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CLOSE – OUT SHEET

This file is closed as of Dec. 31, 1979.

For further correspondence, please see Vol. X.

RECORDS MANAGEMENT SECTION

S. Agriculture

December 28, 1979

Mr. Francisco Rentutar
Director, Bureau of Agricultural Extension
Ministry of Agriculture
Elliptical Road, Diliman
Quezon City
Philippines

Dear Rendy:

It was a pleasure being with you in the same working group during the Kuala Lumpur Workshop and I much enjoyed our cooperation.

Coming back to Washington, I had the opportunity of reading the full text of your report for the Workshop, which you gave me in Kuala Lumpur. It helped me better understand the scope of the entire National Extension Project in the Philippines and the broad spectrum of activities which yourself and your staff are engaging in.

As you requested, in reading your report I gave special attention to the considerations for building a Monitoring and Evaluation System for the National Extension Project. Indeed, only such a system could effectively provide you with the management tool indispensable for keeping track of implementation progress and extension impact. I also fully agree with you that, at this particular moment the critical issue is the organization and staffing of a central evaluation unit for the National Extension System, with local (regional) staff for monitoring and evaluation data generation. Once such a unit is instituted, it can start generating and supplying you with the information you need on a periodic and regular basis. The Bank Staff Working Paper No. 272 contains explicit recommendations on the methodology for data collection and analysis which are directly applicable and adjustable to the situations in the Philippines. Sections IX and X of the same paper contain the staffing recommendations for such a unit and these can also be adjusted to suit your country's circumstances. I feel that qualified and talented staff for such evaluation activities are available in the Philippines. The Bank's appraisal report for the National Extension Project, which I re-read today, provides ample scope for funding and setting up your Monitoring and Evaluation Unit.

Please feel free to let us know whether you need any further direct assistance in setting up the M & E unit for your project and in providing methodological support for a good start to the M & E activities.

As you requested, three copies of the World Bank's Staff Working Paper No. 272 will be mailed to you under separate cover.

We all missed you during the second part of the Workshop, but we understood the urgent nature of the tasks which required your presence back in Manila.

I hope we will stay in touch and I wish you success in your efforts.

With best regards,

Michael Cernea
Senior Sociologist, AGR

S. Agriculture

Messrs. Christofferson, Blaxall and Golan December 28, 1979

Ted Davis, RORSU

Back-To-Office Report on Regional Workshop on Monitoring and Evaluation of Rural Development Projects in East Asia and the Pacific

Attached is a Preliminary Report on the above Workshop which was prepared on the penultimate day (and night) of the Workshop and distributed to the participants on the last day. This preliminary report serves as a back-to-office report, giving in its introduction the general format and organization of the Workshop and containing in subsequent sections the preliminary conclusions reached with regard to the substance of monitoring and evaluation.

Two additional papers will follow. One will be a full report on the workshop which will include more details on the substance of monitoring and evaluation in the Region, as well as recommendaitons for the future. The second will be an analysis of the evaluations of the workshop done by the participants on the last day. This should be useful in improving future workshops on monitoring and evaluation.

Attachment

cc: Messrs. Yudelman, Kapur, Kirmani, Pickering, William Smith, Price, Krishna, Walden, Wadsworth, Turnham, Thoolen, Donaldson, Israel, Youker , Whitford, Garg

REGIONAL WORKSHOP ON MONITORING AND EVALUATION OF RURAL DEVELOPMENT PROJECTS IN EAST ASIA AND THE PACIFIC

KUALA LUMPUR

DECEMBER 10-18, 1979

PRELIMINARY REPORT

Sponsored by:

Agriculture and Rural Development Department and East Asia and Pacific Projects Department of the World Bank

Workshop Staff:

Ted Davis
Guido Deboeck
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Drafting Committee:

Chan Ah Kiow, Malaysia
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December 18, 1979

PRELIMINARY REPORT ON

Regional Workshop on Monitoring and Evaluation of
Rural Development Projects in East Asia, Kuala Lumpur

December 10-18, 1979

INTRODUCTION

The Regional Workshop on Monitoring and Evaluation of Rural Development Projects in East Asia was held in Kuala Lumpur at the Equatorial Hotel from December 10 through December 18, 1979. The Workshop was organized by the Agriculture and Rural Development Department and the East Asia and Pacific Project Department of the World Bank as a part of their ongoing work to improve the implementation of Bank supported projects through improved Management.

Invitations were issued to key staff in Bank supported projects in the East Asian Region and at the same time those invited were asked to prepare papers presenting their own experience with monitoring and evaluation systems. Twenty-one papers were received before the Workshop and were the input into a synthesis paper prepared by a Bank Consultant.

The Workshop was attended by 36 participants from seven countries: Fiji, Indonesia, Korea, Malaysia, Papua New Guinea, Philippines and Thailand. The participants included: 15 project managers; 12 monitoring and evaluation officers; 5 national program officials; 1 from the Agriculture Development Council, and 2 regional officials of Bank offices in Bangkok and Djakarta, and 1 UNDP staff, Malaysia.

The Organizers of the Workshop included three staff members and one Consultant of the Rural Operations Review and Support Unit of the Bank.

The Workshop was opened by the Secretary General of the Ministry of Agriculture, Malaysia, Datuk Arshad bin Ayub, who warmly welcomed the participants and eloquently stated the importance which the Malaysian Government attaches to monitoring and evaluation to provide management at all levels with important management tools.

The Workshop was organized to cover three broad themes:

I. Management Use of Information

II. Data Collection, Processing, Analysis and Presentation and

III. Institutional and Sociological Aspects of Monitoring and Evaluation.

Workshop participants were organized into five small working groups for discussing exercises assigned by the theme moderators. The working groups which were structured to maximize country and project diversity were the main workshop vehicle for participant interchange. For each exercise each group appointed a raporteur who reported to the workshop as a whole on the results of the working group discussions. At the end of the presentation of the three themes of the workshop an open forum was held to provide opportunities for the discussion of a wide range of issues. A summary of the discussion of these themes is given in later sections of this preliminary report.

As a practical exercise the workshop focused on the Muda Irrigation Project monitoring and evaluation system. The participants were reorganized into working teams, this time based on subject matter experience. These five teams focused on monitoring and evaluation concerning (1) irrigaiton (2) credit (3) farm inputs (4) extension and (5) socio economic impact. The Director of the Muda Planning and Evaluation Division gave a brief insight of the project to the workshop and the teams prepared for their work on the field trip. The workshop participants then flew to Penang and traveled by bus to the project area.

Upon return from the field trip the working teams completed their practical exercises and reported their findings to the workshop.

On the last day there was a wrap-up session in which the workshop director gave an overview of the main issues of monitoring and evaluation as they were developed throughout the workshop.

The participants were asked to complete an evaluation form and make suggestions for workshop improvements. The evaluation was also the subject of oral discussions by the participants.

The Workshop adjourned at noon on December 18, 1979.

A list of participants is attached to this Preliminary Report.

THEME I: MANAGEMENT'S NEEDS AND USES OF INFORMATION

The case studies submitted by 21 project managers and monitoring/evaluation officers working on rural development efforts in seven countries, defined various dimensions of management's needs and uses of information. A preliminary synthesis of these various dimensions helped to focus the discussions during the workshop on three major issues:

i) Why monitor? Why evaluate? Who needs M & E?

ii) What do managers expect from M & E?

iii) Why is information not used effectively?

The following paragraphs are a synthesis of the discussion of these issues in working groups.

A. Why Monitor? Why Evaluate? Who needs it?

There are several reasons why rural development projects need to be monitored. The reports from the working group discussions showed that the primary reasons are to keep touch of project progress, to provide feedback on the achievement of project objectives, to serve as a trigger mechanism or warning system for project managers to help them prevent or solve problems during implementation.

Thus, monitoring systems are tools for managers to provide for smooth implementation, to keep implementation on schedule, to provide budgeting control, to measure physical achievements, to identify and reduce bottlenecks or problems that may arise.

Quite distinct from these are the reasons for undertaking evaluation. The workshop participants felt that evaluation of rural development projects is necessary to measure effects and impact of projects, to analyse causes of success or failure, to improve ongoing efforts and the planning of future efforts. In short, evaluation is necessary in order to learn from experiences in implementing rural development efforts. The distinction and need for both ongoing and ex-post evaluation was recognized by all workshop participants. It raised, however, the issue of whether current rural development projects do have enough flexibility, and what could be done to increase flexibility in project design so that the results from ongoing evaluation efforts can effectively benefit the implementation of projects.

Several participants pointed out that monitoring and evaluation are necessary because of external funding agencies - the World Bank "requires it".

In the words of a project manager:

> "Success of a project depends to a large extent on the management being able to keep to a schedule, to remain within the budget, to being able to foresee developing or future problems, to take remedial action without delay. Therefore M & E systems need to be designed." (Singh)

The need for information systems to support management derives from the growing complexity of projects, and particularly from the nature and composition of rural development projects.

Who needs monitoring and/or evaluation? Participants agreed that information systems for rural development are required by various "users", (the most important of which are the project managers and staff). Other users are government agencies and organizations or private agencies that are involved with the project; planners and politicians; and external funding agencies. Important, however, was the observation that M & E systems should also benefit the poverty target group, the clientele of project services and the local leaders.

B. What do project managers expect from M & E?

A lively discussion of this issue among workshop participants expressed high expectations from M & E systems on the part of project managers. As reported by the various working groups, project managers expect that M & E systems produce information and knowledge about rural projects; that the information is accurate, objective, reliable, timely, action and/or decision-oriented.

Among all these desired features the timeliness and relevance of the information for decision-making were considered to be the most important characteristics.

C. Why is information not used effectively?

From the review of experiences with M & E represented in the case studies produced by the workshop participants, it appeared that the expectations towards M & E are seldom met. The issue was therefore raised as to why information systems currently under implementation are not always effective, and why information produced by these systems is not used effectively by project managers?

The reports from the working group discussions made clear distinction between obstacles created by project managers and the deficiencies in the data produced by M & E systems.

First of all some project managers do not consider M & E important. They may lack confidence in the data, or have doubts about the relevance of the information. If project managers were not involved in the design of the system, or have a poor relationship with the M & E staff, that could also influence the effectiveness or use of the products from it.

Secondly, the products from M & E may be late, poorly presented, too long, less than relevant to management's needs. Available resources may be inadequate to deliver a good product. The M & E results may have been presented with a 'take it or leave it' attitude. Especially sensitive information communicated in a poor way, may actually touch on the integrity and/or prestige of agencies involved in the rural operations.

Thirdly, workshop participants felt that some project managers' lack of qualifications, lack of necessary authority, power, poor judgment and use of resources or time may be important obstacles to the effective use of information resulting from M & E systems. Lack of appreciation on the part of project managers often determines the extent to which monitoring and evaluation can be effective.

THEME II: DATA COLLECTION, PROCESSING AND ANALYSIS, PRESENTATION AND INFORMATION FLOW

The closely inter-related topics of data gathering, processing and subsequent presentation to project management as a basis for decision-making have been insufficiently analyzed in the case-studies on experiences in East Asia submitted to the Workshop. Nevertheless, delays related to a combination of these vital processes in timely monitoring of project progress and evaluation of project impact rendering a considerable element of ineffectiveness of the systems are often traced to these activities. Lack of appreciation by end-users is a collorary result.

In view of this, the Workshop organizers have paid attention to promoting group-discussion and exchange of experience among participants on this important theme. The Workshop devoted four sessions to these topics along with an individual exercise on the Scheduling of Activities for Design of Monitoring and Evaluation Systems, the value of which has been established in previous workshops of a similar nature.

The results of the group-discussion sessions have revealed a significant degree of consensus of participants' opinion on the nature of the data problems; these are lack of resources, inappropriate technical design and lack of experience. The problems can be identified in the whole process of data collection, processing and analysis, presentation and communication.

Reflecting the division of the theme into three sessions, the general conclusions on the more specific problem areas and possible improvements, data collection, processing and analysis, and presentation, are discussed separately.

The common problems concerning <u>data gathering</u> are as follows:

- overambitious coverage of a wide range of data/ information without appropriate selection in terms of relevance and capacity;
- sampling design with unwarranted size arising out of insufficient consideration of parameters;
- inefficiency in questionnaire design and data collection methods and procedures that raise doubts of consistency and reliability; and
- lack of adequate supervision of inexperienced field enumerators.

The solutions to these problems, suggested by the participants, can be summarized as follows:

- identifying project objectives more clearly and designing more appropriate key indicators for the specific needs of project management;

- reducing the burden of sample surveys by incorporating and utilizing data and information available from existing reporting channels;

- considering the use of alternative methods of data collection other than exclusive reliance on a structured questionnaire;

- improving questionnaire design to achieve greater efficiency;

- providing more training and supervision for enumerators.

Problems associated with data processing and analysis identified by the experience of the participants included:

- the use of inappropriate data processing equipment which is either inadequate for the needs of the volume of data concerned or over-elaborate according to the present capacity of the staff responsible for data processing activities;

- the lack of analytical experience and qualification of those involved in data transformation and data interpretation;

- the inadequacy of the end-products from processing and analysis in terms of project management requirements;

- the lack of comprehension and confidence of the end-users.

Some of the suggestions for overcoming these types of problems offered by the participants are:

- improvement of the data collection design with the specific goal of facilitating data processing and transformation;

- involvement of more professional inputs in these activities, but the use of external agencies to handle the data processing and transformation is not always conducive to transfer of technical skills, to co-ordination of associated activities and to effective control of project management;

- participation of all those concerned with data generation and utilization of information in the process;

- orientation of data analysis efforts more closely towards the immediate requirements of decision-makers and wherever possible intermediate results should be communicated to those concerned; and

- provision of longer term training to those involved in processing and analysis of data and information.

The problems related to presentation and flow of information are relatively fewer and more inter-related.

- reports tend to be too voluminous and not particularly attuned to the need of project management;

- reports are produced by personnel without sufficient experience and necessary skills in communication and critical perception in analysis; and

- reports have often failed to bridge the communication gaps endemic in the institutional organization.

The solution to some of these problems could be found in:

- improving the style of presentation in brief, concise and specific reporting with recommendations for action wherever possible;

- recognizing the existence of a hierarchy of different end-users of information and preparing reports which are appropriate for their immediate needs; and

- incorporating the use of annexes, tables, graphs and pictorials into the narrative-type of reports.

The working groups have also discussed the importance of the horizontal flow of information among co-operating agencies/ministries in multi-component projects in addition to the primarily vertical flow of information towards higher levels of management. It is further recognized by the participants that regular horizontal flow of information, particularly among field level project staff, should be formalized to facilitate better co-ordination.

In the discussion on the Schedule of Activities for Design of Monitoring and Evaluation System exercise, many of the problems of resource constraints which might cause delays in the supply of information were highlighted.

THEME III: INSTITUTIONAL AND SOCIOLOGICAL ASPECTS OF M & E ACTIVITIES

Four working sessions were devoted to the sociological/institutional aspects of Monitoring and Evaluation. The major sub-topics discussed included:

(a) the organizational placement of M & E units;

(b) alternative models of M & E units for different types of rural development projects;

(c) institutional and cultural aspects of evaluation activities in East Asia countries;

(d) functions and internal structure of M & E units;

(e) the skills and value system of the evaluator.

A. Location of M & E Units

The Workshop participants discussed the lessons resulting from national experiences with respect to the trade offs between hiring external resources (Universities or Consulting Firms) and building-up in-house capabilities (project units) for evaluation work. While recognizing that hiring independent consultants may, in the short run, have the merits of providing (a) high evaluation skills and (b) detached judgment and objectivity, it was felt that the use of consultants implies the disadvantages of (a) sporadic/temporary involvement with the project, (b) reduced possibilities to influence and control their work, particularly in the case of contracts with Universities, and (c) the risk of disguising academic research of personal interest to the University staff but of little operational relevance, under the label of "evaluation research". Most workshop participants felt that, on balance, building up an in-house evaluation capability may entail some delays but is preferable because; (a) it will have continuity throughout the project's life; (b) it has inside exposure to, and direct knowledge of, project circumstances and constraints; (c) feedback into planning activities is achieved more effectively; (d) costs are significantly lower and (e) if successful, it may outlast the project and thus become an "institution building" benefit for the country concerned. External consultants, however, may play a positive role especially at the initial project stage, if they are employed on a diminishing manpower requirement basis, under the obligation of transferring their expertise to project personnel. Solutions for establishing institutional safeguards for the objectivity and credibility of in-house evaluators were suggested, (e.g. they should be given administrative independence from the Project Manager, but remain a part (sub-unit) of the larger administrative set-up within which the project itself is integrated.)

B. Institutional Models and Cultural Constraints

Among the main suggestions made during the working group discussions were the following:

(a) The design of M & E units should be adjusted to the country specific institutional set-up. Inserting M & E as a new and formalized methodology into an existing bureaucratic structure would be more effective if it is deliberately reconciled with the existing rules, norms and culture of the operating administrative system.

(b) Monitoring and Evaluation Units could be area specific or sector specific. Within certain limits, the model of the Unit should vary according to the nature and sub-sector of the project (e.g., irrigation, livestock, credit, fisheries and so on).

(c) Maximization of scarce human resources and skills, and methodological gains in evaluation studies can be achieved if two-tiered systems are created wherever a set of concomitant agricultural projects makes this pattern feasible. A two-tiered M & E system would consist of a Central M & E Unit, well staffed, linked to smaller, project specific M & E cells.

(d) Almost all working groups emphasized that implicit in the Asian culture is a high sensitivity towards criticism and an entrenched respect for age and seniority (comparatively less so in the Philippines, though), which may enhance the cultural difficulties faced by program evaluators. Communication of sensitive evaluation findings to project managers and upward bureaucratic structures ought to be made without compromising the substance, but in ways acceptable within the local culture (e.g., using face to face communication when more appropriate than public exposure, or small versus large meetings, eliciting self evaluation of signaled shortfalls, educating officials about the role of evaluators, identifying culturally legitimated channels, using horizontal communication, etc.

(e) The evaluation effort should result not only in <u>diagnosing</u> problems but also in attempts to <u>prescribe</u> solutions and recommendations.

(f) The actual <u>implementation</u> of evaluation findings, however, should be regarded as primarily (and most often exclusively) the responsibility of the Project Managers or of higher planning or policy bodies.

(g) Both monitoring and evaluation should avoid technical or economic narrowness and should always assess, and report on, <u>farmers' reaction</u> to project components. Evaluation should take into account not only objective constraints on farmers' resources but also their behavioral, attitudinal, religious or ethnic features which may hamper - or may act as a positive stimulus - for project implementation.

C. Staffing, Training, Costs, Equipments for M & E Units

All the points which, with respect to these issues, had been emphasized in the pre-workshop summary paper (prepared by Ronald Ng), were reiterated during the workshop discussion. In addition,

(a) The participants stressed that in their opinion the World Bank as a developmental institution should persistently impress on high ranked officials and managers in developing countries the critical importance of M & E and of allocating the needed resources to it.

(b) The participants expressed high interest in getting access for their staff to formal but short-term and intensive training courses in project evaluation research methods without under estimating the on-the-job training. Courses organized by EDI would be particularly welcomed. Rural Development projects should specify a fraction of funds allocated to M & E for training and fellowships.

(c) Most participants emphasized the need of multidisciplinary staffing of M & E units, securing evaluation staff with economic, socio-anthropological and technical competence.

(d) It was noted that a significant proportion of Bank agricultural and rural development projects in East Asia region do not contain distinct cost and staff specification for the M & E units, although most projects require (in general terms) such activities. Actual establishment of M & E units is administratively more difficult if distinct funding and staffing are not specified at appraisal stage.

D. The Role-playing exercise

During the discussion of the sociological/institutional variables of M & E activities, a practical exercise was carried out consisting of mock-interviewing of two role-playing "Candidates for the position of Evaluation Officer" by two role-playing "Project Managers". The purpose of the exercise was to involve the group in an active process of defining the set of professional and ethical characteristics necessary for performing the function of evaluation.

The outcome of the exercise in most working groups emphasized that the successful candidates who were "recruited" for the job tended to (a) have training in economics and sociology and experience in carrying out field studies; (b) display high sensitivity to farmers' needs, values and ways of expressing themselves; (c) have the commitment and courage to signal shortfalls and other sensitive findings, even if risks are involved; (d) request the project manager to protect the integrity and credibility of

the evaluator's status and to build some safeguards into the evaluator's position to minimize constraints on his objectivity. The "Candidates" were not very satisfied with the incentives and career perspectives offered to evaluators, and were rather hesitant to question, in turn, the project managers about certain circumstances critical to the evaluator's expected responsibilities and work circumstances.

PLENARY OPEN FLOOR SESSION

An open floor session was scheduled after the discussion of the main three themes and before the departure to the Muda exercise. The Workshop participants were invited to raise any issue which, from their own experience, they feel as important for developing institutionalized and effective M & E capabilities. A broad spectrum of issues was brought to the forum and a frank open exchange of opinions took place. Among the questions which elicited most interest and discussion were:

1. How to grasp and immediately study the non-anticipated consequences of project implementation?

2. How should high level government officials be attuned to the usefulness of M & E?

3. Is there a role for the beneficiary farmers in the M & E process? Should self-kept farm records be promoted as an efficient method, under the work-circumstances of project monitoring units?

4. Consider the incentives (or lack of) built into the process of utilizing M & E results.

5. Is it an effective institutional solution to integrate the project M & E unit with the field planning unit?

6. Should project managers and M & E units get involved in preparing the Completion Report? and the ex-post evaluation?

7. How could in-house M & E capabilities be best built in the shortest possible time?

8. What follow-up actions would or should be undertaken by the World Bank, or by country governments in the East Asia region, to improve the abilities for project M & E?

THE FIELD TRIP AND PRACTICAL EXERCISE

The workshop participants were organized into working teams for the purpose of a practical exercise in connection with the field trip to the Muda Irrigation Project located at Alor Star, 300 miles north of Kuala Lumpur.

The Muda Irrigation Scheme is an important Malaysian project aimed at increasing rice production in what originally was a very poor area of the country. The project is assisted by the World Bank. The first phase began in 1967 and aimed to provide irrigation which would permit double cropping where only single cropping was possible before the project began. The completion report for the first project was assisted greatly by the monitoring and evaluation system included in the project.

The Muda Scheme has recently been the recipient of a second loan from the World Bank to further improve the efficiency of the irrigation system through the provision of tertiary canals and to improve the extension system and other inputs. The second Muda project also has provision for continuing the monitoring and evaluation system. The project was the subject of a special World Bank Research Project to measure the secondary effects and impact.

The results of the field exercise and of the discussions with project staff and local farmers consisted of five M & E systems designed by the working teams. Each working team considered the Muda project component it studied (e.g., extension, credit, irrigation, etc.) as a project in itself, assessed its information needs, the quality of the existing reporting system, the need for additional monitoring information and for impact evaluation data, suggested data collection tools and recommended an institutional model for a project specific M & E Unit, with appropriate staffing and funding. The exercise confronted the participants, in a practical way, with the typical set of questions occuring in the design and establishment of M & E systems.

LIST OF PARTICIPANTS

Regional Workshop on Monitoring and Evaluation of Rural Development Projects in East Asia and Pacific

Kuala Lumpur, December 10-18, 1979

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----------ooOoo----------

S. Agr & Rural Dev.

Mr. Robert Goodland, OEHA

December 26, 1979

Peter B. Hammond, AGROR

Protection of Indigenous Peoples from the Impact of Development Projects

1. The "costs" of allowing indigenous cultures to be destroyed must, somehow, be articulated in terms that will win the sympathy of sceptical developers. As a means of "quantifying" these costs so as to more effectively persuade those concerned only with production and profitability -- narrowly defined -- see the attached copy of my November 20 memo to Mr. Collins on this same issue.

2. On "Community Development." It is O.K. to assertthat the indigenous people will have the responsibility to "secure their own area." But it will be necessary to realistically identify the mechanisms which will enable them to do so. Then the efficacy of these mechanisms will need to be carefully monitored during the course of project implementation. For Indian rights that are legally recognized do not appear to be accompanied by any clear means to ensure their enforcement.

3. On "Retraction of Illegals." The need for this points up the importance, cited by Professor Maybery-Lewis, to look out ultimately for the survival needs of all vulnerable rural populations. Perhaps the "illegals" referred to here are already well off peasants, but many landless Ladinhos in Brazil are also in a precarious economic position. Both groups often are powerless in their relationship to a government that rarely consults them in formulating its development plans. Plans to protect the Indians must ultimately be linked to some more comprehensive effort to protect the interests of all the rural poor who may be adversely affected by the encroachment of development efforts.

cc: Messrs. Collins, Lethem Davis

Enclosure

OFFICE MEMORANDUM

S. Agriculture

DATE: December 20, 1979

Mr. Bob Sissons, EMP

Gordon P. Temple, AGREP

EMENA Assistance For CBDISPLAY Enhancements

1. In response to your request I herewith send you this proposal for financial assistance from the EMENA Projects Department towards CBDISPLAY enhancements. So that you might better understand the reasons for the direction of program development and the priority of enhancements proposed, I first present the view of the Committee on Computer Applications in Agriculture on the characteristics required of software intended for project work. I then propose a work plan and budget for CBDISPLAY enhancements for the remainder of FY1980.

2. At the meeting of the Committee on Computer Applications in Agriculture held on September 18, 1979, I briefly reviewed our survey of user's experience with existing software. Members of the Committee then discussed and agreed that computer programs designed for project work require the following characteristics:

Response and Reliability. Project staff operate under time constraints that require quick turn-around for computer service and leave little room for unforeseen problems. But our experience has been that the Bank's computer has not always been able to fulfill these requirements. Batch operations on the Bank's computers, while reliable, often requires a 24-hour turn-around. Users typically require 1-2 hour response. Time sharing service is generally satisfactory when available, but for various reasons it often goes down. These problems with response and reliability have frequently presented serious constraints to users trying to complete appraisals within given deadlines. Because demands for computer time are growing faster than equipment capacity, the Bank's computer is not likely to be able to provide the levels of response and reliability we require in the foreseeable future. Hence, we must develop a version of CBDISPLAY that will run on computers inside and outside the Bank.

Machine Independence. Constructing a version of CBDISPLAY to run outside the Bank will require a total redesign of the program. If that were done, it would be advisable to consider requirements that were not included in the existing version. The project cycle includes much identification and preparation work that is done during field work.

Furthermore, a great deal of data processing could be done during supervision to help project staff understand why events occur differently than planned, and to serve as an analytical tool when projects are redesigned. Assuming that the program should be redesigned, we can create a new version that can be made operational at very low additional costs on computers in borrowing countries, the IBRD/FAO/CP, and other international agencies.

Close Touch By Users With Data. Project specialists emphasize that they must maintain close touch with their data to develop realistic sets of input-output coefficients. Thus, any computer program used in project work must allow users to enter their data easily and quickly, and to receive intermediate results from the computer quickly. Only by this quick action and reaction can most project staff achieve the same level of confidence that they now achieve with data processed with pencil, pen and calculator.

Easy Control Language. Many project staff are apprehensive about using a computer in their project work. Furthermore, most project staff cannot (and should not) invest time learning control languages written in "computerese." Languages must be conversational and structured so that a new user looking at a project can readily understand how the analysis was done.

3. Users find the present control language of CBDISPLAY easy to learn, and that the program allows them to maintain close touch with their data. However, CBDISPLAY will run only on the Bank's computer and, therefore cannot provide the levels of responses and reliability required for good project work. Furthermore, the arithmetic and data generation facilities in CBDISPLAY are relatively primitive, the editor is too restrictive, and the facility for calculating project costs inadequate.

4. Program Development. To remove the constraints present in the current version of CBDISPLAY, I propose the following enhancements:

Enhancements	Completion Date/Cost		
Modification of data base management system, addition of more powerful new editor, and replacement of FORTRAN format statements.	February 20	39 days @$140	= $5,460
Addition of hierarchical arithmetic and data generation function using BNF generated parsing; testing of new systems on the Bank's computer.	March 31	39 days @$140	= 5,460
		1 Staff Month	= 5,000
		Travel and Subsistance	= 3,000
Testing of new system on 1/ IBM computer.	April 30	26 days @$140	= 3,640
		Subsistance	= 2,500
Design, development and testing of COSTAB	June 30	52 days @$140	= 7,280
		1 Staff Month	= 5,000
		Travel and Subsistance	= 2,000
TOTAL COST			$39,340

Contribution to costs	
$29,340	EMP
5,000	CAD
4,000	IPD
2,000	AGR

4. Provision of funds from EMENA for the redesign of CDBDISPLAY and the development of COSTAB would provide necessary complementary financing to complete work planned through the end of FY1980. Beginning July 1980 we plan to continue program development with funds provided to AGR in FY1981 for further software development.

1/ IPD has agreed to provide up to $4,000 for this.

cc: Mr. Graham Donaldson, AGREP

GTemple:sf

ORGANISATION DES NATIONS UNIES POUR L'ALIMENTATION ET L'AGRICULTURE

ORGANIZACION DE LAS NACIONES UNIDAS PARA LA AGRICULTURA Y LA ALIMENTACION

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 - ROME | Cables: FOODAGRI ROME | Telex: 61181 FOODAGRI | Telephone: 5797

Ref. UN 10/65 Gen.Ext. (7th Meeting)

DEC. 19 1979

In your answer please quote

Dear Mrs. Boskey,

Seventh Meeting of the ACC Task Force on Rural Development, Conf.Room No.10, UN Headquarters, New York, 28-29 January 1980

I am writing to inform you that the ACC Task Force on Rural Development will meet at United Nations Headquarters, New York from 28-29 January 1980 as agreed at the ad hoc meeting of the ACC Task Force in Rome in September 1979 and later approved by the Organizational Committee in October 1979. The agenda of the meeting is as follows:

1. Draft cross-organizational programme analysis of rural development;
2. Evaluation of Action at the Country Level undertaken by the Task Force;
3. Any other business.

The draft paper for agenda item 1. will be circulated by the office of Mr. Peter Hansen, Assistant Secretary-General for Programme Planning and Coordination, United Nations, New York before 21 January 1980. A note on agenda item 2. is enclosed.

...

I shall be grateful if you will provide the name of your representative at an early date. This information and any further correspondence on this meeting should please be addressed to Mr. T.N. Saraf, Officer-in-Charge, FAO Liaison Office with the United Nations, Suite 2470, United Nations Headquarters, New York, with copy to Mr. R. Moreno, Director, Human Resources, Institutions and Agrarian Reform Division, FAO and to Mr. Peter Hansen. Requests for hotel accommodation may if necessary be addressed to Mr. Saraf. His telephone number is (212) 754.6036/39/41/42/43/44.

TR made ant 1/22/80

called to confirm TD's attendance 1/22/80

Yours sincerely,

Declan Walton

Declan J. Walton
Director
Office for Inter-Agency Affairs

Mrs. Shirley Boskey
Director
International Relations Department
International Bank for Reconstruction and Development
1818 H Street, N.W.
Washington, D.C. 20433

INCOMING MAIL RECEIVED

Non-Ro-C
Research - General
cc - S - Agriculture

Mr. Rowe, Assistant Director (Agriculture), ASP
Through Mr. Nottidge, Chief, ASPAE

December 18, 1979

A. J. Pritchard, ASPAE AJP

Technical Supervision of Research Projects

1. I discussed the problem of technical supervision of agricultural research projects and components at some length with Sir Charles Pereira when he was in Washington and during a recent mission to Pakistan. The Bank's commitment to agricultural research has gradually grown and it is now larger than that of CGIAR. In order to protect its investment, CGIAR has been instrumental in establishing a system of five-yearly reviews at which progress and research results are assessed at each of the International Centers. By comparison, the Bank is doing little more than financing research and hoping that the results will be satisfactory. The Bank's situation is similar to that of PARC in Pakistan which is regarded by the Pakistan research institutes as nothing more than a channel through which research funds must flow.

2. The research supported by the Bank must be properly supervised and this can only be done by a team of well trained and experienced scientists. There are several methods by which supervision could be accomplished:

(a) The Bank could recruit its own cadre of agricultural scientists and make arrangements for them to supervise projects on a regular basis. However, under such an arrangement it would be costly to recruit enough scientists to cover every discipline and scientists removed from active research soon lose contact with the latest developments.

(b) Sir Charles suggested that the Bank finance about eight positions at the International Centers, on the understanding that the Centers would provide personnel on a regular basis to assist in the supervision of Bank-financed research projects. These personnel could be drawn from all of the scientific disciplines and not restricted to the staff members provided by the Bank. A small group of two or three would be needed at headquarters to arrange the supervision missions and take care of the preparation of reports, etc. This procedure would have to be discussed at a meeting at which all Directors of International Institutes were present.

(c) Provided satisfactory consultants could be found, supervision could be arranged by employing the services of consultants. A headquarters cell would be required.

Reviews for Bank projects would need to be more frequent than once every five years. It is suggested that a small team would be needed

for two to three years after project effectiveness to ensure that research programs had been designed and started properly; and another, larger review, should be mounted after five years to check on results and progress. If the number of research projects on a Bank-wide basis is about 25, then ten review missions would be needed annually over the next five years.

AJPritchard:lml

yellow

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

S. Agriculture

TO: Ms. Tufan Kolan (PMD) DATE: December 18, 1979

FROM: Lennart Ljungman (ASP) and Sydney Draper (AGR/RD)

SUBJECT: Agricultural Sector Symposia (January 7 - 11, 1980)

Designing Forestry Components for Inclusion in Agricultural and Rural Development Projects

1. Mr. Spears' paper of November 29 highlights the important candidate activities for consideration when designing a forestry component. In addition to the topics raised by Mr. Spears, the following paragraphs briefly discuss certain aspects which are likely to feature in design formulation.

2. Environmental Stability. In many prospective project areas, environmental down-grade will be occurring as a consequence of excessive pressures on the land resource from a combination of crop cultivation, fodder collection and grazing, local construction timber and fuelwood collection. In short, the local population will be following a farming system (or land use system) which needs to be modified in order to bring practices in line with sustainable production systems. The strategic location of tree planting (or closure of areas for natural regeneration of tree and fodder species), either as large government blocks, farm woodlots, hedgerow planting, avenue planting, gully planting, etc., can significantly contribute to stabilizing the environment, as well as providing forest products and fodder. However, these measures are likely to succeed only when the local participants/beneficiaries perceive at least some of the reasons to stabilize the environment, since putting them into effect will invariably call for changes in the existing land use patterns. Besides the immediate environment, there are often important off-site considerations to be taken into account, e.g., protection of investments in reservoirs, dams, irrigation canals, roads. On both counts, there is likely to be a conflict of interests between present users and other potential beneficiaries, which may require interventions to induce local participation, particularly in land tenure arrangements and in subsidies.

3. Land Tenure. For land other than private farms, a clear understanding of the rights and obligations of prospective participants in a forestry component is probably a precondition to obtaining their effective support. Existing forest legislation is often very general, imprecise with respect to specific situations, and very likely has been unenforced or only partially enforced for many years. Situations are common where the practices of local populations in grazing and other forest exploitation are contrary to legal prescription which has given rise to distrust between the local population and forest authority. Devising a system of contract in which the participants are clearly aware of their rights and obligations is more likely to secure their sustainable participation. This will imply identifying interest groups competent to contract and also, possible changes in forest or land tenure legislation.

4. Subsidies. Experience so far indicates that forestry components involving local participation invariably involve some subsidy. Apart from a general objective of governments to initiate replanting (for multifarious reasons) and therefore being prepared to finance the operations, there are two important reasons why subsidies are a legitimate aspect. Firstly, many of the target group are unable to provide the total inputs needed, given the relatively long-term (6 - 12 years) before first harvesting, nor would deferred repayment credit be appropriate because of the risk factor and often low financial return. Secondly, environmental stability benefits, both local and off-site, would be shared by other beneficiaries. The levels of subsidy being provided in different projects varies according to the degree of participation and government policy towards subsidies, and there are many variants. A common theme however, has been to attempt to ensure that the cost of replanting of the plantations would be financed from revenues generated by the initial (subsidized) investment.

5. Options for Energy and Shelter. In developing a time series of consumption of firewood and building poles, etc., for both historical and future projections, it is advisable to review the likely options open to the target group. This may call for some heroic prognosis and be open to considerable debate, but will serve to focus attention on the provision of these essential supplies and secure commitment to the program contemplated.

6. Technical Packages. Most developing countries lack a well designed technical package for promoting of tree planting for local use on private lands. Such a package should include recommendation on which land to use, number of trees and spacing required, and simple establishment and husbandry practices. An important aspect of the technical package is its acceptability to the people concerned. For that reason it is possible that package design should aim more at wide 'uptake' than at maximum economic efficiency. For instance, a species might be favored if it has an acceptable economic value production and is likely to receive greater public response than a species with higher production.

7. Data for Impact Studies. There is a general lack of physical data on which to assess the indirect economic impact of tree planting. Such data can be generated as part of the monitoring system built into the project. Studies to be carried out could include waterflow, sediment load, agricultural or agri-forestry production, and climatic and flood conditions etc.

Lennart Ljungman/
SADraper:jh

c.c. Messrs. van Gigch (WAP), Pickering (AGR), Gray (AGR), Naseem (AGR), Thoolen (AGR), Nottidge (ASP)

S. Agriculture

December 18, 1979

Dr. Robert Werge
U.S. Department of Agriculture
OICD, ITD, Room 3910
South Building
Washington, D.C. 20250

Dear Rob:

Some comments follow on the good annotated outline for your paper on "Potatoes, Peasants and Development Projects."

For easy reference, I have given the several parts of your outline alphabetical equivalents; a copy is attached. n/att.

D. O.K. But obviously this part of the paper can be dealt with quite briefly. Bear in mind that we want to demonstrate to a Bank staff audience, which will include agriculturalists, the particular value of an anthropological -- as opposed to an agronomic or economic -- perspective on potato cultivation. However, the data you refer to will be useful to summarize.

E. 1. This interesting point about the appropriateness of the potato for small scale production in scattered fields would seem to have important implications for development planning. I hope you will indicate what they are.

E. 2. Here or elsewhere, will you refer to the concerns of those, like Iltis (see enclosures) who fear that new more "marketable" potato varieties are threatening the survival of nutritionally superior, ecologically better adapted indigenous types? Perhaps this issue, which I am sure you understand better than I, is covered in E.3, but it is not clear.

F. 2. O.K. But with wheat, also, you are "dealing with rainfed agriculture" are you not? Rob, I really make this point only to demonstrate the need for attention to careful writing in preparing the final version of your paper. Otherwise, we risk wasting valuable seminar time with nit-picking critical digressions by an agriculturally sophisticated Bank audience.

F. 3. Good point. A cada uno su propio gusto, so to speak. This emphasis on maintaining balance between producers/ subsistence/ nutritional needs and the requirements of the market will be most interesting. Is there not a relevant literature on the cultural conditioning of food preferences, changing dietary habits, etc., which it might be useful to cite?

F. 5. O.K. One trusts that you will tell us what these "mechanisms" are as they relate both to the potato, to the Peruvian cultural context and, perhaps, to other crops elsewhere. Your audience will be eager to hear you identify these mechanisms, especially as they derive from the context of indigenous society. This is the kind of material an anthropologist is uniquely suited to provide.

G. Conclusion. Your third sentence here is important. However, it is not clear from the preceeding portion of your outline where you have dealt with this question of the ways the potato's botanical attributes "shape the nature of production and consumption activities ..." This important assertion needs to be clearly supported by your data. I am sure it can be. Your last sentence is promising. I hope one can assume that you will indicate what these development strategies should be?

I will give you a call later this week in the hope that we can discuss any of my questions or comments which do not appear entirely clear. Once we have talked, I will get in touch with Personnel to complete arrangements for your contract.

I suggest that you plan to do a next-to-final draft which can be edited before you prepare the paper for distribution. Because so much time has already been lost, could we plan for a February presentation? That would mean that we would need to see a next-to-final draft by late January and a final draft by February 15, at the latest.

As I indicated in my last letter, your ideas are excellent and this outline is promising. What will now be required is strong supportive data and attention to careful writing: requirements I am certain you can meet.

Sincerely,

Peter B. Hammond
Rural Operations Review and Support Unit

Enclosures: As stated

cc:Michael Cernea

S. Agriculture

December 18, 1979

Dr. Richard B. Pollnac
Department of Sociology and Anthropology
University of Rhode Island
Kingston, RI 12881

Dear Dr. Pollnac:

I am glad to know from our telephone conversation today that you could be available for a seminar presentation here in the Bank on sociocultural variables in the design of small-scale fisheries projects sometime in the latter half of March. (I will keep in mind that you could not be available from March 19 through the 22nd.)

In deciding on a specific topic, I suggest that you consider using your Panamanian data as the context for identifying those aspects of the fishermens' culture -- technology, economic system, social organization, authority structure and religion -- which appear most relevant to the successful design of projects intended to benefit small scale fishermen. It will be important to demonstrate the distinctive way that an anthropological analysis contrasts with -- and can productively complement -- an economic approach to project design. Your special interest in cooperatives could, perhaps, provide a useful means of developing this distinction.

As a tentative way of fitting it into our proposed seminar schedule, your presentation has been tentatively entitled "Panamanian Fishermen -- Sociocultural Variables in the Design of Small Scale Fisheries Projects." Let me know if, and how, this title should be altered and when you think you have a topic clearly in mind, give me a call, next week, if possible. Then we would like to see an outline by the end of December. That will be reviewed quickly here and returned to you so that we can have an annotated version by January 15. We would then like to have the completed paper by February 15 -- for review and distribution prior to your presentation in March.

At present, we plan to make your presentation part of a joing seminar with Dr. Donald K. Emmerson, a political scientist from the University of Wisconsin. His title: "Rethinking Artisinal Fishery Development -- Western Concepts, Asian Experiences." I will send you a copy when it becomes available. Both papers would be distributed before the seminar. Each speaker would make a brief verbal review of the principal aspects of his thesis; discussion would follow. Later you would be asked to incorporate the results of this discussion in an epilogue. Enclosed is a suggested format for seminar papers which I hope you may find useful.

I am forwarding under separate cover, copies of several Bank reports on fisheries: the "India Inland Fisheries Project"; the "Philippine Fishery Training Project"; an "Appraisal of the Fisheries Development Project, Burundi"; and an "Appraisal of the Second Fisheries Project, Panama." They will give you an idea of the scope of Bank concerns in the fisheries sector.

As I indicated, once I have your annotated outline, I will forward your CV to the Personnel Division and they will be in touch with you directly concerning your honorarium and travel arrangements.

Let me know if any of the above raises questions. Otherwise, I will look forward to your call as soon as you are able to give more specific definition to your topic. I hope that I can hear from you by the end of next week.

Best wishes in the interim.

Sincerely,

Peter B. Hammond
Rural Operations Review
and Support Unit

Enclosure: As stated
cc: Mr. A. Sfeir-Younis, AGR, Ms. T. Kolars

Non Regional

S - Agriculture

December 14, 1979

Dr. Richard B. Pollnac
Department of Sociology and Anthropology
University of Rhode Island
Kingston, RI 02881

Dear Dr. Pollnac:

I am glad to know from our telephone conversation today that you could be available for a seminar presentation here in the Bank on sociocultural variables in the design of small-scale fisheries projects sometime in the latter half of March. (I will keep in mind that you could not be available from March 19 throggh 22nd.)

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As a tentative way of fitting it into our proposed seminar schedule, your presentation has been tentatively entitled "Panamanian Fishermen--Sociocultural Variables in the Design of Small Scale Fisheries Projects." Let me know if, and how, this title should be altered and when you think you have a topic clearly in mind, give me a call, next week, if possible. Then we would like to see an outline by the end of December. That will be reviewed quickly here and returned to you so that we can have an annotated version by January 15. We would then like to have the completed paper by February 15--for review and distribution prior to your presentation in March.

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Let me know if any of the above raises questions. Otherwise, I will look forward to your call as soon as you are able to give more specific definition to your topic. I hope that I can hear from you by the end of next week.

Best wishes in the interim.

Sincerely,

Peter B. Hammond
Rural Operations Review
and Support Unit

Enclosure: As stated

cc:ASfeir-Younis, AGR

S. Agriculture

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. Montague Yudelman

DATE: December 14, 1979

FROM: Charles Weiss, Jr., Science and Technology Adviser (PAS)

SUBJECT: "Alternative Agricultural Developers" in the U.S.

1. The attached report is an excerpt from a longer paper entitled "The Relevance of A.T. Developments in the U.S. to the Third World" prepared by William Ellis, George McRobie and Kenneth Darrow, and co-sponsored by the Bank and OECD. The full report has been published by OECD.

2. Mr. Ellis presented his report in a seminar to the Bank staff on October 23, 1979, in which he emphasized that the major contribution of U.S.-based "appropriate technology" groups lay in their overall approach rather than in the specific hardware that they were developing.

3. You are welcome to make any use of this report that you wish. Additional copies are available from my office.

Attachment

cc: Messrs. Pickering
Donaldson
Christoffersen
Thoolen

S. Agriculture

December 14, 1979

Dr. Nur Yalman
Director, Center for Middle Eastern Studies
Harvard University
Cambridge, MASS 02138

Dear Professor Yalman:

I am sorry for the delay in writing to tell you how pleased I am to have your letter of November 26 and to learn that you will be willing to participate in the Bank's seminar series.

It would be useful if your presentation could focus on the relevance of understanding indigenous systems of land tenure (1) for the efficient design of development projects and (2) as such understanding can contribute to a fuller comprehension of the social factors that must be taken into account in planning for effective land reform. Your materials on Eastern Turkey would provide an excellent context for such a presentation.

I am in the process of assembling some documents that may assist you in placing your analysis in a framework that will make it most relevant to the concerns of A Bank staff audience. For I am certain that they will be convinced of the worth of your argument and will want to know how its principles can be applied -- operationally -- to their own work. (But this focus is detailed in my letter of November 6 and need not be repeated here.)

Procedurally, we would ask that you prepare an annotated outline of your paper by January 15. That will be reviewed here and we would then like to have a completed draft by March 1. This will allow for its review and for prior distribution to seminar participants. Your presentation would be tentatively scheduled for mid-April and would take the form of a brief verbal restatement of the principal points of your thesis -- followed by a more detailed discussion of your paper's contents. You would then be asked to prepare an epilogue incorporating aspects of this discussion.

We hope that some of the papers from our seminar series, yours among them, will prove suitable for inclusion in a book Michael Cernea and I are editing for publication through the Johns Hopkins University Press.

I am enclosing a note that suggests a format for organizing your presentation. It is intended only to indicate some factors that need to be taken into account to ensure that the special operational concerns of a Bank staff audience are adequately addressed. From your experience in establishing the Social Planning Department within the Planning Secretariat for Turkey, you will know what is required.

When we have your outline, I will contact the Personnel Division to get in touch with you directly concerning your honorarium, travel arrangements and expenses. In the interim, I would be grateful to have a copy of your CV.

If any of the issues touched upon above raise questions, please let me know. Within a few days I will send along some Bank documents which you may find useful. I hope that at some appropriate point prior to your seminar presentation we can plan for you to come to the Bank for a day in order to meet some of the Bank staff who share your concerns, and who will be part of your interested audience.

Incidentally, I still remember with gratitude how much your permission to allow me to reprint "Ascetic Buddhist Monks in Ceylon" enhanced the value of my collection of Introductory Readings in Cultural Anthropology published some years ago by MacMillan. It is good to be back in touch.

More soon, best wishes in the interim.

Sincerely,

Peter B. Hammond
Rural Operations Review
and Support Unit

Enclosure: As stated
cc: Messrs/Mesdames T. Davis, F. Lethem, T. Kolan, G. Davis, M. Cernea

Central Files F-338
non-regional Records
✓ Ks Agriculture & Rur. Dev.
cc's - Population

Ms. Carmen Hamann, Nutrition Specialist, AGR

December 14, 1979

Harold W. Messenger, Assistant Director, PHN

ROME - Meeting on Interregional Consultation of Intersectoral Planning for Rural Children - Terms of Reference

1. You will visit FAO, Rome, from December 17 to 19, 1979, to attend the Interregional Consultation of Intersectoral Planning for Rural Children which will discuss follow-up activities of the World Conference of Agrarian Reform regarding the aspects of integrated rural development planning, concentrating on children as the target population.

2. Specifically, the meeting will have the following objectives:

(a) utilize the overall mechanisms of both the IYC and the ACC to engage in country/inter-country/interregional consultations for planning processes which would contribute to the future formulation and implementation of actions aimed at the betterment of children and their welfare;

(b) identify priority problems affecting infants and rural children within the family and community; and

(c) identify gaps in knowledge and action through a review and analysis of country programs for children, including notably the IYC.

3. Your role at the consultation meeting will be to explain Bank policies and programs in this area, and to contribute to the substantive discussion on items (b) and (c) above in a personal capacity.

4. On your return to Washington, you will prepare a brief report, identifying possible activities that future Bank-financed projects could support.

Cleared with and cc: Messrs. Berg, Senior Advisor, PHN
Thoolen, AGRRD
cc: Mr. Schebeck, AGRNU

CHamann:ap

Yellow

OFFICE MEMORANDUM

S. Agriculture

TO: Mr. G. F. Donaldson, Chief, AGREP

DATE: December 14, 1979

FROM: J. D. Von Pischke, AGREP

SUBJECT: "Fungibility and the Design and Evaluation of Agricultural Credit Projects"

1. The paper bearing this title, by Dale Adams and myself, which was approved for conference presentation by Messrs. Yudelman and Merriam in July has been sent to the American Journal of Agricultural Economics. Reviewers' comments have been received and a revised draft, which is attached, has been prepared. The revisions have been solely of an editorial nature and involve no new arguments or examples. However, the Recommendations section, beginning on p. 18, has been extensively reorganized and tightened up. From the tone of the AJAE editor's letter, also attached, it appears that the attached draft would be acceptable to AJAE for publication with no changes of substance.

2. If the article is accepted, a fee of $40 per printed page would be payable when galley proofs are returned.

3. It would be appreciated if you could send the attached version to Messrs. Yudelman and Merriam for their clearance for AJAE publication.

4. At various times we have discussed the relationship between outside papers and publications and the purveyance of ideas within the Bank. A draft CPN on a sectoral approach to ag credit projects has been seen by Brian Argyle and is being prepared for wider circulation. This CPN indicates that fungibility has implications for project design, the most visible of which is that an overall rate of return is not required for credit projects. By the time the article would appear in AJAE the draft CPN should have received wide distribution and comment throughout relevant parts of the Bank. By the time, too, Dale Adams and I should have presented a short seminar on the topic in the Bank, using the attached paper and the relevant annex from the IDA 105-KE (Kenya First Smallholder Credit project) PIER as background material.

cc: D.B. Argyle, AGR

Attachments

JDVon Pischke:oh

S-Agr.

December 13, 1979

MEMORANDUM

TO: ALL A.I.D. POSTS

FROM: AA/PPC, Alexander Shakow
AA/DS, Sander M. Levin

SUBJECT: Guidance on Forestry and Related Issues

Over the past year Missions have received numerous documents and reports of meetings focused on the problems related to deforestation along with instructions to begin looking at individual country situations as a part of the CDSS process. All of these are a necessary part of a process leading to Agency policy dealing with the problems of deforestation and natural resource depletion.

The attached A.I.D. Guidance on Forestry and Related Issues constitutes one more step toward the formation of a clear strategy. It outlines opportunities for Missions to examine the extent to which deforestation and the loss of vegetative cover constitute an impediment to development, as well as the commitment of the country to alleviating the causes and effects. This is a request to Missions to start a dialogue with host governments and other donors where this has not been done and to build on and expand activities which have already been initiated.

Also attached is a new paper on Peace Corps Forestry Initiatives. It is being sent along with A.I.D. Guidance for two reasons: (1) to acquaint you with the type of initiatives which PC feels are appropriate to their goals and experience, and (2) to provide some further insight to the difficulties encountered in implementing certain types of projects.

The A.I.D. Guidance presents a wide range of objectives and appropriate initiatives. The Peace Corps paper focuses only on those which are appropriate for Peace Corps involvement. A.I.D. Missions in countries where the Peace Corps is located should discuss both papers with the Peace Corps staff, examining possible

new activities as well as collaboration on any existing Peace Corps projects. For Missions where there is no Peace Corps the details of this paper should prove helpful, especially if A.I.D. or PVOs should propose similar initiatives in the future. The Peace Corps welcomes comments and suggestions on their paper.

Missions are requested to report to A.I.D./W on those countries where deforestation and loss of vegetative cover constitutes a serious threat to other development activities and where there is an awareness and a commitment on the part of a country to bring about improvements in the situation. This will give us better information on the extent of the problems, the locations most severely affected and enable A.I.D./W to sort out the necessary financial and technical resources that may have to be committed.

We will soon provide you with an annotated bibliography of reference materials on this subject through the Office of Development Information and Utilization (DS/DIU). Included will be details on activities already completed, underway or planned by A.I.D. that might prove helpful to those preparing similar initiatives. As this inventory of activities becomes better defined it will provide useful information to others, both inside and outside A.I.D., particularly as the U.S. begins to define its contributions to a global effort to deal with problems related to deforestation.

Attachments:

1. Guidance on Forestry and Related Issues
2. Peace Corps Forestry Initiative

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON D C 20523

GUIDANCE ON FORESTRY AND RELATED ISSUES
December, 1979

I. INTRODUCTION: The President will soon receive a report outlining a policy, strategy, and program framework which the USG should pursue to cope with problems related to tropical deforestation. One of the major conclusions of the report, that A.I.D. along with other Federal agencies is helping to prepare, is that accelerated deforestation is rapidly depriving the rural poor of resources needed to meet basic human needs -- food, fuel and shelter. A.I.D. intends to help developing countries meet the challenge posed by deforestation and related problems. This guidance outlines a range of objectives and program options which Missions might take, either bilaterally or in concert with other donors, which will be responsive in a meaningful way to expected instructions from the President. A copy of the Report to the President will be provided as soon as available. This message provides background information and supplements AIDTO Circular A-210 on Preservation of Forests and elements of the Agricultural Development Policy Paper of June 3, 1978. It also outlines available A.I.D./W technical resources should Missions seek assistance and summarizes current activities in this field.

II. BACKGROUND: "Deforestation" is a development problem that extends beyond the loss of tropical rain forests. Forests, woodlands and grasslands provide people with essential food, forage, fuel, shelter, a wide range of commercially valuable products, employment opportunities and environmental benefits. These resources are a vast reserve for current and future generations--a resource that is being jeopardized in many parts of the world by the proliferation of unsustainable patterns of use and an inappropriate allocation of scarce human and capital resources often resulting in an inequitable distribution of income adversely affecting the economic livelihood of the poor.

Planned and unplanned use of forests, woodlands, scrub and savanna always involves difficult trade-offs. The gain of some immediate benefits--timber, fuelwood, space for planting food crops--must be balanced against the loss of values needed over the long term--soil fertility, water quality and quantity, genetic resources, ecological diversity, wildlife and aboriginal habitats, future commercial development, tourism and recreation.

Missions should be aware that in addition to the technical-horticultural aspects of tree planting (soil fertility and pH, water availability climatic conditions, altitude, appropriate species, diversity), there are other important

logistic and managerial activities that must be considered. Solutions to overcome deforestation must also incorporate social-cultural-economic-political-environmental considerations if natural forest conservation and reforestation activities are to succeed.

Our programs must be designed to meet the immediate food and fuel needs of the population by dealing with the causes of resource deterioration (fuel; agricultural land for food, pasture and fodder; and forest products), as well as with symptoms of the problem (tree loss, erosion, declining soil fertility). Careful assessment of individual cases will assure that no potential cause--and therefore no potential remedy--is unwittingly excluded from consideration. It should be realized that since energy/forestry/environmental components of projects cannot be separated clearly, the pursuit of some of the activities identified in this message will also be consistent with the high priority the Agency is placing upon energy programs.

Authority to address these problems is contained in the Foreign Assistance Act of 1961 as amended by the Congress in 1977, 1978 and 1979; specifically sections 102, 103, 103b, 118 and 119. The law authorizes A.I.D. to provide assistance with problems of environment and natural resources, forestry, soil conservation and water management, land use improvement, wildlife and renewable energy, in order to maintain resources essential to meeting basic human needs.

III. POSSIBLE PROGRAM ACTIVITIES: Missions should consult with host countries and help establish the major causes of deforestation and related problems, and determine their magnitude, areal extent, urgency and possible corrective actions. Since most restoration efforts are costly, both in terms of financial and technical resources, each Mission should ensure effective coordination of its forestry activities. One approach is to promote the formation of a "natural resource coordinating committee," with representation from other donor organizations and relevant host country agencies which will optimize the use of limited resources and enable Missions and developing countries to address problems beyond the capability of any single agency.

Varying degrees of awareness exist in LDC governments. Some such as Haiti, Costa Rica, Nepal, Panama, and Upper Volta have developed programs and obtained U.S. assistance. Others are trying to define the problems before designing specific activities. While the causes of deforestation and devegetation are different enough to require country-specific approaches, no

country is immune from the problem of expanding populations placing increasing stress on natural systems. Because of the diversity of problems and commitments, Missions should consider these broad areas of program acitivity:

- Analysis, planning and policy formulation (including natural resource inventories, and land-use assessments, capability classification, tenure security and legislation);
- Institution-building for natural resource management and conservation;
- Incorporation of forestry activities into agricultural and rural development programs;
- Afforestation or reforestation, and protecting natural/induced vegetation;
- Appropriate and alternative energy;

There are a number of means by which assistance may be provided:

- Collaboration with other bilateral or multilateral donors or direct assistance to host countries;
- Provision of technical assistance with an emphasis on multidisciplinary teams;
- Cooperation with the Peace Corps and Private Voluntary Organizations;
- Participation in consortia capable of sponsoring regional approaches to natural resource management and development;
- Provision of PL 480, Title II and Title III support.

The nature of deforestation and related resource problems suggests that a wide range of objectives and initiatives may need to be examined by Missions. This may be appropriate as a part of the ongoing CDSS process or as a separate element of an "environmental profile" as noted in AIDTO Circular A-210. Several possible initiatives have been associated with five basic objectives in order to demonstrate how some activities may provide direct as well as indirect support. Some initiatives could support several of the listed objectives. Missions may also be able to suggest others based on an assessment of country circumstance and needs. The objectives include raising the level of host country awareness, direct forestry improvements, reduction of pressures causing deforestation and natural resource degradation, and improvement in institutional capabilities to manage natural resources.

Each Mission will have to consult with the country on their needs and priorities and then select appropriate objectives and initiatives. It may be that only one of the initiatives can be given the level of attention needed or that several must be addressed simultaneously if results are to be achieved, but in any event, the approach by A.I.D. and the host country in planning initiatives must begin with a conscious effort to expand planning horizons to suit the long-term and ultimately large-scale process of natural resource development and management.

1. OBJECTIVE: To raise host government awareness of the problem of deforestation and natural resource degradation in order to increase their commitment of resources, both human and financial, to provide sustainable natural resource systems in order to meet basic human needs.

- Help assess actual loss rates and analyze causes of deforestation to determine the magnitude and types of efforts needed.

- Develop a comprehensive capability to survey forest resources and to monitor forest cover changes through both ground and remote-sensing technologies.

- Assess with the host government, the economic consequences of existing forestry related practices and land-use patterns, including the associated indirect costs of deforestation, e.g. flooding, soil loss, siltation, disruption of agricultural cycles, rising costs of fuelwood and other forest forest products, loss of medicinal trees, bushes and wildlife.

- Help develop a country strategy to systematically deal with deforestation and associated forest land and resource use problems.

2. OBJECTIVE: To provide support for protection, regeneration, production and restoration efforts.

- Help identify, protect and manage critical catchments and watersheds, areas which contain representative genetic materials, and unique or fragile environments.

- Develop planting materials and technologies and train people for a variety of forestry activities which can be locally initiated and controlled: tree plantations, agroforestry, woodlots, and private holding tree planting.

- Assist in developing income generating programs for the rural poor based upon managing and marketing forest products (plant and animal) on a sustainable basis so that there is a local stake in maintaining natural and planted forests.

- Support efforts to learn and record local knowledge of plants and animals and the scientific basis for indigenous resource practices.

- Initiate, support and expand existing programs of applied research in agroforestry to identify, screen and evaluate trees and plants having characteristics useful to and aimed at solving problems of the rural poor: fast-growing, regeneration by coppicing, multi-purpose (wood, forage, fertilizer and soil fertility improvements) which complement food crops, or which provide other economic and environmental benefits.

- Consider Food for Work (Title II) and Food for Development (Title III) to provide the commodity support and local currencies needed to finance the substantial amounts of labor that might be needed in any large-scale efforts to restore degraded lands and critical watersheds.

- Encourage governments to implement necessary socio-economic and administrative changes, such as land tenure security, so that greater local participation will be forthcoming.

3. OBJECTIVE: To ease pressures on current use of forests and other vegetation by developing renewable and alternative sources of energy and appropriate and alternative, sustainable cropping systems for the rural poor.

- Support village woodlots or urban tree plantations where there is an active pattern of communal landholding or communal oversight of activities. The necessity for involving the women of the community (who usually gather and utilize the fuelwood) in the identification, design, and implementation of such projects cannot be over-stressed.

- Increase productivity of currently cultivated land to reduce the pressure of expanding populations to use forest, savannas and marginal lands for agricultural expansion. This approach needs to be initiated with caution, looking at both the intrinsic capability of the land to support intensified agricultural production and the energy requirements (including fertilizers and pesticides) to sustain it.

- Develop alternatives and renewable energy sources including substitutes for wood fuel and charcoal. Also consider the field testing of solar devices with potential for drying grain, fish and tobacco as well as more efficient low-cost stoves and improved kilns for charcoal production.

- Utilize the concept of agroforestry for the simultaneous and stabilized production of food, forage, and fuelwood especially in areas where shifting cultivation is practiced.

- Evaluate possibilities for short-term subsidy programs for alternative fuels, especially for poor consumers. Such programs are, however, expensive and difficult to terminate.

- Consider, if agro-forestry not appropriate, short-term supplementary financing of commodity support to compensate owners for the loss of productive assets. The timescale of forestry efforts means that land which is replanted to trees is withdrawn from other forms of cultivation for long periods of time.

4. OBJECTIVE: To increase utilization efficiency of forest and other natural resources through: (1) technological improvements--in production, extraction, processing and end use,-- and (2) more effective means of controlling the use rates of existing resources..

- Develop local capability to formulate solutions which are specific to particular environments through long-term training at professional levels.

- Provide short-term training programs in tree planting, propagation and harvesting. A.I.D.'s policies focus on community level training and support of community level efforts through extension services for forestry and soil/water conservation.

- Support public education on resource conservation to provide stimuli for effective community or individual participation in natural resource use through Forestry for Local Community Development (FLCD) and school or backyard tree nurseries.

- Consider small-scale or cottage industry development to utilize "noncommercial" species of trees remaining after selective harvesting for commercial purposes. This approach is limited and must be coupled with appropriate reforestation and environmental controls to ensure that such intensive use of the forest does not create environmental problems of its own.

5. OBJECTIVE: To assist governments to strengthen their institutional capability to manage natural resources through improved planning and regulation of lands for agriculture, energy and other uses at the farm, community and regional levels.

- Upgrade the effectiveness of host country forestry personnel to manage existing reserves by providing appropriate training and equipment.

- Provide technical assistance to host country agencies in analysis, planning, legislation and policy formulation, and environmental assessment activities.

- Encourage host governments to initiate regenerative programs for lands which have deteroriated due to misuse.

- Encourage and assist host governments to develop paraprofessional personnel able to advise small and marginal farmers on maintenance of existing tree crops and integration of tree and other crops in economically viable cropping patterns.

- Encourage and assist host governments to develop and utilize local institutions to build community involvement and capacity for improved resource planning and management.

- Encourage and assist host governments to develop and utilize regional institutions to strengthen system-based oriented (e.g., river basins or catchment areas) planning and management of natural resources.

While this message has focused on activities that might be undertaken in recognition of an identified need, the Missions must realize that many traditional development activities can lead to deforestation, including, land clearing for agriculture and cattle grazing, road construction (especially into unexploited areas), and population resettlement schemes. In these and similar activities, the Missions must ensure that A.I.D. activities do not cause unnecessary deforestation and that the environmental examination carefully evaluates and concludes that the cleared lands will sustain the intended uses and that the activity will go forward only if resource regeneration, or other sustainable use components are incorporated into the project. Missions should also be examining all ongoing and proposed major projects (e.g. integrated rural/agricultural development, irrigation, rural water supply, fish pond development, range management in arid areas) to ensure that appropriate elements such as erosion controls (windbreaks and vegetative plantings), woodlots, watershed protection, training, and nurseries are fully incorporated.

There are several technical problems related to projects in this area that must be overcome, but no project will be successful if technical criteria alone are examined. The host government and local communities must see the need for such activities and be willing to take the steps necessary to reduce natural resource depletion and destructive land-use patterns. Until that level of awareness and commitment is reached, our attention should be directed toward assessment type activities and those designed to upgrade the host country planning capabilities. Wherever the commitment exists, it should be supported and expanded.

Finally, it should be recognized that the economic and social benefits of projects in natural resource conservation, preservation and development may not be apparent in the short term. This should not deter Missions from proposing such activities, which will normally have a three to five year project life span. The measurable benefits when a project terminates may be in terms of institutional development, changed practice, reduced levels of environmental degradation; and these will be sufficient to posit as objectives when proposing activities in this area. It may well be that follow-on project support will be justified in individual cases; the long range nature of the problem, and the need to sustain and support an equivalent long term commitment by the host country, may argue for second stage projects.

IV. AID/W Resources: An interdisciplinary mode of intervention is necessary because of the complexity of the deforestation problem. In addition to the resources normally available from their regional offices, Missions can tap skills and expertise of Development Support Bureau personnel, programs and projects. These include: (1) IQC's in Environment and Natural Resources, (2) Several ongoing and planned DSB projects, (3) Consulting services from direct-hire and IPA personnel.

Six newly arranged IQC contractors in Environment and Natural Resources can provide some expertise in forestry. The list of IQC firms was attached to AIRGRAM A-210. IQC's and ongoing projects in other related subject areas such as Agriculture, Energy, or Rural Development can also provide needed expertise.

A number of DSB personnel and IDIs with formal training in forestry can be made available for support of Mission needs. An AID/W Forest Resource Group has been proposed to serve as a key point of contact on forestry matters. Other personnel having knowledge of related fields such as remote sensing, environment, hydrology, agronomy, soils management, energy, land use planning, land tenure, local organization, and community participation can also be made available in response to specific Mission requests. For some of the identified initiatives, personnel from the Peace Corps and other agencies, as well as Private and Voluntary Organizations, might be available.

January 24, 1980

ROUTING SLIP

Messrs. V. Rajagopalan, E-1023
C. Weiss, D-1000
J. Coulter, E-1039
G. Darnell, D-826
D. Pickering, D-829
T. Davis, E-930
B. Thoolen, D-841
J. Hanna, C-309
J. Blaxall, A-607
A. Golan, A-600
M. Walden, F-402
R. Wadsworth, F-930
G. Homsi, C-908
A. Otten, C-913
C. Ramasubbu, A-942
R. Stern, A-638
K. Haasjes, A-942
P. Greening, E-539
D. Mahar, C-802
R. Skillings, C-802
F. Lethem, E-1028
R. Overby, N-552
H. Reitze, N-558
J. Tixhon, N-549
K. Venkatraman, C-809
Ms. H. Martinez, C-809
C. Watson, N-546
R. Latimer, N-546
D. Rubin, E-930
G. Davis, F-402
K. Marshall, A-1037
Messrs. C. Keil, A-400
H. Wagner, A-925
R. Fishwick, B-215
J. Martinez, C-816
F. van Gigch, A-201
J. Collins, D-821
J. Edgerton, D-843

N. Brouard, A-1037
J. Gorse, E-301
G. Krishna, A-400
O. Price, B-608
N. Sharma, C-913
L. Sonley, A-942
P. Hammond, E-933
J. Hendry, A-1047
C. Walton, F-1006
S. Eccles, E-1005
R. Grimshaw, E-938
K. Berg, B-208
J. Tillier, E-301
J. Peberdy, A-242
W. Smith, A-642
R. Rowe, A-507
K. Pranich, F-518
G. Tibor, F-418
D. Lee, A-542
D. Parsons, B-507
C. Nottidge, F-433
D. Haynes, A-712
M. ffrench-Muller, D-751
B. Merghoub, A-718
P. Naylor, C-711
P. Goffin, A-813
L. Christoffersen, D-839
W. Peters, D-813
J. Russe-l, D-814
G. Temple, D-808
S. Draper, D-848
B. Gray, D-812
R. Hewson, F-925
J. Greenfield, F-408
J. Wallis, A-924
M. Saddington, F-402
E. Senner, E-539
P. Whitford, F-924
F. Thomas, A-923

This Office recently received some additional material (attached) from the U.S. Agency for International Development (US/AID) relating to forest management which should prove of interest to you. It constitutes an extension of material initially sent to you last August by Dr. Lee.

R. Goodland

Cleared w/& cc: Dr. J. A. Lee, OEA

RG:OMc

S - Agriculture

Mr. Ernest Stern, VPO
Through: Mr. Warren C. Baum, CPSVP
Montague Yudelman, Director, AGR

December 13, 1979

Agriculture Towards 2000

1. In response to your question, the report "Agriculture Towards 2000" (AT 2000) is an essay in futurology that analyses trends in developing country agriculture up to the year 2000. It has strengths and weaknesses combining, as it does, quantitative modelling with subjective judgements on the productivity of resources. In spite of poor data - a universal weakness - the report comes up with projections of production of all major crops by the year 2000 as well as aggregate requirements for inputs such as seed, fertilizer, pesticides, power inputs and physical investments. These projections have been premised on meeting an aggregate growth rate in output of 4% per year which, in our view, is not too plausible. The dangers of this are already manifest in that the report of the President's Commission on Hunger has adopted this projection as feasible and reasonable.

2. One great strength of the study - and its novelty - is that it is built up from country level estimates which, in turn, are derived from a fairly detailed inventory of land quality and water potential. This inventory is based on years of detailed work undertaken by FAO and provides some indication of what could be produced with available technology. Judgement on what could be produced was reinforced by expert opinion from technicians and others familiar with the resources in individual countries. The procedure was to establish country targets - to conform with the aggregate growth rates and presuming the lowest possible level of imports - and then adjust according to the resource constraints.

3/ The study's weaknesses are that it projects the aggregate output of each country without any substantive reference to prices, trade, comparative advantage, or the physical and administrative machinery that might be necessary. The result is that some individual country perspectives are unreal. For example, Kampuchea and Zambia are perceived as major exporters by 2000. The country perspectives are not systematically merged with a global framework; there is little room for interdependence between countries, trade expansion or a changing relationship between agricultural and non-agricultural sectors. Most important is that while the whole exercise is centered around supply meeting demand there is no mention of prices. There is no equilibrium mechanism in the model and it is not clear that the scenarios are compatible with a competitive or an administered market clearing price system. As a consequence of this "pricelessness", projections of values have little meaning while the projections of physical quantities are often too aggregate to be useful.

4. Perhaps more importantly, the constraints imposed by meeting a given growth rate caused the study to forego any systematic consideration of the development options for individual countries. The original design of AT 2000 called for the use of a programming model to consider several different "strategies" of development. Unfortunately, the modelling work was not completed, instead technical and policy choices were prescribed. If the work had been completed we have no doubt that a likely scenario would involve more trade and a larger production of fruits, vegetables and animal products than postulated by all the scenarios in AT 2000. In our view, the most interesting part of the current exercise would be if it could encompass different strategies and this would require completion of the modelling work.

5. From analytical work developed in this Department, it appears that the main deficiency of the study - its disregard for price effects - could be remedied by linking the incomplete programming model developed in FAO to the World Agricultural Resource Model being developed by USDA. An interface between these two models could prove useful as this would add a price and trade dimension to FAO's work, particularly as the disaggregated projections of the two models are very close.

6. There are other ways to build on the work represented in AT 2000 which could make use of existing data and analysis in the Bank which includes: (i) project data on yields, ICORs, and investment requirements; (ii) the impact of prices on small farmers which was comprehensively studied in AGR's pricing and subsidy research effort; (iii) the nutritional implications of price, production and development scenarios which also have been modeled (AGR and DPS), and (iv) macroeconomic and trade scenarios from the WDR exercise. Such a joint FAO/USDA/World Bank effort could:

1. Provide a capacity to answer questions such as: (i) impact of energy price changes; (ii) efficiency of cereal self-sufficiency strategies; (iii) long-term price ratios for meat, cereals, non-cereal food crops, fibers, etc.; (iv) the impact of shifts in domestic support policies of the EEC, Japan, China and USSR.

2. Strengthen sector analysis, making possible systematic reviews of agricultural policy options which are currently approached by Bank missions on an ad hoc basis. This could significantly improve the forward planning process for lending.

3. Generate country specific price data for project cost/benefit analysis.

Resource permitting, we propose to continue exploring this with the USDA and FAO in the coming months.

MYudelman/GDonaldson/CMLewis:mt

S - Agriculture

Through: Mr. Ernest Stern, VPO
Mr. Warren C. Baum, CPSVP
Montague Yudelman, Director, AGR

December 13, 1979

FAO's Mandate to Monitor Progress in Rural Development

1. The Bank participated initially in helping FAO prepare for the World Conference on Agrarian Reform and Rural Development. We, along with the other UN agencies, had some problems with the recommendation that FAO should "monitor" both international and national rural development efforts and to measure actual progress in rural areas. Despite strong objections from the UN (Mr. Dadzie) FAO proceeded to push through the recommendation that they have responsibility for monitoring.

2. We were asked to help in the conceptual stages of designing indicators of progress. We were prepared to make Mr. Turnham available to help; unfortunately, there were higher priority claims on his time. Nurul Islam has asked again for an input from us but we simply cannot spare anyone to attend the endless meetings being convened to discuss this topic.

3. As you may have gathered, I do not believe this will be a very fruitful exercise. In my view, it would be easy to design indicators of rural development (or lack of it). But either data will not be available or governments will be unwilling to mount the massive effort required to gather such data and make it available to an external agency such as FAO. I foresee an exercise in frustration. Consequently, I am reluctant to get too involved in it.

cc: Mrs. Shirley Boskey, IRD

MYudelman/CMLewis:mt

NR

S. Agriculture

Mr. Alfredo Sfeir-Younis, AGR

December 12, 1979

Peter B. Hammond, RORSU

Proposed Seminar By Dr. Richard B. Pollnac on "Panamanian Fisheries--Socio-cultural Variables in the Design of Small Scale Fisheries Projects"

As agreed in our conversation today, I will endeavor to schedule Dr. Pollnac's presentation for March rather than February so that it can be combined in a joint seminar with Dr. Emmerson's paper on "Rethinking Artisinal Fishing ..."

I would be grateful if you would ask your secretary to forward copies of the Policy Paper and the draft of Dr. Emmerson's paper as they become available. As relevant materials related to Dr. Pollnac's presentation become available, I will see that copies are sent to you.

I anticipate that the distinctive thrust of Dr. Pollnac's presentation will derive from the anthropological perspective he takes to analysis of his Panamanian data---especially to its implications for the more effective design of Bank projects; and I note your ideas that it would be useful to have some suggestions on the issue of quantifying apparently non-quantifiable variables.

I look forward to cooperating with you further in the development of a productive joint seminar.

cc: Ms. Kolan

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

Non-Regional file
S - Agriculture

OFFICE MEMORANDUM

TO: Addressees Below

DATE: December 12, 1979

FROM: F.L. Hotes (Irrigation Adviser, AGR/CPS)

SUBJECT: Fiscal Year 1979 PPARs
Principal Lessons Learned from Irrigation Project PPARs
Preliminary Comments

1. This memorandum sets forth my selection of the more significant points made in PPARs in the following projects, all submitted to the Board in FY79:

PAKISTAN - Flood Rehabilitation
Cr466-PAK Appraised October 1973

MEXICO - Rio Colorado Irrigation
Ln527-ME Appraised March 1967

KOREA - Pyontaek-Kumgang Irrigation
Ln600-KO Appraised September 1968

In addition, my comments are offered as to the lessons to be learned. Paragraphs' numbers refer to the PPARs.

2. Pakistan Flood Rehabilitation

(a) The PPAR suggests that in cases such as this, where a satisfactory ERR can readily be qualitatively recognized but cannot easily be calculated, it might be worthwhile at least to make a cost-effectiveness analysis (i.e. compare unit costs for project components with standard unit costs for similar activities. (para 13)

(b) Documentation required seems excessive for disbursement against foreign exchange costs of many items. Same results with less time and paperwork could be achieved by disbursing against a percentage of total costs of the items. (para 15)

(c) Use of consultants by the Bank to supervise in the country gave excellent results for this crash project. Costs were less than $30,000 for a $40 million credit (para 18). 89% of credit was disbursed in 13 months.

(d) In view of quick disbursement of 89% of credit in 13 months, extension of closing date by 2-1/2 years for spare parts seemed excessive.

3. Rio Colorado Irrigation Project

(a) Limiting Bank participation to scheduled limited loan funds, without reducing project scope, caused financing difficulties for Government and probably resulted in project completion delays. (para 13-17)

(b) Streamlining Bank procurement procedures would have accelerated disbursements and project completion. (paras 18-19)

(c) In spite of recognized inadequacies in the feasibility study, overall project design and appraisal timing were opportune. (para 24)

(d) The Bank appraisal, as was the fashion at the time (1967), did not adequately reflect the many uncertainties surrounding costs, benefits, and rate of implementation. Project was still very successful. (para 25)

4. Pyontaek-Kumgang Irrigation Project

(a) Inadequate surveys of tidal lands during preparation led to gross overstatement of potentials and underestimation of costs. (paras 11 - 15, 32)

(b) Introduction of High-Yielding Varieties (HYV) of rice led to outputs exceeding appraisal estimates. (para 10)

(c) Inadequate attention was given to subsurface drainage design during preparation and project execution (paras 23-25), resulting in uncertainties even after completion as to drainage benefits and appropriate design criteria.

Lessons to be Learned

5. General lessons to be learned from these PPAR comments, and borne in mind for future Bank lending for irrigation projects, are set forth in this paragraph:

(a) Economic Analysis. Even though an ERR cannot be easily or conveniently calculated, or even if it need not be calculated because of readily but qualitatively recognizable feasibility, a cost-effectiveness analysis should be performed. While OED does not make this point, it is worth inviting the attention of Bank Projects Staff to the fact that cost effectiveness should be a consideration in every project evaluation. It is not sufficient that the projected ERR be "satisfactory." Bank staff also should satisfy themselves that significant savings in costs or increases in benefits cannot be achieved by reasonable modifications of project concept or formulation. It is my impression that in some cases cost effectiveness is not given much attention if the Government's project meets ERR requirements.

(b) Procurement

(i) During appraisal and project start-up, Borrower procurement procedures and Bank requirements should be reviewed with Project staff, with a view to reach mutual understanding and streamline procurement as much as possible. This already is recommended Bank procedure, although not always fully achieved.

(ii) Disbursement against a percentage of item cost in lieu of disbursement against documented foreign exchange costs may accelerate disbursements and reduce paperwork for Bank and Borrower. This procedure frequently is used for Bank projects.

(c) Inadequate project preparation usually results in increased costs and delays in execution, but sometimes projects are still successful despite such a deficiency. Risks and uncertainties should be identified and discussed in appraisal reports (this is now standard Bank procedure).

(d) OED believes that extension of a loan/credit for 2-1/2 years to disburse the final 10% of funds available is excessive. While the length of time and percentage of funds to be disbursed vary, it has been my observation that this is a frequent Bank practice. While there is some undefined limit, I do not see where this practice is inherently "bad."

(e) The use of consultants by the Bank to assist in supervision of projects requiring rapid procurement and disbursements may give excellent results in a cost-effective manner. In view of increasing staff loads, perhaps serious consideration should be given to more use of consultants to the Bank to improve Bank supervision efforts and project execution.

Action Required

6. Addressees of this memorandum are requested to return comments to the writer before the end of January 1980. These can be in the form of marginal notes on a xeroxed copy.

FLHotes:rm

Addressees: Messrs. Malone (OED); Morse (PAS); Donaldson (AGREP); Otten (LCP); Pranich (ASP); W. Smith (AEP).

cc: Messrs. Yudelman, Pickering o/r (AGRDR/CPS).

S-chvy.
✓S-agric.

December 11, 1979

Dr. Stephen R. Gliessman
Departomento de Ecologia
Colegio Superior de Agricultura Tropical
Apartado Postal #24
Cardenas, Tabasco, Mexico

Dear Dr. Gliessman:

Excuse us for not including the skeleton draft for the "Future Directions" Guideline. Please view the skeleton as a list of possible topics; feel free to add to, subtract from and expand upon the listed subjects. Enclosed are several articles on agriculture in the future, and a draft MS "Evaluation of Microbial Technologies Involved in Fuel Production, Agriculture and Forestry", which may be of use and interest to you. Please keep any of interest to you or your department.

Again, feel free to call if you have any questions.

Thank you for your help.

Sincerely,

RG

R. J. A. Goodland
Office of Environmental Affairs

Encls.

cc: Dr. J. A. Lee, OEA

RG:OMc

Future Directions for Agricultural Projects

Future projects will improve in energy conservation or production, and in sustainability of yields, while being environmentally and socially sound (in addition to the usual Bank criteria and goals).

The following should be emphasized: (Include definitions, where being attempted, literature, etc. on each point.)

1. Eco-agriculture:

2. Sustained Yield:

3. Multicrop Projects: Diversification of crop, timing, and spacing so as to minimize agricultural, economic and environmental risk.

4. Increased integration of agriculture with aquaculture and recycling.

5. Microbial Potential: Yeasts; industrial as well as village biogas; single cell protein; symbiotic biological nitrogen fixation; vitamins; viral, bacterial and fungal production; biological control of weeds (if not in IPM); accumulation and fixation of other nutrients (synergists; land-based aquatic biomass systems.

6. "No-till" farming and other 'appropriate technologies' to increase production while conserving soil and other resources.

7. Small Animals: Their value and role in family village plots (e.g. bees, agoutis, rabbits).

8. Fuel: Firewood, charcoal, etc.; oil, latex and resin for local consumption (e.g. castor bean oil for diesels).

9. Novel crops and animals: (See NAS's Tropical Plants with Promising Economic Value.)

10. Appropriate Technology:

RG

S-Agriculture

December 11, 1979

Dr. Vijay P. Singh
Director
International Symposium on
Rainfall Runoff Modeling
Mississippi State University
P.O. Drawer CE
Mississippi State
Mississippi 39762

Dear Dr. Singh:

Thank you very much for your kind invitation to participate in your May 18 - 21, 1981 Symposium. My delay in responding is due to the fact that I have had your letter and bulletin circulated among colleagues at the Bank to ascertain their potential interest.

It appears that no one in the Bank can prepare a paper---because of either operational pressures or lack of a topic which they believe would fit the Symposium. At least one person has indicated that he would like to attend, but it is impossible at this early date to make a firm commitment in that regard.

Please keep us informed via your bulletins as to progress on the Symposium, as that will serve to remind us of the dates.

I regret that our response could not be more positive, but we wish the Symposium every success.

With very best personal regards, I am

Sincerely,

F.L. Hotes
Irrigation Adviser
Agriculture and Rural
Development Department

FLHotes:rm

cc: Mr. P. Whitford (AEP)

NR

S. Agriculture

December 10, 1979

Dr. David Freeman
Department of Sociology
Colorado State University
Fort Collins, Colorado 80523

Dear Professor Freeman:

As you may know, Michael Cernea and I will be editing a number of the papers presented in the Bank's Sociological Seminar Series for publication through the Johns Hopkins University Press. Projects for Rural Development: The Human Dimension is our tentative title. We look forward to including in the book the good article entitled "Sociological Analysis of Irrigation Water Management--A Perspective and Approach to Assist Decision-Making" which you wrote with Professor Lowdermilk.

In the course of reviewing your paper here in the Bank the following issues/queries have been raised.

1. Could the phrasing of the tasks on Page 2 be clarified? For example, some readers may have difficulty in readily grasping what is meant by "mapping strategic variables accounting for behavior associated with poor irrigation efficiencies in existing systems."

2. Would you consider starting your paper with the strong statement that appears at the bottom of Page 2, Paragraph 3, last line, "This paper represents ... ?" This directly identifies the important issues you will be dealing with and would help get your presentation off to a good crisp start.

3. Page 5, could most of this useful review of the literature go in a footnote, so that the action-oriented reader could move on with less risk of losing track of the main thread of your argument?

4. Page 6, Paragraph 1, last line, could we have a definition of "warabandi"?

5. Could the table on Page 10 be redrawn for greater clarity?

6. Page 11, Paragraph 2, line 3, could we have a synonym for "lumpy"?

7. Page 25, the point is well taken that irrigation technologies are often more readily understandable than are the new social arrangements they entail. But could you cite some cases?

8. And, finally, could the general formulation of the first twenty-six pages be more tightly integrated with the examples provided in the case study. At present, the two parts read almost like separate articles.

To assist you in making the relatively minor editorial revisions necessary to fit your article into the format of the book, I am enclosing a style sheet and a manual on the preparation of Bank manuscripts for external publication. A working table of contents is also enclosed.

Also enclosed is a copy of your reflections on the discussion of your seminar paper. The marginal comments may be useful in incorporating some of these ideas into the body of your revised article.

If any of the issues raised above require clarification, please let me know. Basically, your paper is in excellent shape. With a few modifications it should be ready to go as a strong addition to our book. We hope that you and Dr. Lowdermilk can have your revised manuscript ready to send on to us by January 15.

Sincerely,

Peter B. Hammond
Agriculture and Rural
Development

Encs: As stated
cc: Professor Max. L. Lowdermilk

Non Regional

S. Agriculture

December 10, 1979

Dr. Sutti Ortiz
2654 Exeter Road
Cleveland Heights, Ohio 44118

Dear Sutti,

As I believe your know, Michael Cernea and I will be editing a number of the papers presented in the Bank's Sociological Seminar Series for publication through the Johns Hopkins UniversityhPress. PROJECTS FOR RURAL DEVELOPMENT: THE HUMAN DIMENSION is our tentative title. We look forward to including in the book a revised version of your paper on "The Constraints on Rural Marketing Systems -- A Colombian Case."

To assist you in making the editorial revisions necessary to fit your paper into the format of the book, I am enclosing a style sheet, a suggested article format and a manual on the Preparation of Bank Manuscripts for External Publication. A working Table of Contents is also enclosed.

In revising your paper it would be particularly helpful if your would note and try to follow the "Suggested Article Format." This might help give the paper a more explicit structure.

In the course of revising your manuscript here in the Bank, the following issues have been identified for attention:

1) The need to make the relationship of market studies to the successfuly design of road and credit projects more explicit. The value of understanding market networks as a means of ensuring that project benefits meet the needs of the poorest sector of the populace also needs to be underscored.

2) It also would be helpful if you could make clearer the distinction between the anthropologist's approach to the study of marketing and that of the micro-economist. One of the several objectives of this book will be to heighten the awareness of Bank staff -- and of others in the development field -- of the special usefullness of an anthropological or sociological perspective on project work.

3) Can data from your recent mission work be usefully incorporated in your revision?

4) Your discussion of factors affecting changes in the market system is most interesting. It could be used to more explicitly point up the value of the role the anthropologist can play in the early stages of the project cycle in spotting such trends as these and in making project design recommendations accordingly.

...2

5) As indicated in the enclosed "Suggested Article Format," a "Conclusion" would be useful in drawing the paper to an orderly close. Here the implications of dendritic markets for meeting the needs of the poorest farmers should be restated with, if possible, a listing of specific operational recommendations to those responsible for project design.

We hope that we can have your revised paper by the end of December, or by January 15, 1980 at the latest. If any of these points require clarification, please give me a call.

Best wishes.

Sincerely,

Peter B. Hammond
Rural Operations Review
and Support Unit

Encl:

S - Agriculture

NR

Mr. A. Musa Ahmad, Acting Chief, RORSU December 10, 1979

Peter B. Hammond

Update to Tentative Schedule for Sociological Seminars for the Remainder of FY80

1. The schedule shown below is proposed for the remainder of FY80. Note that this series allows for coverage of all topics identified in Mr. Cernea's memo to you dated July 25, 1979.

2. The present order is designed to provide for both topical and geographical spread--East Africa, Central America, the Middle East, South America, West Africa and Asia in that order.

3. We hope that some of the papers will prove suitable for inclusion in the book, tentatively entitled PROJECTS FOR DEVELOPMENT: THE HUMAN DIMENSION, which we will be submitting for publication through the Johns Hopkins University Press.

4. You will note that, contrary to previous practice, one seminar has been planned per month for the six month period beginning in January. This appears to follow the intent of Mr. Cernea's July 25 memo, and it will compensate for the several months during which the regular seminar schedule has been interrupted because of Mr. Cernea's absence. Most presentations will have been made prior to my departure May 1.

5. I will, of course, advise you of any changes in the order of presentations listed on the attached schedule. In each instance it is planned that the authors will be invited to the Bank to confer with relevant staff prior to the drafting of their papers in final form.

6. Plans for FY81: Dr. Neville Dyson-Hudson's paper on "Sociological Variables in East African Livestock Projects," originally scheduled for March 1980, may have to be rescheduled for a later date because he will be working in East Africa for most of the year and does not have travel funds for a return trip to the Bank.

7. Seminars on the status of women in development, on transmigration in Java, on indigenous marketing strategies and on the role of the "Sacred Cow" in Indian livestock development are still in the early planning stages. I will advise you before arrangements become definite. Your suggestions on this schedule will be most welcome.

Attachment

PBHammond/jkv
cc: Messrs. LChristoffersen, AGR; TDavis, AGROR; MCernea, AGROR; JSpears, AGR; SDraper, AGR; ASfeir-Younis, AGR; TKolan, PMD; DRubin, AGROR

TENTATIVE SCHEDULE OF SOCIOLOGICAL SEMINARS FOR THE REMAINDER OF FY80

JANUARY	"Irrigation, Agriculture and Pastoralism in the Sudan," Dr. Gunnar Sørbø, University of Norway
FEBRUARY	"Panamanian Fishermen--Sociocultural Variables in the Design of Small Scale Fisheries Projects," Dr. Richard B. Pollnac, University of Rhode Island
MARCH	"Blood Feuds, Land Tenure Disputes and the Design of Irrigation Projects in Eastern Turkey," Dr. Nur Yalman, Director, Middle East Studies Center, Harvard University
APRIL	"Potatoes, Peruvian Peasants and Development Projects," Dr. Robert Werge, U.S. Department of Agriculture
MAY	"Social Forestry in West Africa: Anthropological Perspectives for Project Design," Marklyn Hoskins, Consultant, USAID
JUNE	"Upward Mobility Among the Poorest of the Poor--Sugar Cane Cultivators in Maharashtra," Donald W. Attwood, McGill University

December 10, 1979

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INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

Yellow

OFFICE MEMORANDUM

TO: Assistant Directors, Agriculture

DATE: December 7, 1979

FROM: M. Yudelman, AGRDR

S - agric & RD

SUBJECT: Agricultural Sector Symposia, January 7-11, 1980

1. The schedule of topics for the Symposia has now been finalized. As you know, a leading speaker has been selected to present a paper on each topic. This presentation will be followed by a discussion, led initially by selected discussants, followed by participation from the floor.

2. For each topic or session we require an experienced chairman in charge, to manage the session and guide and control the discussion. I consider this function extremely important, so that maximum benefit is derived from the discussions.

3. I would be grateful therefore if you would agree to serve as Chairman for the topics on the attached list at the stated times. Would you please confirm as soon as possible.

4. Papers will be sent to you well in advance and the appropriate CPS advisor will contact you concerning the major points likely to arise in discussion.

BSGray:mam

cc: Messrs. Pickering, Christoffersen, Darnell, Fransen, Hotes, Argyle, Spears, Sutherland, Turnham, Collins, Russell, Gray, Naseem
Ms. Kolan

SCHEDULE OF TOPICS FOR AGRICULTURAL SECTOR SYMPOSIA - 1980

JANUARY 7 - 11, 1980 - "EYE" BUILDING

SUBJECTS/TOPICS	SPEAKERS	PROPOSED CHAIRMAN	CPS ADVISOR	DATE & TIME
CROPS (Field and Tree Crops)				
Technological Packages and Approaches to Management for Rainfed Agriculture in Semi-arid Tropics	B.A. (Bert) Krantz	Roger Rowe	Clive Collins	Jan. 7 09.15 - 10.45
Technological Packages and Approaches to Management for Rainfed Agriculture in Sub-humid Tropics	Pedro Sanchez	John Blaxall	John Russell	Jan. 7 11.00 - 12.30
Tree Crops Intercropping Possibilities	George Watson	Francis van Gigch	Brian Gray	Jan. 7 14.00 - 15.30
Problems of Introduction and Sustenance of Technologies for HYVs	Robert Herdt	Donald Pickering	John Collins	Jan. 10 09.15 - 10.45
IRRIGATION				
Irrigation Methods and Efficiencies	Mervin Jensen G.S. Tibor	Paul Goffin	Frederick Hotes	Jan. 8 14.00 - 17.30
Problems of Drainage Related to Irrigation Projects	Pieter Dieleman Ray Winger Walter Ochs	Roger Rowe	Frederick Hotes	Jan. 9 09.00 - 13.00
Planning Flexibility in Designing Irrigation Projects	Per Ljung	Amnon Golan	Frederick Hotes	Jan. 9 14.00 - 15.30
Lessons from Past Irrigation Projects, Including Their Sociological Impact	Fred Hotes (Coordinator)	Frederick Hotes	Frederick Hotes	Jan. 9 15.45 - 17.30

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SUBJECTS/TOPICS	SPEAKERS	PROPOSED CHAIRMAN	CPS ADVISOR	DATE & TIME
LIVESTOCK				
Livestock Production Systems in Semi-arid Rangelands	Klaus Meyn	James Hendry	Donald Sutherland	Jan. 8 14.00 - 15.30
Smallholder Dairy Production	Peter Brumby	James Hendry	Donald Sutherland	Jan. 8 15.45 - 17.15
FORESTS				
Designing Forestry Components for Inclusion in Agricultural and Rural Development Projects	John Spears	Francis van Gigch	John Spears	Jan. 9 14.30 - 17.00
AGRICULTURAL RESEARCH, EXTENSION & TRAINING				
Adoption of New Technology by Small Farms - Results of Field Studies	D. Winkelmann	John Blaxall	Graham Donaldson	Jan. 8 11.00 - 12.30
Agricultural Research and Extension - Experience with T&V System; and Other Research and Extension Systems	J.A. Lindt R.P. Armour	Donald Pickering	James Fransen	Jan. 10 14.00 - 17.30
The Handling of Training and Manpower Development in Bank Agricultural Projects	Bernard Woods E. Nicholson	Paul Goffin	Brian Argyle	Jan. 11 10.00 - 12.30
RURAL DEVELOPMENT				
Design of a Rural Development Project - Conceptualizing a Project and its Key Elements (taking account of consumption)	Peter Nottidge James Greene	Leif Christoffersen	David Turnham/ Alan Berg	Jan. 8 09.15 - 10.45

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SUBJECTS/TOPICS	SPEAKERS	PROPOSED CHAIRMAN	CPS ADVISOR	DATE & TIME
RURAL DEVELOPMENT (cont.)				
Short-cut Methods in Information Gathering in Rural Development Project Preparation	Robert Chambers	Leif Christoffersen	David Turnham	Jan. 10. 11.00 - 12.30
Appraisal of Rural Water Supply - Technical, Institutional and Economic/Financial Considerations	Joseph Freedman	Amnon Golan	Frederick Hotes	Jan. 10 14.30 - 16.00
FARM TECHNOLOGY				
Appropriate Technology, covering: (a) Development of Water Lifting Devices; (b) Performance of Small Tractors	Lawrence Skromme	David Haynes	Graham Donaldson	Jan. 11 09.15 - 10.45
Post-harvest Technology, involving: (a) Threshing (b) Storage, and (c) Processing	David Dichter	David Haynes	Graham Donaldson	Jan. 11 11.00 - 12.30
GENERAL				
Agriculture in the 21st Century	Sylvan Witwerr	Montague Yudelman	Harry Walters	Jan. 11 14.00 - 16.00

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

yellow

OFFICE MEMORANDUM

TO: Files

DATE: December 7, 1979

FROM: B. S. Gray & M. Naseem, AGR

S-agric + RD

SUBJECT: Staff Information Exchange Symposia - Checklist
For discussion with Ms. Kolan 12/10/79

tion/Deadline

1. Location of symposia - room numbers to be finalized.

2. Chairmen - Chairmen have been selected tentatively for each topic. Mr.Yudelman has written the Assistant Directors requesting that they serve.

   - Chairmen to receive priority in receipt of papers.

   - Chairmen to receive summary of biodata on speaker & discussants.

3. Speakers - which papers have been received?

   - speakers to be sent a copy of the schedule of topics in chronological order.

   - have arrangements for travel & accomodation been finalized by Travel Office?

   - obtain biodata on speakers for purposes of introduction.

4. Discussants - to receive priority in receipt of papers.

   - obtain biodata on discussants for purposes of introduction.

   - to meet with CPS advisors to discuss papers.

5. CPS Advisors - to receive priority in receipt of papers.

   - to provide Chairmen with biodata on speakers and discussants.

   - to arrange a meeting between the Advisor and discussants/rapporteurs for discussion of papers.

   - to advise Chairmen of main points which should be raised during symposia.

6. Staff attendance - PMD to request details of proposed attendance from all staff members of agricultural divisions and also from loan officers and DPS management.

7. Schedule of topics - the final schedule of topics in chronological order to be sent to each participant. Schedule will detail chairmen, speakers, discussants, CPS advisors and location.

./...

Action/Deadline

8. Symposia proceedings - rapporteurs from CPS-AGR have been nominated and agreed with Messrs. Donaldson and Thoolen.

   - rapporteurs to be advised of their duties.

   - editing of proceedings by Gray/Naseem.

9. Symposia management - responsibilities to be clearly defined.

10. Papers - to be distributed as priority to Chairmen, discussants, CPS advisors, rapporteurs.

BSGray:mam
cc: Messrs. Pickering (o/r), Donaldson

NR
S-Agriculture

December 7, 1979

Dr. Thayer Scudder
Division of the Humanities and Social Sciences
California Institute of Technology
Pasadena, California 91125

Dear Ted,

As I believe you know, Michael Cernea and I will be editing a number of the papers previously presented in the Bank's Sociological Seminar Series for publication through the Johns Hopkins University Press. PROJECTS FOR RURAL DEVELOPMENT: THE HUMAN DIMENSION is our working title. We look forward to including your good paper on "Some Policy Implications of Compulsory Relocation in Connection with River Basin Development and other Projects Impacting Upon Low Income Populations."

We are asking that articles in the book be kept to a maximum length of between fifteen and twenty pages. Your nineteen page manuscript, thus, allows for some additions.

In making those faitly minor revisions required to fit your article into the format of the book, we would be grateful if you would consider the following issues and/or queries that have come up in the course of reviewing your manuscript here in the Bank.

1) Could the rather general discussion of the deleterious effects of "stress" beginning on page 6ff be more tightly related to the specific problems of relocation? How does such stress differ, for example, from the alienation and dissatisfaction that powerless people experience, generally, when they feel they are being pushed around?

2) Could your recommendations on how to deal with this stress be made more tighly operational? It would be particularly helpful if you could indicate some of the ways you see the anthropologist or sociologist as particularly well suited to intervene in the project design process in order to reduce such stress.

3) It has been suggested that it would be helpful if the paper had a formal conclusion, one that would allow for the brief restatement of your opening thesis and would then remind the reader of the concrete proposals you have made for coping with the critical problems you have identified.

...2

While we want this publication to find a wide readership here in the Bank, we also hope that it will be useful to scholars elsewhere who also are concerned with the more effective identification of socio-cultural issues related to the achievement of development objectives.

To help you to undertake the fairly minor editorial revisions necessary, I am enclosing a style sheet and a manual on the Preparation of Bank Manuscripts for External Publication. A working Table of Contents is also enclosed. (You will note that a slight change in the title for your article has been suggested. But it would obviously be preferable to have your own suggestions on the form that a shorter title might take.)

If any of these points raise questions, please give me a call or drop me a line.

Your paper deals with a critical issue. A few editorial flourishes along the lines indicated above will turn it into a strong addition to our book. We would like to have a revised copy of your paper by January 15, 1980.

I look forward to hearing from you and to receiving your revised manuscript. Best wishes in the interim.

Sincerely,

Peter B. Hammond
Rural Operations Review
and Support Unit

Encl:

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

Yellow
S - Agriculture

OFFICE MEMORANDUM

TO: Chiefs of Agriculture and Rural Development Divisions DATE: December 7, 1979

FROM: M. Yudelman, Director, AGR

SUBJECT: Accounting and Auditing for Agricultural Projects

1. Senior management has directed us to give more attention to, and support for, operations in the area of accounting performance and auditing standards as applied to projects in the agricultural sector. In 1980 a new Financial Advisor is scheduled to join PAS, in much the same capacity as Mr. Raizen performed prior to his promotion to Projects Adviser, CPSVP.

2. We would like to have the benefit of the experience and insights of Regional staff in addressing these issues. Accordingly, we would like your cooperation in establishing a task force of agricultural project officers who have accounting qualifications, and others who may be interested in the topics of accounting and auditing. The task force would be expected to meet up to half a dozen times for the purpose of drafting and reviewing an issues paper dealing with accounting and auditing in agricultural projects.

3. I would be grateful if you would inform members of your division, especially those who are chartered accountants or CPAs, about this proposed task force. Volunteers are requested, and should contact J. D. Von Pischke, AGREP, x 73693, who will serve as task force rapporteur.

4. The first meeting of the group has been scheduled tentatively for 10 a.m. Monday, 17 December.

cc: Mr. V. Rajagopalan, CPSVP,
Mr. van der Tak, PAS
Assistant Directors (Agriculture)

JDVon Pischke:oh

Yellow
S. Agriculture

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. Graham Donaldson, Chief, AGREP

DATE: December 6, 1979

FROM: Gordon P. Temple, AGREP

SUBJECT: USAID Conference on Rural Development
Shenandoah, Virginia November 25-29, 1979
Back-To-Office Report

1. On November 25-29, 1979, I attended a five-day conference on rural development sponsored by USAID (Terms of Reference, dated November 20, 1979).

2. The announced purpose of the conference was (a) to capture the recent experience of people doing rural development in order to learn how to use proven successes to better the lot of the rural poor; (b) to establish an agenda of urgent "need to know" issues for the 1980's; (c) to develop an action agenda for development institutions of what can and should be done to combat poverty among rural people in the 1980's.

3. About 200 people from USAID field offices and headquarters staff, LDC government officials (mainly from Latin America and French-speaking Africa), academics, and a few international organizations were present. The conference began with a Keynote address by His Excellency Ambassador Hernan Santa Cruz, Special Representative to the Secretary-General of FAO. He reported the conclusions of the World Conference on Agrarian Reform and Rural Development and made a strong plea for OECD countries to support development. But he then equated support for LDC's to support for FAO's financing of development projects.

4. Because the conference was so large, it was broken down into three layers of working groups. These groups began with papers given by academics who had little practical field experience and put off field staff with theory and jargon. Upon the completion of these small discussion groups, most of the remaining time was spent reporting up to the next layer working group. Consequently, formal conference sessions spent little time discussing recent rural development experience and differentiating between existing knowledge and issues that require further work. Conference participants were left to squeeze informal discussion into the 15 minute break periods and free time planned after 10:00 P.M.

5. The following issues emerged which concern the Bank.

Consumption and Nutrition in Rural Development Projects

6. Professor Thomas Zalla from Michigan State University presented empirical evidence from Tanzania demonstrating that as income and consumption expenditure rose, the level of nutrition fell. The decline in nutrition resulted from a shift in the composition in consumption as people switched from consuming family-produced foods to consuming foods purchased at market. This issue needs to be considered during design of projects that replace subsistence production with cash crops such as tree-crop projects.

New Trends in USAID

7. Mr. Douglas Bennet, USAID Administrator, attended the last day of the the conference and in a final question and answer period, suggested that

USAID would increasingly:

(a) Delegate financial control together with responsibility to achieve stated targets to USAID mission directors.

(b) Contract with private voluntary organizations to manage development projects now managed by field mission staff.

(c) Take risks with projects designed to reach the rural poor as pilot efforts for larger projects to be financed by international financial institutions.

(d) Work with and provide assistance to national policy decision makers because changes in national policies (price policy, decentralized decision-making, participation), will far outweigh USAID's transfer of resources.

8. Mr. Bennet feels that we are in the midst of a historical decline in the control of decision-making at the center and a rise in the use of macro policy instruments. Hence, he feels that USAID cannot escape dealing with the impact of national policies and will move USAID towards providing more technical assistance with less emphasis on resource transfers.

Views of the Bank

9. I have never attended a conference at which criticism of the Bank's role and performance was so near the surface or views so strongly held. Much of the criticism derived from our sheer size and centralized style of operation. Nevertheless, I was concerned over the repeated reference by both USAID field staff and the government officials to the arrogance and insensitivity of Bank staff in their dealings with LDC officials. Conference speakers also frequently expressed concern that the World Bank demands that scarce national management talent be directed to projects financed by the Bank with little concern for the opportunity cost to the client country of the mismanagement that results elsewhere.

10. A special report by government officials from African countries expressed concerns for:

(a) An increasingly narrow focus on poverty which mitigates against national projects (planning, transportation, etc.) that help poor people who are difficult to identify as project beneficiaries.

(b) Project negotiation that attempts to correct macro policies.

Communication Between USAID and the Bank

11. USAID had obtained a large number of each of the Bank's policy papers dealing with the agriculture and rural development sector. I was pleased to see how quickly these documents were exhausted, to hear comments of surprise from many participants that the Bank was committed to such a

development approach (particularly the Land Reform and Forestry Policy Papers), and to observe a perceptible change in attitude toward the Bank as people began to learn of what the Bank is trying to do today.

12. Efforts to increase communication between USAID staff and Bank staff would improve the rural development efforts of both institutions and I am sure that USAID would welcome our efforts to do so. In pursuit of this goal we might consider inviting staff from USAID's central bureaux that deal with rural development to our informal Division lunches and proposing informal discussions concerning issues about which we plan policy work.

cc: Messrs. D. Pickering, AGR (o/r)
A. Berg, PHN, (o/r)

AGENDA OVERVIEW

"THE CHALLENGE OF POVERTY: RURAL DEVELOPMENT IN THE 1980's"

25-29 NOVEMBER, 1979

	SUNDAY, NOV. 25	MONDAY, NOV. 26	TUESDAY, NOV. 27	WEDNESDAY, NOV. 28	THURSDAY, NOV. 29	
7:00		Breakfast	Breakfast	Breakfast	Breakfast	7:00
8:00		INTRODUCTION	PLENARY: PLANS FOR DAY	PLENARY PRESENTATIONS: REPORTS AND SYNTHESIS	PLENARY REVIEW AND SYNTHESIS: RURAL DEVELOPMENT ACTION AGENDA	8:00
9:00		PLENARY PANEL: ALTERNATIVE PERSPECTIVES ON RURAL DEVELOPMENT	CLUSTER PANELS: MOBILIZATION AND ORGANIZING FOR RURAL DEVELOPMENT			9:00
10:00		Refreshments	Refreshments	Refreshments	Refreshments	10:00
11:00	BUSES DEPART WASHINGTON, DC, FOR SKYLAND LODGE, SHENANDOAH NATIONAL PARK, VIRGINIA	RURAL DEVELOPMENT WORKSHOPS: SUBSTANTIVE ISSUE DISCUSSIONS	RURAL DEVELOPMENT WORKSHOPS: MOBILIZATION AND ORGANIZATION ISSUES	ROUNDTABLE SESSIONS: SPECIAL ISSUES IN RURAL DEVELOPMENT	CONCLUDING SESSION: THE FUTURE OF RURAL DEVELOPMENT	11:00
12:00		Lunch	Lunch	Lunch	Lunch	12:00
1:00			RURAL DEVELOPMENT WORKSHOPS: (CONTINUED)	RURAL DEVELOPMENT AGENDA	CHECK-OUT AND BUS DEPARTURES	1:00
2:00	CHECK-IN AND CONFERENCE REGISTRATION	RURAL DEVELOPMENT WORKSHOPS: (CONTINUED)	CLUSTER PRESENTATIONS: REPORTS AND SYNTHESIS	GROUP SESSIONS: RURAL DEVELOPMENT AGENDA	ARRIVE IN WASHINGTON, DC	2:00
3:00				Refreshments		3:00
4:00		Refreshments	Relaxation, Recreation and Informal Gatherings	GROUP SESSIONS: (CONTINUED)		4:00
5:00		SUBSTANTIVE ISSUE CLUSTER PRESENTATIONS: REPORTS AND SYNTHESIS				5:00
6:00	OPENING RECEPTION	Informal Gatherings		Informal Gatherings		6:00
7:00	Buffet Dinner	Buffet Dinner	Buffet Dinner	Buffet Dinner		7:00
8:00		SPECIAL SESSIONS: RURAL DEVELOPMENT METHODOLOGY PRESENTATIONS	FORMAL ADDRESS: ROLE OF INTERMEDIARIES IN RURAL DEVELOPMENT	REGIONAL PROJECT PRESENTATIONS		8:00
9:00	WELCOME REMARKS AND KEYNOTE ADDRESS					9:00
10:00						10:00

SPEECHES GIVEN AT THE "CHALLENGE OF POVERTY" CONFERENCE IN THE SHENANDOAH NATIONAL PARK - NOVEMBER 25 - 29, 1979 (This includes Papers Submitted for Information)

"RURAL DEVELOPMENT: Today's Dilemmas, Tomorrow's Challenge" - Ambassador H. Santa Cruz

The Challenge of Rural Poverty: the Agropolitan Approach - John Friedmann

Perspectives on Rural Development - Vernon W. Ruttan

Alternative Prospectives on Rural Development - Alain de Janvry

"THE ROLE OF INTERMEDIARIES IN RURAL DEVELOPMENT" - John G. Sommer

"The Future of Rural Development" - Harlan H. Hobgood

Developing Local Capacity for Agricultural and Economic Development in the Rural Sector - Harvey Blustain

Dilemmas in Administrative Reform - David K. Leonard

Developing Local Capacity for Infrastructural, Social and Resource Development in the Rural Sector - Norman Uphoff

ADMINISTRIVE DECENTRALIZATION AND REGIONAL PLANNING FOR RURAL DEVELOPMENT Dennis A. Rondinelli

Governmental and Non-Governmental Organizations: What is their Role in Rural Development - Haven North

Land Tenure Concerns in Strategies to Improve Small Farmer Production - Marion Brown

Small Farmer and Rural Household Production Center - Position Paper - William Burrus

Small Farmer and Rural Household Production Center - Issues Paper - W.W. Shaner

Small Farmer and Rural Household Production Center - Issues Paper - Kathleen Staudt

Incorporating Nutrition and Consumption in Farming Systems Research and Rural Development Projects - Tom Zalla

A Critique of Traditional Agricultural Credit Projects and Policies Dale Adams and Douglas Graham

MARKET ACCESS, AGRICULTURAL PRICING AND FOOD DISTRIBUTION - A Marketing Project Ronald Curtis

The Access of Small Rural Producers and Consumers to Marketing Services - John Lewis

New Directions for Rural Marketing Programs - Rollo Ehrich

RURAL ENTERPRISES AND OFF-FARM EMPLOYMENT - Issues Paper - Smauel R. Daines

RURAL ENTERPRISES AND OFF-FARM EMPLOYMENT - Issues Paper - MICHIGAN STATE OFF - FARM EMPLOYMENT PROJECT STAFF - MICHIGAN STATE UNIVERSITY

RURAL PUBLIC WORKS - Issue Paper - Mary B. Anderson

RURAL PUBLIC WORKS - Rural Infrastructure - Howard B. Helman

RURAL PUBLIC WORKS - Issue Paper - Molly Hageboeck

The Strategic Importance of the Human Resource - Peter Dorner

Positive Aspects of Third World Poverty? - Glynn Cochrane

Paraprofessionals in the Delivery of Social Services in Rural Areas - Royal D. Colle

Providing Social Services in Rural Areas - Health Position Paper - Robert Emrey

Developing a Farm Level Focus in Irrigation Development Schemes - William Bateson

Issues in the Design of Ecologically and Socially Viable Rural Development Projects Peter Dorner

Land Tenure Issues in African Development - James C. Riddell, Kenneth H. Parsons and Don Kanel

Administrating Productive Natural Resources: A Public Goods Problem - James S. Wunsch

Program Overview - Rural Development and Development Administration - Development Support Bureau - November 1979

DS/RAD Cooperating Agreement Profile - Access to Land, Water and Natural Resources University of Wisconsin

Administration and Organization of Integrated Rural Development - Development Alternatives Incorporated

Alternative Rural Development Strategies - Michigan State University

Area Development - University of Wisconsin

Local Revenue Administration Project (LRAP) - Syracuse University

Managing Decentralization - University of California - University of Calif. Berkeley

Methodologies for Rural Development Data Gathering and Analysts - Practical Concepts Incorporated

Off-Farm Employment - Michigan State University

Rural Development Participation Project (RDPP) - Cornell University

Rural Development and Fertility - Research Triangle Institute

Rural Financial Markets - Ohio State University/Agricultural Finance Program

What is the Appropriate Unit of Analysis in Studying Production and Consumption Decisions by Poor Rural People - Jason W. Clay

NR
S - Agriculture

Mr. Ted J. Davis, Chief, RORSU

December 6, 1979

Peter B. Hammond

The 78th Annual Meeting of the American Anthropological Association
Cincinnati, Ohio

1. I attended the meetings from the morning of November 28 through the early afternoon of November 30.

In a search for materials for a projected future seminar presentation on nutrition as it may relate to productive capacity, I first attended the organizational meeting of the Committee on Nutritional Anthropology, chaired by Dr. Christine S. Wilson of the University of California at San Farncisco. As much of this meeting was taken up with organizational business, it was agreed that I would contact Dr. Wilson later in order to elicit her advice in developing background materials on sociocultural aspects of projects designed to improve the nutritional status of peoples whose deficient diet may adversely effect their productivity and well being. I heard (and will obtain a copy of) a Dr. A. Fleuret's paper on "Nutritional Implications of Staple Food Successions in Usubura, Tanzania".

2. At a subsequent session on "Peasants Becoming Post Peasants" the focus of discussion was on the development of more effective means of ensuring that farming peoples share equitably in the benefits of their own increased productivity. In this connection I had a useful working breakfast with Dr. Donald Attwood of McGill University who is the author of "Why Some of the Poor Get Richer: Economic Change and Mobility in Rural Western India". The focus of Attwood's interest is on the development of strategies for more accurate identification of attributes characteristic of those individuals and groups among the "poorest of the poor" who appear most likely to be receptive to technological innovations designed to increase their productive capacity. I will be working with him to develop an outline for a paper that might be suitable for presentation in the Bank's Sociological Seminar series. This plan will be the subject of a separate memo at a later date.

3. Several papers in the session on "Women in the Work Force," most notably Dr. Jane I. Guyer's "Household Budgets and Women's Income", will serve as background for our plans to develop a seminar topic that will assist in more successfully contacting and communicating with the female sector of the work force in Bank projects.

4. At the session on "Third World Concepts of Change and Development" I collected abstracts of several papers that will be helpful in planning for the more extensive use of indigenous social scientists as consultants to Bank missions.

5. On Friday the session on "The Anthropology of Health and Human Services Programs," provided a chance to hear, among other useful papers, Dr. Richard Ott's analysis of "How Not to Build a Dispensary: the Politics of Health Care in Kenya." These and other papers presented during the course of the Meetings will constitute a useful addition to our reference file of background materials on socio-cultural issues related to more successful project planning.

6. Finally, I had a productive discussion with Dr. George Dalton, Professor of Anthropology and Economics at Northwestern University in which he reviewed what he perceives as the shortcomings of anthropologists working as members of interdisciplinary teams in the development field. He will prepare a memorandum for me on this critical issue.

7. My attendance at the Meetings served, also as a means of identifying the Bank's interest in developing ways of more effectively incorporating anthropological method and theory in the design and implementation of development projects.

PBHammond/cc

cc: L. Christoffersen, AGR; B. Thoolen, AGR

S-agric + RD

Graham Donaldson, Chief, AGREP December 6, 1979

Alfredo Sfeir-Younis, AGREP

FAO/CP, "Soil Conservation Financing in the Humid Tropics"

1. This FAO/CP note is a very important piece of material, and an AGREP member should get involved.

2. Since this note is very short, one does not get a clear understanding of the scope and implications of the suggested action program. Furthermore, some of the concepts presented in the note require careful analysis and consideration. For example, the note states that "the meeting acknowledged the economic issues such a practice presented, and recommended that a very liberal approach [emphasis added] would be required in assessing the economic and financial impact of soil conservation. In particular, the element of rural employment would be very important, the use of a benefit stream over arbitrary but restricted periods may not be relevant and much emphasis may be required on the associated social costs and benefits" (page 5). These statements are ambiguous and require careful analysis. Some suggestions follow.

3. In working out the economics of soil conservation, one should, among other things, begin by, first, identifying the major sources of benefits (i.e., increase in production due to higher soil productivity) and costs (i.e., investments). One of the major complications involved in the quantification of benefits and costs is their valuation.

4. Second, one should distinguish, as the note seems to suggest, between soil conservation and soil restoration. In conservation, one assumes that the present productivity of soils is adequate and the central question here being to determine soil use rates over time. In restoration, one explicitly recognizes that soils are of a much lower quality than a predefined quality standard; in some cases, soil productivity may be almost depleted.

5. Third, when dealing with both soil conservation and soil restoration, one has to distinguish between the role played by investment and the role played by institutional arrangements. These institutional arrangements are market (i.e., prices, taxes) or nonmarket (i.e., land tenure) incentives which condition the use rates of existing soils over time. Consequently, when dealing with the economics of conservation projects, one should focus both on the institutional aspects and the investment aspects of soil conservation. When dealing with institutional arrangements, the emphasis should be on identifying the technical, economic and social policy incentives that are changing the state of soil conservation toward depletion. When dealing with investments, the same framework applies. Benefit-cost analysis should provide an adequate framework for addressing soil conservation problems.

6. Finally, when analyzing issues regarding soil restoration, a notion of "appropriate" soil quality should be addressed. Once this "quality factor" has been set, identification of investments and institutional arrangements would follow as stated in paragraph 5. The Least Cost Method should provide an adequate framework for analyzing soil restoration problems.

cc: F. Hotes (AGR)

ASY:vau

NR
S-AGRICULTURE

Mr. Frank Vibert, SVP

December 6, 1979

A. Musa Ahmed, AGR

Questions from the Swiss Government

Kindly refer to the draft dated December 6, 1979 on "Arrangements with Switzerland" circulated by you. I understand that Mr. Yudelman has spoken to you on response to the questions raised by Mr. Jolles with you during your recent meeting with him in Bern.

AGR is concerned with Questions 1-4, 7 and 11. I am attaching a slightly revised version of the paper "The World Bank's Role in Rural Development" which I had circulated as draft. On account of the overlapping nature of the questions and the need to provide necessary background, it was deemed more appropriate to provide the responses in the form of a paper rather than answers to specific questions except for Questions Nos. 4 and 11.

I am attaching a copy of an article written by Mr. Yudelman on "Impact of the Bank's Rural Development Lending" for the September, 1979 issue of Finance and Development. It provides a comprehensive review of the subject and would enable the Swiss authorities to have a much wider and deeper perspective of the Bank's role and performance in this field.

Enclosure: As stated

cc: Messrs. Yudelman, Christoffersen, Thoolen, Donaldson, Davis (on return), Bahl. Ms. Garcia

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. Frank Vibert, SVP

DATE: December 6, 1979

FROM: A. Musa Ahmed, AGR

SUBJECT: Questions from the Swiss Government

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THE WORLD BANK'S ROLE IN RURAL DEVELOPMENT

Introduction

1. The present focus on alleviation of rural poverty in the lending operations of the Bank was initiated by Mr. McNamara in his address at the Annual Meeting of the Board of Governors at Nairobi in September 1973. This was followed by the approval of the following three policy papers by the Board of Executive Directors for the guidance of the Bank's operation staff:

(a) Rural Development
(b) Land Reform
(c) Agricultural Credit

2.

A. Rural Development policy paper introduced the concept of poverty target group. The poor in low income countries, eligible for IDA credit, were defined as those whose per capita income was below what was essential for nutritional and other requirements for subsistence. Thus under Bank concept the term rural poor incorporate small farmers, marginal farmers, landless laborers. For the middle income countries, to which Bank loans are granted, poverty is considered in a relative context; the poor in these countries are those whose per capita income is less than one third of the average national per capita income. A project is classified as rural development only if at least 50% of the direct benefits flowing from it are expected to accrue to the poverty target group. Ideally, rural development projects are expected to:

1) benefit large numbers of the rural poor while ensuring an acceptable rate of return;
2) be comprehensive in approach to small scale agriculture; and
3) have low enough cost per beneficiary to permit replication.

B. The Land Reform policy paper, inter alia, urges:

1) priority in agricultural lending for those countries which pursue broadbased agricultural strategies and pay special attention to the needs of the poorest groups;
2) support for projects and programs which are necessary concomitant of land reform;
3) foster adoption of tenancy conditions and share cropping arrangements that are equitable.

C. The Credit Policy paper, inter alia, focussed attention on:

1) expanded efforts to meet the credit needs of small farmers;
2) emphasis on productive capacity of small farmers rather than on collateral;
3) group lending to small farmers through co-operatives and other forms of groupings;

4) building and strengthening financial institutions and orient their efforts towards small farmers.

D. The above broadly define the parameters within which concepts and strategies of the Bank supported rural development projects are developed.

3. From FY73 to FY79, a total of 269 rural development projects in 68 countries were approved by the World Bank. These are projects in which appraisal estimates were that direct benefits would predominantly accrue to the poverty target groups as identified in accordance with Bank's methodology. The total cost of these projects is US$15,325.8 million. Bank/IDA lending amounts to US$6,718.9 million.

Bank projects referred to above cover a wide variety of activities and are undertaken in widely varied political, economic, socio-cultural and environmental circumstances. The range also incorporates countries whose developmental approach is capitalistic and oriented toward the private enterprise system as well as those whose approach emphasize centralized planned, public ownership of means of production and a limited private enterprise sector. The main objective of these projects is to increase producer incomes by raising output and productivity of the farm enterprise. Many projects are designed to assist the small farmer as a producer. Such projects may also have a major impact on the rural poor through the creation of new employment opportunities, often at higher levels of productivity, both on the farm and in local business and services relating to agricultural development. Projects also affect the poor as consumers; some through the provision of improved services and amenities such as drinking water, primary schools, and local health centers, and others--actually the great majority of projects--which generate increased supplies of food for local consumption.

4. It is a standard practice in the Bank to prepare, in collaboration with the borrower, a Project Completion Report (PCR), on the completion of disbursements for projects which, inter alia, provide quantitative analysis of performance of a project in relation to appraisal goals and estimates. Operation and Evaluation Department of the Bank (OED) 1/, then audits a project's performance and issues a Project Performance Audit Report (PPAR). PCRs and PPARs would quantitatively analyze the extent to which the appraisal forecasts on benefits and beneficiaries were achieved. Preparation of PCRs and PPARs begin after final disbursements. PPARs have not yet been completed in respect of any of these 269 rural development projects, approved between FY73 and FY79.

5. Though Bank's rural development policy and strategy became operational in 1973, a number of agricultural projects approved between FY68 and FY72 were influenced by the philosophy behind the Bank's policy and strategy. In FY78 twenty-eight agricultural projects approved between FY68 and FY74, were audited by OED. The following is an extract from Fifth Annual Review of Project Performance Audit Results:

1/ Reports of this independent department are submitted to the Board of Executive Directors and to the President of the Bank.

In agriculture, about three million rural poor were expected to benefit from the projects reviewed in this group; probably [illegible] of this number was reached. Fifteen of the agricultural projects are also seen to have generated additional employment. Information on income effects is available for seventeen agricultural projects and in all of them income of beneficiaries were higher at audit than before the projects were undertaken. For thirteen projects where a comparison was made with appraisal, income expectations were reached or exceeded in nine, while estimated incomes were below appraisal expectations in four. In one case net farmer incomes tripled; they doubled in another project; and were expected to reach three times above the poverty line in a third. In four other projects, farmers' incomes could not be compared with appraisal expectations.

6. It would be appropriate to refer to Northwest Deep Tubewell Project in Bangladesh--an on-going pre-1973 project which has been criticized by some on the score of large landowners having cornered the benefits at the expense of small farmers and the landless. The raison d'etre of the project was that it would increase food production--the overwhelming consideration of the day--there was no explicit or implied concern for distribution of benefits. However, surveys conducted by Bank supervision missions, Bangladesh Institute for Development Studies, University of Dacca and investigation by an official of the U.S. Treasury Department in response to concerns of the U.S. House of Representatives did not find any pattern of domination by large farmers as claimed by the critics of the project and that very small farmers had benefited from the project in a large measure.

7. As mentioned earlier, rural development projects approved by the Bank since 1973 are still under implementation but these are under close supervision. At the time Rural Development Policy paper was approved it was recognized that for the success of rural development projects it was important to have project specific monitoring and evaluation systems in addition to normal supervision of on-going projects. Between 75 and 92% of the rural development projects each year have on-going monitoring and evaluation systems. Borrowers' perception and capacity to effectively utilize monitoring and evaluation system principally as a management tool for achieving desired objectives of a project has varied from country to country and from project to project. Continuous efforts have been made to improve the performance of project specific monitoring and evaluation systems with encouraging results.

8. One hundred seventy-five development projects approved between FY73 and FY77 were reviewed in depth in the Fall of 1978. Only 18 or about 10% of these projects were considered to have major problems; the bulk of the problems related to managerial issues. Percentage of projects with major problems provide a very broad and very tentative indication of projects which could in the end fail to achieve the appraisal goals. However, these percentages regularly get reduced with efforts to overcome the identified problems. A firm indication of failure of a project is provided by cancellation of Bank credit/loan. The Bank has so far had no reason to cance any credit/loan for a rural development project. An illustration of a project which so far appears to be heading for continued major problems is provided by Papaloapan Basin project in Mexico. The project expected to increase the income of the beneficiaries by more than

three times and create 13,000 jobs. Major investments were to be for irrigation, rainfed agriculture, feeder roads, and water supply. So far only 43% of the hectarage for irrigation has been reached. Only 9% of feeder road and ten percent of water supply targets have been accomplished. The project is three years behind schedule with only 18% of the loan disbursed. Consequently, there was very little impact on the proposed beneficiaries of the project. Local budgetary and management problems were behind the poor performance under the project. Lack of progress under the project is not country specific. A much larger and much more complex rural development project - PIDER - is being successfully implemented in Mexico. The project is expected to benefit 708,000 people by doubling their income; 30,000 jobs would be created; 750,000 persons would have access to health services; 60,000 children would have improved primary education. In physical terms appraisal targets in several respects are already either nearing achievements or being exceeded. In irrigated areas, production benefits are beginning to accrue. In line with experience elsewhere it will take longer to achieve production goals in rainfed areas.

9. Diversity of successful rural development project concepts and implementation experience in varied socio-political situations in different parts of the world can be seen from following examples:

1) Rajasthan Dairy Development (India) FY75
2) Nepal Rural Development Project (Nepal) FY75
3) Southern Upland Rural Development Project (North Yemen) FY75
4) Rio Grande Do Norte (Brazil)
5) Northern Sumatra Small Holder Development Project (Indonesia) FY73
6) Agricultural Minimum Package (Ethiopia) FY73
7) Funtua (Nigeria) FY75

10. Rajasthan Dairy Development Project started in 1975 is expected to achieve full development in 1985 and increase income and nutrition of 240,000 families, majority of whom are in poverty target group. In three years, 40,000 families were reached whose income increased by 560%. Nepal Rural Development Project started in 1976 is expected to reach full development in 1983 and benefit 25,000 families (80% in poverty target group) with increased agricultural and livestock production and better health and sanitation. In two years more than 50% of the farmers are using improved seeds for wheat, maize and potatoes. About 10,000 farmers were reached by extension. Hillside terrace irrigation is already benefitting 2,530 farmers. Twenty-five of 44 water supply schemes designed to benefit 49,000 rural individuals were completed. Under the Southern Upland project in North Yemen, started in 1976, significant impact on farming practices has been achieved which has induced local demand for a second project of this type. Increased farm production is apparently contributing to increased farm incomes. Northern Sumatra Smallholder Development Project started in 1973 with an anticipated nine years for full development was expected to directly benefit over 4,000 landless or marginal farm families and increase their annual income from US$102 to US$370 and indirectly benefit another 6,000 smallholder families. The project has already achieved the appraisal objective in respect of benefits and beneficiaries. Minimum Package Project in Ethiopia (started in FY74, full development in 1986) has succeeded in increasing the income of 450,000 farm families against the appraisal estimate of 400,000. This was achieved despite political and social disruption during project implementation. Funtua Project in Nigeria (started in FY76, full development in 1980) sought to increase production and income of 60,000 farm families in the poverty target group.

Though no estimates of number of families reached by the project is available, significant production increases for a variety of crops have been achieved. Rio Grande Do Norte project in Brazil (started in FY76) was essentially experimental for developing methodologies for reaching small farmers with credit. Its objectives were, inter alia, increasing family income of poverty target group farmers from US$210 to US$430. Total number of farmers reached by extension and increased production was higher than appraisal expectations. Health benefits reached a surprisingly large number of persons with maternal and child health check-ups and vaccinations.

11. Flexibility during implementation characterizes a number of rural development projects. Appraisal targets are modified to respond to field conditions and experience gained during implementation. Kigoma Rural Development Project (FY75) in Tanzania and Rural Development Project (FY74) in Mauritius provide illustrations of such flexibility. Targets set out at appraisal of the Kigoma project turned out to be too optimistic due to:

1) staffing problems;
2) problems over decentralization of decision-making authority; and
3) inadequate efforts to develop and test locally adapted technology.

A mid-term evaluation was carried out late in 1978 on the basis of which the project completion date was extended by three years and modified physical targets determined. The implementation of the project, however, enabled 165,000 people in 55 villages to experience rapid development of crop marketing activity, school construction and road and water supply improvement accompanied by an impresseive degree of community mobilization. Based on the experience of the Kigoma project, the Government of Tanzania has requested the Bank to prepare and finance rural development projects in seven other regions. Creation of productive employment was the major objective of Mauritius rural development project (FY74). Unforseen sharp increases in sugar prices considerably increased employment on sugar estates and alleviated the critical unemployment problem which the initially designed project sought to meet. The project, however, succeeded in improving the quality of life for the beneficiaries as well as significant project-induced increases in income and opportunities for additional unskilled and skilled employment. There is a strong demand in neighbouring non-project areas for similar development investment.

12. In large measure, the Bank's project portfolio reflects the policy and program priorities that emerge from the strategic presumptions, philosophies, analyses and expectations about development of the member governments. Politically the 68 countries in which the Bank has supported rural development projects during FY73-79 represent the entire spectrum from military dictatorships, socialist economies to capitalist/democratic systems. To a degree independent of the capitalist/socialist orientation are differing emphasis on developmental approaches, strategies, short and medium term goals. To illustrate but one of many contrasts - some countries lean considerably towards capital accumulation, savings, and increased production, while others focus more on meeting basic needs, income distributions and poverty alleviation.

Within this framework the role of the Bank is a twofold one. On one side, the projects we support are examined from the perspective of reasonable work, cost effectiveness in relation to objectives and positive contribution toward the ongoing institutional, policy, and program goals of the country in question. On another side, they also reflect the broader concern of the international community, including the donor community, as these are expressed in Bank policy statements and policy goals in the Rural Development, Land Reform and Agricultural Credit policy papers.

13. Efforts to achieve the Bank's objectives in rural development has resulted in the development of projects in areas predominantly inhabited by the poor, for example in four regions of North East - Brazil, and of land settlement projects in countries like the Philippines, Indonesia, Paraguay under which most if not all the beneficiaries are either landless or margnial farmers. Smallholder Treefarming and Forestry Project in the Philippines was designed to develop economically attractive alternative for shifting cultivators who form the poorest segment of the population. Increasing numbers of agricultural credit projects are making special provisions for the beneficiaries in the poverty target group. In Latin America differential rates of interest and reservation of specified percentage of credits in favor of the target group beneficiaries are two of the techniques being followed. For example, under Paraguay Small Farmer Credit project the loan funds would be exclusively used to assist small farmers. Special attention is also being paid to tenancy terms and access of tenant farmers to credit for example in Southern Upland Rural Development project in Northern Yemen. Bangladesh Shallow Tubewell Project requires that 50% of the command area of a tubewell must belong to poverty target group farmers. In Yugoslavia the private sector in agriculture comprise 96% of the population and 85% of the cultivated land. This sector was virtually neglected as the government's efforts were concentrated on the social sector of agriculture. Yugoslavia Agricultural Credit Project would benefit 380 social sector enterprises and 10,200 private sector farmers; annual family income of private sector farmers is expected to rise from US$600 to US$1,600. In order to better service the poor farmers grouping them in cooperatives or farmers' associations is most frequently required. Development of such groups into viable institutions is expected to provide the poverty target group farmers not only an institution for channelling assistance and guidance to them but also a forum for articulating their needs.

14. In addition to the types of interventions mentioned above which are likely to have long-term beneficial socio-political impact, the Bank has been supporting agrarian reform measures undertaken by member governments. The following are three examples:

1) Philippines - Fourth Rural Credit Project - one of the objectives of the project is to support implementation of Agrarian Reform Program;
2) Morocco - Meknes Agriculture Development Project - the project would support distribution of expropriated land to small freehold farms to make these viable units;
3) Paraguay - Small Farmer Credit and Rural Development Project - the government's Agrarian Statute provides, inter alia, for colonization of both public and private lands in order to improve land tenure structure. The project is in support of this objective.

QUESTION 4: Is this statement true? "The World Bank's first priority is integration of the LDCs into the world economy." Cash crops and meat production increased to satisfy markets in the west at the expense of food production and lowering standards of living. Macro and micro analysis of the issue. How does IDA act on it? What does IDA do in controversial projects involving cotton, peanuts (Senegal case), meat ranching (Central America; Honduras case), flower growing in Colombia.

The statement that "the World Bank's first priority is integration of the LDCs into the world economy" is not correct. The Bank's first priority is to strengthen the domestic economies of borrowing member countries through the provision of financial resources in soundly designed and implemented development projects. The achievement of this objective, particularly as it relates to primary production sectors such as agriculture, is likely to result in increased commercialization of that sector and consequently to greater flows of output for the domestic or international market. Increased economic integration, while frequently a concomitant of balanced economic growth, is not an end in itself.

The Bank's lending record in agriculture and rural development clearly contradicts the allegation that cash crops and meat production for export are emphasized in Bank projects at the expense of food production and rural living standards. Over the five-year period FY75-FY79, World Bank committments for agriculture and rural development came to US$11.6 million, or 31% of total Bank lending. Total project costs for agriculture and rural development over this five-year period were US$29.8 billion. It is estimated that about 75% of this amount is oriented toward increasing food (largely grains) production. At full development, these Bank-supported projects may contribute as much as a third of the annual increase in food production in developing countries.

The results of the lending program in FY79 further illustrates these points. Bank-supported agriculture and rural development projects this year are expected to generate 3.3 million tons of cereals annually at full development (with incremental rice production of 1.1 million tons) and over three million tons of other food crops, including fruits, vegetables and oil crops. At full development, some 3.5 million rural families are expected to benefit directly from these projects. More than 2 million of these families now earn incomes below the poverty level for their respective countries. Most of the rural families benefitted by Bank lending for agriculture and rural development operate farms from whcih at least a portion of output is marketed. The Bank has been less successful in reaching rural landless laborers or subsistence farmers.

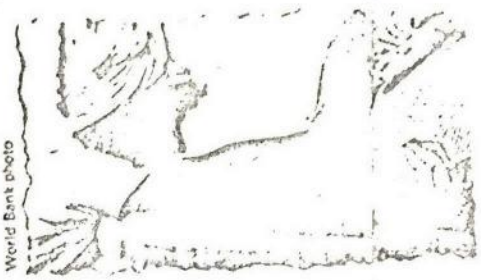
The same standards of soundness and viability are used in IDA financed projects as in the case of projects supported by Bank loans. All projects approved by the World Bank must be deemed to be economically viable, technically sound and administratively feasible. Notwithstanding the Bank's increased emphasis on food production and poverty alleviation, Bank policy also permits lending for the production of export crops and for medium and large-scale farming operations. The Bank does not support projects where land rights are such that most of the benefits accrue to the high-income groups, unless increases in output and improvements in the balance of payments are overriding considerations. In such cases, the Bank will consider whether fiscal arrangements are appropriate to ensure that a reasonable share of the benefits accrues to the government.

QUESTION 11: Why FY79 lending in agriculture declined?

Bank Lending for Food and Rural Development

The World Bank and its affiliate the International Development Association have given food production and rural development high priority. The Bank is now by far and away the largest single source of external funding for this purpose; according to FAO we now provide over 40% of all official committments to agriculture. In the quinquenium ending with the World Food Conference in 1974, Bank committments to agriculture totaled US$3.2 billion. In the quinquenium just ended, total lending committments had risen to US$11.6 billion despite a decline in FY79 compared to FY78, resulting from Board schedulings of project approvals. In terms of actual resource transfer, steady growth was confirmed by the substantial increase in FY79 disbursements; rising from US$916 million in FY78 to US$1,300 million in FY79. Assuming that IDA and IBRD resources are replenished according to plan, food and rural development lending will continue to grow with FY80-84 lending at a level of US$24.3 billion. As a percentage of total lending agriculture's share has increased from 21% of Bank lending in FY70-74 to 33% in FY75-79 and is expected to rise to 35% in FY80-84. Since each dollar invested by the Bank is supplemented by local investment, the total value of Bank projects in the last five years exceeds US$26 billion, a figure which represents around 15-20% of total public investment in agriculture in the developing world.

The World Bank and the World's poorest: VII



World Bank photo

Mr. Robert S. McNamara, President of the World Bank, spoke of "absolute poverty" during his address to the Annual Meetings of the Bank and the Fund in Nairobi in 1973, as "a condition of life so degraded by disease, illiteracy, malnutrition, and squalor as to deny its victims basic human necessities." Absolute poverty, he said, was the lot of 40 per cent of the peoples of the developing countries. Following Mr. McNamara's speech in Nairobi there was a marked shift in emphasis in the Bank's approach to development. This series of articles explains how the Bank is meeting the challenge of poverty in its member countries.

Impact of the Bank's rural development lending

Since the global food crisis of the early 1970s, the World Bank has accelerated its lending for agriculture and rural development, and has substantially reoriented it toward raising the productivity of the low-income groups. This article provides an interim assessment of this strategy.

Montague Yudelman

Since 1973, the Bank's direct lending for agricultural development in the developing world has grown from $1.4 billion a year to $3.3 billion in 1978 and totaled more than $10 billion over this five-year period. The figure for 1978 represents 39 per cent of all Bank lending in that year, and over 40 per cent of all external commitments to agriculture. As each dollar the Bank invests is supplemented by local investment, the total value of projects in which the Bank participates is substantially more than its own contribution: in the last five years the total combined investment has exceeded $24 billion, perhaps as much as 15 to 20 per cent of all public investment in agriculture in the developing world. (These amounts represent direct investment in agriculture; they exclude the indirect effects on the sector from lending to other sectors, which are also appreciable.)

This assessment is on the impact of the Bank's lending for agricultural development, especially on the rural poor. It will be based on the Bank's experience with some 75 projects which have been completed and over 500 others which are still being carried out.

Projects can have various kinds of economic impact. In the great majority of cases, the main objective is to increase producer incomes by raising output and productivity of the farm enterprise. Many projects are designed to assist the small farmer as a producer. Such projects may also have a major impact on the rural poor through the creation of new employment opportunities, often at higher levels of productivity, both on the farm and in local business and services relating to agricultural development. Projects also affect the poor as consumers; some through the provision of improved services and amenities such as drinking water, primary schools, and local health centers, and others—actually the great majority of projects—which generate increased supplies of food for local consumption.

Project work

Raising incomes for smallholders involves raising productivity, and some of the more successful projects have involved increasing the output of traditional crops. Others have involved changing the composition of crops sown. The increased output of traditional crops has come largely from the more effective use of improved

World Bank photo

Previous articles in the series
The World Bank and the world's poorest

I. Changing emphasis of the Bank's lending policies *by Mahbub ul Haq, June 1978*
II. The Bank and urban poverty *by Edward Jaycox, September 1978*
III. The Bank and rural poverty *by Leif E. Christoffersen, December 1978*
IV. The problem of water supply and waste disposal *by Yves Rovani, March 1979*
V. The Bank and the development of small enterprises *by David L. Gordon, March 1979*
VI. Education lending for the poor *by Abdun Noor, June 1979*

seeds, fertilizer, and water—in systems which have helped over 10 million farmers throughout the developing world increase their output of rice, wheat, corn, and cassava and their incomes. Other projects have involved changing this product mix. The shifts in the crops sown have resulted in farmers changing from subsistence production to the production of high-value crops. These crops, grown on smallholder schemes in countries as diverse as Brazil, Indonesia, Kenya, Senegal, Tanzania, and Tunisia, have involved the production of sugar, tea, fruit, vegetables, sisal, and cotton. The smallholder tea project in Kenya, one of the oldest projects of this kind, for instance, increased the incomes of the farmers from around $50 a year to three times that amount.

Projects intended to raise the incomes of the rural poor call, first, for a clear identification of the proposed beneficiaries, and then for the design of projects so that this group will indeed directly benefit from them. In practice, each project design is unique to specific local circumstances. However, it is possible to summarize the main activities emphasized by Bank projects aimed at the rural poor, and their impact.

Irrigation. The effects of irrigation on the production and output of such crops as rice have been widely recognized. Irrigation permits the expansion of intensive cultivation—often making double cropping possible—in areas that are otherwise too dry or too subject to climatic variation to be productive. In the rice economy countries of Asia, those where less than 35 per cent of the farmland is irrigated have average yields of two metric tons per hectare; those where 75 per cent of the farmland is irrigated have average yields of over four metric tons per hectare. Perhaps 40 per cent of all increases in rice yields over the last decade can be attributed to an expansion of irrigation—and this is the largest single component of Bank lending in agriculture.

As far as can be estimated, the Bank is now responsible for 25 per cent of all additional public investment in irrigation. Bank-financed irrigation is now responsible for increasing annual grain production—primarily rice—by about 750,000 to 1,000,000 tons. Equally important, the construction and operating standards established by the Bank have become generally accepted by domestic authorities, with very significant repercussions on the efficiency of national irrigation programs. Bank-financed irrigation schemes, especially in the rice producing areas of Asia, are typically sited in areas of already dense and long-established settlement, frequently with a mix of small (sometimes fragmented) holdings and some larger holdings and sometimes incorporate arrangements for off-farm activities. In such situations, benefits to the poor from these projects are significant, both from the increased incomes of the producers and from enhanced employment opportunities on and off the farms.

A comprehensive analysis of incomes and investments that followed a Bank-financed rice irrigation project in Malaysia indicated that all classes, including the landless, benefited proportionately from the investment. In terms of absolute increase, the impact was obviously greatest for the farmers who started at the highest income level. However, in terms of living standards, the greatest impact was unquestionably on the lower-income small farmers and landless who were able for the first time to afford the necessities for a decent and productive life. The study also indicated that the "secondary" benefits generated in nonfarming activities were, in aggregate, about as large as the project's direct farm impact. For every dollar of direct investment in rice production, there was about 75 cents of investment by blacksmiths, small merchants, and local small-scale manufacturers. Careful post mortems of projects in India and Mexico indicate that as a result of the projects wage rates increase, benefiting the poor, and that the level of migration out of the rural areas declines while other indicators of social well-being—such as school attendance, infant mortality, and the number of bicycles sold—improve.

A recently completed project in the Philippines illustrates the extent of impact when irrigation is associated with a program of land reform. Before the project started, some 24,000 farm families were accommodated on roughly 80,000 hectares. With irrigation, over 90 per cent of the area is now double cropped and yields have about doubled in the former dryland areas. In total, 1979 production is expected to show a more than threefold increase due to the project. At the same time, with land reform, the area in 1978 accommodated 45,500 farm families, the reduced average holding size being more than compensated by increased productivity. Results in Egypt, Indonesia, and many parts of Africa can attest that this is not an isolated phenomenon.

Fertilizer. All evidence shows that chemical fertilizers have played an important role in increasing yields and output in developing countries—and most projections indicate that increased supplies of fertilizers will be a major factor in future food production. The World Bank has become the most important source of finan-

cial and technical assistance for the construction of fertilizer plants in developing countries. Most of these plants are government-owned and are aimed at encouraging import substitution. Bank-supported projects account for roughly 25 per cent of the incremental nitrogen fertilizer, 35 per cent of the phosphates, and 100 per cent of the potash that has been produced since the early 1970s. This additional fertilizer—about 750,000 metric tons annually—can generate roughly 6 million tons of additional cereal, or about half the increase in the output of developing countries during the same period.

An example of a major effort based on increased use of fertilizer with a direct impact on production and income is the current Bank-supported program in northern Nigeria. Only a short while ago, Nigeria was a net exporter of food. But rising incomes brought a greatly increased demand for grains while production declined. The World Bank has made plans to commit over $1 billion for area development projects that will encompass the entire country. Interim results are impressive. The use of chemical fertilizers in the first three project areas increased from 2,000 to 50,000 tons in only three years. Since 1976, production has more than doubled and sales of improved plows, new seeds, and other inputs have increased at a remarkable rate. The projects are at present reaching 200,000 farm families, more than a million people, and in due course will be expanded to reach most of Nigeria's 18 million farming households. Elsewhere, in areas as different as Tanzania, Thailand, and Turkey, Bank-sponsored projects are enabling large numbers of low-income farmers to use fertilizers to increase their output and income.

Other infrastructure. The lack of rudimentary road systems has been a crucial bottleneck to rich and poor in reducing the efficiency of the marketing of either inputs or additional production. Recognizing this, the World Bank investment program over the last three years has helped to finance the construction and rehabilitation of over 80,000 kilometers of rural roads, a network longer than the entire interstate highway system of the United States.

The Bank makes investments in other facets of rural development. Rural electrification schemes are one example. Projects which the Bank has helped to finance have brought power to 30,000,000 rural people—many of them very poor—over the last few years. Financing places for students in agricultural training institutions is another example. Already the 23 projects that have been completed provide 10,000 places for training agricultural specialists. This represents a small proportion of the total places that will eventually be created when the 140 ongoing educational projects are implemented.

Agricultural extension. In many states in India, the Bank has been financing a "training and visit" extension system to improve the capabilities of working farmers. This system, which the Bank helped to pioneer, ensures that field agents keep in close contact with a manageable number of "contact" farmers, who then disseminate improved techniques to their neighbors. At the same time, the agent is kept abreast of the advice he should give through fortnightly in-service training programs. The extension agent concentrates initially on basic details—such as timely planting, proper row spacing of seed or plants—which require no new cash inputs. The programs are cheap, averaging about US$1 per hectare. In India, the observed impact as reflected in output figures has been impressive (see table).

Effects of extension on Chambal Project (Rajasthan, India)

Crop	Average yields (in tons per hectare)			
	Before project	1975/76	1976/77	1977/78
Paddy	2.00	3.35	3.60	4.36
Sorghum	0.44	0.40	0.66	0.63
Wheat	1.17	2.26	2.11	2.31
Sugarcane	40.90	n.a.	59.40	60.60

After only three years, 90 per cent of the farmers were following the extension agent's advice. While the amount of fertilizer used hardly increased at all, it was applied much more efficiently and there was a tenfold increase in the number of farmers using improved varieties of seed. Incomes per hectare grew by at least 50 per cent. Moreover, the diffusion of the new technology from the contact farmers to others has proceeded smoothly, with the gap between their respective yields progressively narrowing (now at 9 per cent). Programs in India alone are at present helping an estimated 9 million farm families, many of whom are smallholders, in nine Indian states. Another 13 million farm families will eventually be reached; incremental production from the total effort is expected, by the Indian Government, to exceed 15 million tons of grains, leading a senior agricultural official to call the programs, "the most special thing that has ever happened to Indian agriculture."

Agricultural credit. Bank-financed programs for rural credits have been deliberately reoriented to make sure that an increasing proportion of these credits accrue to disadvantaged groups who formerly had no access to institutional credit. In this way many credit institutions in developing countries have "eased" into providing loans for the poor; as they have gained experience so the volume of loans for smallholders and tenants has increased. Such a shift has resulted in considerable modifications in organization and criteria for determining the creditworthiness of small farmers.

A study undertaken by the Government of India is one of the few evaluations of the impact of rural credit programs on raising the incomes of the poor. More than 750,000 Indian farmers have taken advantage of the rural credits financed by the Bank. Half of these funds have helped to raise the incomes of very small farmers, much of the credit being used to provide supplementary irrigation, permitting double cropping and increased production. The Government's own evaluation concluded that the credit program, and more especially the small-farm component, had had a considerable impact on raising incomes of the rural poor.

In northeast Brazil, under the Bank-supported Polonordeste program, specific credit mechanisms for helping sharecroppers and the landless have been developed. The mechanisms are designed to suit the needs of these people which cannot be fulfilled through conventional channels. To date experience has demonstrated that such initiatives are feasible without unacceptable default rates and have led to increased production and income.

The multipurpose project. One initiative taken by the Bank in its lending for rural development is the multipurpose project that combines a wide range of activities usually within the framework of some national or regional program. A midterm review of an ongoing project in Mexico illus-

Montague Yudelman

a U.S. citizen, is Director of the Agriculture and Rural Development Department in the World Bank. He received his undergraduate and graduate degrees from the University of California at Berkeley (U.S.A.) and held senior positions with the OECD Development Centre in Paris (France) and the University of Michigan (U.S.A.) before joining the Bank in 1972. Mr. Yudelman has published widely on agriculture and rural development.

trates the impact of such projects. This project concerns carefully selected low-income communities scattered across Mexico in some 30 "microregions." About four years after project inception, some 75,000 low-income families have benefited under the project through investments ranging from irrigation, soil conservation, beekeeping, electrification, roads and marketing services, schools, health care, and water supplies. Thus far, about 30,000 families have experienced an income increase of at least 15 per cent since the commencement of the project, largely through small-scale irrigation and fruit production. An interesting feature of this type of project is the widespread and "quickly" obtained benefits through social infrastructure and electrification.

A special class of poverty-oriented multipurpose projects financed by the Bank involves land settlement and development. One of the most ambitious currently under way is the transmigration project in Indonesia. This project will move very large numbers of the most impoverished families from densely settled Java to the outer islands of Indonesia, where they will be resettled on partially cleared land. The initial—hitherto small-scale—effort financed in part by the Bank has resulted in the annual incomes of some 2,000 farm families rising from about $300 to over $500.

Some lessons

The experiences gained through implementing the approximately 500 projects now under way are both positive and negative. Many were "pioneer" projects either involving activities new to the Bank or work with new agencies. Experience shows that there is often a need for considerable flexibility as circumstances change and as implementation reveals new possibilities or demonstrates the likelihood of failure. For example, in Mauritius a project designed to give temporary and permanent employment for landless workers had provided for some land development but the land—for various reasons which had nothing to do with the project—was not available. A new agreement was made with the Government, and the financing was switched into what has become a successful initiative to provide improved training to develop trade skills among the younger workers. There are many other projects where adjustments have had to be made as more has been learnt about the resource base and technical needs to increase production. In some instances, though, proposed technologies have simply not worked and projects have led to little substantive changes in output and incomes.

In many countries, experience with a first generation or pioneer project forms the basis for subsequent projects. Transmigration in Indonesia is a case in point. Such experience may also form the basis for an expanded national program that goes forward without continuing Bank or other external support. For example, the Mexican program referred to earlier now embraces over 100 microregions. Total expenditures are more than $300 million per annum, while the Bank's support to the program through project finance now amounts to less than 15 per cent of the annual flow.

Through direct involvement at the project level and more general dialogue and interchange, the Bank has exercised a marked influence on national policies and programs for rural development in many developing countries. There is now widespread acceptance that the rural sector is generally grossly undercapitalized and that greater emphasis on agricultural and food production is essential for balanced economic growth. Perhaps more significantly there has also been a growing adoption of the view that growth and equity in the rural areas can be served by raising the productivity of hitherto neglected small farmers and other low-income groups in the rural areas. This is best done by programs specifically designed for this purpose. Such programs are now in effect in more than 100 countries, ranging from the largest in Asia to the smallest country in Africa.

In the last few years it has become clearer which factors contribute most to the impact of specific projects. First and foremost, there is no substitute for government policies which combine (1) adequate incentives to farmers to produce, and (2) increases in the capabilities of rural operating agencies. Most projects are intended to provide a large number of individual producers with an opportunity to raise their output. Whether farmers take advantage of this opportunity has often been determined by external factors, such as the weather, international and national market price changes, or political change.

Weather is important. In the Sahelian zone in Africa, for instance, output fell in Bank financed projects in the early 1970s because of the drought; in South Asia, on the other hand, production in Bank-supported products during this period increased in part - although not wholly - as a result of very good monsoons. A special study of some 18 completed smallholder projects in sub Saharan Africa, all of them appraised and approved before 1973 illustrates a number of these points. While as a group these projects fared well and in fact reached more small farmers than originally envisaged, a number of them performed poorly. In particular, projects involving rain-fed field crops (as distinct from irrigated areas or tree crops) were not very successful. In many cases, given the prevailing cost and price structures, the farm investments supported by these projects were not sufficiently attractive to farmers; they were also often too risky given the hazards of the environment and markets. Some similar problems are also reported for more recent projects still being implemented.

The experience with smallholder projects illustrates one of the several constraints on the expansion of Bank operations to address the problems of rural poverty. Tens of millions of small farmers produce very little in precisely those unfavorable conditions which currently available technologies cannot adequately overcome. Similarly, there are many hundreds of millions of people in the rural areas who either do not have access to land, or whose holdings are too small to sustain themselves and their families. These people can be reached through, for example, the creation of employment opportunities, both permanent and temporary. The Bank has financed more than one million temporary jobs through investment in raising production, land clearing projects, and public works programs. Nevertheless, experience serves to re-emphasize an important general lesson that the contribution to employment creation, either of the Bank specifically or of viable agricultural projects in general, is necessarily a limited one.

One other lesson of recent experience—perhaps the most important of all—is that poverty-oriented projects often need more time to be effective than conventional projects. In retrospect, this is not altogether surprising. Projects intended to help the poor may require several concurrent activities, often including (1) developing technology to suit small farmer capabilities and circumstances; (2) training and motivating extension staff; (3) training farmers and wider communities for full participation and self-management of institutions such as cooperatives; and (4) preventing discrimination against the poor and the preemption of benefits by the richer local leaders, who are sometimes more aggressive entrepreneurs. Preventing such discrimination may include, for example, redefining the laws that govern institutions like cooperatives or changing conditions governing water rights or land tenure. These changes are especially difficult to achieve in societies where land and water are equated with political power. In several projects, for instance, improved technology has been provided to help tenants increase their production but without se-

curity of tenure—they have been displaced by landlords, or the landowners have captured much of the increase in surplus.

In sum, rural development often describes a process involving changing attitudes (including those of bureaucrats), institutions, and old ways of doing things. Experience shows this is often a good deal harder and more lengthy a process than, say, constructing a new power station or planting a new forest. Often, too, results seem to accumulate slowly—almost imperceptibly to the day-to-day observer or participant. Experience also sometimes shows, though, as in the extension projects in India, that once the breakthrough is made, the results can be spectacular.

Prospects

We are as yet far from the point at which the impact of the overall lending effort can be fully and reliably assessed. The major, recent part of the Bank's program to reach the rural poor is still being implemented; many of these pioneer projects will need to followed up through successive stages involving perhaps an overall 15- to 20- year horizon; a number of critical supporting elements and institutional changes will also take time to come to fruition.

Ultimately, success in this field is to be measured as much by the creation of a local capacity for long-term development—a capacity for sustained change—as by any immediate benefits, important though the latter may be. Most important of all is the requirement for sound domestic policies to ensure that increases in agricultural production are sustained and that low-income producers are given every opportunity to increase their output. Increasing investment and the supply of external capital to culture are important, but in our view making better use of existing investments, with comparatively modest incremental outlays to improve efficiency, can yield very high returns. National policies on pricing, land reform, taxation, special facilities for low-income producers, and so forth are at least as important in influencing production as the total flow of resources to a particular country.

A number of recent Bank-financed projects are associated with such policy and institutional reforms. The costs of continuing and expanding Bank efforts are increasing, particularly as projects move into progressively less developed regions; and attempt to deal with more difficult problems. But if the additional resources and governmental commitment are forthcoming, and if expectations are cast in the right time perspective, our experience shows that the chronic poverty now prevailing in many rural areas of the world can be significantly reduced through such efforts.

NR

S-AGRICULTURE

Mr. Charles Weiss Jr., PAS

December 5, 1979

Ted J. Davis

Appropriate Technology

1. In response to your memorandum dated November 14, 1979 to Mr. Yudelman on Appropriate Technology, I am attaching a list of Rural Development Projects approved in FY79. We do not have a separate category of projects under "Social Forestry". You will, however, notice that project 8INDAT06 is entitled: "UP Social Forestry".

2. As regards FY79 rural development projects which merit special mention as particularly suited to local conditions, I would suggest that you consult the Regions. It would appear that in most of the Regions, initial successful experience with concept and strategy for rural development projects has generated repeater projects. In Brazil, the Sergipe project (FY79) is the sixth project based on the experience gained in Rio Grande Do Norte Project (FY76). PIDER Project in Mexico (FY75) has generated two more similar projects. The success of the design and implementation of Nepal Rural Development Project (FY76) in very difficult terrain with acute poverty, has enabled the launching of a second project in the mountainous areas of Nepal. Transmigration II (FY79) project in Indonesia which is specifically focussed on the landless and marginal farmers, will most probably have many more future phases. There are already several Indian Dairy Development Projects supported by the Bank. Such projects are most likely to continue to be supported by the Bank though there was none in FY79. Extension and Training Projects which were launched in one province in India a few years ago now cover, not only several provinces in India, but are also being replicated in Bangladesh, Thailand, Somalia and other countries. It thus may not be very meaningful to consider any project of a particular year as being specially suited to the local conditions. On the contrary, a pilot program which subsequently leads to large scale replication may appear to be of no special significance in the first years of its approval; the first phase of Rio Grande Do Norte is an example. Let me emphasize that, in our view, the Regions are in the best position to determine which of their rural development projects deserve special mention on the score of being appropriate for achieving rural development objectives in concerned countries.

AHAhmad/cc

cc: Messrs. MYudelman, AGR; L.Christofferson, AGR; B.Thoolen, AGR; D.Turnham, AGR

WORLD BANK LENDING FOR RURAL DEVELOPMENT
FY 74-79

FISCAL YEAR	PROJECT CODE	COUNTRY	PROJECT TITLE	IBRD US$M	IDA US$M	TOTAL COST US$M
79	2BUIAT01	BURUNDI	FORESTRY	.0	4.3	8.8
	2KENAN01	KENYA	SMALLHOLDER COFFEE IMP	.0	27.0	62.2
	2MAGAI05	MADAGASCAR	MANGOKY AGRIC DEVT	.0	12.0	29.4
	2MALAD06	MALAWI	NATIONAL RURAL DEVT.	.0	22.0	66.0
	2RWAAD04	RWANDA	RURAL DEVT. MUTARA-II	.0	8.8	11.8
	2SOMAL02	SOMALIA	CENTRAL RANGELANDS DEVT	.0	8.0	46.3
	2SOMAR01	SOMALIA	EXTENSION & TRAINING	.0	10.5	32.4
	2SUDAD06	SUDAN	CROP AND LIVESTOCK-SOUTH	.0	15.0	55.9
	3CAEAL01	CENTRAL AFRICAN EMPIRE	LIVESTOCK	.0	2.5	13.0
	3NIGAI01	NIGER	IRRIGATION I	.0	15.0	21.0
	3NIGAL01	NIGER	LIVESTOCK I	.0	12.0	15.0
	3NIRAD08	NIGERIA	AGRIC DEVT - ILORIN	27.0	.0	64.4
	3NIRAD09	NIGERIA	BIDA AGRICULTURE DEVT.	23.0	.0	64.4
	3TOGAP02	TOGO	COCOA/COFFEE II	.0	14.0	34.2
	5AFGAD01	AFGHANISTAN	RURAL DEVT. I	.0	16.5	39.0
	5SYRAI03	SYRIA	EUPHRATES DRAINAGE I	30.0	.0	52.5
	5TUNAF02	TUNISIA	FISHERIES II	28.5	.0	67.5
	5YARAI04	YEMEN ARAB REPUBLIC	TIHAMA III (WADI MAUR)	.0	15.0	87.6
	5YDRAF03	YEMEN, PEOPLES DEMOCRATIC REP	FISHERIES II	.0	10.0	32.0
	5YUGAD03	YUGOSLAVIA	AGROIND BOSANSKA-KRAJINA	55.0	.0	203.8
	5YUGAI03	YUGOSLAVIA	MACEDONIA IRRIGATION	82.0	.0	188.8
	6BOLAD03	BOLIVIA	OMASUYOS-LOS ANDES R/D	.0	3.0	9.3
	6BRAAD09	BRAZIL	SAO FRN II - RURAL DEVT.	28.0	.0	74.7
	6BRAAD12	BRAZIL	RURAL DEVT V-PERNAMBUCO	40.0	.0	116.7
	6BRAAD16	BRAZIL	INTEG. RURAL DEVT. VI-SERGIPE	26.0	.0	76.0
	6DOMAI02	DOMINICAN REPUBLIC	NIZAO IRRIG PROJ.	27.0	.0	50.6
	6ECUAD01	ECUADOR	RURAL DEVT I-TUNG	18.0	.0	30.0
	6MXCAI11	MEXICO	SMALL SCALE AGRIC. INFRA.	60.0	.0	143.7
	6MXCAI15	MEXICO	RIO SINALOA/FUERTE IRRIGATION	92.0	.0	249.7
	6PANAC01	PANAMA	TROPICAL TREE CROP DEVT.	19.0	.0	38.0
	7INSAD05	INDONESIA	TRANSMIGRATION II	90.0	67.0	242.0
	7INSAI11	INDONESIA	IRRIGATION XII	77.0	.0	118.5
	7INSAI16	INDONESIA	CIMANUK LOWER BASIN FLOOD CTL.	50.0	.0	77.0
	7MAYAI09	MALAYSIA	KRIAN/SUNGEI MANIK IRRIG	26.5	.0	60.2
	7MAYAI10	MALAYSIA	MUDA IRRIGATION II	31.0	.0	69.0
	7MAYAP02	MALAYSIA	SMLHLDRS COCONUT DEVT.	19.5	.0	44.2
	7PAPAD05	PAPUA NEW GUINEA	RURAL DEVELOPMENT I	.0	20.0	32.2
	7PHLAC06	PHILIPPINES	SMALL FARMER DEVT.	16.5	.0	37.0
	7PHLAI16	PHILIPPINES	MAGAT RIVER IRRIGATION	21.0	.0	62.0
	7THLAD04	THAILAND	NORTHERN RURAL DEVT	.0	25.0	47.5
	7THLAI09	THAILAND	NE IRRIGATION II	17.5	.0	80.0
	8BANAF01	BANGLADESH	OXBOW LAKE FISHERIES	.0	6.0	7.5
	8INDAT06	INDIA	UP SOCIAL FORESTRY	.0	23.0	46.5
	8NEPAD02	NEPAL	RURAL DEV II	.0	11.0	13.5
	8SRIAD03	SRI LANKA	KURUNEGALA RURAL DEVT.	.0	20.0	30.0
*TOTAL LENDINGFY 79				904.5	367.6	2951.8

S. Agriculture

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5th December, 1979.

Dr. R. Overby,
Office of Environmental Health,
World Bank,
WASHINGTON, D.C.
U.S.A.

Dear Dr. Overby,

I write to enquire whether the World Bank or any related organisation may be prepared to finance research work on the development of salt tolerance in important agricultural crop plants and closely related topics. While at a recent conference at Brookhaven on "Genetic Engineering of Osmoregulation. Impact on Plant Productivity for Food Chemicals and Energy", I was given to understand by Dr. A. Hollaender that funds might be available from your organisation. who is he?

We have been working intensively in this field for a number of years (a list of publications is included in my curriculum vitae) and, as a result of our own work and that of colleagues in various countries, very substantial advances have been made in our understanding of the salt tolerance. We are anxious to pursue this work with renewed vigour and to co-operate with colleagues in Pakistan on practical aspects of the problem.

We have had an application pending for several months with the Overseas Development Agency of the U.K. Government. The application has been approved in principal but I am becoming increasingly concerned that because of the stringent financial cuts being made by the present administration, money will not be available to finance our project.

I enclose herewith the project application in order to indicate to you the type of work we contemplate. I also enclose the report of the IUPAB group of which I was a member which visited Pakistan and reported on the development of physiological plant sciences in that country with special reference to the problems of salinity and alkalinity.

If you require further information about our work, I would be happy to furnish it. It might also be possible for you to obtain some direct information of our work here from John Spears whom I have known for some years and is I believe on the World Bank staff.

Yours faithfully,

R.G. Wyn Jones.

R.G. Wyn Jones.

S. Agriculture

December 5, 1979

Mr. Keith H. Harris-Watson
Managing Director
APIM Agro-Industrial Planning
Implementation & Management Co. Ltd.
Ludwell House, Byfield, Daventry
Northamptonshire NN11 6YJ
England

Dear Mr. Harris-Watson:

I am sorry indeed that I have been so slow in responding to your letter of September 20, but I have been doing a lot of travelling in recent months and so have the people that I wanted to talk to in the World Bank Group about your proposal.

First of all, I have talked to Montague Yudelman, the Director of the Bank's Agriculture and Rural Development Department, together with his associate, Donald Pickering. They have expressed much interest in your organization and would be glad to talk with you or your people at any time about the opportunities they might see for your providing management services on a Bank- or IDA-financed project. They emphasize, however, that when it comes to "selling" these services you will have to direct yourselves to the borrowers in the field rather than to us.

I have also talked to Mr. Richard Richardson, Director of the IFC's Development Department, who also exhibited much interest in your proposal. (As you may know the IFC sometimes takes a good deal more initiative than the Bank in seeking management services for projects in which they are partners, and the IFC is definitely thinking of expanding its activities in the field of agri-business.) Mr. Richardson said that he would be glad to see you at any time here in Washington, or to arrange for a visit to you in London by IFC staff who might be passing through there.

I would suggest that you respond to Mr. Richardson as soon as you may find it convenient.

With best regards,

Sincerely yours,

J. Burke Knapp

JBKnapp:isk

cc: Messrs. Yudelman and Richard Richardson

WORLD BANK / INTERNATIONAL FINANCE CORPORATION Non-Regional File

OFFICE MEMORANDUM

TO: Mr. G.J. Tibor (Chief, ASPAC) DATE: December 5, 1979

FROM: F.L. Hotes (Irrigation Adviser, AGR/CPS) S. Agriculture

SUBJECT: Safety of Dams

1. This is an interim response to your memoranda of November 9 and December 4, 1979.

2. The interpretation set forth in para 14 of your memorandum of November 9 cannot be considered correct since the "standards accepted by India" are unknown to me in their specifics. The Bank does not accept prima facie the standards of any country, developed or developing. Bank staff have the responsibility of making a judgement on whether the standards of engineering are sound and appropriate to the circumstances of the enterprise and of the country in question.

3. Where the failure of a dam could cause significant loss of lives or property (including the cost of the dam and loss of benefits) the provisions of OMS 3.80 should be followed completely. A dam is a very special type of structure insofar as Bank procedures is concerned. Important bridges and tall buildings would require similar special review procedures. In financing such structures the Bank projects a public image of a worldwide authority and, should a failure of such a structure occur, one can be certain that questions would be asked as to whether the standards and procedures used are appropriate. I doubt that any answer would suffice except that such a structure had been designed and built by competent engineers and constructors with considerable prior experience with such structures, and using internationally known and recognized standards and procedures. And, further, that the designs, standards and procedures had been reviewed by an independent panel representing an even greater spectrum of experience with such structures than provided by the design engineers, and who are current on the international state-of-the-art with regard to such structures.

4. You have a realistic concern as to the responsibility of your staff and Bank management. Para 3 of OMS 3.80 gives important guidance in this regard:

> "...Staff should seek specialized assistance in important or critical areas where they have insufficient expertise themselves, either in a general review of the design concept or in more specific areas, such as rainfall and runoff analysis, soils investigations, spillway design, etc. Staff are encouraged to consult with CPS engineering advisers on these matters."

From among Bank staff there are several with varying degrees of specialized experience in dam design and construction whose advice can, and should be, sought. Mr. Sheehan and myself have lists of competent independent dam consultants, many of whom have been used by the Bank previously. Informal or formal committees within the Bank can be utilized to provide advice when appropriate.

5. Your November 9 memorandum specifically refers to the problem of design floods and spillway capacities according to Indian standards---a problem long recognized in your Region but brought into prominence by the loss of 3,000 lives resulting from the failure of Machhu II Dam in Gujarat State on August 11, 1979. The failure apparently was at least partially due to insufficient spillway capacity. It is my understanding that Indian spillway design procedures do not include a check against a flood resulting from a Probable Maximum Precipitation (PMP), as defined by the World Meteorological Organization (WMO). The PMP approach was developed more than 30 years ago and is considered in all spillway designs for federal structures in the USA. WMO has a bulletin on it. It has been written about or referenced frequently in publications of the International Commission on Large Dams (ICOLD). There are Indians who are familiar with it. The PMP approach is, in fact, internationally known. In view of this fact, it is my opinion that the Bank should not finance projects involving dams where failure could mean significant loss of lives, property or benefits unless estimates of PMP are at least made and considered in the spillway and dam design.

6. While your memorandum focussed on the issue of spillway design standards, structural and other hydraulic aspects of design are also important. Are recent methods of seismic design being used in India? Through their participation in ICOLD the Indian dam specialists undoubtedly are aware of these methods. Perhaps consideration should be given to having a Bank panel of dam experts review Indian design and construction standards and procedures and give the Bank (and India) its approval and/or recommendations.

7. If I can be of further assistance in this matter please let me know.

FLHotes:rm

cc: Messrs. Baum (VPCPS); Rajagopalan, Morse (PAS); Sheehan (EGY); Hopper (ASNVP); Picciotto, Rowe, Pranich (ASP); Yudelman, Pickering (AGR/CPS)

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

SD

S. Agriculture

OFFICE MEMORANDUM

TO: Mr. D.C. Pickering

DATE: November 27, 1979

FROM: John S. Spears

SUBJECT: FAO Meeting on Potential Role of Wood Fuels for Domestic Use in Developing Countries

1. On October 24-26, 1979, Lennart Ljungman and I attended a two-day meeting on the above subject organized by FAO's Forestry Department.

2. The purpose of the meeting which was deliberately kept small (see attached list of participants in Annex 1), was to review current issues in this area in order to provide a sharper focus for future work programs.

3. The background paper circulated as a basis for the meeting discussions (Annex 2) summarizes the present state of knowledge in key areas such as consumption patterns, supply constraints and alternative energy options. From the Bank's point of view, the FAO paper does not significantly add to our appreciation of the subject; the main value of the meeting emerged from the contributions made by the various individual speakers dealing with practical experiences and alternative approaches to resolution of current wood-based energy issues. Those most pertinent to the Bank's own work program are briefly summarized below.

4. Steven Joseph of the Intermediate Technology Development Group from London gave an outstanding presentation of the ITDG's work in development of more efficient stoves suitable for use in developing countries. His descriptions of alternative institutional approaches to encouraging wider use of such stoves were relevant to projects such as those being financed by the Bank in India (Uttar Pradesh and Gujarat), Burundi, Mali, Upper Volta, Niger and Malawi. ITDG have been working with a variety of agencies and institutions, including community development groups, university research teams and artisan training institutions. A key factor in ensuring rapid adoption of new technologies has been mobilization of entrepreneural talent and artisanal skills at the village level for initial construction of trial stoves and promotion of their wider use. ITDG's experience in this field has been encouraging. The theme which ran through the discussions of this topic was the importance of identifying, at an early stage of project development, individuals around whom to build promotion campaigns for wider adoption of new stove technologies and secondly, the rapid progress which has been made in some situations where local village level artisans have set up small business enterprises to mass produce and promote sale and distribution of improved chimneys or other stove components. I would recommend that we try to involve ITDG in further development of Bank financed wood stove projects.

5. Mike Benge of USAID gave an account of his first hand experiences in trying to initiate village level forestry programs in Viet Nam, Philippines and Haiti. He is an authority on Leucaena species. His comments on alternative approaches to extension work in this field were particularly useful. He des-

cribed the success which he had achieved through involvement of school teachers and children in tree planting campaigns. AID are intensifying their involvement in community woodlot programs and I recommend that we continue to work closely with AID in this area. Our principal contacts in Washington are Messrs. Benge, Poole, Taylor and Kunkel (the latter is located in the Peace Corps Office).

6. Gordon Goodman of the Stockholm Beijer Institute spoke of the work of the Institute in the field of rural energy sector surveys. The institute is about to embark on a major systems study of the rural energy sector in Kenya, the findings of which could be pertinent to Bank involvement in the Kenya III Forestry Project. We have arranged for Mikel Grut (a Forest Economist from FAO/CP who will be involved in preparation of the Kenya III Project) to visit Stockholm and to participate in discussions concerning further development of the Beijer Institute Study Work program.

7. Bill Morgan of Kings College University of London (an Adviser to the UN on Rural Energy Problems) made some useful observations on the question of the extent to which agricultural residues such as maize and sorghum stover can be used in lieu of wood fuels. As noted in David Hughart's paper (Non-Commercial and Non-Conventional Energy Sources), about 1 billion people in the developing world rely almost entirely on agricultural crop wastes or animal dung for their basic cooking and heating needs. Since the burning of such residues and dung adversely affects agricultural productivity, the Bank, over the last 12 months has been trying to develop more precise data on the extent to which making wood readily available at the homestead or village level might be expected indirectly to have a beneficial impact on agricultural and livestock output (see for example, para 6.02 of the Nepal Community Forestry Development Project SAR). Morgan will be involved in organization of the forthcoming 1981 UN Conference on "New and Renewable Sources of Energy" and could be a useful contact for obtaining background conference papers and an overview of trends in alternative energy technologies development.

8. G. Ojo of the University of Ife in Nigeria contributed a paper on Rural Energy Systems which summarizes the results of a study being undertaken by the University in Southern Nigeria (around Ife, Ogbomosho and Ibadan). These three urban centers have a combined population of about 1.5 million people. The findings of the study confirm the well established fact that as per capita incomes rise, there is usually a shift away from the use of wood to alternative, more convenient fuels, such as kerosene or electricity. Perception of this fact and adequate sampling of the energy consumption patterns in any particular community, and of likely future changes in per capita income levels over a 10-20 year time horizon (the time needed for fuelwood plantations to mature), are critical issues when designing woodbased energy programs (see for example, the Malawi Woodbased Energy and Yemen SURDP II Project Forestry component which will include household consumption surveys aimed at obtaining more precise information on these issues).

9. This part of the discussion also focussed on the extent to which biomass based fuels (agricultural residues or wood wastes) might, in the future, become a significant source of raw material for wood-based electrical energy power plants. Several plants are currently under construction (e.g. in Vermont and Maine in the North East USA).

10. FAO's own role in the wood-based energy field was outlined by Michael Arnold. FAO has, to date, been the main focal point for collecting together knowledge of the present state of the art and for disseminating literature relating to wood-based energy programs and the role of forestry in community development. Under the FAO/SIDA Program, FAO has US$3 million available for implementation of training courses, research studies and pilot community development forestry programs in this area. The Bank has been working closely with this FAO/SIDA program in setting up monitoring and evaluation studies, wood consumption surveys, and basic research programs as an integral part of Bank financed wood-based energy projects (see for example, FAO/CP's Report in the Region's project working file of the Malawi Woodbased Energy Project which includes detailed TORs for a research study program). I recommend that through FAO/CP, we should continue to develop this link and to capitalize on the experience which FAO over the last 10-15 years has already gained in this field.

The Bank's Role

Project Design

13. To date, the Bank has financed about eight forestry and 14 rural development or agriculture projects including significant fuelwood components (see Annex 3 attached) valued at about US$120 million, some of which include introduction of more efficient wood burning stoves. Judging by response of the FAO meeting, one particular area in which the Bank's experience could be of interest to other agencies is that of woodbased energy project design. Within the Bank, rural forestry including woodbased energy project formulation is a multi-disciplinary activity, involving economists, foresters, agronomists, livestock experts and specialists on alternative energy options. A deliberate attempt is being made in project design to address the inter-related problems of fodder/fuel agriculture and livestock crop production programs in an integrated manner within the framework of rural development programs. The Regional Organizational structure of the Bank and project oriented approach to development have been decisive factors in bringing about this approach to project design and there was discussion about the scope within FAO, for example, to encourage similar working relationships between the various technical divisions concerned with forestry, agriculture, livestock, land and water resource development. I would recommend that the Bank shares its experiences in rural forestry project design by periodically convening informal inter-agency seminars during which, issues of project design, constraints to development and lessons emerging from supervision missions are freely discussed.[1/]

Sector Work

14. A second area in which the Bank could make a positive contribution to further development in this field (although we have not yet done so), would

1/ In October 1979, for example, CPS convened an informal meeting on fuelwood programs which was attended by USAID, Peace Corps, the International Institute for Environment & Development, Inter-American Development Bank, National Academy of Sciences and FAO staff, at which these issues were discussed. Most of the agencies involved in that meeting have followed up by corresponding with or visiting the Bank to discuss their own experiences and problem areas indicating that they would welcome the possibility of continued informal contact with the Bank in trying to resolve common problems.

be by supporting more systematic overall energy sector strategy studies to provide a framework for financing of project oriented alternative energy programs. EWT under Dick Dosik's leadership will be moving into this area in the future. Judging by what we learned from the FAO meeting, there are many other agencies already actively working on sector strategy problems including FAO, the Beijer Institute, USAID, the University of Ife in Nigeria, Tribhuvan University in Nepal, etc., etc. There could be a role here for the Bank in trying to pool the present state of knowledge on sectoral study design, preparation of sector guidelines and provision of funds for further expansion of this type of activity. One of the obvious reasons why the Bank should continue to expand its support of such sector reviews is the role and influence which these sector studies can play in changing Government thinking in relation to energy program development priorities. It is acknowledged in Nepal, for example, that the Bank's forestry sector review in that country, the main focus of which was on rural energy demands, had a significant influence on the thinking of the Economic Planning and Finance Ministries' decision to support an expanded program of fuelwood plantation development in the Hills.

Economic Justification for Wood Based Energy Projects

15. The Bank's experiences in trying to resolve issues related to the economic justification for investment in woodbased energy projects were of general interest. We concluded that there is a real and urgent need to develop better physical data in this area. Through inclusion of monitoring and research studies as part of Bank financed projects, we are gradually improving the Bank's knowledge of this subject. CPS recently financed a 6-week research assistant assignment concerned with development of more precise data on the inter-relationships between tree shelter belts and agricultural crop and livestock yields. This is also a field in which I recommend that we continue to share our experiences with other agencies.

JSpears:hrv

cc: Messrs. Yudelman, Darnell, Donaldson, Temple, Sfeir-Younis, Draper, Ljungman, Baykal, Gorse, Fishwick, Brouard, Wagner, Keil Goodland, Dosik, Hughart, Zurbrugg, Grut, Cooling (FAO/CP Rome)
Mrs. Boskey

Attachment

ANNEX 1

CONSULTANCY ON THE POTENTIAL ROLE OF WOOD FUELS FOR DOMESTIC USE IN DEVELOPING COUNTRIES

FAO, Forestry Department

Rome, 24 - 26 October 1979

LIST OF PARTICIPANTS

M. BENGE	USAID, Washington
J. BETHEL	College of Forest Resources, University of Washington, Seattle
G. GOODMAN	Beijer Institute, Royal Swedish Academy of Sciences, Stockholm
S. JOSEPH	Intermediate Technology Development Group, London
L. LJUNGMAN	IBRD, Washington
W. MORGAN	Kings College, University of London
G. OJO	University of IFE, Nigeria
F.S. POLLISCO	Forest Research Institute, Laguna, Philippines
J. SPEARS	IBRD, Washington

M.A. FLORES RODAS	Assistant Director-General, Forestry Department
J.E.M. ARNOLD	Forestry Department
M.R. DE MONTALEMBERT	" "
E. PELINCK	" "
G. SEGERSTROM	" " (part time)
J.P. LANLY	" " " "
B. BEN SALEM	" " " "
T. CATTERSON	" " " "
P. WARDLE	" " " "

H. VON HULST, AGO	Agriculture Department
N. BUSTRILLOS, ESH	Economic and Social Policy Department
F. ZURBRUGG, DDC	Investment Centre
J.P. HRABOVSZKY, AGD	Agriculture Department

CONSULTANCY ON THE POTENTIAL ROLE OF WOOD FUELS FOR DOMESTIC USE IN DEVELOPING COUNTRIES

FAO, Forestry Department

Rome, 24-26 October, 1979
(Cuba Room, B-224)

AGENDA

1. Introduction

2. Wood fuels for domestic use

   domestic energy requirements
   wood fuels in domestic energy consumption
   growing supply demand imbalances

3. Technologies for production and use

   harvesting and transport of fuelwood
   charcoal production
   improved efficiency in use

4. Fuelwood resource

   resource assessment
   managing existing resources
   creating additional resources
   organizing the supply of wood fuels

5. Alternatives to fuelwood and charcoal

6. Issues in the potential role of wood fuels

   economic considerations
   social aspects
   environmental impact
   institutional framework

7. On-going and prospective programmes

   main orientations and approaches
   exchange of information, coordination

8. Suggestions for future orientations of FAO's work

CONSULTANCY ON THE POTENTIAL ROLE OF WOOD FUELS FOR DOMESTIC USE IN DEVELOPING COUNTRIES

Rome, 24 - 26 October 1979

Background Paper

WOOD FUELS FOR DOMESTIC USE IN DEVELOPING COUNTRIES

The 'other energy crisis', affecting more than a third of the world's population, is becoming of major concern to all those concerned with development in the Third World. The growing energy needs of developing countries will be facing the general energy situation, with consequent dependency on fuels imports competing with those of the industrialized countries and with implications for their economy of the use of expensive imported fuels. At the same time, wood fuels constitute a basic energy source for hundreds of millions of people; they are 'the poor man's oil', with very limited possibilities of substitution by other fuels expensive and available in limited quantities. However, in large and ever-increasing areas the combined effects of population growth and concentration and of limited resources are generating situations where scarcity of wood fuels is developing its harmful effects, mainly on poor people. These considerations, together with the basic importance of energy requirements for subsistence and development, call for a new look at the more traditional use of wood by man as fuel: active policies should replace the 'laissez-faire' attitudes which have prevailed in the past.

The purpose of this paper is not to present a comprehensive review of the supply and demand situation of wood fuels in the developing countries, but to serve as a background to the discussion. It is mainly intended to assist in raising a number of questions and in identifying areas where information is insufficient and/or action is needed. At this stage, the main purpose of deeper consideration should be to review the present role of wood in meeting energy requirements in developing countries, to assess its viability and its potential role and at the same time to identify what could or should be done to alleviate the pressures in situations where the scarcity of wood has or might become a major constraint.

WOOD FUELS FOR DOMESTIC USE

Energy for cooking and heating is an essential requirement at the basic needs level. Fuelwood and charcoal are the more traditional fuels used to meet basic energy needs for domestic use in millions of households in the developing world. An estimated order of magnitude of half the wood harvested annually in the world is for energy supply in developing countries and that many families in rural areas do not have any access to alternative sources of energy. This broad evidence points to the need for renewed attention to be given to the role of fuelwood for domestic use, but major gaps still exist in the knowledge of present situations and of their possible evolution. A good understanding of the present situation of energy consumption for domestic use is essential in order to be able to assess the exact role of fuelwood, the degree of dependence, the effects of scarcity, the changes in needs together with evolving situations, and particularly along with development and economic growth. Such an understanding is basic for identifying suitable solutions which meet people's needs.

Current situation of domestic energy consumption

Most households in the rural - and also urban - areas of the developing countries are still in traditional energy situations where basic energy requirements are met by traditional fuels in the framework of subsistence. Modernization and development usually introduce additional energy requirements with more sophisticated technologies which make use of more complex energy sources. Energy has become an essential component of any comprehensive development programme, not only as an important element for raising living standards through growth but as a basic requirement for ensuring the daily subsistence level at which development can take place. A more precise knowledge of the basic energy requirements of standard households or communities in developing countries is needed for the necessary planning and organization of their supply. Most rural communities are organized as almost closed energy systems with a very limited amount of energy provided on a commercial basis from outside the community. But few attempts have been made to assess the energy budget of such communities, taking into account the various activities such as domestic use, agriculture, handicrafts, transportation and identifying the share of the various energy sources in meeting these specific requirements

Many traditional rural systems integrate their energy needs into the complex framework of their productive activities and socio-economic organization. Little has apparently been done to analyse the main existing situations and to describe typical situations which could be used as a basis for reference and for planning future supplies. Existing information is limited and little reliable quantitative data are available. Furthermore, there is a lack of information and analysis on the implications of development and evolving situations on the energy budget of rural communities and relative possible major influencing factors. There is, therefore, a need for study and research activities to provide reliable information on the rural community and household energy consumption situations and on factors and ways of changes.

Wood fuels in domestic energy consumption

Among traditional energy sources, fuelwood plays a major role and there is evidence of a widespread dependence on fuelwood in rural areas and many urban areas of most developing countries; wood fuels are used and preferred for most domestic energy requirements which in turn dominate total energy use. As a result even in countries where a well-developed commercial energy sector does exist, wood fuels account for a substantial share of total energy consumption. They provide for the largest amounts of traditional energy demands in developing countries through an estimated at 85 % of non commercial energy consumption: in some cases dependence on wood fuels for domestic energy requirements is almost total. This dependence, together with the implied basic concern of maintaining and increasing food production in line with demographic growth, are the major aspects of the role of wood fuels in meeting household energy needs. However, much still needs to be known about levels and pattern of use of wood fuels at the household level and about differences between urban and rural areas. A number of surveys have studied a variety of situations but too often this has been done on a limited basis, without an appropriate design and an adequate statistical approach; measurements problems have seldom been properly solved. The relationships between wood fuels consumption at the household level and socio-economic or cultural parameters, the seasonal variations, the side effects of using wood or other fuels, the implications of development and of changing living standards are not easy to assess. Most of the available information is partial and hardly provides significant indications as many surveys have proceeded only through visual estimates of quantities. Therefore, there is an explicit need for a definition of

appropriate methodological approaches to wood fuel consumption surveys, for more systematic field surveys to obtain more accurate and detailed information on the use of wood fuels by different groups of population in different situations in different countries.

Rising fuelwood scarcities

In some areas the heavy dependence on wood fuels together with growing populations and increased urbanization have led to a marked unbalance with the available supply and to subsequent scarcities. The effects of such scarcities are numerous and self-reinforcing: they affect primarily the poorest who have to spend more for fuelwood collection and purchase in time and money from their limited resources: the depletion of the natural vegetation increases ecological fragility and contributes to the degradation of the resource base on which agriculture is dependent; the scarcity of fuelwood also means the use of agricultural residues and dung to meet basic energy needs. Areas of fuelwood scarcity may even occur in wood-rich countries, for example around major cities, but they are usually characteristic of the more arid regions with fragile ecological conditions, regions with hard climatic conditions or with relatively high population density. There is a clear need for concentrating more attention and efforts on those areas where a critica' situation has already developed with harmful implications on the basic energy requirements of their populations. A systematic identification of such critical areas is required, independent of political or geographic boundaries, to provide the list of first priority areas where action is needed to improve and ensure the basic energy supply. It would also be useful to investigate the general ramifications of fuelwood scarcity and to measure its effects, such as the loss of agricultural production thr gh the diverted use of wastes and dung as fuel, the decrease in soil productivity, the environmental damage; the assessment of these environmental costs is of particular importance and would require continuous and repeated measurements through specially designed surveys adapted to the variety of situations encountered.

Dependence on wood fuels in developing countries is therefore widely evident, especially for meeting the basic energy requirements at the household level such as cooking, heating and also for some processing activities, in both the rural and urban areas. However, much still needs to be known about the basic energy budgets, the exact levels and pattern of wood fuels consumption, the factors affecting such consumption and the

changes related to development, and the effects of scarcity and of substitution by agriculture wastes. Particular attention should be given to reaching a better understanding of some of the typical situations and to the systematic identification of the more critical areas where the scarcity of wood fuels is affecting man and his environment. Under the prevailing energy situation the dependence on wood fuels is not likely to be substantially modified in the foreseeable future: a better understanding of its nature is, therefore, indispensable in order to find out what solutions are appropriate.

TECHNOLOGIES FOR PRODUCTION AND USE

Most of the energy derived from wood and used in the households of developing countries is used through direct combustion of fuelwood or through charcoal for high temperature heat, mainly for cooking requirements. Growing more wood for such energy purposes is subject to a time lag: there is scope for more immediate action for improving the technologies for production and use of fuelwood and charcoal. Traditionally fuelwood was considered as a free access good, often protected by usage rights and closely integrated into the traditional social structures; at the same time, the activities related to its collection and use were mostly scattered at the household level. As a result, there has been almost no evolution in the techniques involved, with the result that wood fuels are still collected and used in the same way as when they were abundant. In addition, much of the knowledge which was available when wood was still generally considered as an important fuel is not any more being used. There seems to be a general scope for substantial improvements of the present conditions of harvesting and transport of fuelwood, in the production of charcoal and in the efficiency of use, particularly through improved stoves. Most of these efforts should go along the lines of appropriate technology approaches to make sure that the solutions meet with the needs and habits of the target people.

Harvesting and transport of fuelwood

Harvesting and transport of wood for industrial purposes have made considerable technological progress. The techniques of harvesting and transporting fuelwood have remained by comparison almost unchanged, probably because fuelwood is mostly marginal to the monetary economy and its gathering in rural areas is directly made by users. In some savannah areas big dry trees are not used while branches and young trees

are collected because of lack of adequate tools; in some forest-rich areas closed to major urban centres, fuelwood is still intensively collected on the limited outer ring of the forest while large quantities of wood suitable for fuel is abandoned by the large industrial logging operations. While the fuelwood gathering distances have been increasing substantially as a consequence of the progressive remoteness of supplies from consuming areas, the most traditional transportation systems are still used despite the bulky nature of fuelwood.

There is, therefore, a clear need for special efforts to be made to improve the techniques of fuelwood gathering and transportation, to adapt the knowledge and techniques available and to find out solutions which are appropriate to the specific conditions of a number of typical situations such as nature of the forest or tree vegetation, physical and climatic conditions, social organizations, etc. At the same time, it would be necessary to foresee how the collection of fuelwood might evolve in the future and to what extent changing supply conditions might modify the traditional direct gathering for the user's needs. This could entail adapting or designing new systems and tools for harvesting and transport which, at the same time, make fuller and better use of the available supply and organize and alleviate the burden of providing for basic energy needs, thus releasing labour for productive activities. The design of such systems and tools should follow the appropriate technology approach; it should probably consider some basic differences of situations such as dry savannah or humid tropics vegetation or such as fuelwood gathering for household use or for the supply of larger markets which can give rise to cash income. The scope for improving fuelwood harvesting and transport techniques seems general in developing countries with potential benefits which go far beyond the energy problem.

Charcoal production

Charcoal is an attractive alternative fuel to fuelwood, or preferable when transportation over long distances is necessary. In some cases, however, uncontrolled charcoal making may result in intensifying the destruction of the forests. Charcoal often substitutes fuelwood, especially when rising incomes and urbanization are combined in monetized markets. Apart from the consumer's preference, its transportability and efficiency in use make charcoal a well-adapted fuel in a number of situations, particularly when an extension of the supply over larger areas is required. However, in order to be really beneficial in energy terms, it is necessary that the charcoal making process be reasonably efficient: even if, in many cases, traditional producers manage to produce a good quality charcoal from the available raw material substantial increases in yields could be obtained

In addition, appropriate techniques make it possible to transform into charcoal large volumes of wood of all dimensions which would otherwise have been destroyed in land clearing or left on the ground in exploited areas including the non commercial volumes of the standing forest, thus contributing directly to energy supply.

However, the diffusion of specially designed small portable or larger stationary kilns is necessary and, for this, techniques will have to be devised or adapted, tested and propagated and special efforts will have to be made in order to train the qualified personnel so lacking in most developing countries. Many different criteria will need to be taken into account in examining local situations and in designing and organizing charcoal production, as the ultimate decisions have to consider not only efficiency in energy supply but also the implications on employment and income. Improving the charcoal making techniques implies also that efforts will be made on adapted techniques and tools both for harvesting wood for charcoal and for transporting charcoal to the market. Substantial improvements seem possible in charcoal production at the local level, apart from large-scale production systems.

Efficient use of wood fuels

Traditional ways of using wood fuels, especially for cooking and heating, have a low energy efficiency as most of the heat is lost in the process. Increasing the amount of energy usefully consumed is one of the most promising and quicker way of diminishing the amount of fuel required and, therefore, of improving the supply-demand situation. Several low cost measures are possible but they may sometimes conflict with traditional usage and preference. Improving the efficiency in use is essentially related to fuelwood: charcoal with its higher calorific value is easier to use more efficiently. A first series of measures are related to supply: dried firewood of suitable dimensions is a first requirement to allow the user to get more and better heat: this might require changes in the organization of the supply. Replacing traditional openfires by simple and well-designed stoves may considerably reduce the quantities of fuelwood required while at the same time improving safety and health conditions: it could be the simplest, cheapest and most effective way of reducing fuelwood requirements for domestic use. Because fuelwood is simple to use and no costly equipment is required to produce or use it, it is often the preferred fuel. Its usage is normally very carefully organized without any unnecessa waste and is closely related to important socio-economic aspects of the household. Nevertheless, despite the increasing importance devoted to improving the efficiency of fuelwood use through well-designed stoves,

there does not seem to be evidence of many such successful programmes. The potential for reducing the demand for fuel through efficient cooking stoves is substantial but effective programmes require careful design, an appropriate technology approach, sufficient adaptation testing and extension and demonstration support. A number of activities related to improved stoves have been or are being carried out in various countries; there is a clear need to know more about problems encountered, successful approaches and determining factors in such programmes. Ways and means to relate such programmes to broader development efforts are also an important aspect, as well as the organization of such programmes and ways of involving all concerned in active participation from the early stage. Socio-economic and cultural aspects are probably as important as the purely technical are and it would seem necessary to define suitable approaches related to the variety of existing situations.

Promoting higher efficiency in producing and using wood fuels is undoubtedly a major potential solution to alleviating the pressure of demand for domestic use: a reduction of the quantities needed for meeting the same basic energy requirements would have a rapid impact in short supply situations; at the same time, adequate production techniques can also rapidly increase the supply from available resources. Appropriate technology approaches are essential in order to achieve successful improvements in activities such as fuelwood gathering and use which are so closely relat to basic needs and have deep socio-cultural content. It involves an area which requires a careful approach, and an exchange of experience and information would be particularly useful, especially on programme design and implementations and on effective impact.

FUEL WOOD RESOURCES

The recent experience with the prices of oil and other modern energy forms stresses the ultimate importance of those energy sources which can contribute directly to self-reliance in energy through their renewability and substainability. The new concern about energy places renewed emphasis on forest resources because of their potential as a renewable source of energy to contribute to the basic energy requirements of populations already so dependent on them. It could radically change the approach to forest resources management by making energy a major production objective. It is evident that in the foreseeable future the more sophisticated energy forms will have to be primarily assigned to priority development activities and the greater part of the population of developing countries will continue to depend on wood fuels for their daily requirements. In forest management it is becoming, therefore, indispensable on the basis of an adequate assessment, to stimulate increased productivity of existing resources, to complement them by the creation of additional resources and to organize the production of the whole in an adequate supply of needs.

Resource assessment

Information on fuelwood production and resources is rarely available. Most of fuelwood production and usage takes place outside commercial channels, is generally not subject to any effective control and, therefore, is not recorded. Official figures on fuelwood production take into consideration the production from forests under some degree of control or management, otherwise production is assumed to be equivalent to consumption, the latter being broadly estimated. Recent work has also shown that information on the national and regional levels on the present situation of forest resources in developing countries is generally inadequate and normally includes only data on wood for industrial supply. Information on forest, woodlots, tree stand and non-tree woody vegetation inventories and yields as far as fuelwood is concerned is rarely available: in particular little is known on the production potential of large areas of open woody cover in arid and semi-arid regions where the fuelwood problem is greater. When available, the information does not include small village and farm woodlots, tree lines and scattered trees. Special efforts are, therefore, necessary in order to establish an adequate information basis for the realistic appraisal of fuelwood supply from existing forest and tree resources. This would have to take into account those tree stands which provide only wood for fuel, but also those forests where wood for fuel or for industrial use might be complementary or competing as well as tree and woody vegetation outside the forest; in some cases, small or dry trees or forest residues left after logging operations might constitute a sizable resource. If existing inventory methods cannot be adapted to provide this information quickly and effectively, then the design of special methods might be necessary. It can also be envisaged to relate or even integrate in the same resource assessment fuelwood and agricultural residues in order to explore the resource in a systematic way which would provide a broader information basis.

Resource management

Existing forest resources constitute the immediate availability for fuelwood supply. In a number of instances, the lack of information has led to large investments in fuelwood plantations without much consideration of existing supply possibilities; no attention was given to the prospects of managing properly the existing woody vegetation. Some work has been done on ways and means of managing the tropical forests, but the purpose was essentially to provide an adequate supply of timber to the industry. Fuelwood is generally collected without any control from existing forests: if the demand pressures become high, not only is dry wood gathered but small trees and branches are also cut, which may affect regeneration and growth. How much

would forest management approaches and procedures need to be reviewed to include wood for energy either as a primary production on areas where demand is particularly pressing or as a complementary product to industrial wood supply. It is only through proper forest management that a sustained yield is obtainable and a major effort may, therefore, be needed to bring into management large areas of forest vegetation for fuelwood production. Improving the management of existing resources means not only managing normal forest stands but also small woodlots or open woody vegetation; existing and usually well-adapted vegetation normally provides a good opportunity at relatively low cost for increasing the supply of fuelwood through simple adequate measures aiming at higher productivity. However, not much recent experience and information seems to be available on appropriate management methods, on ways and means to stimulate the productivity of natural stands for fuelwood supply and on possible results as a sustainable supply option. How much can be gleaned from the papers and records of earlier times when fuelwood was a primary objective of forest management in many forests ?

Creating new resources

Additional or new fuelwood resources may have to be created, especially in those critical situations where fuelwood is in short supply: fuelwood plantations on a substantial scale will often be necessary if the fuelwo needs of areas of large concentrations of population, particularly urban populations, are to be met. The production potential of such plantations, if adequately conducted, can be high, but there are a number of technical, social and economic constraints which usually make such programme a complex and costly solution requiring a careful approach. Growing shortages of fuelwood are often the result not only of high demand pressure, but also of deforestation of land for grazing or agricultural purposes. Competit. for land is in such cases a major constraint to fuelwood plantations which could require flexible solutions in order to avoid diverting large contiguous areas to tree planting. Small woodlots, isolated trees or in lines, systems for joint production of wood and crops or fodder are alternative solutions which might solve the problem in such situations. The time constraint which characterizes forestry production might be a major obstacle to interesting local populations in growing fuelwood, especially when their resources are critically limited and are to be primarily responsive to their priority needs. In seeking solutions in such situations, high yield and quick growth as well as fuel properties are basic factors in selecting species for fuelwood plantin but it will be necessary to take into consideration other aspects such as effects on soil fertility and on yields of other adjacent crops, variety of other outputs such as fodder or fruit, adaptability and versatility, etc.

The large variety of objectives which can be combined with fuelwood production in planting trees is a basic consideration for the selection of tree species and the design of appropriate management systems. Research and development programmes on these problems are essential to ensure a suitable choice of solutions: their technical feasibility is a pre-condition to successful implementation and will, therefore, help to solve the economic and social aspects. In identifying suitable solutions for integrating new fuelwood resources at the farm or the village levels, the people's attitude and possible benefits have to be carefully taken into consideration. In addition, the assessment of such solutions as a sustainable supply option would be necessary.

Organizing the supply

A major aspect of the fuelwood supply is its availability to the poor man for household needs: fuelwood should be accessible to him essentially on the basis of its local availability. There are a number of implications of the basic consideration which accessibility should receive in organizing the adequate supply of fuelwood. Careful planning of fuelwood supply would relate the availability of resources to energy needs on a much closer basis than nation wide, with due account to geographical barriers and ecological and socio-economic conditions. A dynamic approach is required in identifying situations of existing or potential deficit and the nature and evolution of available resources. In designing programmes for the adequate supply of fuelwood, a major issue should be the accessibility under conditions appropriate to the situation and conditions of the poor in rural or urban areas. How can priority be given effectively to solutions which improve local availability, taking into account the physical, economic and institutional factors which govern accessibility?

Assessing the potential role that fuelwood can play as a renewable and sustainable energy source should also take into consideration social, economic and institutional factors, but it is indispensable that a sound technical basis be available. A certain amount of technical knowledge does exist but is not always readily available because of the lack of attention that fuelwood has received in recent times. Additional research is also needed: by the selection of appropriate species and proper management, the supply of fuelwood from the forest resource can substantially increase. Much still needs to be learned through documentation and research about available or potential resources and the technical basis of programmes for the sustained production of fuelwood.

ALTERNATIVES TO FUELWOOD AND CHARCOAL

Wood is presently the predominant fuel for domestic use in developing countries, but it may not necessarily be the most appropriate fuel for each single use within the household, and the dependence on wood fuels may also

be modified along with the development process and with changes in way of life. The prospects for substituting wood fuels are clearly dependent on the comparative cost and availability of alternative sources of energy and on their suitability to meet the various energy requirements at the household level. A distinction should be made between conventional commercial energy sources and unconventional sources such as biogas or solar energy. The domestic use of energy has a strong socio-cultural content and it is, therefore, necessary to extend the question of the suitability of an energy source for substituting a traditional fuel beyond technical aspects.

Substitution of wood fuel by commercial energy sources such as butane, kerosene, coal or electricity is feasible only in urban areas or in rural areas where an adequate transportation system allows for transport and distribution. Although usually more efficient in terms of calorific yield, the prices of these fuels and related equipment restrict their availability to higher income households. In addition, it is likely that these fuels will be primarily directed into higher priority uses for development. However, it could be necessary in some specific situations to call upon these conventional energy sources to replace a fuelwood resource which is becoming increasingly scarce or for some specific uses for which they are particularly well-adapted. These conventional sources of energy are unlikely to play any major role in substituting fuelwood in household uses in developing countries except in specific situations of wood scarcity and abundance of mineral fuels: it could be useful to explore the specific conditions of such situations in order to assess their degree of applicability and the substitution impact on wood fuels use in such systems.

Biogas process of producing energy is particularly valuable as it produces a fuel gas suitable for household energy use in decentralized systems and retains the nutrient value of the organic material. Biogas can be used for almost all energy purposes at the farm level; however, it requires equipment which represents an investment, is of minimum size and requires technical knowledge to maintain the necessary water, temperature and energy conditions for the continuous process. Some installations have been working over long periods but generally in a modern sector framework: intensive work has been carried out in some countries to develop smaller plants, cheap and easy to operate, which make efficient use of a variety of animal and vegetable material. It seems, however, that the available scale of construction and operation make this technology suitable only at the level of community, or at least of a wealthy farm household which owns sufficient cattle and land to supply and use the plant on a feasible basis. It would seem, therefore, that there is not actually much scope in the foreseeable future for biogas to be the alternative source of energy for

substantial number of rural households; unless the households are organized into a community framework and are prepared to cooperate actively by combining their energy needs on a communal basis which could be difficult to achieve. An up-dated assessment of experiences and available information would allow for a better evaluation of the biogas alternative and its prospects.

Many resources and activities seem to have concentrated recently on research on solar energy and particularly on simple devices for direct applications at the household level, mainly for cooking and heating but also for some specific activities such as drying and distillation. In most of the developing world exposure to solar radiation is sufficient but the main problem lies in the cost of equipment and the radical changes in habits required, in addition to the difficulties of using solar cookers for some types of cooking. Even in areas where the scarcity of wood fuels is evident, the prospects for adapting and generalizing the use of solar cookers do not look promising, at least in the short to medium term. The potential for solar energy as an alternative source of energy for domestic use in the developing world, therefore, needs to be assessed as a long-term possibility depending on the development of cheaper and better designed cookers which would be more adapted to the user's requirements. However, solar energy use could well be significantly developed in a number of applications which do not require high temperature heat like water heating or fish or crop drying.

Prospects for substituting wood by alternative fuels or energy sources at the household level in rural areas of developing countries, therefore, seem limited and not likely to make a substantial impact in the foreseeable future. Some substitution by commercial fuels may take place in particular situations such as urban areas, or within energy systems relatively centralized: substitution is also possible in wealthier rural communities either by commercial fuels or by biogas. But there does not seem to be any realistic alternative to traditional fuels for the greater number of rural poor who will, therefore, continue to rely heavily on them. However, it could be useful to keep the latest technological developments under review as well as the results of programmes for encouraging the substitution of wood by alternative fuels. Furthermore, if the prospects for continued dependence on wood fuel are such, it is essential that at least similar research efforts be devoted to wood fuels as are presently taking place on alternative fuels.

POSSIBLE ISSUES IN THE POTENTIAL ROLE OF WOOD FUELS

Fuel wood can effectively play its potential role in contributing to the supply of an important proportion of the basic energy needs in developing countries if a number of issues receive the necessary attention.

The specifications of the critical issues and their adequate integration into wood fuels related programmes are essential. The issues considered here are the non-technical issues and are closely related to the particular position of wood fuels in the decentralized energy systems which are most common in developing countries and also to the socio-cultural content in which wood fuels are used for household purposes. The major issues are of an economic, social, environmental and institutional nature: even if their particular importance varies according to specific situations, their identification is a useful step towards proper consideration in future programmes.

Economic considerations

The market value for wood fuels is an essential parameter for the preparation of any programme and investment for increasing the production of wood for energy. A number of important aspects are related to assessing a proper value to wood fuels. Only a small proportion of the wood fuels consumed is marketed, at prices which are highly sensitive to distances of supply and transport and to costs of producing and extracting wood from the forest vegetation: these prices are also strongly influenced by the supply-demand situation and by the fact that marketed wood fuels are usually bought only by wealthier households. If left to free market mechanisms, fuelwood prices tend usually to go beyond the reach of the people who are actually the most dependent on this energy source. In some instances wood fuels represent such a basic commodity for a large proportion of the population that Governments have been obliged to fix prices at a level compatible with their social importance. In addition, a large amount of fuelwood consumed for domestic purposes is not bought but collected by the users practically free of any direct monetary cost. Assessing the present or future direct value of wood fuels is, therefore, particularly difficult, especially if taking into account its value for the poor.

The indirect value of wood fuels has also to be considered as the effects of fuelwood scarcity are numerous either in terms of diverting agricultural residues and dung from return to the soil and restoring its fertility, or because more time and labour are taken away from productive activities due to the need to collect it over larger distances. Any economic analysis should therefore include the secondary effects both as costs and benefits to the target groups of people and to society. The ultimate question might be to what extent fuelwood can be really valued in economic terms.

Land is, and labour and time can be, scarce resources for the poor and it is therefore essential that the economic approach provide a sound basis for identifying and preparing good projects which meet the needs of the poor and for designing the more appropriate use of their scarce resources. At the same time, it is particularly important that adequate economic justification be prepared for investment proposales in fuelwood projects: the availability of reliable data is a prerequisite, but adaptation of economic analysis methods of forestry projects could also be necessary.

Social aspects

The social aspects related to wood fuels production and use for domestic purposes are numerous and important. Women have an important role as they are responsible not only for using the available energy sources as efficiently as possible, but quite often also for gathering the fuel: the time spent on fuel-related activities may, in certain cases, restrict their availability for any other activity. The way wood fuels are used is usually closely integrated into the socio-cultural tissues of the group and this may result in a strong resistance to any major change not directly perceived as responding to a conscious need. Any programme aiming at modifying and improving the wood fuels situation has, therefore, to clearly address the immediate needs of the target group and to involve it actively as much as possible from the very beginning through the whole process from design to implementation. A substantial amount of benefits should accrue to the group as such as soon as possible. This is the only way to overcome resistance to change and to ensure the efficiency of any programme. It also implies that there is a wide variety of solutions which will be adapted to specific problems and situations and that the social component of any fuelwood programme is particularly important. Participative approaches of the type used for intermediate technology are essential and will usually result in more efficient solutions at a lower cost: it is actually the only possibility of reconciling a desirable change with the socio-cultural values and systems. A review of experiences, successes and failures with programmes related to the various aspects of production and uses of wood fuels could be particularly useful as far as social aspects are concerned: the case of wood-burning stove programmes is particularly relevant. The review of programmes related to other aspects might also provide indications on successful approaches and solutions to social aspects, on the value of generalizing some information or results and on the main difficulties or constraints.

Environmental impact

There is a closed relationship between wood fuels and the environment as most areas of growing scarcity of wood fuel occur in fragile ecological conditions. Deforestation, which might also have other causes than fuelwood gathering, has a well-known impact on ecosystems. Shorter fallow periods associated with intensified land use for agriculture may lead to a subsequent decreasing fuelwood supply. These types of degradation are particularly marked in mountainous and arid areas or around areas of concentrated population. In reverse, it is implicit that fuelwood programmes should simultaneously have a beneficial effect on the environment, provided that they do make optimum use of available natural resources in a way which is compatible with the ecosystems and sound land use practices. In a similar way, programmes designed for environmental purposes and which have a substantial tree component can also contribute to an improved supply of fuelwood to the local population through appropriate choice of species and management techniques. In the design and implementation of fuelwood programmes assessing and monitoring the environmental impact should be a continuous concern.

Institutional framework

The institutional implications of the role of wood fuels are importar as energy is essential for development and as wood fuels would fill their potential role only if closely integrated into rural development. It has been stressed that energy systems in rural areas are mostly decentralized and that local availability is the only way to ensure accessibility. Fuelwood supply should, therefore, be closely integrated into any rural development plan, not only under the particular concern about energy, but also as an objective in land use planning. Consideration should be given to any possibility of using for fuelwood and tree growing all land which is not more directly suitable for food production (road and canal sides, hedges, etc.). This may involve some adaptation of the institutional framework of rural development and a closer integration of forestry and agriculture specialists in multidisciplinary teams. The implication is certainly that the need to supply wood for domestic energy should systematically be included and reviewed in preparing rural development projects and that appropriate solutions be found which take care of the immediate energy needs of households. Appropriate solutions may have to be found which integrate the production of wood for fuel in land tenure and customary rights systems: it might be necessary to reverse the negative attitude of people towards forms of forestry which are dominated by state ownership and to stimulate their involvement and long-term interest

through a direct participation and responsibility. Rural forestry should be stimulated and fuelwood production should be a major component; existing instruments to promote rural development should be adapted in order to include this element. Special incentives might not be necessary, but extension and training together with technical support are essential in all cases: such training is not only necessary at rural communities level; the education of professionals both in forestry and agriculture should foster a broader understanding of the importance of energy in rural development and the contribution of tree growing for fuel. Does this then mean that special extension and training programmes have to be designed and present teaching programmes be reviewed to emphasize the value of systems which combine fuelwood production and rural development ? At the same time efforts to strengthen the rural communities' organization might be necessary in order to improve their capability and authority necessary for the appropriate integration of fuelwood production within the complex of activities involved for rural development.

Particular mention has to be made of the promotion of a more efficient use of wood fuels, as a possibility for a quick reduction of consumption for domestic use. It involves an approach and an institutional support which normally falls outside the scope of usual forestry and agricultural institutions. The integration of such promotion within social welfare programmes is desirable, as it is likely to be much more efficient as part of global social programmes which might also include related aspects such as nutrition, health, education, etc. However, even if the promotion is carried out within a different institutional framework, appropriate action for supply and use of energy from wood needs to be global and coordinated. The problems are not likely to be solved through isolated action on some specific aspects. The role of public and community institutions is essential to ensure proper coordination and commitment to the various aspects involved, to design and support appropriate technical solutions and to induce action through information and extension.

Economic, social, environmental and institutional issues deserve particular attention. They will allow to determine how effectively the potential role of wood fuels is applied in supplying energy to those large numbers of populations who need it for their day-to-day life. The main problems are related to effecting an appropriate integration within rural development and to identifying solutions which take full consideration of the specific social, economic and cultural aspects of given situations. A continuous review of experiences, exchange of information and coordination of efforts would certainly favour more efficient action in response to the widespread and basic need for fuel for the poor.

This paper has not attempted to review the existing information on wood fuels for domestic use in developing countries. There is abundant evidence of widespread dependency of the poor in developing countries on wood for energy for cooking and heating. There are no signs that the dependency will not continue and even increase. Fuelwood has, therefore, to play a major role for energy self-reliance in decentralized energy systems well adapted to the needs, resources and practices of local populations in rural developing areas. The problem is to find appropriate practical solutions and approaches taking advantage of all available information and experience. Proper solutions will differ widely according to specific situations. Some progress could be made by applying existing knowledge but much complementary work needs to be done to design new approaches appropriate to the particularities of the problem in specific situations and then to translate them into practical local solutions.

SUMMARY OF WORLD BANK FINANCED FUELWOOD PROJECTS 1977-80

COUNTRY	DATE	PROJECT	PROJECT DESCRIPTION	SPECIES	LOAN AMT. (US$ Million)	REMARKS
Philippines	FY'78	Small Holder Treefarming	Credit and technical services for 7,400 smallholders occupying 28,600 ha. Enlarged nursery capacity Research into income distribution effects, factors affecting tree growth, efficient use of wood.	Pinus caribaea Ipil-Ipil (Leucaena Leucocephala) Albizzia falcataria	8.0	Aims to demonstrate that tree farming could serve as a lucrative crop for large numbers of smallholders and subsistence farmers on marginal lands. Fast growing trees are being grown as a cash crop for production of fuel wood, leafmeal, charcoal woodchips poles and pulpwood.
Niger	FY'78	Forestry	Establishment of 400 ha. of irrigated fuelwood plantations. Establishment of 700 ha. rainfed tree plantations Assistance to Rural Forestry activities, training in extension services, assistance to research Establishment of a planning management and monitoring unit within the Forestry Department	Neem (Azadirachta Indica) Eucalyptus Camaldulensis	4.5	Aims at arresting "desertification" around Niamey Economic studies of the proposed irrigated plantations a key proj component. Also aims to strengthen the institutional capability of the Fores Service.
India	FY'79	Uttar Pradesh Social Forestry	Establishment of 52,600 ha. of plantations Establishment of a Social Forestry Division Establishment of 90 new nurseries, rehabilitation of 50 existing nurseries Training and research	Eucalyptus spp. Babul (Acacia nilotica) Prosopis (P. Juliflora)	23.0	First phase project with special emphasis on "Demonstration" impact of village plantations and introducing more efficient stoves.
Mali	FY'79	Forestry	3,460 ha. of rainfed tree plantations Application of modern management techniques on a trial basis to 1,200 ha. of natural forest 70 ha. of irrigated tree plantations 3 new forestry nurseries and rehabilitation of an existing one Studies to examine - more efficient uses of wood; ways of encouraging the participation of local populations in forestry; a possible follow-up project	Gmelina (G. Arborea) Eucalyptus Camaldulensis Neem (Azadirachta Indica	4.5	First phase project

SUMMARY OF WORLD BANK FINANCED FUELWOOD PROJECTS 1977-80

COUNTRY	DATE	PROJECT	PROJECT DESCRIPTION	SPECIES	LOAN AMT. (US$ Million)	REMARKS
Nigeria	FY'79	Forestry	Establishment of 24,000 ha. of fast growing Gmelina plantations.	Gmelina arborea Pinus caribaea	31.0	An Industrial Agroforest Plantation project which will also produce significant volumes of saleable fuelwood
Burundi	FY'79	Forestry	Establishment of 30 nurseries 2,000 ha. of short rotation Eucalyptus plantations for firewood and poles 5,000 ha. of pine plantations for saw log production Management and Technical Assistance, Training, Studies of Energy, wood stoves, charcoal production methods.	Eucalyptus Grandis E. Tereticornis	4.3	A small first phase project aimed at building up the institutional capability of the forest sevice to larger rural foreetry program.
Upper Volta	FY'79	Forestry	Strengthening of Forestry Department Establishment of 1,600 ha. of rainfed plantations Management experiments on 1,000 ha. of natural forest. Maintenance of 1,650 ha. of rainfed plantation Establishment of 325 ha. of rural woodlots Studies and training; supply and demand situation, more efficient use of wood, specialized training.	Gmelina eucalyptus teak	12.2	First phase project with special emphasis on resolving technical problems of land preparation in arid zone areas. (mechanised versus labor intensive).
India	FY'80	Gujarat Community Forestry	Establishment of 37,440 ha. of village woodlots Reforest 30,000 ha. of denuded forest Afforest 1,000 ha. of privately owned eroded lands 37,000 ha. of strip planting along roads, canals, railroads. Establish 230 nurseries Introduction of more efficient stoves and cremation facilities Research	Leucaena Eucaluptus	37.0	An extension of the successful "community" oriented woodlot programme already commenced by COG

Wood Based Projects Currently under Appraisal

Country	Date	Project	Project Components	Species	Loan or Credit Amount US$ million (Planned)	Remarks
Bangladesh	FY80	Coastal Afforestation	Development of 100,000 acres of mangrove plantations Maintenance of some 78,000 acres of existing plantations Establishment of a Forestry and Ecology Research Station Extension and training Strengthening of the Bangladesh Landsat Program Establishment of a project monitoring and data collection unit	Keora (Sonneratia apetalba) Baen (Avicennia officinalis)	20	These plantations which are primarily intended for protection of farmlands along the coast and to accelerate reclamation of land for agriculture will produce significant volumes of both fuelwood, pulpwood
Malawi	FY80	Wood Energy	Pilot program for the establishment of a national network of 88 nurseries Establishment of 12,000 ha of fuelwood and pole plantations Establishment of a Wood Energy Division within the Forestry Department Charcoal production trials Research into more efficient uses of wood and alternative sources of energy	Eucalyptus (E-grandis) (E-tereticornis) (E-camaldulensis)	13.0	The Energy Research Unit in this project will carry out research into alternative rural energy sources and will monitor the impact of the project on agricultural productivity
Nepal	FY80	Community Forestry	Establishment of 11,750 ha of "Panchayat" Forests Rehabilitation of 39,100 ha of "Panchayat" Protected Forest Establishment of 0.9 Million trees on private land Establishment of a Community Forestry and Afforestation Division in the Forestry Department Introduction of fuel conservation measures including 15,000 improved stoves Forestry training, feasibility studies, technical assistance	Patula Pine Blue Pine Alnus Prunus Betula	17.0	One of the factors of special interest in this project is the emphasis on involving village "panchayats" in project implementation
Senegal	FY80	Forestry	Strengthening of the Forestry Department Establishment of 2,000 ha of rainfed plantations Experimental management of 2,000 ha of natural forest 1,500 ha of family plantations 1,500 ha of rural community plantations Studies of better uses of wood and substitutes, the potential benefits of rural afforestation, feasibility of a follow-up project	Eucalyptus Camaldulensis Neem	6.0	Project design still under review

Agriculture or Rural Development

World Bank Financed Projects Containing a Significant Fuelwood Component

Country	Project	Project Component	Species	Loan Amount US$ '000	Remarks
Nepal	Rural Development I	1,050 ha fuelwood 470 ha for erosion control		200	Reafforestation and regeneration programs on over-exploited and badly degraded land
Niger	Maradi Rural Development	500 ha in fuelwood plantations	Eucalyptus Dalbergia, Neem	150	Establishment of plantations of 3 ha in one out of every five villages. Community woodlo were abandoned after 3 years because of lack villagers' commitment
Indonesia	Yogyakarta Rural Development	350 ha for silvipasture			Conversion of marginal cropland to trees underplanted with permanent pasture
Tanzania	Tabora Rural Development	Establishment or expansion of 3 nurseries 50 ha fuelwood planted in each of 15 villages per year	Eucalyptus Spp. Cassia Siamea	100	To supply fuelwood for domestic use and tobac curing
Senegal	Dioe Saloum Agric. Dev.	Planting of trees for windbreaks and fuel		100	
Somalia	Central Rangelands Development	Technical Assistance Establishment of 10 km^2 shelter belts around 3 regional capitals		200	
Kenya	Bura Irrigation Settlement	Establishment of partially irrigated fuelwood plantations		100	
Tanzania	Mwanza/Shinyanga Rur. Dev.	Establishment of 5,435 ha of fuelwood and pole plantations Establishment of school tree blocks of 2 ha/school Establishment of 2 ha village tree blocks	Eucalyptus (E-tereticornis) (E-citri-odora) (E-camaldulensis) Acacia Arabica Albizia lebbek	100	
Nigeria	Ayengba Agric. Development	Establishment of fuelwood and pole plantations Supplying farmers with tree seedlings Initiation of a charcoal industry	Eucalyptus (E-tereticornis) (E-camaldulensis) (E-cloeziana) Gmelina Arborea	400	
Korea	Rural Infrastructure	Establishment of 11,000 village fuelwood blocks covering a total of 127,000 ha	Pine Alder Black locust Amorpha Lespedeza	300	A nationwide fuelwood program which was very successful (project completed)
Brazil	Minas Gerais Rur. Dev.	Establishment of 40,000 ha of Eucalyptus plantation on 7,900 farms of less than 100 ha	Eucalyptus Saligna		
Colombia	Integrated Rural Development	Establishment of 4 nurseries, expansion of 5 existing ones Planting of 6,600 ha of trees on 10,600 small farms Soil conservation studies and technical assistance	Eucalyptus and Cupressus Spp.	100	Lack of institutional services has retarded project progress
Chad	Sahelian Zone	Survey and classification of natural forest land prior to implementation of charcoal and wood extraction operations in 3,500 ha of natural forest. Establishment of 2 nurseries and rehabilitation of two existing nurseries Management improvement study		100	
Philippines	Rural Development	Planting 2,200 ha of marginal land with fast growing species Improved management of 2,800 ha inexisting forest Establishment of nurseries to supply farmers with seedlings for fruit and amenity trees as well as for plantations	Ipil-Ipil (Leucaena Leucocephala) Eucalyptus grandis Eucalyptus saligna Gmelina Arborea	200	

Rural Development or Agricultural Projects Currently Under Preparation which will contain a Significant Fuelwood Component

YAR
Morocco Loukos
Honduras Rural Development
Haiti Rural Development II
Bolivia San Jacinto
Nigeria Kano
Nigeria Anambra

S. Agriculture Yellow

NR

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27 November 1979

Professor Michael Horowitz, President
Institute for Development Anthropology, Inc.
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Binghamton, New York 13905

Dear Michael:

As you know, Michael Cernea and I will be editing a number of the papers presented in the Bank's Sociological Seminar Series for publication through the Johns Hopkins University Press. PROJECTS FOR RURAL DEVELOPMENT: THE HUMAN DIMENSION is our tentative title. We look forward to including in the book, your good paper on "Sociological Variables of Livestock Development Projects -- the West African Region".

To assist you in making the slight editorial revisions necessary to fit your article into the format of the book, I am enclosing a style sheet and a manual on the Preparation of Bank Manuscripts for External Publication. A working Table of Contents is also enclosed.

I am aware that you have continued to think about the subject of your paper, and that you will have some additional thoughts to add. In so doing, it would be helpful if you would consider the following points, each of which derives from our concern that the book be maximally responsive to those operational issues most often faced by Bank staff responsible for project planning and implementation.

1) It would be useful if the West African focus of your analysis were more forcefully stated on page 1 where, at present, the examples are taken from other regions. Perhaps you could move forward the strong statement that now appears on pages 2 and 3. These important issues also were clearly and succinctly stated in your letter to Michael dated February 9, 1978 -- pages 1 to 3.

2) Given our audience, some expansion of Section III on "Sociology and Development Interventions in the Livestock Sector" would be beneficial. This section forcefully demonstrates the usefulness of the sociological/anthropological perspective to the more successful design and implementation of Bank projects in the livestock sector.

3) The variables you list on page 44ff are most interesting. Could you relate them a bit more explicitly to the issues raised at the beginning of the paper?

4) I take it that you have a record of the issues raised during the course of your seminar presentation and that you will respond to them, as necessary, in preparing your revision.

5) Page 9 -- Does everybody but me know what an "agrostologist" is?

6) Page 34 -- Can you now verify the reference to Clanet?

7) Page 40 -- The last sentence lacks the clarity one associates with Horowitz' prose.

8) Page 43, points 2 and 3 -- Down with "impact" as a verb!

9) Page 44, para 2, line 5 -- Can "graze" and "browse" be nouns?

10) Page 45, para 4, line 1 -- "This list is neither exhaustive nor invariably required in its totality". Prière de clarifier.

We would like to keep the article length to between fifteen and twenty pages. So, if you think that some tightening up is warranted, feel free.

If any of these points require clarification, give me a call. Basically, the paper is in excellent shape. With a few deft passes of your fine editorial hand, it should be ready to go as a strong addition to our book. We hope that we can have your revised copy by the end of December.

Sincerely,

Peter B. Hammond
Agriculture and Rural
Development Department

Enclosures

PBH:dcm

P.S. are there parts of "The Sociology of Pastoralism and African Livestock Projects" that might be usefully incorporated in your revision?

PROPOSED TABLE OF CONTENTS

PROJECTS FOR RURAL DEVELOPMENT: THE HUMAN DIMENSION

Michael Cernea and Peter B. Hammond, Editors

SUGGESTED ARTICLE FORMAT

Papers should be so written as to make clear to Bank staff -- the primary audience -- the potential operational relevance of anthropology and sociology to the success of Bank work. To achieve this objective, articles should be organized, so far as is possible, in accordance with the following format.

1. Introduction
2. Presentation of Theoretical Argument
3. Exposition and Analysis of Central Sociocultural Issues*
4. Discussion of the Implications of this Analysis to Bank Projects Elsewhere
5. Conclusion
6. Notes and Annexes
7. References Cited

Where this order cannot be followed, authors should check their work to see that the main categories of data indicated in this suggested outline have been included. Article length should be held to a maximum of 35 manuscript pages.

NOTES ON STYLE

To simplify the editorial process, the following stylistic suggestions should be followed in preparing your manuscript. Most of these have been excerpted from the enclosed booklet, "Preparation of World Bank Manuscripts for External Publications," to which you may want to refer for more detail.

FORMAT

Manuscript. Please submit two copies of the manuscript. Each should be double-spaced (including footnotes and quotations) on 8 1/2" x 11" white paper. Quotations should be indented five spaces from both right and left margins.

Footnotes. Footnotes should be numbered sequentially throughout the text. Each should be typed at the bottom of the page on which the footnote number appears.

Foreign words. Foreign words should be italicized, if possible; underlined, if not.

---

* Where possible, use examples based on Bank experience.

Units of measurement. These should be given in the metric system. The non-metric equivalents may be shown in parentheses (p.16).

Currency figures. These may be given in non-US$ amounts, but the US$ equivalent, with the year of reference, should be footnoted (p. 16-17).

Subheadings. Divisions of the text should be marked by subheadings. First- or A-level subheadings are to be indicated by a centered, underlined title; Second- or B-level subheadings by a centered, non-underlined title; Third- or C-level subheadings by a left-margin, underlined title; and Fourth- or D-level subheadings by a left-margin, non-underlined title.

REFERENCES

A detailed discussion of the appropriate footnote and bibliography reference forms is provided on pages 23-52 of the enclosed pamphlet. Examples are shown for diverse materials, including internal Bank documents.

As a general guide, the following examples may be helpful:

Example, footnote:

1. Michael Cernea, "Macrosocial Change, Feminization of Agriculture and Peasant Women's Threefold Economic Role," Sociologia Ruralis, vol. 18, no. 2/3 (1978), pp. 107-24.
2. Clifford Geertz, Agricultural Involution (Berkeley: University of California Press, 1968), pp. 7-12.
3. Cernea, "Macrosocial Change," p. 113.
4. Ibid.

Example, bibliography:

Cernea, Michael. "Macrosocial Change, Feminization of Agriculture and Peasant Women's Threefold Economic Role," Sociologia Ruralis, vol. 18, no. 2/3 (1978), pp. 107-24.

Full bibliographic information should be given on the first appearance of a footnote. A shortened form -- as in example number 3, above -- is sufficient for additional references. The forms "loc.cit." and "op.cit." should not be used.

A NOTE ON CONTRIBUTORS

Please prepare a brief biographical statement, of no more than 75 words, indicating your profession; your title and institutional affiliation; identifying your interest in development issues; and citing your relevant publications.

cc to TD MA File ACC

CRUX Inc.
48 Brattle Street
Cambridge, Massachusetts 02138

Address Reply Mail To:
P.O. Box 349
Cambridge, Massachusetts 02139

MEMORANDUM

TO: L. E. Christoffersen
FROM: J. Tomas Hexner
DATE: November 26, 1979
RE: ACC Rural Development: Internal Evaluation of Country Exercise--The Process

---

1. This should be done in conjunction with Shirley Boskey.

2. The Bank breaks down into four categories:

   i. Liberia and Bolivia (in depth)

   ii. Samoa, Somalia, Lesothio
   (a. Not off the ground--why?
   b. Should they have been selected in the first place?
   c. Was anything learned?)

   iii. Other countries and regions--should their views on coordination of U.N. activities and the importance of a poverty-oriented rural development country strategy be sought?

   iv. DPS: Could research, and if so how, have been involved in such an exercise? (You will recall this was in the Task Force recommendation.)

3. Keeping in mind the potential for internal and external bureaucratic hassles, the best results would be gained by:

   i. Checking with Shirley Boskey

   ii. Calling and sending the attached memos to the directly involved regional program directors. They will preferably answer in writing and then, if necessary, will have a meeting.

OK
No, don't ne
Yes, emphasize
Not actively
Yes, explore
but w
too
much

Dir. Chiefs

iii. Set up half-hour meetings with the other regional program directors so they can give their views on:
   a) Whether their countries should have been included, and
   b) If they feel any benefit can be derived from such exercise.

iv. Setting up an hour meeting with a DPS Director on the general issue of coordination of U.N. research at the country level.

~ Dir. Chiefs
Say Wisner

4. We should have the inputs for the Bank submission by December 23, 1979 so that we could have a draft to be cleared by the regional directors and Shirley Boskey by January 10, 1980.

5. The Draft memos and talking points for your consideration are attached.

6. If you do the preliminaries, I could take "complete charge" upon my return December 10, 1979.

Thanks.

JTH/jev
4 Attachments

DRAFT

MEMORANDUM

Prog. Div. Chiefs

TO: Regional ~~Directors~~--Liberia and Bolivia
FROM: L. E. Christoffersen
DATE:
RE: ACC Rural Development: Internal Bank Evaluation of the Country Exercise

---

1. Attached are the Terms of Reference from the ACC Task Force.

2. You are probably aware that the Bank in 1975-1976 was the "lead agency" in the preparation of a report by outside consultants on how the U.N. system could improve its performance and coordination in povery-oriented rural development. The report in frank terms pointed out the reasons coordination had not taken place and recommended that more effective coordination should be tested at the country level. (The Report is available from my office.)

3. In evaluating the country exercise, I feel we should, in brief, indicate:

   i. What, if anything, the Bank learned?

   ii. What the Bank could have learned?

   iii. The benefits and costs of such "tests" to the Bank and the involved country (from this we should be able to recommend whether any future experiments are merited).

   iv. If the benefit/cost ratio is positive, what, if anything, should be done differently in the future?

4. I would appreciate a brief, written reply as soon as possible, and not later than December 17, 1979. If necessary, we could meet on your views. We would then prepare a draft Bank submission which would be returned to you for suggestions and then to Shirley Boskey for formal clearance. The Bank report must be completed by January 31, 1980.

DRAFT

MEMORANDUM

Proj. Div. Chf.

TO: Regional Directors--Somalia, Lesothio, Samoa
FROM: L. E. Christoffersen
DATE:
RE: ACC Rural Development Exercise: Internal Bank Evaluation

---

1. Attached are the Terms of Reference from the ACC Rural Development Task Force.

2. The Bank must submit a report by January 31, 1980.

3. In addition to responding to the TORs, it is important that the Bank states in clear terms:

   i. Whether these countries should have been included;

   ii. What, if anything, was learned;

   iii. The benefits and costs of such exercise.

4. It would be appreciated if you could submit a draft by December 15, 1979. We could then meet to discuss your response and the rural Bank submission, and prepare a draft for your perusal and comment prior to submitting it to Shirley Boskey for formal clearance and final drafting.

Talking Points
for Other Regional Directors

1. What Country Exercise is all about . . . .
2. How it originated--Khan Report.
3. What happened, in brief--not much.
4. How do they think it could have been different?
5. Was failure inevitable? If so, why?

(We could meet with them from December 12 onward.)

Talking Points
for DPS

1. Is there any real coordination of research within the U.N.?

2. How do the countries get in the act?

3. Would it be useful if the countries coordinated research? What resources would be required and how many countries have these resources?

4. Was the recommendation in the Khan Report to relate research to the country exercise a practical one?

V. S. Agriculture NR
cc. ERIU - FAO

Mrs. Shirley Boskey, IRD
(through L. E. Christoffersen, AGR)
Ted J. Davis, AGROR

November 26, 1979

COPA's Submissions

n/attd.

We have prepared the attached submission as requested by FAO in its letter received October 15, 1979.

The request asked for an itemization and interpretation of all the "agencies'" projects and programs for the calendar year biennium 1980-1981 which have a poverty-oriented rural development element.

It is not possible to analyze the Bank's projects in this fashion. We have therefore done an assessment of the rural development projects supported by the Bank in FY79 and by text have tried to project some estimates of rural development lending in FY80 and FY81.

This submission is limited to those projects handled by the Agriculture and Rural Development Divisions. We have provided listings of FY79 projects for the other sectors to Mr. Boucher who is to review them with the appropriate CPS Departments. His work will have to be submitted as a supplement to this effort.

We have discussed the format of our submission with Ms. Angela King of the UN Office for Programme Planning and Co-ordination since we were unable to follow the specific instructions contained in the request for information. It was agreed that submissions would invariably differ, given the different operating modes of the UN specialized agencies.

Attachment

TJD/cc

H. Walters FAO-WFC/IDRC

Hang - I'll be at Rome Retreat between Christmas and
With the Compliments
New Years, and hope we can get together. Best wishes for the holidays.

Maurice J. Williams
Executive Director

world food council

HEADQUARTERS
via delle terme di caracalla
00100 ROME, ITALY
Cables: FOODAGRI ROME
Telex: 61181 FOODAGRI
Telephone: 5797

NEW YORK LIAISON OFFICE
Suite 3255
U. N. Headquarters
NEW YORK, N. Y. 10017
Telephone: (212) 754-5506/5507

WFC 15.10 Food Strategies (General
World Bank
Nigeria
Bangladesh
Venezuela
Indonesia
Morocco
OECD)

MJW/PK/jma

cc: Williams
Ahmed
Kelloway
Vidal-Naquet
Odero-Ogwel
van Binsbergen
Reg(3)

11-30-79 Xerox copy sent to HEW as Manila E.

united nations
nations unies
naciones unidas

world food council
conseil mondial de l'alimentation
consejo mundial de la alimentación

HEADQUARTERS: Via delle Terme di Caracalla, 00100-ROME Cables: FOODAGRI ROME Telex: 61181 FOODAGRI Telephone: 5797

S. Agriculture

23 November 1979

Dear Mr. McNamara,

You will be interested to hear that some 25 countries have now indicated an interest in preparing and implementing a national food strategy. A list is attached. We are hopeful that the World Bank will take the lead in six of these countries. In addition to Bank activity currently underway in the Philippines and Bangladesh, we understand that you now have a preliminary mission in Nigeria, and that you are considering undertaking work in Venezuela, Morocco and Indonesia.

...

In a meeting last week, the Nigerian Minister of State and Permanent Secretary for Agriculture stressed to me that they are hopeful to see the strategy prepared by March so that it can be incorporated in the new national development programme. They appeared quite serious in their determination to tackle Nigeria's growing food problems.

I have just received Ernie Stern's reply to our request that the Bank prepare a food strategy for Bangladesh. Given the work underway on food questions in that country, particularly by the Bank, a strategy exercise should be very useful in pulling this together and imparting an additional sense of direction to the administration.

We understand from Mr. Yudelmann that the Bank will be preparing a food strategy at Venezuela's request.

Discussions here on 20 November with senior Indonesian officials from the Department of Agriculture, the National Logistic Agency (BULOG) and the Department of Foreign Affairs indicate that a positive response can be expected;

Mr. Robert S. McNamara
President
World Bank
1818 H Street NW
Washington D.C.
U.S.A.

LIAISON OFFICE: United Nations Headquarters, NEW YORK, N.Y. 10017 Telephone: (212) 754 5693/5694

they were, in fact, surprised that it had not already been transmitted to us. It is clear from our discussion with them that they would be pleased if the Bank would undertake the lead role in the preparation of a food strategy for Indonesia.

As I informed Monty Yudelman verbally, the Minister for Agriculture of Morocco has formally indicated his country's wish to prepare a food strategy and has asked us to approach the World Bank for assistance. The Minister mentioned that a mission from the Bank is expected to visit Morocco early in December 1979 to discuss a detailed study of the entire agricultural sector. If the Bank is in a position to assist with a food strategy, this might be a suitable opportunity to discuss the necessary work.

After a meeting yesterday with representatives of OECD countries, it appears that assistance for the other countries interested will be forthcoming. I envisage the role of the World Food Council secretariat as that of providing general clearing house functions through exchange of pertinent information, helping to assure reasonably consistent results and continuing to stimulate interest and support on the part of the donor community. In this regard, it would be helpful to keep abreast of the Bank's progress and cumulative experience.

Best regards,

Yours sincerely,

Maurice J. Williams
Executive Director

COUNTRIES INTERESTED IN A NATIONAL FOOD STRATEGY

1. Philippines
2. Honduras
3. Nigeria
4. Bangladesh
5. Venezuela
6. Somalia
7. Morocco
8. Tanzania
9. Indonesia
10. Cape Verde
11. Senegal
12. Mali
13. Gambia
14. Ecuador
15. Zambia
16. Uganda
17. Mauritania
18. Madagascar
19. Grenada
20. Sri Lanka
21. Nicaragua
22. Liberia
23. Sudan
24. Rwanda

S. Agunbiade

File WFC/IBRD

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Mr. E. Stern through Mr. W. C. Baum

DATE: November 21, 1979

FROM: Montague Yudelman, Director, AGR

SUBJECT: Food strategies

1. Mr. Williams of the World Food Council called "to bring the Bank up to date on the issue of helping countries develop food strategies". He had sent cables to 50 governments urging them to develop food strategies, in line with the suggestions made at the last meeting of the WFC in Ottawa. He has received 22 requests for help, mostly in Africa, though three were from Asia and three from Latin America. The cables had suggested external assistance might be available in the evolution of these strategies.

2. One country, Morocco, had specifically requested help from the World Bank and FAO to develop a food strategy. The request, subsequently confirmed by the Minister of Agriculture attending the FAO Conference, emphasized that the Bank had already done a great deal of analysis of various aspects of the agricultural sector and would soon be sending a sector mission to Morocco. The authorities felt that this mission could pull together various elements within the sector to help develop an appropriate food strategy for the country.

3. I advised Mr. Williams that I would pass this information on to the EMENA Region. I also reminded Mr. Williams that the Bank was interested in attempting to help develop strategies in "three or four" food priority countries. Mr. Williams said that he thought the President of the Bank had mentioned that we would be interested in preparing strategies for up to six countries; he hoped that Morocco would be one of them.

4. I have been in touch with Mr. Bart on this topic. I believe it may be useful for the agricultural sector group visiting Morocco shortly to examine the extent of government committment to a food strategy, before moving ahead.

cc: Mr. Bart EM2
Mr. Haynes EMP
Mr. Walters AGR

MYudelman:lkt

✓ S - Agriculture
cc S - TNT
cc S - Energy
cc S - Environment

Mr. Warren C. Baum, CPSVP
THROUGH: M. Yudelman, AGR
J. C. Collins, AGR

November 21, 1979

"Indigenous Peoples and Development"

1. A most worthwhile and successful seminar on this topic on Friday, November 16th, was sponsored by CPS Agriculture, Transportation and Energy Departments together with the Office of Environmental Affairs. The guest speaker was Dr. David Maybury-Lewis, Chairman of Anthropology at Harvard and a co-founder of the Cultural Survival organisation. About 80 Bank staff attended.

2. The speaker was optimistic that indigenous peoples could and should be given the opportunity to be integrated into the development process and that such integration, providing it occurs at a pace and in a manner appropriate to their circumstances, need not result in such people losing their identity and culture. In his personal experience, such successful integration would, however, depend on:

a) Timely recognition of the presence of indigenous people who, because of a culture and lifestyle closely linked to their natural environment, would be placed at risk by the proposed development;

b) Adequate studies by suitably experienced persons to identify the specific needs of the indigenous people to handle the development process;

c) Provision of titles for lands to be set aside for the use of indigenous people to protect them from an influx of other settlers;

d) When indigenous people are nomadic, they should be provided with the lands essential to permit continuing their traditional way of life for as long as they wish to do so;

e) Provisionsof education at an appropriate time, particularly language training, to enable them to participate actively in the decision-making processes related to their development.

While certain general principles could be set, each group of indigenous peoples was sufficiently different and locally specialised so that no standard procedures for their integration could be set up. This would apply both to extremely primitive hunter-gatherer tribes and to more sophisticated cultures based on shifting cultivation or livestock herding.

3. There was a lively response to my invitation for questions, many of which reflected concern that the Bank as a leading development organisation should perhaps take a more positive position concerning the special needs of indigenous peoples. Dr. Maybury-Lewis agreed that a statement of the Bank's concern for the welfare of indigenous peoples, whose livelihood and indeed existence may be placed at risk by the development process,

would do much to focus attention of member governments on the problem and significantly increase the impact of efforts by organisations such as Cultural Survival on behalf of such minorities. Many indigenous peoples worldwide would perhaps more than any other group fit the definition of rural poor, yet most have been by-passed and in many cases seriously harmed by development within or adjacent to their lands.

4. JCCollins: I; together with Mr. Hammond (CPS Agriculture and Rural Development), Mr. Goodland and the organisers of the seminar, Ms. Watson and Ms. Latimer (PAS Office of Environmental Affairs) would like to pursue further the possibility of closer involvement of the Bank with the problems of such indigenous people. We suggest preparing a briefing document which would:

a) define more clearly what is meant by "indigenous people" and determine in broad terms who and where such people are;

b) list the major factors which threaten the cultural and biological survival of such groups;

c) include recommendations on actions the Bank might initiate to protect and ensure the right of cultural self-determination of such peoples;

d) indicate the extent to which such interventions could be justified on humanitarian, scientific and economic considerations.

Subsequently you might consider raising this subject with Mr. McNamara, whom we feel would view it sympathetically. We would appreciate your advice and suggestions.

cc: Messrs. Yudelman, Christoffersen, Donaldson, Pickering o/r, Hammond - CPS AGR
Messrs. Lee, Goodland; Ms. Watson, Ms. Latimer - PAS OEA

JCCollins:et

S. Agr. & Rural Dev.

Mr. J. C. Collins, AGR

20 November 1972

Peter B. Hammond, AGROR

Reaction to Seminar on Indigenous Peoples and Development

During the course of my brief discussion with Mr. Christoffersen of your draft memorandum of 19 November, the following needs were identified:

1) To define more clearly, what is meant by "indigenous" and to determine in broad terms, who and where such peoples are;

2) To develop a list of the major factors which threaten the cultural and/or biological survival of such groups;

3) To prepare a series of recommendations on actions the Bank might take to ensure the protection and the right to cultural self-determination of such peoples;

4) To draft a series of justifications for the interventions necessary to protect such groups; this justification should take into account:

    a) humanitarian,
    b) scientific; and
    c) economic considerations

It was concluded that it would be appropriate at this stage, to first assemble the data necessary to make the strong recommendations needed to support our argument. Thus our memorandum should express our present concern and state what preparations we propose to take to meet the needs outlined above.

cc: Mr. Christoffersen, Ms. Latimer, Ms. Watson

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

yellow

OFFICE MEMORANDUM

TO: Mr. Gordon P. Temple, AGREP DATE: November 20, 1979

FROM: Graham F. Donaldson, Chief, AGREP GFD.

S-agric + RD

SUBJECT: USAID Rural Development Conference
Terms of Reference

1. On Sunday, November 25, 1979, you will proceed to Shenandoah National Park in Virginia, for a period of five days, to attend the Rural Development Conference sponsored by the Office of Rural Development and Development Administration, Development Support Bureau, U. S. Agency for International Development. Participants will include experienced individuals from USAID field missions, developing country institutions, and international development assistance organizations. The purpose of your mission is to gather lessons from the discussions of successful or promising approaches to rural development that might be useful in future rural development projects financed by the Bank.

2. On your return to headquarters you will submit a back-to-office report.

cc: Messrs. Yudelman, AGR
Pickering, AGR (o/r)
Turnham, AGR

yellow

S - Agriculture

NR

The World Bank / 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. • Telephone: (202) 477-1234 • Cables: INTBAFRAD

19 November 1979

Mr. Paul Sihm
International Livestock Center for Africa
Addis Ababa
Ethiopia

Dear Paul:

Please thank Mr. D. Pratt for inviting me to your Workshop on "Design and Implementation of Pastoral Development Projects for Tropical Africa", scheduled to take place in Addis Ababa from February 25 to 29, 1980.

I would, indeed very much, like to participate as a discussion leader in the session on monitoring. Unfortunately, my present work schedule for the early part of next year is already so committed that I would hesitate to make you any promises. It would be very difficult for me to come to Addis Ababa in the last week of February.

Enclosed is a copy of the report from the workshop in Nairobi. Additional copies can be made available on request.

Please accept my regrets and very best wishes for a successful workshop.

Yours sincerely,

Guido DeBoeck
Rural Operations Review
Support Unit

S-agric & RD

Messrs. M. Yudelman (AGR) and J. Merriam (IPA) November 19, 1979
THRU: Mr. G. Donaldson, Chief, AGREP
Pasquale L. Scandizzo, AGREP

"Project Evaluation in Risky Markets"

1. I have been invited to deliver the attached paper at the ORAGWA Conference (Operations Research in Agriculture and Water Resources) in Jerusalem, November 25-29, 1979. This paper is based mainly on Chapter 6 of the monograph Risky Agricultural Markets which was submitted to the Bank's Editorial Committee on October 16, 1979. Messrs. Anderson and Hazell, co-authors of the monograph, have no objections to my delivery of this paper.

2. I would be pleased if you would clear this paper for delivery at the ORAGWA Conference.

PLScandizzo:hc

NR
S - Agriculture

Ms. Gloria Davis, AEP

November 15, 1979

Peter B. Hammond, AGROR

Bank Sociological Seminar Series

As a follow up to my memorandum dated October 17 and our subsequent discussion, I am writing to reiterate my interest, which Michael Cernea shares, in the prospect of your preparing a presentation for the Bank's Sociological Seminar Series.

Of the two general subjects we discussed, "Spontaneous M Migration" and "Farm Models and Relative Scarcity in Five Transmigrant Communitis", the latter would be especially attractive - as it would provide an opportunity to discuss both the usefulness of anthropologically conceived models of farm organization and anthropological perspectives on transmigration.

I understand that this second paper is to be prepared by January. That suggests that a Spring presentation could be feasible and would allow for prior distribution of your paper to seminar participants.

In the instance of papers prepared specifically for this Sociological Seminar Series we are asking that authors endeavor to follow the general format suggested by the enclosed outline. I realize that your paper would be prepared for another Bank purpose. Nevertheless, these organizational suggestions may be of some utility.

If you agree that the second of the two topics you propose would be the more suitable for seminar presentation here, I would be grateful to receive a copy of your outline when it is ready. And I will look forward to talking with you further as your plans for the paper and our plans for the Seminar Series progress.

I fully understand that your time is already committed to highly critical work, for that reason your willingness to make a seminar presentation is doubly appreciated. We are eager to cooperate in any way that might lighten the burden entailed by this additional work.

Attachment

PBHammond/cc

cc: Messrs. L. Christoffersen, AGR; T. Davis, AGROR; M. Cernea, AGROR

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

S. Agriculture

OFFICE MEMORANDUM

TO: Mr. Charles Weiss, Jr. (PAS)

DATE: November 15, 1979

FROM: William N. Ellis (Consultant)

SUBJECT: Alternative Agriculture

Per your instruction, I have separated the agricultural portion of the report, "The Relevance of A.T. Developments in the USA to the Third World." To this I have added agricultural related topics from past issues of TRANET's quarterly newsletter - directory.

The attached packaged contains:

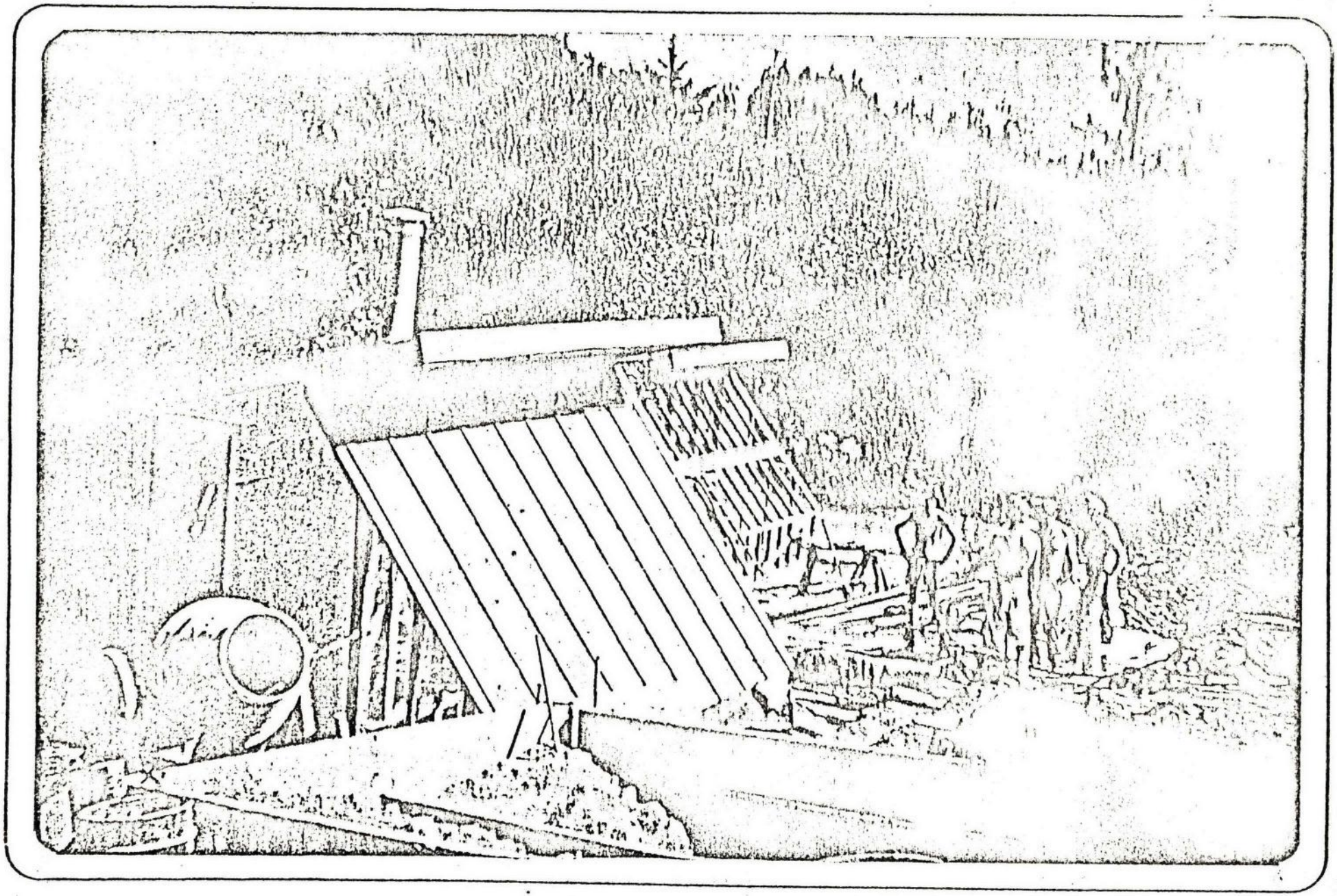
(i) Descriptions of: Farrallones Institute, New Alchemy Institute, Center for the Integration of Applied Science, Roger Blobaum Associates, Ecology Action and the Social Science Institute.

(ii) A directory of some 50 A.T. Centers.

(iii) Some 50 "Alternative Agriculture" news items.

(iv) Biographies of ten U.S. A.T. practitioners.

This gives a fairly good cross-section of what we may call "Alternative Agriculture." We would be pleased to provide a more detailed compendium if it would be useful.



The Rural Center of The Farallones Institute

THE FARALLONES INSTITUTE

The Rural Center
15290 Coleman Valley Rd.
Occidental, CA 95465
707-874-3060

KEY PERSONNEL

1. Christopher Szecsey
2. Max Kroschel
3. David Katz

AREAS OF EXPERTISE

1. Integrated food systems, including bio-intensive horticulture
2. Organic Waste Utilization
3. Small Scale Water Systems
4. Solar Energy and Bio-fuels
5. Training Programs

Integral Urban House
1516 5th St.
Berkeley, CA 94710
415-525-1150

KEY PERSONNEL

1. Tom Javits
2. Jeff Poetsch

AREAS OF EXPERTISE

1. Self-Reliant Housing
2. Urban Gardening
3. Solar Systems
4. Education

The Farallones Institute appeared in 1974 as an alliance of biologists, architects, agriculturists, engineers and artisans. Their purpose is to explore and evaluate technology and systems based on the use of renewable resources to meet our basic needs for food, shelter and energy.

The Institute maintains that the future quality of our lives depends upon evolving a society that scales down human wants, and invents technologies and institutions responsive to human needs in a balanced relationship with nature. It is dedicated to the research, development and implementation of advances towards such a society. There are two parts of the Institute; the Farallones Rural Center and the Integral Urban House.

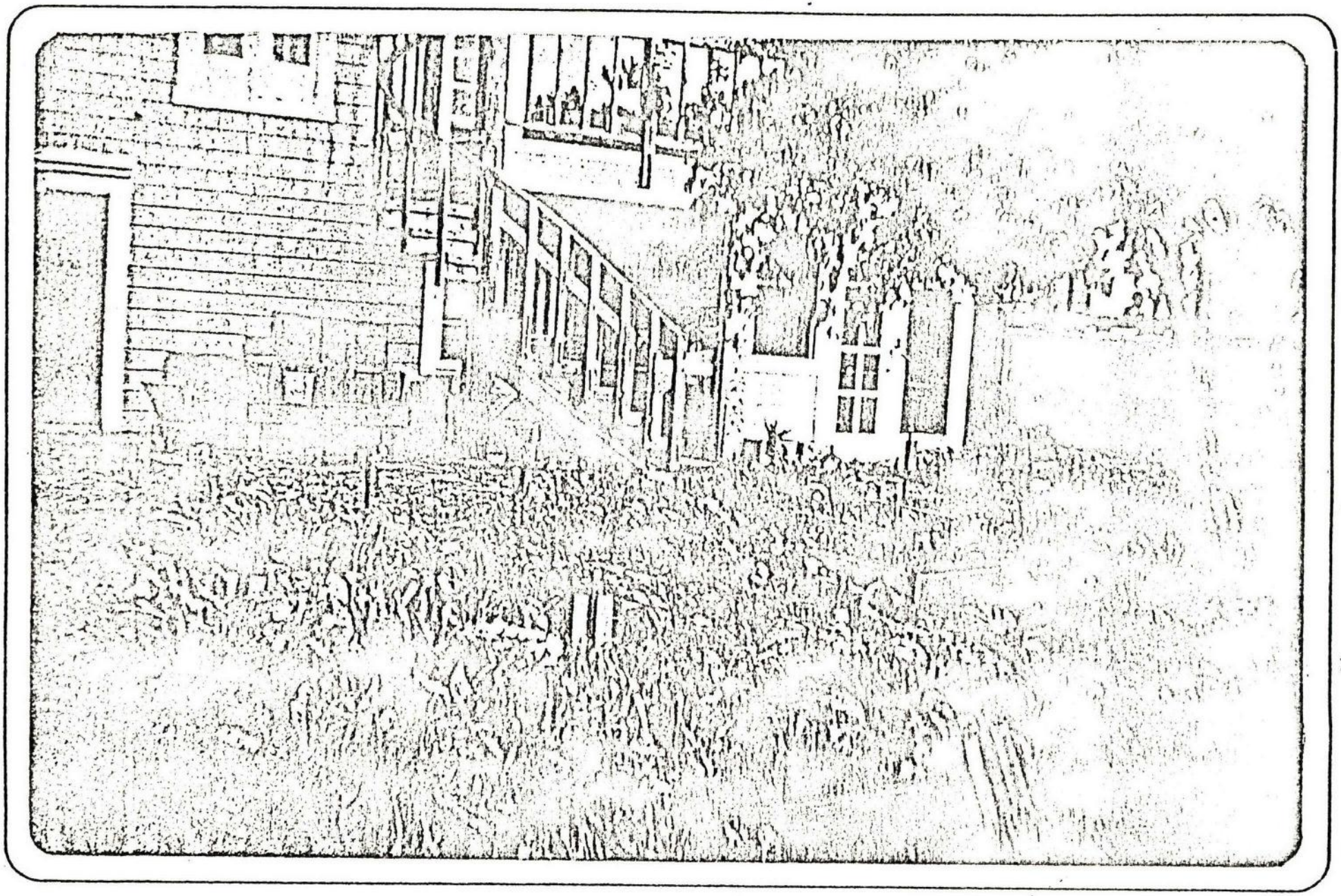
In the hill country of California's Sonoma County, an old ranch of 80 rolling acres is the home of the Rural Center. It is a big laboratory

in which participants investigate and work in four categories: natural energy [illegible] systems, ecosystem management and resource recovery, food production through plant and aquatic systems, and shelter design and construction.

Through a live-in situation, the program is intended to develop and test new alternatives based on learning through the discipline of actual practice. The purpose is to equip people with knowledge and direct experience in ways of living that are not wholly dependent on present wasteful, inefficient, unstable systems of resource use, land management and habitat design. Interns learn by working on alternatives under the direction of the resident staff, visiting experts and by living with the products of their own effort. The Center means to combine all the operations of the homestead to make a unified productive flow of resources, eliminating as much waste as possible.

The Integral Urban House is the urban side of the Institute. It offers a variety of classes on subjects relevant to the development of a self-sufficient lifestyle appropriate for urban people. The research behind the course is conducted at the House, and, as at the Rural Center, the courses thrust is applied research. The four major courses are Urban Food Raising, Solar Energy System, Designing Your Urban Homesite, and Bee Keeping. In addition, the House occasionally gives classes in aquaculture, small stock raising and weatherizing.

A third dimension to the Institute is its degree programs through its affiliation with Antioch College-West. They design both undergraduate and graduate degree programs for students desiring an alternative means of obtaining their education. Students are encouraged to develop independent



The Integral Urban House of The Farallones Institute

studies which might involve such learning settings as projects, fieldwork, apprenticeships, on the job training, workshops and tutorials. A major advantage is that each student's program is individually designed to fit his/her needs and goals.

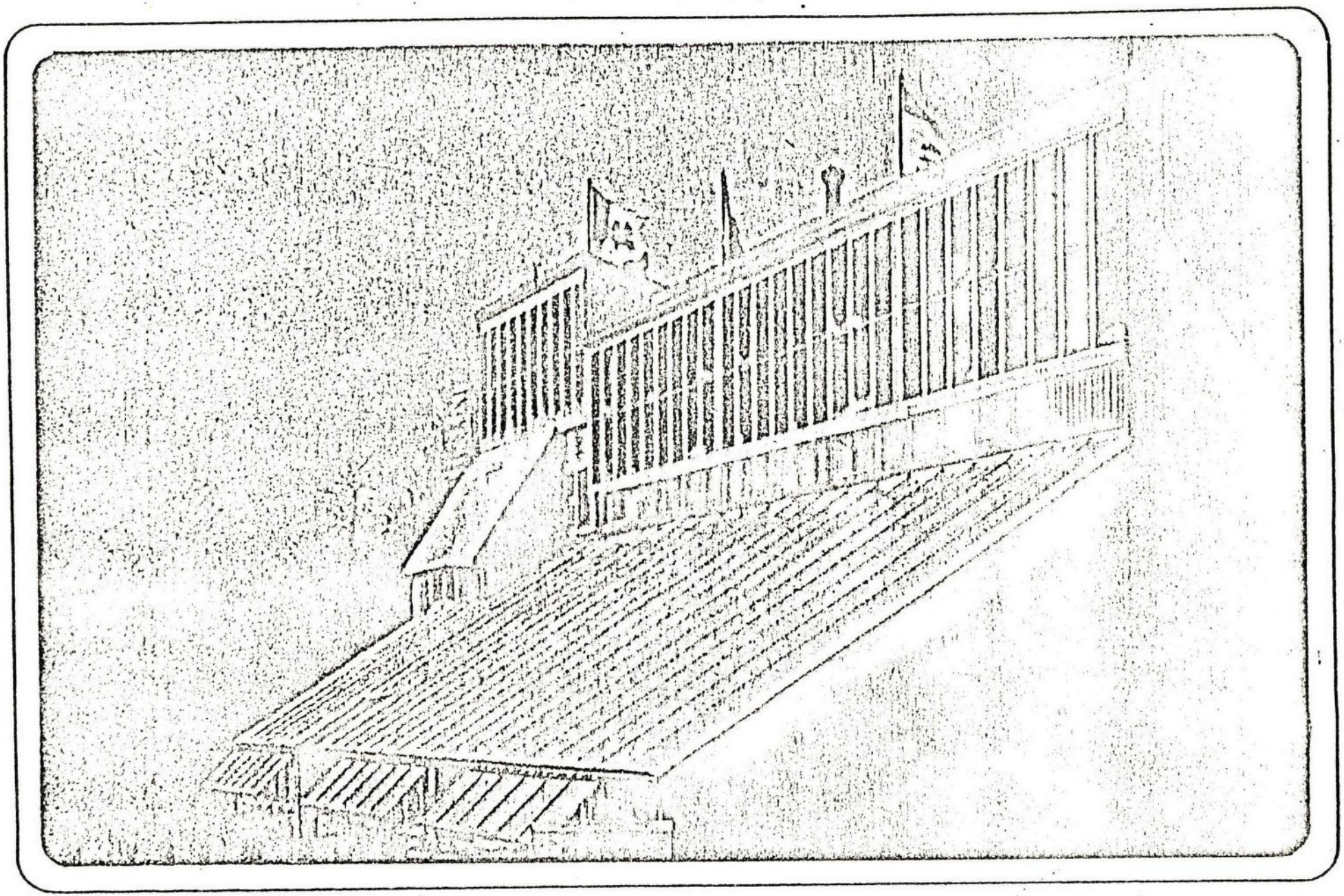
Farallones Institute offers fine facilities to handle exchange interns from the less developed countries. The holistic approach of the Rural Center combined with its individualistic degree program make the institute a clear example of an AT group in the U.S. capable of providing an alternative form of training and experience with its emphasis on appropriate technological development.

KEY PERSONNEL	NEW ALCHEMY INSTITUTE	AREAS OF EXPERTISE
1. John Todd	Box 47 Woods Hole, MA 02543	1. Autonomous Housing
2. Nancy Todd	617-563-2655	2. Eco-development
3. Earle Barnhart		3. Aquaculture
4. Ronald Zweig		4. Green houses
5. Bill McLarney	7. Susan Ervin	5. Biological Agriculture
6. Conn Nugent	8. Hilde Maingay	6. Wind Systems

The New Alchemy Institute was born during the 1969-1970 academic year. It originated partially in a series of evening seminars held by John Todd and Bill McLarney for their biology students at San Diego State College.

Another aspect of the beginnings of New Alchemy in San Diego was concern over what Stewart Brand referred to as the talk/do ratio. The group embarked on a series of field trips to a ranch in the dry, hilly country southeast of the city, just above the Mexican border. From a biology class practicum, the project expanded into a challenge of how to sustain people in such a difficult, arid environment. Each student undertook to examine some part of the environment in detail. Very slowly some pattern emerged, and with the discovery of water and suitable soil, agriculture became a possibility. But the owner sold and bulldozers appeared on the crest of the hill to begin leveling for yet another colony of southern California weekend cottages.

What remained from this experience as the Todds crossed the continent and resettled on Cape Cod has been fundamental to New Alchemy. They fully realized the necessity of the active search for biologically adaptive methods of providing for people. It is this that underlies their aquaculture



The New Alchemy's Prince Edward Island Ark

and their intensive organic agriculture, their work with solar energy, windmills, and bio-shelters.

The goal of the New Alchemy Institute is to design and test human support systems--food, energy, shelter--that are environmentally sound, economically efficient and socially benign. Implicit in that goal is a commitment to develop inexpensive strategies that minimize reliance on fossil fuels and that are built on a scale accessible to families and small groups.

New Alchemy is unusual: a scientific and educational institution that provides some tangible alternatives to current capital-intensive technologies. Drawing upon experience in biology, design, and engineering, the New Alchemists have devised synthetic arrangements that mimic the productivity and resilience of natural ecosystems.

Most dramatic are New Alchemy's bioshelters, northern-climate buildings which link elements previously uncombined: solar heating, wind power, fish farming, gardening. The Prince Edward Island Ark combines a four-person residence, a family green house, a commercial green house, an aquaculture station, a laboratory, a workshop, and a barn. The Cape Cod Ark is a more modest urban microfarm, featuring year-round agriculture and aquaculture in a passive-solar design that needs no input of auxiliary fuels.

Other projects include: intensive biological farming on small plots, backyard aquaculture, wind systems, agricultural forestry, vermiculture. A small Costa Rican affiliate, with two New Alchemists participating for four months every year, has been cited as a model for combining the dual goals of tropical ecology and economic development. Within this success lies New Alchemy's greatest potential of service to the less developed

parts of the world. This ability to provide economic development in balance with a tropical ecology enhances the preservation of not only the environment, but the cultural values of many peoples. Economic development and socio-cultural tradition are compatible and New Alchemists are proving this by research, writing and living.

For those within the locale or able to travel to Cape Cod, the Institute runs workshops on each Saturday from May through October. Among the topics covered are agriculture, aquaculture, bioshelters, wind and solar energy and the social impliations embodied in these ideas. The New Alchemy Institute has an Associate Membership which is available to those interested in helping support their work. Associates receive the quarterly Newsletter as well as the annual Journal of the New Alchemist, which reflects the group's commitment to a publication based on a holistic approach to ecological planning.

When taken in aggregate, New Alchemy's work suggests a new approach to technological problem solving. A theory of design has emerged that weds twentieth-century science to an age-old ideal of fidelity to nature. Specific technologies must be confined to appropriate geographic regions. Nonetheless, there is evidence that the general theory spawned by the New Alchemy experience can prove useful in any number of international applications.

KEY PERSONNEL

1. Helga Olkowski
2. Bill Olkowski

CENTER FOR THE INTEGRATION OF APPLIED SCIENCES

1307 Acton Street
Berkeley, CA 94706

415-524-8404

AREAS OF EXPERTISE

1. Biological pest control
2. Waste management systems
3. Self-reliant homesteads

The Center for the Integration of Applied Sciences (CIAS) was established as a separate wing of the John Muir Institute in 1978. The CIAS concentrates in the areas of integrated pest management/biological control, waste management systems as well as the integrated development of food production, waste and pest management and energy generation systems for small scale self-reliant homesteads.

CIAS studies how to develop and implement AT decision-making processes for ecosystem management. They use an interdisciplinary team approach and work closely, as consultants, with communities, institutions and government agencies that have specific problems or problem systems. Presently CIAS is working on a contract with Department of Water Resources dealing with water levy management. Levy management systems have suffered from a ground squirrel infestation. The squirrels can disrupt and destroy levy systems, and CIAS is researching, developing and testing control methods without pesticides. Through vegetation control and the introduction of natural enemies, CIAS tries to find an ecologically balanced solution to the problem. For the Department of Food and Agriculture, CIAS is researching and testing the feasibility of importing natural enemies to solve pest-control problems in urban areas. Presently, they are maintaining the development at two urban test sites.

The Center also consults the local governments in Berkeley, Palo Alto, San Jose and Modesto, California, about the use of pesticides in the treatment of street trees. In two aphid tests in Berkeley, CIAS has eliminated the problem, while in other projects, they have reduced the use of pesticides by 75% to 99%.

This pest population control is usually accomplished through the introduction of natural enemies, the planting of different species of trees less susceptible to the pest, and water washing insects off the trees. CIAS is also currently working with other community groups on waste management and energy conservation projects.

Most of these projects include not only the research and implementation components, but an educational element including general public education and technology transfer. The staff is in the process of preparing a number of pamphlets, displays and slide shows for this purpose. For instance, CIAS produced a prepared public hand-out which the Palo Alto authorities enclosed in each city utility bill. The Center also maintains an extensive library and files on the management of ecosystems and toxic materials, as well as the associated hazards to human health and the environment. They also have a small insectory which raises and supplies predatory and parasitic insects, and also undertakes biological control importation projects through cooperative arrangements with government quarantine facilities.

The staff is trained in entomology, parasitology, conservation of natural resources, and biology. The Center is currently publishing an international newsletter in integrated pest management. Though the Center has had little direct contact with the Third World, its biological approach to pest management depends on a thorough understanding of the

specific environment in which one is working. Such a requirement combined with their scientific expertise and a willingness to deal with Third World persons seeking ecologically sound pest control offers some potential for assistance to developing countries by CIAS.

KEY PERSONNEL

1. Roger Blobaum

ROGER BLOBAUM AND ASSOCIATES

Rural Route 4
Creston, Iowa 50801
515-782-8098

AREAS OF EXPERTISE

1. Alternative agriculture

Blobaum and Associates is a private consulting firm in alternative agriculture. At present they are assisting in three projects, The Small Farm Energy Project; The Urban Wastes Project; and The Energy/Agriculture Project. Each of the three projects is the first of its kind and all involve alternative approaches to conventional agricultural practices. Two involve research with farmers on working farms which is an approach of considerable merit.

The Small Farm Energy Project is a national research and demonstration project funded for a thirty-nine month period by the Community Services Administration. Blobaum Associates is the principal investigator and is responsible for providing conceptual leadership and supervising the work of a 4-person staff. The staff works with fifty full-time, low-income, small farmers in a rual county in northeast Nebraska. They provide technical and cost share assistance to the 25 farmers who are the project cooperators. The other 25 make up a control group, and their only involvement is maintenance of detailed energy and farm income records.

There are few results on the research component as they do not have two full years of data. The demonstration component, however, has gone extremely well. The project has already shown that farmers will adopt a wide range of alternative energy innovations if they are provided with the technical assistance, some cost sharing and encouragement. Some completed farmer-built projects include a solar grain dryer, two solar hot water

heaters on dairy barns and two types of solar heating systems for houses. In addition, these farmers are involved in manure composting and other energy saving approaches that do not require hardware or construction.

The Urban Wastes Project is a systems study of the feasibility of applying urban wastes to agricultural land. Blobaum and Associates is the grantee for this project which is funded by NSF and has a staff of 4 persons. The unique element of this study is that it views sludge, paunch manure, and other organic wastes found in urban areas as a resource opportunity, not a disposal problem.

They examined three systems scenarios for the Omaha-Council Bluffs SMSA and decided that two different land application approaches would be feasible for the region. The work included developing land availability and cropping sequence projections through the year 2000; developing and applying criteria for identifying suitability for waste application of all land in the region; and testing all waste as to its application safety over a long period at agronomic rates. A final report is being prepared for printing.

The Energy/Agriculture Project is a study of the economic feasibility of organic agricultures in five Corn Belt states. The work is directed by Dr. Barry Commoner and Dr. William Lockeretz. Now in its fourth year, the project compares the production, economic returns, and energy intensiveness of fourteen pairs of matched commercial-size farms in Nebraska, Minnesota, Missouri, Iowa, and Illinois. Its main conclusions are that organic farms consume only about one third the energy of a conventional farm; that the conventional farms have slightly higher yields than organic farms; that organic farms require a little more labor and have lower production costs;

and that the net returns from the two types of farms is almost identical. Thus, organic production appears to be economically feasible for the types of farms studied.

The firm is also directing an emerging agricultural technology assessment plan of the U.S. Office of Technology Assessment and has a contract to assist the Community Services Administration with the Small Farm Conferences throughout the country.

Blobaum and Associates are overcoming in some manner one of the greatest hindrances in agricultural development. That is the deep-rooted traditions of agricultural production. With skill, facts, and assistance on The Small Farm Energy Project, the firm has successfully convinced some farmers to adopt a wide range of alternative energy innovations. This success has potential value for dealings with Third World farmers. In developing countries, the unwillingness of rural farmers to apply and utilize alternative methods of agriculture hinders considerably the dissemination and development of low-cost, self-sustained agriculture. Tempering the effects of this limit could enhance alternative agriculture in the Third World. Further, the firm's interest in small-scale production and AT applications was increased as a result of trips to People's Republic of China in 1975 and 1976. Their continuing exposure to Third World agricultural needs strengthens the plausibility that their assistance and knowledge could have value for the Third World.

KEY PERSONNEL

1. John Jeavons

ECOLOGY ACTION/
COMMON GROUND

2225 El Camino Real
Palo Alto, California
94306

415-328-6752

AREAS OF EXPERTISE

1. Bio-Intensive Food Raising
2. Mini-Farming
3. Urban Homesteading

Ecology Action of the Midpeninsula is a non-profit tax-exempt educational organization. Ecology Action's theme is living one's life within a balanced ecology. Its staff provide supplies, services, and information that help people live in ways that are more self-sufficient, that protect and enhance the environment and that lead to greater health, permanence, and stability. Extensive research on the biointensive form of small-scale food raising and its application to "mini-farming" is also performed. There are four major projects within Ecology Action:

The Common Ground Store is a small organic store which supplies inexpensive quality seeds, organic fertilizers, soil amendments, good quality tools, and sound pest controls. It has two seed and seedling trading programs under which homegrown seeds or organically grown seedlings can be exchanged for others in the store. It provides a soil testing service for the area and offers good advice on local compost materials and methods of environmentally sound soil conservation. In addition, the store maintains an extensive library, for public use, of good books, current periodicals, tapes, and slides on gardening, homesteading, appropriate agriculture, and related topics as well as a collection of unusual publications which are often difficult to find. Ecology Action also publishes and distributes various staff-written information sheets, research reports, and a book describing the basic biointensive techniques of food raising

Areas of interest and research objectives in the garden include: 1) the development of an economically cost-efficient and cost-competitive successful intensive 1/10 acre multiple vegetable mini-farm which could be managed by hand and which could remain self-sustaining in terms of organic matter for compost fertilizer; 2) determining and demonstrating the minimum area of land required to grow a complete, balanced, vegetarian diet; 3) application of the method to Third World and Urban Gardening systems and 4) the development and utilization of sophisticated low-technologies and tools appropriate for small-scale farming, such as the U-bar digging tool, new hand watering and seeding tools, and mini-greenhouses. Small, portable grain threshers and seed cleaners will be tested soon in conjunction with experiments testing the feasibility of small-scale backyard grain production. Qualified staff persons conduct tours of the garden on a regular, weekly basis. An in-depth, introductory half day exposure to the garden project, under the supervision of the garden manager, is available for interested visitors if arranged (preferably a month) in advance.

Ecology Action also has apprenticeships available for individuals who want training in the biodynamic/French Intensive method of small-scale farming. A year program has been designed for those individuals wishing to develop a reasonable level of proficiency. The two year program will enable one to become confident in the yearly food raising cycle, develop intermediate level skills, and be capable of teaching other teachers the method. After completing a three year apprenticeship, the individual should have developed an advanced level of skill and sensitivity to the method and will be able to plan and manage a major, sophisticated, low technology demonstration mini-farm or garden. To date, apprentices have

been trained from the east coast, west coast, midwest, and Canada. The first overseas apprentice, from France, is expected this year. Additional apprentices are expected from other countries in the future.

KEY PERSONNEL	THE SOCIAL SCIENCE INSTITUTE	AREAS OF EXPERTISE
1. Scott Nearing		1. Self-sufficiency
2. Helen Nearing	Forest Farm Harborside, Maine 04642	2. Organic Gardening

The Institute is no structured organization, rather simply an information exchange point where interested homesteaders, organic farmers and the like can seek practical advice based on half a century of experience. The roots of the Institute were planted and cultivated by the ascetic living and writing of Scott and Helen Nearing. Considered the gurus of the "back-to-nature" movement in the U.S., both have lived off the land for nearly fifty years at two different homesteads in Vermont and Maine. In addition they have pursued steady intellectual development through their writings and lectures, many of which they make available through the Institute for a small fee. Their story goes back a long way as both are well over seventy, she being 75 and he 95.

Many years ago, they too lived in the world of clocks and commercialism, money and tension. Scott earned a doctorate degree at the University of Pennsylvania and taught there and at two other institutions. His social viewpoint and strong pacifist stand resulted in his loss of academic credibility, and when he was 50 and unable to survive in a hostile urban environment, the Nearings took to the hills of Vermont where they invented a farm. For twenty years they experimented by living, and they succeeded at establishing a viable, healthy homestead that was nearly self-sufficient. In their co-authored account of this experience, they summarize what they have proven: "Life's necessaries are easily come by if people are willing

to adjust their consumption to the quantity and variety of their products." In 1952 as the development of winter resorts began to crowd their Vermont valley, at 70 and 50 years of age, they picked up roots and moved to Maine to begin again. The Nearings are about 85% self-sufficient on food, 100% on fuel and rent, and they buy a few clothes, hardware and their gasoline. Self-initiative and human balance with nature are two major qualities of the Nearings, and in these rest a major resource for those seeking balanced and self-supportive development.

The physical work is only a part of the vigorous life of these two individuals. Besides running their homestead, they belong to many organizations, lecture widely and write continually. Behind the raw physical success of the Nearings lies an articulate intellectual framework touching on many spheres of politics, environment and philosophy. Their most famous publication is Living the Good Life, which is the working plans for a twenty year project on pioneering, building, organic gardening, and cooperation and vegetarian living on a self-subsistent New England homestead. Scott's work entitled Man's Search for the Good Life is an analysis of the difficulties and dangers which beset the present day western world. More importantly he suggests alternatives for the individual and the community. Two other works are particularly applicable as intellectual stimuli for the pursuers of self-sufficiency: Civilization and Beyond and Freedom: Promise and Menace.

Self-sufficiency with intellectual pursuit are salient ingredients for alternative development in the Third World. The Nearings' self-inventiveness is not crushed in a battle of survival against nature, but a joint pursuit of mind and body in a philosophy of balance with nature.

They have coexisted successfully as an alternative lifestyle in the most advanced and technological society. It has been a choice in which they have equipped themselves with both the "hardware" and "software" to make a good life. The extreme winters they endure, the vegetarian diets they follow, the sound writings they produce make them as much an enduring information resource as a monument to alternative methods of living a full, balanced and happy life.

sounds just like the 30's

PHILADELPHIA GREEN
C/o Jane Lennon 325 Walnut St.
Philadelphia, PA 19106

For 150 years, the Philadelphia Horticultural Society has been promoting new concepts in agriculture. Most recently it obtained a grant of $250,000 to help develop over 200 community gardens and cover over 25 city blocks with trees and green sitting parks.

THE FOOD BANK
1460 Kall Circle San Jose CA 95112 USA
(Steve Radosevich)
Originally involved in typical large community gardens, The Food Bank is now providing gardening opportunities for isolated or disadvantaged people in the region.

BOB LORRAINE
Grosvenor Lodge, Gordon Rd., Clifton
Bristol BSB 1AV, ENGLAND
"The Sleeping Beauty in the Wood" by David Richards is among the publications produced by the City Land Use Project to convince urban officials that city gardens can be economic.

RURAL DEVELOPMENT

Rural Development is not limited to improvements in agriculture. More and more people in the industrialized nations are moving to rural areas to establish businesses. In developing countries the growth of urban shantytowns has stimulated new policies to improve rural life through communications, transportation and other amenities. Among those interested are:

ESSOR RURAL
B.P 7007 Quagadougou, UPPER VOLTA
Young farmers work through radio clubs, seminars, consultations and other means to develop and promote improved agricultural methods for rural workers throughout Upper Volta.

CLEARINGHOUSE ON RURAL DEVELOPMENT
221/223 Deen Dayal Upadhayaya Marg.
New Delhi - 110 002 INDIA
A new publication from theGhandi Peace Foundation, "News and View on Rural Development" abstracts, studies of land reform, agricultural development, soil conservation, farm mechanization, and other areas of interest to students of the small farm in India.

"COMPOST, FERTILIZER, AND BIOGAS PRODUCTION from Human and Farm Wastes in the People's Republic of China"
IDRC
P. O. Box 8500
Ottawa K1G 3H9, CANADA
This translation of a report from China gives useful information on the pathogens in human wastes, designs for hygienic toilets, construction of biogas plants, and home use of biogas.

"RURAL REVITALIZATION
Anthropology Resource Center
P.O. Box 90, Cambridge, MA 02138 USA
Anthropologist Jerry Brown argues in this publication for increased attention and appreciation of rural values in both rural and urban societies.

THE OZARK INSTITUTE
P.O. Box 549, Eureka Springs, AK 72632
The Rural Media acts as a catalyst for rural community action by providing information on A.T., rural development, and regional ecosystems. Its central concern is rural poverty in Arkansas and Missouri. USA

"TECHNOLOGY IN RURAL MEXICO"
from Billie R. DeWalt
University of Kentucky
Dept. of Anthropology
Lexington, KY 40506 USA
This study outlines a number of alternative plowing and sowing methods developed by the low-income Mexican farmers, many with antecedents from ancient history.

SMALL FARM MANAGEMENT AND TECHNOLOGY PROJECT
c/o David Vail, Dept. of Economics
Bowdoin College, Brunswick, ME 04011 USA
A series of studies of rural Maine farms cover farmer's markets, direct farm to home delivery, consumer food co-ops, economic efficiency of small farms, land trusts, and other topics relevant to the "new-ruralism" in the United States.

FUNDAEC
Apartado Aereo 555, Cali, COLOMBIA
(Attn: Farzam Arbab)
The Foundacion Para La Applicacion Y La Ensenanza de Las Ciencias has been developing a wide range of innovative programs which are aimed at direct assistance to the poor rather than improving economic indicators. One of the most creative is the program for "Rural Engineers". This five year education program has high academic standards but is closely tied to the geographic area and the people to be served. An increasing part of the university time for the rural engineers being trained is in direct service to the community.

ELIZABETH O'KELLY
9 Cumberland Gardens, Lloyd Square
London WC1X 9AF, ENGLAND
In a new publication, August 1978, "Rural Women: Their Integration in Development Programmes and How Simple Intermediate Technologies Can Help Them", O'Kelly follows her long list of aids to rural women with a series of case studies covering the role of women in agriculture, the day of an Asian woman, food processing, A.T. for the home, A.T. for the village, women's institutions, and cottage industries.

SELF-HELP FAMILY FARMS
Home Co-op
Route 1, Orland, ME 04472
"Sharing While Owning" is the motto of this innovative program. A community land trust from which members lease the land they use is one corner stone. A cooperative community effort for sharing tools, building homes, sharing costs, and providing training is making it possible for low-income farmers to resist the lure of land speculators in this tourist haven.

DEPARTMENT OF AGRICULTURAL EXTENSION
Ms. Wu Chu Ming, DirectorTaiwan
Provincial Farmer's Association
Taiwan, Republic of China
Growing population and land scarcity has made Taiwan carefully husband its scarce resources. Land reform in the 1950's increased the owner operated farms from 36% to 78% with concomittant increase in production. Current policies call for increased use of biological methods and capital saving technologies.

NATIONAL LAND FOR PEOPLE
1759 Fulton #7, Fresno, CA 93721
NLP promotes the development of smallholders and community farm projects in the U.S. Successful adventures include one co-op farm of six workers who grossed $65,000 in one year; and two farm families who grossed $20,000 on a ¾ acre plot.

RURALAMERICA
1346 Connecticut Ave NW
Washington DC 20036
Ruralamerica is a Washington Based citizen lobby group advocating the development of small farms and the rights of farm workers with U.S. Governmental agencies and the U.S. Congress.

ESTACION EXPERIMENTAL
c/o Donal Wharton, Apdo Postal 15
Quezaltenango, GUATEMALA
This small experimental station works with agricultural extension for Guatemalian Indians. Solar water heating, solar drying, biogas production, windmills, and simple mud stoves are among their key interests.

DIRECTORY OF A.T. CENTERS

Commitment to improving the lot of small farms is moving from the concern of a small group of A.T. advocates into major governmental policies in both overdeveloped and underdeveloped countries. The food surpluses which swamped developed countries during the 1940's and 1950's have disappeared. Improved health care in developing countries has led to population explosions and increasing hunger and malnutrition. A.T. Centers are playing a major role in testing new methods for feeding the world on a sustainable basis. The attached directory contains only a few key groups among many.

TRANET's next directory will be on **COMMUNITY AND HOME HEALTH CARE.** Please send descriptions of relevant programs before February 15, 1979. The summer issue will be devoted to **ALTERNATIVE COMMUNICATIONS.**

BIOLOGICAL AGRICULTURE

In many developing countries each year more and more chemical fertilizers, pesticides and herbicides are needed to maintain food production. It is increasingly recognized that chemical farming is not sustainable. Many groups are experimenting with techniques for a sustainable agriculture with dependence on ecologically sound biological techniques. Among these are:

THE IPM PRACTITIONER
1307 Acton Street
Berkeley, CA 94706 USA
Integrated Pest Management depends on the discovery of biological controls such as preditors, companion planting, and organic techniques. Bill and Helga Olkowski have shown the efficiency of these methods in many U.S. cities. This new newsletter will keep all practitioners in touch with current research, new publications and successful experiments.

BY HAND AND FOOT LTD.
P.O. Box 611
Brattleboro, VT 05301, USA
These developers of tools dependent on human energy have moved into biological agriculture with tapes by Claude Aubert, the foremost consultant for biological farms in France. The 4 tapes for $7.00 each cover The Biological Alternative, The Scientific Base, Biological Methods, and Converting from Chemical Dependence.

DR. HARDY VOGTMANN
Institute of Biological Husbandry
Overwil, SWITZERLAND
Dr. Vogtman is, perhaps, the leading biological farming scientist in Europe. His ten-year program to compare 1.5 Hectare farms covers 90 test plots. The goal to develop guidelines for a sustainable agricultural techniques is not yet complete but set a standard for other agricultural research.

RODALE PRESS
33 Minor Street
Emmaus, Pa.
For many decades Rodale Press, through its monthly magazine "Organic Farming" and many books and publications, has been promoting nonchemical methods of farming. In the past few years, first steps have been made to put the organic philosophy on a scientific basis.

MAINE ORGANIC FARMERS AND GROWERS ASSOCIATION
Box 187, Hallowell, ME 04347 USA
MOFGA has led the United States in establishing standards and certifying organic farms. Their annual "Common Ground Fair" has brought back-to-the land farmers in the Northeast U.S. together to examine the latest technologies for small farms.

DR. STUART HILL
P. O. Box 86
MacDonald Campus of McGill
Ste Anne de Bellevue PQ HOA 1CO, CANADA
The ecology of the soil is being researched by Dr. Hill. Which parasites help plant growth, what conditions assist their growth, how tolerant they are to chemicals are among questions being answered.

THE SOIL ASSOCIATION
Walnut Tree Manor, Haughley
Stowmarket, Suffolk, IP14 3RS
ENGLAND
Promoted by E.F. Schumacher, the Soil Association has a long history of promoting organic methods. Publications such as "Self-Sufficient Small Holdings," "Looking at Livestock," and "Smallholder's Harvest" give helpful hints to new farmers.

WENDELL BERRY
Port Royal, KY 40058 USA
Through books such as "Farming: A Handbook", "Continuous Harmony", and "Memory of Old Jack" in poetry, novel and careful analysis, Berry has been a leading exponent of the rural renaissance in America.

CENTER FOR THE BIOLOGY OF NATURAL SYSTEMS
Box 1126, Washington University
St. Louis, MO 63130 USA
CBNS studies have shown that organic farming may be as economically productive as chemical farming even in the short run. Current and projected studies will include On-Farm Energy Production, small farm marketing, production efficiency, and taxation.

COUNTRYSIDE MAGAZINE
Rt. 1, Box 7
Waterloo, WI 53594 USA
This monthly magazine ($7.00/yr) provides down to earth information on goat raising, bee keeping, small farm machinery, as well as advertisements on home farm equipment and other information needed by the small farmer. The editor's, Jerry Velanger's, bias to biological farming does not interfere with information on how to make it economically on a small farm.

"NATURE ET PROGRES"
3 Chemin de la Bergerie
F-91700 St. Genevieve des Bois, FRANCE

The leading French spokesman for biological farming, "Nature et Progres", keeps track of modern organic techniques as well as expounding the traditional French respect for small scale farms.

INTERNATIONAL INSTITUTE OF BIOLOGICAL HUSBANDY
(David Stickland) Martello House
5 Station Road, Stowmarket, Suffolk, ENGLAND
IIBH is taking a leading role in bringing sophisticated science analysis to organic farming. Working with university scientists they are putting many long held tenets of biological farming to rigorous tests.

SMALL FARM TECHNOLOGIES

In developed as well as developing countries there is a surge of interest in small farms. This stems from the realization that small farms can be more productive, that 82% of existing farms are of less than 5 hectares; and, that over ¾ of the world's population grows much of their own food. Groups working to improve small farm technologies include:

WINROCK INTERNATIONAL
Livestock Research & Training Center
Petit Jean Mountain
Morillton AK 72110 USA
Ruminants (cattle, sheep and goats) convert fodder useless to humans into usable protein, firbres, skins and other useful products. Winrock, established in 1975 by Winthrop Rockefeller, conducts research and training on its own farm site to improve the understanding and use of ruminants for the benefit of mankind.

ENVIRONMENTALISTS, VOLUNTARY ORGANIZATIONS, AND THIRD WORLD FARMERS have initiated a dialogue under the Mohonk Trust (Mohonk Lake, New Paltz NY 12561 USA). The first of their series of booklets, "Environmentally Sound Small Scale Agriculture Projects" is a planning guide for soil, water, pest and nutrient management with an economic cost-benefit analysis for small scale projects. (VITA, 3706 Rhode Island Ave., MD 20822 USA; $3.95).

THE WORLD FOOD PROBLEM IS A STRUCTURAL PROBLEM was the premise of a study "Rural Development Research - the Role of Power Relations" by the Swedish Agency for Research Cooperation (SAREC, c-o SIDA S-105 25, Stockholm SWEDEN). While recommending primarily that more research be done, SAREC recognizes that the bargaining power of the poor must be increased and extension work must be improved to get the results of R&D to the user.

HIGH PROTEIN TEXTURIZED PRODUCTS can be made from vegetables, flours, beans and meats according to "A Village Texturizer" prepared by Meals for Millions and VITA (3706 Rhode Island Ave., Mt Rainier MD 10822 $3.95). Steps through construction and use including how to set up a small business extend this Korean invention for the use of other developing countries and community food processors.

USA FARMERS COULD SAVE $1.6 BILLION and increase acreage by 20 million acres using minimum tillage is one of the facts presented by the US Department of Agriculture in its hesitant entry into organic agriculture. Its "Bibliography for Small and Organic Farmers: 1920 to 1978" (USDA, SEA-AR, Building 005, Rm 127 BARC-West, Beltsville MD 20705 USA) lists 1176 publications of long-term research on OF methods. Among the 19 sub headings are: Animal Wastes, Crop Rotation, Drip Irrigation, Micronutrients, Microorganisms, and Sewage Sludge.

TRADITIONAL TECHNOLOGIES IN THE USA have been revived by popular books such as the Foxfire Series (Anchor Books, Garden City, NY) on technologies of Appalachia and The Salt Book on New England ways. Now new from Cloudburst Press is "The Farmstead Book 1" republication of farm extension articles of 1911 to 1930 covering soils, workshops and forests. These 247 pages of chuck full of information and helpful hints for the small farmer, remind us of how much we don't know that our fathers did. (Madrona Publishers, 2116 Western Ave., Seattle WA 98121 USA $8.95 paperback).

THE PHYSICS, HISTORY, ECONOMICS AND POTENTIAL OF WINDPOWER is carefully covered by physicist David Inglis in "Wind Power and Other Energy Options" (The University of Michigan Press, Ann Arbor MI USA $8.50 paperback). In comparison with nuclear energy, Inglis comes out with $1,250 (wind) to $1,900 (nuclear) per installed KW for total system.

ROOT CELLARS, EVAPORATING COOLING, CRIBS, AND SALTING are among technologies described in Series 2 Vol 5 of FAO's "Rural Home Techniques" (Home Economics Programme, FAO, Via delle Terme di Carcalla, 00100 Rome, ITALY).

BIOGAS FROM CONCEPT TO COOKING is covered in "The Complete Biogas Book by D. House from At Home Everywhere (VAHID, Rt. 2 Box 259, Aurora OR 97002 USA; $8.00). The 403 pages are filled with formula, numbers and sketches to help you understand the workings of your biogas plant.

TEACHING NUTRITION IN DEVELOPING COUNTRIES or "The Joys of Eating Dark Green Leaves" a book for training field workers is one of the services offered by Meals for Millions (P.O. Box 680 Santa Monica, CA 90406 USA). MFM has also developed a food texturizer and conducts courses on infant feeding and other problems of nutrition.

"POSTHARVEST GRAIN LOSS ASSESSMENT METHODS" is a somewhat pedantic manu .. concerned with measuring food lost by milling, birds, insects, mold, and others. Edited by Carl Linblad (1706 Euclid Ave, Washington DC 20009 USA) and Kenton Harris (7504 Marbury Rd., Bethesda MD 20034) the report is based on conferences supported by FAO, LIFE, AID, TPI and other foundations.

ACADEMIC RESEARCH ON PROTEIN is reviewed in "Non-Conventional Proteins and Foods"' proceedings of a conference in Oct. 1977 organized by the Plant Juice Protein Team (University of Wisconsin, Madison WI 53706 USA). Protein from seeds, leaves, algae, beets, animal wastes are separated by various chemical processes.

"EDIBLE LEAVES OF THE TROPICS" has been followed by **"HOW TO SURVIVE IN THE TROPICS"** a readable and practical guide by Franklin Martin and Ruth Ruberte (Mayagez Institute of Tropical Agriculture, Mayaguez, Puerto Rico $5.00). "How to Survive" is full of solid information on proteins, vitamins, carbohydrates and other nutritional needs. It also tells you which plants and animals provide them and how to find and grow them for your use.

LIVING IN THE SUBTROPICS is the topic of a handbooks "Living off the Land" ($7.50) and a bimonthly newsletter ($5.00/yr) from Marian Van Atta (P.O. Box 2131, Melbourne Fl 32901 USA). Each newsletter gives information on the growth and uses of one subtropical plant inluding receipes and bibliography for more information. Among 22 plants covered to date are: Pyracantha, Jicama, Cactus Pears, Papaya, Surinam Cherry and Persimon.

SOLAR FOOD DRYING for the American (or other) housewife is promoted by Stellas Andrassy in "The Solar Food Dryer Book". Her "solarsunhood" is only one of many solar drier designs, and her recipes for muesli, apricot nut bread, sun riced potatoes, and sun herb teas may be no better than those we use. But this is a good practical book for the home library.

PRACTICAL GREENHOUSE CONSTRUCTION from concrete block foundation through studs to measuring and installing lights is outlined by Donal Brann in "How to Build Greenhouses" one of the 669 home improvement series (Easi-Build Pattern Co., Briarcliff Manor NY 10510 USA).

LOW-COST MUD STOVES TO SAVE FUEL WOOD is possibly the most critical need for rural development. Ianto Evans of the Aprovecho Institute in "Lorena Owner-built Stoves" makes the most significant contribution (Volunteers in Asia Box 4543, Stanford CA 94305 USA: Estacion Experimental Choqui, Apartado 159, Quezaltenango, GUATEMALA; or Aprovecho Institute, 359 Polk St. Eugene, OR 97402 USA: $3.00).

SOLAR GREENHOUSES have become the current A.T. symbol for the USA. Homes in every part of the country (including TRANET's) are growing some of their food year round, and catching some heat from the sun. The new "Solar Greenhouse Digest" (P.O. Box 3218, Kingman AZ 86401 USA) edited by Twila de Vries and promising articles by Bill and Susan Yanda promises to keep pace with the developing technology.

A FARM SIZE NITROGEN FERTILIZER PLANT using air, water, and electricity from a windmill is being developed by Charles F. Kettering Research Laboratories (150 East South College Street, Yellow Springs, OH 45387 USA). Smallhydro (400 foot head), or solar voltaics could as well be used to drive the 3Kw Arc electrode reaction cell now on the kettering drawing boards.

TRADITIONAL TECHNOLOGIES of developing countries will be reviewed, analysed and upgraded in a new project being initiated by the United Nations University (15-1 Shibuya 2 Chome, Shibuya-ki, Tokyo 150 JAPAN). Project coordinator, Chandra Soyosa (Marga Institute, 61 Isipathana Mawatha, Colombo, 5 SRI LANKA) invites all nations to participate in STT (Sharing Traditional Technologies) as a fundamental technique for appropriate development.

A SMALL SOLAR FOOD DRYING GUIDE has been prepared by Western Maine Energy Center (Dill House, UMF, Farmington, ME 04938 USA). It contains instructions on how to prepare and dry fruits and vegetables common to the area, some recipes using dried food and a good bibliography.

A METHANE SYSTEM capable of supplying the energy needs of 200 homes has been developed by Heying Enterprise Farm of West Union, Iowa, USA. The system uses the waste from the 160,000 laying hens to power an electrical generator. The residue fertilizes 3000 acres of Iowa corn and soybean. The system costing $150,000 could be easily scaled to any size according to its developers. (Contact: Larry Heying, 702 West Bradord St., West Union, Iowa USA)

BIOGAS USE IN CHINA is the topic of a new 93 page booklet from IDRC (Box 8500, Ottawa, K1G 3H9 CANADA). Translations of three reports from different Chinese provinces indicate considerable ingenuity in the design of biogas plants and detailed knowledge of the pathogenes in excreta.

"MANAGING THE CHOICE OF ALTERNATIVE TECHNOLOGY" in India is a collection of nine studies by students of the Indian Institute of Management (Bangalore 560 027 INDIA). After case studies of rope making, poultry ming, dairy farming, wool, leather, cloth for the poor and housing, the Choice of Technology Group concludes that a new set of "Indian Criteria" for the choice of technology should be developed, that no technology can be studied in insolation, and that region specific studies on co-operatives should be undertaken.

A.T. HARDWARE IN THE USA IS NOT RELEVANT TO THE THIRD WORLD is one warning of the report to OECD, the World Bank, and AID (DS/ST, AID/Dept. of State, Washington, D.C. 20523 USA) by George McRobie, William Ellis, and Ken Darrow. But, the A.T. resource of the USA, consisting of over 300 active groups, is an overlooked resource first, as a training resource for involving local people in solving their own problems, and second, as a model of future options being considered by the most centralized and industrialized nations. The first priority of A.T. developers and New Age theorists in the USA is the reversal of trends which brought on crime, pollution and other problems of the centralized, urban materialistic society. USA groups see the future options as equally shared and equally developed in collaboration with Third World groups.

"RURAL TECHNOLOGY AND WOMEN" is the self descriptive title of a course being offered 8 July to 18 August by the British Council (65 Davies Street, London W1Y 2AA ENGLAND). Elizabeth O'Kelly and Teresa Spens will assist the administrator, planners and designers understand the special needs and capabilities of women in rural development programs.

"HOMEMADE CORNCRIB", Tools for Woodworking", and "Integrated Pest Management" are among the articles in Roadale's latest publication "The New Farm" ($10.00/yr. Rodal Press, 33 East Minor St., Emmaus, Pa. 19538 USA). With Steve Smyser as Editor and Wendel Berry and Gene Logdon as contributers we may expect a valuable service for small North American and European farms.

A FOOD POLICY FOR THE U.K. is detailed in "One Crust of Bread" Oxfam's Public Affairs Report No. 4. Researcher Adrian Walker points out that since 1972/73 the food production of the earth has fallen below the population needs. It is no longer merely a problem of distribution alone. No startling recommendations are made but Britons are urged to recognize the concepts self-reliance and interdependence are complementary and that individual life styles have a planetary impact. Other OXFAM studies include "The Doctor Go Round", "Whose Right to Work" and "Europe and the World Without".

NINETY KILOMETERS OF BAMBOO WATER PIPES are supplying 60,000 people in 24 villages with household water for the first time. Previously many of the people had to walk three hours for their water supplies. The designers of this sytem, Dian Desa (Proyek Teknologi Tepat, JL, Mento Muja Moju 8, Yogyakarta, INDONESIA), are also helping villages construct bio-gasplants using human waste as well as chicken and cow manure and to diversify their crops with clove trees and poultry.

ANIMAL POWER SHOULD BE CONSIDERED PARALLEL TO NUCLEAR solar, fossil/fuel, and other sources of energy states Prof. N.S. Ramaswamy (Indian Institute of Management, 33, Langfor Rd Bangalore 560 027 INDIA) in a draft analysis. In India, 800 million work animals provide 32 million horse power (equivalent to 24,000 megawats) equal to the total electrical production in the country. Electricity costs Rs. 10,000 per kw; the animal equivalent is Rs. 2,000 per kw. It would take 167,000 trucks and 500,000 tractors to replace the bullock cart-traffic. In addition, half of India's 500,000 villages do not have roads surfaced fit for trucks or tractor traffic; loads are small, distances too small; and loading/unloading too high a proportion to make trucks economical.

But the current use of animal power is inefficient. Friction wastes much energy, cart design places too much load on the animal's back, carts and plows are too heavy. About ⅓ of the 32 million H.P. is wasted. Animal Energy Development Organization is proposed to improve use of animal power.

RETURN TO THE SMALL FARM in the USA has caused the U.S. Department of Agriculture to devote its 1978 Yearbook to "Living on a Few Acres". Articles include "Tradeoffs Before Leaving the City", "Remodeling a House", "Land Improvements", "Starting a Kennel", "Woodlots", "Bee Keeping", "Dairy Goats" and many others for the American New Ruralists".

A FOOD POLICY FOR THE U.K. is detailed in "One Crust of Bread" Oxfam's Public Affairs Report No. 4. Researcher Adrian Walker points out that since 1972/73 the food production of the earth has fallen below the population needs. It is no longer merely a problem of distribution alone. No startling recommendations are made but Britons are urged to recognize the concepts of self-reliance and interdependence are complementary and that individual life styles have a planetary impact. Other OXFAM studies include "The Doctor Go Round", "Whose Right to Work" and "Europe and the World Without".

FISHFARMING IN ITS OWN GREENHOUSE is the result of research and demonstration by the Amity Foundation (PO Box 7066, Eugene OR 97401 USA). Their solar greenhouse has glazed surfaces only the south side, heavy insulation and reflecting surfaces on the North, and rock, earth and water storing excess energy. Fish and plans selection as well as wi[illegible] and ecological c[illegible] explained in [illegible]on packed 43 pag[illegible]

"A FISH AND VEGETABLE GROWER FOR ALL SEASONS" describes fish and vegetable production in domes and greenhouses. Authors R.E. Huke and R. W. Sherwin Jr. give specific details of their own dome in the cold climate of New Hampshire, USA as well as a broader information from Burma, Mexico, China and Kenya. Trout, catfish, windmills, and brusselsprouts are included in the working system. And, a list of suppliers of all elements is there for anyone wanting to copy their production (Norwich Publications, For F, Norwich VT 05055 USA $4.95)

BIOLOGICAL AGRICULTURE will be the topic of a conference at Wye College in England Aug. 26-30, 1980. The International Institute of Biological Husbandry is asking both traditional and biological farmers to explore the issue of "An Agriculture for the Future" pre-registration to Dr. R.D. Hodges, Wye College, Wye Ashford, Kent, Tn25 5AH E[illegible]AND).

SMALL-SCALE AGRICULTURAL MACHINES FOR MANUFACTURE are designed by The International Rice Research Institute (IRRI, P.O. Box 933, Manila PHILIPPINES). Engineering drawing and licensing agreements are available for Power tillers, Portable threshers, grain cleaners, vine dryers, a diaphragm pump, a manual weeder and other equipment for the small farm. Would-be manufacturers can obtain training, technical assistance and credit advice.

SEEDS FROM TRADITIONAL CROPS OF AMERICAN INDIANS, early settlers, Mennonites, Amish and other gardeners are exchanged through the "Seed Savers Exchange" (Kent Whealy RR2, Princeton MO 64673 USA). For $2.00, your name and address and a description of seeds you have or ones you'd like, you too can join the over 100 memebers in the annual "Seed Savers Exchange."

A STUDENT HANDBOOK FOR WORLD HUNGER [illegible]RS covers topics such as "Who Owns the Land", "The Green Revolution", "Corporate Control of World Grain" and other critical topics for students and teachers. Available from World Hunger Year - New Jersey (Dept. kFM. 27-06 High Street, Fair Lawn NJ 07410 USA $5.00)

"THE VERMICLUTURE JOURNAL" to be published quarterly by Ecology International Corporation (755 Vernon Way, El Cajon, CA 92020 USA) opens its Vol. 1 No. 1 issue with articles such as "Superworm", "Earthworm castings vs. Chemical Fertilizers", "A New Form of Proteins" and "Vermicomposting Municipal Wastes".

FOR THE HOME WORM FARM the new electrical Edison Kitchen composter "makes rich compost instantly"..."Put food scraps in; take compost out" the ads say, even without the worms. At $140 it may not be for every home but with the growing interest in earthworms for home composting there is a sure market (Ecison Kitchen Composter, 103 East Front St., Red Bank, N.J. 07701 USA).

"HARNESSING THE EARTHWORM" by T. J. Barrett ($4.00), "Raising Earthworms for Profit" E. B. Shields ($3.50) and "With Tails We Win" by Mary Crowe and Gladys Bowen" ($2.00) are among the books for new worm farmers offered by Shields Publications (P.O. Box 669, Eagle River, Wisconsin 54521 USA).

"THE UTILIZATION OF SOIL ORGANISMS IN SLUDGE MANAGEMENT" was the title of last June's meeting of earthworm enthusiasts in The State University of New York (College of Environmental Sciences, SUNY, Syracuse, New York, USA). Papers reviewed in the November/December 1978 issue of Compost Science Land Utilization (JG Press, Box 351, Emmaus, Pa. 18049 USA)

THE REGIME OF SPECIALISTS IS BRINGING ON THE MOST UNHAPPY CITIZENS OF THE WORLD argues Wendell Berry in "The Unsettling of America". Thomas Jefferson's dictum: "Cultivators of the earth are the most valuable citizens. They are vigorous, independent, virtuous, and tied to their country, and wedded to its liberty and interests by the most lasting bonds" forsaw a nation based on agriculture; a culture of nurturers of the land — farming, education and democratic liberty indissoluable linked. Business replaced culture, exploiter replaced nurturer and a desert of technology brought the disintegration of farming communities and the consequent disintegration of the structures of urban life. Berry's 12 public remedies would internalize the landlords integral costs of production and make people rather than the machines of absentee landlords integral parts of the American landscape. (Avon Books, 959 8th Ave., NYC 10018 USA, $4.95)

A THEORETICAL BASIS FOR THE FAILURE OF THE GREEN REVOLUTION is put forward by Kenneth A. Dahlberg in "Beyond the Green Revolution: The Ecology and Politics of Global Agricultural Development" (Plenum Press, 227 W. 17th , NYC 10011, $17.95). Analysis was based on the Westerner's (and Marxist) belief in the superiority and universality of science and technology. It brought on total reliance on the genetic improvement of food and feed crops sold with a missionary zeal to cultures and ecologies for which they were unsuited. A new "contextual analysis" should involve an evolutionary and historical integration of geographic and cultural relativity to determine development policies. New strategies would shorten chains of causation and shift away from current overdependence on energy intensive technologies, centralized institutions, urban conglomeration, and specialized practices. New diversity is needed as much by the urban North as by the rural South.

ALL PHASES OF FISHERIES AND OTHER LIVING AQUATIC RESOURCES, including summaries of research, field projects, new publications etc. are covered in the quarterly ICLARM newsletter (International Center for Living Aquatic Resources Management, M.C.C., P.O. Box 1501, Makati, Metro Manila, Phillippines). Deadlines for submission of articles: the 1st of Dec., March, June, and Sept.

DEVELOPMENT REQUIRES LOCAL TECHNOLOGICAL INDEPENDENCE is a central tenet of IRFED (International Institute for Research and Traingin, 49 rue de la Glaciere, F-75013 Paris, FRANCE). Programs in Mali, Senegal, Ivory Coast and other African countries help local villagers asses needs and develop solutions with local resources. The distinguished Board of Directors chaired by Paul Marc Henry is increasing its attention of wind, solar and other A.T.

GENETIC EROSION OF RICE STOCK is the major concern of the recently completed Rice Genetic Resource Laboratory at the (International Rice Research Institute, P.O. Box 933, Manila, Philippines). The laboratory is headquarters for the Genetics Evaluation and Utilization program which has as its goal the conservation and use of rice genetic materials in an attempt to maintain the varieties of rice available for cultivation. The IRRI has also developed a one man irrigation pump which is portable and can be used for small scale irrigation efforts.

A PHOTODEGRADABLE POLYETHYLENE MULCH has been developed by Plastopil Partnership (Kibbutz Hazorea, ISRAEL). Plastor will disintegrate after a predetermined time period of from a few weeks to many months once it has been exposed to sunlight.

ROGER BLOBAUM

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AREAS OF EXPERTISE:

1. Alternative Agriculture Technology
2. Urban Waste Re-Use
3. Land-Use Policy

BRIEF OF EXPERIENCES:

After eight years as a political reporter and editor for the Associated Press in Madison, Wisconsin, and Chicago, Roger became the Legislative Assistant to U.S. Senator Gaylord Nelson, specializing in farm, rural development and environmental policy. Moving from the government side to the farmer's side, he served as an advisor to the President of National Farmers Union in Denver and in Washington, D.C. During 1969-1970 he was the Senior Legislative Assistant on the Democratic Study Group's task forces on "Food and Agriculture" and "Natural Resources and the Environment." Since 1970 until founding Blobaum and Associates, he was a consultant to government agencies and organizations on farm, rural development, and land use policy.

CURRENT PROJECTS:

He is President of Blobaum and Associates Inc., a small firm specializing in energy/agriculture and appropriate technology. He is Principal Investigator of The Small Farm Energy Project, which is a national research and demonstration project, as well as for The Urban Wastes Project, which is a systems study of the economic feasibility of applying urban wastes to agricultural land.

SKILLS AND ACHIEVEMENTS:

Mr. Blobaum earned his B.S. in Agriculture from Iowa State University in 1955. Then, while pursuing a career in the news reporting profession, he resumed his studies at University of Wisconsin, where he received his MS in Communications in 1963. In 1963-64 he was a Congressional Fellow of the American Political Science Association in Washington, D.C. He also participates from time to time in panels and seminar discussions of D.O.E. and National Science Foundation, usually dealing with the urban or agricultural areas of public policy. The following is a partial list of his publictions:

R. Blobaum, S. Fast, L. Holcomb, and L. Swanson. "An Assessment of the Potential for Applying Urban Wastes to Agricultural Land." A study prepared for the Program of Research Applied to National Needs, National Science Foundation. September, 1978.

R. Blobaum, "The Need for Appropriate Technology in Agriculture." Published by Design Alternatives, Inc. Washington, 1978.

R. Blobaum, "The Politics of Agricultural Land Preservation." A paper presented at the annual meeting of the American Political Science Association. Chicago, September 4, 1976.

R. Blobaum, "The Loss of Agricultural Land." A study report to the Citizens Advisory Committee on Environmental Quality, Washington, D.C., 1974. Reprinted in "Readings in Land Use Policy," a Committee Print, the Senate Interior Committee, June 1975.

R. Blobaum, Review of a paper by H. Carter. J. Youde, and M. Peterson, entitled "Future Land Requirements to Grow Food for an Expanding World Population." Both papers prepared for the USDA Prime Land Seminar, Warrenton, Virginia, July, 1975.

EARLE ALLEN BARNHART

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AREAS OF EXPERTISE

1. Water Pumping Windmills
2. Solar Heated Greenhouses
3. Biological Agriculture--Temperate Zone
4. Family-Scale Agricultural Technology, Costa Rica-Haiti
5. Tree Crops

BRIEF OF EXPERIENCES:

Earle grew up on an Ohio rural mixed crop-dairy farm. He received an undergraduate degree. Since then he has been a biological/energy designer at the New Alchemy Institute, working in the design and development of ecological forms of agriculture, aquaculture, shelter, energy sources and landscapes. He has been involved in the integration of windmills for water pumping with aquaculture; integration of aquaculture in passive solar houses and greenhouses; integration of intensive biological agriculture with simple portable solar cloches and solar aquaculture ponds. For one month in Haiti and two months in Costa Rica he evaluated uses of aquaculture and alternative energy sources of hot, moist, tropical climates, including the construction of a solar copra/herb dryer in Costa Rica with local materials.

CURRENT ACTIVITIES:

He is presently developing propagation techniques for large-scale planting of tree crops for human and animal food. New Alchemy is exploring the uses of food trees and animal forage trees as integral components of agricultural landscapes. He is carrying out research to develop

faster, cheaper propagation techniques for northern temperate nut trees and animal forage trees. Simultaneously, he is studying the ecological theory pertaining to natural forests that would allow one to develop humanly-designed analogs yielding a higher amount of human food. These processes will result in preliminary trial food forests combining food trees and domestic animals on pasture beneath.

TYPICAL SKILLS AND ACHIEVEMENTS:

While working with the New Alchemy Institute, Earle has completed his Master's thesis entitled "Alternative Energy Systems for Small Communities" (1972). The following is a list of his important publications:

Barnhart, E. A., "Wind Power", Journal of the New Alchemists, I. 1973.

_____ "An Advanced Sail-Wing for Water Pumping Windmills", Journal of NAI, III. 1976.

_____ "Technology Appropriate to the Gondoca Region of Costa Rica", Journal of NAI, IV. 1977.

_____ "Bioshelter Biotechnics", Journal of NAI, V. 1978.

_____ "On the Feasibility of an Agricultural Landscape", Journal of NAI, V. 1978.

_____ "Food Forests: An Appropriate Agriculture for the Northeast", New Roots, New England's Appropriate Technology Newsletter, October 1978.

CHRISTOPHER SZECSEY

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AREAS OF EXPERTISE:

1. Small-Scale Agriculture
2. Biodynamic/French Intensive Horticulture
3. Nutritional Gardening
4. Cross-Cultural Studies (Culturally/Socially Appropriate Technologies)
5. Rural Community Development and Extension Methodology

BRIEF OF EXPERIENCES:

1971-74 served with the U.S. Peace Corps, Ecuador, South America. Agricultural extensionist and supervisor of 45 people in school and family gardens, nutrition, and rural community development. 1976-77: Center for Developmental Teaching in Oaxaca, Mexico. Developed and implemented university field studies program, agricultural community development projects and studies. Field facilitator for students and indigenous families. Bio-intensive agriculture and composting for school and family gardens. 1978: Center for Human Potential International in Antigua, Guatemala. Consulted in program development and implementation for 54 Peace Corps volunteers training in appropriate technology: small-scale agriculture, including soil conservation/fertility, Biodynamic/French intensive horticulture, composting, and nutrition; cross-cultural studies; community analysis; and extension methodology.

CURRENT PROJECTS:

Farallones Institute Rural Center: Research, development and education in appropriate technology: coordinator in food production, including bio-intensive agriculture, composting, vermiculture, nutrition, preserva-

tion and storage; public information and education; and consulting and contracting overseas in appropriate technology.

TYPICAL SKILLS AND ACHIEVEMENTS:

1978: Member - Board of Directors for Sonoma County Appropriate Technology Network.

1977-current: Farallones Institute: Biodynamic/French intensive horticulture, composting, low-flush and composting toilets, greywater recycling, apiculture and vermiculture.

1977: Advisor to integral rural development project in Otavalo, Ecuador, in establishing community food production using methane digestor sludge and biointensive techniques.

1975-1976: Private research in cultural ecology and agricultural systems in South and Central America.

1971-1974: During service in U.S. Peace Corps: Spanish language and cross-cultural training, horticulture, nutrition and health.

1967-1971: Callison College, University of the Pacific, Stockton, California. B.A. in Cultural Anthropology and Political Philosophy. Sophomore year: Far Eastern studies in Bangalore, India. Fieldwork: Southwest U.S. - Native Americans; Eastern Australia - Aborigines; Yucatan, Mexico.

MAX L. KROSCHEL

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AREAS OF EXPERTISE:

1. Individual Onsite Waste Management
2. Composting Toilets and Greywater Systems
3. Agricultural Waste Management - Large-Scale Composting
4. Methane Digesters - Small and Intermediate-Scale
5. Small-Scale Water Supply Storage and Distribution Systems

BRIEF OF EXPERIENCES:

Max was a Peace Corps volunteer in Ecuador for 3-1/2 years. His work was with Rural Infrastructure projects: design and construction of several small bridges and buildings; design of sewage drainage and treatment system for small jungle community; coordination and implementation of research and development project in rural sanitation and waste recycling; application of compost toilets, methane digesters and solar water heaters. Currently, he is General Manager, Farllones Institute Rural Center and is conducting a research and development project in composting toilets and greywater systems as well as some educational programs ranging from one or 2-day weekend workshops to 5 and 10 week residential programs with "hands-on" skills training in appropriate technology. Also, he is assisting in a small water supply development project in Oaxaca, Mexico and has been a guest lecturer in Methane Digesters at U.C. Davis and College of Marin.

CURRENT PROJECTS:

The Integral Solar Bathroom, and various applications of solar energy to composting toilets and human waste recycling. Grant funded project through Department of Energy's small grants program. Further projects

include greywater treatment and distribution for subsurface irrigation; greywater irrigation in solar greenhouses; vermicomposting; and use of bio-intensive growing beds for wastewater treatment and disposal.

TYPICAL SKILLS AND ACHIEVEMENTS:

--BS, Civil Engineering, University of Texas at Austin.

--Graduate student: environmental engineering, University of Texas.

--Peace Corps language and cross-cultural training, Ponce, Puerto Rico - Spanish language

--Blacksmithing and tool-making workshop: Alexander Weygers, Carmel, California

--Speaker: National Sanitation Foundation, 4th Annual Conference on Individual Onsite Waste Water Alternative. Paper published in the proceedings: "Experiences with Compost Toilets".

--Articles in Farallones Institute Annual Reports 1976 and 1977.

--Article in Energy Primer, revised edition, on composting toilets.

HENRY W. ESBENSHADE

International Tree Crops Institute
Route 1, Box 378
Woodland, California 95695

916-662-8375

AREAS OF EXPERTISE:

1. Propagation and nursery development
2. Planting and management of agro-forestry systems
3. Multi-cooperator agro-forestry systems
4. Small-scale intensive farming on marginal lands
5. Apiculturalist, including queen breeding

BRIEF OF EXPERIENCES:

He was born on a family citrus farm and his interests in agriculture have continued. He served as an extension agent for the Ministry of Agriculture in Sierra Leone during two years of Peace Corps work; thereafter, worked with European farmers who have been innovative in appropriate technology and ecological agriculture. He returned to complete an MA in geography at the University of California, Davis, with special emphasis on agro-forestry in Mediterranean environments. His primary concern has been with the varied cultural uses of marginal and eroding lands throughout the semi-arid and arid world. He represented the International Tree Crops Institute at the U.N. Conference on Desertification (Nairobi, 1977) and subsequently conducted a survey with the assistance of the Ministry of Rural Development in Lesotho, Southern Africa, on the potentials for developing an agro-forestry system of management for their eroding croplands. Returning to U.S.A., Henry worked with the University of California Agricultural Economic Department as Staff Research Associate on evaluation of desertification impacts.

CURRENT PROJECTS:

He is developing an agro-forestry nursery and research center in California which will become a possible model for other regions, serving as a member of committee developing a windbreak handbook for the state of California in cooperation with U.S. Soil Conservation Service. Also, he is collaborating with a mechanical engineer in design, construction and use of a small-scale low-energy demanding carob pod kibbling device which will be used on a ranch in Mexico (testing of initial design began with '78 carob harvest). Henry serves as the President of Davis Appropriate Technology Group, which is currently renovating a typical suburban home, adding solar heaters, crop driers, greenhouse, etc., and is partner in a diversified vegetable and orchard crops business.

TYPICAL ACHIEVEMENTS:

Energy Fair coordinator for University Extension conference with Dr. E. F. Schumacher.

David Appropriate Technology Group, founder.

Davis Farmers' Market, founder.

Friends of the Earth, board member.

Co-author: "The Development of Tree Crops for Agroforestry Systems" presented at Seventh World Forestry Congress, Djakarta, Indonesia (1978).

Co-author: "Multipurpose Tree Crops: Their Potential Role in Agriculture and the Conservation of Rural Environments" presented at International Federation of Organic Agric. Movements Conference on Basic Techniques in Ecological Agriculture, Montreal, Canada (1978).

THOMAS B. FRICKE

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Santa Cruz, California 95062

AREAS OF EXPERTISE:

1. Ecosystem Management
2. Intensive Horticulture
3. Organic Farming
4. Freelance Journalism

BRIEF OF EXPERIENCES:

After finishing his BA in Urban Design, he spent two years as a Village Technical Volunteer and Vocational Therapist in Bali, Indonesia, through Volunteers in Asia. He helped train health care personnel with projects involving methane digestors, solar heaters, intensive agriculture schemes, and sanitation projects. Following these two years, he spent 1976 working as a staff member at Ecology Action on their on-going project, a Biodynamic/French Intensive research garden. He also worked as a systems technician at the Integral Urban House of Farallones Institute which included construction and maintenance of food production systems, waste nutrient recycling, and renewable energy sources. Moving to the east coast, he worked as a journalist and photographer at Small Farm Research Group in Harborside, Maine. His main work was the documentation of the European Organic Farm Tour.

CURRENT ACTIVITIES:

He is the Project Research Coordinator for the Santa Cruz Farm Project of the University of California. He is responsible for field operations of the research project, "Environmental Monitoring of an Intensive Organic Horticulture System", which is sponsored by N.C.A.T. In some other work, he is currently consulting the United Indian Planners Association of Washington, D.C. on a program for self-reliance on Native

American reservations, especially by using AT in food production. He also does volunteer consulting with Socarro Valesco, Instituto Nacional Indigenista of Mexico. Most of this work concentrates on community composting, intensive gardening, and resource access.

SKILLS AND ACHIEVEMENTS:

He earned an MS in Ecosystems Management in June 1978 from Antioch University/West. He is fluent in German and English, and proficient in Spanish and Indonesian. During 1977 he undertook an intensive apprenticeship in toolmaking and blacksmithing as well as studying/working on housing construction at an Owner-Builder Center. Mr. Fricke also has experience as a freelance journalist and travelling correspondent in most South American countries. Since 1977 he has been associated with VITA as a volunteer consultant. The following is a partial list of publications which he has authored.

Freicke, Thomas B., Pedoman Membangun Digestor, a practical methane plant construction manual, 25 pages, Pekanbaru, Sumatra, Indonesia; October 1975 (In Indonesian).

_____ "Methane and Agriculture Sections", Appropriate Technology Sourcebook, 2nd Edition, a Volunteers in Asia Publication, Stanford, California; November 1976. (Contributing Editor) 3rd Edition, Stanford, California; February, 1979. (Contributing Editor)

Fricke, Thomas B. and Javits, Tom, "Grey Water Use in the Home Garden", 20pps., Farallones Institute, Berkeley, California; February, 1977.

Fricke, Thomas B. and Javits, Tom, "Greywater Guidelines", RAIN Magazine, pps. 12-14, Portland, OR; March, 1977.

Fricke, Thomas B. and Bunnell, Sterling, "An Urban Savonius Aquaculture System", in Wind Power Digest, pps. 10-14, Bristol, Indiana; Fall 1977 Issue.

_____ "Urban Wind Power--The Savonius Rotor", in Farallones Institute Annual Report, p. 25, Occidental, CA; January 1978.

DAVID KATZ

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AREAS OF EXPERTISE:

1. Agricultural Production and Management
2. Biological Agriculture
3. Integrated Pest Management
4. Educational and Training Programs

BRIEF OF EXPERIENCES:

Eight years experience in agriculture including experience as manager of 1000 acre commercial farm, then self-employed on 120 acre family farm. Also experience as consultant on planning and management in a variety of agricultural operations. Considerable management and project development experience as director of the Antioch College West Farm Program and as Executive Director of the Farallones Institute. These positions contributed to a comprehensive working knowledge of technical subjects such as solar design and application, waste water management, agricultural production, light and heavy construction, as well as a high degree of competency in administrative areas such as fiscal planning and management, fundraising, executive decision making, program development of technical assistance and training programs, and working with staff and outside personnel.

Program development work and public service has led to considerable experience in working with government officials in local and federal levels.

CURRENT PROJECTS:

Director of the Center for Sustainable Agriculture, a project that is developing training center for new entry and other small farmers in California. The Center will also be involved in technical assistance work, research and technology development, and in influencing public policy.

TYPICAL ACHIEVEMENTS:

In 1972, he received his BS in Agroecosystem Dynamics from the University of California-Davis and for the following two years lectured there and at Sonoma State University on methane recovery and waste management systems. In 1977 he was a member of the Small Farm Viability Task Force for the State of California as well as a member of the Chancellor's Task Force on Critical Issues for Agriculture in the 1980's for University of California-Davis. He is currently a member of the Reclamation Board for the State of California, elected President of the Board in 1978. Governor Jerry Brown had appointed David to the Board in 1976. He also is fluent in Spanish.

Nebraska. Daily activities include education, design, construction, research, and administration.

TYPICAL ACHIEVEMENTS:

He has travelled by auto from Alaska to Florida and has visited twenty European countries and nine South American countries by bus and train.

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AREAS OF EXPERTISE:

1. Forestry and Natural Resources (Soils, Water, Range Plants)
2. Small Scale Farming
3. Community and Regional Planning
4. Alternative Energy
5. Extension and Transfer of Information

BRIEF OF EXPERIENCES:

He was born, raised and worked on father's small diversified farm near Niobrara, Nebraska. BS in Forestry University of Missouri-Columbia, MS in Natural Resources U. of Nebraska, and Masters of Community and Regional Planning candidate U. of Nebraska, classwork completed and presently writing thesis. He assisted in a training program for Natural Resources Districts by helping them in the development of their one and five year plans. He conducted research into the conflicting land uses in Nebraska. Under a grant from Title V of the Rural Development Act of 1972 a 3 year education effort was undertaken to inform the citizens of Nebraska about Land Use Issues. He was responsible for making the arrangements for the workshops, recruiting resource personnel, researching the issues, and conducting discussion groups made up of Nebraska citizens.

CURRENT PROJECTS:

He is co-director of the Small Farm Energy Project for the Center for Rural Affairs. Under a research and demonstration grant from the Community Services Administration, a three year project is under way to transfer alternative energy innovations of all types to twenty-four full-time, low income, small, conventional farms located in Cedar County,

SYLVIA BLANCHET

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AREAS OF EXPERTISE:

1. Environmental Education
2. Intensive Horticulture for L.D.C.'s
3. Handicrafts and Cottage Industries
4. Historical Anthropology
5. Environmental Landscaping

BRIEF OF EXPERIENCES:

She has had a diverse array of activities directed towards acquiring skills and expertise in the areas of intensive food production, environmental education for children and adults, and cottage industries. She has been exploring new dimensions for women in particular vis-a-vis appropriate technology, and seeking to stimulate further critical involvement by women in this movement. Responsibilities have included operations manager of an 18th century living history museum, trainee for an agricultural development project for developing countries, environmental educator and curriculum writer for a school district, commercial nursery assistant manager, and working partner in a women's "integral landscaping" cooperative in Berkeley, California.

CURRENT PROJECTS:

1. Originator of an innovative elementary school garden project in Scotts Valley, California.

2. Homesteading in a 5-acre market garden near Santa Cruz, California.

3. Expanding knowledge in natural family planning, natural childbirth, midwivery, and prenata/infant/mother nutrition as a result of own and shared childbirth experiences.

4. Personal cottage industry projects including dried floral arrange-

ments, herbal sachets, innovative marketing techniques, etc.

5. Ongoing projects: consultation with VITA, Farallones Institute, N.C.A.T., etc.

TYPICAL ACHIEVEMENTS:

1. Delegate to a two-month international conference on "Social Aspects of Scientific and Technological Advancement", with representatives from the U.S., U.K., and U.S.S.R., in Britain, 1975.

2. Completed a 16 week housing construction course and a workshop on the construction of passive solar greenhouses in Berkeley, California, 1978.

3. Community Gardens facilitator for low-income people, Santa Barbara, California, 1976, while a Direct Relief Foundation intensive food production trainee for developing countries.

4. Photographer for a two-month European tour of organic farms, with the Small Farms Research Group, Harborside, Maine, 1977.

5. Operations Manager responsible for researching and reconstructing an exact replica of an 18th century colonial farm, Edgemont, Pennsylvania, 1975-76.

WILLIAM OLKOWSKI, Ph.D.
HELGA OLKOWSKI, M.S.

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AREAS OF EXPERTISE:

1. Integrated Pest Management (IPM)
2. Biological Control of Insects
3. Organic Waste Management
4. Small-Scale Food Production

BRIEF OF EXPERIENCES:

For the past ten years, first as Research Associates of the University of California, and recently as directors of a Center of the John Muir Institute, they have been developing alternative methods of pest and waste management for communities and State and Federal agencies. They have specialized in reducing pesticide use in a variety of settings and in demonstrating environmentally sound food production methods utilizing organic wastes.

CURRENT PROJECTS:

They are currently developing integrated pest management systems dealing with insect, weed and rodent problems in four California communities and the State Dept. of Water Resources. They have undertaken a state-wide survey of urban pest problems for the State Dept. of Agriculture, a national survey of natural enemies of shade tree insect pests for the E.P.A., and numerous slide show and writing projects dealing with their field of expertise.

TYPICAL ACHIEVEMENTS:

They were among the group that started the Berkeley Ecology Center. They were responsible for starting the first community-wide recycling center. They started the student garden at the University of California, Berkeley, and the associated class, Urban Garden Ecosystems, to demon-

strate environmentally sound methods of small-scale food production. They were among the founding members of the Farallones Institute and they initiated and guided the development of the Integral Urban House: they have written two books and numerous articles and pamphlets on pest and waste management and food production. They edit and publish a newsletter on IPM. The following is a partial list of these works:

1977. Managing Flies Around Rabbit Systems. North Country Star, February-March, 1977. P. 4.

Olkowski, H. and W. Olkowski. An Easy Plan for Making Hot Compost. Horticulture Magazine, Massachusetts Horticultural Society, Boston, Mass., March, 1977. Pp. 46-48.

Olkowski, W. et al. 1978. Urban Integrated Pest Management, in: Pest Control Strategies. D. Pimental (ed.). Academic Press.

Olkowski, W., H. Olkowski, A. Kaplan, R. van den Bosch. 1978. The Potential for Biological Control in Urban Areas: Shade Tree Insect Pests, In: Perspectives in Urban Entomology. J. W. Frankie and C. S. Koehler. Academic Press.

Olkowski, H., W. Olkowski, K. Davis, L. Laub. 1978. Developing an Integrated Pest Management Program for a School District. Proceedings of the XII Annual Conference of the Association of Applied Insect Ecologists, Newport Beach, California.

Olkowski, W., H. Olkowski and T. Javits. The Integral Urban House, book to be published Summer, 1979 by Sierra Club Books, San Francisco.

Olkowski, H., and W. Olkowski. City Peoples Book of Raising Food, 1975, Rodale Press, Emmaus, Pennsylvania.

S. Agriculture
cc. ERIU - IFAD
cc ERIU - FAO
cc. ERIU - World Food Council

ERIU = General
ERIO - OECD

EMENA: EEC - General
EMENA: FED - General
EMENA: OPEC - General
EMENA: IFAD - General

November 15, 1979

NRIC:

Mr. Montague Yudelman, Director

Graham Donaldson, Chief, and Clifford M. Lewis, AGREP

Back to Office Report - Travel to Paris, Brussels, Vienna, Rome, London, October 13-27, 1979

1. As outlined in our terms of reference (attachment I) we visited OECD in Paris; the EEC in Brussels; the OPEC Special Fund in Vienna; the International Institute for Applied Systems Analysis (IASA) in Vienna; the World Food Program (WFP), FAO and World Food Council (WFC) in Rome; and the Wheat Council in London. We attended sessions of the Committee on Food Aid while in Rome and the Food Aid Committee of the Wheat Council while in London. Lists of people met (attachment II) and documentation made available (attachment III) are attached. → n/att

Organization of Economic Cooperative Development (OECD)

2. In Paris we had meetings with various units in OECD including: (i) the agriculture staff, (ii) the secretariat of the Development Assistance Committee (DAC), (iii) staff working at the Development Center, (iv) staff of the Interfutures project.

Agriculture Committee

3. The OECD Agriculture Committee, composed of Agriculture Ministers, has requested various studies of particular interest to the World Bank, included are studies of: (i) Trade (ii) Energy (iii) Food Policy.

4. Trade: A major study of trade in temperate agricultural products is underway with special reference to the sources of market instability. As part of this work, a separate study of OECD-LDC trade is being undertaken; the Bank has been asked if it could contribute to the joint working party dealing with this. The initial work by the OECD staff and working party members indicates there is a need to insulate domestic farm sectors from Soviet induced dislocations. Today, the Soviets export their instability by not holding stocks and making up supply shortfalls by world market purchases. Because of the link between weather in the USSR and South Asia an unfair burden is being placed on those importers least able to bear it. Acute transportation bottlenecks and inherent market variability add to the need for a regulating mechanism which would include increased storage capacities within importing countries. The OECD will also examine the macroeconomic impact of current agricultural trade policies with their report going to the Economic Policy Group of the OECD.

5. Energy: The OECD has launched a major study on the agricultural impact of the current and prospective energy price and supply situation. Energy use in the agro-food chain will be surveyed with emphasis on ways to facilitate necessary adjustments. A meeting of experts will be held in early 1980. This work parallels current research within AGREP

which focusses on LDC agriculture. Different forms of collaboration were discussed and the responsible OECD authorities were keen to assure that our work programs converged.

6. Food Policy: The OECD has work underway on its member governments' management of food systems. This builds upon earlier work on specific food chains (beef, pork etc.) and will focus on increasing efficiency. The study also examines food distribution and subsidy schemes in specific countries.

Development Assistance Committee (DAC)

7. The secretariat of the DAC asked about statements by the Director AGR that technical assistance flows in the agricultural sector had declined. They pointed out that this was not entirely the fault of the bilateral agencies but reflected the priorities of recipient governments. Discussion of bilateral aid to agriculture disbursements and lending strategies pointed up areas of shared concern. It would appear that delays in actually transferring funds is a widespread problem linked to the "new style" of development assistance and to a lack of concerted work on increasing absorptive capacity. DAC staff expressed concern, which they felt was widespread, about the performance of the UNDP system for technical assistance in agriculture which is channeled through FAO. Their view was that such efforts had not laid the groundwork needed in the rural sector.

8. Staff responsible for data on aid flows to agriculture asked for our help in the compilation of their annual reports which the FAO and WFC have begun to use for political purposes. The Bank accounts for almost half of all assistance to agriculture. We have computerized the relevant lending statistics which would make it possible for us to report directly on our work (at present the DAC staff relies on Bank Annual Reports).

Development Center

9. The Development Center's work program is built around a theme of interdependence. There are four areas of conern: (i) technology, (ii) private investment flows, (iii) processing of raw materials, (iv) food policy. Item (iii) is relying, in part, upon work done for the Bank's upcoming policy note on rubber. The Development Center staff dealing with item (iv) have focused on food self-sufficiency in a set of reference countries. There is no intention of doing additional primary research or to do much in terms of actual farm level experience. The emphasis on self-sufficiency appears ill-considered and, in our view, little of interest will come out of work premised in this way.

Interfutures Project

10. The Interfutures Project was established some three years ago to analyze different scenarios of economic growth with a focus on the relationship between industrialized and developing countries. Staff responsible for the agricultural and food component of the report felt

that the major changes in the international grains economy of recent years had resulted from the growth in incomes among the middle and upper income developing countries. This had fueled huge increases in imports, not population growth in low income countries. It was felt that in future the agriculture sector would continue to evolve along historical lines. The energy situation would not, they felt, adversely affect it. However, important shifts in enterprise mix and technology could be expected as producers shift away from maximizing physical yields to maximizing economic returns. Further, the nutritional and ecological dimensions to the food problems of low income areas were expected to become more serious in the future. A detailed report on the food and agricultural component of the Interfutures model is being prepared and will be sent to this Department.

European Economic Community (EEC)

11. The EEC secretariat administers the world's most expensive farm support program, the Common Agricultural Policy (CAP), and represents member governments at various international conferences dealing with agricultural issues (eg. Wheat Council). The Community also administers a growing aid program. Our meetings dealt with various issues including: (i) the operational experience of the European Development Fund (EDF) in agriculture, (ii) the CAP's impact on developing country exports, (iii) the potential impact of expanding the EEC to include Spain, Portugal and Greece on countries who expect to increase agricultural exports to the Community, (iv) food aid, (v) general development issues.

European Development Fund (EDF) Agriculture Projects

12. EDF aid is given as part of the Lome Convention mostly in the form of project assistance. $180 million were committed for agricultural projects over the last 4 years. Allocations for an individual country are publically known at the beginning of each four year programming cycle. The country authorities must then suggest projects for EEC financing. Project preparation and appraisal is the responsibility of field staff. These personnel, 50 for agriculture, handle supervision and disbursements. Serious implementation problems have arisen. Staff felt that increasing aid for agriculture would be difficult due to inadequate indigenous project preparation and implementation capacity. Discussion of EDF experiences with project generation in Africa showed they were interested in lending directly for "institution building". Their thinking in this areas was similar to current thinking in AGR/CPS and FAO. In contrast to their experience with the Bank, however, EDF's operational experience with FAO was far from satisfactory. It was felt that a lacuna had emerged in the agricultural sector by virtue of FAO's weakness.

The Common Agricultural Policy

13. Brief discussions about the CAP showed that there is little capacity for assessing the impact of internal adjustment and support

policies on developing countries. An illustration is the Commission's response to the increase in cassava imports from Thailand. Through July 1979 almost 3.6 million tons of manioc, to be used for feed, had entered the Community despite record high prices; total annual imports were roughly a million tons only 3 years ago. The Community would like to see Thai imports stabilized at current levels and apply a variable levy to imports above that level. To do so they will have to appeal to the GATT for a waiver. However, they had yet to review the impact such moves would have on poor Thai farmers. They were unaware that perhaps a million farm families depended upon cassava production and that encouraging alternative crops might lead to increased poppy cultivation.

Expansion of the EEC

14. The current negotiations over Greece, Portugal and Spain entering the EEC will involve significant concessions in terms of agricultural protectionism. Commission staff feel that agreements being being negotiated will significantly alter the export prospects for EMENA countries. An example is importation of fruits and vegetables. Market assumptions used to justify current Bank projects that generate destined exports may prove unrealistic in the face of the market arrangements that seem likely to emerge from current negotiations.

Food Aid

15. The EEC runs a large food aid program. One of its largest projects is being co-financed with the Bank (National Dairy project in India). The Community is interested in expanding such joint efforts. The Community officials asked if the Bank might consider utilizing the counterpart funds accumulated by the disbursement of food aid. This idea is an old one, dating back to the days when IDA was first formed. At that time the US government envisioned turning over PL 480 local currency holdings to the Bank (an idea that was rejected by the Europeans). The Community also indicated an interest in assuring long run availability of food aid (via a Food Aid Convention) and in providing help in identifying and overcoming the physical and institutional impediments to better distribution of food. At present the Community has no overall policy governing food exports (concessional or commercial) a situation which was expected to change in the next 5 years.

General Development Issues

16. The importance attached to food issues is brought out by the recent European Parliament's debates on this subject. The idea of a special session originated in Italy and was supported by the Commission secretariat. The policy speeches indicated concern about the physical dimension to action on food security, viz. building better roads, ports and storage facilities. Private discussions showed that EEC staff was considering the linkage between internal EEC policies and the prospects of developing countries. This was of great topical concern given: negotiations our expanding the EEC; Anglo-Italian criticism of EEC budgets; growing concern about an

to change the Community's impact on the developing world. However, the community had little in the way of a policy planning capabiltity either for North/South issues generally or global agriculture. This gap has not gone unnoticed and may explain their keen interest in improved liaison with the World Bank agriculture staff.

OPEC Special Fund

17. Discussions at the OPEC Special Fund covered a wide range of specific issues. Great interest was expressed in current Bank thinking. The OPEC Fund invited us to meet consecutively with their operational staff, including their Executive Director. This session proved extremely interesting. They appeared somewhat less well informed about current Bank priorities and procedures than we would have expected. Serious concern was expressed about the most recent formulation of the "project cycle" which seemed, in the OPEC Fund Executive Director's view, to stress irrelevant issues. Their view was that project preparation (feasibility studies) and appraisal became self-contained ends in themselves. For instance, they suggested there was little linkage between an FAO Investment Center preparation reports and the appraisal reports. Similarly, the experience with actual implementation indicated that insufficient attention had been paid to building up indigenous capacity for management. Great interest was expressed about current thinking within AGR on "pioneer projects" and sector lending".

18. The OPEC Special Fund staff were keen on the idea of financing storage capacity within developing countries. They viewed the issue from two separate dimensions. First, was the fact that subsistence farmers were, through successful rural development schemes, generating surpluses for the first time. The need for farm level storage increased accordingly. The fact that the Bank financed large village level storage in Ethiopia and India was a pleasant surprise to the staff. They also expressed interest in Bank thinking about national food storage systems and the need for international market stabilization. It appeared likely that large scale support from OPEC related financing agencies for the construction, filling and operation of national storage facilities could be forthcoming.

19. In private meetings, concern was expressed about IFAD's performance. The comment that, "as things stand we would be better to give the money to IDA", summarizes the general line of current reasoning. While there was a strong commitment to the concept of IFAD, and it appears likely that IFAD's replenishment will be supported, there was little satisfaction with current practices. It was felt, IFAD needed to identify its specific comparative advantage and that the Bank might help in formulating what that role might be.

Institute for Applied Systems Analysis (IASA)

20. The IASA was established to faciliate exchanges betwen Comecon and OECD countries. It has undertaken various programs of mutual interest. Their program on agriculture was designed to provide a framework for its member countries to prepare models of their farm sectors. These models

would be linked by IASA to provide a simulation of world agriculture. The project is two years behind schedule. While it holds promise of future returns it faces serious problems. As is true with all such undertakings, the program is only as good as the data it processes which, in this instance, is weak and generally out-dated. Further, staff running the effort have no agricultural experience. The IASA staff were interested in keeping us fully informed and would be willing to undertake special runs according to parameters which we would provide.

The Rome Food Agencies

21. We had a series of meetings in Rome which covered all of the agencies dealing with international agricultural policy. We also had the opportunity of covering the same ground with the representatives of the important governments who overview the FAO affiliated agencies. We had particularly fruitful talks with the World Food Program, an agency with a demonstrated capacity for effectively handling food aid and which is highly regarded by all the aid agencies (including Bank project staff who have dealt with them). The contrast between WFP and the other Rome agencies, partricularly FAO, was striking. Serious problems, both of substance and form, were obvious at FAO. Perhaps most important, the developed countries do not take FAO's policy mandate seriously. As a result the developing countries -- who form a highly organized lobby group which involves the Rome G77 and FAO's own country representatives -- have little reason to be realistic or constructive. The politicized environment in which analysis is geared to "proving" the G88's points permeates FAO policy work which therefore has little operational value. Although less obvious, the WFC suffers similar problems.

World Food Program (WFP)

22. The World Food Program is an agency affiliated with FAO but, as an operational rule, totally autonomous. Its head is the former director of the Canadian Wheat Board and it relies upon staff who have wide operational experience. We had an opportunity to meet with all of the key staff including the Executive Director. The WFP viewed infrastructure bottlenecks as the most serious short-run constraint to improved food security. The WFP has, along with the General Sales Office of the USDA, the most extensive experience in moving grain into and within developing countries. The Executive Director and his staff were eager to help the Bank identify infrastructure deficiencies that might be a focus for projects. In effect, the WFP could fill an informal project identification function. They would also be willing to allocate their food for work aid to Bank projects. On a less formal level the WFP, which relies on contributions from the OPEC countries for meeting transport costs, indicated that OPEC authorities were interestd in building up grain storage and distribution capacity in developing countries. According to WFP sources, the OPEC authorities seem to be taking possible retaliation by food exporters more seriously than the food exporters themselves.

23. The WFP staff were extremely doubtful about FAO's attempts to project future developing country food requirements. They were equally dubious about the quality of current FAO attempts to identify food security projects and showed little interest in establishing operational efforts with FAO. At the same time, they sensed a growing willingness on the part of donors to expand support in the food sector. Although the WFP has an extremely small policy unit, the management offered its views on various other proposals: (i) some system of market stabilization was needed although there was no prospect of a wheat agreement, (ii) such a system should take an integrated approach and include all grains, especially rice, (iii) a financial scheme to compensate developing importers for cereal price increases was not only usurious but would result mainly in "subsidizing speculators in the pit at the Chicago Mercantile Exchange", (iv) food sector strategies should not require sophisticated nutritional data -- it was better to do something than study it, (v) the clinical approach to nutrition had notjustified its expense better to link food aid to food production projects.

Food and Agriculture Organization (FAO)

24. During discussions with Mr. Islam, Assistant Director General, he expresses concern about the weakness of statistics on developing country agriculture and the need for better micro-economic studies. He offered to begin providing the Bank with FAO internal draft reports, work programs and meeting schedules. It was agreed that there was scope for better coordination on substantive research as well as policy issues. We agreed to make an effort to improve communications.

25. Discussions about the FAO's efforts in food security and post-harvest losses showed: (i) great interest in obtaining Bank financial support for programs identified by FAO missions, (ii) a willingness to adapt current procedures to make World Bank involvement easier, (iii) a dissatisfaction with the achievements of the Investment Center which had not, in the view of those in charge of these FAO programs, made satisfactory efforts to obtain donor support. However, it should be noted that a review of FAO's project documents showed that their quality often falls well below minimum Bank standards for feasibility studies.

26. Discussions about FAO's Five Point Plan on food security and its Early Warning System proved extremely disquieting. It appears that FAO is unwilling to do more than accept official government statistics in its reports. Validating their accuracy is not a task they are prepared to undertake even though their reports are treated as ex cathedra statements. Even their use of weather information is below par as they use only the reports contained in USDA publications (which the Bank receives well before FAO). Similarly, little capacity exists for useful analysis on issues such as the foreign exchange constraints faced by food importing developing countries. FAO simply does not have access to market information on major commodity items. Instead, it relies on recycled Wheat Council and USDA reports. Overall, we found that statistics put forward in speeches by the Director General and policy papers do not bear careful scrutiny.

27. We met briefly with staff at the Investment Center. It was somewhat surprising that they were unaware of current Bank policy regarding the financing of working capital 8in the form of stocks of grain) in storage projects. There was general agreement that sector lending would become more important. The Investment Center recognized that such a shift would dramatically alter the Cooperative Program's role.

International Fund for Agricultural Development (IFAD)

28. Staff were optimistic about the prospects of replenished IFAD resources. The present plans was to wait until IDA VI negotiations were completed. The other major theme was the staff's sense that their operational focus would soon shift away from co-financing projects to true "IFAD" projects. At present support had been provided to projects which had been identified, prepared and appraised by other agencies (mostly the Bank). To change this, IFAD had initiated a series of "programming missions", which were designed "to shorten the project cycle", and permit IFAD's involvement in actual project identification. The official view was that these programming missions would both identify and prepare projects, i.e., that the follow-up would be an appraisal mission. Governments in Nepal and Sri Lanka had been informed that already completed missions would lead to appraisal missions within a year. Specific appraisal, based on details worked out in IFAD, would be undertaken by institutions such as the Bank.

29. The staff have not had an opportunity to focus on innovative operational mechanisms (eg, disbursements) and intend to use existing systems. Overall, lending criteria is similar to the Bank's official rural development policy. However, IFAD is interested in projects that focus benefits exclusively on the poor and landless. Although well intentioned, such an approach seemed highly unrealistic in operational terms. Our disquiet was reinforced at subsequent meetings with consultants who had participated in the programming missions.

World Food Council (WFC)

30. Little needs to be added to our memo of October 29 (attachment III) except to emphasize the potential problems if the WFC were to see itself as supervising the Bank's experimental activities in support of national food strategies. WFC staff were enthusiastic about Progress that had been made in sector work, under the heading of "food strategies", especially in Bangladesh. However, their expectations for other such efforts (e.g., Philippines and Nigeria) seem unrealistic in view of the emergent problems and constraints. It is notable that "food strategies" have not been endorsed by the FAO at the G77, who have expressed their skepticism on the subject at the United Nations.

31. Other aspects of the WFC's current work program are: (i) agricultural research (which will involve circulating the CGIAR's annual report); (ii) fisheries (which FAO will support with a paper based largely on a draft Bank policy paper that is currently in the review process; and (iii) discussion of food consumption. Item (iii) will require the convening of a meeting to discuss how food consumption requirements of vulnerable groups might be improved and not adversely affected when food prices rise. The Bank has been asked to participate. However, the WFC staff is not yet clear on whether they wish to pursue a discussion of nutrition programs per se or whether they would prefer to focus on the wider issue of sector management that provides for both adequate producer incentives and low food prices to vulnerable groups. The former would require Bank nutrition division participation (including the prospective 5 year plan) while the latter falls within AGREP's responsibilities for sector work and dovetails with existing research activities.

International Wheat Council (IWC)

32. The International Wheat Council, and its subsidiary the Food Aid Committee, is serviced by a small secretariat that is highly regarded both by its member government agencies and by the private grain trading companies. Its statistics and projections are not affected by political pressures and, along with those from the USDA, are a reliable guide to current market developments. Our memo of October 29 outlines current developments at the Wheat Council and Food Aid Committee (attachment III). It might be added that the staff members of the IWC are convinced they will be increasingly involved in analyzing the infrastructure and transport requirements of developing countries. If the Bank becomes more active in this sector collaboration with the exporting agencies and WFP cold take place within the IWC framework.

Conclusions

33. Our meetings confirmed our working hypothesis about current work on food policy issues -- a mass of detailed information is available but as yet no one has put it together in a systematic or policy oriented way. It is clear that managing the international food system will become increasingly complex and difficult. There is a clear need for new mechanisms both for the immediate future as well as the 1990's. There was general agreement that the priority problems and programs were the physical and institutional constraints to the timely movement or equitable distribution of food supplies. This substantiates the position taken in the draft approach paper to global food storage and distribution infrastructure requirements that is being prepared for review by Mr. Stern.

34. The other conclusion from our meetings is that Bank relations with international agencies dealing with food issues should be more comprehensive. The Bank should, by virtue of its substantial role in developing world agriculture, be in a position to judge: the merits of IFAD's replenishment; FAO's Five Point Plan for Food Security; how modifications in the CAP affect current Bank projects in EMENA, etc. Up until now we have not

approached these sorts of issues in terms of influencing events in order to see our objectives fulfilled. Rather we have assumed a purely reactive role waiting for others to take the initiative. Given the requirements incumbent upon responsible management of our agricultural portfolio we should rectify this situation. This implies a shift in current allocation of manpower for liaison activities which, in our view, have overemphasized forums of limited potential value. Further, we need to consider ways to improve monitoring of specific policy actions in the international arena that impact projects.

GDonaldson/CMLewis:mt

S-agric & RD

Those listed below. November 12, 1979

Alfredo Sfeir-Younis, AGREP

D. EMMERSON, "Rethinking Artisanal Fisheries Development: Western Concepts, Asian Experiences"

I am attaching, for your comments, Mr. Emmerson's study on artisanal fisheries in Asia. AGREP is planning to submit this study as a Staff Working Paper. I would appreciate receiving any comments you may have by November 23, 1979.

Attachment

Distribution: Messrs. F. Kada (AGR)
L. Sprague (AGR)
D. Hodgkinson (ASP)
B. Berman (AEP)
S. Capoluongo (EAP)
N. Sharma (LCP)

cc: Mr. G. Donaldson, Chief, AGREP

ASI:vau

S-Agric+RD

The World Bank / 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. • Telephone: (202) 477-1234 • Cables: INTBAFRAD

November 12, 1979

Mr. Bill H. Kinsey
Overseas Development Group
University of East Anglia
Norwich NR4 7TJ
England

Dear Bill:

Your letter and manuscript reached us late October. Thank you for taking the time to edit our report.

We received very few comments from the reviewers. Hendry, Turnham, Israel and Anderson expressed to Ted their satisfaction with the paper. They did not have any substantive comments and therefore did not write any review report. Mr. Garg, Chief of the Planning and Evaluation Unit in South Asia, read the paper, and was impressed he said. He requested several copies that he wanted to use to stimulate his management to organize a similar workshop in South Asia.

I received some handwritten suggestions from P. Abraham which were primarily editorial comments, that have been incorporated in the text. Finally, Ben Thoolen suggested to Leif that our paper be distributed first in draft to the Nairobi and K.L. pariticpants; secondly that a 'less hurried review' be undertaken in AGR, before its release as a Staff Working Paper.

Meanwhile, I enclose three copies of the "preliminary, provisional draft" of our brainchild. Please let me know how many additional copies you would like to have, and/or to whom you would like us to send the report.

The K.L. Workshop will end on December 18th; I will probably be back in Washington on December 21st, but will certainly not make it to the office after traveling around the world. Call me at home, or alternatively, I hope to see you early in January at the Bank.

Enclosed are also some other materials you may find of interest. In mid-October I obtained a copy of the Pascal operating system which includes a screen-oriented editor. It is a delight to write papers with. I'll send you shortly a copy of another paper on personal computing, that I have currently in production.

Hope all went well in recent trip. With best regards,

Sincerely yours,

Guido Deboeck

Enclosures

S-agric & RD

The World Bank / 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. • Telephone: (202) 477-1234 • Cables: INTBAFRAD

November 8, 1979

Dr. Robert Werge
U.S. Department of Agriculture
OICD ITD Room 3910
South Building
Washington, D.C. 20250

Dear Robert:

It is good to have a copy of the outline you propose for your seminar paper on "Potatoes, Peasants and Development Projects."

As agreed, I am forwarding some comments. They follow the order of your Outline.

II "Introduction." I hope that you can manage to begin by telling your audience what your main points are to be, and very briefly, how you see them as relevant to Bank work. By that means you will get their interest. They will then know why you expect them to pay attention to the descriptive material that follows. It will be fine, then, to go on to discuss "the importance of the potato in the developing countries." I hope that you will include here, or elsewhere, your interesting idea on the suitability of the potato as a subsistence crop for the rural poor, one that need not undermine their socio-economic autonomy (if you think that is the case).

III "Relevant Botantical Characteristics of the Potato." Sounds good.

IV "Botanical Implications for Peasant Cultivation and Consumption." O.K. as far as it goes. You appear to be discussing the effects of the potatoe's botany on patterns of consumption and distribution. If you would also refer to its effect on the organization of production we would then have a more complete picture. Perhaps this is the place for part of your statement about the potatoe's being well suited to small scale production in densely populated areas, etc., as well as its being appropriate for large scale production?

V "Botanical Implications for Development Projects Involving Potatoes." Sounds fine. It would also be good if you could consider the inter-relation between the economic system or systems associated with potato cultivation and the cultivators' social organization. We would then see the theoretical link you hypothesize between botany, technology, the economic system and social organization. This could be helpful to project planners who need to be aware of possible managerial constraints which might be associated with potato cultivation in "cultural context."

VI " Conclusions."

A. O.K. You might want to state and briefly explore the possible contradictions between increasing the peasant farmers' food producing capacity through reliance on potato cultivation and the development planners' interest in cash crops that might be more promising in their effect on national income.

B. O.K. But if you wander off to discuss other crops -- which I think it would be interesting for you to do -- I hope that you will return to potato cultivation for your final statement, so that your audience is brought back to the main topic. (Otherwise your first discussion question might be on tobacco!)

The prospect of your showing slides as an accompaniment to your presentation is most interesting. We will need to hear your plans for integrating your audio-visual materials with your verbal presentation.

If you find these suggestions reasonable, you should go ahead and develop a fuller, annotated outline by Monday, November 26th. If that is acceptable, we could then finalize your contractual arrangements with Personnel; I know that they have already contacted you. We would then like to see your paper by January 31st. That would allow for its review, possible revision, and distribution in time for a seminar presentation in the early Spring.

One final point, Robert, some of the text of your earlier draft was a bit bumpy, e.g., "In technical assistance programs, involving potatoes or other crops, it would be well to examine both the diversity of growers and the response of a new technology under farmers' conditions before attempting to educate the farmers to the benefits of its use." Trying for shorter sentences might help ensure that your subjects and predicates agree, etc. But this is a minor point and one that we can deal with. Your ideas are excellent and your outline is promising.

As I told you, following your seminar we will ask you to prepare a brief epilogue responding to questions raised during discussion of your paper.

I am glad that we had a chance to talk today. Please let me know if any of the above raises any questions. I look forward to receiving your annotated outline by November 26 and to seeing you at the meetings in Cincinnati soon thereafter.

Best wishes.

Sincerely,

Peter B. Hammond

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

yellow

OFFICE MEMORANDUM

TO: Mr. Donald Martinusen (AGR/RD) DATE: November 8, 1979

FROM: Paulos Abraham (AGR/RD) PA

S-agric + RD

SUBJECT: Mid-Term Evaluation (Coolfont) Workshop Follow-Up

1. With reference to your memo of September 14, 1979 ("Coolfont - Follow-Up"), I would like to suggest the following themes for follow-up.

(a) Beneficiary Participation

There seems to be general consensus that beneficiary participation is one of the major factors in ensuring project success. Operationalizing the objective of meaningful participation has, so far, proved difficult. The subject is obviously politically sensitive and great care needs to be taken in "formulating a scheme" for beneficiary participation.

(b) Targeting of Project Benefits

Although the Bank is increasingly grappling with the issue of equitable distribution of project-generated benefits, a systematic study needs to be undertaken on how best to ensure that benefits do actually accrue to the target group. What types of mechanisms should be tried to meet that objective?

(c) Integrated vs. "Disintegrated" Design

With the advent of the "new style projects", integrated rural development projects seem to have grown in "popularity". Problems of coordination, synchronization, shortage of trained manpower to manage such projects, clashes between Project entities and sectoral ministries and/or agencies etc. seem to have emerged perhaps with much greater seriousness and frequency than anticipated. Under what circumstances would the integrated approach be preferable to the "disintegrated"?

PAbraham:jh

c.c. Mr. Ben Thoolen (AGR/RD)

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

S-agric & RD

OFFICE MEMORANDUM

TO: Mr. Montague Yudelman, Director, AGR
THROUGH: G. Donaldson, Chief, AGREP
FROM: Pasquale L. Scandizzo, AGREP

DATE: November 7, 1979

SUBJECT: Agriculture Towards 2000 (AT 2000) - General Comments and Reader's Guide

1. This report describes the preliminary results of an ambitious project undertaken by FAO during 1978-79 to quantify and analyze some of the issues of world agriculture up to the year 2000. As an essay in futurology, this study is daring and comprehensive of sometimes bewildering details. It uses a combination of a quantitative projection methodology and expert judgement to survey world prospects in agricultural production, trade, expansion of arable land, irrigation and the use of modern inputs. Despite the dismal state of country-level statistical information, it manages to provide aggregate projections on seeds, fertilizers, pesticides, power inputs (including animals), physical and financial capital both for the base year and a number of alternative future scenarios. While disaggregated projections are not published, they are also available for each country.

2. As an exercise in forecasting, the novelty of the study resides in the "constructive" nature of its aggregate projections. Unlike all the other world-level forecasts 1/, the aggregate figures presented in the report are patiently put together country-by-country, an excruciating task whose main reward is perhaps a higher degree of confidence in the correspondence of the statistics used to some basic reality.

3. As an example of economic modeling, the study is not impressive. While the sheer size of the projections undertaken perhaps prevents the construction of a coherent economic structure, the basic framework of the study is a country-by-country physical plan, whose main thrust appears to be an almost Eastern-European over-preoccupation with matching country resources (mainly irrigated land) and production targets. As a consequence, the study pays virtually no attention to the elements of economic feasibility other than such material availability. Prices, possibilities of factor substitution, labor markets and alternative trade patterns are therefore disposed of by sweeping judgements or neglected altogether.

4. Following the lead provided by the earlier Indicative World Plan, AT 2000 can be considered a variant of the materials balance technique. First, for each country production targets are established based on the assumption that the country would prefer, ceteris paribus, the highest possible level of self-sufficiency in food consumption 2/. Second, these targets are translated into a pattern of resource use using country information on dominant technology and , mostly, the educated guesses of an agricultural expert. Third, the level of factor use is compared to an estimated future availability of different resources. If the factor use implied by the production targets appears to be infeasible, the targets are reduced either uniformly, or, again, by expert judgement, until they become compatible with projected factor levels.

1/ Put forward by other international agencies such as IFPRI, OECD, etc.

2/ Page 39 "... The "normative" element in the production analysis is that agricultural growth should accelerate to the "maximum feasible" extent, with priority in the general case to the basic food commodities for increasing self-sufficiency.

5. Having witnessed the construction of some of the country estimates based on this methodology, I must testify that the process is less ludicrous than it appears to be, particularly for countries where the information base and expert judgement is available and adequate. The strength of the estimates obtained at country level comes from the inventory of land quality and land and water potential contained in the 1978 FAO/UNESCO World Soil Resource Map and the FAO Agro-Ecological Force. These data, as supplemented by country information lend some substance to arable land, irrigation and yield estimates. The fact that the country information is so highly aggregated, however, creates the uneasy feeling that, despite the attempt at constructing the estimates from the bottom up, the elements of the construction are not sufficiently disaggregated to capture most of the relevant country details.

6. Because the analysis is originally performed country-by-country, small and homogeneous country data tend to be more reliable than for large and diversified countries (such as, for example, Brazil) for which the need to condense the land types and yield estimates requires a much stronger sacrifice of available micro-information. Moreover, for countries where the constraints to agricultural growth are not land-based, the determination of a single strategy of development is much less obvious and far more sweeping judgements are required on output levels and factor ratios.

7. Overall, the major strength of the study and the area of its greatest potential usefulness resides in: (i) the constructive approach used to obtain the estimates and, where publishable, the unpublished country-level projections, and (ii) the fact that the study provides specific and consistent estimates of resource and modern inputs. While the preliminary results presented are insufficiently detailed to permit a firm judgement, the main features of development emerging from the normative scenarios are well expressive of at least one point of view on the future of developing countries agriculture and can be a point of reference for the consideration of alternative options.

8. Against this overall positive judgement, one cannot avoid considering the weakness of both the study and what is presented in the preliminary report. First, despite its initial more ambitious designs, the study did not progress beyond a simple-minded country-by-country physical program of production. As a consequence, the normative scenarios proposed in many cases are not significantly different of a series of projections from trend lines bent to match the expectations of a particularly small group of experts. Second, the way the individual country scenarios are merged into an overall picture is essentially unsystematic and does not consider the pattern of interdependencies between countries, the possibilities of trade expansion and the relationship between agricultural and non-agricultural trade. Third, while the interface of supply and demand is the very core of the study, the role of prices is virtually nil, not only in the sense that no equilibrating market mechanism is at play in the model used, but also because the question is not posed at all of whether the scenarios designed are compatible with a competitive (or even an administered) market clearing price system. Partly as a consequence

of the "pricelessness" of the system so designed, one cannot take seriously most projections of values, while the projections of physical quantities, which are less affected by this indeterminacy, are often too aggregate to be useful.

9. Perhaps more importantly, the restriction of the normative strategy considered to one single variant has caused the study to forego any systematic consideration of the development options for individual countries. While in the original design of the study, the final combination of inputs and outputs was supposed to be identified via a programming model which considered several possible "strategies" of development, the need to accelerate the timing eventually eliminated this component altogether. The "normative scenario" was instead identified directly by the expert(s) on the basis of a data eyeballing procedure. The programming model was run, with some very interesting results, but the time was considered insufficient to incorporate these results in the report. Perhaps not surprisingly, the results of the programming model suggest that a likely scenario would involve more trade and a large production of fruits, vegetables and animal products than postulated by all the normative variants.

10. Although the quantitative details form the stronghold of the study, they are also its potentially most vulnerable spot for questioning both at the country and commodity level. 1/ Perhaps for this reason, the preliminary report virtually presents nothing of the wealth of detail provided by number-crunching model at the core of the study. This is regrettable, because the aggregate figures presented have very limited value for policy practitioners and economic analysts. In the main, they do not significantly differ from other projections available from IFPRI, OECD and the like, and when they do one is often left wondering as to the specific cause of such discrepancy.

Chapter by Chapter Comments

11. Chapter 1. This chapter presents an overview of the major problems emerging from consideration of recent trends in developing country agriculture. The main characteristics identified in the evaluation of these trends are: (i) a greater international preoccupation with food problems, (ii) a relative modernization of agriculture, (iii) a switch of domestic development policies in favor of agriculture, and (iv) a continual drive for self-sufficiency on food production. In the newly found international context of food policies, the challenge for agriculture is seen to be to reverse the falling self-sufficiency of developing countries in basic foods and their declining share of world agricultural exports. These indications are at the base of the "normative scenario" of the projection exercise. Overall, they appear to agree with the diagnosis provided by other studies of the same issue, such

1/ In fact, where country level results are provided, the implications of the normative scenarios often appear rather implausible (as for example in the case where Cambodia and Zambia are supposed to switch from importing to exporting grains).

as, for example, the USDA GOL Model Study 1/ and the OECD more recent "Interfutures" report 2/. Unlike these two studies, however, the FAO overview choses not to emphasize at the outset specific issues such as the tradeoff between increase in livestock products and foodgrains, the physical and institutional limits to growth, and the increasing cost of energy.

12. Chapter 2. This chapter explains the main steps of the methodology used and constrasts the trend scenario, where the tendency for self-sufficiency ratios to deteriorate is supposed to continue, with the normative scenario, where such a trend is checked or reversed. In addition to the problems discussed above, the presentation reveals one basic economic inconsistency in the normative projections. On the one hand, demand forecasts are in fact obtained at constant prices, thus implicitly requiring a continuation in the production and income trends. On the other hand, where the normative scenario is specified, account is not taken of the fact that the increased production levels can only be obtained if sufficiently high prices are assured to the farmers. In a sense, therefore, the normative scenario is overambitious as higher prices would bring down demand and require lower levels of production to meet the desired self-sufficiency ratios. As the chapter explicitly underlines (p. 19), a detailed assessment of the production potential (up to 15 input factors were identified) constitutes the bulk of the quantitative analysis of the study.

13. Chapter 3. This is an interesting, more detailed discussion of the trend and the normative scenario, from the point-of-view of consumption and production increases, their regional and crop distribution and the prospects for growth and trade. In order to appreciate the main thrust of the "normative" assumption, it is instructive to quote the already mentioned OECD study (p. 80) "... the problem of chosing development strategies is well known to the elites of these countries (i.e., the LDC's), which are torn between the desire to reproduce the growth and consumption patterns of the developed world by means of industrialization and integration in the world market, and the hope of inventing new forms of development which will satisfy the basic needs of the whole population more rapidly." In effect, the normative scenario embodies the potential contradiction between a lower growth, inward looking pattern of development more responsive to basic needs and income distribution and a more dynamic, outward looking pattern with all the evils of rapid industrialization and concentration of income. While the scenario seems to opt for the first alternative, an attempt is made in this chapter to argue that the drive for self-sufficiency is not incompatible with higher growth and expansion of trade.

1/ USDA, Alternative Futures for World Food in 1985, Vol. 1, World GOL Model Analytical Report, pp. 20-30, April 1978.

2/ Interfutures, Facing the Future, OECD, pp. 17-26, 1979.

14. More specifically, Chapter 3 argues that, because of physical limits in the supply of arable and irrigated land, the desirable acceleration of agricultural growth can only occur by increasing yields per acre of land. There is substantial agreement on this diagnosis in all existing projection studies. However, some substitution between land and other inputs may alter substantially the quantitative implications as demonstrated for example by the runs of the mentioned USDA GOL Model. All these runs point to the substantial diminishing marginal return of any expansion in food production through increased use of resource-augmenting inputs.

15. Chapter 4. This is perhaps the central chapter of the report containing most of the details on input use and cropping patterns projected by the study. Without discussing the individual projections, which in general seem to be reasonable, three main points can be made on the analytical content of this chapter. First, the projections presented are consistent with the orders of magnitude of the projections used by a variety of sources, including USDA, IFPRI, the Trilateral Commission 1/, the President's Science Advisory Committee 2/, and the Wageningen group 3/. Where the FAO figures differ from these broad estimates, is in the larger amount of detail, even though only a small part of it has found its way into the report. Second, perhaps inevitably, the fact that a higher amount of detail than the average global study is provided, raises questions as to relevance of insufficiently disaggregated figures, which often give only a glimpse of the amount of diversification hidden by the world or region-wide aggregate figures without being capable of capturing the relevant differences. A case in point is the land-water classification, where the six-fold typology adopted (low rainfall, good rainfall, problem areas, naturally flooded, fully irrigated, partially irrigated) seems often grossly inadequate as a basis for disaggregating uses of other inputs, specially fertilizer, at world or even regional level.

16. Finally, in many respects this chapter could be greatly improved by avoiding that the relative simplicity of the input and output projections is endlessly discounted, qualified and overexplained by a host of expert judgements, technical and economic marginally related points, policy considerations and the like. Thus, it would be wise to try to purge this chapter of statements too general to be non-trivial, as

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1/ Reducing Malnutrition in Developing Countries: Increasing Rice Production in South and South-East Asia. Report of the Trilateral North-South Food Task Force of the Trilateral Commission.

2/ US President's Science Advisory Committee. The World Food Problem, a report, Washington, D.C. 1967.

3/ P. Buringh, H.D.M. van Heemst, and G.J. Staring, Computation of the Absolute Maximum Food Production of the World. Wageningen, January 1975.

for example in the case where supply systems are recommended "for a carefully balanced set of machinery, of power units and matching implements, spares and repairs and fuel and lubricants ..." (p. 88). The discussion on the agricultural research, tagged at the end of the chapter as an afterthought, is also only a literary piece with scarce connections with the substance of the material presented.

17. Chapter 5. This chapter is a somewhat heroic attempt to translate the projections of levels of resource use into total investment estimates. The attempt is hampered by two perhaps fatal problems: (i) the price system used to evaluate the various elements of capital should depend on the factor and product price ratios but no explicit assumption is made on either, (ii) identical unit prices are applied to the evaluation of machinery, storage, transport and marketing to all countries. Assuming that something can be done to solve these two problems, however, the attractiveness of these estimates is again the fact that they are constructively derived by a minute enumeration of required levels of physical capital and therefore bear a much closer relation to identifiable elements of real production than the usual aggregate figures derived through ICORS or investment functions.

18. A major deficiency of Chapter 5 is that the attempt at linking physical capital needs to financial requirements is an essentially pointless enumeration of possible sources of funds for agricultural investment. A meaningful discussion of financial needs could perhaps be developed by examining the characteristics of the benefit/cost streams and the riskiness of the different types of investment. This could also suggest the areas where the social rate of profit is likely to diverge from the private rate so that government rather than private resources may be called for.

19. Chapters 6 and 7 are largely self-contained analyses of prospects for fishery and forestry world demand and supply. Neither of the two sectors is included in the quantitative AT 2000 model. Chapter 8 is an insubstantive discussion of employment mainly showing that at present labor use is not meaningfully incorporated in the AT 2000 quantitative framework.

20. Chapter 9. This chapter discusses the nutritional implications of the projections obtained in the earlier chapters. Because only country aggregates are used, the assessment is a pessimistic one. It appears to ignore the caution urged against the ruthless comparison of average country consumption data with requirements. While it mentions budget survey data it neglects to point out that the estimates and the projections of malnutrition from these surveys are often much at variance with than the ones obtained from country balance sheets.

21. Chapter 10 presents an analysis of investment requirements and growth in marketing and agricultural processing. Both sections are competently done, but are essentially ad hoc exercises added on the main

estimates. Chapter 11 and Chapter 12 are literary essays respectively on agricultural price policies and institutional changes. In both cases the coverage of topic can be considered adequate if perhaps excessively terse, but no substantive connection is offered with the main topic of the study. In the case of price policies, the discussion avoids the basic question of whether the normative strategy proposed is compatible with a system of mututally consistent national market prices.

22. Chapter 13. An essay on international trade prospects for LDC's, this chapter tries to relate the normative scenario trade projections to the changes in world trade relationships advocated by the Program of Action toward the Establishment of a New Economic Order (NIEO). Because the quantitative framework of AT 2000 does not include a matrix of trade flows and all but ignores international prices, individual country trade projections are not necessarily consistent with each other both in the inter-country and in the intra-country sense. In terms of global balances, this chapter shows that the normative scenario would have to imply a substantial expansion of developing country exports and a substantial contraction of their imports, with the developed countries playing an offsetting role as a residual, accomodating market. Whether the figures obtained are mutually compatible and economically feasible, the analysis is not able to tell.

23. Chapters 14-17 contain a policy analysis of such topics as food aid, the special role of agriculture in developed countries, external assistance to agriculture and general considerations and policy implications. While I feel that overall these chapters provide an interesting, if somewhat uninspiring treatment of these issues, they also clarly suffer from the fact that the study is essentially incomplete. For example, the analysis of the agricultural policy topics considered would be much more useful if the estimates obtained in the alternative scenarios were brought to bear on the issues in more disaggregated terms, rather than in the extremely aggregate order of magnitudes considered here. Clearly, more work is necessary if the use of the estimates obtained is to go beyond a quantification of the commonplace.

cc: Messrs. Pickering, Veraart, Turnham
AGREP Staff

PLScandizzo:hc

F-338

S-agric & RD

November 6, 1979

Professor Nur O. Yalman
Department of Anthropology
Harvard University
Peabody Museum
Cambridge, Massachusetts 02138

Dear Professor Yalman:

At the suggestion of George Dalton, who has just brought to my attention your article on "Land Disputes in Eastern Turkey," I am writing to ask if you would be interested in considering the presentation of a seminar on some aspect of the issue of land tenure and land disputes here at the World Bank.

Yours would be one in a series of seminars designed to sensitize Bank staff to the potential relevance of anthropological and sociological perspectives to the successful identification, preparation and implementation of Bank projects. By this means, we hope to increase the involvement of anthropologists in World Bank work, both here in Washington and -- as consultants to Bank missions -- in the field.

Problems resulting from differences between local, or "indigenous" and national systems of land allocation are frequent in Bank projects, not only in such areas as agriculture and rural development, but in roads and forestry projects as well. Your contribution could be very valuable. What is perhaps most critical to the success of any such presentation here is clear demonstration of the operational relevance of the anthropologist's data and analysis to Bank work. It is, I think, a very promising way of making Bank staff more aware of the potential contribution of anthropology to the success of development projects. For anthropologists it offers a means of using their knowledge to enhance the chances that indigenous cultural institutions, and auchthonous peoples themselves, will be taken explicitly into account in planning projects that are maximally responsive to the needs of the people, particularly the rural poor.

....2

Some of the papers in our seminar series are currently being prepared for publication through the Johns Hopkins University Press.

Should the possibility of presenting a paper along the general lines I have suggested be of interest to you, I would be delighted to hear from you. I could then fill you in on the procedures we follow here in preparing a seminar of the sort you might present.

Looking forward to hearing from you, I am,

Yours sincerely,

Peter B. Hammond
Agriculture & Rural
Development Department

cc: Dr. Dalton

WORLD BANK / INTERNATIONAL FINANCE CORPORATION S- Agric & RD.

OFFICE MEMORANDUM

TO: Files

DATE: November 5, 1979

FROM: Donald C. Pickering, Asst. Director, AGR

SUBJECT: International Council for Research in Agroforestry (ICRAF)

1. On November 2, I chaired a meeting attended by Messrs Fishwick (WAP), Gray (AGR), Wallis (LCP), and Dr. J. Hulse (IDRC), Vice Chairman of the ICRAF Board of Trustees. The meeting was called at Dr. Hulse's request for thoughts from the Bank on the role of ICRAF in development. The attached letter from the Council's Director General to the Bank plus an oral presentation from Dr. Hulse were used as the agenda for the meeting. N/A

2. In brief, ICRAF remains in some uncertainty as to its precise role and functions. It could offer consulting services and advice on consultant engagement in agroforestry. It could support and manage research and training in agroforestry matters. It could also collect and disseminate information on the subject. It was agreed that other agencies could, and were, tackling these areas of action albeit as part of broader ranging work programs, thus centers in the CGIAR network and the Commonwealth Agricultural Bureau. But some question attaches to the appropriateness of the priority and focus of such agencies in the agroforestry field.

3. It was agreed that the Bank staff could perhaps assist ICRAF to define its role, primarily as a 'think tank', but also as a potential source of specialist skills in such areas as design and supervision of monitoring systems in agroforestry. Such assistance might best be attempted via a seminar, lead by the Director General of ICRAF, in the Bank with participation by operational staff facing agroforestry related problems in their work. A brief paper outlining perceived roles for ICRAF, and circulated in advance of the seminar, would be essential to ensure full discussion by participants.

4. Dr. Hulse took note of the suggestions of the meeting indicating he would discuss them with his colleagues on the ICRAF Board of Trustees at its next meeting in late November. I undertook to brief John Spears and to request him to follow up with Dr. Hulse by telephone or letter (preferably in the week of November 12/16) any further thoughts which may be relevant to the forthcoming ICRAF Board meeting. Mr. Spears would continue to be responsible for maintaining a Bank link with ICRAF.

cc: Mr. Spears (with attachments)
Messrs Fishwick, Gray, Wallis (w/o attachment)
Dr. J. Hulse

DCPickering:emw

S- Agriculture

November 2, 1979

Dr. Richard B. Pollnac
Department of Sociology and
Anthropology
University of Rhode Island
Kingston, Rhode Island 02881

Dear Professor Pollnac:

This is just a line to follow up on our telephone conversation today concerning the possibility of your preparing a presentation on fisheries for our Sociological Seminar Series here at the Bank.

As these seminars are organized, those who present papers are asked to submit an outline for review, and then a paper which is also reviewed for possible needed revisions and prior distribution to seminar participants. The speaker is also asked to meet informally with Bank staff sharing similar interests and, following the seminar, he is requested to prepare a brief epilogue responding to issues raised during the course of his presentation.

Currently a selection of these seminar papers are being prepared for publication through the Johns Hopkins University Press.

It is good to know of your possible interest in our series and I look forward to receiving the reprints - and the c.v. - you promise.

Yours cordially,

Peter B. Hammond

PBHammond/dad

S. Agriculture

The World Bank / 1818 H Street, N.W., Washington, D.C. 20433, U.S.A. • Telephone: (202) 477-1234 • Cables: INTBAFRAD

November 2, 1979

Dr. D. W. Attwood
Department of Anthropology
McGill University
Leacock Building
855 Sherbrooke West
Montreal, P.Q. H3A 2T7
Canada

Dear Professor Attwood:

I have just finished reading with great interest your article in the September issue of CURRENT ANTHROPOLOGY entitled "Why Some of the Poor Get Richer: Economic Change and Mobility in Rural Western India." I note that your research interests include "the impact of irrigation and cash cropping on peasant cultivators." And I am wondering if you would be interested in presenting a paper on either of these topics, preferably the latter, in our Sociological Seminar Series here at the Bank.

One of the objectives of this series is to increase awareness among Bank staff of the potential relevance of anthropological and sociological perspectives to Bank operations. By this means we hope to encourage greater use of sociologists and anthropologists in the critical early phases of the Bank project cycle, especially at the stages of project identification and planning -- before failure to take sociocultural variables into account becomes an obstacle to the effective involvement of local peoples in the planning of development projects likely to affect their lives.

If you think that you might be interested in contributing the results of your valuable experience and insights to this effort, I would be very glad to hear from you. I would then call to fill you in on more of the details concerning the procedures we follow in organizing a seminar of the kind you might present.

Hoping to hear from you, and with congratulations in the interim on your excellent paper, I am

Yours sincerely,

Peter B. Hammond
Agriculture and Rural
Development Department

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

Non-Regional File

OFFICE MEMORANDUM

TO: Addressees Below

DATE: November 2, 1979

FROM: F.L. Hotes (Irrigation Adviser, AGR/CPS)

S-Agric + RD.

SUBJECT: Subsurface Water Table and Drain Depths for Irrigated Lands

1. A recent Expert Consultation on Drainage Design Factors was held in Rome under FAO auspices. Fifteen international experts on subsurface drainage of irrigated lands attended for five days, addressing a list of questions submitted by persons working on drainage projects. Answers were developed, and the results are expected to be published in an FAO Bulletin in late 1980.

2. In the meantime, because of their importance to Bank irrigation work, I am enclosing copies of two drafts on drainage depths which reflect the consensus experience of the experts. In late February a complete final draft of all questions will be circulated. In addition, presentations by three outside-the-Bank experts will be given at the Bank Agricultural Exchange Program, January 7 - 11, 1980.

Enclosures (B.1.1. and B.2.1.)

FLHotes:rm

Addressees: Messrs. Naylor, Economides, Rahman, Tirmazi (EMP)
Pranich, Baker, Unhanand (ASP)

cc: Mr. Pickering (AGR/CPS)

REDRAFT/26.10.79/ARAR/RYCROFT/WILLARDSON

B.1.1 WHAT DEPTH OF WATER OR DEPTH RANGE OF WATER TABLE FLUCTUATION DO YOU REQUIRE TO BE EFFECTED BY THE DRAINAGE SYSTEM?

In your answer:

- specify the maximum allowable water table position for major types of crops, differentiating between irrigation season (or growth stages in an irrigation season) and off-season
- where transient water tables are formulated, specify also required drop rate
- specify other major factors of practical importance in establishing the required water table, indicating how each factor influences the ultimate depth and to what extent.

ANSWER

The water table positions that a drainage system is to achieve are primarily related to soil type, climate, crops, cropping intensity and water management. Most crops grow best with a water table which is below their normal root zone. However, crops will not be adversely affected by a higher water table for a short period.

Irrigation season

The tables B.1.1-1 and 2 show water table depths that are recommended for steady state and transient drainage design. For lands that will be planted to different crops, the deepest water table required should be used.

Table B.1.1-1 Recommended water table depths for drain spacing design using steady-state formulas

	Crops	Depth in m below ground surface Fine textured permeable soil ⟶ coarse soil	
Irrigation season	Field crops	1.2	1.0
	Vegetables	1.1	1.1
	Tree crops	1.7	1.2

Table B.1.1-2 Recommended water table depths for drain spacing design using non-steady state (transient) formulas

	Crops	Depth in m below ground surface Fine textured permeable soil ⟶ coarse soil	
Irrigation season	Field crops	0.9	0.9
	Vegetables	0.8	1.0
	Tree crops	1.4	1.1

The values given in table B.1.1-1 refer to the design level of the water table during periods of maximum drainage requirement. They provide a basis for spacing calculations using steady-state equations (see Question B.4.1).

The values given in table B.1.1-2 refer to the highest design water table position which is usually reached in the peak irrigation season, immediately after water application.

Designing drainage systems on the basis of allowable duration of water in the root zone, i.e. at levels higher than those indicated in the tables is not sufficiently defined at present to be generally recommended.

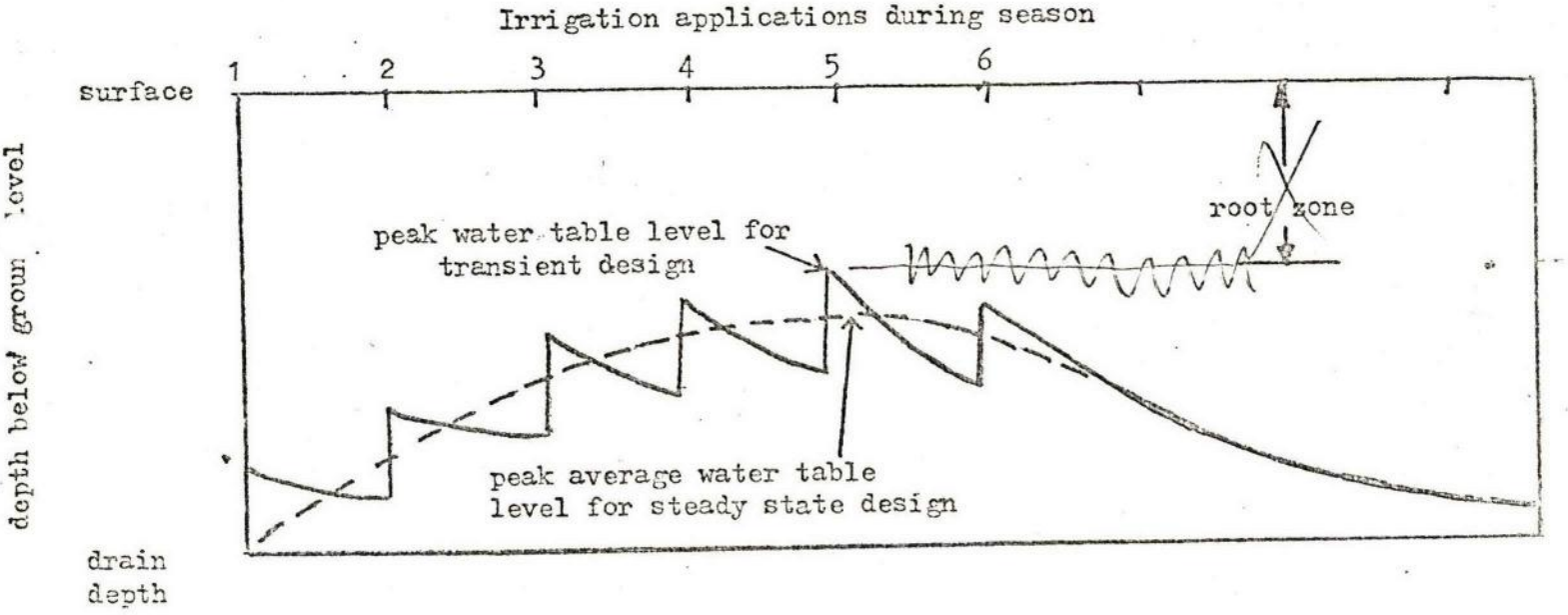
Fallow season

Control of the water table is also required in fallow land areas, especially those within irrigated lands in order to prevent salinization due to capillary upward seepage of saline groundwater. It is recommended that the water table should be controlled not less than 1 m below ground level in ~~coarse~~ textured soils ~~and 1.7 m in fine textured soils~~. In order to achieve this control the drains should be placed at a depth of not less than 1.5 m & 1.8 m respectively.

DISCUSSION

In irrigated areas the water table rises in response to irrigation and rainfall and subsequently falls at a decreasing rate with time due to drainage and evapotranspiration. The water table fluctuates regardless of whether a steady state equation or a transient equation was used in the design. The design must be such that the water table will not rise excessively and damage the root system of the plants. Therefore, the above recommended water table levels ~~for the irrigation season~~ are primarily related to aeration requirements and to prevention of capillary salinization for the fallow season.

The transient design concept implies that the water table is kept below the figures in the table at all times during the irrigation season. In steady state design the water table may rise above the design level for short periods of time. As a result, the steady-state design water table levels are generally deeper than the transient levels as is shown on the following figure.



Some designers allow the water table level to rise into the root zone. They then require that it should drop back to below the root zone level within a specified length of time. However, the available information on

temporary waterlogging and its effects on plants and soils is considered insufficient to make general recommendations of this method of design at the present time.

Shallow water tables with narrow fluctuation limits require a high level of sophistication in water management to prevent damage to soil and crops. Under incomplete management conditions it is much easier to provide the required aeration and to prevent salt accumulation in a soil with a deeper water table. However, no flexibility has been included in the tables to cover irrigation management deficiencies. Where these are considerable, the recommended design water table depth values may be increased by 0.1 - 0.2 m.

In areas of high and continuous in-seepage rates, the design steady-state water table levels should be lowered by 0.20 m to include hydraulic head needed to drain the seepage water, unless available information points to a different value.

B.2.1 WHAT DRAIN DEPTH DO YOU CONSIDER PRACTICAL OR DESIRABLE?

In your answer:

- specify the desired drain depth under conditions of no limitations of soil profile and drain outlet levels
- indicate how drain depth is influenced by soil conditions, particularly by soil stratification
- indicate how drain depth is related to the water table position at the end of a drain-out period between two water applications, and to cropping intensity (including fallow periods)
- show how the cost of pipe drain installations is related to drain depth.

Please note:

Drain depth refers to the (average) depth of a drain pipe line below ground surface

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ANSWER

The desired drain depth is that which meets the criteria for water table control at a minimum cost. The options are within a range of depths whose limits are set by requirements of water table and salinity control as well as by economics and factors related to the local situation.

Drain depth for Water Table and Salinity Control

Considerations of water table and salinity control result in the shallowest possible drain depth. From a strictly theoretical point of view, this cannot be higher than the water table depth given in tables B.1.1-1 and 2 or the water table depth required to control salinity during the fallow season. In practice the shallowest drain depth is this minimum water table depth plus the range over which the water table fluctuates, and it is generally in the range of 1.5 - 2.0 m below the ground surface. Where water management conditions are poor, the drain depth should be closer to the lower limit.

Economic Drain Depth

The drain depth to be selected may be deeper than the minimum depth obtained above. How much deeper depends on cost factors and on specific local conditions.

Cost factors include the installation of field drains as well as work needed on collectors, mains, outlets and related structures. Deep drains cost more per unit length but can be spaced farther apart due to higher available hydraulic head and increased storage capacity, with a resultant lower drainage rate. Therefore, the net cost per unit area is less. At depths beyond 3 m construction costs of field drains, mains and structures rise faster than the drained area increases and the economic advantage is lost. Minimum cost considerations lead to drain depths which are generally between 2.0 and 3.0 m. Presently, most drains are constructed at depths up to 2.5 m because of practical equipment limitations.

Local Situation

There is not always a free choice of drain depth in the range set between the highest acceptable and the most economic depths. The capacity of the available digging machinery may set drain depth limitations, and so may the location of slowly permeable soil layers. Drains should be laid in the most permeable layer near drain depth. They should be placed on rather than in a barrier layer. If drains must be placed in a slowly permeable layer, permeable material in the trench should connect to higher, more permeable layers.

DISCUSSION

The following explains the procedure for making the minimum design drain depth estimates.

a. The steady-state drain depth is the sum of the design water table depth required from table B.1.1-1 plus half the fluctuation caused by the maximum individual recharge plus a residual hydraulic head value of 0.10 m. The fluctnation is found by dividing the recharge from irrigation by the drainable porosity ~~and dividing the result by 2.0~~.

b. The transient drain depth is determined by adding the design water table depth

rise

from table B.1.1-2 to the maximum individual recharge and adding a residual hydraulic head value of 0.10 m. (The water table rise is determined by dividing the recharge from irrigation by the drainable porosity.) An alternative method is to use a dynamic water balance for the whole year, keeping the maximum level of the water table below the level specified in table B.1.1-2.

c. The shallowest drain depth for salinity control is the water depth for fallow conditions plus a residual hydraulic head value of 0.10 m plus 0.02 m to account for the hydraulic head needed to discharge the water originating from the irrigated lands.

In areas of high and continuous in-seepage additional hydraulic heads should be taken into account for determining the drain depth.

The maximum drain depth calculated should be used as minimum design drain depth.

Examples of calculation are given below.

An area with field crops on fine textured soils, having a recommended average water table level of 1.2 m (see table B.1.1-1) and an estimated seasonal fluctuation range of 0.5 m yields a shallowest (steady-state) drain depth of 1.2 + ½ x 0.5 + 0.1 = 1.55 m. If the maximum water table rise is 0.6 m due to water application, and the recommended transient water table level in table B.1.1-2 is 0.9 m, then the shallowest (transient) drain depth is 0.9 + 0.6 + 0.1 = 1.60 m. The drain depths of 1.55 and 1.60 should be compared with the drain depth for the fallow season and the deeper depth would be selected as the shallowest possible drain depth.

Applying this procedure for a range of water table fluctuations of between 0.3 to 0.8 m, which is a practical range under most conditions of soils and crops, yields shallowest drain depths between 1.3 and 2.3 m, with a concentration for field crops ~~on the part~~ between 1.5 and 2.0 m.

The water table fluctuation is primarily caused by recharge from deep percolation and required

leaching, and by drainage and evapotranspiration. Where the drain depth is shallow and the water table fluctuates in the crop root zone, evapotranspiration may cause a greater water table drop rate than does the drainage system. With drain depths of 1.5 m or greater, this is unlikely to be so and the above procedure is based on water table lowering by drainage only. Calculations on the basis of steady-state and transient water table levels should, basically, lead to the same drain depth. However, variations in assumptions may cause some, usually slight, differences.

The water table recedes more slowly as it approaches the drain depth. In the intensive part of the irrigation season it is unlikely to reach drain depth before the next water apllication. This has been expressed in a residual hydraulic head value of 10 cm.

Where gravity outlets are too shallow, an economic analysis should be made to determine the feasibility of a pumped outlet. The economic feasibility of deepening the gravity outlet system should be evaluated also. The outlet costs should be combined with the cost of on-farm drainage computed for different depths and spacings of on-farm drains. Adequate drainage at the least cost per unit area is the important criterion.

S-agric + RD

Mr. Guido Deboeck, AGROR

November 1, 1979

A. Musa Ahmad, Acting Chief, AGROR

Managing Information for Rural Development - Draft Staff Working Paper

Mr. Christoffersen discussed my memorandum dated October 26, 1979 on the Draft Staff Working Paper, with me on October 29. His decisions on the recommendation made in my memorandum are:

i) The paper should be circulated as a "Preliminary Document" to the participants of the Nairobi Workshop and of the forthcoming Kuala Lumpur Workshop, with a forwarding memo stating that it will shortly be published by us as a Staff Working Paper.

ii) As this paper is based exclusively on the discussions in the Workshop at Nairobi, it should not be finalized without first sending a copy to the participants and given them a reasonable time, say one month, to react if they choose to do so. We, however, should not specifically ask for comments on it, as such a request could unnecessarily delay the publication of the Staff Working Paper. Courtesy demands that this be done before we issue the paper as a Staff Working Paper.

iii) The "Preliminary Document" will be reviewed by AGR as soon as possible to avoid delay in its proposed publication.

AMAhmad/cc

Cleared with and cc: Messrs. L. Christoffersen, AGR; T. Davis, AGROR

S-agric + RD

Mr. William Clarke, VPE and
Mr. M. Yudelman, AGR
J. D. Von Pischke, AGREP

November 1, 1979

Crop Insurance: UNCTAD/UNDP Conference on Agricultural Insurance
Colombo, 1-5 October, 1979

1. The UNCTAD/UNDP Conference on Agricultural Insurance in Developing Countries was attended by participants and observers from 16 countries, primarily in South and Southeast Asia. I attended as an observer on behalf of the Bank. Most of the participants were from the insurance industry, often from public sector insurance or reinsurance companies in the orbit of the UNCTAD Special Programme on Insurance. Speakers were drawn from crop insurance authorities in France, Israel, Mauritius, Sri Lanka and the US and from UNCTAD.

2. The conference opened with an UNCTAD statement of the theory of crop insurance, followed by presentation from Sri Lanka, where crop insurance has existed for 20 years. That presentation was something of a disaster, as is the Sri Lankan experience to date. While the speakers spoke of crop insurance as a great boon for farmers (in spite of having no monitoring or evaluation data on onfarm impact), the audience was more interested in the fact that in insurance terms the scheme has never made sense. Cautionary tones were sounded by the speaker from France, who indicated that crop insurance is a political football in France, and the speaker from Israel, who indicated that the peculiar conditions of success or of partial success in Israel and in developed countries could not be found in poor countries. The speaker from the US, who works for both AID and the Federal Crop Insurance Corporation, provided some useful means of classifying crop insurance approaches and objectives, and encouraged the adoption of crop insurance in developing countries, at least on an "experimental" basis. It appears that AID intends to expand its crop insurance projects, and FAO is providing further encouragement by a series of additional conferences which during 1980 will probably produce a call for technical and financial assistance for spawning crop insurance programs.

3. My impression is that the economic case for crop insurance, based on shifts in cropping patterns towards higher value, more risky crops, is outweighed by the institutional and actuarial problems facing any new program. Sri Lanka's scheme has done poorly on these grounds for 20 years, while the initial $100 million capitalization of the US program was lost in the first five years of its operation. While these problems are unlikely to deter UNCTAD, FAO and AID from promoting or using crop insurance as a new vehicle for resource transfer, in my view it is unlikely that these activities will result in the development of efficient means of assuming growers' risks.

4. Work is now underway in AGREP on a position paper on agricultural insurance intended for Bank-wide discussion.

cc: Messrs. Donaldson, AGREP, Pickering, AGR, Veraart, AGR

JDVon Pischke:oh