

**Administrative Order**  
**No. 44**  
**May 7, 1990**

**SUBJECT: Policies and Guidelines on the Management  
of DENR Research and Development  
(R&D) System**

Pursuant to Section 17 of Executive Order No. 192 mandating the Ecosystems Research and Development Bureau (ERDB) to coordinate all technological researches being undertaken by the regional offices of the Department of Environment and Natural Resources (DENR) which are hereto referred as the Ecosystems Research and Development Sectors (ERDS) and in order to strengthen and streamline research management of the Department through the ERDB, the following policies and guidelines are hereby promulgated:

**Section 1. Statement of Policies**

It is the policy of the Department that Research and Development (R&D) activities shall be focused on the most urgent, high priority areas defined to ensure a more rationalized disposition and efficient utilization of the country's natural resources in consonance with the policy focus on ecological balance, ecosystems productivity, equity and social justice. Furthermore, R&D shall also provide the necessary technological backstopping to push development forward in line with the government's desire to maintain the momentum of development in the Philippine economy.

**Section 2. Objectives**

To establish policies on R and D management systems towards the attainment of a more effective and efficient way of preparing, implementing, evaluating and monitoring DENR and R&D researches.

**Section 3. Definition of Terms**

- 3.1 **National Research and Development Framework** - spells out the general direction for the various integrated ecosystems approach programs and identifies the priority areas or gaps requiring attention. It guides the research sector in formulating activities that are problem and clientele-oriented and should contribute to the overall national as well as regional development goals.

- 3.2 **Research Thrusts/Priority Areas** - refer to the specific research thrusts/priority areas of the region which were identified in the National and Regional R and D Framework.
- 3.3 **Ecosystems Approach** - refers to one which is opposed to a single discipline or commodity. It pertains to holistic, integrated, and interdisciplinary undertakings.
- 3.4 **Ecosystems Research and Development** - is an organized, systematic and scientific search for knowledge leading to an understanding of the relationship or interaction of one component with the other components and the application of such understanding for the protection, rehabilitation, utilization and appropriate management of ecosystems for the welfare of the society.
- 3.5 **Basic Research** - is the experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, with no particular application or use in view.
- 3.6 **Applied Research** - is an original or verifactory investigation undertaken to acquire new knowledge and is directed primarily towards a specific aim or objective to resolve a particular problem.
- 3.7 **Research Proposal** - is a document which defines clearly the objectives/targets; establish the time frame and strategy of actions and specify the resources required to attain the objectives. This is broadly classified into program, project and study.
- 3.7.1 A program involves a group of interrelated or complementing research projects on a multi-disciplinary approach to meet established goals within a specific time frame.
- 3.7.2 A project is a set of interrelated studies or a component of a program to meet pre-determined objectives within a specific frame.
- 3.7.3 A study is a basic unit in the investigation of a specific problem identified under a project. A study could either be classified as short term, or long term. A study shall be classified as short term if it has very minimal funding requirements which does not exceed P5000 and a duration of a year or less, otherwise, the study shall be classified as long term.
- 3.8 **Technology** - is an observation based on research or inventions intended for use by specific clientele with specific problems. The technology may be generated locally, within the country or may be borrowed from other countries which is verified and found applicable in the country.
- 3.9 **Technology Generation** - is the process of conducting research with the primary aim of solving specific problems previously identified. It includes reporting of results obtained.

- 3.10 **Technology Verification** - is the conduct of pilot projects for the refinement of technologies, or the conduct of further research for technologies that are either incomplete or tentative.
- 3.11 **Technology Transfer** - is the process of moving the results of research from the generator to the end-user.
- 3.12 **Packaging of technology** - is the means of processing the information or technology to give it the form, content and language deemed appropriate for acceptance and adoption of the technology by the target clientele.
- 3.13 **Dissemination of technology** - is the process of bringing the packaged technology to the intended end-user through the selected medium (e.g. print, television, radio, etc.)
- 3.14 **National Agriculture and Resources Research and Development Network (NARRDN)** - is a large network established and managed by the Philippine Agriculture, Forestry and Natural Resources Research and Development (PCARRD) with the task of promoting coordination and linkages among agencies and institutions in agriculture, forestry and natural resources sectors.
- 3.15 **Field evaluation** - This shall serve to verify information contained in the quarterly and year-end technical and financial reports and to observe the actual conduct of the activities.
- 3.16 **In-house Review** - Researchers report on the major highlights of the project in a forum with the evaluation team. The evaluation team shall select from among the research reports to be presented in the Regional R and D Highlights and Planning Workshop.

#### **Section 4. Research Management System**

##### **4.1 Development of the R and D Framework**

Setting directions for research is one of ERDB's primary functions. ERDB must ensure the formulation of a well-defined National R and D framework to be implemented by the DENR R and D network.

The formulated R and D framework shall be reviewed and updated yearly through a series of regional consultation/workshop held simultaneously during the conduct of the yearly Agency In-house Reviews.

##### **4.2 Research and Development Network**

The DENR R and D network shall serve as a mechanism to effectively link offices in the Department, each with their respective R and D activities. ERDB shall be the central research coordinating body of the Department,

responsible for the coordination, monitoring and evaluation of all R and D activities in the department. ERDS shall undertake R and D activities on specific and priority areas of investigation within their territorial jurisdiction, while ERDB shall implement basic researches, applied researches which are nationwide in scope and where the technical expertise required is not available in the ERDS.

Both ERDB and ERDS shall represent the Department in the National Agriculture and Resources Research and Development Network (NARRDN).

#### 4.3 Components of the R and D proposal

The research thrusts/priority areas in the National and Regional R and D Framework shall serve as the basis for preparing a research proposal.

To ensure inclusion of salient points in the proposal and to facilitate the review and evaluation processes, the standard format for the preparation of long and short term proposals is shown in Appendix 1. The important parts of a research proposal are as follows:

- 4.3.1 **Title** - This should describe the work scope in specific, clear and concise term.
- 4.3.2 **Importance/Significance of the Study** - This contains the rationale in undertaking the study and the benefits obtainable from the expected results.
- 4.3.3 **Review of literature** - The proposal should be supported by significant recent findings from local and foreign literatures to elucidate the gaps that the proposal tries to fill up.
- 4.3.4 **Objectives** - This should be stated clearly and logically in a realistic and attainable way considering the resources available (manpower, facilities, money) and methods employed.
- 4.3.5 **Methodology** - It should clearly define and discuss in details the manner in which the desired objectives could be achieved.
- 4.3.6 **Activity Schedules** - This includes the specific group of activities in chronological order at various phases of the study and is presented by simple timetables, graphs or charts.
- 4.3.7 **Budget Schedules** - The budgetary requirements of major items should be presented in details broken down on quarterly basis for 1 year and total cost on a yearly basis if proposal extends beyond a year. The major cost items are personal services, maintenance and operating expenses which include travelling expenses, supplies and materials and sundry items, equipment and capital outlay.

## **Section 5. Qualification of Research Leaders**

Qualification and capability of the proponent shall be considered in the formulation and implementation of research proposal. Qualification refers to the level of education while capability refers to the competence of personnel in handling the research study. Only personnel who occupies permanent position shall be allowed to handle program/ project/study leadership. The specialist group whose exposure and experience is directly relevant to the proposal under study may be allowed to assume study/project leadership. Program leadership/coordinatorship shall be given to personnel who specialized in certain field of study.

Research Assistant group and other personnel under plantilla/job contract shall act as co-worker in the preparation and conduct of the study.

## **Section 6. Processing and Evaluation of R and D proposals**

A research proposal undergoes the following process and evaluation system before it is approved for implementation:

### **6.1 Research proposal originating from the ERDS**

- 6.1.1 These proposals shall undergo in-house review through the leadership of the Regional Technical Director for Research (RTD) and shall be duly approved by the Regional Executive Director (RED) before they are submitted in 6 copies to ERDB for evaluation. Such proposals, however, may be referred to the regional consortium to check overlapping or duplication with any on-going, completed or submitted proposals within the region.
- 6.1.2 At ERDB, the proposal shall be thoroughly reviewed by at least three (3) members of the ERDB Pool of Evaluators which is composed of experts on the subject. If the proposal needs revision or modification after the evaluation, ERDB through its Planning Unit, shall consolidate the comments of the evaluators and transmit the proposal together with the comments to the proponent for revision/incorporation, within a month upon receipt of proposal. In case of conflict of comments and suggestions of evaluators, the evaluators shall sit en-banc to resolve the conflict.
- 6.1.3 The proponent revises the proposal based on the consolidated comments and then transmits the revised proposal to ERDB for re-evaluation.
- 6.1.4 The ERDB Pool of evaluators reviews the revised proposals to see to it if the comments are incorporated in the proposal. In some instances, the proponent may discuss the matter with the evaluators or submits a

reaction letter if he does not agree with the whole or a portion of the evaluation report.

- 6.1.5 After the proposal passes the evaluation process, the ERDB Director indorses the proposal to PCARRD or any funding agency for clearance/approval and funding. In cases where fund source is from the general appropriation of the regional office, the ERDB Director shall indorse the proposal to the Regional Executive Director for approval. Only proposal which has passed the evaluation on or before the 3rd week of September of the current year are eligible for inclusion in the R&D activities for the following budget year.
- 6.2 ERDB initiated proposal shall be reviewed and evaluated by both the Section Chief and Division Chief of the proponent. After a thorough review, the Division Chief shall indorse the proposal to the Director for rigid evaluation following the system described in Sections 6.1.2 to 6.1.5. When fund source is the general appropriation of the bureau, the ERDB Director shall approve the proposal.
- 6.3 R and D proposal prepared by other research institutions/organizations and submitted to DENR for funding shall also undergo the above described processes of evaluation, and the Undersecretary for Environment and Research shall indorse it to the Secretary for approval and possible funding.
- 6.4 The R&D Projects Evaluation System is shown in appendix Figures Nos. 1-4.

## **Section 7. Implementation of R&D Programs/Projects/ Studies**

- 7.1 The ERDS RTDs shall be responsible in the implementation of programs/projects/studies within their respective territorial jurisdiction. These projects may take the form of regular, special, foreign funded and pilot projects. For research projects that require replication in 2 or more regions, however, ERDB shall serve as coordinator of the said research programs/projects/studies. Subject to the approval of the Undersecretary for Environment and Research and the Undersecretary for Field Operations, ERDB shall have the responsibility of deploying equipment and other logistic requirements from one involved region to another.
- 7.2 In regional offices where technical expertise required of the program/project/study is not available, but is available at ERDB, ERDB shall provide the necessary manpower to conduct the said program/project/study.
- 7.3 ERDB shall provide technical assistance to ERDS in the implementation phase of the study in case expertise is lacking in the region. Prior to implementation, the proponent through the RED shall submit to ERDB a schedule of implementation together with a copy of the approved proposal.

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- 7.4 It shall be the responsibility of the RTD/RED and the assigned ERDB evaluator to see to it that programs/ projects/studies are implemented based on the approved project design and scheme of implementation.

### **Section 8. Reports**

- 8.1 All program/project/study leaders shall submit to ERDB the quarterly Work and Financial Plan on a study basis following Appendix Form No. 4 and narrative quarterly and year-end accomplishment reports following Appendix Form Nos. 2 and 3 for monitoring and evaluation purposes. Quarterly and year-end reports shall reach the ERDB every first week of the ensuing month and year, respectively. Likewise, ERDS shall furnish ERDB a copy of pertinent documents such as a copy of the proposals in the pipeline together with its status, on-going studies (in case the proposals and on-going studies did not pass ERDB's evaluation mechanism) terminal reports of completed studies following Appendix Form No. 5 and results of evaluation being conducted by the evaluators other than ERDB.

ERDB shall consolidate all reports of ERDS and submit consolidated reports to the Secretary before the 15th of the ensuing month or year.

### **Section 9. Monitoring and Evaluation of R and D Activities**

ERDB shall spearhead the conduct of a yearly field evaluation and in-house review of previous year's ongoing and completed program/project/study in each regional office. The members of the Evaluation team shall come from ERDB and ERDS pool of evaluators. Representative from member agencies of NARRDN and Planning and Policy Studies Office of the DENR shall be invited to participate in the in-house reviews.

The evaluation team shall report findings on the effective implementation of the program/project/study and recommend solutions to the problems/difficulties encountered. They may also recommend continuation or termination of the program/project/study based on the findings of the evaluation. Major revisions requiring changes in the organizational structure, methodology and termination of the program/project/study, etc. shall be decided upon by the funding or approving agency. The Regional Technical Director for Research representing the Regional Executive Director or the ERDB Director, as the case may be, may decide on minor revisions recommended for the program/project/study. The researcher concerned shall be furnished a copy of the evaluation report.

The flowchart of the detailed process of evaluation and monitoring of R and D projects for the DENR Research Sector is shown in Appendix B.



## **Section 10. Research Management Information Systems (RMIS)**

This system is the information processing support for the DENR R and D network. It shall be capable of supporting on-line data entry for updating and inquiry on the research project and/or about any project in the file and shall consist of 2 sub-systems:

- 10.1 Data bank for all terminal reports/abstracts of completed researches and human resources of the DENR R and D Network.
- 10.2 Research Monitoring System developed to control and monitor files of proposals, new and ongoing research programs/projects/studies including all relevant budgetary, personnel and logistics information.

ERDB, through its Planning and Management Information Services Unit, shall spearhead the development of the RMIS and shall be responsible in the training of the regional staff in implementation of the system in their respective offices. ERDS shall in turn be responsible for the acquisition of the necessary hardware to support the system.

## **Section 11. Technology Transfer**

Information/data derived through research should be compiled, classified and translated into packaged information in the kind of language that is understood by the target clientele.

- 11.1 ERDS shall be responsible for the compilation, classification, organization and integration of information/data derived from their respective territorial jurisdiction while information/data from international and national sources shall be the main concern of ERDB.
- 11.2 Documentation through writing, use of photos/slides, radio/T.V. coverage, and/or video/cassettes of topics of regional coverage shall be the task of ERDS while ERDB shall deal on topics of national concern or coverage.
- 11.3 Packaging of information/data shall be done through print (such as newsletter, journal, how to's) broadcast on Radio or T.V. or Audio-visuals.

ERDB shall be responsible for the publication of Canopy, Sylvatrop Journal, How to's, RISE. On the other hand, Regional DENR newsletter, Techno Transfer Bulletin and translated versions of How to's and RISE shall be the main concern of ERDS. Furthermore research results for technical publications shall be submitted to ERDB for review and publication.

- 11.4 ERDS shall spearhead the dissemination of information/extension work/establishment of demonstration farms in their respective territorial jurisdiction, ably supported in terms of technical expertise and/or logistics by ERDB whenever available. ERDB shall provide copies of publications such as Canopy, How to's, RISE, Sylvatrop to ERDS and other clientele.
- 11.5 ERDB and ERDS shall monitor and evaluate the adoption of technologies by the target clientele. Likewise, ERDB and ERDS shall be responsible for institutionalizing a mechanism for feedback and impact assessment on the results of researches or technology developed. Unlike ERDS which shall cover technologies of regional coverage, ERDB on the other hand, shall take charge of technologies which are national in scope.
- 11.6 The DENR shall retain proprietary rights over the results of completed researches or parts thereof, and the dissemination, publication, or commercialization of such can only be effected with the express permission of the DENR.

**Section 12. Repealing Clause.**

All orders, circulars, memoranda and other issuances which are inconsistent herewith are hereby revoked, amended or modified accordingly.

**Section 13. Effectivity.**

This order takes effect immediately.

**FULGENCIO S. FACTORAN, JR.**  
Secretary

**Recommending Approval:**

**CELSO R. ROQUE**  
Undersecretary for Environment  
and Research

**VICTOR O. RAMOS**  
Undersecretary for Field Operations