

Republika ng Pilipinas
PAMBANSANG PANGASIWAAN NG PATUBIG
(National Irrigation Administration)
Gusaling APC, Quezon Memorial Circle
Diliman, Lungsod ng Quezon

MC # 66, s. 1973

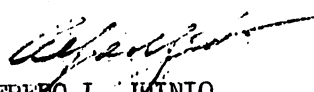
MEMORANDUM CIRCULAR

TO : THE ASSISTANT ADMINISTRATOR; SPECIAL ASSISTANT; HEADS
OF DEPARTMENTS AND STAFFS; REGIONAL IRRIGATION ENGINEERS;
IRRIGATION SUPERINTENDENTS AND ALL OTHERS CONCERNED
This Office

SUBJECT : Guidelines and Policies in the Formulation and Develop-
ment of Activities in the Research and Development
Division, Operations Department

Attached herewith for your information and reference are the Guidelines and Policies in the Formulation and Development of Activities in the Research and Development Division, Operations Department. In order that these activities in the Research and Development Division can be dovetailed and integrated with the activities in the Systems Operation and Maintenance, it is directed that all activities being undertaken along the lines stated in this guidelines be channeled to the Operations Department, Attention: Research and Development Division, so that information and data necessary for these research activities may be consolidated and integrated into the research studies.

Please act accordingly.


ALFREDO L. JUINIO
Administrator

August 21, 1973

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GUIDELINES AND POLICIES IN THE FORMULATION AND DEVELOPMENT
OF ACTIVITIES IN THE RESEARCH AND DEVELOPMENT
DIVISION, OPERATIONS DEPARTMENT

The Research and Development Division of the Operations Department was created, to intensify the research activities in the N I A, for further development of existing irrigation facilities and improved water management techniques and practices to effect a better service for the farmer-end-users.

"Research and Development mean the critical and exhaustive investigation or experimentation to discover new facts and its correct interpretation; the revision of accepted conclusions, theories and practices in the light of newly discovered facts as applied to irrigation water management, land classification for sustained irrigated agriculture and agro-economic findings to hasten progressive changes for the efficient administration and management of irrigation activities of the National Irrigation Administration.

Defined and detailed activities of the Research and Development Division will serve as guidelines of technical personnel of the NIA engaged in research and development activities in the Operations Department,

I - TYPES OF RESEARCH ACTIVITIES

Research activities applicable to the NIA, may be classified as follows:

A. Research in Operations

Under this heading, relevant activities are as follows:

1. Water Management Improvement Research

This activity will effect savings in the utilization and conservation of irrigation water and maximize utilization of effective rainfall. The amount of water saved will bridge the gap between potential irrigable areas and the areas benefited. The immediate objectives is to increase benefited areas of the system and increase its cropping intensity.

2. Pilot Project Operation

This applied research activity will demonstrate the benefits that can be derived in the application of proven theories and principles in the care and management of different soil types and rate and kinds of fertilizers needed under an improved-sustained irrigated agriculture, with increased cropping intensity in the pilot projects, so that the results of these research activities can be applied to all the existing irrigation systems administered by NIA under the multiplier effect; and all other systems scheduled for construction/completion under the intensified irrigation development of the NIA.

3. Facilities Improvement Research

This activity refers to the study on how improvement can be effected in existing irrigation systems' facilities, like canal lining, simple devices for water control and measurement; soil conditioning, and new irrigation concepts; or at least the improvement of the operation and maintenance of each irrigation system under an increased cropping intensity and better cropping pattern for the attainment of increased productivity and income.

4. Soil Management Research

This activity refers to the improvement of soils physical conditions to maximize the yield and effect savings in irrigation water. Conduct crop adaptability tests and fertilizer trials for different crops on variable soil textural classes, taking serious consideration on the diversified/multiple cropping approach to maximize land use patterns for increased productivity.

Establish guidelines in land classification for irrigation and cropping intensity purposes.

5. Irrigation Extension Research

This research activity will explore the most suitable extension approaches in irrigated agriculture, thus providing a functional flow of technical information and assistance to farmers in irrigated areas for intensified and diversified/multiple crop production patterns, as an adjunct to the efficient collection of irrigation fees. Attempt will be made to deal deeper into the farmer's behavioral patterns, essential to the attainment of economic self-sufficiency and independence.

* Guidelines/procedures will be prepared for the organization of viable irrigators' association, as a cohesive force in the upliftment of the rural areas, where technical informations in diversified irrigated agriculture can be easily disseminated and collection of irrigation fees can be effectively facilitated.

B. Agro-Economic Research

Under this heading, it shall imply and cover only Agro-economic research as applied to existing irrigation systems, and in on-going irrigation projects of the NIA.

Attempts will be made to analyze the effect of a highly diversified and improved multiple cropping patterns and cropping intensity in increased production, and the responses of farmers in the payment of irrigation fees.

Results obtained from the different research activities should be used for the improvement and growth of existing systems and in on-going irrigation projects in the attainment of the corporate objectives of the NIA.

II - PROPOSED ACTIVITIES IN THE RESEARCH AND DEVELOPMENT DIVISION, OPERATIONS DEPARTMENT

A. Research in Operations

1. The overriding activity under the research in operations category appears to be the application of the results obtained in the pilot project operation on water management improvement in the existing national irrigation systems and in on-going irrigation projects presently administered by NIA. Inasmuch as the pilot project on water management have already attained some measure of success, the application of the principles and theories on water management should now be implemented and applied for all

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the existing irrigation systems in order to attain the objectives of the NIA, to increase the cropping intensities in the irrigated areas by formulating cropping patterns, more suited to the variations of irrigation water supplies in each of the different systems. This will maximize the utilization and conservation of irrigation water, for increase productivity and possibly the farm income of irrigation users.

2. Facilities improvement studies should be undertaken in each of the existing irrigation systems to determine the inadequacy and/or lack of control structures and measuring devices. New concepts in irrigation should also be considered such as canal lining, soils improvement and conditioning, crop response to different rates of irrigation water (soil moisture tension) including new method of irrigating crops, other than rice, such as sprinkler irrigation, drip irrigation, etc. to maximize the use of these facilities for better irrigation service.

With the results of these studies as basis, recommendations should be submitted for the rehabilitation and improvement of each of the existing national irrigation systems in order to improve cropping intensity and to close the gap between the actual benefited areas and the potential areas of each system.

B. Agro-Economic Research

1. Input-output analysis should be undertaken on the different factors of production such as the use of high yielding varieties, application of fertilizers, insecticides, and improved farming techniques and practices to increase the productivity of the farm, thus attaining higher yield per unit area of irrigated land.
2. Determination of the economic contribution of each of the existing national irrigation systems to the nation's economy, in terms of actual benefits, by considering three (3) major factors:
 - (a) Increase benefited areas by reducing the gap between the actual benefited areas and the potential areas.
 - (b) Increase yield per hectare per crop of actually benefited areas.
 - (c) Increase cropping intensity per agricultural year.

This research study should be undertaken periodically after major rehabilitation and improvement work in specific systems are completed to ascertain the new benefits pertaining thereto.

3. To determine on a periodic basis, the applicable irrigation fee to be charged water users in the national irrigation systems for irrigation services rendered in order to provide for the cost of operation and maintenance and the repayment of the cost of construction of the existing systems. However, the irrigation fee rates should be within the capacity to pay of the irrigation users. Inasmuch as this is a continuing study, this activity should be allocated to the Agro-Economic Analysis Section.

4. Studies should be undertaken to generate labor intensive activities in the operation and maintenance of systems as opportunities for the employment of irrigation users, to supplement their income and enhance their capabilities to pay their irrigation fees.

Research findings of the Water Management, Agro-Economics Analysis and Land Classification Sections will be disseminated by the Farmers' Assistance Section to the farmers through the irrigators' Association. These could be carried out through the preparation, printing and distribution of simplified information materials to the water users/farmers.

Farmers through their irrigators' group shall be assisted to develop farm production plans and use of improved farm practices best suited to their farms. Problems and opportunities are to be discussed with farmers through farm, home and field visits or through the general assemblies of members of irrigators' association.

Farmers shall be taught the importance of cooperation especially in the promotion of their socio-economic well-beings. Communication is an important tool between the farmers and water authority in improving the efficiency of irrigation systems.

A massive information and education campaign, organization, supervision and guidance to farmers and irrigators' associations must be done.

Republika ng Pilipinas
PAMBANSANG PANGASIWAAN NG PATUBIG
(National Irrigation Administration)
Gusaling APC, Quezon Memorial Circle
Diliman, Lungsod ng Quezon

July 18, 1973

MEMORANDUM

F O R : The Administrator
This Agency

F R O M : S.I. Julian, Research & Development Div.
Operations Department

SUBJECT : Proposed Guidelines and Policies in the Formulation
and Development of Activities in the Research and
Development Division, Operations Department

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2. Pilot Project Operation

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SEBASTIAN I. JULIAN
Chief, Research & Development Division

NOTED:


EUSEBIO N. SALAZAR
Chief, Operations Department