



A.I.D. RESEARCH & DEVELOPMENT ABSTRACTS



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QUESTIONS AND ANSWERS ABOUT ARDA

What is ARDA?	<i>ARDA</i> , "A.I.D. Research and Development Abstracts", is a quarterly abstract journal issued by the Division of Development Information and Evaluation, Bureau for Program and Policy Coordination.
What is the goal of ARDA?	The goal of <i>ARDA</i> is to transfer development and technical information to active practitioners in development assistance.
For whom is ARDA published?	<i>ARDA</i> 's target audience is A.I.D. staff world wide and selected key institutions in developing countries. Such institutions are government agencies, universities, libraries, research organizations, and other public and private sector organizations.
What material are abstracted in ARDA?	<i>ARDA</i> presents abstracts of AID-funded current and less recent research studies, state-of-the-art reports, sector analyses, special evaluations, and other documents which, taken together, describe a broad spectrum of international development experience.
To whom do I address additional questions regarding ARDA?	Please direct all correspondence and requests for further information to: Editor of <i>ARDA</i> PPC/CDIE/DI Agency for International Development Washington, D.C. 20523 U.S.A.

QUESTIONS ET REPONSES RELATIVES A ARDA

Qu'est-ce qu'ARDA?	<i>ARDA</i> , "A.I.D. Research and Development Abstracts", (Résumés sur la recherche et le développement de l'Agence pour le Développement International), est une revue trimestrielle composée de résumés publiée par la Division de l'Information sur le Développement, Centre d'Information et Dévaluation du Développement, Bureau de Coordination de Programmes et Politiques.
Quel est l'objectif d'ARDA?	Le but d' <i>ARDA</i> est de transmettre des informations techniques sur le développement à ceux qui prêtent assistance au développement.
A qui s'adresse ARDA?	<i>ARDA</i> 's s'adresse au personnel d'A.I.D. dans le monde entier et à certaines institutions clés situées dans les pays en voie de développement. Ces institutions comprennent des agences de gouvernement, des universités, des bibliothèques, des organisations de recherche, et d'autres organisations dans les secteurs publics et privés.
Que contiennent les résumés d'ARDA?	<i>ARDA</i> présente des résumés des recherches actuelles et moins récentes financées par A.I.D., des rapports sur l'état actuel du développement, des analyses de différents domaines, des évaluations spéciales, et d'autres documents. Le tout ensemble décrivent une vaste étendue d'expériences dans le domaine du développement international.
A qui est-ce qu'il faut poser des questions supplémentaires au sujet d'ARDA?	Veillez envoyer toute correspondance et toute demande de plus amples renseignements à: Editor of <i>ARDA</i> PPC/CDIE/DI Agency for International Development Washington, D.C. 20523 U.S.A.

PREGUNTAS Y RESPUESTAS SOBRE ARDA

¿Que es ARDA?	<i>ARDA</i> , "A.I.D. Research and Development Abstracts", (Sumarios de investigación y Desarrollo de A.I.D.) es un jornal que sale cuatro veces al año, publicado por la División de Información sobre el Desarrollo, Centro de Información y Devaluación del Desarrollo, Departamento de Coordinación de Programas y Políticas.
¿Cual es el objetivo de ARDA?	El objetivo de <i>ARDA</i> es comunicar información técnica y sobre el desarrollo a los participantes activos en las actividades del desarrollo.
¿Para quien se publica ARDA?	<i>ARDA</i> se dirige al personal mundial de A.I.D. y a las seleccionadas instituciones claves de los países en desarrollo. Tales instituciones cuentan con agencias de gobierno, universidades, bibliotecas, organizaciones de investigación, y otras organizaciones de los sectores público y privado.
¿Que contienen los informes de ARDA?	<i>ARDA</i> presenta resúmenes de estudios actuales y menos recientes financiados por A.I.D. relativos a la investigación, de informes sobre el estado del arte, de análisis de sectores, de evaluaciones especiales, y de otros documentos, los que todos juntos describen un panorama extensivo de experiencias dentro del dominio del desarrollo internacional.
¿A quien se dirigen preguntas adicionales sobre ARDA?	Sírvase remitir toda la correspondencia y los pedidos de más información a: Editor of <i>ARDA</i> PPC/CDIE/DI Agency for International Development Washington, D.C. 20523 U.S.A.

USER'S GUIDE TO ARDA CITATIONS

Item number	101	PN-AAK-592	Document number
		MF \$3.24/PC \$28.47	Microfiche/ Paper Copy prices
Title	Soybean seed quality and stand establishment; proceedings		
Author(s)	Sinclair, J.B.; Jackobs, J.A.		
Institution(s)	University of Illinois at Urbana-Champaign. College of Agriculture. International Soybean Program		
Meeting	(Conference on Soybean Seed Quality and Stand Establishment, Colombo, LK, 25-31 Jan 1981)		Serial title and number, date, pagination, and language
Supplementary note(s)	INTSOY series, no. 22, 1982,xiii, 206 p., En		
	Published by University of Illinois at Urbana-Champaign		
	Grant DAN-1406-G-00-10150-00		Publisher
Project number	93105600		
Contract/Grant	AID/ta-C-1294		
Availability note	*International Food Policy Research Institute, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036 USA		

Soybean research has shown that both physical and biological factors are responsible for reduced seed quality and vigor, that stand establishment depends on seed quality, and that seed quality is directly influenced by weather conditions during seed maturation and harvest and by subsequent storage conditions. Because knowledge of these facts remains largely fragmented and is not being communicated to farmers, the International Soybean Program (INTSOY) hosted an international conference in Sri Lanka for research scientists and extensionists to correlate current knowledge on soybean seed quality and stand establishment, discuss ways to communicate this knowledge to farmers, and determine future research needs. The conference proceedings presented in this volume include: (1) 19 invited papers and abstracts of 13 volunteered papers on soybean seed maturation, genetic differences in seeds, the effect of weather, harvesting and planting procedures, and the role of insects and pathogens; (2) 11 country reports from various Asian nations; and (3) reports from three working committees on soybean production, crop protection, and storage and mechanization. In the plenary sessions, the speakers voiced a number of proposals on what emerged as a major concern among the delegates - the importance of seed quality in expanding soybean production in tropical and semi-tropical areas. Pointed out in particular was the complexity of soybean seed production in the tropics and semi-tropics due to high humidity and temperature levels that prevail throughout the year. Other themes sounded were the necessity for good seed to make soybean an economical crop and the nutritional importance of soybeans. All information presented during the conference related to seed production, technology, and storage and to seed certification in tropical and semi-tropical developing countries.

Abstract

001

PN-AAL-095

MF \$1.08/PC \$6.76

A.I.D.'s experience with integrated rural development projects

Kumar, Krishna

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation

Jul 1987, xi, 31p. + 2 appendices, En

A.I.D. program evaluation report, no.19

Although A.I.D. enthusiastically embraced integrated rural development (IRD) projects in the 1970's as a way of reaching remote and disadvantaged populations, this retrospective study, a synthesis of impact evaluations of 11 IRD projects implemented in Asia, Africa, and Latin America, reveals them to have been plagued with a number of management and implementation problems.

Although most of the projects examined increased agricultural productivity and incomes, they also tended to benefit wealthier farmers. The projects' social service components did reach the needy, but their impact was undermined by a general tendency to reduce services when faced with financial or administrative problems. In fact, the projects' sustainability in general is dubious, mainly because the host governments have neither the will nor the resources to maintain inputs and services at project levels. The IRD projects were only modestly successful in achieving national level objectives, such as food self-sufficiency.

The problems experienced in IRD frequently stem from the choice of implementing agency. Four types of agencies have been used for IRD projects (project management units, national line ministries, subnational government bodies, and private voluntary organizations) - each type having its own advantages and shortcomings. As a general rule, however, IRD management has been hampered by poor coordination among participating agencies, overreliance on public bureaucracies, poor timing of outputs, and inflexible project design. Other problems have been inappropriate national economic policies, inability to establish effective beneficiary organizations to promote sustainability, inadequate attention to socioeconomic factors, and inadequate (or nonexistent) technical packages.

In sum, IRD is a valuable strategy for certain special circumstances (e.g., narcotics control development, multisectoral assistance to remote or famine-affected areas), but IRD projects should be designed so as to minimize coordination requirements, while maximizing the use of private sector firms to provide services.

002

PN-AAL-088

MF \$1.08/PC \$7.15

Conducting group interviews in developing countries

Kumar, Krishna

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation

Apr 1987, x, [46]p., En

A.I.D. program design and evaluation methodology report, no.8

Conventional qualitative data collection methods (e.g., censuses, sample surveys, ethnographies) often yield overly elaborate and inappropriate information for A.I.D.'s management and evaluative purposes. An alternative that is often overlooked is the group interview. This handbook discusses group interview methodology in non-technical language, paying special attention to the problems of conducting interviews in developing countries. Elements of interview design and execution are examined at length, including among others: (1) defining the scope and objectives of the interview; (2) determining the size and composition (e.g., by age, sex, class, etc.) of the groups; (3) interviewing techniques; (4) methods for controlling the discussion; and (5) recording results. A separate section discusses the community interview, a carefully structured form of the town meeting. Although the interview method has certain disadvantages (for example, interviewer bias may affect results, and the data produced are not a representative sample), it can nevertheless be a useful tool in project planning, implementation, and evaluation. A two page bibliography is included.

003

PN-AAX-071

MF \$2.16/PC \$25.48

Development administration and U.S. foreign aid policy

Rondinelli, Dennis A.

National Association of Schools of Public Affairs and Administration; U.S. Dept. of Agriculture.

Development Program Management Center; U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development (Sponsor)

1987, xi, 188p. : chart, En

Studies in development management.

Published by Lynne Rienner Publishers, Inc.

9365317

It is important to determine precisely what A.I.D. has learned from its experience after three decades of attempting to improve administrative capabilities in developing countries and to manage its own foreign assistance capabilities more effectively. This book offers a chronological and historical perspective, examining

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the strategies and approaches that emerged during the 1950's and 1960's (when the "Point Four" technology transfer approaches were dominant and A.I.D. adopted administrative reform and institution-building strategies), the early 1970's (when the Agency concentrated on sectoral and internal project management improvement), the mid- to late 1970's (when the "New Directions" mandate refocused attention on people-centered project management and design intended to reach the poor majority), and (4) in early 1980's (when A.I.D. undertook a "learning process" approach to improving development management). The results of a recent assessment of A.I.D.'s management effectiveness in Africa are then reviewed, providing an empirical perspective on the validity of the theoretical conclusions of A.I.D.'s research on development administration. The final chapter explores the prospects for improving development administration through U.S. foreign aid, concluding that the major lesson to be drawn from this historical review is that development management is neither an art, nor a science, but a craft. A 12-page list of references is included. (Author abstract, modified)

004 **PN-AAL-089**
MF \$2.16/PC \$13.78

Guidelines for data collection, monitoring and evaluation plans for A.I.D. - assisted projects

Norton, Maureen; Benoliel, Sharon Pines
U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation
Apr 1987, xii, 51p. + 3 appendices, En
A.I.D. program design and evaluation methodology report, no.9

A review of recent A.I.D. experience with data collection introduces these guidelines aimed at helping A.I.D. managers obtain the project performance data they need for effective decisionmaking. The paper presents two sets of guidelines. The first set covers collecting data during project implementation in order to improve project monitoring and impact assessment; data gathering techniques, the need for rapid, low-cost studies, and the use of the latter to answer the questions posed by managers are discussed. The second set of guidelines, which concerns the preparation at the project design stage of plans for data collection, monitoring, and evaluation, presents a step-by-step approach to designing a project information system; items covered include identifying information users, clarifying the project's logframe components, identifying managers' questions and the data for answering them, clarifying counterpart involvement, developing feedback procedures, and developing a budget. Appendices provide a checklist of issues for preparing Project Paper data collection plans; discuss data gathering techniques for conducting rapid, low-cost studies; provide sample data collection, monitoring, and evaluation plans for projects in various sectors; and present an ex-

tensive bibliography on methodologies for project evaluation.

005 **PN-AAW-653**
MF \$1.08/PC \$6.50

History of the USAID program in Rwanda, 1962-1985

Grosz, Lynn Elizabeth
U.S. Agency for International Development. Bureau for Africa. Office of Regional Affairs (Sponsor)
Apr 1986, iv, 44p. : charts, statistical tables, En
698051096

The growth of A.I.D.'s program in Rwanda from that country's independence in 1962 through 1985 is traced. In the early years (1962-68), A.I.D., functioning as a supplemental donor, encouraged economic development, fiscal reform, and internal security. A new policy for Africa ended bilateral assistance in 1969 and from then until 1974 A.I.D. activities were restricted to P.L. 480 Title II assistance and a self-help program. After the 1973 "New Directions Mandate" sparked interest in Rwanda as one of the "poorest of the poor", A.I.D. began to develop a long-range program, consisting primarily of increasing agricultural production and improving the country's demographic situation (1975-79). Despite a change in directors in 1979, the Rwanda Mission continued through 1982 to focus on enlarging and coordinating activities begun in the late 1970's. The priority for the years 1983-85 has been to address the "four pillars" of A.I.D.'s global development priorities and strategy. This report presents both brief summaries and longer descriptions of each of these periods; major emphasis is placed on describing the wealth of new projects developed after 1974.

006 **PN-AAX-844**
MF \$3.24/PC \$30.03

Policy analysis matrix : a manual for practitioners

Pearson, Scott R.; Monke, Eric A.
Pragma Corp.
U.S. Agency for International Development. Bureau for Program and Policy Coordination. Office of Policy Development and Program Review (Sponsor)
Jul 1987, xiii, [221]p. : charts, statistical tables, En
PDC-0091-C-00-6176-00

One of the crucial problems in establishing agricultural policies in developing nations is opening the lines of communication between economic analysts and government decisionmakers. This handbook is a straightforward guide to a particular type of applied economic analysis - the policy analysis matrix (PAM) - which is easily explicable to policymakers and which allows analysts to address three principal issues: com-

modity pricing, public investment, and agricultural research policy. Following an overview of the manual, chapters 2 and 3 deal with the principles of PAM and of constructing commodity budgets; the purposes are to introduce the logic of the method and to illustrate how one organizes the basic data. Chapters 4, 5, and 6 show how to prepare farm-level/post-farm budgets and private/social valuations; these chapters contain the essence of applying the PAM method and of generating results. Chapter 7 discusses how to interpret the results, and chapter 8 provides practical suggestions on communicating the results, orally and in writing, to busy policymakers. Appendix A demonstrates how a microcomputer can assist the analysis, although the procedures can be done, if tediously, with a hand calculator. (Author abstract, modified)

007

PN-AAW-854

MF \$1.08/PC \$6.76

Policy reform programs in Africa : a preliminary assessment of impacts

Haykin, Stephen M.

U.S. Agency for International Development. Bureau for Africa. Office of Development Planning
Mar 1987, v, 43p. : chart, statistical tables, En

Since 1980, A.I.D. and other donors have increasingly stressed programs to reform the misguided economic policies - aimed at fostering industrial and urban development at the expense of rural producers - which have been the main cause of Africa's poor economic performance over the past three decades. This report assesses the impacts of such donor programs in five countries in sub-Saharan Africa - Zambia, Somalia, Mali, Zaire, and Zimbabwe. Notable in each case study is an assessment of the impact of policy reform programs on the agricultural sector and an analysis of the role of U.S. assistance. A summary section indicates the positive effects of the economic reform programs on agriculture and the economy, while acknowledging that bad weather, falling export prices, and debt service have generally slowed macroeconomic progress. It also notes some problems involved in implementing economic reform programs (e.g., the difficulty of managing price interventions) and the critical role played by donors in promoting policy reform. A strong affirmation of the need for donors to continue stressing policy reform concludes the report.

008

* PN-AAX-955

MF \$2.16/PC \$14.56

Solving world hunger : the U.S. stake

Wennergren, E. Boyd; Plucknett, Donald L.; et al.
Consortium for International Cooperation in Higher Education; U.S. Agency for International Development. Bureau for Science and Technology.
Office of Agriculture (Sponsor)

Sep 1986, ix, 102p. : ill., graphs, maps, statistical tables, En

Published by Seven Locks Press

* Also available from: Seven Locks Press, P.O. Box 27, Cabin John, MD, 20818, for \$7.95 per copy plus \$1.50 postage and handling.

With President Truman's Four-Point Program, the United States embarked on an effort, later supported by other developed nations, to alleviate poverty and hunger on a world-wide basis. Although the program has been both popularly praised and criticized, most Americans do not know enough about the program to express an opinion. This book aims to eliminate that information gap by providing a perspective on worldwide issues and through a discussion of how and why the United States participates in such efforts. The chapters in Part I treat: (1) the world food problem; (2) the history and nature of U.S. foreign assistance; (3) U.S. economic assistance and international trade; (4) the benefits of international collaboration in agricultural research; and (5) food sufficiency and political stability. Part II presents a framework for determining the impact of development and trade on a local economy, while Part III explores various development education programs which attempt to inform the public through, inter alia, school curricula, media outreach, conferences, and training programs for development educators. Extensive statistical tables, a bibliography, and other readings are included.

009

PN-AAX-884

MF \$2.16/PC \$17.68

U.S. aid to Cameroon : its impact on agricultural and rural development

Jaeger, William K.

World Bank

U.S. Agency for International Development. Bureau for Africa (Sponsor)

Feb 1987, vii, 133p. : graphs, statistical tables, En

Managing agricultural development in Africa research report, no.11

The impacts of A.I.D. assistance to Cameroon's agricultural and rural sector are assessed in this report, which traces A.I.D.'s involvement there from 1961 to the present. Although initial levels of aid were low (the Yaounde Mission, like many others in Africa, was in fact closed for 6 years, 1968-74), subsequent events - most

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notably the Sahel drought and the 1973 New Directions legislation - have gradually increased the level of U.S. bilateral assistance to Cameroon to \$22.5 million (as of 1984), while at the same time focusing this assistance on agriculture (the sector accounted for 80% of A.I.D. assistance in 1982). Separate sections of the report (1) provide a detailed breakdown of the volume, content, and sectoral distribution of A.I.D. assistance to Cameroon since 1961; (2) examine the rationale behind A.I.D.'s program; (3) examine in detail the appropriateness and effectiveness of six agricultural projects from the period 1975-85; (4) discuss the impact of the program; and (5) recommend changes to maximize the program's effectiveness. It is concluded that while USAID/C has done relatively well in developing a coherent development strategy, implementation has been hampered by lack of accountability within the A.I.D. bureaucracy, lack of staff continuity, unrealistic project designs and uneven evaluation quality, and legislative restrictions.

010

PN-AAX-883

MF \$2.16/PC \$19.50

U.S. aid to Nigeria : its impact on agricultural and rural development

Jaeger, William K.
World Bank
U.S. Agency for International Development. Bureau for Africa (Sponsor)
Feb 1987, vi, 143p. : graphs, statistical tables, En
Managing agricultural development in Africa research report, no.10

The shape and impact of A.I.D.'s program in Nigeria from 1961 to 1984 is documented and evaluated. Separate chapters of the study provide a detailed breakdown of the program, analyze its rationale, examine the appropriateness and implementation of seven specific projects, provide an indepth study of A.I.D.'s assistance in agricultural research (including assistance via regional and centrally-funded projects), and evaluate the program's impact on agricultural and rural development. The study concludes that agricultural educational support and scholarship programs were successful in Nigeria. However, the A.I.D. program was hampered by lack of adequate monitoring, the stipulation that projects use difficult-to-maintain U.S. commodities (e.g., tractors), a misplaced belief that technology alone could solve Nigeria's problems, and the limited effectiveness of the AID-established (and still supported) International Institute for Tropical Agriculture research center. Recommendations for improving the effectiveness of A.I.D.'s program are included, as are 9 tables, 10 figures, and a 7-page bibliography.

011

PN-AAX-882

MF \$2.16/PC \$19.24

U.S. aid to Senegal : its impact on agricultural and rural development

Jaeger, William K.
World Bank
U.S. Agency for International Development. Bureau for Africa (Sponsor)
Feb 1987, vii, 145p. : graphs, statistical tables, En
Managing agricultural development in Africa research report, no.9

A.I.D.'s direct agricultural assistance to Senegal (which dates mostly from the mid- and late 1970's) generally has not met its objectives of increasing crop or animal production, but the Agency's more recent initiatives in policy reform and nonproject assistance have benefited the rural sector by contributing to liberalized agricultural marketing and pricing, credit restructuring, and reductions in government debt. Thus concludes this review of A.I.D.'s impact in rural Senegal from 1961 through the present. The review examines A.I.D.'s program in Senegal (volume, content, sectoral distribution) in some detail, explains A.I.D.'s assistance strategies, and then analyzes six specific agricultural projects which, taken together, constitute nearly half of all A.I.D. obligations to Senegal between 1975-84. The author notes that project aid to Senegal has often exceeded the country's limited absorptive capacity and that A.I.D. has sometimes been slow to learn from its projects' failures. Other problems have include unrealistic designs, inadequate monitoring, and the A.I.D. bureaucracy (high staff turnover and an emphasis on funding levels rather than project success). Finally, while nonproject assistance to promote policy reform can have long-term impacts, it cannot form the basis of a long-term development strategy.

012

PN-AAY-392

MF \$1.08/PC \$4.42

USAID / Jakarta's strategic use of empirical information

Hermann, Chris
U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation
Oct 1987, x, 22p. + appendix, En
A.I.D. evaluation occasional paper, no.15

The extent to which A.I.D. Missions comply with the A.I.D. policy that management decisions be based on hard, empirical evidence varies greatly from Mission to Mission. This paper describes the exemplary performance of USAID/Jakarta in this area. The paper sketches and exemplifies the three stages in the evolution of the Mission's strategy for using empirical information - developing problem-oriented evaluations, coordinating information activities for project, program, and

policy purposes, and disseminating information to potential users - and delineates the central roles played in this evolution by the Mission Director, the Project and Program Support Office and the Evaluation Section, and Mission technical offices. The report also specifies problems limiting the Mission's further improvement and greater use of its information system. A review of the lessons which other Missions can learn from USAID/Jakarta's experience stresses the need for a clear commitment to information activities by senior Mission managers and active involvement therein by the Mission Director; insights for developing a Mission information strategy are also provided. A concluding section suggests that in the face of the low priority accorded within the Agency to information activities (in fact, if not in policy), A.I.D. focus on developing regional information services rather than in-house Mission capabilities.

013 **PN-AYY-339**
MF \$1.08/PC \$10.01

Gender issues in A.I.D.'s agricultural projects : how efficient are we? - a study of the lessons learned in implementation of A.I.D.'s women in development policy in West and North Africa, the Near East, and Asia

Cloud, Kathleen

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation

Revised ed.

Apr 1987, viii, 26p. + appendix, En

A.I.D. working paper, no.85

9300085

Agricultural projects that specifically target resources to women are more likely to succeed than projects that do not. Thus concludes this review of 22 A.I.D. projects implemented in Asia, the Middle East, and North and West Africa between 1975 and 1985. The review also found that although women were deeply involved in agriculture in 18 of the 22 project areas, women's access to project training, technical assistance, credit, and labor markets was much more limited than was that of men. The presence of gender analysis in project planning documents seemed to increase, but did not guarantee women's access to project resources; gender analysis was most effective when accompanied by gender-specific adaptation of technical packages, institutional arrangements, etc. In some cases, however, local conditions (e.g., the position of women within a particular village) served to improve women's access even if women were not specifically targeted. The review also points out that the presence of female project staff can significantly increase women's access and it notes that the Africa Bureau was most likely (and the Asia Bureau least likely) to address women's roles and resources. Case studies of the 22 projects are appended.

014

PN-AYY-219

MF \$1.08/PC \$9.75

Guidebook for integrating women into small and micro enterprise projects

Otero, Maria,; Semenza, Laurene; et al.

Robert R. Nathan Associates, Inc.

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Office of Women in Development (Sponsor)

Jul 1987, 74p., En

Gender manual series. Gender issues in small scale enterprise

9300030

DPE-0300-O-00-5006-00

A guide to help A.I.D. programmers integrate women into small- and microenterprise (SME) development programs is presented. An initial section summarizes the reasons for integrating women into SME or other income-generating programs; these include the loose structure of the SME sector (which allows women to divide their time between economically productive and domestic activities) and the fact that the usual constraints to women's participation in economic activities (e.g., lack of education and training, low literacy levels) do not prevent women from entering the SME sector, as they can use skills they already possess to expand household activities (e.g., food processing) into economic activities. The central second section: (1) examines the standard components of SME projects (credit, technical assistance, and training); (2) discusses SME project design issues (funding, cost-effectiveness, the capacity of implementing institutions, and the role of outside technical assistance); and (3) presents four steps to be taken in integrating women into SME project design (identify the type of assistance to be provided, conduct feasibility studies and disaggregate the data by gender, identify an appropriate implementing institution, and identify constraints to female small and micro entrepreneurs). The third section looks at gender concerns in SME project implementation, monitoring, and evaluation.

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015

PN-AAX-047

MF \$1.08/PC \$11.70

Integrating women into development programs : a guide for implementation for Latin America and the Caribbean

White, Karen; Otero, Maria; et al.

International Center for Research on Women
U.S. Agency for International Development. Bureau for
Latin America and the Caribbean (Sponsor)

May 1986, iv, 88p. : statistical tables, En
Gender manual series. Gender issues in Latin America
and the Caribbean

5980000

LAC-0000-G-SS-5081-00

The purpose of this guidebook is to provide practical advice to A.I.D. personnel in the Latin America and Caribbean Bureau on the design and implementation of projects to improve women's economic status. Directed especially to Missions' Project Development Support Offices and Technical Offices, this guidebook: (1) provides background information on the economic importance of women in the Latin American and Caribbean region; (2) identifies institutional and procedural factors that have constrained the integration of women's concerns into project design; (3) suggests the roles and responsibilities of each Mission office, along with measures to improve accountability; (4) provides general guidelines for project design, implementation, and evaluation; and (5) makes concrete, specific suggestions on how to integrate women into microenterprise, agricultural, housing, and vocational and participant training projects. A 4-page list of information sources on women's socioeconomic activities, both regional and country-specific, is included.

016

PN-AAL-087

MF \$2.16/PC \$14.30

Women in development : A.I.D.'s experience, 1973-1985, vol.1: synthesis paper

Carlioni, Alice Stewart

U.S. Agency for International Development. Bureau for
Program and Policy Coordination. Center for
Development Information and Evaluation; U.S.

Agency for International Development. Bureau for
Program and Policy Coordination. Office of Women
in Development

Apr 1987, xviii, 51p. + 4 appendices : chart, statistical
tables, En

A.I.D. program evaluation report, no.18

Based on desk reviews and/or field studies of 102 projects related to women, this report synthesizes the results of A.I.D. experience since 1973 in targeting women in development (WID) activities. The major finding is that mainstream projects that ensure women's participation in accordance with their roles within the project's baseline situation are more likely to achieve their aims than projects that do not.

Agricultural projects that delivered resources directly to women according to their role in the local farming system were much more likely to achieve their purpose than projects which did not. Employment projects (i.e., projects to generate income or to provide job training and credit) that adapted mainstream training and credit programs to women's needs were more successful than projects designed specifically for women. Similarly, the success of energy and water/sanitation projects was dependent upon adequate knowledge of women's responsibilities and patterns of water/fuel use rather than on strictly technical criteria.

In education projects, the level of women's education clearly correlated with improvements in health, hygiene, nutrition, and family planning, as well as higher productivity and employment. The correlation between the level of female participation and achievement of immediate project purposes was difficult to document, however, since most of the reports studied overlooked gender disparities in enrollment when assessing educational institution-building projects.

A review of the relationship of gender variables to the achievement of socioeconomic goals found that understanding gender factors in agricultural production - differential access to and control over resources, gender-linked labor constraints, control of income from crop sales, and differing stakes in and incentives for increasing output - is crucial to successful technology transfer. Also crucial at the level of socioeconomic impact is an understanding of the various sources of and control over income and of gender roles in consumption.

Ten practical suggestions are made to improve gender analysis techniques, delivery of resources to women, and tracking of women's participation in project activities. A concluding review of the various types of women's projects finds that: (1) mainstream projects with "gender sensitive" designs are the most effective at meeting WID objectives; (2) women-only components in larger projects can be effective, although they may lead to tokenism if gender differences are ignored; and (3) women-only projects tend to be small in scope and costly in staff time, and are best suited for the delivery of training.

017

PN-AAX-975

MF \$1.08/PC \$4.94

Alternative financial instruments for less developed countries

E.F. Hutton Inc.

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Office of Policy Development and Program Review (Sponsor)

Jun 1987, [36]p., En

9300092

PDC-0042-O-00-6120-00

Policy restrictions on the development of new financial instruments in developing countries are examined in this study, and some new policy approaches suggested. Specifically, the study examines: (1) major policy restrictions on the growth of savings and investment, i.e., interest rate caps, restrictive tax policies, collateral requirements, government control of security pricing, prohibitions on some methods of finance (e.g., leasing), and the effect of Islamic banking codes; (2) policy constraints that prevent private sector banks from engaging in term lending, i.e., prohibitions on the issuance of the long-term instruments needed to support such lending and unfair competition from subsidized development banks; and (3) specific prohibitions on term lending for privatization. A final section suggests new approaches for: (1) the development of instruments that transfer funds - both among financial institutions and between financial institutions and productive enterprises - in a timely and cost-effective manner and that mobilize indigenous resources; (2) policies that encourage banks in developing countries to undertake term lending but minimize misallocation of scarce investment resources; and (3) involvement of international institutions in this policy development. (Author abstract, modified)

018

PN-AAY-120

MF \$2.16/PC \$17.29

Background papers for employment research priorities workshop

Berry, Albert; Lindauer, David; et al.

Devres, Inc.

U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development (Sponsor)

(Employment Research Priorities Workshop,

Washington, DC, US, 8-9 Dec 1986)

9 Dec 1986, [130]p., En

9311096

PDC-1096-I-00-4162-00

Four background papers prepared for the 12/86, A.I.D.-sponsored Employment Research Priorities Workshop are presented in this volume. "Some Priorities for Employment Research" by Albert Berry

analyzes the status of recent research and implications for future work (especially in the area of education and public sector employment) and expresses a need for comparative studies of different countries. "Are Wages Too High?" by David Lindauer presents both analytic and empirical evidence challenging the notion that public sector employment practices in Africa are generating high wages which cause significant distortion throughout the labor market. "Employment Research Priorities" by Dipak Mazumdar studies the impact of government policies on the structure and operation of rural and urban labor markets, and particularly on the absorption of labor; the interrelationships among labor and other inputs (e.g., land in rural areas) are also considered. "Employment Research" by Gustav Papanek, Peter Doeringer, and Elliott Morss outlines a new framework for employment research which stresses the issue of equity and also takes into account the need to better understand micro-level markets and institutions.

019

PN-AAY-121

MF \$1.08/PC \$7.54

Employment research priorities workshop: final report

Hollister, Robinson; Wood, Jayne Millar

Devres, Inc.; U.S. Agency for International

Development. Bureau for Science and Technology.

Office of Rural and Institutional Development

(Sponsor)

(Employment Research Priorities Workshop,

Washington, DC, US, 8-9 Dec 1986)

Feb 1987, xii, 30p. + 3 annexes, En

9311096

PDC-1096-I-00-4162-00

The A.I.D.-sponsored Employment Research Priorities Workshop convened in December 1986 to review employment research over the past 10 years and establish research priorities for another 10 years. After much discussion, in which it was decided that research priorities should be set independently of current A.I.D. policies and research efforts, five priority topics were defined: macroeconomic and trade policies; rural labor markets; urban labor markets; public sector employment; and political/institutional factors. Each of these topics, it was further agreed, should be explored within the context of five crosscutting issues: gender/ethnicity analysis; productivity and technology; capital and labor markets; human resource development for employment; and the measuring and monitoring of employment trends. Regional employment research priorities for Asia, Africa, and Latin America and the Caribbean were also identified. These proceedings include summaries of: four background papers (the papers in their entirety are available as PN-AAY-120); workshop group and plenary discussions; and conclusions.

020

PN-AAY-182

MF \$2.16/PC \$13.39

Financial sector review of Rwanda

Goldmark, Susan

Development Alternatives, Inc.; Harvard University.
Institute for International Development; Michigan State University; U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development (Sponsor); U.S. Agency for International Development. Bureau for Africa. Rwanda (Sponsor)

Jan 1987, x, 97p. : statistical tables, En

9365426

DAN-5426-C-00-4098-00

Rwanda's financial sector is reviewed as a prelude to more intensive studies of the relationship between capital markets policy and enterprise development. Included are descriptions of the regulatory policies of the Central Bank (CB) and of the administration, performance, and client profile of commercial banks, the parastatal Savings and Loan and Mortgage Banks, the rural-based Popular Banks, and the Rwandan Development Bank (BRD). Activities of the informal financial sector are also reviewed. To make the formal financial sector more effective, the CB should: (1) encourage the provision of production credit to agriculture and to small-, medium-, and micro-industries outside Kigali (rather than the extension of trade credit to large firms); (2) encourage banks to use raise longer-term deposits and allow them to apply variable rates on term loans to compensate for risk; (3) fix interest rates above domestic inflation in order to encourage savings; and (5) increase its oversight of financial institutions. Recommendations are to: (1) build BRD capabilities to manage donor funds; (2) increase the administrative and technical abilities of the Popular Banks, which offer the best hope for meeting the financial needs of the rural sector; and (3) have the formal sector adopt the desirable features of informal sector lending (e.g., disbursing loans via socially cohesive groups). Included are suggestions for future studies, 32 tables, and an annex detailing the financial positions of various institutions.

021

PN-AAX-460

MF \$1.08/PC \$3.77

Investment climate in Guinea

Nyirjesy, Francis

Equator Advisory Services Ltd.; Chemonics International; U.S. Agency for International Development. Bureau for Africa. Guinea (Sponsor)

Mar 1987, 34p., En

6750212

LAC-0212-C-00-5015-00

Thanks to the extensive economic reforms recently undertaken by the Conte administration, Guinea has been increasingly successful in attracting prospective

U.S. investors. This paper, after reviewing the economic legacy left by the Toure regime (which ruled Guinea for 26 years, until March 1984), describes the four major economic strategies of President Conte: (1) disengagement (nearly all state enterprises have been closed and those that remain manage public infrastructure); (2) public investment (which is funded almost entirely by international donors and focuses on infrastructure reconstruction and expansion, agricultural development, and strengthening of the social services base); (3) administrative reform (involving decentralization and a streamlining and upgrading of the civil service); and (4) economic reform (introduction of a new currency and a weekly foreign exchange auction, trade liberalization initiatives, and improvements in economic management). Also provided are overviews of laws and procedures governing or affecting foreign investment in Guinea (including the country's new Investment Code, which guarantees certain investor rights and establishes special incentives). A final section describes specific opportunities for U.S. investment in natural resource-based and market-based enterprises and discusses the availability of financing.

022

PN-AAX-973

MF \$1.08/PC \$8.19

Tax policy reform and capital market development in less developed countries

Touche Ross and Co. Washington Service Center; U.S.

Agency for International Development. Bureau for Program and Policy Coordination. Office of Policy Development and Program Review (Sponsor)

Apr 1987, iv, 55p., En

9300092

PDC-0092-O-00-6122-00

To help identify tax policies that can support the growth of capital markets in developing countries, this study analyzes, within the context of the basic structure of a tax system, the advantages and disadvantages of policy options regarding three different tax bases: personal and corporate income (including income from capital); consumption; and labor income. Specific attention is given to savings incentives, to special tax incentives to encourage capital formation, and to taxation of the income of foreign businesses. Indirect taxes are discussed briefly. The authors recommend that A.I.D., in its policy dialogue, encourage developing countries to: (1) reduce marginal corporate tax rates; (2) reduce or eliminate double taxation of corporate profits; (3) adopt policies that would result in capital income being taxed across all industries at as uniform a rate as possible (although in certain cases it may be advisable to provide incentives to particular industries or types of activities); (4) encourage savings through lower marginal individual income tax rates or through a partial exemption of savings; and (5) to target incentives to foreign investors by modifying tax rules, e.g., through income tax treaties. References are provided.

023

PN-AAX-075

MF \$1.08/PC \$6.89

Economic growth and the Third World : a report on the A.I.D. private enterprise initiative

U.S. Agency for International Development. Bureau for Private Enterprise
Apr 1987, 52p. : ill., En

Through the Private Enterprise Initiative begun under the Reagan administration, A.I.D. has made a systemic effort to use private enterprise as a key vehicle for improving the economies of Third World countries. This review documents activities conducted under the Initiative in over 30 nations in the areas of policy reform, private enterprise credit, agribusiness, business and export development, investment promotion, management development, and technology transfer. A discussion of how the Initiative is organized within A.I.D.'s Bureau for Private Enterprise is included. The study concludes that the Initiative has made significant progress in expanding the role of the private sector in the Third World, but notes the following lessons: (1) it is important for A.I.D. to understand the suspicion and hostility of Third World governments towards private businessmen who are seen as economic and political competitors; (2) A.I.D. should focus its efforts in those areas where it has the greatest expertise and resources (e.g., P.L. 480 and Economic Support Fund programs); and (3) development of the private sector is a slow process requiring a long-term commitment.

024

PN-AAY-183

MF \$3.24/PC \$31.20

Effect of policy upon small industry development in Honduras

Goldmark, Susan; Deschamps, Jean-Jacques; et al.
Development Alternatives, Inc.

Harvard University. Institute for International Development; Michigan State University; U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Honduras (Sponsor); U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development (Sponsor)

Sep 1987, xiv, 195p. + 6 annexes : charts, statistical tables, En

9365426

DAN-5426-C-00-4098-0

Government economic policies affect far more business firms than single projects can and do so in ways which differ significantly according to firm size. This study examines Government of Honduras (GOH) policies and their effects on small and micro manufacturing enterprises (SME's). Following an overview of Honduran economic performance, industrial structure, and

economic policies, the study provides specific analyses of the financial market, labor, fiscal, and trade policies of the GOH, as well as of regulatory procedures and government red tape. The authors find that, although SME's are more economically efficient than their larger, more capital-intensive counterparts, economic policies (e.g., interest rate caps, foreign exchange rates and restrictions, labor legislation) and the administration of regulatory procedures all greatly favor the latter, a situation which is compounded by bureaucratic inefficiency (which inhibits SME's from officially registering with the government, as required) and by a toleration of smuggling (which most strongly affects the subsectors dominated by SME's). The study makes 16 recommendations for policy changes and calls for institution building of private sector lobbying groups, along with training aimed at building Honduran professional capabilities. A 4-page bibliography of English and Spanish sources (1937-87), 66 tables and figures, and the questionnaires used in the study are included.

025

PN-AAY-257

MF \$1.08/PC \$1.69

Evaluation of the impact of projects to promote small scale industrialization

Young, Robert C.

U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development
(Policy Workshop on Small Scale Industrialization, The Hague, NL, 19 May 1987)
[1987], 14p., En

While A.I.D.'s record in small-scale enterprise (SSE) development projects has admittedly been less than impressive, the Agency's experience, reviewed in this workshop paper, has taught three lessons which suggest hope for the future. (1) SSE interventions, while seldom meeting the traditional criterion of financial self-sustainability, generally prove cost-effective socially. (2) Greater income and employment effects are more likely if resources are made available to small- (but not new or micro) or to medium-scale enterprises. Specifically, the most efficient small manufacturing firms seem to be those having between 10 and 50 workers; such enterprises are most likely to use carefully identified inputs and to fill strategic production gaps most efficiently. (3) Policy projects, especially trade policy projects, may prove more cost-effective than direct credit or technical assistance projects in promoting growth, employment, and income generation in the SSE sector.

026

PN-AAX-972

MF \$1.08/PC \$5.98

Financing privatization under limited capital conditions

Arthur Young and Co.; U.S. Agency for International Development. Bureau for Program and Policy Coordination. Office of Policy Development and Program Review (Sponsor)
Nov 1986, 41p., En

Due to inadequate financial markets and institutions and restrictive government regulations, privatization programs involving the sale of state-owned enterprises (SOE's) are often constrained by insufficient availability of private investment capital. Selected near-term solutions are examined in this paper, which: (1) sketches typical target SOE's and aspects of the capital shortage problem; (2) looks at possibilities for and constraints on foreign investment, discussing in particular various types of joint ventures between foreign and domestic investors; (3) examines specific methods to effect privatization under limited capital conditions, including debt-equity swaps, leveraged buyouts, employee stock ownership plans, management contracts with profit sharing clauses, leasing with option to buy, and, in serious cases, the choice of simply giving the SOE away; and (4) considers the role foreign donors and lending institutions can play in promoting policy dialogue and financing privatization support mechanisms (e.g., discount facilities, training programs, and the creation of special funds for legal fees or labor compensation). The paper also advocates experimentation in nontraditional financing techniques. It does not, however, consider the issue of creating/supporting capital market institutions, viewing this as a longer-term response. (Author abstract, modified)

027

PN-AAY-143

MF \$1.08/PC \$5.33

Lessons from experience : the design and implementation of commercial lending projects by A.I.D.'s Bureau for Private Enterprise

Management Systems International, Inc.; U.S. Agency for International Development. Bureau for Private Enterprise. Office of Policy and Program Review (Sponsor)
Jun 1987, ii, 37p., En Companion ES: PD-AAW-302

Since November 1983, A.I.D.'s Bureau for Private Enterprise (PRE) has administered a \$100 million Revolving Fund authorized by the U.S. Congress to promote development of the private sector in the Third World. This report analyzes PRE's experience to date in its two principal types of projects: direct loans to agribusinesses and indirect loans to local intermediate financial institutions (IFI's) for onlending to small and medium

businesses. Specifically, the report presents case studies of: (1) two direct loans - to Leather Industries of Kenya and Antigua Shrimpery Ltd.; and (2) two loans to IFI's - the public sector Commercial Finance Company in Kenya and the private sector WAFABANK in Morocco. The report also draws on the experience of comparable projects of PRE's Investment Office, various USAID's, the World Bank, and the International Finance Corporation. A total of 20 lessons learned are presented in the areas of program operations, development impact, and replicability/sustainability. Suggestions for incorporating these lessons in future programs conclude the report.

028

PN-AAL-085

MF \$1.08/PC \$10.66

Private Development Corporation of the Philippines

Love, Ray; Theil, Peter A.; Ruppert, Philip W.
U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation
Oct 1986, xiv, 25p. + 3 appendices : map, statistical tables, En
A.I.D. evaluation special study, no.46

Based on in-depth interviews, client visits, and financial analysis, this evaluation of the Private Development Corporation of the Philippines (PDCP) is part of A.I.D.'s reappraisal of its 30 years of experience in private sector initiatives.

The PDCP, founded in 1963, was originally capitalized by an A.I.D. loan of P27.5 million. Despite the adverse effects of inflation, devaluation of the peso, and restrictive government regulation of imports and interest rates, by the end of 1982 PDCP had provided assistance to 1,183 projects having a peso value of over P5 billion. This expansion is complemented by the fact that PDCP has retained a trouble-free loan portfolio and has benefited from continuity of management and very good in-house staff training.

Problem areas have been in the diversity of the portfolio - originally, loans were made predominantly to large industry, although by 1983 small and medium industries were receiving more attention - and in the geographic distribution of the funds, which still go mostly to the central regions. The local currency supply has been a problem as well, although PDCP's ability to tap the peso resources of the Industrial Guarantee and Loan Fund (a separate institution also established in part with A.I.D. funding) has alleviated the problem somewhat. The establishment of a Central Bank credit line in 1981 also increased the supply of pesos from foreign currency loans for local expenditures.

The PDCP experience points up several factors which A.I.D. should heed as it draws up a new private sector development policy. For example, greater attention must be paid to analysis of the financial sector in recipient countries as a prerequisite to A.I.D. investment. Priority should be given to wholesaling rather

than retailing financial assistance to the private sector. Finally, training and technical assistance should be part of every A.I.D. attempt to establish or strengthen development finance institutions. Appendices include a statement of PDCP's current business policies and 28 tables of financial statistics. (Author abstract, modified)

029

PN-AAX-974

MF \$1.08/PC \$9.10

Privatization and employment policy : issue analysis

Hay Group

U.S. Agency for International Development. Bureau for
Program and Policy Coordination. Office of Policy
Development and Program Review (Sponsor)

Jun 1987, iii, 46p. + 3 appendices, En
9300092

PDC-0092-O-00-6121-00

In its policy dialogue with developing countries regarding privatization, especially of state-owned enterprises, A.I.D. often encounters employment issues which extend beyond the loss of jobs. This review of employment problems due to privatization is framed around two basic questions: what are the key employment problems to be addressed, and what administrative steps must be taken to ensure that these issues are identified and resolved. The review opens with an overview of privatization and of the major actors in the process. This is followed by a description of both substantive and procedural employment problems (e.g., when should workers be informed of privatization plans, their job and benefit rights, and other employment options) and then by a discussion of alternative means of resolving these problems. The review closes with some thoughts on how A.I.D. can use this review to develop a relevant data base of alternative methods to minimize adverse employment impacts and to formulate appropriate policy guidelines. Appendices include a privatization glossary, a checklist of recommended privatization procedures, and an outline of the pros and cons of alternative actions concerning employment problems. (Author abstract, modified.)

030

PN-AYY-381

MF \$1.08/PC \$3.90

Privatization in the Ivory Coast : a status report

Dei, Carleene

U.S. Agency for International Development. Bureau for
Africa. Regional Housing and Urban Development
Office (Sponsor)

Jul 1986, 29p., En

Privatization - the transfer, in one form or other, of
public sector operations to the private sector - is now

underway on every continent and in countries of widely diverging political and economic philosophies. This report describes the privatization process in the Ivory Coast, a nation whose economic philosophy is known as "state capitalism". Specifically, the report: (1) examines the principal causes underlying the government's decision to privatize its state corporations and sell its holdings in dozens of private companies; (2) discusses the manner in which privatization has been carried out in a number of firms; and (3) evaluates the positive and negative effects of the process. It is concluded that while the government's original decision to privatize is still in effect, few transfers have actually been completed; privatization currently appears to be in a "holding pattern." This caution could be due to efforts to ensure Ivorian rather than foreign control of the firms, the poor economic conditions prevalent during the period, a lack of technical capability or experience with such processes, or a desire to use the transfer of assets as a political patronage resource.

031

PN-AAX-966

MF \$1.08/PC \$2.86

Privatization of Corporacion Financiera Nacional : Ecuador

Laport, Robert E.

Analysis Group, Inc.; Center for Privatization; U.S.

Agency for International Development. Bureau for
Private Enterprise (Sponsor)

5 Aug 1987, 20p., En, Es

Center project / Center for Privatization, no.48

9400008

DPE-0008-C-00-5808-00

Initial attempts by Ecuador's *Corporacion Financiera Nacional* (CFN) to disinvest itself of stock in 33 companies in which it holds ownership interests of from 3 to 100% are summarized in this report to the A.I.D. Mission in Quito. Stock in four priority companies was offered through the Quito and Guayaquil exchanges in July 1987, but with little success - only 225 of the approximately 565,000 shares offered were sold. A number of factors had virtually guaranteed the offering's failure - lack of publicity, a soft market, the fact that two of the issues offered were very closely held companies, and, most importantly, the fact that CFN asking prices were not in line with current market valuations. Solutions to these problems are offered, which if followed, should make future offerings a success. The report includes English and Spanish versions of a discussion memorandum sent to the General Manager of the CFN outlining these conclusions.

Small scale industries in developing countries : empirical evidence and policy implications

Liedholm, Carl; Mead, Donald
Michigan State University. Dept. of Agricultural Economics; U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development (Sponsor)

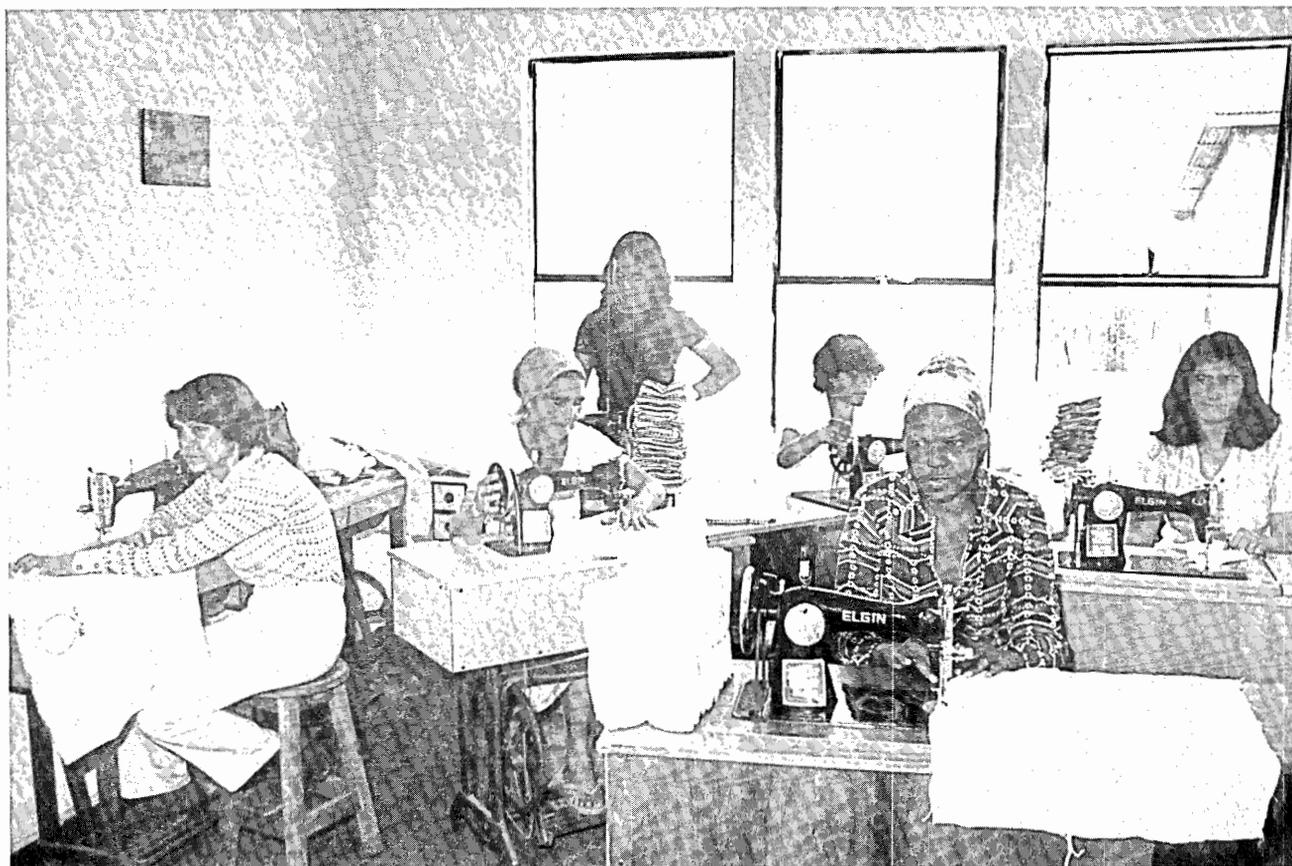
1987, ix, 141p. : statistical tables, En
MSU international development papers, no.9
Bibliography: p.133-141

9311191

DAN-1090-A-00-2087-00

* Also available from: *MSU International Development Papers, Department of Agricultural Economics, Agriculture Hall, Michigan State University, East Lansing, MI 48824-1039 USA, single copies free of charge.*

While small industries play a large role in providing productive employment and income opportunities in developing countries, not a great deal is known about these firms. This paper, based on studies conducted in 12 countries of manufacturing and repair firms employing fewer than 50 persons, provides an overview of small firms (their magnitude, composition, input structure, and growth) and examines the determinants of the demand for and supply of the goods and services they produce. Findings reveal that small firms account for the vast bulk of industrial employment, are most often located in rural areas, and very often employ just one person, usually the owner, who in many cases is a woman. These one-person enterprises are usually a part time activity financed almost wholly out of personal savings. Attempts to reach small firms through credit programs are most successful when loans are small, short-term, are provided by local institutions, and supply working (rather than fixed) capital. Non-financial assistance works best when it is tailored to a particular product group and location and is provided by pre-existing institutions. The policy environment can promote small firm success by removing tax and credit inequities and by increasing the agricultural income which can be spent on small firm products. A 9-page bibliography is included.



Small, short-term grants and loans can help small firms like this women-owned sewing cooperative, which generate extensive economic benefits in developing countries, get off to a productive start.

033

PN-AAX-730

MF \$2.16/PC \$22.10

Agricultural sector of Morocco : a description

Crawford, Paul R.; Purvis, Malcolm J.
U.S. Agency for International Development. Bureau for Asia and Near East. Morocco
Country development strategy statement[, FY 1988 : Morocco], annex C, Feb 1986, 164p. : charts, statistical tables, En

Prepared as a background document for USAID/Morocco's FY 1988 Country Development Strategy Statement (CDSS), this document synthesizes information from a number of primary and secondary sources to provide a comprehensive description of the agriculture sector in Morocco - its performance, problems, and potential. After an initial section on the situation and outlook for the Moroccan economy as of 1985, the study discusses the role and structure of Moroccan agriculture, as well as performance and issues related to crop and livestock production, forestry and fisheries production, agricultural input use, foreign trade, and government investment in and subsidies to the sector. A 154-item bibliography (1977-86) listing A.I.D., World Bank, Moroccan government, and other documentary sources is included. (Author abstract, modified)

034

PN-AYY-255

MF \$1.08/PC \$7.02

Bibliography of readings in farming systems : 1987 volume IV

Caldwell, John; Flora, Cornelia Butler; et al.
University of Florida. Institute of Food and Agricultural Sciences; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor); U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development (Sponsor)
1987, 51p., En
9364099

The fourth and final volume of a bibliography of selected readings in farming systems research, a product of A.I.D.'s Farming Systems Support Project, is presented. Standard bibliographic information, together with a short abstract and a note on document availability, is provided for 119 documents in a wide range of fields including (inter alia) agricultural education, extension, and economics, animal husbandry and nutrition, cropping systems, fishery development, integrated pest control, lowland and upland cropping, soil conservation and management, and technology adoption in countries such as Colombia, Burkina Faso, Ecuador, Gambia, Ghana, India, Indonesia, Jamaica,

Lesotho, Nepal, and Thailand. Subject/geographic and author/institution indexes and ordering instructions are included.

035

*** PN-AAV-663**

MF \$1.08/PC \$6.63

Cereal disease methodology manual

Stubbs, R.W.; Prescott, J.M.; et al.
International Maize and Wheat Improvement Center; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)
1986, iii, 46p. : ill., charts, map, statistical tables, En
936411101

* Also available from: CIMMYT Publications, Apdo. Postal 6-641, 06600 Mexico, D.F., Mexico

Plant pathology and varietal research methods aimed at improving national cereal production programs in developing countries are presented in this manual. An introductory section discusses the importance of wheat and barley as a food staple and reviews the origin, classification, and morphology and growth of these cereals. The life cycle and classification of cereal rusts, the major diseases of wheat and barley, and their development are then examined, followed by an outline of the natural cycle of pathogen and disease development and a description of techniques for surveying and recording cereal diseases. A review of the principles of breeding disease-resistant cereal varieties introduces a fairly in depth discussion of the issues and techniques involved in creating artificial epidemics to establish plant pathology. Two annexes provide characteristics of four types of wheat and barley diseases: fungal, bacterial, viral, and diseases caused by nematodes.

036

PN-AAW-538

MF \$1.08/PC \$3.90

Contribution of cropping systems program research and extension to the rural poor : a case study of Ratnanagar cropping systems site

Timsina, Jagadish; Suvedi, Murari
Winrock International Institute for Agricultural Development; Nepal. Ministry of Agriculture (Sponsor); German Agency for Technical Cooperation (Sponsor); International Development Research Centre (Sponsor); U.S. Agency for International Development. Bureau for Asia and Near East. Nepal (Sponsor)
Dec 1986, [25]p. : statistical tables, En
Rural poverty research paper series, no.2
3670149
ASB-0148-C-00-5171-00

The impact of an AID-supported cropping systems program on small and marginal farmers (those with less than 0.5 ha of land) in two villages around the Ratnanagar cropping systems research site in Nepal is reported in this paper. The program aimed at increasing land use intensity (multiple cropping) and the yield of individual crops by making better use of available resources. The paper first describes the Ratnanagar site (where rice, mustard, and maize are major crops) and the research methods used in the present study. Data analysis was both quantitative and qualitative. The paper provides information on the existing cropping systems at the Ratnanagar site and describes the extent to which farmers have adopted recommended technologies, as well as differences in yields between participating and nonparticipating farmers. Specific areas discussed include: farmers' socioeconomic characteristics; crop production practices (use of improved varieties, fertilizers, and plant protection measures) and cropping patterns relative to the three major categories of land in the research area (lowland irrigated, lowland rainfed, and upland rainfed); increases in cropping intensity, also relative to land type; animal husbandry practices; and farmers' response to the research program. Conclusions regarding program usefulness are drawn, and recommendations as to future research and policy needs are given.

037

PN-AAL-090

MF \$1.08/PC \$10.27

Credit programs for small farmers : a project manager's reference

Chew, Siew Tuan

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation

Jun 1987, x, 37p. + 6 attachments, En
A.I.D. evaluation special study, no.47

Most of the agricultural credit programs funded by A.I.D. between 1950 and 1985 encountered serious implementation problems and failed to meet their objectives. This report, the first in a series of reference guides for project managers, summarizes A.I.D.'s experiences with small farmer credit and its current policy, and describes two new approaches to providing agricultural credit.

The lessons learned to date revolve around four issues. (1) Certain pre-conditions must be met if a credit program is to succeed: favorable market conditions and government pricing policies; adequate postharvest support; sufficient land and labor resources among target farmers; and the existence of an appropriate, profitable agricultural technology. (2) Positive real interest rates should be charged; this is a fundamental lesson, but often requires long-term, sector-wide policy reform. (3) In the area of loan administration, A.I.D.'s experience suggests certain steps (outlined herein) that can help project managers design an appropriate loan portfolio, identify possible alternatives to big banking in-

stitutions, minimize transaction costs, protect against inflation and bad debt, and address equity concerns. (4) Standard methods of evaluating credit programs are costly and inefficient; perhaps evaluation should focus less on changes in farm income and more on the development of self-sustaining rural financial institutions.

Two experimental approaches to funding agricultural credit programs - rural savings and private equity investment - are currently underway. (1) Early results from a program in Honduras and the Dominican Republic suggest that local agricultural banks and credit unions can successfully mobilize deposits in conjunction with their lending, although they might require substantial technical assistance and training. (2) A USAID/Honduras project is testing the feasibility of establishing a private company to share investment risks with small livestock farmers.

Appendices include excerpts from A.I.D. policy papers and annotated bibliographies (along with ordering instructions). This report, and others in the Project Manager's Reference series, will be made available to A.I.D. Missions through the computerized information retrieval system, MICRODIS.

038

* PN-AAV-729

MF \$5.40/PC \$57.85

Diamondback moth management: proceedings of the first international workshop

Talekar, N.S.; Griggs, T.D.

Asian Vegetable Research and Development Center; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

(International Workshop on Diamondback Moth Management, 1st, Tainan, TW, 11-15 Mar 1985)

1986, xi, 471p. : ill., charts, maps, statistical tables, En
AVRDC publication no. 86-248

936411105

* Also available from: Asian Vegetable Research and Development Center, P.O. Box 42, Shanhua, Tainan 74199 Taiwan, China

Diamondback moths are threatening economically important cruciferous vegetable crops throughout the world, especially in Southeast Asia where pesticide practices have served to increase the pest's resistance and reduce the number of their natural enemies. A total of 40 papers, all but 5 of which were presented at a March 1985 conference in Taiwan on diamondback moth management, are collected in this volume. The papers are grouped into major subject headings which cover nearly all aspects of diamondback moth management including: biology and ecology, sex pheromone, cultural control, biological control, chemical control, insecticide resistance, and integrated control. The volume attempts to synthesize as much of the information presented as possible; each of the papers contains an

abstract and each section includes a discussion of main ideas. Both subject and author indexes are provided.

039

*** PN-AAW-848**

MF \$1.08/PC \$8.32

Effects of trade and exchange rate policies on agriculture in Nigeria

Oyejide, T. Ademola

International Food Policy Research Institute; U.S.

Agency for International Development. Bureau for

Science and Technology. Office of Agriculture

(Sponsor)

Oct 1986, 61p. : charts, statistical tables, En

Research report / International Food Policy Research Institute, no.55

* Also available from: *International Food Policy Research Institute, 1776 Massachusetts Ave., NW, Wasington, DC 20036, USA*

Although the oil boom of the mid-1970's has caused Nigeria's GDP to increase at an annual rate of 7%, the agricultural sector, which still employs 59% of the work force, continues to experience sharp declines in productivity and exports. Several macroeconomic policies have contributed to this problem, including an import substitution-industrialization strategy that reallocates resources from the agricultural to the industrial sector, and monetary policies that have led to an overvalued domestic currency which particularly squeezes agricultural exports. This study attempts to assess (1) the degree of protection afforded by trade and exchange rate policies to agriculture vis-a-vis other sectors of the economy, (2) how these policies affect the allocation of resources within the agricultural sector itself, and (3) how the dominant sector, oil, has affected production within the agricultural sector. The study concludes that efforts to revitalize the agricultural sector must include programs to develop new technology, rural infrastructure, and rural investment together with agricultural price interventions, and that leaders should consider the effects on other sectors before implementing policies designed to support growth in one sector.

040

PN-AAW-497

MF \$1.08/PC \$4.42

Ideology of race and class in the development of smallholder agriculture in Jamaica

Bims, Hamilton

Clark University. International Development Program;

Institute for Development Anthropology, Inc.; U.S.

Agency for International Development. Bureau for

Science and Technology. Office of Rural and

Institutional Development (Sponsor)

Aug 1986, 32p., En

How the "tyranny of imagery" - rather than purely rational "ideas" - is at the root of social stratification in Jamaica is explored in this study. A review of class relations since the 1830's shows that lingering colonial stereotypes of class distinctions as reflecting an unchangeable, "natural" order resulted in a political and economic structure in which Blacks and other "people of color", most of them former slaves, were belittled despite their keen understanding of agriculture and marketing (largely because of enforced responsibility in these areas). Counterpointing the Jamaican study is a discussion of production in 19th century Cuba (after most world powers had disavowed slavery) in which the number of "slaves" actually rose with the advent of industrialization. The report concludes that conscription into slavery is due not to the qualities of those conscripted but rather to the image - which becomes expressed in class structure - ascribed to them by those most likely to benefit.

041

*** PN-AYY-411**

MF \$1.08/PC \$8.32

Korea's seed potato program : organization, impact and issues

Horton, D.E.; Kim, Y.C.; et al.

International Potato Center; Korea. Ministry of

Agriculture and Fisheries. Office of Rural

Development (Sponsor); U.S. Agency for International

Development. Bureau for Science and Technology.

Office of Agriculture (Sponsor)

1987, 68p. : charts, statistical tables, En

936411107

* Also available from: *International Potato Center, Apar-tado 5969, Lima, Peru*

In the late 1970's, Korean production of potatoes, a staple and more recently a cash crop, fell sharply due to the failure of Korea's Seed Potato Certification Program to control the spread of potato virus diseases, even among its own foundation seed stocks. In response, the Korean Government reorganized the program, establishing a Basic Seed Production scheme that used tissue-culture for producing, storing, and rapidly multiplying virus-free planting material. Techniques for field multiplication, inspection, and pathogen testing of foundation, registered, and certified seed were also improved. The new program has sharply reduced virus disease symptoms in farmers' fields and increased yields from an average of 11 t/ha to over 18 t/ha. Despite this success, only about 15% of the seed potatoes in use are certified; benefits could be maximized if the program were better integrated with the farmers' informal seed system. Other potential program reforms include clarifying the responsibilities of participating institutions, strengthening technical capacity to inspect and certify seed, and eventually transferring responsibility for seed production and marketing to the private sector.

042

PN-AAV-691

MF \$1.08/PC \$3.90

Land reform : progress and prospects in Nepal

Bahadur K.C., Ram

Winrock International Institute for Agricultural Development; Nepal. Ministry of Agriculture; U.S. Agency for International Development. Bureau for Asia. Nepal (Sponsor)

Jul 1986, 26p. : statistical tables, En
Research report series / Winrock International Institute for Agricultural Development, no.2
367014403

Land reform and resettlement programs have been implemented in Nepal since the 1940's to increase agricultural production, improve the condition of the peasantry, and divert capital and labor to non-agricultural pursuits in order to accelerate economic development. However, these objectives have not been realized, and early achievements are being eroded. This paper analyzes Nepal's agrarian land reform program and suggests policy measures for future action. The first two sections summarize the history and structure of land reform and resettlement programs and assess their impact on land distribution, tenancy reform, agricultural development, landlessness, and migration and forest encroachment. The third section discusses the Sixth Plan and new policies designed to consolidate and strengthen the programs, and identifies needs for further policy development in the areas of land ceiling, tenancy reform, land administration, peasant proprietorship, and resettlement. A discussion of the main forms of land tenure in Nepal, tabular data on land ceilings and agricultural rent, and references are provided in appendices.

043

PN-AAV-834

MF \$1.08/PC \$6.76

Pest management assessment and recommendations

Mertely, James C.

Chemonics International; Belize Agribusiness Co.; U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Belize (Sponsor)

30 Sep 1986, 50p., En
5050008
505-0008-C-00-6030-00

Prepared by a consultant to the Belize Commercialization of Alternative Crops Project, this report identifies diseases and insect pests affecting fruit and vegetable crops in Belize and examines ways of controlling them. A crop by crop assessment of potential pests is presented for beans, chayote, corn, cucurbits, okra, peppers, tomatoes, yams, papaya, and pineapple. Crops which, from a pest management perspective, are

probably unsuitable for Belizean cultivation are identified. Next, pesticides and their use are discussed in terms of availability, sources, level of use, and application equipment. Specific recommendations are provided for 1985-86 on: (1) establishing a nursery; (2) achieving a good stand; (3) pesticide procurement; and (4) ongoing pest management assistance. Weed control methods are briefly discussed, and plant pathogen/insect and pesticide lists and descriptions of several common pests are provided in appendices.

044

PN-AAV-758

MF \$1.08/PC \$5.46

Traditional Gambian land tenure and the requirements of agricultural development

Eastmen, Clyde

Consortium for International Development; Colorado State University; Gambia. Ministry of Agriculture and Natural Resources (Sponsor); U.S. Agency for International Development. Bureau for Africa. Gambia (Sponsor)

Sep 1986, 36p., En
Mixed farming and resource management project
technical report, no.19
6350203

Agricultural production levels are directly, but not solely, related to a farmer's ability to control the land he or she cultivates. This case study assesses the effect of Gambian land tenure structure on agricultural development efforts. After briefly discussing the evolution of property rights elsewhere in the world and the requirements of commercial agriculture, the study compares western land ownership practices and traditional African tenure for both livestock and crops in order to indicate the problems associated with encouraging agricultural development from a western perspective. The ability of the traditional tenure forms to meet the requirements of agricultural development are systematically assessed in terms of technology adoption, efficiency of resource allocation, use of credit, equity, resource conservation, and land security. The report concludes that the traditional Gambian cropland tenure will not constrain the type of agricultural development which is likely to occur in The Gambia in the near future, but adds some general suggestions for a land tenure reform program which would benefit The Gambia in the long run.

045	PN-AAW-655 MF \$2.16/PC \$17.16	046	* PN-AAW-527 MF \$1.08/PC \$10.92
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Transformation of the agrarian structure in Ecuador with specific reference to the province of Chimborazo

Haney, Emil B., Jr.; Haney, Wava G.
 University of Wisconsin, Madison. Land Tenure Center;
 U.S. Agency for International Development. Bureau
 for Science and Technology. Office of Program
 (Sponsor); Jan 1987, 130p. : statistical tables, En
 Research paper / Land Tenure Center, University of
 Wisconsin - Madison, no.86
 9310111
 AID/CSD-2263

Ecuador's agrarian reform laws of 1964 and 1973, designed to redistribute land and distribute wealth more evenly, have fallen over 50% short of their goals. Part one of this paper sketches the agrarian structure prior to 1964, assesses the impacts of the reform laws, and discusses major changes occurring in the agrarian structure today and their policy implications. Part two narrows the focus to Chimborazo Province, which was the province most affected by agrarian reform in terms of land area and number of beneficiaries. Data, derived mainly from public censuses, case studies, and a 1983 survey of 529 households, are presented on such topics as farm size, land tenure, land fragmentation, agricultural production, agricultural labor, migration, capital accumulation, economic activities, and income. Chimborazo's experience with land reform is found to parallel closely that of Ecuador as a whole, two of its most salient characteristics being the increasing minifundization and proletarianization of the countryside. And while there have been notable improvements in housing and social infrastructure since the reform laws were enacted, very little economic surplus has been returned to the land and to rural communities. Further agrarian reforms, it is concluded, can help reduce - but certainly not eliminate - poverty and the continuing inequalities of the agrarian structure. A 4-page bibliography and 57 tables are included.

Whole - farm model based on experimental flocks and crop rotations in northwest Syria

Nordblom, Thomas L.; Thomson, Euan F.
 International Center for Agricultural Research in the Dry
 Areas; U.S. Agency for International Development.
 Bureau for Science and Technology. Office of
 Agriculture (Sponsor)
 Jan 1987, v, 78p. : statistical tables, En
 936411112

* Also available from: *International Center for Agricultural Research in the Dry Areas, Box 5466, Aleppo, Syria*

The first quantitative whole-farm analysis completed at ICARDA, described herein, used data from farm-scale crop, sheep, and native pasture experiments at Tel Hayda, Syria. Four rainfed crop rotations - (1) barley-fallow, (2) barley-vetch, (3) wheat-lentil-watermelon, and (4) wheat-vetch-watermelon - were tested over a 6-year period to compare traditional rotations (1 and 3) with high input rotations (2 and 4) which incorporated vetch crops for pasture or hay. Experimental flocks of Awassi ewes provided nutrition-performance data; preliminary estimates were used for native pasture offtakes, with and without phosphate fertilizer; and a 1985 farm survey provided price data. The data were integrated using linear programming, and optimal solutions were computed for 36 resource and management scenarios. The high input rotations yielded greater profits under all comparable resource conditions and were associated with greater crop yields and sheep numbers. Profits and ewe numbers increased when native pasture was added to the farm, and increased further with fertilized pasture. Optimal ewe numbers declined with a change from low to high nutritional regimes, but farm profits were little affected. The analysis suggests that the replacement of fallow and lentils by vetch may, with judicious management, lead to more productive and profitable crop-livestock husbandry in similar environments. The programming model used by ICARDA is described in sufficient detail to enable others to repeat or modify the experiment. (Author abstract, modified)

AGRICULTURE

047

* PN-AAV-444

MF \$7.56/PC \$81.51

Abstracts on field beans (*Phaseolus vulgaris* L.), v.11

Gonzalez V., Francy; Franco, Tito L.

International Center for Tropical Agriculture; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

1986, 3v., En

* Also available from: *Centro Internacional de agricultura Tropical, Apartado Aereo 6713, Cali, Colombia*

This journal of 1,228 analytical abstracts provides a specialized guide to the world's literature on field beans (*Phaseolus vulgaris* L.). The abstracts, which are assigned descriptors and complemented by author and subject indexes, present condensed information from journal articles, booklets, reports, theses, manuals, and other conventional and nonconventional material. They are categorized according to the following disciplinary fields: (1) botany, taxonomy, and geographical distribution; (2) plant anatomy, morphology, and cytology; (3) plant physiology; (4) agronomy; (5) plant pathology; (6) pest control and entomology; (7) genetics and plant breeding; (8) nutrition; (9) microbiology; (10) economics and development; (11) field plot technique; (12) grain storage; and (13) uses, industrialization, and processing.

048

* PN-AYY-345

MF \$1.08/PC \$3.51

Late blight of potato : *Phytophthora infestans*

Henfling, Jan W.

International Potato Center; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor) 2nd ed.

1987, 25p. : ill., charts, statistical tables, En

Technical information bulletin / International Potato Center, no.4 Rev. ed.

936411107

* Also available from: *International Potato Center, P.O. Box 5969, Lima, Peru*

One of the most serious fungal diseases of potatoes, late blight occurs almost everywhere potatoes are grown. Although the disease can be easily controlled through the use of fungicides, late blight continues to be a major constraint to potato production worldwide, especially in Third World nations where fairly expensive fungicide applications are not cost-effective. This report provides basic information on: (1) the symptoms of late blight; (2) its biology and epidemiology; (3) control strategies, including proper planting methods and fungicide applications; (4) race-specific and general resistance; and (5) methods for evaluating plant resistance. Charts, illustrations, and references are included.

049

PN-AAW-770

MF \$1.08/PC \$7.93

Plant tissue culture methods : a laboratory manual

Siriwardana, Sunitha

Colorado State University; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

1987, 57p., En

Intended for use as a student laboratory manual, this report presents methods of preparing media and of culturing plant tissue. The manual consists of 14 exercises or "laboratories", each containing an outline (i.e., introduction, purpose, materials, and procedures), an area for writing discussion questions or making comments, a bibliography and, in most cases, laboratory exercises. The following procedures are covered: stock solution and media preparation; aseptic technique; callus, suspension, and meristem culture; *in vitro* fertilization; embryo culture; morphogenesis; somatic embryogenesis; *in vitro* selection for stress; isolation and culture of plant protoplasts; virus indexing; and anther culture.

050

* PN-AAX-845

MF \$5.40/PC \$52.78

Sorghum bibliography, 1983

Prasannalakshmi, S.; Basavaraj, Nalini; Sinha, P.K.

International Crops Research Institute for the Semi-Arid Tropics. Sorghum and Millets Information Center; U.S.

Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

Sep 1986, ix, 400p., En

* Also available from: *International Crops Research Institute for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324 India*

Compiled from over 600 primary periodicals and numerous abstracting journals such as *Agrindex*, *Indian Science Abstracts*, and *Dissertation Abstracts International*, and drawing from a large body of nonconventional literature produced by research centers and libraries in India, Africa, and Latin America, this comprehensive annotated bibliography of sorghum research published during 1983 is the sixth in a series published by the Sorghum and Millets Information Center. The bibliography provides 1,558 citations on, inter alia, sorghum physiology and biochemistry, genetics and breeding, agronomy and cultivation, diseases, pests, and utilization. Entries are arranged by broad subject headings, and within the headings alphabetically by author. Author and subject indexes are included.

051

PD-AAU-711

MF \$2.16/PC \$13.52

Final report : social and economic influences on perimeter management and operation: findings from research in the Maggia Valley, Niger

Goldring, Luin

U.S. Agency for International Development. Bureau for Africa. Niger; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

Jan 1987, vii, 96p. : statistical tables, En

Irrigation schemes are often managed with the idea that farmers on a given perimeter will complete tasks according to a uniform schedule, on the assumption that the farmers can mobilize resources equally. The findings reported herein of research conducted in two dam-fed irrigation perimeters in Niger's Maggia Valley challenge that assumption. Specifically examined were: (1) the sequence, duration, and seasonal variation of farming tasks on irrigated and rainfed plots; and (2) socioeconomic factors affecting farmers' performance of these tasks. The latter included labor availability; access to cash, land, and other productive resources; and power as it relates to land tenure and property, control over agronomic practices, decision-making, and the role of ONAHA, a parastatal charged with managing the perimeters. Findings show that farmers' access to cash, land, labor, and other resources (and hence their production strategies) vary - a factor which should be taken into account in water management and irrigation system design. Changes that might be instituted include flexible water schedules, wider choice in cropping patterns, changes in the size/composition of farmer groups, and designing systems which permit quicker irrigation flows. Strategies for increasing farmer participation in perimeter management, an ONAHA policy objective, are suggested.

052

PN-AAW-830

MF \$1.08/PC \$2.47

International conference on irrigation system rehabilitation and betterment, volume 1: proceedings

Haider, Mohammed

Colorado State University. University Services Center; Consortium for International Development; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

Jan 1987, vi, 14p., En

Irrigation rehabilitation and betterment (R&B) is a twofold process of addressing problems arising from inadequate maintenance and introducing system improve-

ments to upgrade performance. R&B projects are often hampered, however, by inadequate focus on system operation and management, overly rigid implementation schedules, ineffective monitoring, and low sustainability, among other factors. In a 1986 conference on irrigation system R&B projects, representatives from 20 countries plus officials of A.I.D., the World Bank, the International Irrigation Management Institute, and other organizations met to discuss approaches to these and other R&B project design problems. This document, the proceedings of the conference, presents these discussions and a set of guidelines for R&B project design worked out by the participants. Eighteen recommendations are made, including, inter alia, balancing construction and management improvement activities, increasing farmer involvement in project planning and implementation, and improving coordination among donor, lending, implementing, and local organizations.

053

PN-AAW-834

MF \$1.08/PC \$9.36

Irrigation management in Pakistan : four papers

Merrey, Douglas J.; Wolf, James M.

International Irrigation Management Institute

Nov 1986, 66p. : charts, maps, statistical tables, En

IIMI pub 86-03

IIMI research paper, no.4

Despite massive economic investments in development - most of them in irrigation - Pakistan's Indus Valley is one of the poorest areas in the world and the productivity of irrigated agriculture, by all conventional standards of measure, remains very low in comparison with its apparent potential. The four papers presented herein address different facets of this paradox. The first paper looks at Pakistan's Provincial Irrigation Departments, with attention to the implications which financing and staffing structures have on operations and maintenance policy. The remaining papers analyze local-level sociological and ecological processes that have important implications for irrigation system management and for development policy at the macro level. A total of 66 references are cited (1907-1986) collectively. (Author abstract, modified)

054

PN-AAW-403

MF \$1.08/PC \$1.82

Mexico : irrigation water charges in Mexico

Perez, A. Olaiza
U.N. Food and Agriculture Organization (Sponsor)
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
(Expert Consultation on Irrigation Water Charges,
Rome, IT, 22-26 Sep 1986)
26 Sep 1986, 12p., En
Paper no.20

Mexico's laws and policies governing irrigation financing and cost recovery are herein described. Following a discussion of the extent, location, and types of irrigation in Mexico, attention is given in turn to (1) a new law (first effective in 1986) requiring that direct users of irrigation systems contribute 90% of the recoverable value of irrigation works over a 15-year period and a downpayment of 10% in the first year; (2) a 1982 law regulating payments for the abstraction of water; (3) policies to support irrigation investment on private farms through, e.g., credit, tax exemptions, and technical assistance; (4) policies, laws, and regulations concerning operations and maintenance (O&M), including the components of O&M costs, budgeting, types of water charges, and collection methods; (5) farmers' ability to pay water charges; and (6) problems in collecting water charges. It is noted in conclusion that, since irrigation costs are increasing in real terms more rapidly than are agricultural prices, there is a need to broaden the participation of direct users and farmers in cost recovery. Changes in irrigation charges should be made in accordance with three principles: water use efficiency; sufficiency of charges; and fair distribution of costs.

of the on-farm costs). As the first phase of Plan implementation has significantly increased farmer revenues, a study of possible further farmer contributions is being undertaken. Investments in private schemes to irrigate small farms or land owned by small agricultural companies are financed in the same way as are on-farm investments in the public scheme. However, one large private system, which irrigates about 2,000 ha of land owned by a single agricultural company, is financed through the normal banking system. O&M costs in the oases are partially subsidized. Water charges supposedly recover about 50% of these costs, but the true figure may be less, as there is a tendency to postpone maintenance expenditures. While farmers participate in O&M decisions, their labor participation is less than it was 25 years ago because most projects are so technically complex that only the state can operate them.

056

* PN-AYY-488

MF \$1.08/PC \$11.31

Economics and management of Thai marine fisheries

Panayotou, Theodore; Jetanavanich, Songpol
Winrock International Institute for Agricultural
Development; International Center for Living Aquatic
Resources Management; U.S. Agency for
International Development. Bureau for Science and
Technology. Office of Agriculture (Sponsor)
1987, vi, 82p. : charts, statistical tables, En
ICLARM contribution no.384
ICLARM studies and reviews, no.14

* Also available from: International Center for Living Aquatic Resources Management, PO Box 1501, Makati, Metro Manila, Philippines

Thailand's fishing industry is one of the world's ten largest, with a fleet of 20,000 modern vessels and an annual catch of about 2 million tons of fish, but the Thai government's ability to manage the fishing industry has not kept pace. In fact, the rapid development of the Thai trawl fishery and concomitant stagnation of the small-scale coastal fishery have resulted in a dualistic structure - small-scale fisheries employ over 70% of fishermen, but land less than 30% of the total catch. This study documents the profitability of trawl fishing, the poverty of small-scale fishermen, the heavy overfishing of the Gulf of Thailand, and the discrepancy between the catching power of the Thai fishing industry and the management and enforcement capabilities of Thailand and its neighbors. The study concludes that actions to resolve Thailand's fisheries problems would involve (1) an immediate halt to the construction of new trawlers and stricter controls on existing vessels, in order to curtail destructive in-shore fishing and illicit distant-water operations; and (2) fisheries enhancement projects for small- and large-scale fishermen (e.g., artificial reefs, joint ventures with neighboring countries); and (3) the development of alternative sources of

055

PN-AAW-400

MF \$1.08/PC \$1.17

Tunisia : irrigation water charges in the oases of South Tunisia

Essid, Habib
U.N. Food and Agriculture Organization (Sponsor); U.S.
Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
(Expert Consultation on Irrigation Water Charges,
Rome, IT, 22-26 Sep 1986)
26 Sep 1986, [8]p. : map, statistical tables, En
Paper no.17

Current financing of irrigation investment and irrigation operations and maintenance (O&M) costs in the oases of southern Tunisia is described. Under the government's Water Master Plan of the South, major investments are made by the public sector without any cost recovery, but farmers must finance 85% of on-farm investments (credit is available to farmers for up to 70%

employment and animal protein. Includes tables and references (1953-85). (Author abstract, modified)

057

* PN-AAY-490

MF \$3.24/PC \$27.43

Indonesian marine capture fisheries

Bailey, C.; Dwiponggo, A.; Marahudin, F.
International Center for Living Aquatic Resources
Management; Indonesia. Ministry of Agriculture.
Directorate General of Fisheries (Sponsor); Indonesia.
Ministry of Agriculture. Marine Fisheries Research
Institute (Sponsor); U.S. Agency for International
Development. Bureau for Science and Technology.
Office of Agriculture (Sponsor)

1987, xii, 196p. : ill., charts, statistical tables, En
ICLARM contribution no.388

* Also available from: *International Center for Living
Aquatic Resources Management, PO Box 1501, Makati,
Metro Manila, Philippines*

While the sea has always played a large role in Indonesia's cultural heritage, of late the tremendous economic importance of its marine capture fisheries has come to light: in 1982, fishery products contributed \$253 million to Indonesia's export earnings. This comprehensive survey draws on previously unavailable information (e.g., interviews with fishermen, fish dealers, and village leaders and a large amount of "grey" literature from regional universities and government agencies) to give a complete description of the size and state of Indonesia's marine fisheries. After an overview of the sector, separate sections discuss: (1) the size of Indonesia's marine fisheries resources and the potential for their expansion into underutilized areas; (2) the economic structure of the fisheries in terms of employment and productivity; (3) fisheries management and development policies and programs; (4) cost and earnings of medium- and small-scale fishing units; (5) fish marketing and distribution; (6) socioeconomic factors affecting small-scale fisheries development; and (7) implications for future policy and research. Includes 65 tables, 39 figures, and a 21-page bibliography (1934-84).

058

PN-AAX-723

MF \$1.08/PC \$1.56

Integrated strategy to promote a sustainable shrimp mariculture industry in Ecuador

Olsen, Stephen; Figueroa, Eduardo
University of Rhode Island. International Center for
Marine Resource Development; U.S. Agency for
International Development. Bureau for Science and
Technology. Office of Forestry, Environment and
Natural Resources (Sponsor)
Apr 1987, [12]p., En

As the world's leading producer of cultured shrimp since 1983, Ecuador has profited from its shrimp mariculture industry; however, the industry has also been the major cause of changes in Ecuador's coastal ecosystems. This report presents in summary form the principal findings and recommendations developed by the A.I.D. Coastal Resources Management Project for developing a sustainable shrimp mariculture industry in Ecuador. Coastal management issues which are discussed include the declining quality of water, the shortage of post larvae, and the management of wild shrimp stocks. Because the shrimp industry provides important foreign exchange, the report also presents findings and recommendations on measures to safeguard the economic vitality of the industry and encourage the appropriate level of involvement by the Government of Ecuador. Two other issues, technical assistance and public education, are briefly discussed. A concluding section proposes future roles for the project in the continued management of Ecuador's coastal resources.

059

PN-AAW-876

MF \$1.08/PC \$6.76

Inventory of beneficial marine life of Costa Rica's Atlantic coral reef

Robinson, Steve
International Institute for Environment and
Development; U.S. Agency for International
Development. Bureau for Science and Technology.
Office of Forestry, Environment and Natural
Resources (Sponsor)
Mar 1987, ii, 46p., En
9365517

Studying the marine life of Costa Rica's Atlantic coral reef system to identify new fishing opportunities, the author of this report found instead that the coral reefs and their inhabiting sea life are dead or dying and, further, that this has had profound consequences for the economic and cultural patterns of coastal villages. It may also eventually affect the sport fishing industry, a significant source of foreign exchange for the country. Evidence is cited that the reefs are dying because sunlight has been blocked by sediment washing down from banana fields along the Rio Estrella. Based upon his own direct observation and conversations with fishermen, the author describes the prevalence of individual species (adults or juveniles) of: ornamental fish; miscellaneous fish species; invertebrates; food fish (including lobsters, an important commercial species, now declining very rapidly); and marine organisms inhabiting the Gandoca Lagoon. In conclusion, recommendations are made for coral reef rehabilitation, reform of banana field practices, and possible restitution payments for the affected fishermen from the banana companies.

Cereal feed use in the Third World : past trends and projections to 2000

Sarma, J.S.

International Food Policy Research Institute

U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

Dec 1986, 68p. : charts, statistical data, En
Research report / International Food Policy Research Institute, no.57

936411114

* Also available from: *International Food Policy Research Institute, 1776 Massachusetts Avenue, Washington, DC 20036 USA*

In developing countries, the use of cereals as livestock feed has long been outstripping their use as human food, a fact with profound implications for the food security of low-income people and for employment.

Covering 104 developing countries, this study analyzes the growth in cereal use for feed over the period 1966-80 with respect to regional, subregional, and income-related factors; forecasts feed use for the years 1990 and 2000, using alternative projections and assumptions; and discusses policy implications. The dynamic interaction between cereals as food supply and cereals as feed supply is illustrated by case studies of Taiwan and the Republic of Korea, showing that when income rises beyond a certain level, cereal consumption for food declines and consumption of livestock products increases, leading to increased demand for feedgrains. If this demand is not met, domestically or through imports, market forces can drive the prices of both meat and cereal beyond the reach of the poor. Possible strategies for preventing or mitigating this potential problem include (1) the use of labor-intensive, employment-generating livestock production methods and (2) research to increase feedgrain yields and/or substitute fodder and noncereal feeds. However, to formulate appropriate feed strategies, more reliable data on feed use by type of feed and by category of livestock output are needed. Included are 31 data tables and a 2-page bibliography (1980-86).



Increased reliance on grass and other fodder for livestock feed is one way of alleviating food security problems caused by the diversion of cereals from human to livestock consumption.

061

* PN-AAW-840

MF \$1.08/PC \$11.57

Food stamp scheme in Sri Lanka : costs, benefits, and options for modification

Edirisinghe, Neville

International Food Policy Research Institute; U.S.

Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

Mar 1987, 85p. : charts, statistical tables, En

Research report / International Food Policy Research Institute, no.58

936411114

* Also available from: *International Food Policy Research Institute, 1776 Massachusetts Avenue, NW, Washington, DC 20036 USA*

In 1979 Sri Lanka replaced its long-time policy of subsidizing food prices with a direct income transfer scheme, in the form of a food stamp program, aimed at households earning under Rs. 3,600 annually. This report evaluates the new program and makes some suggestions for its improvement. The initial chapters examine the new program and its benefits (as compared with those of the old program), its effectiveness in avoiding "leakages" to unintended beneficiaries, and its effects on fiscal costs and income distribution. Discussed next are patterns of food consumption and nutrition under the new and old programs, the effect of inflation on the real value of food stamps, and the impact of food stamps on nutrition in general and on child nutrition in particular. Key findings are that the new program has led to a deterioration in the nutritional welfare of the households in the lowest income group and has been unable to mitigate the effect of inflation on these households. To help the poorest households, the program should adopt a specific calorie target (although this will vary with budgetary resources) and find suitable criteria for targeting beneficiaries. In any case, supplementary child welfare programs should be continued. Forty-seven tables, five appendices, and a 4-page bibliography are included.

062

PN-AAY-147

MF \$1.08/PC \$10.92

Inter-state variations in food consumption, nutritional adequacy and levels of poverty

Gupta, Saroj

Techno Economic Research Institute; U.S. Agency for

International Development. Bureau for Asia and Near East. India (Sponsor)

Jun 1987, vii, 73p. : chart, statistical tables, En

USAID / India occasional paper, no.4

India's accumulation of large stocks of foodgrains has had little effect on overall levels of poverty. Using the National Sample Survey Organization's consumer ex-

penditure estimates for 1961-2 to 1983 for 15 major Indian states, this study assesses differences among states and income classes and between rural and urban areas in food consumption patterns, nutritional adequacy, and poverty; foodgrain production and consumption linkages are examined as well. The study concludes that by and large poor states have remained poor and better off states have remained better off. Among the findings are: (1) per capita expenditures on foodgrains declined in most states from 1961-2 to 1983; (2) in 1961-62 per capita calorie intake was above recommended levels in almost all states, whereas in 1983 this was the case in only four states; (3) general reductions in the intake of cereals, pulses, and milk during the study period led to increased poverty in most of the states; (4) poverty levels reached a peak during 1968-74, and were as a general rule higher in rural areas; and (5) foodgrain consumption was negatively associated with foodgrain production. A possible short-term solution to India's poverty problem could be to improve surplus grain distribution, but ultimately steps should be taken to increase the income of the rural poor through increased agricultural assistance. Included are 35 tables and 4 figures.

063

* PN-AAX-327

MF \$3.24/PC \$26.78

Nutritional aspects of project food aid

Forman, Martin J.

U.N. Administrative Committee on Coordination.

Sub-committee on Nutrition; U.S. Agency for International Development. Bureau for Science and Technology. Office of Nutrition (Sponsor); (Workshop on Nutritional Aspects of Project Food Aid, Annapolis, MD, US, 14-18 Jan 1985)

1986, viii, 43p. + appendix : charts, map, statistical tables, En

* Also available from: *Sub-Committee on Nutrition, Administrative Committee on Coordination, United Nations, c/o Food Policy and Nutrition Division, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy*

Means of evaluating and enhancing the nutritional impact of project food aid (i.e., food donated in support of specific school feeding, maternal/child health feeding, or Food for Work projects) were examined in a January 1985 workshop in Annapolis, Maryland, the proceedings of which are presented here. The workshop focused on six issues: targeting food aid; food aid as income transfer; stimulating catch-up growth through integrated health/food aid programs; phasing out food aid programs; evaluating food aid programs; and nutrition education. Both summaries and complete texts of the workshop papers are provided, along with recommendations for each of the six issues.

064

PN-AAY-371

MF \$2.16/PC \$17.03

Study of trilateral food aid transactions

Morton, Alice L.; Enger, Warren J.; et al.
RONCO Consulting Corp.; U.S. Agency for International
Development. Bureau for Science and Technology.
Office of Rural and Institutional Development
(Sponsor)
28 Apr 1987, viii, 61p. + 4 annexes : charts, statistical
tables, En

Each of the four trilateral food aid transactions examined in this study involved the provision of U.S. rice or wheat under the P.L. 480 Title II program to a particular African country in exchange for a surplus of a locally produced commodity, which was then provided free to a nearby recipient country then in deficit. The political and policy considerations, developmental and market impacts, costs, and management procedures involved are analyzed; it is found that trilateral transactions afford policy influence and generate positive reactions in both of the developing countries involved. Although it is probably only in a long-range sense that the agreements open or develop a market for similar U.S. food products, the overall purchasing power of the two developing countries is enhanced for all U.S. goods and, since private sector firms are employed wherever possible, developmental benefits accrue to the economies as a whole. Although these exchanges were carried out under unusual, emergency conditions, their cost and time requirements seemed to be no different from those in normal bilateral arrangements. It is concluded that these transactions offer a useful tool for promoting development and that standardized procedures should be developed to facilitate them. A case study of one transaction and a short bibliography are included.

065

PN-AAY-060

MF \$3.24/PC \$26.00

World food needs and availabilities, 1987/88

U.S. Dept. of Agriculture. Economic Research Service.
International Economics Division; U.S. Agency for
International Development (Sponsor)
Aug 1987, i, 196p. : graphs, statistical tables, En

Detailed country tables and narratives present assessments of the quantities and dollar values of additional food needs of developing countries for 1987/88 and 1988/89, especially the need for cereals, the main food aid commodity. Status quo (SQ) cereal shortfalls in 69 developing countries are estimated at 8.8 million tons, 2.2 million above 1986/87 needs. Specifically, SQ shortfalls will increase to 4.3 million tons in sub-Saharan Africa and to 2.2 million tons in Asia, while North African shortfalls are expected to decline, and Latin America's to remain constant at 499,000 tons. When requirements for cereal stock adjustments are added, total needs increase to 9.1 million tons.

Shortfalls in cereals needed to meet minimum nutritional standards (MNS) in 1987/88 are estimated at 19.7 million tons, an increase of 2.2 million tons, with the greatest needs in South Asia (6 million) and East Africa (5 million). Southern Africa's MNS needs will increase by 1.4 million tons.

In 1988/89, cereal SQ shortfalls worldwide are expected to decline to 7.9 million tons overall, with declines in North Africa and South Asia and increases in Latin America and East Africa. MNS needs for 1988/89 should decline to 18.8 million, with improvements in South Asia and increased needs in East and Southern Africa and Latin America. Information on pulses, vegetable oils, and dairy products is also included. (Author abstract, modified.)



Trilateral food aid, in which food is provided to a country in exchange for a surplus of a locally-produced commodity which is in turn given to a third country, effectively promotes development in both recipient countries.

066

PN-AAX-051

MF \$1.08/PC \$1.56

A.I.D. policy guidance on AIDS

U.S. Agency for International Development
Bureau for Science and Technology, Office of Health
17 Feb 1987, 11p., En

The Agency for International Development's official policy guidance on acquired immune deficiency syndrome (AIDS) is presented. In general, the Agency will use its limited resources to support WHO, the lead donor in the fight against AIDS, to the extent this can be done without jeopardizing priority activities (e.g., child survival) or risking cultural and political backlashes. Specifically, A.I.D. will: (1) fund studies of the long-term development and economic effects of AIDS; (2) collaborate with other donors in information exchange; (3) provide in-country and participant training related to AIDS prevention and control; (4) support public health education efforts through operations research projects and through WHO; (5) procure and supply condoms and perhaps help WHO procure condoms on a reimbursable basis; (6) support WHO efforts to prevent blood transmission of AIDS, fund the purchase of blood screening equipment and supplies, and possibly help adapt diagnostic technologies to developing countries; (7) support efforts (excluding abortion) to prevent perinatal transmission of AIDS; and (8) support WHO efforts to reduce the impact of AIDS on individuals, groups, and society in general. The Agency will not fund research or activities that can be funded by other U.S. Government agencies or by WHO. Excluded in particular are major bilateral anti-AIDS programs and efforts to develop an AIDS vaccine. Guidance for monitoring the effect of AIDS on the Agency's immunization, breastfeeding, and family planning programs is included.

067

PN-AAX-157

MF \$2.16/PC \$14.04

Child survival : risks and the road to health

Galway, Katrina; Wolff, Brent; Sturgis, Richard
Westinghouse Co. Institute for Resource Development,
Inc.; U.S. Agency for International Development.
Bureau for Science and Technology. Office of
Population (Sponsor)

Mar 1987, 101p. : ill., charts, maps, statistical tables, En
9363000; 93659513
DPE-3000-C-00-2017-00; PDC-1406-I-11-4062-00

An alarming statistic - that a child born in a high-mortality African or Asian country is 20 times as likely to die before the age of 5 than a child born in the United States - introduces this report on child survival. The report begins by briefly outlining world patterns and rates of child survival. The body of the report is divided into two main sections. The first discusses major impediments to child survival (i.e., diarrheal disease, vac-

cine-preventable diseases, acute respiratory infection, malaria, malnutrition, and high-risk fertility behavior) and current strategies for their removal. Because child mortality rates are often high in impoverished societies, part two of the report analyzes the socioeconomic factors affecting child survival, including education and literacy levels, availability of modern health services, income per capita and government expenditures, food availability, and water and sanitation facilities. Included are 12 tables, 45 figures, 3 maps, and 3 fact sheets.

068

PN-AYY-022

MF \$1.08/PC \$5.20

Child survival strategy for Senegal

Mitchell, Marc D.; Rogosch, John
Management Sciences for Health; U.S. Agency for
International Development. Bureau for Science and
Technology. Office of Health (Sponsor)

7 Aug 1987, iii, 36p., En
9365927
DPE-5927-C-00-3083-00

Several factors make Senegal one of the small number of countries to which A.I.D. has accorded special priority for child survival (CS) activities - the severity of the problem (children under 5 make up about 18% of the total population but account for over 50% of all deaths), the Government of Senegal's (GOS) strong commitment to addressing the problem, the availability of infrastructure and absorptive capacity, and the presence of a continuing A.I.D. program. Although the leading causes of child death in Senegal (diarrhea, respiratory infections, malaria, measles, and tetanus) can be prevented, the health system is unable to deliver the needed interventions. Presented herein is A.I.D.'s plan to improve this situation. The plan examines each technical intervention (immunizations, oral rehydration therapy, family planning and antenatal care, malaria control, and nutrition improvement) and discusses the current A.I.D., GOS, and other donor programs in these areas, as well as specific problems, and the range of options available for long- and short-term improvements. Also discussed are more general areas where A.I.D. can contribute to CS in Senegal - assistance in coordinating the national CS program and in developing a self-financing health care program and expansion of the successful Rural Health Services Project.

069

PN-AAX-052

MF \$1.08/PC \$6.76

Diarrheal disease control strategy (oral rehydration therapy and related intervention)

U.S. Agency for International Development
Dec 1986, 26p. + 6 appendices, En

Acute diarrhea is a leading cause of child death in developing countries. This document outlines A.I.D.'s oral rehydration therapy (ORT)-based strategy for controlling this disease. An initial chapter presents guidelines for developing country-level ORT strategies: (1) develop comprehensive programs; (2) stress ORT case (including dietary) management by health personnel and mothers and, for serious cases, appropriate referral; (3) make children 0-2 years of age the primary target group; (4) stress the sustainability of ORT and related interventions; (5) involve both the public and the private sectors; (6) collaborate actively with other donors; and (7) link ORT efforts to preventive and primary health care programs. A second chapter discusses specific implementation issues such as country selection, policy dialogue, planning, health worker training, communications and social marketing, production and distribution of oral rehydration salts (ORS), management information and evaluation systems, and research and information dissemination. Concrete steps outlined by A.I.D. for implementing its ORT strategy are specified. Technical appendices detail ORT indicators and home treatment procedures as well as ORS composition and manufacturing standards.

070

PN-AAX-653

MF \$1.08/PC \$11.83

Individual and family choices for child survival and development : a framework for research in sub-Saharan Africa

Buvinic, Mayra; Graeff, Judith; Leslie, Joanne
International Center for Research on Women

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Office of Women in Development (Sponsor)

Apr 1987, iii, 74p. + attachment : statistical table, En

Bibliography: p.65-74

9060001

PDC-0068-G-SS-6139-00

Although child survival and development (CS&D) services benefit children, it is their mothers who decide whether or not to adopt these services. This report focuses on the community and individual factors behind the choice of African women either to try CS&D services or to maintain their use. Key community factors are: the typical engagement of women in food crop production with its seasonal variations of demands on time; the informal (i.e., non-monetary) nature of most women's work; women's lack of access to formal support (credit or extension services) and their reliance on informal social support (their female kin); and the division of labor in households with and without men. Individual factors include women's level of formal education and their social learning experiences in health and other areas. These factors, together with the characteristics of the CS&D service or practice itself, affect a woman's assessment of its potential costs and benefits and of her own resources and ability to produce the desired outcome; continued use of a

CS&D service depends primarily on the outcome of the trial. The authors present a model, developed from a literature review, analyzing women's decisions which incorporates these factors and make suggestions for its testing in the field. A 10-page bibliography (1970-87) and a lengthy table evaluating income-generating projects for women are appended.

071

*** PN-AAW-871**

MF \$1.08/PC \$9.36

Malnourished children : an economic approach to the causes and consequences in rural Thailand

Chutikul, Sirilaksana

East - West Center. East - West Population Institute; U.S. Agency for International Development. Bureau for Science and Technology. Office of Population (Sponsor)

Dec 1986, vii, 64p. : statistical tables, En

Papers of the East - West Population Institute, no.102
9363000

* Also available from: East - West Population Institute, East - West Center, 1777 East - West Road, Honolulu, HI 96848 USA. \$3.00 per copy

This economic analysis of the causes and consequences of malnutrition in young children in rural Thailand views parents as productive agents who make interrelated decisions regarding family size, labor force participation, expenditures, and intrahousehold resource distribution in the face of constraints imposed by their resource limitations and their particular "production technology." Using data on preschool and school children obtained from a village-level survey in Northeastern Thailand, the study finds a familiar pattern: low income, high fertility, low nutrient intake, and poor nutritional status and health. One unexpected finding, however - that a mother's formal employment is detrimental to child nutrition - has important policy implications regarding job creation and income generation. Malnutrition and high fertility are also shown to have adverse effects on the mental ability of school-age children. Further, by controlling for environmental factors, the study offers some evidence that malnutrition has a direct and independent link to poor mental ability. (Author abstract, modified.)

072

PN-AYY-136

MF \$1.08/PC \$10.66

Reaching the people : creating a national drug abuse prevention resource centre

Giltrow, David R.

Academy for Educational Development, Inc.; U.S.

Agency for International Development. Bureau for

Asia and Near East. Pakistan (Sponsor)

5 Dec 1986, 78p. : chart, statistical tables, En

Executive summary: PN-AYY-192

9361406

PDC-1406-I-00-4052-00

Drug abuse in Pakistan has become a problem of alarming proportions, but efforts to stop the rapid increase in heroin and other narcotics abuse have been hampered by Pakistan's linguistic and cultural diversity, misinformation about the nature of drug abuse, and ignorance. This study presents a preliminary design for an A.I.D.-supported drug education center - the Drug Abuse Prevention Resource Centre. The Centre can make a vital contribution to Pakistan's efforts to fight drug abuse by serving as a central agency for the development of (1) mass media campaigns (radio and television messages, public rallies, posters, etc.); (2) newspaper and feature articles for placement in key publications; (3) audiovisual training materials; (4) training programs for lawyers, doctors, government officials, and other professionals; and (5) a drug abuse research program. In addition, the Centre would play an active role in the establishment of "drug-free" zones, a concept not unlike the Neighborhood Watch program in the United States, in which local authorities and residents work together to limit drug activity. By developing outreach materials addressing different segments of the Pakistani population, and by establishing branch offices in the provinces, the Centre will be able to reach and affect all parts of Pakistan. Staffing requirements and scopes of work for technical advisors to the center are appended.

073

PN-AAX-678

MF \$1.08/PC \$7.54

Community participation in water supply project as a stimulus to primary health care : lessons learned from A.I.D. - supported and other projects in Indonesia and Togo

Eng, Eugenia; Brisco, John; et al.

Camp Dresser and McKee, Inc.; U.S. Agency for

International Development. Bureau for Science and

Technology. Office of Health (Sponsor)

May 1987, x, 56p. : charts, En

WASH technical report, no.44 WASH activity no.180

9365942

5942-C-00-4085-00

Community participation in water supply projects stimulates participation in later health activities, according to this field study, which also develops a conceptual framework for understanding, operationalizing, and evaluating community participation. Sixty villages in Togo and Indonesia were evaluated for their degree of participation in the planning, construction, and operation of four water supply projects (two funded by A.I.D.) and then for their degree of completion of a DPT (diphtheria, pertussis, and tetanus) immunization series. The study found that significantly more children completed the immunization series in villages where participatory water projects had been carried out than in villages with nonparticipatory water projects or with none at all. Recommendations aim at promoting participatory water supply projects and at linking these projects with health activities because of the former's stimulus effect. A discussion of conceptual models for understanding community participation and a copy of the questionnaire employed in the study are appended.

POPULATION

074

* PN-AAX-682

MF \$1.08/PC \$10.40

Recent fertility trends in the Pacific Islands

Levin, Michael J.; Retherford, Robert D.
East - West Center. East - West Population Institute;
U.S. Agency for International Development. Bureau
for Science and Technology. Office of Population
(Sponsor)

Aug 1986, vii, 72p. : charts, statistical tables, En
Papers of the East - West Population Institute, no.101
9363000

* Also available from: *East-West Population Institute,
East-West Center, 1777 East-West Road, Honolulu, HI
96848 USA. \$3 per copy*

Applying the own-children method of fertility estimation to census data, this study computes fertility trends over the past 20 years for most of the Pacific Island nations (Melanesia, Micronesia, and Polynesia), French Polynesia being the key exception. Numerous figures and tables document findings on, inter alia, annual total fertility rates, annual marital total fertility rates, age-specific birth rates, age-specific marital birth rates, singular mean ages at marriage, and marital fertility control. While the presentation of the data is primarily descriptive, the following general observations are made. (1) Reproductive behavior in the Pacific is highly diverse, both among and within the three major divisions. (2) Mortality, including child mortality, is low, providing parents with incentives to reduce family size. (3) Throughout the region, age at marriage has been relatively high for some time, so that fertility declines, where they have occurred, have been due primarily to the advent of marital fertility control.

075

PN-AAY-369

MF \$1.08/PC \$6.50

Family planning management training : case study evaluation in Senegal

Engelberg, Gary; Wolff, James
Management Sciences for Health; U.S. Agency for
International Development. Bureau for Science and
Technology. Office of Population (Sponsor)

6 Jun 1987, 46p., En, Fr
9363039; 6850248
DPE-3039-C-00-5075-00

A.I.D.'s Family Planning Management Training (FPMT) project is developing a case study evaluation protocol for use in assessing/refining the assistance it provides to developing country FP organizations. Details of the protocol's development, supporting documentation, and the results of a pilot test - an assessment of FPMT's assistance to the AID-supported Family Health and Population Project in Senegal - are reported here. Findings suggest that FPMT assistance was successful in three areas: (1) supervision (FPMT developed functioning su-

perisory protocols for clinical and IEC personnel); (2) management systems support (a central warehouse inventory management system was developed and implemented, as were systems for estimating contraceptive needs, tracking client service information, and accounting/budgeting); and (3) participation in the Francophone Regional Advisory Committee (regional relationships with other FP directors were strengthened, and the resolve of the Senegalese director to play a key role in developing a national FP policy was fortified). FPMT's experience in Senegal underlines the importance of open, frequent communications with clients and, on a broader level, the need for FPMT to communicate more effectively to both clients and Missions the comprehensive and ongoing nature of its management development approach.

076

* PN-AAY-123

MF \$1.08/PC \$7.15

Population policy and individual choice : a theoretical investigation

Nerlove, Marc; Razin, Assaf; Sadka, Efraim
International Food Policy Research Institute; U.S.
Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)

Jun 1987, 52p. : charts, En
Research report / International Food Policy Research
Institute, no.60
936411114

* Also available from: *International Food Policy
Research Institute, 1776 Massachusetts Ave. NW,
Washington, DC 20036 USA*

Policies to control population growth depend on assumptions about parents' motivation for having children. This study examines the population implications of the "endogenous fertility" assumption - that is, parents care about the numbers and the welfare of their children and respond to economic constraints and opportunities when making choices affecting their children. Specific attention is given to the implications of the assumption for three issues - optimal population size and growth rate; real and false externalities; and inter- and intragenerational income distribution. The study also examines the "old age security hypothesis", which views children as a capital good. Various non-coercive population policy alternatives involving taxes, public goods (e.g., education), and child allowances (positive or negative) are also considered. Suggestions for future research, various illustrations, mathematical appendices, and a bibliography are included.

HOUSING AND URBAN PROGRAMS

077

PN-AAX-347

MF \$3.24/PC \$35.88

Jamaica shelter sector strategy, phase I - final report

Jones, Eleanor B.; Webber, Maureen; et al.
Urban Institute; U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Jamaica (Sponsor); U.S. Agency for International Development. Bureau for Private Enterprise. Office of Housing and Urban Programs (Sponsor)

Feb 1987, 2v. : charts, map, statistical tables, En

Using the Housing Needs Assessment Model developed by the Urban Institute, this report forecasts Jamaica's need for new and upgraded housing units through the year 2006 and estimates the investments required under three alternative plans for meeting housing needs. It also reviews the institutions involved in Jamaica's housing sector, summarizes planning efforts since the mid-1970's, and analyzes the recent performance of the housing sector and its key constraints. The report finds that some 15,550 new and 9,700 upgraded units will have to be built annually to meet Jamaica's housing needs by 2006 and that the major sectoral constraint is lack of financing - even households with incomes in the upper quintile have difficulty affording the least expensive private sector housing. Critical issues that need to be resolved in formulating a national housing strategy include closing the serious gaps in housing-related information and developing policies to: (1) substantially expand the productivity of the formal housing sector; (2) reduce the costs and risks inhibiting formal private sector production; (3) focus public sector housing efforts on designing solutions (e.g., sites and services) affordable by the poorest households; (4) expand public sector production capacity by shifting some of its management responsibilities and risks to the private sector; and (5) enhance production by the informal housing sector.

078

PN-AAY-418

MF \$2.16/PC \$15.73

Proceedings of the second international shelter conference and Vienna recommendations on shelter and urban development

National Association of Realtors; U.S. Agency for International Development. Bureau for Private Enterprise. Office of Housing and Urban Programs (Sponsor)

(International Shelter Conference, 2nd, Vienna, AT, 10-12 Sep 1986)
1987, 126p., En

Proceedings are presented of the Second International Shelter Conference, held in Vienna, Austria, September 10-12, 1986 and attended by 32 senior housing professionals from a wide range of private sector firms and national institutions. After introductory chapters on the new housing agenda set by the changing development situation and on the economics of Third World shelter efforts, conference papers are presented. These covered: (1) worldwide shelter conditions today; (2) the contribution of shelter to national economic development; (3) a framework for housing markets and housing finance; (4) resource mobilization through household savings; (5) policy and programs for urban and shelter lending during the coming decade; (6) housing progress in the Third World; and (7) lessons for developing countries from Canadian and U.S. shelter systems. Chapter 4 presents the conference's detailed recommendations regarding shelter and urban policy formulation, urban management and planning, urban land policies and procedures, infrastructure services, housing production, and housing finance, as well as reflections by officials from A.I.D. and three other international agencies. Appendices include a 4-page list of references (1955-86).

ENVIRONMENT AND NATURAL RESOURCES

079

PN-AAX-605

MF \$3.24/PC \$38.09

Final report : assessment of national parks, wildlife sanctuaries and other preserves development in Thailand

Kasetsart University. Faculty of Forestry; Thailand.

Ministry of Agriculture and Cooperatives. Royal Forest Dept.; Thailand. Office of the National Environment Board (Sponsor)

U.S. Agency for International Development. Bureau for Asia and Near East. Thailand (Sponsor)

Mar 1987, xii, 138p. : charts, map, statistical tables, En

The final edition of a working document intended to meet the information needs of governmental and non-governmental agencies, indigenous and external, that are directly or indirectly concerned with the management of Thailand's protected wildlife areas is presented. The tripartite purpose of the report is to: (1) assess accomplishments, the current status and plans for future development, and principal problems/issues for the development/maintenance of Thai national parks and reserves; (2) establish a common understanding of these problems/issues among Thai officials and key personnel from potential donor agencies; and (3) identify a realistic agenda for collaboration with foreign park and sanctuary management agencies and interested donors. As such, the report first presents objective information on the evolution and development of Thailand's protected areas system and the system's current status. Part two discusses major trends in the administration and development of protected areas. Part three analyzes major issues/constraints and presents recommendations. Project concept papers, which are based on the recommendations, are annexed. (Author abstract, modified)

080

* PN-AY-567

MF \$4.32/PC \$46.93

Peruvian anchoveta and its upwelling ecosystem : three decades of change

Pauly, D.; Tsukayama, I.

Institute of the Sea of Peru; German Agency for Technical Cooperation; International Center for Living Aquatic Resources Management; U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

1987, xii, 351p. : graphs, statistical tables, En
ICLARM contribution no.391

ICLARM studies and reviews, no.15
9311050

* Also available from: ICLARM, P.O. Box 1501, Makati, Metro Manila, Philippines

The anchoveta fish (family *Engraulidae*) occurs exclusively along the turbulent coasts of Peru and Chile. This book, the fruit of a collaborative effort among re-

search institutions on three continents - IMARPE in Peru, GTZ in West Germany, and ICLARM in the Philippines - presents a comprehensive study of the recruitment (population growth) patterns of the northern/central portion of the anchoveta stock, i.e., off the Peruvian coast. The study is the first attempt ever to use time series data from Peru (covering 1953 to 1984) to test Lasker's hypothesis that storms, by dissipating food-rich microlayers in which anchoveta larvae can feed, lead to their starvation and thus to recruitment failures. The text is divided into four main sections. Part one contains three studies on oceanographic and atmospheric conditions in the region. Parts two and three, each containing six analyses, treat the dynamics of the anchoveta stock and of major anchoveta predators and competitors, respectively. A final section presents three papers on managing the Peruvian anchoveta ecosystem; the last of these, an attempted synthesis of the entire document, indicates steps towards integrating what is now known of fish dynamics off Peru into a large-scale simulation model for use in formulating a comprehensive fishery management plan for that system. All the studies are technical in nature and include extensive references. Species, geographic, and author indexes are appended.

081

* PN-AAX-989

MF \$2.16/PC \$15.21

Planning for the development of a biological diversity action plan in the Philippines

DuBois, Ransom

International Institute for Environment and Development; U.S. Agency for International Development. Bureau for Science and Technology. Office of Forestry, Environment and Natural Resources (Sponsor)

Jun 1987, 11p. + 7 appendices : charts, En
9365517

DAN-5517-A-00-2066

* Also available from: International Institute for Environment and Development, 1717 Massachusetts Ave., NW, Suite 302, Washington, DC 20036 USA

A consultancy in the Philippines, reported here, was undertaken in June 1987 to examine the possibilities for coordination among four recently proposed environmental projects - A.I.D.'s Biological Diversity Action Plan Project (BioD), the World Wildlife Federation's Integrated Protected Area System Study (IPAS), the World Bank's ffARM Study, and the Government of the Philippines' own National Conservation Strategy (NCS). In this report, the consultant makes several suggestions regarding the design of the BioD project, the possibilities for interproject coordination between BioD and IPAS, and areas in which support could be provided to the NCS (no suggestions are made concerning ffARM, as only limited information was available on this project). Appendices include: profiles of academic,

ENVIRONMENT AND NATURAL RESOURCES

governmental, and other organizations concerned with the environment and of ongoing projects related to biological diversity; a conceptual approach to development of the NCS; the ffARM Study's initiating memorandum; and the IPAS proposal.

082

* PN-AY-499

MF \$2.16/PC \$14.69

Selected annotated bibliography on natural resources and the environment of Indonesia and guide to additional resources = Sumber daya alam dan lingkungan Indonesia sebuah bibliografi pilihan dan beranotasi serta petunjuk sumber informasi tambahan

Murphy, Laura

International Institute for Environment and Development; U.S. Agency for International Development. Bureau for Science and Technology. Office of Forestry, Environment and Natural Resources (Sponsor)

Aug 1987, viii, 105p., En, In
9365517

* Also available from: *International Institute for Environment and Development, 1717 Massachusetts Ave., Suite 302, NW, Washington, DC 20036 USA, single copies free*

Commissioned by USAID/Jakarta for use in internal planning, this annotated bibliography, published in dual-language (English and Indonesian) format, presents information sources from the 1980's on the environment and natural resources in Indonesia. Included (in order of importance) are environmental or natural resource assessments, syntheses of research, and other overviews; reports by consultants and researchers working on projects of government or donor agencies (especially A.I.D.); and popular articles. The citations are categorized as follows: (1) general (environmental policy, strategies, and regulations, sector reviews and discussions); (2) forestry and land use; (3) water and soil conservation; (4) coastal and marine resources; (5) conservation of biological diversity; (6) pesticides; (7) the impacts of industrial development; (8) human ecology and the urban environment; (9) institutions and initiatives (efforts and concerns of governmental, non-governmental, university, and donor agencies). Citations of special significance (e.g., hallmark legislation, studies frequently referenced by others) are marked with a single or double asterisk. Following each citation, sources (original implementing agencies, libraries, collections) are given in parentheses; a list of these sources and information on how to locate them is provided at the end of section two, which provides an alphabetical guide to individuals and agencies visited by, or at least recommended to, the author. The annotations (not abstracts) are meant to guide readers to citations which suit their purpose.

083

PN-AY-394

MF \$1.08/PC \$11.44

Report of the forestry private sector study, September 28 - November 27, 1986

Kernan, Henry; Bender, W.L.; Bhatt, Bal Ram
U.S. Agency for International Development. Bureau for Asia and Near East. Nepal
Nov 1986, [83]p. : maps, statistical tables, En

Despite the 20 donor-supported forestry projects currently active in Nepal, the country's forestland is being depleted at a rate of some 25,000 ha annually. This review of Nepal's private sector forestry industry proposes a series of reforms aimed at both increasing investments in the industry and reversing the crippling deterioration of the forests. These reforms include: (1) recognition of private forests by the Government of Nepal (GON) and development of policies requiring private enterprise to take responsibility for their management; (2) focusing the resources of the Forest Department on specific areas to be termed national forests, on research, and on cooperation with local and private forestry; (3) transferring to the panchayats the authority to manage forests not owned by the GON or by private firms; (4) directing reforestation efforts to private farmlands; (5) dismantling and selling parastatals now attached to the Ministry of Forests and Soil Conservation, as appropriate; (6) securing raw materials for industrial processing through agreements with wood-based industries, contracts with private landowners to grow wood as a crop, and a Reforestation Fund to be supported by assessments on such industries; (7) privatizing tree seedling nurseries; and (8) planting more trees along roadways and waterways. Among the appendices are a 60-item bibliography (1972-86) and details on Nepal's forest industries and public forestry personnel.

084

PN-AAY-405

MF \$1.08/PC \$11.83

Accelerating private investment in energy conservation : identification and analysis of key barriers and policy tools

Hagler, Bailly and Co.; U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor)

Feb 1987, v.p., En

HBC reference no.86-181

9365728

DAN-5728-C-00-3073-00

Barriers to private sector investment in energy conservation (EC) in AID-assisted countries are systematically classified in this report. The major classification is into four broad types: (1) technical (lack of awareness, data, and skilled personnel, as well as of EC technologies, goods, and services); (2) economic (low world oil prices and domestic price distortions); (3) financial (lack of internal sources of capital and poor access to adequate credit); and (4) institutional (lack of government commitment to EC, public resistance, lack of EC standards, foreign exchange policies, and tariff and import restrictions). A number of sector-specific barriers in industry, agriculture, electric power, transportation, and building construction are also identified. The study includes a review of the policy tools available to governments to encourage EC, makes related recommendations for A.I.D. Missions, and briefly identifies additional information needs. Among study findings are that: (1) most of the literature does not explicitly differentiate between general and sector-specific barriers; and (2) the barriers to foreign private investment are generally not conservation-specific. Appendices include check-lists of the barriers grouped according to the classification system and cross-referenced to the study's bibliography.

085

*** PN-AAX-171**

MF \$1.08/PC \$6.11

Evaluation of international photovoltaic projects, volume I : executive summary

Eskenazi, D.; Kerner, D.; Slominski, L.

Sandia National Laboratories; U.S. Dept. of Energy.

Office of Conservation and Renewable Energy.

Division of Photovoltaic Energy Technology

(Sponsor); U.S. Agency for International

Development. Bureau for Science and Technology.

Office of Energy (Sponsor)

Sep 1986, x, 28p. + attachment : charts, graphs, En 9365710

* Also available from: NTIS, U.S. Dept. of Commerce, 5285 Port Royal Road, Springfield, VA 22161 USA

Findings from a cost-efficiency and performance evaluation of some 2,700 photovoltaic (PV) systems in use in 45 countries are summarized. The report compares PV systems with conventional systems of similar output for five applications: water pumping, communications, vaccine refrigeration, lighting and home power, and multi-use systems. Data were gathered from technical reports, user questionnaires, and interviews with experts. Major findings are as follows. (1) The technical problems initially experienced with PV systems have been largely overcome and the majority of the systems have been well accepted by users on the basis of their reliability, independence from fuel, and minimal maintenance requirements. (2) The greatest constraint on implementing PV systems in developing countries is lack of an established infrastructure to support training, maintenance, and repair. (3) PV systems (especially smaller ones) can be the least-cost option on a life-cycle basis, even though initial capital costs are high. Included are financial analyses, by application and system size, comparing PV and conventional systems under favorable and unfavorable financial assumptions.

086

PN-AAW-931

MF \$1.08/PC \$10.53

Financing energy conservation in developing countries

Hagler, Bailly and Co.; U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor)

Feb 1987, v.p. : statistical tables, En

9365728

Accelerating the private sector's participation in energy activities is a primary goal of A.I.D.'s Office of Energy. The difficulty in financing energy conservation (EC) projects - the theme of this study - is one of the most serious obstacles to the achievement of this end. Chapter 1 introduces some basic concepts concerning private sector evaluation of EC projects and discusses traditional approaches to financing EC investments (i.e., corporate and project financing), as well as incentive measures and assistance programs (e.g., subsidized-interest loans, purchase of energy savings, reducing or eliminating tariffs) that the public sector can use to overcome the barriers to financing conservation investments. Chapter 2 examines a number of innovative approaches to financing EC projects; these new approaches, which are designed to overcome the barriers posed by traditional financing techniques, include: shared-savings and joint-venture arrangements; energy service agreements; variable-payment loans; limited-term, guaranteed-payback loans; and true leases. The paper concludes by discussing the roles which the government can play in promoting the use of these innovative methods. (Author abstract, modified)

087

PN-AYY-403

MF \$2.16/PC \$14.43

More with less : managing energy and resource efficient cities

Bendavid-Val, Avrom

U.S. Agency for International Development. Bureau for Science and Technology. Office of Multisectoral Development

1987, x, 101p. : ill., charts, En
9365402

A.I.D.'s Managing Energy and Resource Efficient Cities (MEREC) project was a pilot effort to help local institutions in growing secondary cities solve resource-related problems through technological and managerial innovations. This review of MEREC's experiences in three pilot cities is intended to share with policymakers and program managers the project's lessons regarding costs, benefits, difficulties, funding sources, and project replicability in different settings. Following an introduction, Chapter 2 describes activities in the first MEREC demonstration city, Tacloban, in the Philippines; the next chapter discusses the overall MEREC approach as it has been refined through experience. Chapters 4 and 5 are devoted to the demonstrations in the other two cities, Guarda, Portugal, and Phuket, Thailand; they highlight the consequences of the unique administrative and environmental circumstances of each city and describe the local MEREC projects conducted in each. Chapter 6 provides a summary of lessons learned from the three demonstrations and addresses specific questions related to replicability in other countries. Short appendices listing sources of more information and other MEREC publications are included. (Author abstract, modified)

088

PN-AAX-169

MF \$4.32/PC \$40.69

Peoples' institutions for forest and fuelwood development : a report on participatory fuelwood evaluations in India and Thailand

Morse, Richard; Tingsabadh, Charit; et al.

East - West Center. East - West Resource Systems Institute; East - West Center. East - West Environment and Policy Institute; Appropriate Technology Development Association; Chulalongkorn University. Social Research Institute; U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor)

Mar 1987, vii, 317p. : statistical tables, En
9365728

LAC-5728-G-SS-4083-00

Project evaluations, like project designs, should take into account the perceptions of the affected population. Reported here are the results of two evaluations - con-

ducted not by the usual external experts, but by farm families and other local residents - of fuelwood projects in, respectively, a hill area of northern India, and a rainfed rice-growing area in Thailand. The evaluations' conclusions differed widely - sometimes diametrically - from those of external evaluation teams. This report presents the evaluations' methodologies, detailed findings, and policy and action recommendations, and points out several lessons common to both evaluations, among them the following. (1) Since individual villages can differ widely in social and biophysical features affecting forest and fuelwood development, projects should be specifically tailored to the village level. (2) The folk knowledge of forestry possessed by villagers (especially by women, who bear the greatest fuelwood-related burden) is often a neglected resource in project planning and management. (3) The importance of developing an atmosphere of trust and partnership between villagers and the government must not be underestimated. The report includes recommendations for strengthening the capacity of local institutions to participate in project planning, implementation, and evaluation.

089

PN-AYY-406

MF \$2.16/PC \$14.69

Potential and policy issues of industrial cogeneration in the Dominican Republic : final report

Hagler, Bailly and Co.; Dominican Republic. National Energy Policy Commission (Sponsor); U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor); U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Dominican Republic (Sponsor)

Apr 1987, v.p. : statistical tables, En
9365728

DAN-5728-C-00-3073-00

A \$4 billion foreign debt, declining world sugar prices, and the high cost of imported oil make it imperative for the Dominican Republic to increase its output of thermal and electrical energy. This study evaluates the potential of industrial cogeneration - the burning of industrial wastes to generate electricity and low grade heat and steam - for attaining this end. Specifically, the study determines steam and electricity requirements in various industries, examines pertinent economic and financial data, and discusses approaches to dealing with institutional impediments to cogeneration. Key findings are that private sector cogeneration could provide 10-15% of the country's installed electrical generating capacity by 1997, and that the food processing sector has the largest potential for cogeneration. Recommendations are to: (1) formulate a rational cogeneration policy, as well as a regulatory framework articulating public and private sector roles; (2) create a cadre of cogeneration specialists to conduct feasibility studies for industrial clients; (3) make electricity pricing

ENERGY

realistic; (4) initiate an information, awareness, and technology transfer campaign; (5) conduct 1 or 2 demonstration projects; (6) provide additional credit resources to finance cogeneration investments; and

(7) stress the cogeneration potential of the sugar industry. Included are a detailed action plan, as well as 46 tables and two technical appendices.



The use of sugar cane residues as fuel for generating electricity could significantly alleviate the Dominican Republic's critical energy situation.

090

PN-AAY-139

MF \$1.08/PC \$7.54

Decentralization of the educational system of El Salvador : an analysis of opportunities

Hanson, Mark; Garms, Walter; Heymans, Carlos
Academy for Educational Development, Inc.; U.S.
Agency for International Development. Bureau for
Asia and Near East. Pakistan (Sponsor)
28 Jul 1986, iv, 40p. + 5 annexes : charts, map,
statistical tables, En

The feasibility of two key reform strategies announced by El Salvador's Ministry of Education (MOE) in 1982 is examined: (1) decentralization (in which the local community generates and spends its own resources for education) and (2) deconcentration or regionalization (in which the community participates in decisions on the use of MOE resources). The MOE's reform efforts have been constrained, according to the study team, by two kinds of bottlenecks: (1) those external to the MOE - lack of clear directives from the central government, the MOE's difficulty in making decisions at the regional level that require other Ministries' approval, and the archaic bureaucracy within which the MOE must work; and (2) those internal to the MOE - the central level's reluctance to relinquish power and resources to the regions, the weakness of the existing information system, the influence of political patronage, managers' tendency to live apart from the communities where they work, and the inexperience of local school district (*nucleo*) directors. While various factors (e.g., the scarcity of local resources, high illiteracy, lack of a tradition of local autonomy, and the civil war) make decentralization infeasible, deconcentration is found to be both appropriate and viable. A total of 13 recommendations are made to help make this process a reality.

091

PN-AAX-491

MF \$12.96/PC \$140.40

Haiti : education and human resources sector assessment, IEES, improving the efficiency of education systems = Haiti : evaluation du secteur de l'éducation et des ressources humaines, AMESED, amelioration de l'efficacite des systemes educatifs

Florida State University; Howard University; Institute for International Research, Inc.; State University of New York at Albany; U.S. Agency for International Development. Bureau for Science and Technology. Office of Education (Sponsor); U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Haiti (Sponsor)
Mar 1987, 4v. : charts, map, statistical tables, En, Fr

A review of over 265 documents and interviews with more than 250 indigenous officials provide the basis for this AID-funded analysis of Haiti's educational sector. Respectively, the report's four volumes: (1) synthesize the conclusions of the entire report, present an economic and fiscal analysis of the sector, and review the coordination of donor activities; (2) analyze the preprimary and primary educational levels, reviewing textbooks and school feeding programs in annexes; (3) examine secondary, higher/university education, and teacher training; and (4) analyze management training, vocational-technical education, and nonformal education. Chapters dealing with particular educational branches are structured as follows. First, they examine the evolution and present status of the branch in question, current plans and objectives, and indicators of performance. Next, these data are analyzed in terms of internal and external efficiency, degree of equity and access, management and supervision, and costs and financing. Progress made in each of these categories is evaluated in light of the system's major constraints and most pressing needs. Finally, conclusions are drawn and a series of recommendations are made to improve the quality and quantity of educational outcomes, improve system efficiency, and orient future investment in the most productive directions. (Author abstract, modified)

092

PN-AAL-096

MF \$1.08/PC \$11.83

Hassan II Institute of Agriculture and Veterinary Medicine in Morocco : institutional development and international partnership

Eriksen, John H.; Busch, Lawrence; et al.
U.S. Agency for International Development. Bureau for Asia and Near East. Morocco; U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation
Jul 1987, xiv, 28p. + 10 appendices : map, statistical tables, En
A.I.D. project impact evaluation report, no.65
6080088

A.I.D.'s assistance to Morocco's Hassan II Institute of Agriculture and Veterinary Medicine (IAV) has been uniquely successful among projects to train agricultural researchers and educators in Francophone Africa. This impact evaluation reviews A.I.D.'s support to the IAV over the past 18 years, and assesses the kind of support required to ensure continued success.

Starting with a single Moroccan faculty member in 1969, the IAV now has a 350-member faculty, more than 85% of which is Moroccan, and IAV graduates now occupy a wide range of management positions in government agencies and state-run and private agricultural enterprises. The IAV has played a central role in the modernization of the Moroccan agricultural sector,

EDUCATION

and has become a major regional resource as well, drawing many students from other African countries.

IAV's success can be traced to many factors, including the commitment and excellence of the IAV's charismatic leadership, a complementary long-term commitment on the part of A.I.D. and the primary Title XII contractor (the University of Minnesota), a curriculum model that integrates classroom experience with rural realities, and the existence of a broad base of secondary school graduates in science. However, IAV remains fragile; it must now face the problems of a change in leadership, mounting operating costs, and concerns on the part of private sector employers as to the relevance of IAV training.

IAV's experience illustrates the crucial importance of high-level political commitment; strong, effective institutional leadership; and the flexibility to adapt a wide range of faculty experience and attitudes that "fit" institutional needs. Building a successful university faculty is possible, but takes time: in this case, 18 years of hard work by A.I.D. and the University of Minnesota. Withdrawing support too early may jeopardize the gains achieved. (Author abstract, modified)

093

PN-AAX-847

MF \$2.16/PC \$13.65

Indonesia education and human resources sector review, April 1986 : chapter one, executive summary

Bock, John; Allen, Dwight; et al.

Florida State University. Learning Systems Institute; Indonesia. Ministry of Education and Culture (Sponsor); U.S. Agency for International Development. Bureau for Science and Technology. Office of Education (Sponsor)

Apr 1986, i, 83p. + 2 annexes, En
9365823

A fully collaborative effort by A.I.D. and Indonesia's Ministry of Education and Culture, this comprehensive review of the Education and Human Resources (EHR) sector in Indonesia assesses the country's education and training system in terms of national goals and the current 5-year plan, the status of current educational activities, identified EHR needs, the constraints to meeting these needs, and the opportunities and policy options for overcoming the constraints. Specific objectives of the assessment are to: (1) increase the use of available data in EHR sector decisionmaking; (2) assess three key sector areas - quality of instruction, access, and equity; (3) influence medium- and long-range planning, including A.I.D.'s Education Policy Planning Project; and (4) identify areas requiring further research. This document presents an executive summary of the entire review, including a summary of the status and policy options for each individual subsector. Published separately are full reviews of economic and financial analysis (PN-AAX-848); management of education (PN-AAX-849); policy analysis and educational data systems (PN-AAX-850); preprimary and primary educa-

tion (PN-AAX-851); secondary education (PN-AAX-852); vocational and technical education (PN-AAX-853); teacher education and training (PN-AAX-854); higher education (PN-AAX-855); nonformal education (PN-AAX-856); and external assistance (PN-AAX-857).

094

PN-AAL-094

MF \$1.08/PC \$10.53

Malawi : Bunda Agricultural College

Welsch, Delane; Flora, Jan; et al.

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation
Jul 1987, xii, 19p. + 9 appendices : map, statistical tables, En

A.I.D. project impact evaluation report, no.64
6120054; 6900054

When Malawi attained independence in 1964, few of its citizens had any advanced training in the agricultural sciences, and most top-level agricultural jobs in the public and private sectors were filled by expatriates. This impact evaluation report reviews A.I.D.'s involvement with the Bunda Agricultural College, which was founded within the University of Malawi (UM) in 1966 to address this personnel constraint. Bunda has been the focus of two A.I.D. projects (covering the periods 1966-70 and 1976-82) to finance campus construction, provide long-term expatriate faculty, and train Bunda faculty at U.S. universities.

Bunda's record over the past 20 years has been one of outstanding accomplishments as a teaching institution. During this period, Bunda has granted 861 diploma degrees and 300 B.S. degrees; nearly all the expatriates in the agricultural sector have been replaced by Malawi nationals. The relevance, quality, and efficiency of Bunda's educational program remain high, even though the College has had to adjust in recent years to a shrinking operational budget.

Despite Bunda's success, changes in Malawi and in the College itself now dictate a new approach. Demand for Bunda graduates is projected to decline during the remainder of the 1980's. At the same time, Bunda's still growing Ph.D. faculty focuses almost exclusively on teaching and has had but little involvement in Malawi's national research program. Clearly, Bunda's traditional emphasis on teaching needs to be adjusted to focus more on research, but such a change would require a closer institutional link with the Ministry of Agriculture (MOA). Bunda's relative isolation from the MOA and even from other colleges within the UM has caused problems in faculty career development, in designing educational programs that address national priorities, and in the college's ability to contribute to the larger agricultural research/extension systems already in place in Malawi. Future programs to develop agricultural colleges should include measures to strengthen inter-institutional relations.

095

PN-AAW-581

MF \$4.32/PC \$43.03

Teaching English by radio : interactive radio in Kenya

Imhoof, Maurice; Christensen, Philip R.

Academy for Educational Development, Inc.; U.S. Agency for International Development. Bureau for Science and Technology. Office of Education (Sponsor)

1986, xiv, 333p. : ill., statistical tables, En

9311017

AID/DSPE-C-0051

The Kenya Radio Language Arts project was an ambitious, innovative effort to show that "interactive radio instruction" - a method which fosters continuous interaction between children and the radio characters - can substantially improve the teaching of a second language (in this case, English) in primary schools. Results

of the project show important gains in student achievement, enthusiastic acceptance by both students and teachers, low costs, and high cost-effectiveness. This book documents the project and is divided into two main parts. Part 1, on underlying concepts and basic operations, includes chapters on: the context for collaboration; developing and managing the instructional system; instructional principles and methods; adapting the curriculum to radio; formative evaluation; writing broadcast scripts; and producing radio lessons. Part 2, on project results, contains chapters on the project's evaluation strategies, the development of the tests administered to the children, overall project results, and strategies and costs for nationwide dissemination of the project. A brief final section presents the Project Director's summary of the project. Appendices include: sample teachers' notes, lesson plans, and scripts; and lists of instructional and film/video materials available from the contractor and of select project documents.



As participants in the innovative Kenya Radio Language Arts project, these students made important gains in academic achievement.

TECHNOLOGY AND COMMUNICATIONS

096

PN-AAX-686

MF \$1.08/PC \$8.32

Design and installation of rural telecommunications networks : lessons from three projects

Goldschmidt, Douglas; Tietjen, Karen; Shaw, Willard D. Academy for Educational Development, Inc.; University of the West Indies, Kingston (Sponsor); Indonesia. Directorate General for Higher Education (Sponsor); National Telecommunications Enterprise of Peru (Sponsor); U.S. Agency for International Development. Bureau for Science and Technology. Office of Education (Sponsor)

Jan 1987, ii, 51p. : ill., charts, En
9365811
AID/DSPE-C-0081

Implemented via pilot programs in Indonesia, the West Indies, and Peru, A.I.D.'s Rural Satellite Program has combined existing local technology with INTELSAT to test the use of telephone technology - specifically, audioconferencing - to support development efforts. This report documents the specifics of the design, installation, and operation of the three systems and related technology, as well as lessons learned from the experience. Program results show that the idea is sound, the technology can be developed, and the costs are reasonable. In addition, the challenges of developing countries' financial, technical, and human resource limitations led to innovations in such areas as: satellite bridging to conserve channel use; a network "gating" system to reduce line noise; the first-time use of a six-meter earth station with INTELSAT domestic service; the design of a small, solar-powered earth station for rural use; specially adapted equipment to withstand humidity; and new graphics systems. The program has given both A.I.D. and the host countries the technical ability to help others establish innovative uses of satellite technology, sparing them the arduous trial and error technology transfer process. Extensive diagrams, figures, and pictures illustrate the report.

097

* PN-AAW-864

MF \$2.16/PC \$15.86

Directory of librarians in international development

Brekke, Elaine; Brady, Eileen; et al. Washington State University Libraries
U.S. Agency for International Development (Sponsor)
1987, [121]p., En

* Also available from: Washington State University Libraries, 221 Holland Library, Pullman, WA 99164-5610 USA

A directory of over 100 experienced librarian consultants and information specialists, all of whom have served overseas either in development projects or as

advisors to a developing country in Asia, Africa, Latin America, or the Middle East, is presented. Based on responses to a questionnaire circulated to all land-grant institutions, to the state university of each of the 50 U.S. states, and to U.S. library schools, the directory provides information on each expert's name, title, address, telephone number, education, area of specialization, as well as brief narrative descriptions of his/her project or other relevant experience. The main body of the text is arranged alphabetically. Indexes by area of specialization/experience, host country served, and language proficiency are included.

098

PN-AAX-690

MF \$1.08/PC \$8.32

Handbook for planning telecommunications support projects

Tietjen, Karen; Shaw, Willard D. Academy for Educational Development, Inc.; University of the West Indies, Kingston (Sponsor); Indonesia. Directorate General for Higher Education (Sponsor); National Telecommunications Enterprise of Peru (Sponsor); U.S. Agency for International Development. Bureau for Science and Technology. Office of Education (Sponsor)

Jan 1987, ii, 52p. : ill., charts, En
9365811
AID/DSPE-C-0081

As the success of Rural Satellite Program pilot projects in Indonesia, the West Indies, and Peru has shown, telephone-based satellite telecommunications systems, and in particular audioteleconferencing, can be a reliable and cost-effective way to support training and extension activities in education, agriculture, and health. This handbook was developed by the Rural Satellite Program to assist planners in using telecommunication technology to support development efforts. Focusing for the most part on the pre-feasibility and feasibility stages of a telecommunications project, the handbook: (1) presents a general planning methodology; (2) delineates socioeconomic and structural issues that may affect communications projects; (3) provides guidelines for assessing communications needs and developing applications; (4) suggests means of assessing available telecommunications infrastructure and services; (5) addresses cost issues and ways of identifying the resources needed for project implementation; and (6) describes ways to organize and analyze information as a prelude to the operational planning phase. Each section includes guidelines for collecting information on factors which must be considered if telecommunications systems are to be an effective development tool. Charts and illustrations are included. (Author abstract, modified)

099

PN-AAX-473

MF \$1.08/PC \$12.35

Integrated development of English - Spanish machine translation : from pilot to full operational capability - technical report

Leon, Marjorie; Schwartz, Lee A.; Vasconcellos, Muriel
Pan American Health Organization; U.S. Agency for
International Development. Office of the Science
Advisor (Sponsor)

Oct 1986, 89p. : ill., En
9365542

DPE-5542-G-SS-3048-00

Machine translation of English to Spanish would aid immeasurably the rapid diffusion of knowledge in Spanish-speaking America, especially in the health field. Accordingly, in 1983 A.I.D. provided a grant enabling the Pan American Health Organization (PAHO) to develop its English-Spanish translation program, ENGSPAN, which is based on PAHO's earlier, Spanish-English program, SPANAM, in use since 1980. The major accomplishments of the A.I.D. grant period are detailed here, with emphasis on innovative solutions to difficult problems. Successive chapters detail the different subprograms and operations which allow the program to analyze the context in order to translate more accurately phrases and idiomatic expressions requiring more than word-to-word conversion. ENGSPAN also makes use of specialized mini-dictionaries in such areas as law, finance, and agriculture, employing in all over 40,000 vocabulary entries. Further developments and directions are discussed, along with plans to rewrite ENGSPAN to make it capable of being run on a microcomputer instead of the present mainframe systems. Extensive appendices showing translation procedures and actual unedited machine translations complete the report.

100

PN-AAX-685

MF \$3.24/PC \$27.30

Peru rural communication services project: final evaluation report

Mayo, John K.; Heald, Gary R.; et al.

Florida State University. Learning Systems Institute.

Center for International Studies; University of the
West Indies, Kingston (Sponsor); Indonesia.

Directorate General for Higher Education (Sponsor);

National Telecommunications Enterprise of Peru

(Sponsor); U.S. Agency for International

Development. Bureau for Latin America and the

Caribbean (Sponsor); U.S. Agency for International

Development. Bureau for Science and Technology.

Office of Education (Sponsor)

Feb 1987, x, 198p. : charts, maps, statistical tables, En
9365811; 5980581

Although a developed communications system is central to increased growth in isolated rural areas, only the recent introduction of earth-satellite technology has made such networks feasible. Utilizing beneficiary interviews and site visits, this final report evaluates the Rural Communications Services Project (RCSP), a pilot project to establish a telecommunications network in San Martin, an isolated high jungle area in northeastern Peru.

RCSP, as implemented by the *Empresa Nacional de Telecomunicaciones del Peru* (ENTEL), installed earth stations at three major cities in San Martin, and linked four secondary towns to the stations through radio telephone service. While project duration was expected to be three years, site selection and installation alone took three years, and the project itself lasted six years. Cost underestimates also contributed to the delay in implementation, and once the equipment was installed, technical problems caused further delays. The radio telephone equipment was especially prone to failure, although it should be noted that performance of the system improved markedly over the course of the project.

Despite these problems, there was immediate demand for the systems, especially from business and commercial interests. During the project's first two and one half years, some 207,441 calls were placed, generating \$272,000 in revenue. Audioteleconferencing (ATC) services, developed in cooperation with the Ministries of Agriculture, Health, and Education, were used by the Ministries and ENTEL, primarily as a substitute for face-to-face training.

Despite demand, however, system revenues were unable to cover operating costs, let alone contribute to capital recovery during the first two years of operation. Benefits to individuals and communities were harder to assess, although communication alternatives (e.g., letters, telegrams) were more expensive than phone calls, and interviews suggested that the value of the call exceeded its price. Similarly, the cost of face-to-face training far exceeds that of a typical ATC seminar. While the evaluation concludes that the RCSP makes a good argument for projects of this type, it warns that transfer of sophisticated communication technology is very difficult and requires thorough planning and innovative management practices to be successful.

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PN-AAW-653	005	PN-AAX-723	058	PN-AAY-371	064
PN-AAW-655	045	PN-AAX-730	033	PN-AAY-381	030
PN-AAW-770	049	PN-AAX-733	032	PN-AAY-392	012
PN-AAW-830	052	PN-AAX-844	006	PN-AAY-394	083
PN-AAW-834	053	PN-AAX-845	050	PN-AAY-403	087
PN-AAW-840	061	PN-AAX-847	093	PN-AAY-405	084
PN-AAW-847	060	PN-AAX-882	011	PN-AAY-406	089
PN-AAW-848	039	PN-AAX-883	010	PN-AAY-411	041
PN-AAW-854	007	PN-AAX-884	009	PN-AAY-418	078
PN-AAW-864	097	PN-AAX-955	008	PN-AAY-488	056
PN-AAW-871	071	PN-AAX-966	031	PN-AAY-490	057
PN-AAW-876	059	PN-AAX-972	026	PN-AAY-499	082
				PN-AAY-567	080

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Title _____			
2.	<input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	PC MF	_____ _____
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Title _____			
6.	<input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	PC MF	_____ _____
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7.	<input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	PC MF	_____ _____
Title _____			
8.	<input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	PC MF	_____ _____
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