

ACCELERATED AGRICULTURAL PROJECT

TRAINING PROGRAM REVIEW

NATIONAL IRRIGATION ADMINISTRATION

THE PHILIPPINES

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AND THE NEAR EAST**

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ACRONYMS

AAP	Accelerated Agricultural Production Project
BLDC	Basic Leadership Development Course
DT	Ditch Tender
CIS	Communal Irrigation System
CLSU	Central Luzon State University
FIO	Farmer Irrigator Organizer
FIO-JET	Farmer Irrigator Organizer Job Enrichment Training
FIOS	Farmer Irrigator Organizer Supervisor, usually a watermaster
FMT	Financial Management Training
FTO	Farmer Training Officer (Regional IDD Staff)
HRD	Human Resource Development
IA	Irrigation Association
IAL	Irrigation Association Leader
IALIC	Irrigation Association Leadership Installation Conference
IDD	Institutional Development Department
IDO	Irrigation Development Officer (IOW's new designation)
IOSP	Irrigation Operations Support Project (World Bank/USAID)
IPC	Institute for Philippine Culture
IOW	Irrigation Organization Worker (NIA Staff IDO)
IT	Irrigation Technician
IS	Irrigation Superintendent
ISPAN	Irrigation Support Project for Asia and the Near East
O&M	Operations and Maintenance

NIA	National Irrigation Administration
NIS	National Irrigation System
P	peso (exchange rate US\$1 = P25)
PIE	Provincial Irrigation Engineer
PIO	Provincial Irrigation Office
RID	Regional Irrigation Director (NIA Regional Head, also see RIM)
RIDD	Regional Institutional Development Department
RIM	Regional Irrigation Manager (NIA Regional Head)
RTCG	Regional Training Core Group
RTO	Regional Training Officer (Administration and Personnel Division)
SMD	Systems Management Department (Central Office)
SMT	Systems Management Training
TOT	Training of Trainers
TNA	Training Needs Assessment
USAID	U.S. Agency for International Development
WT	Water Tender (National Systems)

EXECUTIVE SUMMARY

The Review Task

ISPAN was asked to review the National Irrigation Administration (NIA) training programs conducted under the Accelerated Agricultural Production Project (AAP). The review was seen as a diagnostic stage that would perhaps be followed by an advisory program to implement some of the ISPAN team's major recommendations. The task was to identify strengths and weaknesses of the NIA/AAP training program and suggest ways to strengthen and refine training procedures, methods, and materials. The product of this review is the subject report. Oral debriefings were made to NIA and to the Manila Mission of the U.S. Agency for International Development (USAID).

The following areas were examined in the team's review:

- Management and Organizational Issues: Goals of the training and roles in the organization
- Training Curriculum and Content: Curriculum development and instructional materials
- Training Methodology
- Training Cost
- Overall Impact and Results of Training

Activities for this review included field visits, interviews, and observations. In all, approximately 80 persons at all relevant levels were interviewed; four training events were observed, and four regions visited. Three universities conducting training impact evaluation studies were visited.

Findings and Recommendations

The overall intention of the team is to provide specific, useful, and readily implementable suggestions. Recommendations are intended to provide ways to move a function now in place, with

a history and momentum, toward increased excellence. This should be done without major disruption and without altering priorities in general.

These recommendations will require the attention of top management at central and regional levels if they are to be implemented. Many can be implemented immediately; others will require specialized technical assistance.

Structure and Organization of Training

Responsibility for managing and controlling training quality in NIA and for the AAP Project is dispersed. There is a danger that proliferation of training programs in each department will not sustain quality training in NIA in the long run.

NIA staff believe that the purpose of AAP training programs is to help establish and sustain irrigation associations (IAs). Farmer training is considered a means to support NIA's goal of financial viability for IAs and to turn over parts of national systems to farmers. Farmer training and training for NIA staff to support IAs represent a considerable cost to NIA, although it was not possible to ascertain exact costs.

Training can support the policy framework more effectively if policy is clearly and strongly communicated to all levels of NIA and if the role of training in support of it is articulated.

The training structure will need to be gradually shaped to conform to the role expected of it. Most training is carried out by NIA staff whose primary responsibility is not training. Because training specialists have yet to find a home within the agency, training cannot totally fulfill its role in NIA. Another difficulty is the training budget, which is mixed with operations and not easily identified.

Recommendations

- Clearly articulate overall NIA policy regarding the role of IAs.
- Define a training strategy in support of that policy.
- Consider integrating all training functions into one Institutional Development Department (IDD) training unit at the central and regional levels initially; as it demonstrates capability, evolve this training unit into a full training department for NIA under the Assistant Administrator for Operations and Equipment Management.
- Recruit a limited number of training specialists who would be solely responsible for training; provide regular professional positions for them.
- Consistently involve and coordinate with all of NIA staff outside of the IDD who will supervise the trainees that IDD trains.
- Consider adopting a target training budget as a percentage of each year's annual budget.

Training Content

NIA has developed a broad-based series of training courses designed to support IAs and NIA staff that work with them for both communal and national systems. Some of the training content (especially the financial management curriculum) is directly traceable to IA needs, although the team had some questions about the appropriateness of some of the basic leadership training content.

The TOT content for provincial and regional staff appeared to lack trainer skill development. Staff who conduct training are primarily nonprofessional trainers who learn how to conduct a specific training program.

The water management training content seemed to cover the essentials but the team was not sure that water management skills needed could be learned within the current training format. Some technical content may have been developed in past programs

and could be used now, particularly in water management and operations and maintenance.

Needs assessment processes may not be paying enough attention to farmer input or verifying everyday needs of the training recipients. Some needs assessment processes may be out of date.

Recommendations

Curriculum Development

- Undertake a systematic review of the content of each core curriculum training course. These reviews should be based on field work from the bottom up and be documented in needs assessment format. Current course content and objectives should be adjusted as needed. This work could be conducted on a pilot basis in one region in conjunction with a pilot training improvement program (see recommendations in Chapter 6 for details).
- Develop complete trainer manuals for all regularly recurring training programs within the core curriculum for farmer training and IA support training. These manuals should follow from the needs assessment/review recommended above.

Systems Management and Water Management Training

- Ensure that systems management training under AAP and the institutional component of the Irrigation Operations Support Project (IOSP) comprises a general survey of the problems to be expected combined with specific ways in which trainees can find help in dealing with them in the field.
- Under the O&M training component of IOSP, defer the proposed training program until NIA commits in principle to whether it wishes national irrigation systems to be operated on a day-to-day discharge basis.
- Under the same project, review NIA's recent experience in discharge-based operation, training, and research. This review should be carried out in part by agency people who had first-hand experience in those programs.

Training Methodology

The approach to training is strongly content-oriented. Training methods are limited mostly to lecture format because those who conduct training (not professional trainers) are unfamiliar with interactive methods. (The common mythology is that anyone who can deliver a lecture can also train.) Individuals who know how to use interactive training methods do not co-train with technical specialists or significantly influence the training methodology. Visual aids are used in limited ways, but the chalkboard is used for the most part.

Training objectives for each session, which would let participants know what is going to be covered, are rarely stated. In most programs, fewer days are allowed for training than called for in the original design. To compensate, the hours per training day have increased to as many as twelve.

Recommendations

- Undertake a renewed TOT program using state-of-the-art, practical, and useful training methods *based totally on adult learning training methods*. This could be developed as a pilot program for the AAP project areas.
- Select trainers carefully by using a qualification program. Trainers that come from the technical ranks should be selected because they are excellent communicators and have training potential. Their appointment should be reviewed by a selection panel that operates at each region. Combine training specialists with content experts in training programs.
- Review the length of all training programs from the standpoint of training effectiveness. No program should require that trainees spend more than eight hours in a training day, including coffee breaks.

Training Effectiveness

Those interviewed believe that effectiveness varies considerably from program to program and region to region. The team found little attention being paid to evaluating training effectiveness within NIA as a regular part of training management.

The current follow-up work being done by the supervision and organization processes probably accounts for a great deal of learning that takes place at the field level. No doubt this learning is aided by training; however, it was not possible to assess training effectiveness as currently managed. Performance-indicator measurements are needed.

Program expansion should be based on some assessment of effectiveness. The current practice, which is to move as fast as possible, may be counterproductive.

Recommendations

- Invest a body within the agency, or set up a new body, to regularly assess the progress in achieving the objectives of NIA's institutional programs, with special attention to organizing and training farmers. Feedback on effectiveness should take place as a regular management process.
- Select for first priority implementation a limited number of irrigation systems, both communal and national, upon which to focus organizing and training efforts (regions implementing AAP and IOSP).
- Recognize and enhance the successful elements of skill transfer through on-the-job coaching. Follow-on supervision should be recognized as an important part of the training process and strengthened by, among other ways, involving FIOs' and IOWs' immediate supervisors more closely in the overall training program.

1

INTRODUCTION AND BACKGROUND

1.1 Background

The National Irrigation Administration (NIA) of the Philippines is charged with designing, developing, and maintaining state-owned and -operated irrigation systems through all provinces. NIA is organized into 12 regions, each regional office administering and supervising the large systems that its irrigation superintendents manage. These systems are termed "national" systems.

Within the three to seven provinces in each region are a number of small farmer-owned and -operated irrigation systems that NIA designs, finances, and constructs, and local irrigation associations (IAs) operate and maintain while repaying NIA for the investment. These systems are called "communal" systems.

NIA has begun to stimulate increased local responsibility by organizing IAs for both national and communal systems. This policy is designed to increase NIA's ability to operate as a self-sustaining corporation.

1.2 Terms of Reference

The Manila Mission of the U.S. Agency for International Development (USAID), with NIA's concurrence, asked the Irrigation Support Project for Asia and the Near East (ISPAN) to review NIA training programs conducted under the Accelerated Agricultural Production Project (AAP). It was generally agreed that NIA had a well-developed training program that could benefit from review and from recommendations that build upon current strengths. The ISPAN review was seen as a diagnostic step that would perhaps be followed by an advisory program to implement some of these recommendations.

The team was requested to—

- Identify strengths and weaknesses of the NIA/AAP training program by reviewing and assessing training procedures, methods, and materials.
- Suggest ways to strengthen and refine training procedures, methods, and materials that would increase their relevance, action-orientation, and practicality.

The review products would be a written report and oral presentations to NIA and USAID/Manila.

1.3 Consultant Team

ISPAN provided a three-person team to conduct the review. Dan Edwards, a training and management specialist from Training Resources Group; Tom Wickham, an irrigation management specialist and engineer with extensive experience in the Philippines and Asia; and Leonardo Abesamis, an agricultural engineer with extensive experience working with (and retired from) NIA.

1.4 Review Method

1.4.1 Plan of Inquiry

The team gathered its review data through reading, interviews, and observation. For a complete list of questions in the plan of inquiry, refer to Appendix A. These areas were investigated:

Management and Organizational Issues

- Training goals and the role of training in the organization
- Structure
- Roles
- Staffing
- Management of specific training events

Coverage and Participants

- Identification of participants
- Numbers trained

Training Curriculum and Content

- Curriculum development
- Training and instructional materials

Training Methodology

- Appropriateness of methods
- Equipment
- Training environment

Cost-Effectiveness

- Average cost per trainee
- Training budget

Overall Impact and Results of Training

- Perceived usefulness
- Evaluation
- Relevance to management and recipients

1.4.2 Work Plan

Review activities included field visits, interviews, and observations. In all, approximately 80 people at all relevant levels were interviewed at the central NIA office and four regions. (See Appendix B for a complete list of persons interviewed.) The team observed four different training events; attended an AAP management conference in Iloilo (Region VI); and visited three universities conducting training-impact evaluation studies.

During the first week of the assignment, central office NIA staff were interviewed in the Institutional Development Department (IDD), Systems Management Department (SMD), Communal Irrigation Development Project, and Administrative Training Division. Top management, training implementors, and program supervisors were interviewed, and curriculum documents for most regular training programs were obtained and reviewed.

Team members observed training activities in Regions IV, V, VI, and X, and interviewed NIA staff in these regions. Staff covered the following categories: regional irrigation director (RID), irrigation superintendent (IS), provincial irrigation

engineer (PIE), farmer training officer (FTO) and regional training officer (RTO), farmer irrigator organizer (FIO), irrigation organization worker (IOW), irrigation technician (IT), watermaster, program supervisor, and IA farmer leader.

Training events visited included an Irrigation Association Leadership Installation Conference (IALIC), a Farmer Irrigator Organizers Job Enrichment Training (FIO-JET), a Training of Trainers (TOT) for Financial Management for IOWs working in communal systems, and an IOW Predeployment Training for communal systems.

1.5 Report Organization

1.5.1 Relevance to NIA Training in General

This report focuses primarily on the AAP-related training that was observed. However, interviews and observation invariably led to information about much of the training conducted for farmers and NIA regional staff in general. Most of those interviewed said that training in other regions was, for the most part, conducted the same as in the regions the team observed (IV, V, VI, X). The basic curriculum and training resource material reviewed was for all farmer and NIA field staff; thus, issues and recommendations related to training structure, methodology, and effectiveness are probably applicable to NIA training in general.

The operations and maintenance (O&M) and administrative training supported by AAP but conducted within the framework of the World Bank-sponsored Irrigation Operations Support Project (IOSP) has just begun (except for the TOT program). Therefore, this training could not be extensively reviewed by the team (although a list of proposed courses was reviewed). Chapter 3 includes brief comments on the plan for course structure, management, and delivery.

1.5.2 Format

The report devotes a chapter to each major area of inquiry, while each chapter follows a simple format of findings, issues, and recommendations. A summary chapter assembles all the recommendations for follow-up or action planning, and general guidance regarding lessons in training structure and delivery that emerge from this review appears as a conclusion.

2

SUMMARY AND STRUCTURE OF AAP/NIA TRAINING

2.1 Introduction

The training that NIA carries out to support its institutional programs (principally those supported by AAP and IOSP) reflects the agency's overall policies and its training structure. This chapter summarizes the team's findings on the management and structure of NIA training and discusses certain issues stemming from these findings. The chapter concludes with ten recommendations relating to overall objectives and delivery of a high-quality training product.

2.2 Levels of Training

Training conducted under AAP and IOSP is provided for two levels: NIA staff and farmers. Both types of training are divided further into training for communal irrigation systems (owned and operated by farmer IAs) and training for national systems (owned and operated by NIA). AAP supports training for both communal and national systems; IOSP supports training for national systems only.

All AAP training is coordinated by the Institutional Development Department (IDD) under the Assistant Administrator for Systems Operation and Equipment Management. IOSP training, which is just getting underway, is planned also as an activity of the Systems Operation and Equipment Management Sector, under the same assistant administrator but through SMD.

Most training, regardless of irrigation type or project, is implemented at the regional level. NIA currently administers 12 regional offices, of which 3 (Regions V, VI, and X—corresponding to the Bicol, Western Visayas, and Northern Mindanao regions) are AAP target areas.

IOSP training has been planned with two major components: one (which supports IAs and is similar to that under AAP) is planned for regions not

covered by AAP, the other for O&M staff in national systems throughout the country.

Communal Systems

AAP-supported training for communal systems uses IOWs and is an outgrowth of the previous communal irrigation program (1981-86). IOWs are college graduates that NIA hires on a contractual or a daily basis to help organize IAs and train their leaders. The IOWs are supervised generally by the PIE. Despite the nature of their employment and resultant staff turnover, a number of IOWs still work with NIA after several years.

AAP-supported IOWs are normally assigned to one communal (base) system for a year, during which they also support one or two other (radiation) systems. They primarily train the farmer leaders of those IAs: president, vice president, auditor, secretary-treasurer, and the seven- to nine-person board of directors selected from the various turnout service-area chairmen.

While in their areas, IOWs receive training organized by the provincial training core group. This training is loosely coordinated by a core group at the regional level.

National Systems

Training for national irrigation systems is organized differently. Though some "outside" IOWs are still used in national irrigation systems, NIA has recently begun to select leading farmers from each prospective association and designate them as FIOs. These organizers receive an incentive payment currently fixed at P500/mo payable for the duration of their organizing function in the IA (about a year). They are supervised by the water management technician watermaster, or his assistant, under the IS.

FIOs receive prefielding training from a regional training core group (RTCG) controlled by the

regional director but coordinated largely by the regional IDD office (RIDD), with some assistance from the central office. RTCG members include staff of RIDD and other NIA regional offices, as requested by IDD.

There is also a central office core training group, primarily comprising program supervisors assigned to correspond to each region's needs. This group assists each RTCG at its inception and provides periodic assistance thereafter. Much of the central group's role is to provide administrative clarity and support to the regions.

Prefielding and In-Service Training

The content and duration of prefielding and in-service training for both CIS and NIS, although subject to many adjustments at the regional level, are usually roughly comparable for IOWs and FIOs. In each case three separate training programs are called for, each lasting one to two weeks:

- Basic leadership development training—to strengthen leadership skills in farmer-leaders and to channel that leadership toward establishing IAs. Some IOWs also receive this training through a TOT program for this course.¹
- Financial management training (FMT)—to convey sound accounting and bookkeeping practices to the IA leaders.
- System management training (SMT)—to help IA leaders, IOWs, and FIOs understand key concepts and practices of crop and water management. Some IOWs are also provided this training through a training-of-trainers program for this course.

Prefielding training under AAP has included many sessions of basic leadership development training at all three regions. A few sessions on financial management have also been given, although system management is not yet underway. However, under the previous communal irrigation program, NIA gained some experience with topics analogous to these three. The general model described above is expected to serve as a guide for both IOSP and AAP training programs.

The end-objectives of the Basic Leadership Development Course (BLDC) and the IALIC training for farmers in both communal and national systems are these:

- Identify farmer leaders and acquaint them with various reasons for forming IAs, e.g., support for repairs to the minor irrigation system.
- Provide some organizational tools and requirements for forming IAs, e.g., adoption of bylaws. Help the national IAs understand the NIA maintenance and irrigation service fee contracts.²
- Assist in the formation of the board of directors and election of officers for each IA.
- Provide some management skills in supervision, running meetings, working together, and managing distribution (primarily in communal systems).

This description pertains only to institutional training under AAP and IOSP; in addition, NIA manages considerable overseas training, staff development training, and other specialized courses. IOSP-supported training, managed by SMD, is planned for O&M staff throughout the country and

¹ In NIS, this course has evolved into an irrigators association leadership installation conference (IALIC).

² These contracts permit NIA to contract out to national IAs the tasks of maintaining parts of national systems and collecting irrigation service fees from farmers. IAs then retain part of those fees as incentive payments.

also contains administrative training for regional staff. Other training is administered by several departments/divisions, including the training division under the Department of Administrative Services.

Some NIA staff have considerable training experience. For instance, during 1975-81 NIA carried out an ambitious O&M training program, at the end of which the traditional watermasters had been either upgraded or replaced by trained water management technologists, who became the key operating staff in national systems throughout most of the country.

The training during that period included three broad areas: system water management, irrigated crop production, and human resource development (the latter including training in farmer organization). These courses required about three months of training at the training center, in three different modules; supervised field training over two cropping seasons (one wet and one dry season) in Central Luzon; and two more seasons of supervision in the trainees' assigned home areas.

The materials, thorough and tested, used in that training program could serve as reference material in the design of current AAP and IOSP training. Many trainers in that program are still with NIA and could serve as training resources.

2.3 Training Purposes

The team interviewed NIA staff at many levels to assess the primary perceived goals and purposes of institutional training. Here are some findings:

- Training is considered necessary for establishing sustainable and stable IAs. Numerous attempts at establishing IAs have been made but the results were sometimes unsustainable. Farmer training is considered necessary if IAs are to become permanent institutions.
- Farmer training is considered an important means towards NIA's goal of financial self-sufficiency, under which the agency intends to finance all operating costs and some investment

costs at each region through irrigation service and amortization fee collections. Some RIDs stated that training measurably increased NIA's collections.

- Farmer training is regarded as essential if irrigation systems or parts thereof are to be turned over to farmers to operate and maintain, as is seriously considered at present.
- Trained farmers should be able to contribute to a more modern and prosperous rural sector by employing more efficient irrigation and cropping methods.

While there is probably general agreement on these objectives, it was not made clear to the team which have priority and exactly what the ultimate objectives of the institutional training program are.

2.4 Training Administration and Cost

Although training generally helps improve irrigation performance, such improvements may not be directly proportional to the training cost. A well-prepared training program, coupled with sound administration and skillful trainers, could be completed in an efficient training period, thereby marginally reducing its cost while maintaining quality output. However, most training costs are incurred not to pay for daily food allowances in a training center, but to cover fixed costs of staff time, transportation, and materials. Improperly led courses with long lectures are often marginally more costly in the short term. Their primary cost, however, is the lower quality of learning they produce and the follow-up attention needed later to correct errors due to undeveloped skills.

In the regions visited, variations were noted in the quality of training administration. Such variations may be attributed largely to differences among the office heads in those regions, to uneven staff quality, and to directives implemented that were not fully understood.

2.5 Training Issues

2.5.1 Training in Support of NIA Policy

NIA's institutional training is designed to support the establishment of stable and sustainable IAs. Although this purpose seems to be generally well understood throughout the regions visited, it was rarely articulated forcefully, or even directly. In some cases it appeared that the training had acquired a momentum of its own, aided by the complexity and scale of the effort, which was consistent with the policy framework but largely independent of it. Considerable variation in training implementation was found because of different leadership qualities and personnel in the regions and, perhaps, unclear direction.

If these observations are correct, they will have important consequences. Training is likely to lose its focus and purpose, and may degenerate into a number of separate activities. Effective training must be closely linked to management's policy direction and priorities or it can become training for its own sake.

2.5.2 Training and Organizing Farmers

AAP and IOSP incorporate several activities: minor repair, institution-building (or organizing farmers), and research. Training, primarily of farmers, is seen as an important instrument of institution-building. The team agrees strongly with this concept.

In the field, there is some evidence that the distinction between training and organizing farmers is blurred. As a summing up activity, the IALIC appropriately helps to build the IA. However, the training activities in the IALIC would have more impact if they were treated separately. The organizational conference is mixed with training; consequently training receives only the time remaining after all the organizing business is concluded. (Refer to Chapter 4 for comments on the methodology of leadership training.)

The distinction between training and organizing affects not only training methodology but also the outcomes. Although linkage from training to organizing is important, the best approach to organizing farmers may not be the best way to train. Similarly, training, no matter how well done, cannot be expected to answer all the needs of organizing functional IAs.

Project documents suggest that training has been given unusually heavy weight in both AAP and IOSP, perhaps at the expense of community organizing activities. Achievements will be greater if it is clear exactly what training is to accomplish and what supporting developments can be expected from farmer organization. The implications of this distinction extend to the kinds of training staff and organizers NIA may wish to hire, the number and types of training courses, and the nature of the interaction between NIA and farmers.

2.5.3 Responsibility for Training Design and Implementation

As noted, IDD coordinates training under the AAP project, and SMD manages that of IOSP. Both training programs are to be primarily carried out by the regions.

Overall responsibility for training in general—design, implementation, supervision and monitoring—appears to be so widely spread throughout NIA that management and quality control have become difficult. Within IDD and the regional offices, it is not clear that AAP training has a responsible locus either. No formally prepared training professionals are responsible for its management, even though some staff hold such titles as regional training officer or farmer training officer. Evidence of this diffusion of responsibility is seen in the variability in training quality from region to region, the relatively weak supervision of training events, and the apparent lack of NIA monitoring and feedback that would report regularly on training progress. Although the Central Training Office collects training data for reporting purposes, this is not a monitoring function.

A specific problem caused by diffused responsibility is the parallel development of two different but related training programs: IA systems management training under IDD, and watermasters' water management training under SMD. Such problems as competition between two or more training modules could be avoided by placing greater responsibility for all training phases in the hands of relatively few people (including some professional trainers). Their responsibility should include forming a monitoring unit to assess the quality of training activities. Chapter 5 discusses this recommendation in greater detail.

2.5.4 Multiple Trainer Roles

Most training is carried out by regional and provincial core groups composed mainly of NIA staff whose primary responsibilities are not training. Some core groups have experienced organizers working with engineers and financial staff, and are managed by an RTO or FTO or someone from the possible mix that has worked with a given program several times. In interviews, none in this mix believed that they were professional trainers or that their jobs were primarily to conduct training. RTOs and FTOs have training-management duties, primarily—not training—and have not been selected because of extensive training backgrounds. Training specialists have yet to find a home within the agency.

There are some benefits to this arrangement: training is done by staff from the real world of irrigation or by regional staff, whose concerns are irrigation performance and organizing rather than training. Their backgrounds enhance the possibility that appropriate training objectives will be selected. On the other hand, this core group is unlikely to know a great deal about training and will rely primarily on what they can learn by doing or can pick up along the way. A few training specialists (with sound understanding of methodology) at each level in the system would strengthen AAP and IOSP training.

2.5.5 Integrating NIA Staff and Resources in Training

In carrying out their responsibilities for coordinating AAP training, IDD staff sometimes rely upon themselves too much to provide the bulk of the training. Thus, they neglect important linkages with staff that supervise the participants. Likewise, O&M training personnel should coordinate their training activities more closely with IDD. Better coordination and involvement with NIA operating staff would improve the training programs. In some regions this is already being done to some extent, while in others NIA involvement is quite limited. What is needed is an even stronger training partnership between IDD and operations staff in each of the regions and among different departments at the center concerned with training. Here are some specific ways to do this:

- Consistently consult with supervisors and technical staff before training. This will ensure better needs assessment and determine if emphasis is needed in certain training areas.
- Request that immediate supervisors attend the last day of training to assist those they supervise in work planning and follow-up planning.
- Request that technical staff form part of the training core group whenever possible, to work in training and co-facilitate training sessions when appropriate.

2.5.6 Financial Constraints on Training

Training quality in some regions may have suffered significantly through the impact of the policy of attaining financial viability (self-sufficiency). Because viability is attained when income exceeds expenses, there are powerful incentives to cut costs as much as possible; in such an environment, training is one of the first places to cut.

Although training is not the only function affected by cost-cutting incentives, it is particularly vulnerable. There are few spokesmen for training and the results of training are intangible. As a result, training sessions in some regions have been cut from two weeks to six days. This reduction of days has been balanced to some extent by extending the period of training to as many as twelve hours per day. Clearly the trainees cannot absorb all the material in such compressed sessions.

Training costs are substantial and there are areas where savings can be made. But the economies to be taken up should be those that retain the effectiveness of the training.

NIA might consider reserving a certain percentage of its annual budget for training and human resource development (HRD) as many private companies do. This would ensure long-range consistency in training and would protect it from excessive cost-cutting at the regions. The actual percentage selected is less important than acceptance of the principle that an agency such as NIA has ongoing training needs that must be protected.

2.5.7 Structural Issues in Training Effectiveness

Throughout its mission, the team was asked to address organizational issues of NIA training. Although questions of reorganization often seem important, the more important issues in the *short run* are the smaller ones of making optimum use of training resources with the relatively small changes described throughout this report. Immediate major structural reorganization does not appear essential at this time; instead, various incremental measures (addressed in the recommendations) seem the most appropriate ways to strengthen training and its management in NIA.

In the *long run*, however, NIA may wish to consider alternative organizational arrangements for training. If so, these observations may be useful:

- First, it would probably be useful to designate a body with specific training responsibility. Assuming that institutional training remains a

key part of NIA's agenda, a new (training) unit could be created within IDD. There would be advantages to having it come under the Assistant Administrator for System Operation and Equipment Management because it is important to link training as closely as possible to the operational objectives of the system.

- Alternatively, training could be taken up under SMD. There would be some advantages in this arrangement also, but at present the service orientation of training seems to fit more naturally with the service orientation of IDD. Furthermore, SMD is already a large department with highly specialized responsibilities.
- Many other issues would have to be sorted out before NIA could seriously consider structural changes regarding training. For example, the role of the Training Division, currently under the Assistant Administrator for Administrative Services, would have to be clarified. It might be advisable to ask them to assist IDD with the considerable administrative requirements. In addition, the Training Division should continue to coordinate NIA's overall HRD planning, an important function. Any additional major manpower planning or needs assessment should logically be managed by this unit.

2.6 Human Resource Development in NIA

In preparing this report, the team examined several training programs and noted some implementation problems. Among those are two that exist in any large government agency: staff who may not be fully qualified for the positions they hold, and staff who may not be fully responsive to changing priorities and policies.

If NIA's senior management wishes to review staff qualifications and performance against objective position descriptions, and to design a phased training program for as many staff positions as necessary, there are effective methodologies for doing so.

An overall manpower plan and HRD assessment covering key positions could be carried out largely by NIA itself. Because new training positions have been recommended in this report to consolidate training currently being undertaken in a number of NIA offices, a logical place to start would be in the training sector.

Ultimately, NIA senior management may wish to implement an HRD strategy by which the agency directs training to its key staff in ways that make the agency more responsive to management. This approach is well established in private business and, increasingly, in government agencies. It is likely that international support could be found to finance part of it.

2.7 Recommendations

- Clearly articulate NIA's policy regarding the role of IAs.
 - Define clearly a training strategy in support of that policy.
 - Undertake these steps to strengthen the training function:
 - Prepare written descriptions of all training positions.
 - Recruit a limited number of training specialists and subject-matter specialists who would be solely responsible for training.
- Provide regular professional positions for these professional trainers.
 - Consistently involve and coordinate with all NIA staff outside of IDD who will supervise the people that IDD trains. Require that other departments that undertake training coordinate with IDD.
 - Encourage all staff qualified by virtue of their personal skills, operational experience, and former training experience to join training core groups and work with the support of training specialists to deliver quality training.
 - Review and incorporate appropriate technical resource materials in water management and cropping from the training programs developed several years ago by the Water Resource Management Training Center.
 - Consider integrating all training functions into one IDD training unit at the central and regional levels initially; as it demonstrates capability, evolve this training unit into a full NIA training department under the Assistant Administrator for Operations and Equipment Management.
 - Strengthen training supervision in the field.
 - Consider undertaking a training needs assessment at all levels of NIA as a first step toward a possible HRD program.
 - Consider adopting a target training budget as a percentage of each year's annual budget.

3

TRAINING CONTENT

3.1 Introduction

The training content review that follows is a brief examination of the primary training given under AAP and, to some extent, under IOSP. Because all NIA training programs have not yet been developed in a manual format, it was impossible to review training materials and content in depth; however, comments are included on course syllabi that the team was able to read. Additionally, a detailed review of Systems Management Training (SMT) for the AAP and comments on training proposed under ISOP are provided.

3.2 Overview of AAP and IOSP Training Courses

The training programs in Table 1 form part of NIA training in support of IAs and of NIA staff that train farmer leaders. The overall curriculum can be divided into training for farmer leaders and training for NIA staff that support, organize, or strengthen IAs.

The farmer-leader training is divided into essentially parallel programs for communal systems and national systems. It includes IA formation and leadership training; financial management training;

and systems management training.³ These three programs form the basis of training developed and supported by the AAP and the institutional portion of IOSP.

Training for NIA staff includes programs to prepare training core groups at regional and provincial levels, and training for new organizers who are responsible for setting up IAs and/or supporting them in the start-up phase. Limited supervisory training is available for NIA staff at PIE offices and from ISs who oversee organizers.

Thirteen technical courses will be developed within the framework of IOSP that USAID is sponsoring. These courses are listed with the staff for whom they are intended. Although the content of these could not be reviewed at this planning stage, some overlap with current programs, particularly water management training, was identified. To date, coordination between SMD and IDD has not been extensive.

3.3 Basic Leadership Training

3.3.1 Content Review

A content review was made of most of the farmer training programs and TOT resource materials listed in Tables 1 and 2.

³ A new SMT for farmers in national systems is now under development. As NIA increasingly involves farmer leaders in the management of national systems, this training takes on more importance.

Table 1
NIA TRAINING CURRICULA

<u>COURSE TITLE</u>	<u>PURPOSE</u>
For Communal Systems	
1. Basic Leadership Development Course (BLDC)	Prepares IA leaders in roles and responsibilities and team formation, election of officers, work planning.
2. Financial Management Training (FMT)	Prepares IA financial officers for bookkeeping.
3. System Management Training (SMT)	Prepares O&M staff (irrigation technicians and ditch tenders) in how to operate and maintain the system.
For National Systems	
1. Irrigation Association Installation Conference (IALIC) (parallel to BLDC in Communal)	Prepares IA leaders in roles and responsibilities and team formation, officer election, and work planning.
2. FIO Program FIO Prefielding Training	Prepares FIOs (local recruit part-time organizers) in the roles and responsibilities of being organizers and entry into job, self development.
3. FIO Job Enrichment Training (JET)	Follow-up training in areas of perceived need: supervision technical areas for regional and provincial staff: IOWs, FIOs, watermasters.
4. System Management Training (under development)	Trains farmers in how to operate and maintain parts of the system.
For NIA Staff That Work at the Field Level With IAs	
1. Irrigation Organizer Worker (IOW) Deployment Training NIA	Prepares IOWs (newly recruited community organizers) in the roles and responsibilities of being an organizer and entry into NIA, self-development, and awareness.
2. Training of Trainers	Core group of NIA staff are formed as an ad hoc training group at regional and provincial levels: basics of training and specific preparation for delivering any or all training modules directed toward farmers.
3. FIO Supervisory Training	Introduction to supervision and leadership. For water management technicians and watermasters who supervise FIOs.

Table 2
**PROPOSED O&M TRAINING
 UNDER SMD's IRRIGATION OPERATIONS SUPPORT PROJECT
 WORLD BANK/USAID**

**For Field/Regional Staff in IAs and
 NIA Staff that Directly Support Them**

1.	Water Management Training	Basics of O&M for watermasters, asst. watermasters.
2.	Hydrology Workshop	Engineers Aide, AIS. Asst. Hydrologist. Water flow.
3.	Light and Heavy Equipment Maintenance	Repair crews, technicians
4.	Systems Facilities Maintenance	Watermasters, IA asst.
5.	Accounting for Non-Accountants	Accounting clerks, billing.
6.	Budgeting and Accounting	Sr. accountants, cashiers.
7.	Records Management	Clerks, grades B/D Storekeepers.
8.	Cashiering	Cashiers and dispersing officers.
9.	Basic Supervision and Management	Engineers.
10.	Personnel and Management by Objectives	Admin, asst. principal engineers, supervisory engineers.
11.	Inventory Management	Storekeepers, custodians, clerks
12.	Project Management	Principal engineers, supervisory engineers, chief engineers.
13.	Irrigation Management Information System	Oper. chief, watermasters, irrigation superintendent, and asst.

For NIA Trainers—Central and Regional

1.	Training of Trainers/Central	Central office program managers, and selected training staff for central: Basic and advanced training.
2.	Training of Trainers/Regional	Regional trainers and regional NIA staff and managers who participate in delivering training: basic facilitation skills.

The basic leadership program focuses on farmer leaders who are organizing either a communal system IA or a national system IA. This training takes place in a conference setting. The conference (called an IALIC or a BLDC) mixes conference work, which addresses IA organization and planning, with training. The following elements are IA management-related:

- Explanations of the IA structure
- By-laws, ratification of by-laws
- Election of officers and committee formation
- Contracting for O&M
- Work plan preparation

The portions of the agenda that are directed toward IA formation seemed appropriate and necessary steps in forming an association.

Course elements that are primarily training include—

- Theoretical frameworks of organizing, philosophical base
- Collective and situational leadership
- Facilitating and conducting a meeting
- Problem solving and decision making

During field work, the portion of the training covering the organizing framework and the collective situational leadership were observed. The trainer background materials for the other portions of the agenda were also reviewed.

Two concerns surfaced relating to leadership content. First, how is the content communicated or delivered? Second, how is the content for farmer leaders selected and is it appropriate?

3.3.2 Delivery Method

The leadership framework and situation leadership training is derived from Hersey and Blanchard's synthesis called situational management. In the management training field, the framework is commonly known, and has been used for the past 20 years to train business executives to get the best results from a range of followers. When this program is trained with college graduates, it normally takes from three to five days for a full program. Shortened versions are occasionally used

for a one-day program. In the IALIC observed, approximately 20 minutes were devoted to this leadership concept; farmer leaders hearing this brief lecture could derive little that was applicable to managing and distributing water.

Although the content related to meetings and problem solving is probably appropriate, it becomes weak when trained in lecture format. But if skill practice on running meetings were given, the content would probably be appropriate (assuming the trainees' jobs require this skill).

3.3.3 Content Selection

Staff interviewed said that the leadership content had been put together "from the top" over the years, taking materials from different sources. It did not appear that a clear or recent analysis of farmer leader needs for skills and knowledge had been conducted to determine this content.

3.4 Financial Management Training

The FMT training module was reviewed, and a TOT for IOWs in financial management training was observed. Those interviewed reported that the FMT for farmers and for trainers was generally considered on target, specific, and outcome-oriented. Training in this area is for people who keep association books and for those who manage the finances. Although the team did not review this material in depth, the training content appears to be based on a clear needs assessment process and seems on target.

3.5 Systems Management Training

The SMT program, primarily developed for communal systems, covers cropping, planning and conducting water distribution, and maintaining and cleaning canals. The material is introductory in nature and generally varies by region and province, depending upon needs (according to the engineers interviewed). Although it is not clear that SMT has conducted a formal needs assessment, most PIEs and their staffs seem to know which communal systems need training and why.

SMT training has evolved from the former NIA communal irrigation program. In 1982, NIA's System Management Working Group developed a comprehensive document in support of that training; the document outlines seven parts to SMT training:

- Cropping calendar
- Water management during normal operation
- Water management during periods of crisis
- Maintenance
- Conflict management
- Improved farm-level facilities
- Rules and regulations

People interviewed stressed that farmer-leader SMT need not cover all seven. For each IA, IOWs, FIOs, and their supervisors are to determine which parts should be covered and which omitted. However, the TOT (including training of IOWs and FIOs) presumably must cover all seven.

NIA is now adapting this process to SMT under AAP. Relatively few changes have occurred for communal systems; however, as a practical matter some parts of the program have been given special attention, namely, training on the cropping pattern and on water management. (Improved farm-level facilities are covered to some extent in the Minor Repair component of AAP.) The team could not review the adaptation of this process to national systems because it was in the final stages of preparation by IDD and not yet published.

All of the seven-part content appears potentially relevant and important to system management of both communal and national systems. Despite its relevance, however, the team questions to what extent the content can form the basis of a strong training program. These are some reasons:

- It will be very difficult to effectively train IOWs, many of whom have little technical or farming background, in this wide range of detailed material.
- It will also be difficult to train FIOs in applying the location-specific system management material because they will know more than their trainers, through first-hand experience on their farms.

- Most skills required are not amenable to the lecture-format type of training observed by the team, and can only be taught effectively in the field.
- Few NIA staff can train others effectively in system management and many of those who are qualified are assigned to operating systems throughout the country.

Consequently, instead of trying to include all aspects of SMT under AAP and IOSP institutional training, certain parts could be selected for priority training and others omitted. For example, the training could include a brief summary of certain important issues, followed by information on how trainees at all levels can get help with more-specific problems in their areas.

Planned follow-up on the job would combine effectively with the introductory program. To be successful in this mode, NIA would have to put together small staff groups at each region who could visit IAs (at the request of the IOWs, FIOs, and their supervisors) and provide informed support in system management to those IAs and their farmer leaders.

If this approach were accepted, SMT for IOWs, FIOs, and farmer leaders would still have a place. But rather than attempting to build a strong and comprehensive capability into each trainee, the training would try to give everyone enough information to recognize system management problems and know how to seek help.

3.6 Water Management Training under the O&M Component of IOSP

IOSP has two related components. One of these is to support institutional training largely as AAP does, but in regions AAP does not cover. In this report, references to training under IOSP fall within that context.

A separate thrust is training and other improvements in overall operations and maintenance of national systems. Training in this context is for NIA operating staff, and a separate water management training program is being prepared for this component.

Although the team reviewed the tentative plans for this training, the manuals have not yet been prepared and no training courses have been held. Consequently, the following observations are based on a narrow understanding of what is intended under the project.

First, the team believes the water management course content includes too much material of a research nature, which is not directly relevant to those responsible for day-to-day operation of irrigation systems. For example, about half of the proposed training covers the technique for measuring water losses through seepage and percolation. Experience in Philippine irrigation systems has shown that loss measurements must be very precise to have any meaning and that this would not normally be expected of operations staff. Furthermore, based on its own research NIA already has reliable loss estimates, which can guide operations of most irrigation systems.

Second, over 90 percent of the proposed training is on technique and application of water measurement. It would appear that those discharge measurements are intended to guide system operation. We do not believe NIA has committed to that form of operation at this time, and note that there are other well-established operating systems in place.

Third, the team questions whether physical conditions in most irrigation systems would permit cost-effective discharge measurements accurate enough to be used for operations purposes.

In conclusion, the team believes the discharge-based content of the proposed training to be suitable for a small research group within NIA; however, unless NIA clearly establishes that the operation of its national systems will be carried out according to day-to-day discharge measurements, we believe it would be premature to implement the training as proposed.

It should also be noted that NIA has extensive experience in water-measurement approaches to system operation and considerable experience in training for this subject. A careful review of that experience would be an appropriate way to address the issue because most key participants of this work are still with the agency.

3.7 TOT Content

The syllabus for the TOT program conducted for NIA central staff under the IOSP was reviewed. Interviews were conducted with regional and provincial-level training staff to assess how skills were learned in the programs they have attended.

Most content reviewed consisted of written lectures on such topics as writing training objectives, conducting training needs assessments, using energizers, evaluating training, and defining the role of the trainer. Content areas that were not presented included material that differentiates adult learning from pedagogy.

The TOT conducted under IOSP appeared to be a series of lectures on training topics presented by resource speakers. Because skill building is the most important part of a TOT program, the team believes that the lecture method is not the best way to increase training skills of NIA central office staff. For example, there was little evidence that the program trained NIA staff in designing and writing case studies, role plays, critical incidents, and problem and field-exercise design. Nor did it include practice training in how to implement these two-way communication processes.

Chapter 4 reviews the TOT program in financial management conducted at the regional level. Regional TOT programs are designed primarily to assist nonprofessional trainers in conducting a specific training event. In these programs there is an appropriate element of practice training and critique. However, the content of these programs is unfortunately not designed to form trainers; it is directed instead at forming technical or content presentations, primarily lectures.

3.8 Training Issues

3.8.1 Needs Assessment Processes

The essentials of training are who, what, and how. The needs assessment process determines the "what" (content) of training. Among the materials given to the team was a three-page document on conducting training needs assessments. Of those interviewed, none mentioned this guide when asked how the

content of training programs was developed. In fact, many of those who currently conduct training were unsure how the content was determined for courses they were working in.

A needs-assessment process should seek to determine exactly what the farmer leaders and NIA staff need to do to meet performance standards on the job. It should then compare current performance against those standards. Currently, needs-assessment processes appear to be informal and unmanaged. Content development for training should be an organic, alive process wherein varying needs in the environment and among management priorities constantly shape the training content.

3.8.2 Training Manuals

None of the training materials reviewed were organized into complete instructional guides or trainer manuals. The norm has been to provide background materials or resource book: and compilations for trainers to use in preparing what and how they are going to train. This combination of documents and individual preparation is not a trainer manual; a more-complete document is required. It should be formatted to contain specific session designs for each minute of training: very specific instructions for each portion of training, all visual materials and flip chart wording, and trainee handouts. A one-week program could contain up to 200 pages, depending upon the specific content.

The team believes that NIA needs trainer manuals to provide consistency of content, objectives, design, and training flow. The manuals would also serve as training quality-control devices. Such documents should be developed using word processing equipment, so they can be updated as needed.

3.9 Recommendations

3.9.1 Curriculum Development

- NIA, with AAP assistance, should systematically review the content of each of its core curriculum training courses. These reviews should be based on field work from the bottom

up and be documented in needs-assessment format. Current course content and objectives should be adjusted as needed. It is suggested that this work be conducted on a pilot basis in one region in conjunction with a pilot training improvement program (see recommendations in Chapter 4, Training Methodology).

- Complete trainers manuals should be developed for all regularly recurring training programs within the core curriculum for farmer training and IA support training. These manuals should follow from the needs assessment/review recommended above.

3.9.2 Systems Management and Water Management Training

- Under AAP and the IOSP's institutional component, SMT should include a general survey of the problems to be expected combined with specific ways in which trainees can find help in dealing with these problems in the field.
- NIA should identify small regional teams of system management specialists who could respond to the needs of IOWs, FIOs, farmer leaders, and their supervisors.
- Under IOSP's O&M training component, the proposed training program should be deferred until NIA commits in principle to whether it wishes national irrigation systems to be operated on a day-to-day discharge basis.
- Under the same project, NIA should review its recent experience in discharge-based operation and training and research. The review should be carried out in part by agency people who have had first-hand experience in those programs.

4

TRAINING METHODOLOGY

4.1 Introduction

This chapter briefly reviews the training methods observed in four training programs. The observations were augmented by reviewing written syllabi for most AAP programs and resource materials used by trainers to prepare their sessions. Appendix C provides additional guidance for training methods that would be too voluminous to include here.

4.2 Trainer Preparation and Background

Of those interviewed who worked as trainers or training program supervisors (about 30), the great majority said they felt inadequately prepared for the task of being a trainer. Most said they had learned by watching others conduct training or by attending a special program to learn to deliver a specific training module. Few said they had attended workshops or specially designed programs to learn to use a range of training techniques or to design training events.

In the AAP programs, training is conducted by a combination of technical experts (engineers, economists, agriculturalists) and community organizers who have learned to conduct training in a variety of ways. None of those interviewed considered themselves professional trainers or training specialists.

The supervisors and regional managers said that each training program had a "dry run" to prepare for a training event. Interviewed staff who conduct training said that, in reality, they seldom do dry runs anymore because they already know how to conduct the specific programs they are required to train.

4.3 Physical Arrangements of Training Space

In the four training programs observed, participants were arranged in rows—*theater style*. The training rooms appeared small in relation to the number of participants, and break-out space (another room or corner with separate discussion space) was not set up. Most of the training rooms observed were filled with outside noise (motorcycles, trucks) and had hard surfaces so that sound was amplified. In most cases, microphones were required.

4.4 Learning Climate

In those programs observed, the learning climate varied: sometimes the trainees appeared bored; sometimes conversations took place at the back of the room; sometimes people did not pay attention during the after-dinner session from 7:00 p.m. to 10:00 p.m. At other times, the group was very involved with the activity. This was particularly true when an energizer was taking place or in the early morning.

The predominant learning climate observed was of trainer-centered processes and a schoolroom atmosphere. (Some participants took notes continually.) The trainers were pleasant and respectful, and those trainees interviewed reported that they were pleased to attend training. Some said, however, that they would prefer if trainers found out what participants did and did not know before preparing training sessions.

4.5 Interactive Training Techniques

The four training programs observed all contained considerable content delivered through long lectures. Most of the communication observed was

one way—trainer to group. It seems to be the norm to "put across" content material, which requires that it be spoken and explained by a content expert.

Those interviewed said that lecture was used predominantly because there was not enough time to use other techniques. However, in programs related to specific skills, those interviewed said that some of the training included exercises (in financial management) The review of the TOT materials indicates that some experiential methods are used, but these seemed limited to a portion of the training called "group dynamics," which is given in some of the basic leadership and TOT courses.

Use of case study methodology, particularly useful in training content and in transmitting involved scenarios, was not observed in any of the currently used training materials. Role play was described as used in IOW training. IDD central office staff said that they would like to learn how to design a role play or write a case study.

4.6 Visual Aids

Some visual material was presented in the training programs observed: all used chalkboard and written handouts. In the IOW predeployment training, a very long flow chart, an overhead projector, a chalkboard, and handout materials were used. Visual materials are important and NIA should be congratulated on their use in training programs.

In some instances, however, the visual aid was distracting or was not used to advantage. The amount of chalkboard writing was once a case in point, when the trainer used a great deal of time to write up lecture points (school teacher style) while the group waited (and talked with each other). Some trainers consistently faced the chalkboard to read lecture notes, rather than face the group.

There was no observed use of a flip chart easel. In one instance, manila paper was used; however, it

was pasted to the chalkboard and appeared to have been used several times already.

4.7 Balancing Content and Available Time

In most programs observed, the training staff said that the programs had been originally designed for much longer time periods. The IOW predeployment program for communals—originally designed for twelve days—was cut first to ten days, then to eight, and at the time of observation was being trained in six. When asked what had been dropped from the program, the reply was that very little had been cut (except for the two-day field training portion). Instead, the training day had been lengthened to 12 hours.

The trainers and certain management staff believed it was impossible to achieve the training goals within the available time. When asked why programs had been shortened, some said that provincial engineers and other managers felt the lengthier training required too much time away from work sites; others said that the cuts were to save money.

4.8 Training Objectives

In the training programs observed, a standard procedure for adult learning was missing: no trainer was ever heard to state at the beginning of a session what the expected outcomes of that session were; when sessions ended, no trainer was observed to ask if the training objectives had been met.

A review of the goals and objectives of the training materials indicates that general goals for a program are written. But no specific session or unit objectives could be found. Unless specific training objectives are used for each session or module of training,¹ it becomes difficult to design the training activities and measure the results.

A one-hour session on a specific topic can be considered a session or it could be called a training module.

4.9 Feedback Mechanisms in Training

Trainers interviewed said they did not formally ask the training group for periodic feedback on the programs. Although a questionnaire is generally given at the beginning and end of the program, it is designed for trainees to assess how well they know the content. In-process feedback sessions at the end of each day that ask the training group to list, for example, the strong and weak points of the program are not conducted. Feedback is solicited only informally, outside of the training sessions.

4.10 Energizers and Ice Breakers

In the training programs observed a great deal of energy was devoted to "energizers." Usually these were done between content-related activities, such as lectures, and they took the form of a little exercise (draw a face that is sad, happy, and angry in the circle) or a performed song. It is a strength of the training observed that attention was paid to maintaining trainee interest. When the trainers were asked why they did these, they replied that "the group gets bored so we have songs and games to wake them up."

Generally, the energizer was given and then the session began with no linkage to session objectives. For example, the song—a sad love ballad—was sung before the session on "raising and leveling of expectations." The "three faces" exercise came just before a lecture on leadership, but no attempt was made to link the leader's job with happy, sad, or mad followers.

4.11 Co-facilitation

In the training observed, one trainer worked alone in front of the group. Being in a training core group does not mean working to conduct team training. It usually means that a number of people are available to conduct their own piece of the program.

In a number of instances co-facilitation would have been the most effective use of group and trainer time. This was true in the segment on "raising and leveling" expectations when one trainer asked the group for their input and subsequently had to write

it single-handedly on the chalkboard while the group waited (and became distracted). An alternative would have been to use one trainer to paraphrase while the other recorded.

4.12 Methodology Issues

4.12.1 Adult Learning vs. Traditional Methodologies

Appendix C gives an in-depth discussion and examples of ways to move the training programs in the direction of adult learning. In general, the training observed used assumptions of "child learning" (pedagogy). Such methods tend to create dependence on the knowledge and control of the instructor; the lecture method is the most common example of this. These methods are reinforced by the learning climate and physical arrangements of the training rooms.

Methodologies based on pedagogy have not proven effective as ways to transfer knowledge or skills to adults. A pedagogic model also tends to take authority and responsibility away from the trainees and vest it in the trainer. People learn to train others the way they are trained themselves. The pedagogic model in NIA is like a pyramid, with each level imposing the same model on the level below. The training programs communicate a view, perhaps unintentionally, of the trainer as a teacher and authority figure, rather than a view of the participants as mature, capable learners. This works in opposition to NIA's goals of creating strong and self-sufficient farmer organizations and self-reliant and responsible staff.

4.12.2 Length of Training Programs

The team's review of the goals and content of many training programs indicates that most programs have too little time to cover the amount of material in any depth. It is impossible to conduct interactive and skill-related training within the time many programs allow.

Almost all the trainers interviewed said they felt very pressured to try and cover everything in the

shortened time now allowed for training. The answer to shorter times is not to conduct training for 12 hours a day; such a practice is less than effective and asks too much of trainers and participants. Current schedules leave almost no time for participants to socialize, trade stories about their work and communities, or learn and network informally—very important elements of adult learning events.

4.12.3 Who Conducts Training?

A healthy mix of staff are generally involved in conducting training. It is a strength of NIA training that immediate supervisors are sometimes involved in training and that there is a mix of technical expertise and social/training expertise.

It is also true that not everyone can train. Training should not be a performance nor should it be a lecture. One reason so much lecturing takes place in the programs is because the trainers do not know how to use interactive training methods. Only people who have demonstrated a high degree of communication skills and who have undergone specialized training in group facilitation should work in training programs.

4.12.4 Trainer Development

About 5 people in each province and region and about 10 to 15 in the central NIA office conduct training, making a total of around 400. Within the mix of individuals that deliver NIA training, some should be considered training specialists.

NIA needs a concentrated program that would develop training skills in more depth than can be attained at present. The TOT program materials reviewed include some very dated materials (25 years old, in some cases); some of the concepts have been superseded by other ideas and methods.

Trainer development is most effective when a combination of specialized instruction and internships (supervised on-the-job or program work) is provided. Under normal circumstances, it

takes from three to five years to prepare someone to master a range of training methods, learn to design training and write training manuals, evaluate training, and have some expertise in a few technical areas.

4.13 Recommendations

- Undertake a renewed TOT program using state-of-the-art, practical, and useful training methods based totally on adult learning theory. This could be developed as a pilot program for AAP project areas. The program should go beyond current in-house expertise, and should not repeat past practice of inviting local training experts to speak. Instead, NIA should develop a program that works with at least two master trainers who can model excellent training methods. On-the-job practice and program development activities should also be included in the program.⁵
- Select trainers carefully by using a qualification program. The current view that anyone who can stand before a group and lecture is a trainer should be changed. Trainers that come from the technical ranks should be selected because they are excellent communicators and have training potential. Their appointment should be reviewed by a selection panel that operates at each region.
- Review the length of all training programs from the standpoint of training effectiveness, which should be the first criterion. It is not cost-effective to squeeze in a lot of content and lectures that do not provide learning. If training programs cannot be delivered within normal working days, the content should be shortened. No program should require that trainees spend more than eight hours in training per day, including coffee breaks.
- Refer to Appendix C for specific methodological recommendations.

⁵ For this recommendation, a three-stage pilot program is recommended that is directed toward a provincial and regional core group and selected central NIA trainers. Refer to the recommendations summary in Chapter 6 (Methodology) for a more-detailed recommendation.

5

ASSESSING TRAINING EFFECTIVENESS

5.1 Introduction

The effectiveness of a training program can be estimated if a comparable untrained control group exists, the training is complete or well underway, and the target populations experience no other significant interventions with objectives similar to the training.

AAP training is of recent origin and not yet complete at the three AAP locations visited by the team. Training objectives are strongly supported by parallel organizing efforts of the FIOs and IOWs (see Chapter 2 for a fuller discussion of this point), and at most locations it is not clear that provision was made for control or benchmark data. Consequently, the team cannot make a definitive assessment of training effectiveness at this time.

The review on program effectiveness does not attempt a measurement approach. Some of the observations in this chapter are closely linked with observations on training methodology and content. Notwithstanding the limitations of the method used, judgments about effectiveness are based on observation (professional judgment) and hearsay (what NIA staff said had or had not provided results).

This chapter, therefore, addresses three topics:

- Training accomplishments that were frequently mentioned by persons interviewed or that appeared to be strong, based on team judgment;
- Research issues related to training effectiveness; and
- Recommendations regarding some principles of training assessment that NIA could carry out without great expense or difficulty.

The team observed a number of training sessions conducted in Regions IV, V, VI, and X for FIOs,

IOWs, and farmers. In addition, members interviewed NIA staff of the IDD and SMD and also university staff involved with research associated with the training.

5.2 Basic Leadership and Farmer Training

The leadership training portion of the IALIC was observed and the written module of resource materials for installation training reviewed. The time devoted to leadership in the IALIC appears too short to have much impact. It also appears that the material, using Hersey Blanchard's situational leadership framework mixed with other concepts, does not lend itself easily to practical management skills for farmers. Much of the material was rather general in nature, such as advice on how to establish good relations with farmers and the importance of discipline.

Regional managers and engineers were asked to evaluate the extent to which the FIOs learned skills in training programs compared with skills learned by work on the job and through coaching by program supervisors; all said that most learning took place after training through coaching on follow-up visits. However, they said that training brought people together with NIA and started the process, making the follow-up work better because of the introduction provided in training programs.

In assessing training results at the farm level, the team noted, first, that the training in almost all cases is given only to IA leaders, who usually number between 12 and 18 per IA. Farm-level training effectiveness is thus closely linked to the quality of those leaders and to how long they remain in their elected positions.

FIO and IOW effectiveness at the farm level should be judged in part, and perhaps largely, on the basis of organizing farmers and IAs through follow-up efforts. It is not possible to ascribe these results

solely to formal training events, particularly, or to any other single factor. One could argue that regular contact in organizing is also a training process, although unstructured. A complete evaluation should therefore take both organizing and training functions into account.

5.3 Systems Management Training

The team did not observe training sessions in systems management, which is more detailed and technical than basic leadership training and training of trainers. As discussed earlier, SMT under AAP is just beginning in national systems, although it has been done in communal systems using previously designed approaches.

In reviewing the material proposed for this training, the seven topics appeared generally relevant. On the other hand, it is not clear that all FIOs and IOWs, especially those who have no farming background or related university courses, will be able to absorb such technical material. Only some of the seven aspects of this module would be presented to each IA; the FIOs and IOWs are asked to acquaint the farmer leaders with the topics and choose which ones to cover.

A parallel water management course is being developed for watermasters under IOSP; the two implementing offices of NIA would profit by coordinating their efforts.

5.4 Impact of Training of Trainers

Much of the financial management TOT appeared to be absorbed and retained by the trainees, despite sub-optimal training facilities and, in some cases, methods. Their success is due to the basic design of the training, which allows practical exercises using actual financial data. The design also requires that trainees work in small groups and prepare mock training sessions in front of peers for criticism. The detailed and technical content lends itself to specific, measurable training objectives.

After observing trainers who said they had undergone training by other trainers, it appears that, in general, TOT programs do not attempt to build

trainers in the professional sense. Instead, they instruct staff in how to deliver a specific training *course*. Consequently, many delivery techniques do not use interactive discussion or other interactive methods, but mainly rely on the straight lecture method, which can be picked up quickly by the novice trainer.

5.5 Trainer Morale

In at least two of the four regions visited, training staff said that morale suffers from long hours and high pressure, as the training is compressed into very tight modules of 6 days each, compared with plans that call for 12 days. Some trainers also said they did not feel that NIA really cared about them as a resource because the agency did not provide job security for them as permanent staff, even though some of them had worked in training for a number of years. In spite of this, the members of the training core groups seem to have a strong reserve of enthusiasm and motivation because, as many said, "we love working with farmers."

5.6 Research Program

The team visited the researchers in Regions V, VI, and X responsible for studying the impact of training under AAP. In both cases these people seemed well qualified but with very little experience and limited facilities to support their work. Moreover, the limited time scale—10 months, of which several critical months had elapsed while the researchers were asked to await further guidelines—is inconsistent with the ambitious range of research objectives.

These studies are being conducted by interviewing and observing both farmer leaders and other farmers in sample IAs. The confusion between AAP organizing and training functions may also affect the output of these studies because the indicators being recorded are largely those relating to the IAs' organizational strength, not just to FIO and IOW training effectiveness.

The participant observation portions of the methodology may prove useful, but the performance-indicator portion of the research may

not prove to be comparable within regions receiving similar training (and even less so among all AAP regions). A thorough attempt to measure the impact of training should, for example, include a measure of pre-training performance. Most of the studies review training achievement after the fact. There should also be some indicators of behavior change in farmers. Data should not be limited to farmers' views of training's usefulness. Additionally, there appears to be no significant control sample that received no training.

The team noted the close relationships between the NIA regional research coordinators and staff of the cooperating universities. Additional interaction with professionals from CLSU, IPC, and UP/Los Banos who have had more extensive experience in irrigation training would also strengthen the research.

5.7 Assessment Issues

5.7.1 Need for NIA Internal Assessment Capability

AAP training has begun in all the regions visited, but there is little evidence that NIA systematically assesses training effectiveness and quality. In part it may be expected that the universities will provide much of this assessment through their research studies.

An agency carrying out a major program such as that financed under AAP and IOSP needs to be aware, through its own internal monitoring, of how the program is proceeding. This monitoring differs significantly from the traditional research orientation of most universities and provides more-timely feedback and greater policy-relevance than university research usually can.

Sooner or later government agencies implementing important programs will carry out their own assessments in some way. The team proposes that NIA consider establishing, as soon as possible, a formal structure to monitor progress of AAP and related training; formal evaluations can thus assess agreed-upon criteria and the exercise can be carried

out by agreed-upon people in the agency. The structure, which might be analogous to the Dam Safety Review Panel, would provide continuing feedback to management on the effectiveness of AAP and IOSP organizing and training. Without this structure, judgments that appear arbitrary are likely to form the basis of the evaluations.

There is of course an important role for research to play in irrigation questions, including institutional ones. But those activities should not substitute for the agency's responsibility to monitor and, where needed, change direction in its programs.

5.7.2 Farmer Organization and Training by Stages

Although certain elements of previous programs provide NIA with background on institutional work, the scope of farmer organization and training envisaged under AAP and IOSP is far broader than any attempted by the agency in the past.

In view of the innovations inherent in this program, the team believes there would be benefits to a staged or phased implementation strategy at the regional level. AAP training already is primarily implemented by the regional offices of NIA, and all regions visited were making vigorous efforts to implement the program rapidly. A logical way to carry out a strategy of stages would be to have each region prepare an implementation schedule in which organizing and training resources focus on a limited number of systems. Communal systems and new national systems—those without assigned ditchtenders—or relatively small national systems would probably best serve this initial focus.

When NIA's assessment shows progress in these initial-stage systems to be satisfactory and lessons learned are well-understood and addressed, the regions would embark upon organizing and training for the next round of systems.

This approach would give greater focus to AAP and IOSP objectives and, through regular assessment and feedback, would provide the direction for future implementation that at present seems not fully available.

5.7.3 Building on Successful Elements of Skill Transfer

If it is true, as many observers stated, that a great deal of learning takes place through one-on-one coaching and field visits by NIA staff, it may be possible to build on this and enhance the process. Training can take place in a variety of ways: the formal training session or conference provides certain opportunities, while the field setting provides others. Most field coaching should be done by the immediate supervisor, who is in the best position to monitor performance.

5.8 Recommendations

- NIA should invest a body within the agency, or set up a new body, to regularly assess progress in achieving the objectives of NIA's institutional programs, giving special attention to organizing and training farmers.
- The regions implementing AAP and IOSP should select for first-priority implementation a limited number of irrigation systems, both communal and national, upon which to focus organizing and training efforts. An annual program should be presented of systems to be taken up each year according to a set of criteria.
- Follow-on supervision should be recognized as an important part of the training process. It could be strengthened, for example, by involving FIOs' and IOWs' immediate supervisors more closely in the overall training program. Specific agreements for on-the-job learning with monitoring should be developed during the last day of each training program for this purpose.
- Universities conducting irrigation training and research in the regions should be encouraged and financed to make fuller use of professional expertise from selected Philippine institutions that have stronger background in this field.

6

SUMMARY OF RECOMMENDATIONS

6.1 Introduction

Although specific recommendations appear in each chapter, this one provides a complete summary for reviewers to use in action planning and follow up.

The team's overall intention is to provide specific, useful, and readily implementable suggestions. It is not our intent to ask NIA to create a large training institution nor to elevate training to a position of importance beyond its true role as a service function to implement management policies, vision, and priorities in strengthening irrigation associations.

The recommendations that follow are intended to provide ways to move a function that is in place, with a history and momentum, toward increased excellence. This movement should be possible without major disruption and without altering priorities in general. The attention of top management at central and regional levels will be essential if the following recommendations are to be implemented. Many can be implemented immediately; others will require specialized technical assistance.

6.2 Recommendations

6.2.1 Training Structure and Management

- Clearly articulate NIA policy regarding the role of IAs.
- Define clearly a training strategy in support of that policy.
- Undertake these steps to strengthen the training function:

Prepare written descriptions of all training positions.

- Recruit a limited number of training specialists and subject-matter specialists who would be solely responsible for training.
- Provide regular professional positions for these professional trainers.
- Consistently involve and coordinate with all NIA staff outside of IDD who will supervise the people that IDD trains. Require that other departments who undertake training coordinate with IDD.
- Encourage all staff qualified by virtue of their personal skills, operational experience, and former training experience to join training core groups and work with the support of training specialists to deliver quality training.
- Review and incorporate appropriate technical resource materials in water management and cropping from the training programs developed several years ago by the Water Resource Management Training Center.
- Consider integrating all training functions into one IDD training unit at the central and regional levels initially; as it demonstrates capability, evolve this training unit into a full training department for NIA under the Assistant Administrator for Operations and Equipment Management.
- Strengthen training supervision in the field.
- Consider undertaking a formal, professional training needs assessment at all levels of NIA as a first step toward a possible HRD program.
- Consider adopting a target training budget as a percentage of each year's annual budget.

6.2.2 Training Content

Curriculum Development

- With AAP assistance, undertake a systematic content review of each of NIA's core curriculum training courses. These reviews should be based on field work from the bottom up and documented in needs assessment format. Current course content and objectives should be adjusted as needed. This work could be conducted on a pilot basis in one region in conjunction with a pilot training improvement program (see recommendations in Chapter 4, Methodology).
- Develop complete trainer manuals for all regularly recurring training programs within the core curriculum for farmer training and IA support training. These manuals should follow from the needs assessment/review recommended above.

Systems Management and Water Management Training

- Ensure that SMT under AAP and the IOSP institutional component includes a general survey of the problems to be expected combined with specific ways in which trainees can find help to deal with them in the field.
- Consider identifying small regional teams of system management specialists who could respond to the needs of IOWs, FIOs, farmer-leaders, and their supervisors.
- Under the O&M component of IOSP, defer the proposed training program until NIA commits in principle to whether it wishes national irrigation systems to be operated on a day-to-day discharge basis.

- Under the same project, review NIA's recent experience in discharge-based operation, training, and research. This review should be carried out in part by agency people who have had first-hand experience in those programs.

6.2.3 Training Methodology

- Undertake a renewed TOT program using state-of-the-art, practical, and useful training methods based totally on adult learning theory. This could be developed as a pilot program for the AAP project areas. The program should go beyond current in-house expertise, but it should not repeat the past practice of simply inviting local training experts to speak. Instead NIA should develop a program that works with at least two master trainers who can model excellent training methods. On-the-job practice and program-development activities should also be included in the program.⁶
- Select trainers carefully by using a qualification program. (The current view that a trainer is anyone who can stand in front of a group and lecture should be changed.) Trainers that come from the technical ranks should be selected because they are excellent communicators and have training potential. Their appointment should be reviewed by a selection panel that operates at each region.
- Review the length of all training programs from the standpoint of training effectiveness. The first criterion should be learning effectiveness; it is not cost-effective to squeeze in a lot of content and lectures that provide no learning. If training programs cannot be delivered within normal working days, the content should be shortened. No program should require that trainees spend more than eight hours in training per day, including coffee breaks.

⁶ A three-stage pilot program is recommended that is directed toward a provincial and regional core group and selected central NIA trainers. Training methods should be improved by undertaking a pilot TOT program in one selected AAP region. The program should be a laboratory for needs assessment, curriculum redesign, training materials and manuals development, and training methodology improvements. A program design that takes place using current up-to-date methods and outside consultants provided through AAP should be considered. The program should take place over an 18-month period and involve a three-week TOT laboratory/workshop approximately every six months. After each workshop, on-the-job application and program development should take place. The on-the-job portion should use the current USAID program advisory staff to monitor and assist.

6.2.4 Training Effectiveness

- Invest a body within the agency, or set up a new body, to regularly assess progress in achieving the objectives of NIA's institutional programs, giving special attention to organizing and training farmers. (NIA)
- Select for first-priority implementation a limited number of irrigation systems, both communal and national, upon which to focus organizing and training efforts. Present an annual program of systems to be taken up each year according to a set of criteria. (Regions implementing AAP and IOSP)
- Recognize follow-on supervision as an important part of the training process. It could be strengthened, for example, by involving FIOs' and IOWs' immediate supervisors more closely in the overall training program. Develop specific agreements regarding on-the-job learning with monitoring during the last day of each training program for this purpose.
- Encourage (and finance) the universities conducting irrigation training and research in the regions to make fuller use of professional expertise from selected Philippine institutions that have stronger background in this field.

Appendix A

PLAN OF INQUIRY—NIA TRAINING REVIEW

OUTLINE OF CATEGORIES TO EXPLORE

I. Management and Organizational Issues

Goals of the training function and role of training in the organization.

- How does management see training as a function?
- Is there a clear and widely understood vision of what training is and can/should do for the organization (or the project)?
- What is the purpose of training? Who is it intended for?
- What kind of leadership exists for training? How is the direction determined?
- How does training relate to the overall HRD goals of the agency?
- Is there career path training? How is it determined?

Structure

- How is training structured in the agency?
- Who has responsibility for training?

Roles

- Are roles of staff, chain of command clear?

Staffing

- Who conducts training? Is there a mix of training specialists and technical or subject matter experts conducting training?
- What are the qualifications of training and training-management staff and how are they selected?
- Are there sufficient staff to carry out training?
- What is the ratio of staff to trainees in typical training events?

Management of Specific Training Events

- How effectively is training planned for in terms of logistics, support, and the micro-management of the training event itself?

II. Coverage and Participants

Participants

- Who are the intended recipients of the training (and at what levels)?
- How are they determined?
- How many people are trained regularly (per year?)

Coverage

- Is sufficient training conducted to meet the skill needs of the target population?
- How often would the average trainee at each level cycle through a training program?

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III. Curriculum and Content of Training

Curriculum Development

- What is the needs assessment process? How is it conducted?
- To what extent are training recipients observed, talked with, or otherwise involved in determining the content of training? How are supervisors and field staff involved?
- Do performance standards exist? How are they communicated to staff or training recipients?
- How are training goals determined once needs are assessed? How are decisions made about what training should take place? How are training goals related to performance problems?
- How appropriate is the training content? Is it pitched to the appropriate level of the trainees? Is it complete, sufficiently comprehensive?
- Does a core curriculum exist for regularly recurring training needs? Is it published into a schedule and advertised in advance?

Training and Instructional Materials

- Do handouts and other instructional materials exist for the participants? What is their quality? Are they adequate? How clear are they? Are they targeted appropriately?
- Do instructor manuals exist for regularly recurring training courses? Do instructors use a written design that indicates sequence, time, content, materials etc.? Do training designs follow adult learning methodology (see methodology)?

IV. Methodology of Training

Appropriateness of Methods

- What methods are used for each level of intended result and participant?
- Are methods appropriately matched to the intended result?
- To what extent is there understanding of the philosophy and techniques involved in adult learning methods? (Two-way communication, interactive discussion, case study, role play, buzz groups, participant reports, participant control and involvement?)
- How trainer-dependent are the methods? What is the extent of lecture method (one-way communication approaches) as compared to interactive methods?

Equipment

- What kind of training equipment is used? How is it used?

For example, visual aids: flip chart, white board, chalkboard, overhead, opaque, slides, films, video-tape (interactive and passive).

Training Environment

- What kind of training space is used? Is it appropriate?
- What is the climate within training groups (interactive, noisy, fun, solemn, passive, quiet, etc.)?

V. Cost Effectiveness

Training Cost

- What is the cost per trainee (including all overhead time, release time of participants and instructors, materials, per diem, transport, space, equipment, etc.)?
- To what extent is training contracted out to specialists? Should it be contracted out in terms of cost-effectiveness and quality?
- Does training pay for itself? Are fees charged and to what extent do they cover costs? Could training be sustained without a subsidy from the outside (donors, project funding)?
- What measures are being taken to provide for the sustainability of training as an expense to the agency?

VI. Overall Impact and Results of Training

Perceived Usefulness

- What do the following groups think/feel/understand about the usefulness of the training provided: management, field staff, training staff, participants at various levels?

- Is there a perceived difference that training makes in performance? How is this determined?

Evaluation

- How is training evaluated currently?
- What feedback mechanisms (formal and informal) are used to improve training content and delivery?

Relevance

- What is the relationship of the training to—
 - Organizational goals
 - Identified real problems or needs for performance improvement
- Is training appropriately used as a management tool? How?

Appendix B

PERSONS INTERVIEWED

(Listed in chronological order of interviews)

NIA Central Office Staff

J. del Rosario, Jr.	Administrator
José Galvez	Assistant Administrator, Systems Operations and Equipment Management
Máximo Eclipse	Assistant Administrator, Administrative Services
Mario Gulinao	Project Manager, IOSP, Systems Management Department
Rolando Medina	Division Manager, IDD Region IV
Bert Payawal	Manager, Systems Management Department
Ronnie Saramiento	Project Manager, AAP (Acting)
José Soliva	Program Supervisor, IDD (National Systems)
Evelyn M. Buenaventura	Program Supervisor, IDD (National Systems)
Ildefonso M. Lirio	Program Supervisor, IDD (National Systems)
Efren Rabacal	Program Supervisor, IDD (National Systems)
Evaristo Macalalad	Manager, Central Training Division, Personnel & Administration
Aurora Sisón	Training Specialist, Central Training Division, Personnel & Administration
Arthur V. Lazaro	OIC, IDD
José Cedeño	Manager, Special Projects Department (Communal Systems)
D. Macatumbas	Division Manager (Assistance), IDD
Roger Gusilitar	Assistant Director Special Projects Department (Communal Systems)
C. Giñez	Program Supervisor, IDD (Communal Systems)
B. Ofrecio	Program Supervisor, IDD (Communal Systems)
E. Selva	Program Supervisor, IDD (Communal Systems)
E. Pintor	Program Supervisor, IDD (Communal Systems)
A. Reyes	Program Supervisor, IDD (Communal Systems)
A. Abalos	Program Supervisor, IDD (Communal Systems)
E. Fiestado	Program Supervisor, IDD (Communal Systems)
R. de Lara	Systems Management Department
Mrs. Tetangco	Training Consultant, Systems Management Department

Region 4 Staff and Others Interviewed

Roland Medina	Regional IDD Manager
Efren S. Roqueza	Irrigation Superintendent, Santa Cruz-Mabacan System
August V. Samonte	Regional Training officer
Carmelo L. Estorillo	Irrigation Superintendent, Matatgi Core Group
Felix C. Sandicho	Irrigation Development Officer
Luceno R. Manpog	Farmer Organizer, IDD Core Group
Cesar T. Langmay	Farmer Organizer, IDD Core Group
Evita R. Roqueza	Agriculturalist, IDD Core Group
Sofia Carmelita	Community Organizer, IDD Core Group
G. Resurreccion	Community Organizer, IDD Core Group

Graciano C. Jumaquio	Economist, IDD Core Group
Alejandro U. Pectoral	Irrigation Development Officer
Virgilio Alon	Farmer Irrigator Organizer, Santa Cruz River System
Eduardo Estrada	Farmer Leader, Santa Cruz River System
Florencio Espritu	Farmer Leader, Santa Cruz River System
Dalmacio Bernardino	Farmer Leader, Santa Cruz River System
Renato Pangayan	Farmer Leader, Santa Cruz River System
Adrian Calica	Farmer Leader, Santa Cruz River System

Region 5 Staff and Others Interviewed

Sonia Imperial	Researcher, Ateneo de Naga University
Jess Volante	Researcher, Ateneo de Naga University
Ramon de los Reyes	Researcher, Ateneo de Naga University
Willie Papaya	Regional Research Coordinator
Joyce Ereve	Irrigation Development Officer, IDD
Vilma Lomaniog	Regional Training Officer, IDD
Edmundo Fuentesbella	Engineering Chief, NIA
Tom Francia	Regional IDD Chief
Pic D. Dedase	Supervisor, IDD

Region 6 Staff and Others Interviewed

Mr. Dato-On	OIC, NIA
Orlando P. Belonio	Agriculturalist, Jalaur River Irrigation System
Elgin Vargas	Irrigation Superintendent, Jalaur River Irrigation System
Dr. Botin	President, W. Visayas Polytechnical College, Mambusao, Capiz
Dr. Ramos	Director of Research, W. Visayas Polytechnic College, Mambusao, Capiz
Ivy Rose Gonzalez	Irrigation Organization Worker, Jalaur River Irrigation System
Cesar Vilodres	Regional Research Coordinator

Region 10 Staff and Others Interviewed

Agustin A. Córdoba	Regional Irrigation Manager
Mamento Apañada	Regional Training Officer, IDD
Orlando Hondrade	Irrigation Superintendent, Pulagui River Irrigation System
Patrio Juan	Asst. Irrigation Superintendent, Pulagui River Irrigation System
Senida Cointic	Researcher, College of Agriculture, Central Mindinao University
Scarfn Girultero	Provincial Irrigation Engineer, Bukidnon
Romulo Silvestre	Regional IDD Chief
Gertrudes Aleria	Program Supervisor, Regional IDD
Ruth Antatico	Program Supervisor, Regional IDD
Rosa Patiño	Community Organizer, Regional IDD
Angela Famas	Economist, Regional IDD
Elsa Juralan	Community Organizer, Provincial Irrigation Office, Bukidnon
Susan Gozon	Community Organizer, Provincial Irrigation Office, Surigao Norte
Julius Maquiling	Chief of Construction Section, Regional Engineering Division
Janeth Lorono	Community Organizer, Provincial Irrigation Office, Bukidnon
Edith Abdon	Accounting Section Chief, Regional IDD

Ophelia Abdon

Program Supervisor, Project Management Office, Comprehensive Agrarian Reform Program

Other Parties Interviewed

Benjamin U. Bagadion

Frances Korten

Sadiq I. Bhuiyan

Dan Minnick

Nenita Tapay

Charles Rheingans

K. Smith

Robby Laitos

Teódolo (Ted) Ehera

Consultant and Retired Assistant Administrator, NIA

Associate Representative, Ford Foundation, Manila

Agricultural Engineer, and Head, Waste Management Department,

International Rice Research Institute, Los Banos

Head, Department of Training and Technology Transfer, IRRI, Los Banos

Sociologist, University of the Philippines, Los Banos

Project Officer, USAID/Manila

Consultant, USAID/Manila

USAID Project Advisor AAP

Institutional Development Consultant, AAP

Appendix C

TRAINING METHODS

The following discussion of methods and recommendations provides specific ways to improve the delivery of the programs observed. Beyond that, some general guidance is provided. They are called "rules of thumb" and should not be considered as absolute rules.

The overriding principle (the biggest rule of thumb) for training is this:

Everything in training has an effect, intended or not.

Everything that happens in a training setting has a positive or negative effect on the learning process. Unintentional interventions can distract (noisy room, bad lighting). It is the trainer's job to ensure that everything taking place in the training program is intentional and designed to enhance learning or lead to the planned learning objectives.

Physical Arrangements of Training Space

Discussion

In all four training programs observed, significant communication opportunity was lost because the participants were arranged in rows—*theater style*. The training rooms had a jammed feeling to them. Break-out space (another room or corner with separate discussion space) was not provided or set up. Most of the training rooms observed were filled with outside noise (motorcycles, trucks) and had hard surfaces so that sound was amplified. This required excessive use of microphones.

The consequences of seating in rows were these:

- Participants had to look at the back of people's heads instead of at their faces.
- Trainers could not maintain eye contact with all of the trainees or gain it quickly.
- The use of space (and the chalkboard) gave the impression of a primary school classroom; this would tend to cause participants to unconsciously revert to being dependent learners rather than the independent adults they really are.

- Open exchange of views among participants is not easy when seated in rows; the communication tends to flow up front to the trainer and back to individuals rather than around the group.

The lack of break-out space—

- Tends to encourage lecture-oriented training designs because there is little space in which to conduct exercises and discussion in small groups;
- Makes it hard to have discussions;
- Keeps attention focused on the trainer instead of on all the resources in the room.

The noise level in the training rooms—

- Creates a great deal of stress on the trainees and trainer;
- Makes it hard to hear without shouting or using a microphone. Microphones tend to separate the group from the trainer and unnecessarily formalize the training climate.

Rules of Thumb

- Training space (as differentiated from "conference" space) should always be arranged so that most participants can see each other face to face most of the time, and also see the trainer. This requires a room big enough for an open-ended horseshoe, or a three-sided rectangle (U-shape) or five or six tables¹ arranged in a fan shape with five or six chairs at each table. A NIA training group should not, under any circumstances, be seated like school kids. This gives all the wrong signals.
- Sufficient training space should be provided for the group to break up into small task or discussion groups on a regular basis.

¹The fan shape of four or five tables with people seated at each table provides the advantage that tasks can be given in the middle of a lecturette for a quick discussion around the table. Each table can become a mini-work group. This can save disruption in group movement, yet effectively meet the requirement of eye contact, for the most part.

Training rooms need to be secured away from roadways or equipment yards to avoid distracting sounds. The floor or ceiling should have sound-absorbent material on it (reed mats will work). Microphones should not be needed if a room is set up correctly and measures have been taken against sound intrusion.

Setting the Learning Climate

Discussion

The "learning climate" in trainer jargon is the learning atmosphere, or readiness to learn that is created in a training group. Trainers can almost feel the difference of a positive and well-established learning climate as opposed to a recalcitrant, hostile, or tired group. The learning climate must be set or created and maintained for each training session and the overall training program. The learning climate is affected by all the things that happen in training, positive and negative, but mostly it is affected by the way the trainers interact with the participants. If trainers talk with participants as equal adults and friends, the participants will respond in kind as responsible adults (or at the level of maturity they have attained). Conversely, if trainers talk down to participants as children, the group will do many of the things that dependent children do.

When the ISPAN team asked some of the participants how they felt about the training they received, many politely said they appreciated what they were receiving from NIA ("thanks for the help"). In some cases, the farmers said they thought the trainers should ask them what they know about leadership first before telling them what it is. This is a typical adult response from a person who feels talked down to and not brought into the learning process as a resource.

Rules of Thumb

- TOT programs need to stress that the clients are all adults and should be treated as such. General assumptions regarding adult learning should be reviewed during the TOT. These can be found in the book: *The Adult Learner, A Neglected Species* by Malcolm Knowles.
- Trainers should avoid such behaviors as these: telling trainees what to wear to sessions (rather, ask the participants what norms they prefer regarding dress); making trainees into "room monitors" who are supposed to help the trainers erase the blackboard (a technique used in primary school).

"The participant is my client" is the orientation that professional trainers need to keep in mind when talking with participants. The role of the trainer is to avoid creating dependence. As such, the participants should have a say in the use of training space and choice of training center, and should regularly provide feedback to trainers on their performance.

Energizers and Ice-breakers

Discussion

In the training programs observed, a great deal of energy was devoted to "energizers." Usually these were done between content-related activities, such as lectures. They took the form of a little exercise (draw a face that is sad, happy, and angry in the circle) or a performed song. When the trainers were asked why they did these, the reply was that "the group gets bored, so we have songs and games to wake them up."

Generally, the energizer was given and then the session began with no linkage to the session objectives. For example, the song—a sad love ballad—was sung before the session on "raising and leveling of expectations." The "three faces" exercise came just before a lecture on leadership, but no attempt was made to link the leader's job with happy, sad, or mad followers.

Rules of Thumb

- The climate-setting activity (ice-breaker) must be specifically designed to connect or lead into the subject of the training session; otherwise, it becomes a game unrelated to the learning and can even detract from the purpose.
- Specific climate-setting activities for most NIA training sessions should be designed with clear intent and for appropriate effect. The climate setting should be written into the design of the trainer guide or instructor manual.

Interactive Training Techniques

Discussion

In the four training programs observed, all were predominantly designed with heavy and long lectures. Most communication observed was one way—trainer to group. It seems to be the norm to "put across" content material. Skills were described as trained using exercises (in financial management), but content was described as a lecture.

All learning research indicates that the least effective way to deal with content is through lectures. The most effective way involves participants with the material so that they work with the content (hear, see, and do); thus, they literally "teach themselves" the information while the trainer serves to facilitate and correct or coach. Discussions with those guiding the IDD training-design process indicated that staff were well aware of experiential learning exercises such as case study, problem exercises, and role play.

The term "lecturette" in training jargon means a short lecture-discussion that has a high degree of two-way communication. Briefly explained material is presented on flip charts (there is always a visual component) and interspersed with questions and interaction. A lecturette should be 30 minutes or less because the attention span of learners with this type of format is about twenty minutes.

Rules of Thumb

- No one should stand before a training group and talk for more than thirty minutes. If the material cannot be understood within that time, the wrong methodology has been selected to train the material. The thirty-minute limit could be lengthened to forty-five if good visuals are used and if 50 percent of the material involves participant discussion and interaction.
- Most material now provided in the form of lectures should be converted to case studies that contain information and exercises for small groups to work with and present. Case study writing could become a project of provincial and regional training core groups working with central NIA staff. For each module, a series of case studies, or a "continuing story" case could be constructed.²

²A reference on the recommended type and form of case study can be obtained from A.I.D. by requesting a copy of *Training Guide for a Management Development Program in Water and Sanitation Institutions*, Technical Report No. 59, 1989, from the WASH Project, 1611 N. Kent Street, Room 1001, Arlington, Virginia, 22209. This manual contains training exercises, case studies, and a complete training design in management development.

A conference activity held in a training setting (such as elections, reports, planning) should not be considered training and does not follow these rules of thumb. When the conference activity is mixed with training, the training program should be separate and the room rearranged for the training activity.

Visual Aids

Discussion

In the training programs observed, visual material was presented by means of very long flow chart, overhead projector, chalkboard, and handout materials. The use of visual material is important and NIA should be congratulated on its use.

In some instances, however, the visual aid was distracting or not used to advantage. The amount of chalkboard writing was once a case in point. A great deal of time was used by the trainer to write lecture points on the chalkboard (school teacher style) while the group waited (and talked with each other). Some trainers consistently faced the chalkboard to read lecture notes, rather than face the group.

One visual training aid not seen—a trainer's mainstay—is the flip chart easel with newsprint or manila paper. Pre-printed newsprint was placed on a chalkboard for brief explanation, then quickly removed and saved for use in the next training program.

Flip chart stands have several advantages:

- They can be moved around the room and used for small group tasks.
- Written material on the flip chart can be removed and stuck to the wall, to be referred to several times or to be left as an important reminder.
- All lecturette material can be written in short form (on newsprint), and thus seen by the participants (material is easier to learn when it can be seen as well as heard). The trainer can also refer to it (easier to remember what to say and also maintain eye contact when material is on view).
- Participants can use flip charts to organize their presentations to the full group.

Rules of thumb

- Each training program should have at least four light-weight flip chart easels and pads and several magic markers.
- The chalkboard should be used minimally or not at all.
- All lecturette material should be presented using a flip chart (if the lecturette is too long to fit on a flip chart, too much talking is going on, and not enough participant-centered methods are used). As a quality-control measure, the training coordinator for each program should review the flip charts that presenters prepare before the session.
- The current use of overhead projectors and handouts is positive and should be continued when applicable.

Matching Content to Available Time

Discussion

Many of NIA's training programs have been reduced, in some cases from twelve days to six. In order to compensate for this reduction, the training day has been extended, often to include evening sessions. Many programs require that trainees sit in sessions for ten to twelve hours. Studies on learning indicate that it simply is not possible for people to learn beyond limited hours in a training day, particularly using one-way communication methods.

Evening sessions should rarely be given, and those given should be light (a movie or slides for entertainment). Off-hours in training programs can be very important for the group as "team building," providing a time to create personal networks, share ideas, talk about what they are learning, raise questions, reflect, and relax.

Rules of Thumb

- A typical training schedule should be arranged so that variety and pace are built in. A break of at least twenty minutes, preferably thirty, should be provided every two hours.

Here is a typical training day that has been used successfully many times:

- 0800—1000 Session #1
- 1000—1020 Break
- 1020—1230 Session #2
- 1230—1400 Lunch
- 1400—1530 Session #3
- 1530—1600 Break
- 1600—1800 Session #4
- 1800—Free Time

The above example provides about seven and a half hours in session. This is about all that a group can usefully absorb in a training day, if good morning, afternoon, and lunch breaks are given. Evenings are open for relaxing and integrating learning from the day. The long lunch break (one and a half hours) is important. It gives the trainers a chance to prepare and catch their breath, and it allows the training group to get over most of their drowsiness from lunch and to come back to training refreshed.

Training Objectives

Discussion

In the programs observed, training objectives were limited to the introductory sessions of a program. They were given as the general expected outcomes of the week of training or of the program. This is appropriate and should form a part of the start-up activity of a program.

However, no instructors were observed to state specific session objectives at the beginning, or to review them at the end. In none of the materials reviewed was there evidence of specific training objectives.

There are a number of schools of thought on training objectives. Industrial performance-instruction approaches (such as represented by Mager) stress the importance of measurable, conditioned, specific, clear end statements for a session. These usually even require that "action" verbs only be used: list, state, articulate, demonstrate, instead of know, be able to, understand.

Other schools of thought on training objectives are less rigorous and work on the basis of general learning objectives that are as clear and specific as possible. The performance-instruction school of thought is appropriate for very technical training requirements in which

measurement is important. The more-general school is used for training relating to management, supervision, and problem solving.

Both views on training objectives, however, require that the trainer be clear about what needs to be trained and that this be clearly communicated to the trainees at the beginning of each session, and checked in some way at the end of a segment.

Rules of Thumb

- Each NIA training session should begin by telling participants what they are going to learn and why. The training objectives should be written on flip charts and posted on the wall for easy reference by the training group.
- At the end of each session, learnings and applications of the learnings should be reviewed, and the objectives should be referred to again.

Feedback Mechanisms in Training Sessions

Discussion

In those programs observed, it did not appear that the trainers asked the training group for feedback on how the program was going. In process training, evaluation in open-ended format is important. Feedback—

- Keeps the training relevant and targeted to the appropriate levels.
- Helps the trainers know if they are coming across correctly.
- Provides ideas on how to focus, sharpen, and improve the training designs.
- Lets the trainees know that the trainers are listening and consider the trainees valuable, adult assets to the training process.

Rule of Thumb

- At least three times a week during training, a half-hour should be set aside at the end of the day to openly ask the group "how's it going," and "what can we do to improve what you are getting?" The least threatening way to do this is to form small groups and ask them to list positive and negative things the trainers can do or should know about the program. The feedback is solicited from each group (instead of

from the individual) and is recorded on the flip chart. Recording is important so that it is clear that input is heard and taken into account. The trainers should not answer or defend themselves but simply listen.

Co-Facilitation

Discussion

In the programs reviewed, most trainers worked alone before the group. In the interviews with trainers, many said that it was difficult to manage and deliver training by themselves. Most well-delivered training programs of the length of NIA training are co-facilitated. Co-facilitation means true "team training." Two trainers stand before the group most of the time, or one is walking around or closely involved on the side while the focus is on the speaker. Co-facilitation means that information given by one trainer is added to by the other, flip charts are managed by both, and lead and support functions are exchanged from session to session. It takes good pre-planning and a pre-designed session in order to co-facilitate. Co-facilitation will probably improve training planning if done consistently.

NIA should find a way to ensure that co-facilitation is used extensively in its program. This is particularly important when technical or content specialists are working with the groups. If co-facilitation is established as a norm, it will become increasingly natural and expected. The training platform in front of a group will also become increasingly informal territory, as it should be for effective learning.

Rules of Thumb

One trainer paraphrases while the other writes on the flip chart. A good place to do this in the programs observed was when the group said what it wanted from the training program ("raising and leveling of expectations.")³ The writer should be sure that the actual words of the group are written down, unless the words paraphrased by the other trainer are to the satisfaction of the trainees.

³ The expression "raising and leveling" implies that whatever expectation the group may have will necessarily need to be "leveled." Terming this session in this manner may communicate the wrong message. Since virtually all NIA training programs include this at the beginning, it is suggested that the segment be renamed as "Participant Expectations." Additionally, the trainers are priming the expectation process unnecessarily by asking (even requiring) the participants to contribute expectations in the categories of content, trainers, and other participants. It is more group-centered to simply let the information emerge. Trainer expectations should be separated and built into a subsequent piece labeled "norms." The norms of training are the agreed upon ways that the trainers and the group will work together. This is different from trainee expectations.

- A technical trainer explains specific content while a training specialist helps with visuals and then gives an exercise to the group that illustrates or allows the group to use the technical material.
- Whenever one trainer does not see, hear, or understand what someone says or does, the other trainer intervenes and clarifies when appropriate.