promote family planning as a component of responsible parenthood".

With the ascendancy of the Ramos administration in 1992, the support to the key population policy goal of reducing fertility rates became much stronger. The Medium-Term Plan 1993-1998 sets an explicit objective of reducing the population growth rate and fertility "through a wider recognition of the benefits of small family size and the promotion of more responsible parenthood". The Plan also states that the FPP will be implemented vigorously to moderate population growth. However, the burden of reducing fertility in the Plan appears to be borne almost entirely by the FPP rather than by a broader range of development activities.

According to Zablan, the PREPF recommendations were acted upon then by concerned agencies. The data used as bases for the fertility projections were the same data used in the preparation of the 1974-1977 Population Plan, particularly in specifying fertility targets and formulating strategies for FP service delivery. Moreover, the PREPF researchers were members of the POPCOM Technical Working Groups that prepared the Population Plan.

The PREPF fertility scenarios projected fertility to reach replacement level with a Total Fertility Rate (TFR) of 2.1 children per woman by the year 2000. However, in 1985 the TFR was estimated to be 4.46. Five years later, it stood at 4.13 children, a figure twice that of replacement fertility. In view of this reality, the MTPDP 1987-1992 set back its target for replacement fertility to the year 2010. The next Five-Year Plan set a TFR target of 3.2 by 1998. The projections in the Long-Term Planning Project (1995-2040) have set the years 2010, 2020, and 2030 as more likely dates for the achievement of replacement fertility under the Low, Medium, and High Assumptions, respectively, of the pace of fertility decline. This repeated postponement of replacement level fertility goals at each planning cycle denoted the

lack of a firm determination on the part of government and other sectors concerned to regulate fertility and to arrest the momentum of population growth.

Mortality

With its mortality projections, PREPF attempted to chart the course of future mortality starting from the period 1970-1975. Two assumptions were prepared with the expectation that the actual level would lie in-between an "achievable" (High Assumption) and an "ideal" (Low Assumption). This expectation was premised on the condition that action would be taken along the lines of the PREPF recommendations. Life expectancy at birth was projected to increase from 59 years in 1970-1975 to 67.9 years by the century's end under the High Assumption incorporated a slow pace of decline more in keeping with actual experience while the Los Assumption reflected a fast mortality decline along the lines proposed in the United Nations Model (1956).

In line with these mortality projections, PREPF recommended the pursuance of more vigorous health policies geared to the following:

1. **Integration all levels of health care and strengthening health care units in rural areas;**
2. **Increasing the doctor-population ratio and widening the dispersal of health facilities;**
3. **Promoting environmental sanitation and personal hygiene through more active community participation;**
4. **Strengthening nutrition programs through supplementary feeding programs, nutrition education, deworming; and**
5. **Conducting massive immunization campaigns.**

Five-year Philippine Development Plans for 1979-1982 through to 1993-1998 together with their updates were examined by de Guzman[2] to ascertain which of these policies may have been inspired by PREPF. In addition, the Four-Year Development Plan, FY 1972-1975, and the Four-Year Development Plan, FY 1975-1977, which antedated PREPF, served as benchmark and were scrutinized to determine which policies had been pursued even before the initiation of PREPF.

The 1978-1982 Plan represented a complete departure from the usual plan preparation and presentation. The health program was presented in a more holistic manner, recognizing its linkages with other programs in the Plan. For the first time, this Plan expressed its objectives in terms of parameters that directly related to the target clientele. It attempted to express specific quantitative targets for these parameters.

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[2]de Guzman, Eliseo A. Declining mortality among Filipinos: The years after PREPF. Paper presented during Pre-Congess III: Philippine Social Sciences and Public Policy and Practice, held at the Philippine Social Science Center, Quezon City, on 22-23 May 1998.

The 1978-1982 Plan enumerated three different reinforcing policies that addressed the need to integrate all levels of health care and to strengthen primary health care (PHC) in rural areas as suggested by PREPF (Recommendation 1). Subsequent plans called for the institutionalization of PHC and the adoption of the total integrated approach as well as the expansion of Medicare.

Recognizing the health delivery problems identified by PREPF, the 1978-1982 Plan promised to expand health manpower through the recruitment of, and provision of the necessary skills to, indigenous and barangay-level health workers (Recommendation 2). Later plans envisioned the strengthening of private sector participation to improve the lopsided delivery of health services.

To encourage active community participation and effective use of health services, massive information and education campaigns would be conducted as specified in the 1978-1982 Plan (Recommendation 3). Increased reliance on indigenous resources and technology was pursued by the Development Plans that followed:

The 1978-1982 Plan provided for the acceleration of immunization efforts (Recommendation 5)[3]. As planned, preventive health activities were to be vigorously implemented during the period 1987-1992.

The take-off from the threshold level of 59 years as the life expectancy at birth in 1975 was much in accord with and in fact more optimistic than what PREPF had prescribed. But PREPF failed to foresee the economic difficulties and political instability of the early eighties which effects could well have been felt even during the late seventies. Despite constraints, the health program had registered positive points in its effort to improve the quantum and quality of services. However, these seemed insufficient. Increases in the numbers of hospitals, doctors, and nurses were not sustained. Consequently, the number of people being served per hospital, doctor, or nurse declined. The rise in the numbers of midwives, rural health units, and barangay health stations improved the ratios somewhat but the number of clients served per health worker/station remained staggering due to high population growth rates. Gains in income did not result in commensurate improvements in the population's ability to provide for its needs.

In view of the above, it is not surprising that the estimates of the life expectancy fall below the PREPF High Assumption. The projections of the National Statistics Office (1997) and the United Nations (1995) for 1995-2000 indicate that the gains in life expectancy at birth, after the slump, would start picking up again starting in 1995 such that by about the end of the present century, the life expectancy at birth would hover around or even surpass the PREPF High Assumption figure. If the current socio-economic development experienced by the country continues or even accelerates, a life expectancy at birth of around 70 years can be expected as the next millennium begins.

[3]Recommendation 4 on strengthening nutrition programs is discussed in the section on Health and Nutrition.

Spatial Mobility

The PREPF projected interregional migration for the period 1970-1980 using a regression model. It was evident from this model that income and economic potential play significant roles in attracting or repelling population. It was then predicted that Metro Manila will probably experience a decrease in immigration during the decade of the seventies. Substantial increases in out-migration were foreseen for Bicol and the Central Visayas while a faster pace of suburbanization was anticipated for Metro Manila. These projected patterns, notwithstanding, it was expected that the dominant migration streams will remain those flowing to Metro Manila's core cities and to the Mindanao regions.

An assessment of the most recent interregional migration data from the 1990 census by Perez[4] shows that the PREPF projections for Metro Manila and Bicol seem to be consistent with the 1985-1990 trend of increased out-migration from these two regions. However, Central Visayas was reported to be experiencing a decelerated out-migration. Despite decelerating in-migration, the PREPF statement that the movements into Metro Manila will retain their dominance remains valid. Changes in the boundaries of the Mindanao regions and the creation of the Autonomous Region for Muslim Mindanao (ARMM) prevented the realistic evaluation of migration flows to Mindanao. Supplementary data from the 1988 National Demographic Survey revealed further shifts in migration patterns to a regime of intra-urban and intra-rural movements rather than rural-urban migration for the period 1983-1988.

Based on the regression results and the trends and patterns of interregional migration from the PREPF research, two major policy recommendations were advanced, namely:

1. **Development efforts should be redirected from the more popular urban centers to both the secondary (or alternative) urban centers and the countryside; and**
2. **An information network should be set up at the place of origin so that those who want to, and will leave anyway, would have adequate information on alternative destinations where they could maximize the gains from their migration through higher-paying employment.**

Although the Philippine Government articulated a desire to slow the pace of urbanward migration, the population policy reveals a clear absence of explicit policy provisions to address the concern for a balanced population distribution. The population program was lopsidedly focused on meeting fertility reduction

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[4]Perez, Aurora E. From migration research policy prescriptions to population distribution policy actions: The Philippine Social Sciences and Public Policy and Practice, held at the Philippine Social Science Center, Quezon City, 22 May 1998.

targets. Consequently, creating a better balance between numbers of people and resources as well as between people and opportunities to achieve sustained economic development, was inadequately addressed.

Two decades after PREF, the concentrated pattern of urbanization still prevails and urbanward migration continues to such an extent as to appear untenable despite regionalization efforts during the 1980s. Admittedly, past schemes of regionalization, apparently in response to PREPF recommendations on the need to redirect migration away from Metro Manila, did not achieve much in altering this traditional regional destination of migrants. Medalla (1985) and Herrin and Pernia (1987) have pointed out that such policy instruments were either fundamentally unsound, were misdirected, or that available resources were spread too thinly. Government has been unable to reform its bias for infrastructure investments. Lamberte et al. (1993) underscored the uneven distribution of government expenditures where the National Capital Region's share in government expenditures increased from 23 percent in the eighties. Such disparities in development were sure to attract migrants so that developed regions and their network of large cities and urban town centers grew in size through natural increase and migration.

Perez' closer scrutiny of the 1989-1992 MTPDP shows improvements in regional development policy statements. Its long-run objectives were clear:

1. Accelerate the growth of less developed regions and achieve a more balanced spatial development; and
2. Promote the efficient development and sustainable use of land and other physical structures.

Specific population distribution policy goals were:

1. Pursuit of desirable regional population distribution and patterns of urbanization; and
2. Dispersal of industry to the regions.

Concrete regional development equity strategies and programs intended to address spatial equity and interpersonal equity were contained in the MTPDP. The first was promoted through the distribution of physical infrastructure to effect regional dispersal of industries. The second was enhanced through integrated area development projects and social services. However, variations in regional development performance suggest the absence of investment in human capital in the less developed regions. Inadequate technical skills of human resources in these regions effectively constrained government's efforts to stimulate regional economic growth and development and achieve a deconcentration of population across the regions.

Part of the 1997 National Framework for Regional Development is a development vision that professes government's pursuit of a broad-based growth "to provide equal opportunity for all regions to make productive use of their respective resources by (1) facilitating the movement of population and the flow and exchange of goods and information; (2) ensuring access to basic services; and (3) promoting sound environmental management". Two of its features are refreshing,

to wit: "where the geographically-fragmented islands are integrated, where social, cultural, and economic interaction takes place beyond local, regional, and even national boundaries"; and "where economic integration is further expected to take place through greater interdependence and complementarity between urban and rural areas". These features emphasize national dispersion through regional concentration with an eye to regional groupings rather than individual and independent regional administrative units; strengthened rural-urban linkages through infrastructure development of road and transportation networks; resource and area-based development that maximizes comparative advantages of regional groups that will promote intra-regional interaction; and effective regional governance premised on decentralization and devolution. Unfortunately, these elements were treated inadequately in past regional development strategies.

A recent and much improved migration-sensitive policy instrument operating through urban development and housing needs is R.A. 7279 approved in 1992. The improvement lies in the National Economic and Development Authority (NEDA), the National Statistics Office (NSO), and the Commission on Population (POPCOM) to monitor population movements and to provide advanced planning information such as population projections, embodied in Section 37, Article IX. What this provision has achieved in terms of integrating population variables in policy formulation and development planning is the interrelationship between population movements and urban development, focusing on its impact on housing services and the need to promote socio-economic growth in the countryside. What is lacking is a set of implementing rules and regulations for the effective implementation of the mechanism of inter-agency coordination for monitoring population movements as provided for in this law.[5]

Recent efforts at explicit demographic specification in policy instruments have resulted in several programs and development strategies directed at population distribution that are in reality by-products of policy insights from past migration studies. A review of such studies yields policy insights into two recommendations involving migrant information; *first,* modifying potential migrants; mental mapping of destination areas formulated through what may be inaccurate information from friends and relatives; and *second,* a nation-wide migration information assistance at the local level. There have been serious efforts at legislation to make some policy sense of the migrants' social network which exerts great influence on the migrants' choice of destination. Senate Bill 639 and House Bill 6819 introduced in 1995 and 1996, respectively, aimed at institutionalizing a national facilitation service network through the establishment of a public employment service office in every province, key city, and other strategic areas throughout the country were, unfortunately, never passed in Congress. While these two aforementioned Bills were to influence population movements indirectly, House Bill 240 sought to discourage the unabated in-

[5]The draft rules and regulations were approved by the POPCOM Board at its 19 June 1998 meeting.

flux of migrants to overpopulated cities and municipalities in the next 15 years. To operationalize that regulation, the bill's sponsor proposed a migration registration system at the barangay level coupled with regulation mechanisms such as a migrant social guarantor at destination and police clearance from origin. While this bill had the good intention of temporarily regulating population movements to congested urban areas, the apparent "undemocratic" nature of its implementation process failed to gain social acceptance in Philippine culture and society.

This brief review of policy instruments indicates the: (1) existense of laws that are migration-sensitive; (2) mix of approach in policy formulation adopting both direct controls and indirect regulation of population movements through sectoral concerns such as housing, employment, and countryside development; (3) lack of implementing rules and regulations of R.A. 7279 with respect to Section 37, Article IX; (4) general absence of provisions for monitoring the implementation and evaluating the impact of such legislation; (5) the absence of useful migration data in sufficient detail for use in data-based policy formulation and in evaluating and monitoring the population redistributive effectiveness of programs; and (6) forward-looking approach of assigning the implementation of the specified programs and related strategies to the Local Government Units (LGUs) which may result in an organizational dysfunction due to function-overload on the LGUs.

ASPECTS OF FILIPINO WELL-BEING

Health and Nutrition

Indicators of health and nutrition: for health – the monthly number of sick cases per household and the monthly number of sick cases per 1,000 people, and for nutrition – the percentage of children aged 0-6 years with second and third degree protein-energy malnutrition (PEM0 were projected to year 2000. The projection was done using a model that related a variety of socio-economic and demographic variables to the health and nutrition indicators. These variables consisted of income, women's education, belief patterns, fertility, age structure, housing conditions, and environmental sanitation.

Based on the assumption used, rising incomes, better education, and lower fertility could reduce the prevalence of malnutrition among children from 30.6 percent in 1975 to 1.34 percent in the year 2000. Cases of illness per thousand population could also be reduced by 12 percent or even by as much as 23.3 percent if, in addition to demographic and social changes, housing conditions were improved and beliefs regarding health care modernized.

Herrin[6] assessed the PREPF scenarios against actual levels of health and nutrition achieved, based on the latest available data in the 1990s. Data on health

[6]Herrin, Alejandro N. Health and nutrition: PREPF scenarios for the year 2000 revisited. Paper presented at Pre-Congress III: Philippine Social Sciences and Public Policy and Practice, held at the Philippine Social Science Center, Quezon City, 22 May 1998.

and nutrition since the PREPF study show manifested improvements such that the scenarios are unlikely to materialize. Nutritional data revealed continuing high rates of child malnutrition and very high prevalence of micro-nutrient deficiencies, especially among pregnant and lactating women.

An explanation of the lack of progress in nutrition and health improvements along the path projected by the PREPF can be found both in the poor economic performance in the 1980s, particularly the economic crisis of 1984-1985 and the slow recovery that followed, and deficiencies of government health and nutrition programs that reduced their potential impact.

The nutrition projection to the year 2000 assumed among others, that the growth rate of GNP would be 8 percent annually. Such a growth rate which was the national target during the PREPF years, was never experienced by the economy. Growth rates were even negative during the crisis years, 1984-1985. From 1986 to 1996, the growth of GNP averaged only about 4.5 percent. Associated with poor performance was the slow decline in high poverty rates. In 1994, the poverty rate was still 35.5 percent, representing over a third of households and 41 percent of the population. The problem was worse in the rural (48.6 percent) than in the urban areas (24.2 percent).

Herrin speculated on the prospects of achieving the PREPF scenarios from the standpoint both of the distance still to be reached and the probable impact of policies and programs in health and nutrition undertaken since the late 1970s, against the backdrop of contemporary economic environment. The PREPF Health and Nutrition Project recommended or supported a number of actions in the broad area of socio-economic development. These included:

1. **Raising the average educational attainment of women to fourth-year high school by year 2000;**
2. **Reducing fertility to replacement level by century's end;**
3. **Accelerating the annual growth of GNP from 6 to 8 percent;**
4. **Ensuring a sustained growth of food supply per capita;**
5. **Taking stronger measures to achieve income equity and improve environmental and housing conditions.**

The government did consider and implement a number of direct nutrition interventions since the launching of the Philippine Nutrition Program in 1974. The focus was on young children as well as on pregnant and lactating women, although it did not appear that the latter were given priority over the former. Over the years, these included food assistance; micro-nutrient supplementation and fortification; growth monitoring and promotion and nutrition education; home and community food production; and credit assistance. Some specific studies revealed certain shortcomings in both design and execution of these intervensions. These included, as in the case of food assistance, poor targeting and leakages. Much of the food went to older children rather than those at the peak ages for wasting, many of whom were not covered by the programs. A great deal of the food was

distributed on a "take home" basis so that an unknown, perhaps large, quantity was shared with older family members (Heaver and Hunt, 1995).

In the field of health, PREPF recommended:

1. **Focus on major diseases and on area-specific disease problems;**
2. **Strengthening the resource capability of regional health units, granting them authority to design and implement health programs which are responsive to specific morbidity problems;**
3. **Intensifying efforts at sewage and garbage disposal, drainage facilities, housing, and potable water supply.**

PREPF recognized that health education on a mass scale can be a powerful force in raising the health status of the population. Thus, it was suggested that:

1. **Health education programs be institutionalized at the level of the rural health unit, and made a regular component of the health service delivery system;**
2. **A vigorous and sustained information campaign be undertaken on environmental sanitation through mass media and the barangay network;**
3. **Environmental education be integrated into the school curricula, focusing especially on human activities for the maintenance of a healthful and livable environment;**
4. **The Ministry of Education and Culture and the Ministry of Health establish a formal coordinative group that will oversee the planning and implementation of school health programs.**

Finally, the government should deliberately see to it that by year 2000, the imbalances in the distribution of health care services which characterized the then health care system are minimized. PREPF noted that given the limited resources allocated by government to the health sector, there was a need to de-emphasize the building of new hospitals/medical centers and stressed rather the establishment of more and better primary health clinics in the rural areas. PREPF suggested that government develop appropriate incentives for health workers in the rural areas, and encourage the educational institutions to orient their health programs towards the needs of rural areas.

Many of the recommendations are of a general nature and are not entirely new. Since the PREPF study, there have been significant developments in the field of health along the lines suggested, *although it is difficult to attribute specific initiatives solely to the PREPF recommendations.* Health delivery systems have expanded their outreach to the rural areas. More cost-effective methods of primary health care have been adopted as in the case of the control of diarrheal diseases and acute respiratory infection. Vigorous campaigns for immunization and micro-nutrient supplementation were made, especially in the 1990s. Efforts to provide greater

access to safe water supply and sanitary toilets have been increased. Other significant developments involve legislation, as in the case of the Generics Act of 1988 that is expected to help improve the efficient use of drugs, and the National Health Insurance Act of 1995 that is anticipated to achieve universal coverage of health insurance.

As in the case of vigorous nutrition interventions, no systematic evaluation of the impact of these major efforts on national trends in nutritional status has been undertaken. There are, however, fragmentary studies that point to certain shortcomings or concerns that prevent potential impacts of these health interventions form being fully achieved or sustained. Two examples follow.

One of the most successful programs in the late 1980s and early 1990s was the child immunization program. Strong political will, forcible leadership at the DOH, vigorous support from foreign and local donors, and active participation of the community, particularly during mass campaigns (National Immunization Days (NIDs) have resulted in high levels of immunization coverage. However, the Expanded Program of Immunization (EPI) appeared to have suffered a setback since 1993. Based on DOH service statistics, the coverage of 91 percent in 1993 declined to 88 percent the following year and to 86 percent in 1995. DOH officials view this reversal in trends with great concern. Dayrit et al. (1997) revealed that reported cases of EPI diseases based on sentinel surveillance system indicate that measles is still very highly endemic in the country.

The apparent downtrend in EPI coverage is believed to be due to: problems related to devolution (e.g., logistics, lack of outreach due to insufficient funds, and absence of monitoring and supervision); the campaign approach (i.e., the NIDS) may have distracted mothers from routine immunization; and the controversy regarding tetanus toxoid injections for pregnant women (DOH, 1996).

Access to safe water supply and sanitary toilets has improved between 1990 and 1995. In 1995, 86 and 75 percent of households had access to safe water supply and to sanitary toilets, respectively. However, recent experience with the implementation of water and sanitation projects has raised a number of concerns that could affect the ability to expand such coverage. These problems include: inadequate capability of LGUs to manage and implement WATSAN projects, and lend support to Barangay Water Supply Associations (BWSAs); weak monitoring system; declining assistance of national government and external support agencies; and low priority given to sanitation as revealed by its low budgetary allocation relative to total allocation for the water and sanitation sector.

From a broader perspective, the contribution of direct interventions to influence health and nutrition may be assessed in terms of the resources committed to these activities. The pattern of government spending reported in the 1997 Philippine Human Development Report (HDN and UNDP, 1997) revealed that the share of human development priority concerns in total government spending was 10 percent on average during the period 1987-1994. This level is only half the norm of 20 percent. Moreover, taking inflation and population change into account, the

per capita human priority expenditures in 1985 prices stood at PhP 253 in 1994, lower than the peak level of PhP 285 reached in 1989.

This brief review of the PREPF scenarios against actual events from the 1980s to the present reveals that accomplishments fell short of those projected. The PREPF scenarios were often faulted as being too rosy. But that was precisely the point. Hard work was required to achieve rapid economic growth while intensifying efforts on specific health and nutrition interventions. However, efforts were below the mark, particularly on the economic front. The scenarios revealed that unless the economy is on the path of sustained growth, the total impact of the direct health and nutrition interventions, while benefitting vulnerable groups in the short run (if properly targeted), may not be large and sustained enough to compensate for the adverse effects of poor economic conditions.

NATURAL RESOURCES TO THE YEAR 2000

Concentrated research effort on the economic scarcity of Philippine environmental and natural resources began in the mid-seventies through the PREPF. The study focused on dipterocarp forests, metallic minerals, energy, fisheries, water and air resources, and formulated scenarios through 2000 A.D. In examining the PREPF findings and recommendations in this sector, delos Angeles[7] focused only on a subset of the resources studied: forests, water, and fisheries.

Forest Resources

PREPF applied forest economics concepts to various sectoral concerns. The findings on forest resources showed that based on supply-demand projects through 2025, timber scarcity would be experienced towards the year 2000, with excess demand coming mostly from the international market. The extent of forest cover was much less than officially reported, based on interpretation of the 1976 LANDSAT photos. Forest charges were too low relative to log prices, thereby encouraging high harvest rates and low wood recovery rates by processors. Revisions were needed in the allowable annual cut formula which was earlier designed for only two cutting cycles and based on optimistic growing conditions. About 8 million hectares of unclassified public lands were vulnerable to open exploitation.

As provisions for the future, PREPF recommended:

1. **Reforestation efforts to cover 3.6 million hectares of thinly stocked production forests, 1.4 million hectares of protection forests for watersheds, 1 million hectares of minimal reforestation for range-**

[7]delos Angeles, Marian S. Philippine environment and natural resources management: Perspectives from environmental economics. Paper presented during Pre-Congress III: Philippine Social Sciences and Public policy and Practice, held at the Philippine Social Science Center, Quezon City, on 22 May 1998.

land purposes, and 5.6 million hectares of marginal lands for pulpwood plantation establishment.

2. **Effective forest protection and strict enforcement of laws.**
3. **Revision of the allowable cut formula to implement the selective logging system and potential follow through to the application of a computer-simulation model for forest management developed by the project.**
4. **Update of the statistical system to allow for more realistic planning and forest land use allocation.**
5. **Revision of the forest charges and system of allocating licenses to private forest users.**
6. **Investment in research to examine non-timber products and services and as basis for multiple-use forestry.**

The PREPF consultants played a major role as advisors to government in various ways including the formulation of development project proposals and policy reforms. Some of the immediate results indicated that notwithstanding the initial reaction of the forestry officials to bar the release of updated forest cover statistics, investments were eventually made for reform of resources information by the newly created Natural Resources Management Center. A stumpage appraisal system was to be piloted by the Natural Resources Development Corporation of the Department of Environment and Natural Resources (DENR) during the mid-1980s.

Action was delayed in some instances. For example, master planning at the national level was conducted only in the late eighties. Such planning has as yet to be pursued holistically at the subnational level. As a condition under the Structural Adjustment Loan, forest charges were revised in 1991 through R.A. 1761. Beginning in the late eighties, reforestation programs and watershed rehabilitation were intensified through various foreign-assisted projects. The allowable annual cut formula was revised in the early nineties. The much lower yields of residential forests then observed in the field was an additional push for this revision under the Natural Resources Management Program.

An area that was not adequately addressed by PREPF was population growth in the uplands. A later study conducted by Cruz (1991) estimated that the upland population was 18 million, of which about 6 million were in forest lands. This figure was readily cited by officials of the Aquino administration. It also provided for a better setting against which forestry officials accepted more readily the need to manage upland populations in place, in lieu of the previous approach of prosecution and resettlement.

Water Resources

The water studies included estimates of potential surface water availability, requirements by various sectors and pollution loads through the year 2000. The

key findings were: (1) Water deficits were estimated for the islands of Cebu and Negros and Cotabato, based on vegetative cover, rainfall, and hydrologic information; (2) The island of Cebu was identified as the critical area where scarcity and a 97 percent utilization rate of potential supply would be experienced by the year 2000; (3) Pollution load estimates indicated potential problems for Laguna Lake with pollution sources coming mostly from urban areas; (4) A fourfold increase in investments in irrigation was needed for the irrigable areas identified by NEDA in southern Mindanao, Central and Eastern Visayas; and (5) in general, potential water supply was considered to be sufficient to meet projected requirements, with water storage and conveyance posing more serious bottlenecks to meeting demand.

The reforms in the water sector that may have resulted from PREPF are not known. Based on the current water supply problems, it appears that the studies were not properly disseminated nor were they taken seriously, if indeed they reached decision-makers.

The PREF studies did not include economic aspects of water resource management. Most subsequent economic studies focused on financial analysis of irrigation and watershed reservoir infrastructure projects. They emphasized enhancement of water supply through technological fixes. Exceptions were the early applications of environmental economics research to watershed management that were conducted by Francisco (1986) on the on-site and off-site costs of erosion in the Magat and Pantabangan watersheds and the environmental cost of mining in the Upper Agno River by Briones (1985). The latter work was used as basis for the subsequent rehabilitation of the affected irrigation systems while the former was a key input to the first application of resource accounting in the Forestry Master Plan documents, albeit treated secondarily as part of an appendix.

More recent water scarcity problems point to the need to examine not only water supply management but also demand interventions through correct pricing of water uses. The household and industry water demand studies of David and Inocencio (1998) lay the empirical foundation on which to base water price reforms. An expanded study by the same authors who are based at the Philippine Institute for Development Studies (PIDS) is being conducted in response to the Water Crisis Commission's request.

Another aspect of demand management is the pricing of water use for waste disposal. The January 1997 application of user fees to industrial users of Laguna de Bay in terms of the installation of wastewater treatment facility and pollution load measured in terms of BOD5 was initially based on studies conducted by Hagler Bailley et al. (1996) under the Metro Manila Environmental Improvement Program and the Industrial Environmental Improvement Program. An ongoing study by the Laguna Lake Development Authority (LLDA) reviews the progress and impact of the user fees particularly in terms of behavioral change and revenues generated. A key factor in this case is the mandate and legal authority of the LLDA over the watershed.

Fisheries

The PREPF fisheries studies indicated signs of overfishing in the coastal waters, based on lower yields indicated by five-year data. No substantial increase in commercial fisheries and stagnant productivity of inland waters was evident. There is considerable potential for development of aquaculture technology.

The recommendations included:

1. **Improving technical assistance to raise productivity;**
2. **Providing subsidies for increased exploitation of the deepseas;**
3. **Setting up marketing centers and organizing small-scale fisherfolk for improving marketing channels and procuring bank loans;**
4. **Examining land use policy including exploring fish culture as an alternative to rice culture.**

The few economic studies that were conducted on fishery resources were cost and earnings studies, with policy implications on the need for financial assistance to increase production. As in the forestry work, the consultants to the fisheries studies provided advice to the government, thereby influencing policy directions. Research and technical assistance were directed towards increasing aquaculture production, and subsidies in terms of soft loans were granted to increase fish production in both inland and marine waters.

Future research is important since environmental and natural resource management requires a long-term perspective. If effective in contributing to reforms, such research tends to be self-defeating, a desirable result for which scholars should be prepared. Thus, it is no comfort to realize that many of the PREPF scenarios are being verified as the year 2000 approaches.

Few futures studies have been conducted at the national level, although scenario building and simulations are key to the usual project feasibility studies. A notable exception is the simulation of alternative futures under various economic policy scenarios explored by the PIDS Trade and Environment studies, the results of which were discussed during deliberations for GATT ratification in the Senate committees. More recently, an analysis of the ENRAP team on the environmental implications of the Philippines 2000 targets was provided to the working groups formulating the Plan 21 document initiated by the NEDA.

POLITICS

In his Introduction to **Probing Our Futures: The Philippines 2000 A.D.,** O.D. Corpuz (1980) faulted the PREPF study for "not including a scenario on the political system". It is as if the PREPF team assumed that no important political changes would occur toward the end of the 20th century. It should be recalled that the PREPF study was undertaken during the early years of martial law. Therefore, the implicit assumption was that the country would be under martial rule over the next 25 years or so. Under this assumption, the nature of the political environment

within which the policy recommendations were to be pursued and implemented was taken for granted. To rectify this omission, the session organizers invited Bennagen and Quilop[8] to examine the interplay between politics and the policy process. In their paper, the authors endeavored to see how changes in the political scene impact on the policy process and related these to the PREPF projections and recommendations.

How, then, were particular changes in the Philippine political system linked to the PREPF recommendations? A few examples will shed light on the linkages between the nature of the political system and the PREPF recommendations.

PREPF highlighted the environment's degraded status and cautioned that if certain reforms were not undertaken, the country would experience resource shortage and other environmental problems by the end of the century. The recommended reforms in the forestry sector were already listed in the preceding section. Since then, the same recommendations have been rehashed and new ones generated in the literature attempting to understand what ails the Philippine environment. For instance, reforestation has been cited as a priority activity by several administrations and yet, there is still the danger of the country's vanishing timber supply in the next several years. One problem is that while reforestation is technically feasible, it has not been conducted properly because it goes against the interests of certain sectors in society. To illustrate, illegal loggers are presumed to have a short-term approach to the environment and natural resources since they are after immediate profits.

Reforestation has also been hampered by the fact the DENR lacks the necessary equipment, humanpower, and other resources needed to implement reforestation activities efficiently and effectively. This is due in part to the low budgetary priority accorded by governments to the environment sector. In addition, how can any technically viable environmental conservation policy be properly implemented in a system where timber license agreements (TLAs) are used as a tool of political patronage? Marcos, for example, was known to have given his cronies TLAs covering forested lands in Mindanao and other parts of the country in exchange for their support (Boyce, 1993). In a system ruled by sizable number of administrative and legislative officials who have interests in logging, mining, and other environment-related companies, how can any conservation policy work? For instance, it has been reported that during the Ninth Congress, almost 180 out of 199 House members had interests in land-related companies (Gutierrez, 1944).

One vital change that has occurred in the political system which has had repercussions on most sectors of the system is the decentralization of central government operations. In part, this has led to the increased participation and

[8]Bennagen, Pia, and Raymund Jose Quilop. Contextualizing PREPF: Politics, policymaking, and policy implementation. Paper presented at Pre-Congress III: Philippine Social Sciences and Public Policy and Practice, held at the Philippine Social Science Center, Quezon City, on 22 May 1998.

more substantial involvement of local individuals and communities in governmental projects. It cannot be discounted that under the Marcos government local entities were also given a chance to be involved in the policy process. However, studies have revealed how different this participation is from that which is occurring at present. For the most part, the participation of local groups in environmental programs under Marcos' centralized government was limited to the implementation phase. Simply put, the local communities became the technical arms of the government. They were there to see to it that the government's forestry programs were put into action. Their participation began and ended at the level of implementation. During Factoran's turn as DENR Secretary, the Department became heavily involved in decentralizing its operations. The community forestry program saw the involvement of local communities and even families in the formulation of forestry management plans. And up to the monitoring and evaluation of said program, the DENR made use of inputs from the local communities (Factoran, 1992). This participation was brought about by the implementation of the Local Government Code of 1991 and by the DENR's adoption of the policy that "if the people are the problem, then they must be part of the solution". Thus, a more democratized system created avenues for participation that were absent (or present but not fully utilized) in an overly centralized system of governance. Involving local actors in DENR activities has enabled the Department to know the real state of affairs at grassroots level and to generate solutions to problems that are formulated by the very people directly affected by such problems. Furthermore, such a partnership between governmental and civil society actors has enabled the sharing of information, knowledge, and skills and has fostered a more collaborative approach to the search for solutions to the environmental problems that continue to plague the country.

A goal set by PREPF in the area of health and nutrition is the attainment of a substantially better health and nutrition status for the Filipino people by the turn of the century. The delivery of health services is one of the key areas affected by the decentralization policy of the Aquino and Ramos governments since it is one of the services that has been passed on from the central government to its local counterparts. Some praised this move saying that bureaucratic red tape would be minimized because the health needs of local communities can now be handled by municipal and provincial hospitals and clinics. Local communities need no longer travel to Manila to consult doctors and procure medicines. On the other hand, there were those who cautioned a gradual decentralization of the health sector because local governments need to have not only adequate equipment and financial resources but more importantly, the necessary skills and training to perform the responsibilities given them. After several years of devolving health services, it has been found that this policy has not improved health services delivery at all. This is not to say that decentralizing the delivery of health services should be done away with altogether. Devolving key functions to the local level is the ideal arrangement but the incapability of local officials, the politicking of government officials, and

the abuse of taxation powers by local officials hamper the proper implementation of the 1991 Local Government Code (Flaminiano, Jr. and Yglopas, 1993).

In an attempt to improve its performance, the DOH under the Ramos government has turned to the private sector and the NGOs. The private sector assists in financing health programs and service delivery while NGOs are involved in pioneering alternative health approaches and in promoting and developing indigenous and traditional medicine. The more democratic environment has brought about a shift from a top-heavy system to one that is more broad-based and participatory.

If the PREPF recommendations were acted upon immediately, would they have had any influence on the direction of political change in the system? One can venture the opinion that since all the PREPF recommendations were geared toward contributing to the attainment of a just, good, and humane society, it would be safe to say that any government that could successfully implement the proposed recommendations would gain legitimacy in the people's eyes. Such an analysis is incomplete because it isolates the policy process from the political realities of the times. During the 1970s, the Philippines did enjoy economic growth as partly reflected in the various infrastructure projects that government embarked upon. Yet, despite the economic gains during that period, there were groups that continued to oppose the government and its dictatorial orientation. Hence, legitimacy was not gained just because government delivered economic goods. Certain sectors clamored for change due to the oppression, human rights violations, socio-economic inequity, and other government abuses. The overthrow of Marcos and his cronies led to the redemocratization of the country. However, it would still be difficult to say whether political change could have come sooner or later had the government acted on the PREPF recommendations and pursued them effectively and efficiently.

CONCLUSIONS

Insofar as the dimensions of population are concerned, one can ask: Did the PREPF scenarios come true?

With respect to fertility and mortality, partial successes can be claimed. Fertility declined to a TFR of under 3 children per woman in the early 1990s, compared to a goal of replacement fertility by the year 2000. Mortality declined as well to a life expectancy at birth in the middle 60s for both sexes combined. A decomposition of the national figures by province shows differentials in life expectancy of more than 20 years, with mortality lowest in the highly industrialized and medically endowed areas, and highest in areas occupied by minorities – the Moslems in Mindanao and the minority groups in the Cordilleras in addition to Region VIII, the least developed region in the Visayas. In terms of migration, the change is close to zero. Outmigration from rural areas continues unabated, in-migration to developed areas has shifted away from hopelessly overcrowded urban centers (the city of Manila sports

a negative population growth rate while Cebu City has been the slowest growing administrative unit in Metro Cebu since the 1980s).

Emphasis has been placed on the increase of longevity. The upper level of Philippine society has average life expectancies far above the average national life expectancy and is hardly behind what most developed countries enjoy. Increasing the average national life expectancy is possible only through a narrowing of the life expectancy differentials that exist in the country and as already cited, as wide as 20 years. As mentioned above, those slated to die relatively early are the minorities, especially those in Mindanao. Economic development has to do not only with a good life, it has to do with the chance of having life at all.

In terms of the policy recommendations made, they all have one thing in common. All are directed to government. PREPF was designed to make policy recommendations and it is the government that sets policies. But is it only the government that can translate general policies into action? The answer depends on what policies one is talking about. When it comes to ideas, sentiments, and behavior that affect individuals directly and primarily, ideas and sentiments can neither be legislated nor changed, certainly not overnight. This is especially so when its emphasis is laid on respect for individual rights and values. Both the right to survive as a family and to live a decent life as a family are acknowledged human rights.

All five fertility-related PREPF recommendations had to do with family planning; three of them with service delivery, administration, and targets that can directly be acted upon and two with more complex matters. With respect to service, families take action in the framework of their cultural setting and as necessitated by their social and economic situation. As long as the latter does not change, individuals and families have no reason to change their time-honored behavior. The presentation of techniques alone that can change their behavior or the outcome of its does not work as long as it does not make sense in this situation. The services must fit the culture of the people and it must be integrated in the total development strategy, not isolated from it.

At the time of PREPF, fertility reduction was equated with FP, and the idea of integrating FP with a total development process was only beginning to be realized. Since PREPF, considerable progress has been made in that respect. Today, it is generally realized that fertility reduction cannot be legislated but requires education. But this education has to be meaningful in the social and economic environment in which people live. To just go and order schools to include FP courses in their curricula is not the same as educating children. Doing exactly that, i.e., ordering schools, has not helped much during the past decade to increase contraceptive prevalence rates.

Migration is the process that brings population and resources into a balance. People, individually or as families, have always moved to where resources needed to make a living are to be found. Less developed rural areas suffering from population pressure will always send out people to other areas, urban or rural,

where livelihood opportunities exist or are believed to exist. Only brutal suppression of individual movements can prevent that.

Policy recommendations and development plans designed to get away from the steady influx of migrants to a very few megacities have ranged from dispersal of industries to secondary growth poles, interrelated a real development and similar measures. Such plans are good but who can implement them? The government alone? Entrepreneurial initiative cannot be legislated, at best it can be stifled. To cite an example – in the 1970s and 1980s, Cebu was the most stable place imaginable: nothing ever changed. Then there came a governor who told the central government to get off his back. After a while, Cebu was declared a "boom town". The governor was able to create enthusiasm, initiative, and activity, and Cebu began to change. The best policy that has been enacted and that is helpful in bringing about industrial and commercial dispersion and prosperity or economic and social development is the process of devolution leading to local autonomy and with it, local initiative by the private sector.

Possible mortality scenarios outlined in the PREPF reports, like those dealing with fertility, have not been fully realized. But like fertility, they describe the direction into which developments have proceeded. Life expectancy has been raised, infant mortality has been reduced. The policy recommendations made a quarter of a century ago have correctly been based on government action that was possible financially and in terms of manpower and that concentrated not on curative but on preventive public health measures. The government delivered on the expansion and strengthening of primary health care for all, including the rural people; the integration of health services through effective referral systems, massive immunization campaigns, and nutrition programs. It has not yet succeeded but initiated activities to extend Medicare to rural workers and their families. It has commissioned large-scale studies of the entire health care delivery system, including the private sector. Curative services needed to address the range of diseases from the predominant infectious diseases to degenerative ones can only be provided by the private sector.

The lack of development or evenly spread development leads to uncontrolled migration, urban growth, and high morbidity and mortality – a multiple causal chain. All three demographic processes are influenced by, and in turn influence, economic development. One is not always sure what has to be changed first or most of all. Can one be done without the other, i.e., decrease fertility and mortality without economic change? To a certain extent, the answer is yes. Fertility has been reduced somewhat through FP, but the reduction has not gone as far as desired. Mortality has been lowered to the threshold level through the reduction of infectious diseases, but further improvements are extremely hard to come by. To go further, socio-economic change has to occur.

The policy recommendations and programs were designed to solve problems. But as is most often the case in human life, solving one problem creates others. Reducing fertility has resulted in population aging. Lowering mortality has led to a morbidity explosion and to increasing health care needs.

The lack of progress in nutrition and health improvements along the path projected by the PREPF can be explained by the poor economic performance in the 1980s, particularly the economic crisis of 1984-1985 and the slow recovery that followed. Deficiencies of government nutrition and health programs that reduced their potential impact is another reason.

An issue of great concern is the effect of devolution on the delivery of health and nutrition services, among others. The issues and problems that have surfaced during the implementation of the 1991 Local Government Code include financial support, NGO participation and problems arising with the transfer of personnel (Legaspi, 1995). Moreover, certain devolved agencies (mostly the DOH) have resisted devolution and have favored subsequent moves to recentralize the health sector advocated by certain members of Congress.

PREPF projections seemed generally on target for the resources that were estimated to be scarce by this time. Indeed, there is now a serious shortage of forests and timber stands. The country is experiencing excessive depletions in fishery products in traditionally important bays and waters. Air and water pollution in many parts of the country stand at very alarming levels. In fact, the reductions in some of the critical resource bases seem to have occurred much earlier than what PREPF projected. As early as 1992-1993, forest cover diminished to less than 7 million hectares, from a high of 18-20 million hectares at the beginning of this century. In a sample of 15 fish-rich bays done in 1996-1997, fish loadings dropped in 7 of them. By 1990-1992, PM10 levels in Metro Manila had already exceeded WHO standards. But PREPF seemed short on factoring climate change.

There is a need to follow through what PREPF has done. This time more exhaustive analysis should be conducted, with the newest tools available, applied to a wider array of environmental and resource phenomena. Sharpening the quality of data may be more readily possible now. But there are some things that may be developed as a concern for economic analysis beyond what PREPF did: for example, more aggressive inclusion of institutional analysis and analysis of transaction costs in the distribution of benefits and ecological costs of development; localizing the analysis specifically on how human and ecological security (HES) works at local community levels. These seem crucial in the light of new trends which PREPF did not see fit to assume during its time. This review has highlighted three things: there are many more people than ever before, resources are scarcer, and decisions have still to be made as to how to act together in a way that is democratic and politically meaningful. These suggest that it is imperative to produce more from much less, consume less of what is left, and to share more of what there is.

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Thank you, thank you very much Mr. Chairman. In 1975 it was very difficult for social scientists not to have been involved in PREPF in one way or the other. Unfortunately, I was on the other side of it. I was part of the funding institutions that sponsored this large scale study and I had the task of looking at the four-foot reports that were produced by the authors of the papers.

Given the short time that I have, let me just make a couple of points. First, I think Academician Concepcion was inadequately introduced. I think that she initiated the population program in this country. She was the first one who in fact raised the problem of high population growth rate late in the 60s and in fact was responsible for the creation of the Population Commission in the 70s. I think it is therefore appropriate for her to have spent time looking into the results of the PREPF studies. I wanted to read the paper twice. After reading it the first time, I was not depressed. I was very depressed. I think it's a stirring indictment of the utility of social science research at that time, the relevance of it to policy.

In particular, if we read the conclusions of the test paper, everything that the PREPF's studies had expected to be, the preferred scenario and the preferred alternative were not realized and she says that with respect to the population, the fertility targets were partially achieved. I believe that if you ask NSO Administrator Africa here to account for some of the changes in the samples to measure fertility rate, I'm sure that she would probably change the conclusion from "partially achieved" to "not having been achieved."

The second point that I want to mention is that when this was started in 1975, the comparison was made between the Philippines and Thailand and the population of the Philippines in 1970 was 36.8 million and Thailand's was 36.4 million. Today, Thailand's population is 60 million, ours is 72 million. That gives you a sense of the degree to which the preferred scenarios were different.

The issue of trying to integrate development policies and population, I think, is something that had been raised much much earlier than in the 1987-1992 Medium Term Philippine Development Plan. This was done in 1978 by Academician Encarnacion when he wrote the very interesting paper "Looking Into How Migration Turns Fertility Transition" and he was talking about the degree to which certain levels of education actually turn around the fertility rate. His sample study may have been just a small part of the 1978 NBS data but the policy implications were very clear and very simple. Pursuing good education up to a certain level would actually turn fertility around. Unfortunately, nobody heard that.

Finally, I wanted to propose a PREPF II which presumably would want to look at the next generation. I suppose I will not be here by that time. My thinking about it is really to warn against doing that. I think we should just go back to PREPF I. Change the dates in which they were published, put it in a better shape,

use good software, and we will have the same thing said all over again for the next 25 years. As I said at the start, I really think that the only thing that is really needed is really a good interactive model which we had suggested to PREPF as an afterthought. Unfortunately, that was not carried out completely simply because it was an afterthought. We will have to talk about that again 25 years from now and I think it will be a rehash of PREPF I.

Thank you very much.

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Administrator, National Statistics Office

- It appears that the next time a research program like the PREPF is undertaken, oppositions to policy positions should be made a part of the research team. The section on fertility and family planning attributes "the repeated postponement of replacement fertility goals at each planning cycle"... to "the lack of a firm determination on the part of government and other sectors concerned to regulate fertility and to arrest the momentum on population growth."

  I also note that in the section on mortality that while rise in the numbers of midwives, rural health units, and barangay health stations improved the ratios somewhat but the number of clients served per health worker/ station remained staggering due to high population growth rates.

  Why proceed with basic projections of how many people there will be at a point of time in the future when there is a distinct possibility that these may not materialize because of the objections of a very powerful lobby? If these projections are followed, the resulting requirements for hospital beds, doctors, vaccines, classrooms, teachers, textbooks, etc. will be overestimated and financial and manpower resources will be misallocated.

  It might be useful to have a quantification of how the so-called "other sectors" can pull targets down and translate these into the amount of resources that can be misused because of "explicit avoidance of policy advocacy".

- To my knowledge, the set of implementing rules and regulations of R.A. 729, otherwise known as "Urban Development and Housing Act of 1992 had been signed by the heads of the Department of Interior and Local Government, National Economic and Development Authority, Housing and Urban Development Coordinating Council, National Statistics Office, and the Commission on Population before President Ramos stepped down from office last June.

- Per section 285 of the 1991 Local Government Code, the allocation of resources, particularly the national internal revenue taxes, depends on the population size of the province, city, and municipality. Their shares are determined on the basis of the following formula: population – 50 percent;

land area – 25 percent and equal sharing – 25 percent. The formula used for barangays is: population – 60 percent and equal sharing – 40 percent.

Urban planners should consider reducing the weight for population in the formula while at the same time promoting infrastructure build-up and industry promotion in the rural (not suburban areas) areas. The NSO sometimes feels that the major development strategy for some towns is to influence census-taking in order to obtain a higher population count and consequently a higher IRA. This serves also as an argument for more registered voters come election time.

A local government unit (LGU) is allocated a bigger share of the internal revenue allocation (IRA) if it has more people residing within its boundaries. Rightly so since there are the people to be served. However, since resources flow to them, these LGUs become more of magnets for migration.

- The concern of employment is also part of the issue on migration. While migration is usually grouped with determinants of population like fertility and mortality for purposes of population projections for instance, it responds directly to the employment situation of both the sending and receiving areas. The PREPF used a model acknowledging that income and economic potential play significant roles in attracting or repelling population.

Note that only about 65-70 percent of persons who are 15 years old and over enter the labor force. Another 30-35 percent stays out and includes the students, housewives, the retired, etc. This group may enter and exit the labor force: (a) when the economy is bad and landing a job appears to be difficult, or (b) when the economy is perceived to be progressing and the chances of finding a job increase. Its behavior need not be contained within the geographical area where it is situated but to areas outside this, including outside the country.

This partly explains inward urban migration to and high unemployment rates in growth centers. Also, depressed regions such as the Autonomous Region of Muslim Mindanao exhibit low labor force participation due to (perceived or actual) limited employment opportunities and this results in high success rates of finding employment.

One wonders of migration is important to be prominently addressed by Department of Labor and Employment and the Housing and Urban Development Coordinating Council.