PHILIPPINE PLANNING JOURNAL

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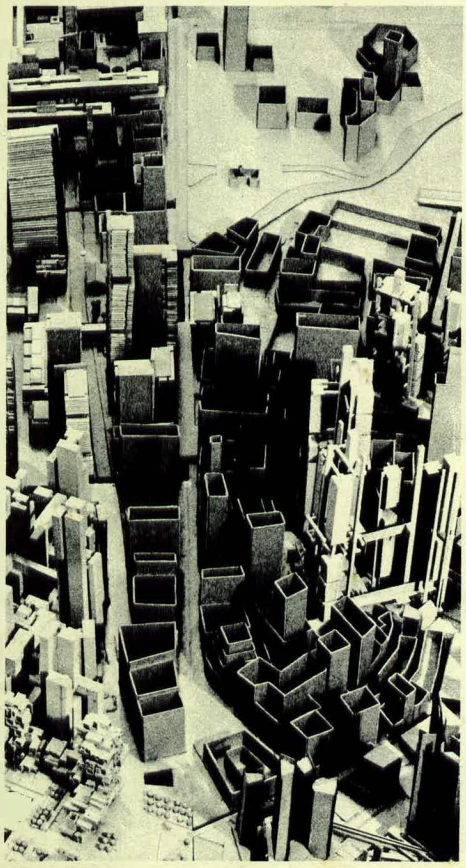
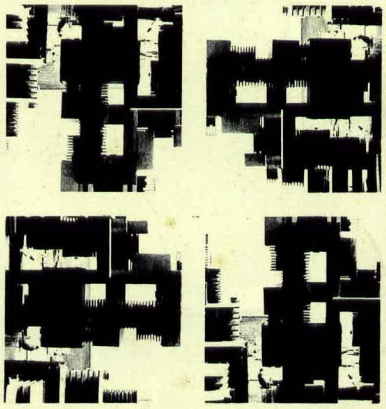
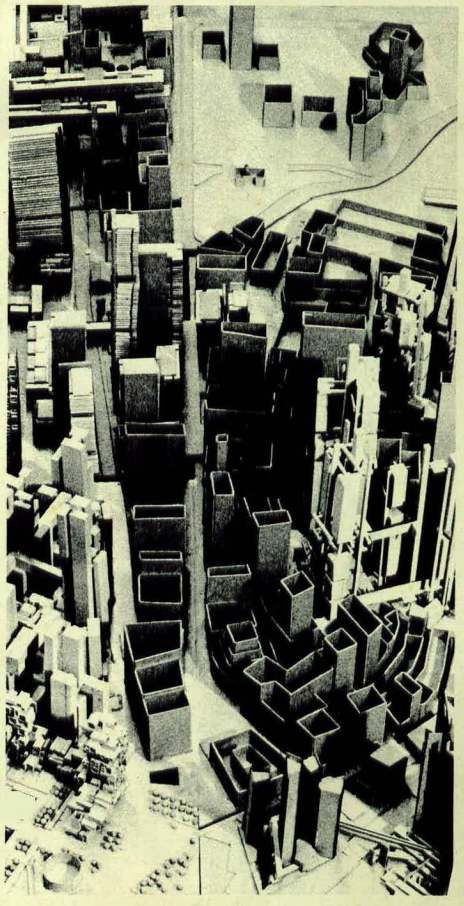
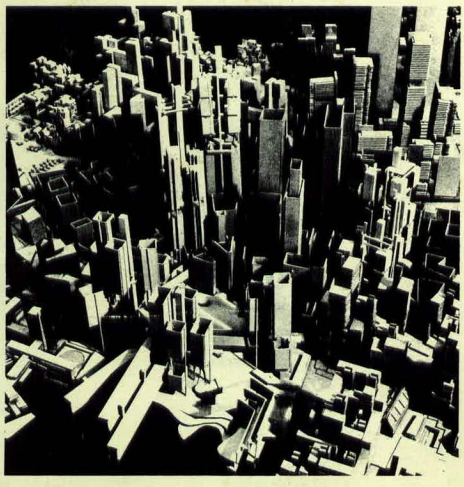
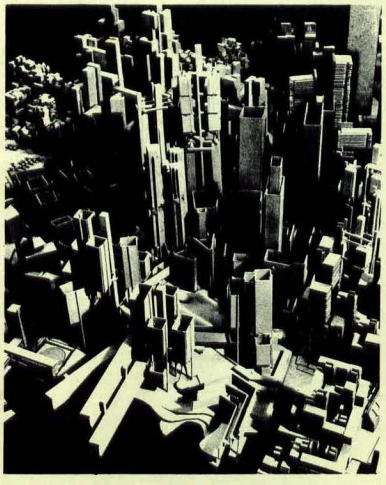










PHILIPPINE PLANNING JOURNAL

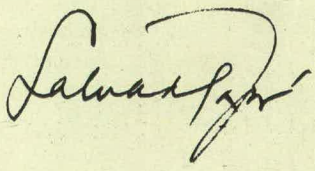
INSTITUTE OF PLANNING UNIVERSITY OF THE PHILIPPINES VOLUME ONE * NUMBER 1 OCTOBER 1969

CONTENTS

presidential message

I greet with pleasure the staff of the University of the Philippines Institute of Planning on this first issue of their **Philippine Planning Journal.**

The nature and function of the Institute indeed require a vehicle for the publication of data on the trends of our development and for the articulation of concepts relevant to the needs of our developing society. It is necessary for the country today to examine not simply the reality of our present situation, but also the ideas that have guided the direction of the national growth. This must be done not in order to prove those ideas wrong, but in order to take account of new conditions which require that our development plans be more closely geared to sound, valid, long-range national goals.



EDITORIAL

Through the **Philippine Planning Journal,** starting with this issue, the Institute of Planning, University of the Philippines, assumes an important role of providing the government officials and the general public with up-to-date information and ideas about environmental planning. The Journal will serve as an outlet for researches and creative work of the Institute's faculty, staff, students and alumni. In succeeding issues, efforts will also be made to publish researches from other allied fields.

The articles in this issue are varied and are not focused on any specific area of environmental planning or urban problems, Two articles: "Burnham's Plan for Manila" and "Prospects for Planned Growth in Metropolitan Manila" deal primarily on Manila — its past, present and proposed development in the future. Of interest to the planners are the proposed coding standards for land use mapping by the Task Force Committee created purposely to prepare such standards and Calabia's suggestion to establish a data bank for urban and regional planning in the Philippines. Faithfull's article describes the United Nations' participation in promoting environmental planning in the Philippines. A regular feature of the Journal is the section on Regional Development Centers.

Our modest offerings in this issue were chosen mostly on "hunches" of what we believe the readers will be particularly interested in. In selecting articles for future issues, we will be guided by our readers' comments and suggestions, current planning issues and prevailing needs in the country.

Tito C. Firmalino

UNITED NATIONS ASSISTANCE IN ENVIRONMENTAL PLANNING IN THE PHILIPPINES

United Nations assistance in planning in the Philippines started in a slightly indirect manner in 1958 with the assignment of two short-term experts to survey the housing conditions in the Islands. This assignment resulted from a request by the Government of the Philippines. The two experts concerned are known to everyone who has been concerned with the fields of planning and housing. They were Charles Abrams and Otto Koenigsberger. They were asked to advise the Government on housing and on planning needs, methods and resources, to evaluate the existing housing on the bases of program, financing, administration, house designs, construction and planning methods including building reseach; to make policy recommendations for housing and planning and for the rehabilitation of affected families; and to suggest the form and extent of future technical assistance in the areas surveyed.

The report prepared by Abrams and Koenigsberger is a model of its kind and reflects the wide background and experience which they were able to utilize in considering the Philippine problems. The duration of the mission was only one month and it is quite extraordinary for these two men to distil a report in which the findings and conclusions are valid still. In fact, in reading the report one may wonder whether anything has changed in the intervening eleven years. Abrams and Koenigsberger gave great credit to the Filipino officials who assisted them and especially to Mr. Sim Garcia who is now with ECAPE in Bangkok.

Although planning is mentioned only briefly in the terms of reference of this mission, the question of housing is so inextricably linked with planning at all levels that any expert advising on housing must take into account the necessity of preparing and carrying out housing program in conformity with practical and effective national, regional and local plans. In fact, the Abrams-Koenigsberger report devotes three of its chapters to the land problem, planning and legislation. Land was discussed in relation to cost, availability and location as well as ownership and taxation. The report refers strongly to the need for the public purse to benefit from increases in land valuation which may occur because of public improvements or planning proposals. It refers to the Government's reluctance to expropriate privately-owned land for public use. It also speaks of the government's "power plant" which includes:

1. the power of expropriation or eminent domain for the taking over of property for public use;
2. the power of the government to levy taxes and expend the proceeds for public needs; and
3. the police power for the regulation of behavior in the interest of general welfare.

The problems of using this power plant to the full are so well-known that they need not be discussed in this article. Suffice it to say that the necessity to use it as far as possible is even more urgent today than it was in 1958.

The report discusses the planning situation and refers to the work of the National Planning Commission; to the disorder in development in the Philippines, with squatters living in public parks, subdividers selling plots without providing roads and utilities, prices soaring, towns and villages sprawled along the highways, and roads clogged with calesas, buses and jeepneys; and to the growing impatience on the part of the mayors, councilors and citizens concerning long-term plans, with reality superimposing itself on fantasy, and the hopeful blueprints fading under the desperate needs of people for shelter. It states that much more realistic and vigorous approaches are needed and that the preparation of plans must be matched by plans for their implementation.

Here, in particular, it seems that little has changed in the intervening years. Town and city plans in the Philippines seem to have unrealistic goals which are unrelated to the capacities of the implementing local government authorities. Finance, staffing, legislation, organization and administration for the successful implementation of plans had been lacking and are still lacking. There has been practically no feedback from the plan implementation process to the plan preparation process. Linkages between the local governments and the National Planning Commission have remained elementary. The National Planning Commission itself operates on a minimal budget, and its inability to recruit additional staff and to allow its personnel to travel and to spend sufficient time in the areas outside Manila has reduced considerably the effectiveness of its dedicated staff who are capable of performing useful and valuable public services but are often frustrated.

The report speaks of the need for realistic planning, to include the assessment of present and future housing needs, allocation of urban land for various uses, neighborhood planning, the survey of employment for low-income families, the provision of dispersed employment,

the improvement of transport facilities and a careful study of the utilization and development of the Manila Railroad lines. It speaks of the needs for the design of a mass transportation system for the Manila region, for public investment in plan implementation, and for government acquisition of land for housing in relation to future transport routes and transport improvements. The report concludes with a discussion of the necessity for housing legislation. It lists many points which should be drawn into housing legislation, a number of which are equally relevant to any discussion of planning alone. It emphasizes the need for regional planning and development laws and lists desirable components of such laws.

Subsequent to the Abrams-Koenigsberger mission, things apparently went on much as usual in the field of planning. The next move came in 1962 with the arrival of a United Nations expert, Morris Juppenlatz. Juppenlatz came in response to the Government's request for advice and assistance on low-cost housing. He was attached to the People's Homesite and Housing Corporation. Inevitably, in his consideration of housing, Juppenlatz came up against the same problems discussed by Abrams and Koenigsberger. The situation had not changed for the better and in fact had worsened in the larger cities in the Philippines.

Juppenlatz assisted the People's Homesite and Housing Corporation in the preparation of several draft bills, among them being House Bill 9419, "an Act to provide for the establishment of a national planning, housing and financing authority." This was a compendious bill which would have had the effect of amalgamating a number of existing agencies concerned with housing and planning. It included a brief provision for the establishment of a center of urban studies. The Bill passed the Lower House in 1964 but never progressed further.

At about the same time, another movement was beginning to gather force. Much earlier, in 1959, Director Carlos P. Ramos of the Institute of Public Administration (now College of Public Administration) of the University of the Philippines, prepared a study on the problems of Metropolitan Manila. The study was commissioned by UNESCO and was presented to the Regional Seminar on "Problems of New and Rapidly Growing Towns" at New Delhi in December, 1960. The following year, a study of mass transport facilities on Metropolitan Manila was carried out and Ramos was the consultant. Then in 1963, a seminar on urban housing problems was convoked by the National Economic Council. Ramos was one of the major discussants. His interest in, and concern for, planning was rapidly developing that, in March, 1963, he initiated, through the United Nations "the extension of technical assistance with a view to establishing the program of urban studies in planning in the Institute of Public Administration of the University."

This resulted in the visit in early 1964 by a United Nations expert, Professor Dennis Winston, Head of the Department of Town and Country Planning, University of Sydney. This visit was concluded by a conference attended by government officials and civic leaders. The conference was chaired by Mr. Sixto Roxas, who was then the Chairman of the National Economic Council. Great interest was shown in the proposal to establish a center of urban studies and the conference agreed to support the move and that further details should be worked out. In May, 1964, the Government of the Philippines requested another United Nations expert in urban and regional planning. The duties of this expert were to consist of:

1. organizing training programs, including the training of senior government officials in urban diagnosis and regional analysis for planning, design and implementation of industrial estates in the Philippines, and
2. assisting the Government of the Philippines in preparing a request to the United Nations Special Fund for the establishment and operation of a center for training and research in urban and regional planning.

As a result of this request, the United Nations expert arrived in August, 1964. In collaboration with Dean Carlos P. Ramos, a request

for Special Fund assistance was prepared and submitted to the United Nations in 1965.

At that time the Government could not give the request a high priority as a number of other important projects were also in the pipeline. It seemed at the time that the Ford Foundation could offer earlier assistance. Thus, the University decided to transfer the request to the Foundation. However, the Foundation, which was already assisting several related units of the University of the Philippines, decided not to undertake any new projects until 1966. Therefore, the University re-submitted the request to the United Nations in October, 1965.

In early 1965, the Fifth Congress of the Republic of the Philippines passed Republic Act 4341, "an Act authorizing appropriation of funds for building facilities and operating expenses of the Institute of Planning of the University of the Philippines and for other purposes." The Act declared the national policy to strengthen and assist the government and local government agencies and other private organizations in the study and solution of their development problems; to facilitate the realization of developmental proposals at all levels; to improve human settlements and their environment by the integration of social and economic, physical and administrative situations; to produce comprehensive and coordinated development studies and plans; and to make available a group of capable professional urban and regional planners to assist in the achievement of this policy.

In October, 1965, the Board of Regents of the University of the Philippines, on the recommendation of President Carlos P. Romulo, formally established the Institute of Planning, appointed the Dean of the College of Engineering as Acting Director, and appointed the members of the Advisory Council. In the absence of early United Nations assistance, the University was able to obtain a number of Colombo Plan fellowships and began to select faculty and staff members who were sent abroad to Australia, Canada and the United Kingdom for graduate study in Town and Country Planning and in Regional and Community planning.

The United Nations consultant finished his assignment in May, 1966 and returned to Australia but the Philippine Government requested the United Nations that he return as soon as possible. In April, 1966, the Board of Regents appointed Dr. Leandro A. Viloria as Director of the Institute and he went abroad on a Colombo Plan fellowship in August, 1966. Funds became available to the Institute in December, 1966.

In early 1967, the United Nations consultant returned for a further assignment of one year to assist in the establishment and building up of the Institute. By the end of 1967, three of the Institute's faculty members including the director had returned, and the Institute was beginning to expand and develop its programs of applied research, consultation, graduate education and in-service training.

In June, 1968, the United Nations approved the request of the Government of the Philippines for Special Fund assistance for the Institute of Planning, and in August, 1968, the project manager for the Special Fund project arrived in Manila.

The purposes of the project are similar to those of the Institute as stated above. The work of the project also covers the four broad categories, namely, consulting and advisory services, applied research, graduate education and in-service training. The project will run for a period of approximately four years. During this time, Special Fund will provide a total of 216 man-months of services by experts, fellowships at an estimated cost of $29,000, equipment and supplies at a cost not exceeding $40,000 and local operating costs of $27,200. The total Special Fund contribution is $546,000 and the Government will contribute $68,000 towards local operating costs.

A team of seven experts will be provided in addition to the project manager. The team will consist of a regional planner, two physical planners (one for urban and another for rural areas), a land

and development economist, an expert in the legal aspects of planning, an expert in planning control and implementation and an urban sociologist. Two of the experts arrived on June 4. The others are scheduled to arrive late this year or during the early part of next year. They will remain in the country for periods ranging from one to three years. In addition to the individual experts, a total of 12 months of consultant services is provided for special needs.

The Special Fund provides for 66 man-months of training fellowships in regional planning, transport, metropolitan planning, urban research and for other fields still unspecified. The allocation for equipment provides for two operational vehicles, and for printing and reproduction equipment sufficient to set up a small but effective printing shop within the Institute.

During the project, the Government will provide a counterpart contribution in kind totalling $547,000. This will be made up of 990 man-months of professional staff services, 618 man-months of non-professional services, land and buildings at an estimated cost of $157,500, equipment and supplies at an estimated cost of $77,461, miscellaneous services and facilities at $36,269 and costs of local transportation and handling of equipment.

The programs of the project will be directed towards the establishment of firm bases for both a national framework plan and for metropolitan region framework plans. The latter will be in the four main growth areas of the Philippines. Secondly, and supplementary to these framework plans, the programs also will provide for demonstration action plans within the frameworks. Corollary to these activities will be the initiation and establishment of centers of consultation, research and study, including in-service training programs in the growth areas.

The United Nations is also involved in other projects in the Philippines which are either directly related to planning and development or contributing towards a basis for planning and development. Chief among these are two projects now going on in the Manila Metropolitan Region. These are the World Health Organization's project on sewerage in Metropolitan Manila, and the Laguna de Bay project for flood control and water utilization in the Laguna de Bay area. Although these projects are primarily engineering in nature, both involve consideration of the scale and direction of development in the Manila Bay Metropolitan Region, and both will produce results of the greatest significance in the preparation of framework and development plans for the region. Consequently, coordinating arrangements have been established between these projects and the Institute of Planning.

There are on-going projects of agencies in the Philippines which will have a considerable bearing on planning and development. Among these are the Watershed Management project of the Bureau of Forestry, the Soil Fertility project of the Bureau of Soils, and the Fisheries project of the Bureau of Fisheries. A new and most important project has also been started. This is the Philippine Transport Survey, and the results of this will be of vital value to national, regional and local planners. Externally, the United Nations is currently preparing through the Asian Development Bank for a Southeast Asian transport study. The conclusions of this study will also be important in national and regional planning in the Philippines.

It is possible that all or any one of these projects may lead to additional United Nations assistance. Environmental planning is one where opportunities for a more specialized and productive United Nations assistance project may likely arise. An example of this could be the preparation and implementation of a plan for the Manila Bay Metropolitan Region or the Davao Metropolitan Region in Mindanao. Coordinated planning and housing projects might likewise be initiated. The question of transport on a metropolitan basis is another field in which special assistance might be needed and might be very productive. There is much to be done in housing itself, administratively, financially and physically. All in all, there are a number of possibilities for future United Nations assistance, particularly in the field of environmental planning.

WALTER G. FAITHFULL
UN Special Fund Project
Institute of Planning
University of the Philippines

Editor's Note

The Plan of Operation for the United Nation's Special Fund assistance project to the Institute of Planning, University of the Philippines, was signed on May 9, this year, by National Economic Council Chairman Marcelo S. Balatbat representing the Philippine Government and by Mr. Andrew Joseph, a representative of the United Nations. The statements of these personages are reproduced below:

Marcelo S. Balatbat, NEC Chairman:

"I feel signally honored to participate in today's ceremony marking the fruition of painstaking efforts and long period of waiting for the formal launching of the cooperative effort of the Government of the Philippines and the United Nations Development Program in strengthening the Institute of Planning of the University of the Philippines.

"The people of the Philippines look up to the Institute of Planning, University of the Philippines, to provide men of skills to plan urban and rural areas for maximum economic utilization for present and future generations. The rapid growth of Philippine population demands the highest calibre planning of the use of physical resources to insure to everyone of the increasing multitude his rightful share of the opportunity for existence and well-being.

"It is with a high degree of satisfaction that I note the desirable transformation of the University of the Philippines. Time was when the chief mission of the University of the Philippines was to produce the political leaders of the country. Consistent with the role required of governments during these times, that is, that it should provide leadership in socio-economic development, the University of the Philippines has structured itself to provide the country with men capable to lead not only in political and administrative affairs but also in business and development matters. The Institute of Planning is one of the units that enable the University of the Philippines to accomplish the foregoing mission.

"Another happy development in the operations of the University of the Philippines is its increasing contact with the people. Several units of the University are now engaged in extension work that bring the results of studies and research direct to the people. The seminars, workshops and in-service training programs conducted by units of the University have brought the University of the Philippines closer to the people.

"The Institute of Planning is one of these units. Aside from training men to imbue them with planning skills and expertise, the Institute of Planning, through its research, advisory and consultant programs, will deal with actual concrete problems and situations.

"The mission of the Institute of Planning is tremendous in magnitude. Fortunately, the vision of the men, here and in the United Nations Development Program in New York, has made possible this program of assistance to provide sinews to the Institute of Planning, especially during its initial period of operation. Because the objectives are great, the expectation of success is high. In this common effort to strengthen the Institute of Planning, we shall always remember and appreciate heartily the assistance extended by the United Nations Development Program, very worthily represented in today's ceremony by Mr. Andrew Joseph. To him and to the international team of experts headed by Mr. W. G. Faithfull, I pledge our wholehearted cooperation in the implementation of the Plan of Operation we have just signed. This pledge is fortified by assurances of devotion to duty by a dedicated staff led by Dr. Leandro A. Viloria and of sustained support and encouragement of the President of the University of the Philippines, Dr. Salvador P. Lopez."

ited Nations Special Fund Assistance Agreement
the Institute of Planning was signed last May 9,
69 at the University of the Philippines Executive
ouse. Signing the Agreement are: National
conomic Council Chairman Marcelo S. Balatbat
econd from left), U.P. President Salvador P. Lopez
enter) and U.N. Representative Andrew J. Joseph
econd from right). Also in the picture are: Dean
arlos P. Ramos (extreme left), member of the I.P.
dvisory Council and Budget Commissioner Faustino
-Changco (extreme right).

Andrew Joseph, U.N. Representative:

"The necessity of planning in the Philippines has long been recognized, but the machinery and capacity for planning have not been sufficient. Substantial progress has been made in national and regional economic planning and also in the implementation of specific projects at various levels. However, the translation of economic plans to comprehensive physical development plans has not been fully effective, and there is much to be done in defining land and settlement policies for the country as a whole, and especially in relation to the burgeoning urban areas.

"In the last two decades a handful of courageous and farsighted men went abroad to study planning at universities in the United States and in India. Also, a number of Philippine universities, recognizing the necessity for engineers and architects to understand something of the planning process, have introduced courses in their undergraduate programs. Apart from this, however, there has been no formal training and education of planners in the Philippines and the supply of qualified and experienced planners has been very limited.

"There have always been problems of development and organizational arrangements of rural and urban areas in the Philippines as in any other country. But it is only in the last few years that the magnitude of these problems has increased so rapidly that the majority of the people are becoming aware of the urgency.

"In many countries, there has been a rapid growth of population especially in urban areas, and an increasingly vivid realization by the general public, and consequently by those in power, of the enormous problems which are developing. This has led to an intensification of the planning process and of the implementation of plans.

"The demographers of the Philippines confidently estimate that before the end of the century we will have more than twice as many people. Yet, the land area will not increase, and it is possible that the area under cultivation will not increase either. In fact, the cultivated land area may conceivably decrease, being unsuitable, or as watershed areas are returned to forest, and as new methods of production increase the capacity of more tillable lands. This being so, where will the additional 35 or 40 million Filipinos make their homes and earn family income? With an average farm at present of roughly two hectares it is obvious that very few, if any, of the additional population will live in rural areas. Therefore, to begin with, we must

anticipate that the urban areas of the Philippines will grow by at least 35 or 40 million people before the end of the century. In addition, it can be expected that changes in farming methods will result in more commercial agriculture, larger and larger farms and a smaller number of farm families. Therefore, we can expect that out of the current 25 million rural people, a substantial number will also leave the farms to move to the urban areas. The end result might very well be a total movement of 50 million people or more to the urban areas of the Philippines.

"One does not need to be a planner to have a fairly clear idea of what these mean. The Filipino people who are presently living in urban areas are all too well aware of the problems of finding a job, travelling to work, getting sufficient clean water to drink, building a house, disposing of their wastes, educating their children, saving their house from being burned down or blown down by typhoon, or saving sufficient money to purchase a lot on which to live. The results of a mass movement of 50 million people to the towns and cities will intensify these problems.

"The great question is what can be done to prepare for this and to ensure that these migrating people are not forced to live in poverty and squalor but can live their lives in an atmosphere of hope and expectation and achievement and satisfaction. This question cannot be answered by any one person or group of persons alone. The answer is dependent on the concerted action of the whole community, but it requries the skilled advice and assistance of specially educated and experienced people capable of analyzing situations and forecasting requirements and formulating and implementing proposals to provide for the requirements. Some of these people already exist. The Philippines has a substantial group of economic, social and administrative planners and organizers whose capacity is unrivalled. However, the physical planners, the city planners, the regional planners, the community planners or the comprehensive environmental planners compose a minority group. Yet, it is this group that will have a substantial influence on the growth of the nation.

"This is why the Institute of Planning of the University of the Philippines is very important. For the first time in its history, the Philippines has a center of environmental planning.

"The Government, recognizing that the Institute would require assistance for several years, initiated a request to United Nations for assistance from the Special Fund. In June, 1968, this request was approved and United Nations decided to match the Government contribution over a period of about four years providing a total of $546,000 in assistance. This will provide for a world-wide group of experts who will spend from one to four years in the Philippines, for specialized fellowships for selected Filipinos to travel and work abroad, and for equipment for the Institute. The Government's counterpart contribution covers buildings for the Institute, salaries for faculty and staff, equipment, furniture and office expenses. Filipino members of the Institute and foreign experts will work together in pursuance of the objectives of the Institute. Already, the first steps in achievement have been taken. The Institute has completed several consulting projects. It has completed preliminary research studies. It has graduated the first Masters in Environmental Planning, one of whom is the vice-chairman and executive director of the Board of Technical Surveys and Maps, and the other is a senior engineer of the Department of Public Works. A number of others will graduate at the end of the current summer term. These are mainly senior officers representing a wide cross-section of government agencies. The Institute has also collaborated in several in-service training programs."

MANILA P.I.

PLAN OF PROPOSED IMPROVEMENTS

THIS PLAN ACCOMPANIES REPORT TO HON. WILLIAM H. TAFT SECY. OF WAR.

NOTE:

FOR CONVENIENT NUMBERING OF BLOCKS, THE CITY IS DIVIDED INTO TWO SECTIONS, NORTH AND SOUTH, SEPARATED FROM ONE ANOTHER BY THE PASIG RIVER

INDICATES PRESENT BUILDINGS

INDICATES FUTURE BUILDING SITES

APPROVED JUNE 26, 1905

D.H. Burnham

Elias Anderson

REPRODUCED FOR THE INSTITUTE OF PLANNING, UNIVERSITY OF THE PHILIPPINES
FROM A REPRODUCED COPY BY THE BOARD OF TECHNICAL SURVEYS AND MAPS,
Manila, August 14, 1969

200 100 0 200 400 600 800 1000 1200 METERS

BURNHAM'S PLAN FOR MANILA

"Make no little plans: They have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remember that a noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with evergrowing insistency. Remember that our sons and grandsons are going to do things that would stagger us. Let your watchword be order and your beacon beauty."

Daniel Burnham

INTRODUCTION

"Make no little plans . . ." is one passage that has become the motto of many city planners in the western world. The same exhortation seems to have been the motivating factor behind the achievements of Daniel Hudson Burnham in the field of physical planning. His grand plan for his own native city of Chicago symbolized the fulfillment of these most inspiring words.

The Chicago Plan was formally presented in 1909. It was the crowning achievement of the author's involvement in public affairs which started with the World's Columbian Exposition held in Chicago in 1893 and took him to Washington, San Francisco, Cleveland, West Point, Harvard, Manila and Baguio. It also marked the fruition of his close association with his most esteemed friends in the planning profession such as Charles McKim, Frederick Law Olmstead, Sr., Augustus Saint Gaudens, Frank Millet and Edward H. Bennett. The plan was not only the most comprehensive prepared for an American city at that time but was also representative of the practical achievements based on civic spirit and enterprise.[1]

ASSIGNMENT: PHILIPPINES

As early as 1901, the United States Secretary of War Elihu Root proposed to the members of the Senate Park Commission[2] that after completing studies in Europe they extend their journey to the Philippines for the purpose of giving advice concerning the improvement of the old city of Manila and the planning of Baguio as a summer capital. This arrangement proved impracticable and the Manila visit had to wait for a more propitious time.

The next secretary of war, William Howard Taft, summoned Burnham to Washington, D.C. on April 24, 1904 and asked him to go to the Philippines to prepare plans for the cities of Manila and Baguio. Burnham accepted this new assignment in the service of his country without remuneration,[3] and started adjusting his schedule as well as that of his associates who were then working with him in three or more important projects. The decision was for Bennett to stay behind to work on the San Francisco project, while Pierce Anderson would accompany him to Manila.[4]

Burnham and Anderson reached Manila on December 7, 1904. The day after his arrival, Burnham drove around the city and visited Camp McKinley by the Pasig River. The quick pace of activities to which he dedicated himself was remarkable. In a week's time, he became familiar with the existing conditions of the city. He accomplished this by driving around the city at least three times, going to the Pasig River twice, extending his trip to as far as Laguna de Bay and Pagsanjan Falls in the province of Laguna. He also surveyed the city from the tower of the Bilibid Prison. He always preferred to stand on a high point from where he could have a commanding view of the place which was the object of his plan. Through consultations with military officers who knew the problems and physical features of Manila, his study of this city became more or less complete. It was such a hectic schedule that he assigned to himself that illness soon overtook him on December 18 of the same year.[5]

The third week was devoted to the survey of Baguio where, with some companions, Burnham stayed until the end of December. The first few days of January, 1905, found him working most of the time at his office in the city hall of Manila. There was also a side trip on a government launch across Manila Bay to the province of Cavite. After five weeks' sojourn in the Philippines, Burnham sailed for Hong Kong in mid-January.

The preliminary report on Manila was almost through when Burnham arrived in Chicago on March 12, 1905. In a letter to Charles Moore, he expressed his satisfaction over a job well done, stating that the Manila scheme was very good.[6] However, it was not until June 28 of the same year that the final report was submitted to the secretary of war in Washington, D.C.

MAJOR PROPOSALS

The plan of Manila appeared to be similar in many respects to the San Francisco Plan, also a project of Burnham and his associates. Burnham was guided generally by the principles of planning already applied at the Chicago Fair and the city of Washington, D.C.[7] Major aspects emphasized were the civic center, wide radial boulevards, landscaped parks and pleasant vistas — all contributing to the achievement of city planning objectives popular at that time. These objectives which were widely

[1]Thomas Adams, *Outline of Town and City Planning* (New York: Russell Sage Foundation, 1935), p. 204.

[2]The members of this Commission were Burnham, McKim, Olmstead, Jr. and Saint Gaudens. See Charles Moore, *Daniel Burnham* (Boston and New York: Houghton Mifflin Co., 1921), Vol. 1, pp. 141—148.

[3]See Charles Moore, *Ibid.*, Vol. 2, p. 163.

[4]*Ibid,* Vol. 1, p. 233.

[5]*Ibid.*, p. 239.

accepted encouraged the development of the "City Beautiful" movement.

In his plans, Burnham was influenced by the French ideas on urban design and by Christopher Wren's plan for London which offered a comprehensive system of traffic circulation, symbolic focusing and grand vista — a radial pattern fixed on a center.[8] These principles were demonstrated by Baron George Eugene Haussmann in Paris and introduced with a fair degree of success in other cities. The French influence in Burnham was especially discernible in the Chicago Fair of 1893.[9]

Preliminary work on the Manila Plan started almost simultaneously with that of the San Francisco Plan although the latter project lasted for two years while the former had a commission good only for six months. Both plans suggested what should be done if the cities were to grow and what to provide to achieve convenience and environmental beauty where people lived and worked. Burnham visualized the potentialities for physical development of the two cities.

There were five interrelated major proposals in Burnham's plan for Manila. These were: (1) the development of the water front and the location of parks and parkways so as to give adequate opportunities for recreation to every quarter of the city, (2) the establishment of a street system which would secure direct and easy communication from every part of the city to every other sector or district, (3) the location of building sites for various activities, (4) the development of waterways for transportation and (5) the provision of summer resorts.

Burnham identified the natural recreational assets of Manila, which are primarily the river and the ocean bay. Proposals affecting these assets and the recreational objectives included the extension of the bay boulevard to Cavite City, the construction of shaded drives on the banks of the Pasig River, the water front reclamation for the New Luneta (now Rizal Park), the reservation of park sites and playfields evenly distributed over the city, the installation of public fountains and the provision of encircling parkways. The parks and recreational facilities suggested by Burnham would provide sufficient breathing spaces for a city whose population was definitely increasing.

The communication system embodied in the plan was patterned somewhat after Pierre Charles L'Enfant's design for Washington, D.C. — superimposing radial and diagonal arteries on the rectangular street system. John Reps deplored Burnham's obsession with diagonal boulevards which, according to him, only led Burnham "to make proposals for new streets the only apparent function of which was to complete a symmetrical pattern."[10]

The most important aspect of this portion of the report was Burnham's advice to the government to start laying the groundwork, whenever possible, for the completion of the work. The advice having fallen on deaf ears, Manila consequently lost the chance to reserve land for its current and future needs for urban development.

In the grouping of public buildings, consideration was made of Manila as the national capital of the Philippines. The capitol and other national government buildings were to face a semi-circular plaza from which point was to radiate a street system connecting the various sections of the city. The court-house was to be located south of the main group, where it could be treated with awe and respect. Northward were sites for a number of semi-public buildings such as libraries, museums, and permanent exposition buildings. The municipal complex was to be sited around Plaza McKinley. Building sites for other uses were properly indicated in the plan. The whole thing projected unity in architectural composition, with each building and each group related to one another.

There were provisions for official residences, city clubs, small boating clubs, a casino, a hotel and public baths along the bay. These were intended to add to the pleasantness of Manila life and to accentuate the attractions that might encourage residents and visitors to stay and spend their fortune in the city.

The development of a water transportation system would entail additional wharfage and port facilities northward from the business district of San Nicolas and Binondo. It would also mean the widening, bridging and maintaining of the narrow canals which ran through Manila. Burnham recommended the transformation of the canals or ***esteros*** into economical transport routes for the transaction of public business. Moreover, the ***esteros*** could become elements of beauty like the canals of Venice.

[6] *Ibid.*, p. 245.

[7] See John W. Reps, *The Making of Urban America* (Princeton: Princeton University Press, 1965), p. 516.

[8] See Paul D. Spreiregen, *Urban Design: The Architecture of Towns and Cities* (New York: McGraw-Hill Book Company, 1965), pp. 22—23.

[9] Sigfried Giedion, *Space, Time and Architecture* (Cambridge, Mass.: Harvard University Press, 1963), pp. 392—393.

[10] John W. Reps, *op. cit.*, p. 517.

For summer resorts outside the city but within the reach of the Manilans, Burnham cited the availability of the hill country surrounding Laguna de Bay, the low hills on the east and the higher mountains of Mariveles across Manila Bay. However, he failed to mention Tagaytay City, the Sierra Madre areas close to Tanay and Antipolo, which would answer his principal objection to Baguio, that is, the latter's distance from Manila.

IMPLEMENTATION

Burnham outlined the standard of measuring the success of his plans. He once declared: "The real test of the plan will be found in its application, for such is the determination of the people to secure more perfect conditions. It is certain that if the plan is really good, it will commend itself to the progressive spirit of the times, and sooner or later it will be carried out."[11] Judged on the basis of this statement, the Chicago Plan passed this standard with flying colors. In the case of the Manila Plan, however, judgment should be made on the context of the circumstances attending its implementation.

In the beginning, the prospects of having the Manila Plan faithfully executed were bright. The Philippines was then a colonial possession of the United States and it could have been easy for the American government to channel public improvement funds along the lines recommended by the plan. This opportunity was further enhanced by the appointment in November, 1905 of William E. Parsons, a young American architect, as the general architectural supervisor over the design of all public buildings and parks throughout the Islands. In this position, Parsons became the interpreter and executor of the Burnham Plan for Manila. But eight years later, when he resigned, nothing much had been accomplished toward the realization of the objectives of the plan.

During the Second World War, a great portion of Manila was razed to the ground. Out of the ruins, public buildings and streets could have been rehabilitated and reconstructed with the view of achieving, with modification, the proposed schemes in the Burnham Plan. However, based on available records, nothing has been done towards this end.

Meanwhile, events tending to frustrate the realization of the plan have transpired. One of these is the decision of the late President Manuel L. Quezon to transfer the nation's capital to a new site outside Manila. This decision led to the enactment of Republic Act No. 333, in 1948, which formally established the permanent seat of the national government in Quezon City. Lack of effective control on the development of Manila also contributed immensely to the failure in the implementation of the plan. Because of the demand for urban land for commercial and other speculative ventures, land values have gone up. Moreover, the rural migrants pushed from the countryside by poverty and dissident activities flocked into the city and squatted on every available government and vacant land and even on the frequently-flooded areas close to the ***esteros.***

Looking now at the existing arrangement of public buildings, one can find flagrant violation of Burnham's principle of architectural unity for a civic center. A notable exception is the Post Office.

The proposed ocean boulevard is slowly shaping up. Roxas Boulevard, with a right-of-way of at least 34 meters, stretching from the Rizal Park down to Parañaque, Rizal, where it intersects with the avenue leading to the Manila International Airport, coincides with the boulevard indicated in the plan. And so with the Bonifacio Drive which extends from Rizal Park northward to the North Harbor area. Except for the portions in front of Rizal Park, the United States embassy, the Manila Yacht Club, the Philippine Navy, the pier areas and the Cultural Center, Roxas Boulevard hugs the seawall, thus offering one an unobstructed view of the bay.

The national government has already authorized the extension of the ocean boulevard southward to Cavite City and toward Mariveles in Bataan.[12] The highway extensions are supposed to be limited access parkways consisting of six lanes. They are intended to carry inter-provincial or regional traffic flows.

As mentioned earlier, the Burnham Plan proposed shaded drives along the banks of the Pasig River with the drive on the south side leading to Fort McKinley and even beyond to the lake area. Although streets were constructed on the north side from Estero de la Reina near MacArthur Bridge to the mouth of the Pasig, these are not serving the purpose envisaged by the plan.

[11] Charles Moore, *op. cit.*, Vol. 2, p. 98.

[12] The three laws authorizing the highway extensions are: *R.A. 3741* (Private Financing Law); *R.A. 5 87* (The Public Works Act of 1967); and *R.A. 5297* (Continuation of Public Works Project Payable with, or in Consideration of, Certification of Indebtedness).

Muelle de la Industria and Muelle del Banco Nacional are two-lane streets providing access to business establishments and warehouses along the Pasig River. On the south bank are Muelle del Rio which extends from Del Pan Bridge to the bay and the Bureau of Post road from Aduana Street to MacArthur Bridge, both serving as access roads to offices and warehouses on this side of the river. A number of permanent buildings and structures erected on the lots fronting the Pasig River now would consist the most formidable obstacles toward the construction of the drives.

Envisioned in the plan were four regional parks and nine playfields distributed strategically to serve the different residential areas. Rizal Park, which is conveniently located near the proposed civic center, was envisioned as the primary park. Of the four district parks, one had to be located in the district of Tondo, another in Malate, a third in Sta. Ana and a fourth in Sampaloc. This system of parks did not fully materialize. Rizal Park has been developed as a major recreational space not only for the Manila residents but also for the whole Metropolitan region. Harrison Park in Malate now serves the need for open space of this district, while Paco Park, Plaza Hugo and Plaza F. Calderon have been provided for the residents of Sta. Ana and Pandacan. The Tondo area, including Sta. Cruz, has four small local parks consisting of a total area of 8,447 square meters. The Sampaloc residents are probably the most unfortunate since no park area has been set aside for their district.

It is interesting to note that the proposed sites for playfields are now devoted to other uses. On these sites are elementary schools, a college, government offices, commercial establishments, streets and residences.

Pasig River has not been developed as an effective transportation artery. According to the reports of the Bureau of Public Works, only tugboats and barges of low-draft can negotiate the full course of the river. Cargo boats can reach the river only up to a certain point below the Del Pan Bridge.

The canals, too, are not used for transportation. They have been converted into veritable open sewers. Even for drainage purposes, the canals or the ***esteros*** are inefficient because of the illegal structures placed there by the squatters and of the garbage dumped into them.

The combined length of the ***esteros*** in Manila has been reduced considerably from 95 kilometers in 1904 to 56 kilometers in 1966. About 22.5 kilometers are located north of the Pasig River and 33.5 kilometers on the south.

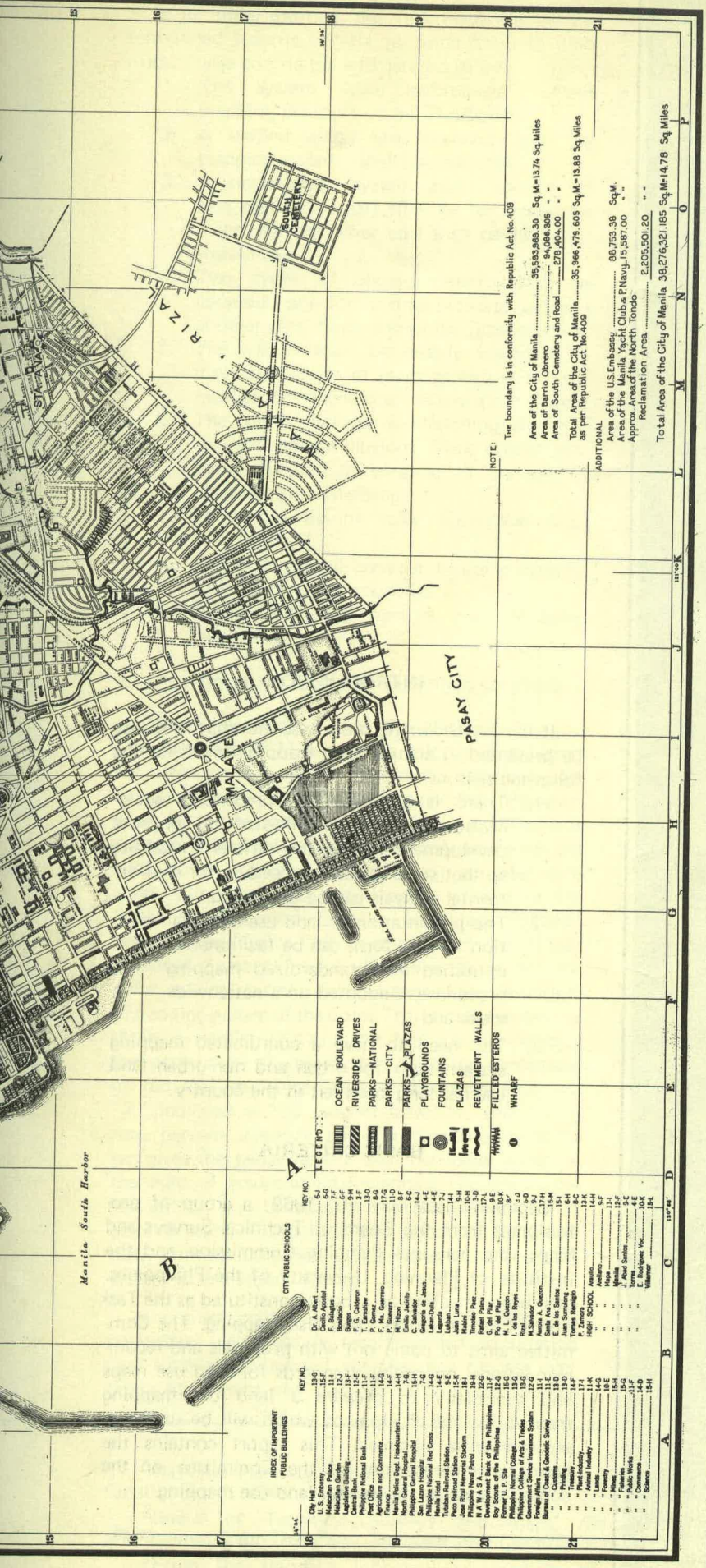
The question as to what should be done with the ***esteros*** has evoked diverse views. A transportation survey team recommended maximum utilization of the streams by constructing elevated bus roadways above them.[13] The ***esteros*** could be covered with earth after the enclosed sewer lines have been laid and paved portions underneath the elevated bus routes could be used for traffic and parking. Mayor Antonio J. Villegas of Manila, during the student presentation of a proposed redevelopment of a section of the city's downtown at the Institute of Planning, University of the Philippines, expressed his desire to reclaim the ***esteros*** for other urban uses, either for housing or for business. Again, the suggestion of a well-known critic of urban design which is to have the ***esteros*** "widened and deepened to form quiet pools, bordered by winding walks, and defined by tall trees and palms growing as they would in nature – and incidentally hiding the buildings in their vicinity."[14] reminds one of Burnham. It appears that Burnham's proposal as regards the ***esteros,*** that of making use of them as waterways, still is the best solution.

Thus far, the most obvious influence of Burnham in the physical development of Manila is the grid system of streets. The radial streets also exist although the scheme of interrelating them with the civic center has not been carried out effectively. Some of the major radial streets connecting the interior districts to the civic center are the Calle General Luna which passes through Ermita and leads to Paco, Pandacan and Sta. Ana; the United Nations Avenue which intersects with the General Luna near Taft Avenue; the Ayala Boulevard that crosses the Pasig River and goes to San Miguel and Sampaloc; the Calle P. Burgos which extends into Rizal Avenue in Sta. Cruz; and the Bonifacio Drive that connects Tondo and San Nicolas with the proposed civic

[13]From a summary of the D.C. Transit System survey published in the *Manila Chronicle,* April 8, 1963.

[14]I. V. Mallari, "The City We Want," *Manila Times,* April 29, 1969.

CITY OF MANILA
FROM ORIGINAL SURVEYS 1904-1965
CORRECTED AS OF MARCH 1, 1965
PREPARED IN THE
DIVISION OF DRAFTING AND SURVEYS
DEPARTMENT OF ENGINEERING AND PUBLIC WORKS
SERAFIN D. VILLANUEVA
DRAWN BY.... JOSE SUIZA
METERS
LADISLAO J. TOL
CITY ENGINE
CALOOCAN, RIZAL
NAVOTAS
QUEZON CITY
TONDO
STA. CRUZ
SAMPALOC
BINONDO
SAN NICOLAS
QUIAPO
SAN MIGUEL
PANDACAN
INTRAMUROS
ERMITA
PACO
STA. ANA
MALATE
SOUTH CEMETERY
MAKATI, RIZAL
PASAY CITY
Manila North Harbor
Manila South Harbor
PIER 14
PIER 12
PIER 10
PIER 8
PIER 6
PIER 4
PIER 2
INDEX OF IMPORTANT PUBLIC BUILDINGS
CITY PUBLIC SCHOOLS
KEY NO.
LEGEND:
OCEAN BOULEVARD
RIVERSIDE DRIVES
PARKS—NATIONAL
PARKS—CITY
PARKS & PLAZAS
PLAYGROUNDS
FOUNTAINS
PLAZAS
REVETMENT WALLS
FILLED ESTEROS
WHARF
NOTE:
The boundary is in conformity with Republic Act No.409
Area of the City of Manila .... 35,593,989.30 Sq. M.=13.74 Sq. Miles
Area of Barrio Obrero .... 94,086.305 " "
Area of South Cemetery and Road .... 278,404.00 " "
Total Area of the City of Manila .... 35,966,479.605 Sq. M.=13.88 Sq. Miles
as per Republic Act No.409
ADDITIONAL
Area of the U.S. Embassy .... 88,753.38 Sq. M.
Area of the Manila Yacht Club & P. Navy .. 15,587.00 " "
Approx. Area of the North Tondo
Reclamation Area .... 2,205,501.20 " "
Total Area of the City of Manila 38,276,321.185 Sq. M.=14.78 Sq. M
A B C D E F G H I J K L M N O



center.

Burnham, as early as 1905, already proposed the building of underpasses and overpasses for traffic segregation, particularly the separation of railway lines from land transport routes. Actually, two overpasses were built coinciding with his plan: the Sta. Mesa and Dimasalang transport separations.

CONCLUSION

It is now sixty-four years since Burnham drafted the plan for the city of Manila. As indicated in the previous discussion of the Burnham proposals and of their consequent implementation, the conclusion is obvious — that the plan was not successfully carried out.

Based on the current city planning practice, the Manila Plan of Burnham is far from being comprehensive. The emphasis was on the physical; it aimed at transforming the city into a visually satisfying environment. It failed to consider the increasing economic role of Manila, the growing problems of urbanization, and the possible expansion of the built-up areas toward the suburbs. The provision of shopping centers, health services, and other facilities outside the proposed transportation system, civic center and the parks was not a major aspect of the Plan.

As a piece of urban design work, the Manila Plan is a fine example of the classical city planning practice of the "City Beautiful" movement. As an instrument of physical, economic and social change, it has been shown to be in many ways impractical. Planning in a democracy, as part of the governmental process, is in essence a function that should translate the people's aspirations into reality through their active support and participation. The Burnham Plan lacked the genuine support of the citizens. This, perhaps, explains why it was not fully implemented.

The government of Manila has yet to come up with its comprehensive plan which will embody the values and interests of its citizens. Unfortunately, the motivation and inspiration for the planners could not be the Burnham Plan which is of another age.

FEDERICO B. SILAO
Institute of Planning
University of the Philippines

CODING STANDARDS FOR GENERAL LAND USE MAPPING

By

Task Force Committee on Land Use Mapping*

INTRODUCTION

It is now becoming more essential that land uses be presented in standardized mapping forms for the following reasons:

1. There is a need for comparative socio-economic studies manifested by physical development among the different localities so that some rational procedure for environmental analysis can be developed;
2. The presentation of land use information in map form can be facilitated if a unified and standardized mapping procedure is adopted on a nationwide scale; and
3. The need to have a coordinated mapping system both for urban and non-urban land use has long been felt in the country.

BASIC CRITERIA

Beginning last May 16, 1969, a group of professionals from the Board of Technical Surveys and Maps, the National Planning Commission and the Institute of Planning, University of the Philippines, has been meeting as a body constituted as the Task Force Committee on Land Use Mapping. The Committee aims to come out with proposals and recommendations on coding standards for land use maps and eventually to prepare a land use mapping manual for the Philippines which will be useful to environmental planners. This report contains the basic recommendations of the Committee on the coding standards for general land use mapping.

*The members of the Task Force Committee are as follows: lomeno L. Corton, Board of Technical Surveys and Maps; eronimo V. Manahan, Institute of Planning, University of the hilippines; Rosauro S. Paderon, National Planning Commission; and dmundo Roque, National Planning Commission.

In its initial meeting, the Task Force Committee formulated specific criteria to guide them in their work. These criteria are enumerated below.

1. The system shall incorporate current mapping practices of the Philippines.
2. A unified urban and non-urban land use mapping system shall be adopted.
3. A standardized system shall consist of two parts: one part shall be for small-scale maps and the other part shall be for large-scale maps.
4. Two types of coding systems shall be adopted: one for colored presentations and another for black-and-white presentations.
5. The system shall be readily adaptable for mass production of maps as well as for any manual or mechanical cartographic means.
6. The colors, textures and hatchings shall not give any optical illusions. While over-all presentation shall be pleasing to the eye, it shall not be misleading.
7. The difficulties of color separation shall be minimized.
8. The system shall consider mapping systems adopted by other countries.
9. Mixed uses shall have a way of being mapped.

BASES FOR THE LAND USE MAPPING SYSTEM

During the early 1950's the National Planning Commission (NPC)[1] adopted a color coding system for urban areas. This was used as the principal guide in the mapping system recommended. However, some additional colors were utilized for other land uses particularly for non-urban land uses since the NPC color coding system did not consider such areas. Similarly, the color coding system of the Board of Technical Surveys and Maps (BTSM), namely, the Color-Trol System[2] and the BTSM Standard Symbols[3] were the other bases for the color coding system recommended for adoption. The coding system of the Color-Trol is represented by three numerals: (XXX). The first figure indicates the percentage of yellow, the next, the percentage of red and the third, the percentage of blue. An "X" indicates a 100 percent intensity, and "O" a zero percent intensity and a numeral multiplied by ten gives the percentage of that particular color. In the light of environmental planning practice in the Philippines, and because of the relative scarcity of color printing and colored-film products useful for map printing purposes, a black-and-white mapping system is also recommended.

A unified coding system both for urban and non-urban land uses is recommended considering that total environmental planning is a process over time. At present the Philippines is predominantly rural. The trend therefore is for agricultural areas to be encroached upon by urban development. In unplanned areas such a situation is wasteful in terms of rational land management since the likelihood is that fertile lands will be converted to urban land uses. Under a unified land use mapping system urban development thresholds can be properly identified, making it possible to program conversion of non-urban land to urban land uses at the proper time.

The number of categories that can be clearly recognized in map form is limited by the scale and the use of the graphical presentation. The size and character of the land area also have direct bearing on the coding standards to be adopted. Hence, two sets of coding systems have been recommended. One is a general land use mapping system for maps of scale 1:2,000 to 1:10,000 and another for 1:25,000 to 1:50,000. The former set gives more details than the latter. The principle followed in formulating the two-set system is that, in general, small-scale maps should contain only the very general land use categories to ascertain the readability of the map.

A combination of colors, hatchings, textures, words and symbols is recommended to reduce the amount of colors used in map presentations. Minimization of colors, in combination with hatchings or textures also reduces the probability of optical illusions in map presentations. In adopting a combination of colors, hatchings and textures, density and frequency of occurrence of a particular land use have been considered. A land use that is generally more dense in population has either a darker color or value. If a particular land use occurs less frequently and the spatial distribution is small, then a combination of hatchings and colors is used. For spatially extensive areas, a particular land use is identified by means of word designation.

The coding system for land use mapping here recommended is the result of a thorough study of mapping systems in the United Kingdom, Canada, Australia, United States, Japan, Israel, Denmark, Yugoslavia, Union of Soviet Socialist Republic, Sweden and Netherlands. This study was undertaken because up to the present no land use coding system has been internationally adopted. The United Nations has made initial attempts to arrive at an international coding system of land use mapping, but inquiries on the progress of the work proved negative. The system herein recommended will generally meet the requirements of the different agencies and offices that prepare land use maps. It will also meet the varying economic capabilities of prospective users throughout the country.

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[1]National Planning Commission, *City and Town Planning Data,* Circular No. 2, 1945, as amended in 1963.

[2]Board of Technical Surveys and Maps, *Republic of the Philippines Color-Trol Chart Standard Hue Classification.*

[3]From the standard topographical symbols of the Board of Technical Surveys and Maps.

I. Color Coding Standards for General Land Use Mapping (For maps of scale 1:25,000 to 1:50,000)

Urban Land Use	Color-Trol Code	Color Identification
Residential	500	Lemon yellow
Business	5X0	Wine red
Industrial	0XX	Dark violet
Institutional	03X	Prussian blue
Urban open space	X05	Light green
Transportation and utilities	035	Silver grey
Water	003	Light aquamarine blue
Non-Urban Land use		
Forest land	X5X	Olive green
Grassland	X0X with BTSM symbol	Bottle green with symbol
Cultivated land	X53	Raw sienna
Barren land	XXX	Dark brown
Swamp, marsh and mangrove	003 with BTSM symbols	Light aquamarine blue with symbol
Rural settlement	X00	Lemon yellow
"Kaingin" (slash-and-burn) area	X5X with 1 mm. diameter white dots 4 mm. on centers diagonally aligned	Olive green with white dots
Irrigated land	Three-millimeter wide S-waves 1.0 mm. apart around appropriate color of irrigated land use	
Vacant urban land	Blank or white with base information indicated	
Existing road	Two parallel black lines along right-of-way	
Proposed road	50 % screen grey vertical zebra bands perpendicular to proposed right-of-way	
Other proposed transport routes	Designate with standard BTSM symbol with silver grey vertical zebra bands perpendicular to proposed transport right-of-way	
Proposed use not sited	Represent with a 4.0 mm. diameter ring having a minimum width of 1.0 mm. and with its appropriate color of use	
Specially protected area	Delimit area with a 1.0 mm. wide dark red band around properly designated land use color and indicate specific use in words	
Flood-liable area	Delineate with a 0.3 mm. x 4.0 mm. dark blue dashed lines along flood line and indicate with words "FLOOD-LIABLE AREA" along boundary flood recurrence intervals shall be shown; the appropriate color of land use shall likewise appear	
Planning area boundary	Delineate by means of a 3.0 mm. wide band of black dots, 20 % screen, 11.75 lines per centimeter aligned diagonally	

II. Black-and-White Coding Standards for General Land Use Mapping (For maps of scale 1:25,000 to 1:50,000)

Urban Land Use	Texture Identification
Residential	Diagonal lines 0.2 mm. thick, 1.5 mm. on center drawn 45 degrees left to right, upwards
Business	45-degree cross-hatched lines 0.2 mm. thick, 1.5 mm. on centers both ways
Industrial	Horizontal-vertical cross-hatchings, 1.0 mm. thick, 2.0 mm. on centers both ways

Institutional	Vertical lines 0.3 mm. thick, 1.0 mm. on centers
Open space	Dots 20 % screen, 19.75 lines per centimeter aligned diagonally
Transportation and utilities	Diagonal dashed lines, 1.5 mm. long spaced 1.0 mm. apart drawn 45 degrees left to right upwards 1.0 mm. on centers; appropriate BTSM symbols may also be used
Water	Blank with water lines indicated along coastline or banks
Non-Urban Land Use	
Forest land	BTSM forest symbol
Grassland	BTSM grassland symbol
Cultivated land	Paired cross-hatched lines 0.2 mm. thick, 5.0 mm. on centers both ways between pairs; paired lines shall be 1.0 mm. apart and drawn horizontal-vertical
Barren land	1.5 mm. long X's diagonally aligned at 2.5 mm. on centers both ways
Swamp, mangrove or marsh	Swamp, mangrove, or marsh symbols of BTSM
Rural settlement	Diagonal lines 0.2 mm. thick 1.5 mm. on centers drawn 45 degrees left to right upwards
"Kaingin" (slash-and-burn) area	1.0 mm. diameter circles with X's diagonally aligned at 4.0 mm. on centers both ways
Irrigated area	3.0 mm. wide "S" band 1.0 mm. apart around irrigated area having appropriate texture of non-urban use
Flood-liable area	Delineate with 0.3 mm. by 4.0 mm. black dashed lines along flood line with the words "FLOOD-LIABLE AREA" along boundary; flood recurrence intervals shall be shown; appropriate texture of use shall likewise appear
Vacant urban land within the planning area	Blank with base information indicated
Existing road	Two parallel black lines along right-of-way
Proposed road	50 % screen grey vertical zebra bands perpendicular to proposed right-of-way
Other proposed transport routes	Designate with standard BTSM symbol with 50% screen grey vertical zebra bands perpendicular to proposed right-of-way
Proposed use not sited	Represent with a minimum of 4.0 mm. diameter ring having a minimum width of 1.0 mm. and with its appropriate use texture
Specially protected area	Delimit area with a black line having a minimum width of 1.0 mm. around properly designated land use and indicate specific use in words
Planning area boundary	Delineate by means of a 3.0 mm. wide (min.) band of black dots 20 % screen, 11.75 lines per centimeter aligned diagonally both ways

III. Color Coding Standards for General Urban Land Use Mapping (For maps of scale 1:2,000 to 1:10,000)

Urban Land Use	Color-Trol Code	Color Identification
Residential		
Residential 1 (low-density)	500	Lemon yellow
Residential 2 (high-density)	X30	Golden yellow
Residential 3 (hotels, etc.)	X30 with black lines, 0.2 mm. thick, 1.5 mm. on centers drawn diagonally 45 degrees left to right upwards	Golden yellow with 45-degree hatchings in black

Business offices	5X0 with black 45-degree cross-hatched lines 0.2 mm. thick 1.5 mm. on centers both ways	Wine red with 45-degree cross-hatchings in black
Trade (retail and wholesale)	5X0	Wine red
Services (personal)	350	Carmine
Industrial		
Light	055	Light violet
Heavy	0XX	Dark violet
Institutional		
Government	03X	Prussian blue
Private	00X	Sky blue
Specific Designations in Black Capital Letters		
Medical		MED
Educational		EDU
Religious		REL
Cultural		CUL
Administrative		ADM
Penitentiary		PEN
Open space		
Restricted	X05	Light green
Public	X0X	Bottle green
Specific Designations in Black Capital Symbols or Appropriate BTSM Symbols		
Cemetery		CEM
Golf course		GOLF
Playground		PLAY
Athletic field		ATH
Park		PARK
Military reservation	X05 enclosed with a 2.0 mm. wide band of 03X	Light green with a Prussian blue band
Transportation and Utilities		
Transport facilities	035	Silver grey
Specific Designations in Black Capital Letters or Appropriate BTSM Symbols		
Airport		AIR
Heliport		HEL
Parking		PARKING
Pier		PIER
Terminal		TER
Public utilities	035 with diagonal dashed lines 1.5 mm. long spaced 1.0 mm. apart drawn 45 degrees left to right upwards at 1.0 mm. on centers	Silver grey with 45-degree diagonal lines in black
Specific Designations in Black Capital Letters or Appropriate BTSM Symbols		
Telephone exchange		TEL
Electric power station		ELEC
Pumping station		PUMP
Sewerage treatment plant		SEWR
City gas		GAS
Reservoir		RESV
Water		
Fish pond	003 with appropriate BTSM symbol with word "FISHPOND" in black	Light aquamarine blue with black BTSM symbol
Beach	003 with black dots and with word "BEACH"	Light aquamarine blue with black dots

Surf	003 with black wavy lines 2.0 mm. on centers drawn parallel to shoreline and with word "SURF"	Wave lines on light aquamarine blue
Saltbed	003 with appropriate BTSM symbol and with word "SALT" in black	Light aquamarine blue with black BTSM symbol
Vacant urban land within planning area	Blank or white with base information indicated	
Mixed urban land uses	A 4.0 mm. diameter dot with the specific color of the secondary land use within boundary line of dominant land use	
Existing road	Two parallel black lines with minimum thickness of 1.0 mm. drawn along right-of-way	
Proposed road	50 % screen grey vertical zebra bands 3.0 mm. wide drawn perpendicular to proposed right-of-way	
Other proposed transport routes	Designate with standard BTSM symbol over silver grey vertical zebra bands 3.0 mm. thick drawn perpendicular to proposed right-of-way	
Proposed use not sited	Represent with a 1.0 cm. diameter ring having a minimum width of 2.0 mm. and with the appropriate color of its proposed land use	
Specifically protected area	Delimit area with a dark red band having a minimum thickness of 2.0 mm. and designate land use in words	
Flood-liable area	Delineate with 0.3 by 4.0 mm. dark blue dashed lines along flood line with the words "FLOOD-LIABLE AREA" along boundary; flood recurrence intervals shall be shown; the appropriate color of land use shall likewise appear	

For large areas requiring hatched lines, dots or any other texture or color, a minimum of 3.0 mm. wide band around boundary of land use may be adopted for easy preparation of maps.

Planning area boundary	Delineate by means of a 6.0 mm. wide band of black dots 1.0 mm. in diameter at 2.0 mm. on centers both ways diagonally aligned

IV. Black-and-White Coding Standards for General Urban Land Use Mapping (for maps of scale 1:2,000 to 1:10,000)

Urban Land Use	Texture Identification
Residential	
Residential 1 (low-density)	Diagonal lines 0.3 mm. thick, 2.5 mm. on centers drawn 45 degrees left to right, upwards
Residential 2 (high-density)	Diagonal lines 0.2 mm. thick, 2.0 mm. on centers drawn 45 degrees left to right, downwards
Residential 3 (hotels, etc.)	Diagonal lines 0.2 mm. thick, 1.5 mm. on centers drawn 45 degrees left to right, upwards
Business	
Office	45-degree cross-hatched lines 0.2 mm. thick, 1.5 mm. on centers both ways
Trade (regional and wholesale)	45-degree cross-hatched lines 0.2 mm. thick, 2.0 mm. on centers both ways
Services (personal)	45-degree cross-hatched lines 0.3 mm. thick, 2.5 mm. on centers both ways
Industrial	
Heavy industry	Horizontal-vertical cross-hatched lines 1.0 mm. thick, 2.0 mm. on centers both ways
Light industry	Horizontal-vertical cross-hatched lines, 1.0 mm. thick, 4.0 mm. on centers both ways

Institutional	
Government	Vertical lines, 0.3 mm. thick, 2.5 mm. on centers
Private	Vertical lines, 0.3 mm. thick, 1.5 mm. on centers

For specific designations use designations under color coding standards for general land use mapping for maps of scale 1:2,000 to 1:10,000.

Open space	
Restricted	Dots 20% screen, 19.75 lines per centimeter aligned diagonally with word "RESTRICTED" or appropriate BTSM symbol
Public	Dots 20% screen, 19.75 lines per centimeter aligned diagonally with word "PUBLIC" or appropriate BTSM symbol
Military reservation	Dots 20 % screen, 19.75 lines per centimeter aligned diagonally and with a 2.5 mm. wide enclosing band of dashed lines 4.0 mm. long at 2.0 mm. on centers drawn diagonally at 45 degrees
Transportation and utilities	Diagonal dashed lines 0.2 mm. thick by 1.5 mm. long, spaced 1.0 mm. apart, drawn 45 degrees left to right, upwards 1.0 mm. on centers; appropriate symbols and designations under color coding standards for general urban land use mapping (for maps of scale 1:2,000 to 1:10,000) shall be used
Water	
Fishpond	Rectangular fishpond BTSM symbol with word "FISHPOND"
Beach	Standard BTSM beach symbol or with fine dots with word "BEACH"
Surf	Wave lines with word "SURF"
Saltbed	Rectangular saltbed BTSM symbol with word "SALT"
When appropriate, indicate also water lines, surroundings and standard nautical symbols	
Vacant urban land within planning area	Blank or white with base information indicated
Mixed urban land uses	A minimum of 4.0 mm. diameter cutout with secondary land use symbol or texture within boundary of dominant land use texture
Existing road	Two parallel black lines with 1.0 mm. minimum thickness drawn along right-of-way
Proposed road	50% screen grey vertical zebra bands, 3.0 mm. wide perpendicular to proposed right-of-way
Other proposed transport routes	Designate with standard BTSM symbol with 50 % screen grey vertical zebra bands 3.0 mm. wide perpendicular to proposed right-of-way
Proposed use not sited	Represent with a ring 1.0 cm. in diameter, having a minimum width of 2.0 mm. and with the appropriate texture of the proposed land use
Specially protected area	Delimit area with a 2.0 mm. wide black band around properly designated land use and indicate specific use
Flood-liable area	Delineate with 0.3 mm. by 4.0 mm. black dashed lines along flood line and add the words "FLOOD-LIABLE AREA" along boundary; flood recurrence intervals shall be shown; the appropriate texture and the land uses shall likewise appear

For large areas requiring hatched lines, dots, or any other texture, a minimum of 3.0 mm. wide band around boundary of land use may be adopted for easy preparation of maps.

Planning area boundary	Delineate by means of a 6.0 mm. wide band of black dots 1.0 mm. in diameter at 2.0 mm. on centers both ways diagonally aligned

V. Coding Standards for Non-Urban General Land Use Mapping (For maps of scale 1:2,000 to 1:10,000)

Use colors or textures and symbols as per coding standards for general land use mapping (1:25,000 to 1:50,000 maps) but with appropriate designated classification in black capital letters as given below. Boundaries of 2.0 mm. wide black bands shall delimit every specific land use detail. General classifications recommended are the following:

Forest land	
Commercial forest concession	COM
Forest farm	FOF
Reforestation area	REA
Reservation, national park	NPK
Permanent forest	PFO
Watershed	WSD
Grassland	
Cogonal	COG
Pasture	PAS
Settlements	
Ranch	RAN
Livestock area	LVS
Non-residential farm building	NRF
Farm building	FBD
Cultivated land	
Grain crops	GRC
Fruit trees	FRT
Fiber crops	FIB
Orchard	ORC
Vegetable crops	VEG
Root crops	RTC
Coconut grove	CNG
Cane field	CAF
Bamboo grove	BAM
Barren land	
Desert	DES
Rock land	ROC

For swamps, mangroves, marshes, kaingin areas and irrigated land, use coding standards for maps of scale 1:25,000 to 1:50,000.

CONCLUSION

The preparation of these recommended coding standards for general land use mapping is an initial attempt to coordinate various efforts undertaken by earlier study groups in reconciling land use mapping systems both for urban and non-urban land uses. Hopefully, the coding and mapping system will contribute to the analysis and classification of use, non-use and misuse of land. All these will be relevant information about the planning progress in a medium which is easily readable and understandable to the layman who is most affected by planning proposals.

DATA BANK FOR URBAN AND REGIONAL PLANNING

INTRODUCTION

It is commonly recognized that the field of comprehensive urban and regional planning needs more information and data as bases for decisions. This recognition arises as a logical response to the complexity of the problems the planning field now encompasses. In the past, the planning field seemed to have operated generally through "hunches" and the drawing board. Although such method served its purpose, it proved inadequate in coping with today's urban and regional planning problems.

Planning is regarded as a "continuous process" that never really ends after the completion or implementation of a plan. As a process, planning relies on vast amounts of data. This emphasis on facts and scientific investigations sharply differentiates the current comprehensive urban planning approach from the old planning practice, which largely focused on aesthetics.

The field of comprehensive urban and regional planning is undergoing a metamorphosis through the introduction of new analytical techniques and the application of the planning data bank. This paper will attempt to describe briefly the procedures of developing a data bank and how this new tool for urban and regional planning may be applied to Philippine condition.

In dealing with various planning problems, a wide gap may exist between research and decision-making. Because of the lack of readily available, timely and accurate vital information in government offices, research is often delayed, so much so that by the time it is completed, the situation has changed. The data bank concept has evolved in more developed countries in response to the foregoing problem.

A "planning data bank" may be defined as a system which employs an electronic computing facility to develop information from a relevant set of data derived from various sources,[1] or it may mean simply as an organized method of using data for a specific purpose.[2] The extent and scope of the data bank depend upon a number of considerations such as the amount of investment the planning agency is willing to put up for the system, the decision of whether or not to use data processing equipment, and the capability of the computing facility for storage and retrieval of information.

The applicability of the data bank for planning purposes has been tested with encouraging results. It was found useful especially in comprehensive land use planning, school facility planning, central business district planning, community renewal and capital improvement programming.[3] A planning data bank can also provide information for other researches in fields outside planning.

[1]See, for example, Vladimir V. Almendinger, Emory W. Franks and Joel M. Kibbee, *Urban and Regional Information Systems: On the Threshold of a Technology*, (Sta. Monica, California: Systems Development Corporation, 1966).

[2]Calvin S. Hamilton, "The Development of a Land Use Data Bank for Transportation Planning," *The Highway Research Board*, Vol. No. 54 (Washington: U.S. Department of Commerce, Bureau of Public Roads, 1963).

[3]See, for example, Metropolitan Data Center Project Report, *Tulsa Metropolitan Area Planning Commission* (Tulsa, Oklahoma: February, 1966).

DEVELOPING A PLANNING DATA BANK

There are various sequences or steps to be followed in the establishment of a planning data bank among which are the following: (1) identification of the general categories of data considered essential in a number of planning activities; (2) inventory of possible data sources and specific data available from each source, (3) development of the data bank information format, files and codes; and (4) data collection, storage and retrieval.

Identification of Data

Since it will be tremendously costly to amass data, it is advisable to collect only those data which are reflective of the types of planning activities that should be undertaken by the planning agency, at least within the immediate foreseable time. Such data will include land use, population and community socio-economic profile. Among the three, land use information is perhaps the most extensive.

The term "land use" refers to "man's activities on land which are directly related to land."[4] Land use information covers more than a thousand items. The following are representative examples: (1) residential (e.g. single family dwelling units and duplexes); (2) manufacturing (e.g. food and kindred products and petrochemicals); (3) transportation, communication and utilities (e.g. railroads, highways and streets); (4) trade (e.g. wholesale and general merchandise); (5) service (e.g. finance, insurance and real estate); (6) cultural, entertainment and recreational (e.g. parks and resorts); (7) resource production and extraction (e.g. agriculture, forestry and mining); (8) underdeveloped land and water areas (e.g. unused land, lakes and rivers).

Land use information is necessary in a number of planning activities such as the making of urban plans, and the preparation of subdivision regulations, zoning ordinances and building codes. Land use data are also needed in the understanding of a region and in the evaluation of its development potentials. Public and private investments in the cities and in the regions will be influenced by the adequacy of land use information of one kind or another.

Population and socio-economic data compose the other key elements in the planning data bank. Population statistics should include size, age, and other related population characteristics. The socio-economic aspects normally cover employment size, employment by types of industry, per capita real income, family expenditure, investment and output, and statistics on housing, education, health and other social services. The data bank files should be maintained in such a way that the data on population and its socio-economic characteristics can be meaningfully related to land use and vice versa.

Inventory of Data and Data Sources

Once the specific data that pertain to the planning agency's activities have been identified, an inventory of all possible data sources and the types of data available from each source should be undertaken. Likewise, attempts should be made to find out if the data from the identified sources are available on a continuing basis. The development of data bank is a long-range project and its success will depend upon the uninterrupted cooperation between the data suppliers and the planning agency which manages the data bank. Continuous and harmonious cooperation will be possible if the data "suppliers" can become data "consumers" as well.

Information Format, Files and Codes

The development of information files and codes is essential for collecting and maintaining standardized information and for facilitating the use of electronic data processing machines. It is often observed that the data agency follows its own methods of data collection and of defining terms. This method may not fit the requirements of the data bank. Since the planning office which manages the data bank is asking a favor from an existing agency, a change in the method of collecting data by that agency would be difficult to institute. This change cannot be effected without the consent of the data suppliers. However, once a working relationship between the suppliers and the planning data bank management has been established, the creation and maintenance of the information files of the data bank will be facilitated.

Information stored in the data bank should be classified by specific areal unit for comparability and in order to facilitate analysis. Depending upon the details desired, information may be collected on the following categories: parcel, barrio, municipality and province. For planning purposes, the parcel offers distinct advantages as a basis for collecting and storing data since this unit is suitable to most land use studies done at the micro-level. Besides, data of such nature offer enough flexibility of being consolidated to represent larger units such as the municipality, whenever the need for such classification arises.

Data Collection, Storage and Retrieval

Data collection can be done systematically with the use of the information format file from both the secondary sources such as the tax assessor's office, census bureau and other government agencies and from personal interviews. Data collection should include the program of updating the most relevant baseline information.

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[4]Marion Clawson and Charles L. Stewart, *Land Use Information, Resources for the Future, Inc.* (Baltimore: The Johns Hopkins Press, 1965), p. 62.

The next step after data collection is the editing and the codifying of information based on appropriate coding system. Edited information can then be entered into punch cards or transcribed into tapes or discs depending upon the type of data processing equipment available. If the electronic data processing machine is used, the procedure would require the writing of an appropriate computer program to make possible the retrieval of the stored information at some future time.

If the modern data processing equipment is unavailable, the collected information may be simply placed in columnar pads, in analysis strips, or in any other similar media. Analysis of the data may be done directly after summing up entries in columnar pads or strips.

The use of a modern computing facility has advantages over that of the manual method. Analysis can be easily facilitated and the storage space requirement is greatly minimized. However, the acquisition of an electronic computing facility will need tremendous amount of capital which may not be within the capacity of a planning agency.

THE FEASIBILITY OF A PLANNING DATA BANK IN THE PHILIPPINES

The feasibility of introducing a planning data bank for Philippine urban and regional planning may be viewed from various angles, among which are cultural, economic and technological. Let us look critically at each of these factors.

Culture-Based Problems

From the cultural angle, the planning data bank may be treated as a new idea like that of instituting a land reform program for the first time or that of introducing a new and improved variety of rice in the rural areas. The land reform program and the introduction of an improved variety of rice are considered essential in promoting agricultural development. And yet, the land reform program has been resisted subtly by influential citizens while the propagation of the new and improved variety of rice has been strongly resisted by farmers who are opposed to change.

In the case of a planning data bank the specific culture-based problem that might be anticipated is the fear of the citizens that the data being sought will be used later against them. For instance, a revelation of the true values of improvements on land may increase their real property tax. Even if the bulk of the data will be collected from existing statistical reports of offices or agencies, some problems are likewise anticipated. Because of inter-agency suspicion and competition, valuable information may not be readily accessible. In other instances, data are treated as "stocks in trade" and the agencies will not give out the data unless something or a favor is given in return. Moreover, there is a belief that to have access to information is to have power. Because of this belief, possible data suppliers may become reluctant to cooperate in the establishment of a planning data bank.

What the culture-based problems seem to imply is that the computerized planning data bank should not be set up unless the cooperation of the data suppliers is assured. The establishment of a planning data bank could become an expensive proposition for a planning agency if it fails to obtain the cooperation of the data suppliers. As previously hinted, cooperative relationship between the data bank management and the data suppliers will be possible if the data suppliers are themselves data consumers. The rationale of this cooperation may be viewed from the fact that it is possible through the data bank to have a central pool of relevant information which can be retrieved on short notices for use by cooperating agencies. It might be added that the use of expensive computing facilities could be maximized if more data could be processed and more so if additional agencies are to be served.

Based on their current functions, the following government agencies are the most relevant units to form the nucleus of cooperation for establishing a planning data bank in the Philippines:

National Economic Council
Presidential Economic Staff
Congressional Economic Planning Office
Manpower Development Council
National Planning Commission
National Irrigation Administration
Board of Technical Surveys and Maps
Regional Authorities and Development Boards
Home Financing Commission
Land Reform Authority
Agricultural Productivity Commission
Development Bank of the Philippines
Central Bank of the Philippines
Presidential Assistance on Housing and Resettlement Agency
National Science Development Board
National Water and Air Pollution Control Commission
People's Homesite and Housing Corporation
Philippine National Railways
National Waterworks and Sewerage Authority
National Power Corporation
Department of Public Works and Communications
Presidential Arms on Community Development
Presidential Advisory Council on Public Works and Community Development
Department of Social Welfare
Department of Labor
Department of Health
Department of Education
Civil Aeronautics Administration
Land Transportation Commission

Economic Considerations

From the economic standpoint, the initial costs of setting up the planning data bank may be less significant in comparison to the costs that will be forthcoming as soon as the system is in operation. Computing facilities can easily be set up through the assistance of a consulting computer design specialist. However, maintaining such facilities and amassing information which can be retrieved and analyzed will require much more efforts and money. Under the situation obtaining in the Philippines, a great deal of investments will be made on the data collection phase due to the dearth of informational material concerning the conditions, potentialities and uses of land in the communities.[5] This deficiency can be attributed primarily to the predominantly macro-economic orientation of Philippine planning efforts. Considering the anticipated initial costs, the feasibility of establishing a planning data bank will lean heavily upon inter-agency financial support and cooperation.

Technical Considerations

The effective utilization of a planning data bank will depend upon the number of users who are familiar with the system. Like any new innovation, the data bank is only of value to the planner to the extent that its use is understood. This will probably be true if the data bank is fully computerized. In such a case, the data bank may become the exclusive domain of the programmer and the program analyst, while the planner may become too dependent on whatever the programmer and the computer analyst will say about the data. This condition is far from being ideal. Since the planner has a more direct responsibility with his policy recommendations, he should be familiar with the computer operation as well as with the interpretations derived from the programmed data. At the same time, he could still avail himself of the assistance of the computer specialists.

As regards the personnel requirements of the planning data bank, some problems may come up because of the lack of trained physical planners in the Philippines. Physical planners with extensive knowledge of the operation of the data bank and the electronic computing equipment are hard to find. This problem is further complicated by the fact that physical planning in the country is still in its infancy.

The problem of this nature can be solved through the adoption of a long-range program of planning education. In the Philippines, the initial move along this direction has been effected through the enactment of Republic Act 4341 in 1965, creating the Institute of Planning under the University of the Philippines. There are now signs of the growing awareness of the need for physical planning among local executives and also among the national leaders. This awareness became evident in the last session of the Congress when a physical planning bill was introduced. The fate of the bill is uncertain but its sponsor vowed to work for its passage in the next session.

CONCLUSION

The environmental planner obtains the answers to most of his questions about the community or region through a mass of data. He applies planning theories or concepts in analysing the data. In the end he assures himself of a better perspective and a better understanding of the planning area. Yet, because the data of desired quality, quantity and scope are sometimes not available, an objective approach to community or region of planning is seldom achieved. The planning data bank concept has therefore evolved as a response to the need for a more accurate, timely and adequate planning data.

The feasibility of establishing a planning data bank in the Philippines may be examined from the cultural, economic and technical standpoints. Cultural, economic and technical factors certainly create difficulties but these are by no means insurmountable.

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[5]The same observation was made by Director Tito Mijares of the Bureau of the Census and Statistics, who proposed to higher authorities an expanded and continuing statistical services to include permanent offices on the provincial and municipal levels. *Manila Times,* August 20, 1969.

PROSPECTS FOR PLANNED GROWTH IN METROPOLITAN MANILA

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A great deal has been said and written about the increasing difficulty of living in Metropolitan Manila. Indeed, as Dr. Escudero aptly put it, in this "big city" one can easily sense "overcrowding, the cancer-like spread of slums, deplorable housing conditions, diminution of clean, safe, green open spaces, wasted time in traffic, poor hygiene and environmental sanitation with children playing in filthy and uncollected mound of refuse, and seemingly sinister-looking stereotypes of lawbreakers eyeing their potential victims – all in one swift glance."[1] But this chaotic and unhealthy setting is largely self-created, being the product of our unplanned actions. While we are increasingly discomfitured by this situation and shudder at the trends towards an even grimmer metropolitan environment, we are compelled to seek the brighter side of the picture and ask ourselves: What are the prospects for transforming Metro Manila into a more livable and workable environment which would be conducive to the attainment of the people's socio-economic ends and the enhancement of the human spirit? This is the basic question to which we address ourselves here. Our main concern then is WHAT COULD BE for Metro Manila by way of planned environmental growth.

GROWTH TRENDS

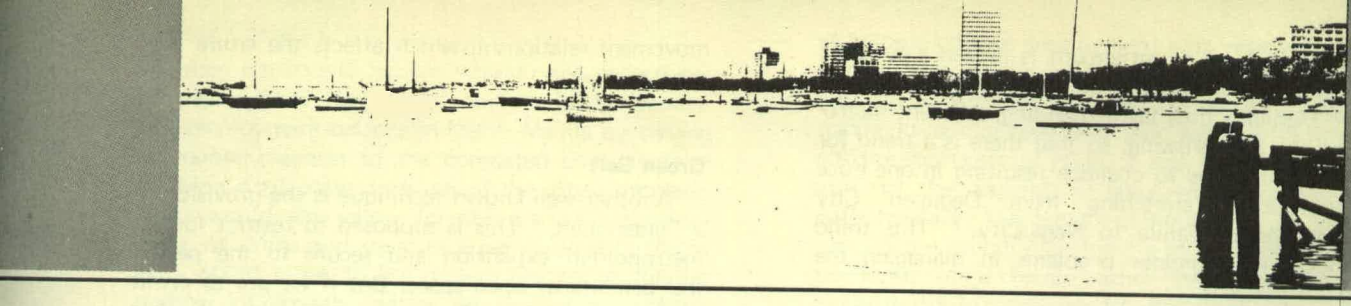
Inevitably, our starting point is an assessment of the present trends of environmental growth in the area. This would provide us with the proper orientation for examining the potentials for altering the growth tendencies in the area towards the desired ends. Consider then the following indications:

Population

Metro Manila remains as the biggest and fastest growing agglomeration in the country. It continues to be the main "suction pump" of the nation, pulling in many skilled and ambitious migrants who are pushed by poverty and low employment from the rural areas and secondary urban centers. In 1948, according to the Philippine census of population, Metro Manila had 1.6 million people in its 76,000-hectare area, which meant that 8.4 percent of the country's inhabitants lived in 0.25 percent of its area. In 1960, its population had risen to 2.8 million and its area had increased to 109,000 hectares, which showed that 10.3 percent of the nation's population resided in 0.36 percent of its land mass. By 1980, the population of the Metro would have grown by 6.6 percent annually to 10.7 million, and the extent of the metropolitan area would be 192,000 hectares, [2] indicating that 20.9 percent of the country's inhabitants would be concentrated in 0.64 percent of its area.

Internally, Manila continues to become quite overcrowded in relation to the other parts of the Metro; its density is 10 times that of the surrounding ring of administrative units. But the Metro's population is gravitating outwards, indicating a "dying" core and fast-developing suburbs. While Manila's population is increasing at only 1.3 percent a year, Quezon City's inhabitants are increasing at 11.4 percent a year. This outward population shift is generally the result of mixed and obsolescent land uses, overpopulation, traffic congestion, and other related factors in the central core.

Metro Manila as a whole is not overcrowded. Even assuming a gross density of 100 persons per hectare, the 192,000-hectare area that would develop by 1980 is capable of accommodating conveniently 19.2 million people. The problem can be traced to the irrational distribution of population vis-a-vis employment and supporting land use activities.



Employment

Metro Manila's employment base has not expanded fast enough to accommodate the rapid growth of and shifts in the population. The Metro as a whole continues to have a high unemployment rate of four to six percent. But the bigger problem is the increasingly poor distribution of employment. While people have been fleeing the congested core to reside in the suburbs, jobs have not dispersed or developed in the suburbs at a commensurate rate. Manila still accounts for one-half of the manufacturing employment of the Metro and is the center of employment for industries tied up to the ports, wholesale trade, professional, financial and other tertiary activities.

Many factories and retail establishments, however, have been locating in the suburbs like Makati, Pasay City, Quezon City, and Caloocan City, among others, in an unguided and sporadic manner. In spite of this development, the suburban communities are still primarily "dormitory towns" with residents primarily dependent on the Metro core for jobs. The consequence of this population-employment imbalance is a worsening pattern of heavy and long cross movements between homes and workplaces.

Transportation

The homes-workplaces maldistribution is closely tied up to transportation. Metro Manila's origin-destination patterns point to the defects of the network system.[3] The roads and streets, some of which were inherited from the pre-motor age, show no hierarchical pattern, as the national government and the numerous local administrative units continue to develop their circulation networks independently and in an unguided and uncoordinated fashion.

Transportation appears as a most dominant factor behind metropolitan growth. Note how obsolescence tends to set in rapidly along the narrow, criss-crossing streets in Manila, whereas wider thoroughfares such as Epifanio de los Santos Avenue are fast being lined up with factories and commercial establishments. It will also be observed that built-up areas outside the core tend to be concentrated along the radial arterial highways. Because of the lack of complementary measures to control land use development along these roads, it seems likely that this unhealthful ribbon of mixed stores, factories, offices, and apartments along improved or new roads would continue in the future.

While roads and streets are being constructed and improved to accommodate the increasing traffic flows, these developments have been far outstripped by the rapid increase in motor vehicles at the rate of 12 percent a year.[4] The results are, of course, worsening traffic congestions. The public transport system, which consists of jeepneys and buses, has outlived its usefulness, plagued as it is by fragmented management, irrational routing, and traffic jams. Traffic conditions are bound to deteriorate further with the rising car ownership rate of about 15 percent annually. Studies show that automobiles are rapidly outnumbering public vehicles on the roads and streets.

Housing

The housing problem stems mainly from the poor inter-relationship between population and employment as discussed above. It tends to grow worse with the continuous uncontrolled development of incompatible land uses, the presence of idle urban lands, low incomes, and weak government housing policy. Most acute is the unabated mushrooming of slums and squatter colonies[5] that are increasing at an alarming rate of 12 percent a year. No longer a monopoly of Manila, these settlements have been creeping outwards like a cancerous growth. Such outlying towns as Las Piñas, Taguig, Cainta, and Malabon are now dotted by these "eyesores." One factor behind their proliferation is the desire of poor families to live near their employment sources. People who want to buy their own land have to look for it farther and farther away from the core. But since jobs are heavily concentrated in the central city, it means longer, tiresome and more expensive home-to-work journeys.

Land Uses

The land use pattern in the area is a reflection of the interaction of the foregoing factors of population, employment, housing and transportation. It continues to be an incoherent mixture of homes, factories, stores, open spaces, and offices. One can attribute this mainly to the absence of a comprehensive land use plan for Metro Manila and its component administrative units, and to the lack of effective zoning ordinances, building codes, and other social controls and legal tools. Open spaces, already inadequate both in quantity and distribution, are fast giving way to more intensive uses generally dictated by market forces. The built-up areas outside the core are concentrated chiefly along the transportation arteries with a generous scattering of dubious subdivisions lying in-between. If we try to project the existing land uses in Metro Manila assuming uncontrolled growth, as a National Waterworks and Sewerage Authority study did,[6] we would have by 1985 a large, heterogeneous, and formless mass that is 10 to 16 kilometers in radius, with jumbled-up land uses without coherence and identity.

The new kind of settlement is indeed a dynamic organism ever expanding in space and time. While Metro Manila is thus fast expanding, adjacent metropolises are also growing, so that there is a trend for these metropolises to coalesce resulting in one huge "megalopolis" stretching from Dagupan City through Metro Manila to Naga City.[7] This trend forebodes even greater problems in managing the land use patterns.

POTENTIALS FOR CONTROLLED GROWTH

These then are the "natural" tendencies of uncontrolled growth in Metro Manila. Frightening as they are, these trends are not our fate for they can be altered. And this brings us to the prospects of providing for planned growth in the area.

We do not know exactly what we want Metro Manila to be except that in general forms, it must be a more livable and workable physical environment which would enable us to pursue our varied social and economic goals efficiently; hence, our study will be primarily exploratory. And since we are working on the metropolitan level, we shall concern ourselves mainly with such prospects on a strategic basis. Our emphasis will be on the major components of metropolitan growth which could form an "outline" or framework within which more detailed aspects of the physical environment could be fitted and which would provide flexibility for action at lower levels. We will, therefore, as Keeble suggested,[8] concentrate on the prospects for (1) balancing population and employment in Metro Manila to reduce daily mass movements to and from work and home and to relieve housing shortages, (2) improving and rationalizing the major transportation system to support a balanced population employment relationship, (3) strengthening the pattern of service centers to afford the majority of the Metro's inhabitants accessiblity to a wide range of goods and services, and (4) locating and preserving open spaces to make best use of natural landscape features and to disrupt the agricultural pattern as little as possible.

Urban Renewal

With these in mind, we first examine the possibility of urban renewal in the core. This scheme generally involves two phases – the clearance of slums and squatter areas and the development on the cleared sites of high-density residential, commercial and industrial uses in accordance with a comprehensive plan. Laudable as its objectives are, urban renewal is highly impractical in Metro Manila. As experience has shown, clearing slums, squatters, and mixed land use development is hampered by almost formidable legal and political implications, not to mention the huge sums of money involved. Do we have the finances necessary to carry out a large-scale renewal in the core? And where would the displaced persons and establishments be housed? Viewed in its broader perspective, renewal of blighted core areas seems to be only a partial solution to the overall problem of an unbalanced work-home movement relationship which affects the entire metropolitan area.

Green Belt

Another well-known technique is the provision of a "green belt." This is supposed to restrict further metropolitan expansion and secure to the people the benefits of open space. But if we are to profit from the mistakes of others, we should note that the green belt has not stopped the sprawl of "exploding" metropolises like Tokyo or London, and Metro Manila definitely is far from being a static area. In England, the green belt has been reduced to an artificial barrier over which sprawl has simply leaped. Moreover, the topography and the present land use pattern of Metro Manila does not allow the location of an encircling open space. The designation of a green belt also raises difficult legal and political problems involving the over-sanctified private property rights of the Filipinos. In the final analysis, a green belt would not be attacking the very essence of the problem, which is a complex phenomenon marked among others by a decaying core, unregulated land uses and heavy commuting.

New Towns

A concept worth considering is the development of self-contained new towns to solve the population over-concentration in the core as well as the poor distribution of population and employment in Metro Manila. There appears, however, a few feasible sites for self-sustaining new towns in the Metro, considering the area's topography and the close scatter of settlements. Several new towns would be required and these would call for a complicated machinery for acquiring, planning, developing, and controlling land. It is also doubtful whether it would be more profitable to develop entirely new communities or to build upon existing large towns and transforming them into regional centers, consideration being given to the advantages of external economies already present in those towns.

Even in England, which is best known for new towns, there is yet no conclusive proof of the success of this technique. People tend to come not only from the congested city as intended, but also from other regions of the country. The objective of a self-contained town is not likely to be attained because new towns would still strongly depend on the core for professional, financial, and tertiary services, which require central location for reasons of accessibility and efficiency.

Conceptual Structure

If we reject these alternatives, what then are the possibilities for achieving the four general goals of metropolitan growth mentioned above? It would seem that a good prospect lies in a conceptual structure of growth centers, corridor development, transportation polar grid, and wedges or grid of open spaces. This would enable us to take advantage of existing conditions with minimum government interference and with a promise of greatest returns.

Growth Centers

There are several reasons why growth centers are promising. They could help achieve a better population-employment balance in Metro Manila by serving as counter-magnets to the congested core, thereby relieving it of some pressures of the urban problem. They would also allow for the gradual redevelopment of slums and squatter areas vacated by those who would move to the growth centers. A limited number of growth centers are needed to perform regional services for various purposes – commerce, education, industry, and other similar activities in accordance with the "central place theory" of Christaller and August Losch.[9] These centers would act as bases for the spatial arrangement of other elements in the metropolitan area to which other activities would relate. Because of limited resources, these centers would also be the priority areas for investments in industry, infrastructure, and housing in order to get maximum results, instead of spreading such investments too thinly or haphazardly.

The location of these centers should be dictated by the desired distribution of the population and the efficient and economical location of services. This means that they will be inextricably linked to the transportation system. The distribution of the growth centers would, in turn, considerably influence the location and pattern of ancillary facilities such as housing, local trade, and local streets. Hence, these centers should generally be developed in existing large towns and cities along the major transportation routes radiating from Manila. They can be conceived of as central places for service areas of about 800,000 to 1,000,000 people to whom they would provide a wide range of activities such as retail and consumer services, professional and business services, certain industrial activities, and government-supported services.

Fortunately, Metro Manila has some potential growth centers which have developing basic industries and traditional service areas. These could serve as the bases for eventual development as regional centers. Among them are the towns of Rosario for petro-chemicals, Bacoor and Kawit for fishing and pearl culture, Muntinglupa and Biñan for industrial parks, Marikina for shoes and leather, and Montalban and Pateros for poultry.

One motivating force for growth of the centers would be the shopping establishments, although they may not remain as the only motivating factor. Many suburban centers, such as Cubao in Quezon City, were originally developed primarily as retail and consumer service establishments, but are now attracting offices, apartments, public insitutions, and facilities for recreation. The proposed growth centers, aside from being regional shopping centers, could then be markedly defined by a wide array of offices, institutions, houses, factories, and transit facilities.

As mentioned earlier, housing would be a secondary facility of the growth centers which are aimed at helping balance employment with residence distribution. The centers could be planned to reduce the journey to work to tolerable standards, probably a maximum commuting time (one way) of 30 minutes and transport cost of P0.60 a day. They would provide for the dispersal of employment hand-in-hand with housing. The design of housing as an integral part of the overall plan for the growth center would be more of a local, rather than a metro-wide responsibility and would therefore serve as a challenge to the local governments in the area.

Transportation

The transportation system in Metro Manila has a good potential for strengthening the concept of growth centers and corridor development. The radial thoroughfares, which comprise the basic framework of the system, are already existing and most of the urban development outside the core are found along them. What is needed is to improve the carrying capacities of these roads, and to convert some of them to limited access roads and expressways to accommodate the increase in traffic volume. The radial roads are especially important because of the need for easy accessibility to the Manila ports for transhipment of goods.

The biggest gaps in the present transportation network of Metro Manila are the non-radial thoroughfares. While an important objective of planned growth in Metro Manila is the inter-dependence among its components, this cannot be effectively achieved by its strongly center-oriented transportation system. It is also imperative that a network of circumferential roads be developed to meet the demand for non-radial movements. Due to the decreasing volume of activities from the core outwards to the Metro limits which is a normal result of competing land pressures, an evenly spaced rectangular grid would not be suitable. A polar grid with cells expanding from the center to the periphery is better fitted. Because of the preponderant north-south growth of the area and the intervening presence of the Laguna de Bay, the layout of the circumferential roads would be slightly modified.

For easy and convenient cross-movements, it is important that the circumferential roads intersect the radial thoroughfares near the proposed growth centers. There are already existing roads, such as the Marilao-San Jose Road and the Pasig-Montalban Road, which could form parts of the proposed circumferential thoroughfares.

Internal traffic can be more efficient if the operation of buses and other passenger vehicles is placed under a unified management to ensure proper scheduling of the trips and routing of lines in accordance with the dominant origin-destination patterns. Perhaps, the inevitable growth in mass movements in the Metro could be better accommodated by a mass railway system. This is one promising prospect which has not been explored locally, although its usefulness has been aptly demonstrated in other world metropolises. A single mass transit line can convey as much as

90,000 passengers per hour compared to the maximum capacity of all the buses in Metro Manila of only 20,000 passengers per hour per lane.[10] The mass railway system should be placed closely parallel to the radial arterial highways to ensure complementarity of these two types of transport facilities. For travel in the core, the proposed monorail system[11] has a good potential for transporting commuters in large numbers in a considerably short time (about eighteen minutes from one end of the core to the other). This facility, however, provides mainly for mass movement within the core and does not answer the need for radial mass transportation from the center to the outlying towns and cities of the Metro, a need that becomes more pressing as the Metro grows and expands.

Circulation within the component cities and towns of Metro Manila could be improved if local roads and streets were functionally related to the major radial and circumferential routes in such a way as to establish a well-graded hierarchy of transportation routes. As the Buchanan Report[12] pointed out, such hierarchical pattern can provide more direct movement between origin and destination and at the same time reduce unnecessary through-trips which cause intrusion into "environmental areas."

Open Spaces

The metropolitan structure of growth centers and transportation corridors could be further articulated by an adequate system of open spaces. Despite the presence of the well-maintained Rizal Park and the prestigious memorial parks in the suburbs, Metro Manila could be a more livable environment if open spaces of varying sizes and functions, like play lots, playgrounds, parks, playfields, athletic fields, institutional grounds and water courses were provided in greater quantity and better spatial distribution.

As far as major open spaces are concerned, two strong possibilities emerge in the present context. One is a wedge system of open spaces sited between the corridors. This appears especially promising since it could harmonize with the existing trends toward concentrated urban growth along the arterial highways. Another alternative is a grid system of open spaces more or less parallel to the components of the highway grid. Aside from allowing some amount of intensive development between the corridors, this scheme offers to the inhabitants of Metro Manila greater accessibility to open spaces which can be connected to transportation routes.

Open spaces in Metro Manila need not be laid out merely to affect order in the landscape. Neither should they serve only the function of providing recreation facilities. They may serve other purposes like intensive farming and agriculture, especially the raising of perishable crops. The designation of open spaces therefore should be patterned in such a way that the fertility of the soil is given due emphasis. Open spaces can also contribute to the preservation of natural landscape features, such as the rolling hills of Antipolo and the valleys of Marikina. They could likewise be the rights-of-way of power lines, sewers and water mains. Open spaces, if covered with trees or lush vegetation, can prevent soil erosion.

Industry

What about the prospects for industry as an element of metropolitan growth? It is expected that a higher proportion of people in Metro Manila will be engaged in industrial occupations in the future while manufacturing establishments will spread outwards. This is because large-scale industrialization in the area is only starting to "take off." Moreover, many areas, within and without the Metro, still have large agricultural populations.[13] And these would eventually form part of huge surpluses of farm labor as crop production improves. The towns of Dasmariñas, San Jose and Angat, for example, still have 60 to 70 percent of their inhabitants in farm occupation.

The government is continually encouraging the dispersal and development of industries elsewhere to minimize concentration of population in few urban centers, provide additional income to rural populations, and reduce production waste. It is furthermore espousing the development of industrial estates.[14] These aims could be met, first of all, by integrating industrial development into the idea of growth centers. Most of these centers will in fact depend upon a strong industrial base for viability.

It is possible to plan certain light industries side-by-side with residential uses, especially in the low-density suburbs. A set of criteria, principally of performance standards, can be introduced in local zoning ordinances in order to provide greater flexibility than most of the present "straight jacket" negatively-oriented ordinances.

Similarly, employment in industries could be provided in some portions of the built-up areas and surrounding communities that are primarily residential. In the long run, strong residential orientation may not be rewarding. New industries can be introduced on vacant or less intensively used land to reduce commuting and to increase the area's tax base.

There is also a good prospect for initiating industrial parks or estates on vacant or non-intensively developed land along the transportation corridors, in consonance with government policy as mentioned above. The National Planning Commission has listed some potential areas for industrial activities. These include the San Mateo-Marikina area, and Valenzuela.[15] Norzagaray in Bulacan could also be developed into an industrial estate with cement manufacturing as the core industry. All these industrial parks possibly would contain heavy and extensive industrial enterprises that require big chunks of land, heavy movement of commodities, high-capacity transportation facilities, water, sewer, and power services. They would attract population and influence housing construction as well as auxillary industrial and commerical activities, thereby helping solve the imbalance between population and employment distribution in the Metro.

CITIZEN PARTICIPATION

There is one vital planning aspect that may not be directly related to the metropolitan form and structure but is nevertheless highly relevant to the prospects for planned growth in Metro Manila. This is citizen participation in planning. All of us recognize that planning is for and by the people and that the objective of our planning efforts is "to form a total environment maximizing life chances and returns of the citizenry."[16] For this reason, it is essential that all segments of the metropolitan area have a hand in planning endeavors.

Thomas A. Reiner stated that there are three levels of choices in planning: "***first,*** the selection of objectives and criteria; ***second,*** the identification of a set of alternatives consistent with these general prescriptives, together with the selection of one of these as a preferred alternative; ***third,*** guidance of action toward determined ends."[17] In all these levels, the citizens must necessarily be involved, most especially in the goal formulation and in the plan implementation stages. The citizens should be encouraged to participate in setting planning goals to ensure that the ensuing plans are reflective of their felt needs, wants, and aspirations; the role of the government will be that of an arbiter to solve conflicting individual and group interests so as to promote the welfare of the community as a whole. The objections of the people must be considered and understood to obviate costly and time-consuming obstacles to otherwise well-laid out plans.

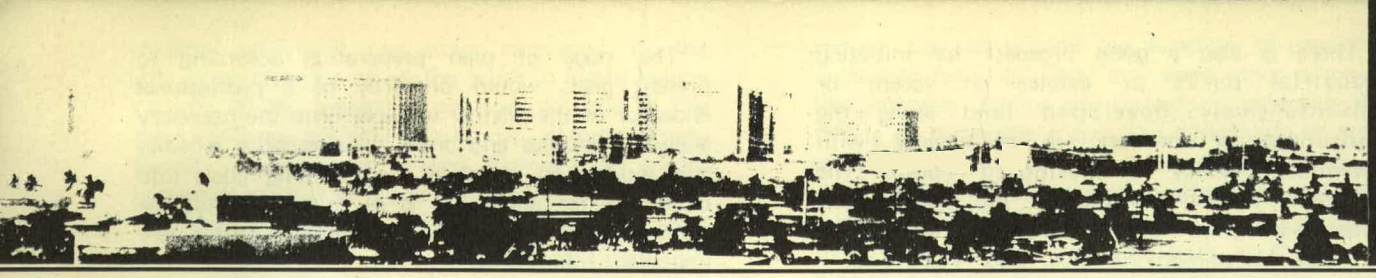
Citizen participation is especially important because planning generally involves the use of public finances and expropriation of property. Once plans are prepared, the citizens must also be counted on to implement portions of them, with the government providing the support in the form of infrastructure facilities aside from the overall guidance and control of action.

The stage of plan preparation according to present goals would primarily be a professional endeavor of the planner who performs the necessary analytical studies and draws up alternative schemes and models to translate the planning goals into blueprints for action. It is at this stage that the administrative and technical machinery plays a very important role.

Citizens thus enter into the planning picture either as individuals or as members of groups. The people could be the target of public relations and education or be the collaborative participants in planning operations. Since many urban decisions are private, it is only through the involvement of all sectors of society in the planning process that private decision-making could be directed toward the community welfare, especially if the government sets up adequate incentives. Citizen organizations can furthermore spur and strengthen professional planning.

We have seen the potentials of citizen participation in the development of Rizal Park. Likewise, we are aware of how the civic-spirited citizens composing the Pasay City Citizens League for Good Government have vigorously sought government action to transform the environment of their city into a more orderly and decent one. Indeed, we are not wanting in well-meaning public, private and quasi-public organizations dedicated to the improvement of our environment. What we lack is a comprehensive framework to unify and guide their uncoordinated activities.

In Metro Manila, we can encourage membership in planning bodies and civic organizations dedicated to planning in the same manner as practiced in Canada and in the United States. The private individuals should also be urged to participate in public hearings to discuss plans, zoning regulations, and other related subjects affecting the physical development of their community. The citizens can participate in the discussion of planning proposals to stimulate public interest and opinion. In all these areas of citizen involvement, it is important to count heavily on the articulate persons who can contribute more substantially to the different aspects of the planning process. These are the professionals belonging to various disciplines such as architecture, engineering, economics, sociology, public administration, health, law and geography. The Philippines has a considerable number of professionals who are engaged in one way or another in resolving environmental problems of the metropolises. However, their activities generally are uncoordinated. To remedy the multi-faceted problems of the Metro, it will require effective inter-disciplinary coordination and cooperation. Through consultation and exchange of ideas among the members of these disciplines, workable proposals can be drawn. In this regard, the role of the professional planner is vital since the others may rely on him to effect the necessary coordination of efforts and to maintain a comprehensive view of the entire situation. Fortunately, the country now has a growing number of professional planners whose skills can be harnessed to meet the problems of the metropolitan environment.



CONCLUSION

We have examined some prospects for planned growth in Metro Manila. Our assessment is, to repeat, mainly exploratory and strategic in nature. It is hoped, however, that this discussion opens up avenues for more intensive and localized research work. Metro Manila, despite its present chaotic situation and fearsome growth tendencies, can still become a more livable and viable environment. It is yet to experience high rates of automobile ownership and usage, which are now a major dilemma of metropolises in more developed countries. And it has the advantage of learning from the experiences – the successes and the failures – of the more progressive nations in dealing with the environmental ills of their urban areas.

Metropolitan Manila has long felt the growing pains of a disorderly and unhealthful environment that accompany the "developing" economy of the country. Its environmental problems seem to grow beyond proportions because of our utter failure to take advantage of the benefits that flow from infusing greater rationality into the area's growth processes by means of a comprehensive environmental planning. These prospects and opportunities might soon be lost to us if proper use is not made of them now.

[1]Manuel Escudero, "Perceptions in an Urban Environment," a speech delivered in the Seminar on Man and His Environment sponsored by the Philippine Institute of Architects and the Institute of Planning on April 16, 1969 at Makati, Rizal.

[2]Population projections were made by formula $P_2 = P_1 e^{rt}$. Metro Manila's extent was based on the criteria of the International Urban Research, *The World's Metropolitan Areas* (Los Angeles: University of California, 1959).

[3]See Bureau of Public Highways, *Origin and Destination Study, City of Manila, 1957–1958* (Manila: 1958).

[4]Statistics from the Department of Public Works and Communications.

[5]See Special Committee created by the Office of the President on March 19, 1968, *A Comprehensive Report: Squatting and Slum Dwelling in Metropolitan Manila* (Manila: April, 1968), mimeographed. See also Aprodicio Laquian, *Slums Are for People* (Manila: University of the Philippines, 1968).

[6]See the Institute of Planning, University of the Philippines, *A Planning Strategy for Metropolitan Manila, AD 2000* (Manila: University of the Philippines, 1968).

[7]Filomeno Corton, a graduate student in the Institute of Planning, University of the Philippines, studied the megalopolitan trends in the Philippines and submitted a graduate paper on this subject.

[8]Lewis Keeble, *Principles and Practice of Town and Country Planning* (London: The Estates Gazette Limited. 1964).

[9]Walter Christaller, *Central Places in Southern Germany* (New Jersey: Prentice Hall, Inc., 1966) and August Losch, *The Economics of Location* (New York: John Wiley and Sons, Inc., 1967).

[10]Kenneth Scheider, "How to Ease Manila's Traffic Problem," *The Sunday Times Magazine* (Manila: August 6, 1961).

[11] *The Saturday Mirror Magazine* (Manila: May 23, 1969).

[12]See Colin Buchanan, *et al,* "Traffic in Towns," in Denys Munby, ed., *Transport* (Middlesex: Penguin Books Ltd., 1968), pp. 153–183.

[13]See Philippine censuses of population and agriculture, 1960.

[14]Socorro B. Ramos, ed., *Philippine Industry* (Manila: Department of Commerce and Industry, 1965).

[15]Information about the listing of potential industrial areas by the National Planning Commission was obtained for this paper by Jesus G. Manalang, a graduate of the Institute of Planning, University of the Philippines.

[16]H. Wentworth Eldredge, ed., *Taming Megapolis* (New York: Anchor Books, 1967), Chapter 20.

[17]Thomas A. Reiner, "The Planner as Value Technician: Two classes of Utopian Constructs and Their Impacts on Planning," H. Wentworth Eldridge, ed., *Ibid.,* p. 233.

planning news

Man and His Environment Seminar

The Philippine Institute of Architects and the Institute of Planning, University of the Philippines, conducted a series of seminars and conferences on metropolitan planning and urban design from March to June this year. The theme was "Man and His Environment: Metropolitan Manila as a Case Study." Held every month, guest speakers included Antonio C. Kayanan who spoke on "Urban Planning in a Free Enterprise Economy"; Dr. Manuel Escudero delivered a paper on "Perceptions in an Urban Environment"; Sixto K. Roxas dealt on the topic "Urban Land Problems"; and Honorato G. Paloma spoke on "Design in an Urban Environment."

Concluding this series of seminars was a conference and workshop last June 21 where Architect and Regional Planner Angel Nakpil gave the keynote address "The Urgent Future" followed by three papers: "Aspects of Urban Management: What Metropolitan Manila Needs," "Prospects for Planned Growth in Metropolitan Manila" and "Strategies for Metropolitan Growth," prepared by the students of the Institute of Planning. Delegates presented specific recommendations and conclusions as well as coordinated program outline for planning a better Metropolitan Manila.

Epilogue was delivered by Walter G. Faithfull, project manager of the United Nations Development Program for the Institute of Planning, University of the Philippines.

It was the intention of these seminars and conferences to examine critically and in depth, the situation, growth and future possibilities for the rational development of man's environment with Metro Manila as a specific example. In examining Metro Manila, it is hoped that a continuing dialogue will take place and lead to a healthy discussion of the problems of urban growth and development now facing the growing discipline of planning and the design profession in the country today.

Angel Nakpil Heads Planners Group

Architect and Regional Planner Angel E. Nakpil was elected president of the Philippine Institute of Environmental Planners organized early this year. Other officers elected were: Leandro A. Viloria, vice president, Luis Ma. Araneta, treasurer and Geronimo V. Manahan, secretary.

Other members of the Council elected during the organizational meeting include: Serafin Aquino, Jr., Honorato G. Paloma, Cesar H. Concio, Manuel Mañosa, Jr., and Asteya M. Santiago.

Committees formed during the meeting of the Council elected Cesar H. Concio as chairman on Constitution and By-laws with Asteya M. Santiago as member and Walter G. Faithfull as adviser; and M. Mañosa, Jr., H.G. Paloma and G.V. Manahan, resource persons.

Membership Committee chairman is Angel E. Nakpil with Leandro A. Viloria, Luis Ma. Araneta and G.V. Manahan as members.

Appointed chairmen of other committees were: Luis Ma. Araneta on Finance, Leandro A. Viloria on Public Relations, Angel E. Nakpil on Programming, and H.G. Paloma on Professional Practice.

Students of the Institute of Planning organized the State University Planning Society and elected its officers headed by Andres Luna Ortiz, president; Eulogio G. Galang, vice president; Wilhelmina Z. Ortiz, secretary; Marceliano A. Ganay, treasurer; Eufemio P. Dacanay, auditor; and Ernesto C. Mendiola, pro.

Class officers of the Institute of Planning Student Association for the school year 1969–1970 include Eulogio G. Galang as president; Wilfredo M. Atienza, vice president; Delia G. Roperos, secretary; Teresita M. Logan, treasurer; Eufemio P. Dacanay, auditor; and Rosauro S. Paderon, pro.

The Graduates

The first two graduates of the Institute of Planning were Cmdr. Marcelino S. Tabin, executive director of the Board of Technical Surveys and Maps, and Teodoro T. Encarnacion, senior supervising engineer of the Department of Public Works and Communications. Both are agency scholars and honor students.

Summer graduates this year include:

Eden M. Camarillo,	B.S.C.E., B.S.S.E.
Sergio M. Cariño,	B.S. Arch.
Ireneo L. Catipon,	B.S.C.E.
Marceliano A. Ganay,	B.S. Agri.
Alicia D. Ganzon,	LI. B.
Erlinda V. Gruin,	B.S. Arch.
Jesus G. Manalang,	B.S. G.E.
Ernesto C. Mendiola,	LI.B.
Honorio I. Millora,	B.S.C.E.
Pablito G. Orcajada,	B.S. Agri. Engr.
Andres Luna Ortiz,	B.S. Arch.
Wilhelmina Z. Ortiz,	B.S. Arch.
Antonio T. Osongco,	B.S.C., A.B.
Oscar R. Ponsaran,	B.S.C.E., B.S.S.E.
Luis T. Tungpalan,	B.S. Arch.
Jaime F. Uyloan,	B.S.C.E.

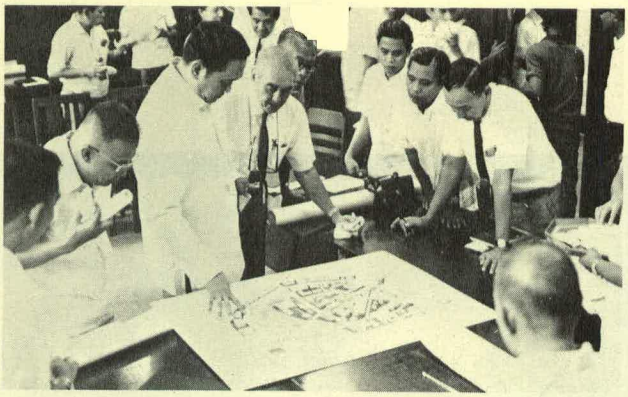
Leading the way for the two graduates is Prof. Fred B, Silao followed by T. Encarnacion and Cmdr. Tabin at the graduation rites last April, 1969.

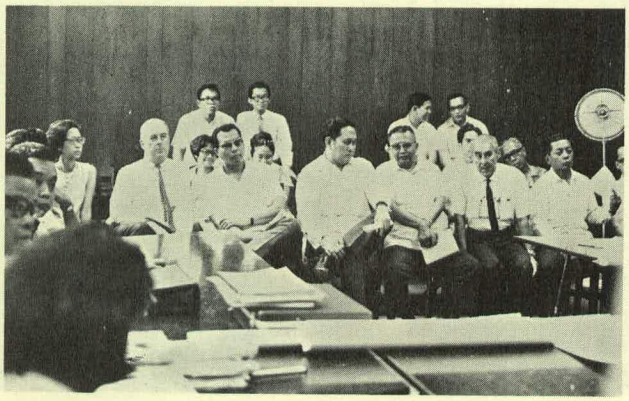
A team of faculty and staff of the Institute of Planning visited Pagsanjan, Laguna at the request of local government officials to survey their water resources and other related municipal needs.

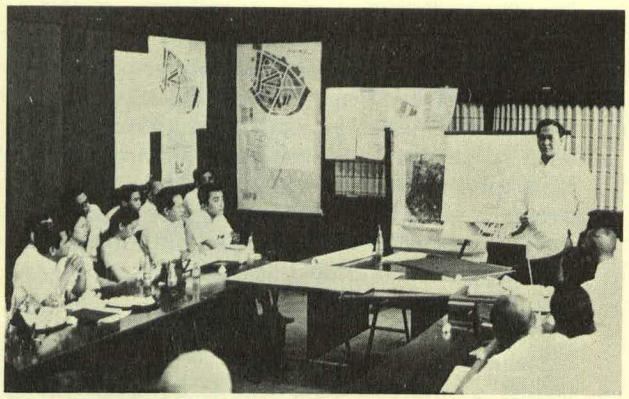
ivities of the Institute of Planning include brief- of guests from India who had just completed Senior Fellowship Program at the Training Cen- for Urban and Regional Planning, Calcutta Met- olitan Planning Office.

fing by Dr. Leandro A. Viloria about the tute of Planning before the members of the t Local Government Reform Commission.

ation rites for the new students was one happy sion at the Institute of Planning. Masters and phytes as well as the faculty and staff of the tute were treated to the "sight, sound, taste, l and touch" of the environment. After going ugh the various "tests" and "ordeals," the phytes were sworn into the Association.

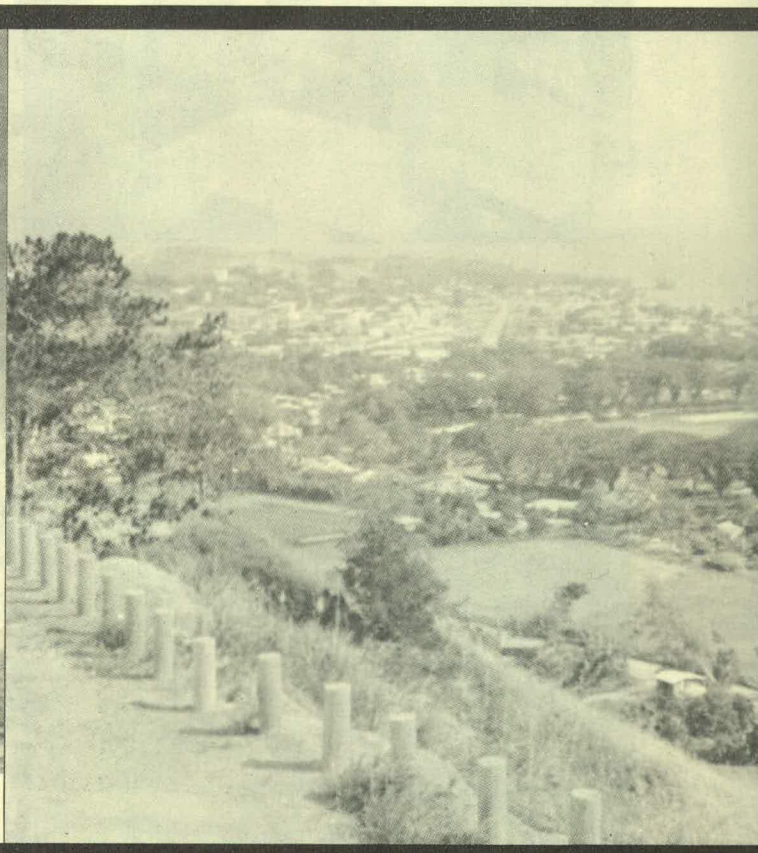






A session with local officials of the city of Manila was held at the final presentation of the students' proposed development plans for downtown Quiapo. Present during the presentation were Mayor Antonio J. Villegas, Vice-Mayor Felicisimo S. Cabigao, local officials and advisers to the Mayor, and other guests to hear the proposal of the students. During this session, the Mayor revealed some of his plans for the City and expressed his interest in urban renewal projects.

REGIONAL DEVELOPMENT CENTERS



First Regional Center Established

The University of the Philippines and the Mindanao State University formally established the MSU-UP Planning and Development Center on August 30, 1969 with the signing in Marawi of the Memorandum of Agreement between U.P. President Salvador P. Lopez and MSU President Antonio Isidro.

Objectives

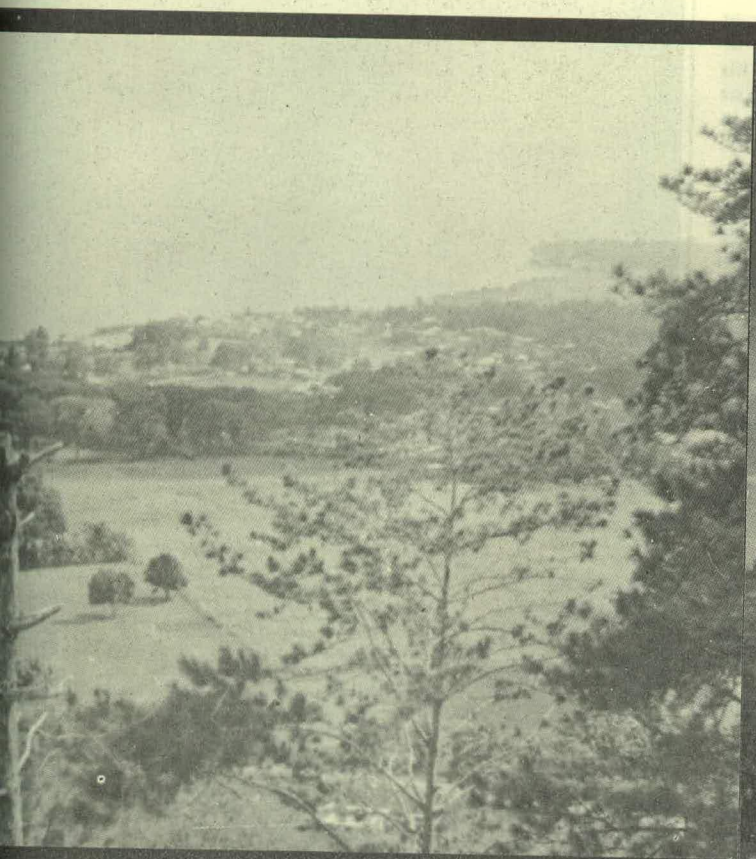
As provided for in the Agreement, the Center will undertake studies necessary for the overall planning and development of the Northern Mindanao region. The priorities include a program for the conservation and development of the Lake Lanao watershed, the industrial development of Greater Iligan, and tourism in Marawi. The Center will also conduct workshops, conferences, and other training programs for government officials, MSU faculty, and private citizens who are in one way or another involved in city or regional planning.

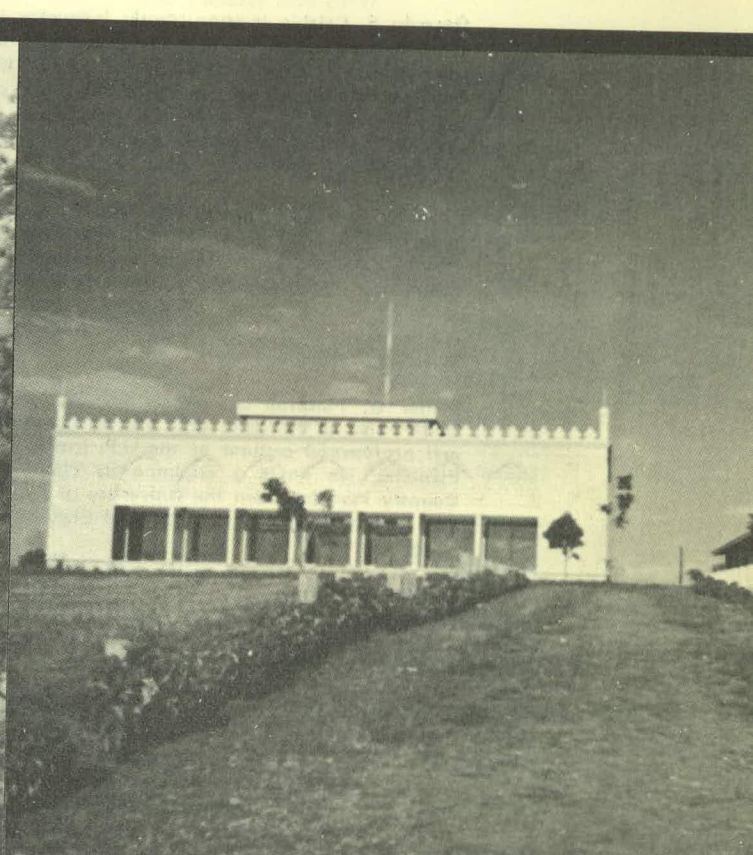
Administrative Setup

The Agreement provides for the formation of the Board of Directors and the Executive Committee to achieve the objectives of the Center. The Board of Directors will formulate and adopt broad policies and programs. It will be composed of nine members: three to be appointed by the president of the University of the Philippines, three by the president of the Mindanao State University, and three to be elected by the Board from outside the ranks of the two universities. A chairman will be elected from among the members of the Board and the director of the MSU Institute of Regional Planning will serve as ex-officio secretary.

The Executive Committee will serve as the implementing arm of the Board of Directors. It will consist of five members: two to be appointed by the president of MSU, two by the president of UP, and the director of the MSU Institute of Regional Planning, who will serve as ex-officio chairman.

The Agreement will remain in force until June





30, 1970 unless renewed by both parties for a period acceptable to both.

Rationale

This is the first of five regional centers of applied research in urban and regional planning which will be established by the University of the Philippines in cooperation with selected local universities. Four others will be established in Cebu, Davao, Baguio and Iloilo. The centers will provide the channel through which units of the University engaged in extension programs can coordinate their efforts and thus effect an interdisciplinary and integrated approach to the problems of the region.

It was with this purpose that the Council on Regional Development Studies, composed of the directors of the Asian Labor Education Center, Institute of Planning, Local Government Center, and Institute for Small Scale Industries was formed. Until the formation of the Council, these four units of the University had related but uncoordinated programs which were administered separately and independently of each other.

President Lopez discussed this purpose in his speech delivered on the occasion of the Eighth Foundation Day Anniversary of the Mindanao State University on August 31, 1969. He stated: "Through the Council on Regional Development Studies, the UP will provide a unified program of technical assistance and advice to our sister universities in selected regions of the country. In due time, we hope, these selected regional universities in turn will become — as the UP has become for the National Government and the country as a whole — a continuing source of studies, in-service training, and consultant advice for local officials and civic groups." Thus the centers' twin objectives of research and training are linked to the University's policy of involvement in public affairs by creating the proper atmosphere for directed change.

about the authors:

Gerardo S. Calabia is concurrently instructor in the U.P. Institute of Planning and coordinator of the Regional Center in Marawi. He finished his Bachelor of Science in Agriculture at U.P. Los Baños in 1958 and his Master of Science in Community and Regional Planning at the University of British Columbia in 1968.

Teodoro T. Encarnacion is one of the two first graduates of the U.P. Institute of Planning. He obtained his degree of Master in Environmental Planning in 1968, after three semesters' graduate work as agency scholar of the Department of Public Works and Communication where he is senior supervising engineer.

Walter G. Faithfull is a project manager of the UNDP and at the same time visiting consultant and professorial lecturer at the U.P. Institute of Planning. He holds a Diploma in Town and Country Planning from the University of Sydney and a membership in the Institute of Engineers in Australia.

Federico B. Silao is assistant professor of planning at the Univesity of the Philippines. He finished the degree of Master of Public Administration at the U.P. in 1966.

The Task Force Committee on Land Use Mapping is composed of: Geronimo V. Manahan, assistant professor, Institute of Planning; Rosauro S. Paderon and Edmundo Roque, regional planners, National Planning Commission; and Filomeno L. Corton, chief cartographic engineer, Board of Technical Surveys and Maps.

The Faculty and Staff of the INSTITUTE OF PLANNING

Leandro A. Viloria
Professor and Director

Ramon C. Portugal	Professor
Tito C. Firmalino	Assistant Professor and Secretary
Federico B. Silao	Assistant Professor
Asteya M. Santiago	Assistant Professor
Geronimo V. Manahan	Assistant Professor
Jose R. Valdecañas	Assistant Professor
Lita S. Velmonte	Assistant Professor
Gerardo S. Calabia	Instructor
Cesar O. Marquez*	Instructor
Maria Eloisa F. Litonjua	Researcher
Dolores A. Endriga	Research Associate
Cynthia R. Dionisio	Senior Research Assistant
Yolanda M. Exconde	Senior Research Assistant
Rosario D. Jimenez	Senior Research Assistant
Teresita M. Logan	Research Assistant
Roque A. Magno*	Research Assistant
Delia G. Roperos	Research Assistant
Alfonso S. Tioleco, Jr.	Research Assistant
Lucrezia J. G. Villanueva	Librarian
Pedro E. de Luna	Administrative Officer

Lecturers

Adriano A. Arcelo, Lecturer
Avelino B. Lim, Special Lecturer

Visiting Professors and Consultants

Walter G. Faithfull, Project Manager, UN Special Fund Assistance to the Institute of Planning
Vishwa Nath Prasad, Regional Planner
Gordon L. Edwards, Urban Planner

* On study leave abroad.