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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, Center for 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?	Veuillez 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 REPUESTAS 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 at ano, publicado por la División de Información sobre el Desarrollo, Centro de Información y Devaluación del Desarrollo, Departamento de Coordinación de Programas y Politicas.
¿ 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 endesarrollo. Tales instituciones cuenian 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 analisis 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 mas 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		Serial title and number, date, pagination, and language
Author(s)			
Institution(s)	Sinclair, J.B.; Jackobs, J.A. University of Illinois at Urbana-Champaign. College of Agriculture. International Soybean Program		Publisher
Meeting	(Conference on Soybean Seed Quality and Stand Estab- lishment, Colombo, LK, 25-31 Jan 1981)		
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		
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-AAZ-587** MF \$3.24/PC \$37.96

Creating opportunities for change : approaches to managing development programs

White, Louise G.
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, xvii, 281p., En
Studies in development management.
Published by Lynne Rienner Publishers, Inc.
Summary report: PN-ABB-242
9365317

Even given a favorable policy environment and adequate resources, development programs will not succeed without strong management. This study, focusing on management at the program level (rather than, as has recently been the trend, at the project level), contends that program management has its own particular dynamics. As programs are systems of activities where central units provide direction and support and actual delivery is carried out by other units, program managers face a broader set of questions than if they were managing autonomous projects. They have such varied tasks as bringing together different sets of constituencies with different aims, working with policymakers to reshape broad goals and translate them into feasible programs, designing organizations for service delivery and administration, and even mobilizing resources to support their program. This book presents a basic management framework and then explores six approaches within that framework that have been influential in development literature: goal-directed analysis, organized anarchy, bureaucratic process, institutional analysis, social learning, and political influence. The report outlines the initial assumptions of each of these approaches and describes how each has been extended and developed in practice. A concluding chapter compares the approaches and considers their implications for managing development programs. Includes extensive notes and a 30-page bibliography.

002 **PN-AAZ-588** MF \$4.32/PC \$39.65

Organizational change as a development strategy : models and tactics for improving Third World organizations

Hage, Jerald; Finsterbusch, Kurt
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, xv, 293p., En
Studies in development management
Published by Lynne Rienner Publishers, Inc.
9365317

Are the organizational models of the West applicable to the Third World? The authors of this volume answer with a qualified yes - if correct strategies for organizational change are employed. Chapter 1 examines the major strains of Western thought on organizational change, while Chapter 2 explains the contingency theory of organization, which holds that different situations (especially different levels of market demand and of technological sophistication) call for different organizational forms. Chapters 3 and 4 use contingency theory to examine twelve case studies from developing countries: six cases in which the purpose of a project was to change an organization, and six cases in which the purpose was to improve community services via organizational change. The major conclusions are: (1) at least six different organizational models - four of which were developed in Western organizational theory - can be effective in the Third World; and (2) many of the successful projects demonstrate the utility of contingency theory. Chapter 5, drawing on organizations from both the developed and developing worlds, suggests lessons for change agents. Provided in an epilogue are a comprehensive statement about the larger issue of how organizational change can best serve societal development, and a two-part strategy for bringing about such development.

GENERAL DEVELOPMENT

003

PN-AAZ-675

MF \$2.16/PC \$20.80

A.I.D. Development Information Center manual

Logical Technical Services Corp.
U.S. Agency for International Development. Bureau for
Program and Policy Coordination. Center for
Development Information and Evaluation (Sponsor)
Jul 1988, 147p., En
OTR-0000-C-00-4446-00

A.I.D. Development Information Center (DIC) managers are often called upon to meet the diverse information needs of USAID Missions with few resources and little or no professional training in library science. This document, a complete operations manual for Mission DIC's, provides essential information and guidance to DIC managers and other Mission staff charged with establishing or maintaining a DIC. The manual, which is based on the combined experience of several Missions, is organized into three sections: managing a DIC, managing and organizing information resources, and providing services. These sections discuss in detail every aspect of DIC organization and operation, including (inter alia) facility planning, user assessments, computerization, selecting and deselecting resources, resource classification schemes, ordering A.I.D. and non-A.I.D. information resources, and developing outreach services to help disseminate information and encourage use of the DIC. Appendices include lists of recommended A.I.D. and non-A.I.D. resources for DIC collections, as well as the classification scheme and cataloguing guidelines governing Mission DIC's. Includes 31 charts and tables.

004

PN-AAZ-838

MF \$1.08/PC \$9.62

Peace Corps small projects design and management : training manual for volunteers and counterparts

Wzorek, Carol
U.S. Peace Corps. Office of Programming and Training.
Information Collection and Exchange
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Program (Sponsor)
Jan 1987, 91p., En
9361421

To meet the growing concern that projects funded under the A.I.D./Peace Corps Small Projects Assistance (SPA) program may not represent a community's genuine needs or priorities, the Peace Corps has conducted a series of 2-3 day workshops on fostering community involvement in project design, implementation, and evaluation. The workshops also aim to increase Peace Corps volunteers' and community members' ability to use new management tools (e.g., problemsolv-

ing, proposal writing) and to determine the appropriate use of external assistance for community development. Provided here is the trainers' manual for conducting such a workshop, whether for the SPA program or any other type of community project. Separate sections discuss (1) the characteristics of successful projects; (2) problem analysis and project identification; (3) setting project objectives; (4) identifying project resource needs; (5) testing project feasibility; (6) determining project roles and responsibilities; and (7) monitoring and evaluating small community projects.

005

PN-ABA-123

MF \$1.08/PC \$7.02

Policy reform in developing countries : the influence of bilateral donors

Bivin, Julie
Midwestern Universities Consortium on International
Affairs
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Rural and
Institutional Development (Sponsor)
5 Aug 1988, i, 52p., En

Following the lead of multilateral organizations such as the World Bank and the International Monetary Fund, bilateral donors are increasingly making development assistance contingent upon certain policy reforms or structural adjustment by the recipient governments. As A.I.D.'s experience with policy-related aid is already well-documented, this paper examines the roles of five other major bilateral donors - the United Kingdom, the Federal Republic of Germany, the Netherlands, France, Sweden, and Japan. The report describes the major instruments used in policy-related aid: policy dialogue; conditionality; financial assistance; technical and sector assistance; and debt forgiveness. A discussion of donor coordination, the role of multilaterals, and sustainability is included. Presented next are case studies of the five donors, outlining their respective policy objectives and the specific instruments each employs; a summary of bilateral trends is included as well. A final section suggests a potential future role for bilateral donors in promoting structural adjustment and policy reform. Includes a 2-page bibliography.

006

*PN-ABA-229

MF \$1.08/PC \$1.82

Project management techniques for performance monitoring

McLean, Diana
International Service for National Agricultural Research
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)

Jun 1988, 10p., En
ISNAR working paper, no.13
936411113

** Also available from: International Service for National
Agricultural Research, P.O. Box 93375, 2509 AJ, The
Hague, Netherlands*

Agricultural research organizations are increasingly using a project management approach to ensure thorough planning and to allocate scarce resources in a more rational way. This paper, using on-farm maize research as an example, describes and compares four simple techniques for monitoring research performance by tracking resources, outputs, and time. It looks at each of the techniques - task lists, bar (Gantt) charts, milestone (deliverables) charts, and networks - in order of complexity and notes their advantages and disadvantages. The author warns, however, that these techniques are only applicable where a workplan has been devised in advance, targets or milestones have been identified, and administrative reporting systems are reasonably operational. Whether lists, charts, or networks are used, the crucial challenge to research managers is to develop reasonable research proposals, precisely define inputs and outputs, and accurately estimate resource needs. (Author abstract, modified)

007

PN-ABA-317

MF \$1.08/PC \$5.33

Beyond the project : the quest for sustainability in the Third World, working paper

Gow, David
Development Strategies for Fragile Lands
Development Alternatives, Inc.
Tropical Research and Development, Inc.
Earth Satellite Corp.
Social Consultants International
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Rural and
Institutional Development (Sponsor)
(Sustainable Development : in Search of Lasting
Solutions, Cambridge, MA, US, 22-23 Apr 1988)

Jun 1988, iii, 38p., En
9365438
DHR-5438-C-00-6054-00; 527-0000-C-00-7841-00

Current thinking about sustainable development is characterized by a tendency on the part of development institutions to valorize the intellectual "planning" phase of project design, and to place key personnel in centralized planning facilities, while the actual work of implementing development projects, which is usually performed by technicians and other "lower level" field personnel, often goes unacknowledged. What is needed, according to this study, is a reassessment of the assumptions that underlie Western notions of "sustainable development" and the institutions that promote it. Separate sections are devoted to defining problematic terms, identifying the primary constraints on sustainable development (including political, economic, environmental, technological, and institutional factors), and proposing an integrated approach to development resting on three interrelated groups of factors: political support and commitment, technology and the natural resource base, and development management strategies. Achieving sustainable development, the paper concludes, is not simply a matter of transforming host country conditions; it is a process that necessarily transforms the donor as well. Includes a 7-page bibliography.

GENERAL DEVELOPMENT

008

PN-ABA-128

MF \$1.08/PC \$7.41

Women and export manufacturing : a review of the issues and A.I.D. policy

Joeke, Susan; Moayed, Roxana
International Center for Research on Women
U.S. Agency for International Development. Bureau for
Program and Policy Coordination. Office of Women in
Development (Sponsor)

Jul 1987, 52p., En

9060001

OTR-0001-C-00-0212-00

Included in A.I.D.'s export promotion program is support for offshore production by U.S. companies in so-called export processing zones (EPZ's) in developing countries. What advantages and disadvantages accrue to the women who hold about 80% of the 1 million jobs in these zones? A review of the literature on the subject

worldwide reveals a complex situation. On the basis of women's actual employment alternatives, EPZ employment clearly provides a steady income under conditions no worse than in other sectors. At the same time, EPZ's perpetuate occupational and wage discrimination by sex, may in some industries subject women to particular health hazards, and may improve women's financial position only in the short term. Faced with this situation, A.I.D. should adopt a twofold policy. (1) It should try to improve women's quality of life and job satisfaction by encouraging EPZ employers to tolerate workers' associations and unions and to provide transportation to and from work, health care, food aid, child care facilities, training and job referral, and savings schemes. (2) A.I.D. can consider EPZ's a convenient site in which to prepare women for work after they leave the EPZ's, e.g., by establishing savings and credit programs to help workers and their families establish small businesses and through training to help women workers find new employment or become self-employed. (Author abstract, modified).



Women are playing a major role in the development of the African small enterprise sector.

009

*PN-AAZ-129

MF \$1.08/PC \$3.12

Private and public sectors in developing country grain markets : organization issues and options in Senegal

Newman, Mark D.; Sow, P. Alassane; NDoye, Ousseynou
Michigan State University. Dept. of Agricultural Economics

U.S. Agency for International Development. Bureau for Africa. Senegal (Sponsor)
1987, vii, 14p., En

MSU international development papers. Reprint, no.12
Originally published as Document de travail no.1985-1
by the Bureau of Macro-Economic Analysis, Senegal
Agricultural Research Institute

6850223

685-0223-C-00-1064-00

* Also available from: Michigan State University, Dept. of Agricultural Economics, Agricultural Hall, East Lansing, MI 48824-1039 USA

Structural adjustment for many countries involves defining appropriate private and public sector roles, particularly in agricultural marketing. One hallmark of the policy packages being advocated is increased reliance on the private sector to carry out the agricultural marketing tasks which before independence were handled by public and parastatal agencies. Faced with high costs, considerable unreimbursed credit, and a variety of other factors, Senegal abolished its *de facto* national grain and oilseeds marketing board in 1980 and embarked on an experiment involving both the development of a legal private grain trade and occasional forays into the grain market by a public agency - the Food Security Commissariat. This paper uses survey data to examine the grain marketing system which has developed in Senegal and explores the policy issues and options raised by the Senegalese experience. Findings suggest that where private and public market alternatives exist side by side, policymaking is a difficult task, but actual implementation of government policy decisions (e.g., enforcing a price policy) can be even harder. (Author abstract, modified)

010

PN-AAZ-556

MF \$2.16/PC \$14.30

Trade, aid and development : general evidence and the EEC experience with particular reference to developing countries in Asia and the Near East

Ernst, Ulrich F.W.

U.S. Agency for International Development. Bureau for Asia and Near East. Sri Lanka

Sep 1987, 47p. + attachment : charts, statistical tables, En

What role does trade play as a development tool? Contributing to the debate on this question, this literature review, based largely on the experience of the European Economic Community (EEC) in the Asia and Near East (ANE) region, reviews the general theoretical and empirical arguments concerning the relationship between trade and growth, briefly describes broad patterns of trade between EEC and ANE countries, and outlines the confusing melange of protectionism, preferential treatment, and direct and indirect aid that characterizes EEC policies - as well as those of its member nations - toward developing countries. A basic conclusion is that the tariff preferences and other trade-related assistance offered by the EEC to ANE countries have not contributed much to these countries' economic development. The key lesson learned is that domestic policies in ANE countries play a more important role than measures taken by external governments, so that policy dialogue and aid conditionality appear to be the most promising options for donor countries and agencies.

011

*PN-AAZ-573

MF \$1.08/PC \$2.47

Thinking economically : applying two classical concepts to grassroots enterprise development

Dichter, Thomas W.; Zesch, Scott

Technoserve. Replication and Dissemination Dept.
U.S. Agency for International Development. Bureau for Food for Peace and Voluntary Assistance. Office of Private and Voluntary Cooperation (Sponsor)

1987, 14p. : ill., En

Findings '87

9380280

PDC-0280-A-00-6205-00

* Also available from: Technoserve, 148 East Ave., Norwalk, CT 06851 USA

Even at the grassroots level, economic concepts such as "comparative advantage" and "opportunity costs" play a crucial role in determining enterprise viability. These concepts help business planners choose the best, most profitable use of their resources given the constraints they face. This paper explores the meaning, difficulties, possibilities, and implications of the use of these economic tools, especially in the context of assistance to small Third World enterprises by private voluntary organizations (PVO's). Even the smallest individual enterprises in the Third World are being drawn into a wider commercial network, and as they struggle to compete their managers must begin to use the same kind of economic analysis used by business elsewhere. Economic tools should be applied not just during the start-up of a business but throughout the life of the enterprise in response to changing macroeconomic conditions. Through hands-on management training, PVO's can transfer the economic skills that small-scale

ECONOMICS

entrepreneurs need in order to seek out new opportunities and respond to changing trends. An additional point is that these tools should not only be applied to the local client firms, but should also be used by the funding PVO's in deciding whom and how to help. (Author abstract, modified)

012

PN-AAZ-400

MF \$2.16/PC \$15.34

Handbook of private and economic profitability analysis

Jansen, Doris J.; Ruiz de Gamboa, Alberto M.
U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Ecuador
Mar 1988, 116p. : statistical tables, En

While an individual enterprise may be "privately profitable" under certain economic conditions and government policies, it does not automatically follow that

it is "economically profitable" for the nation as a whole. This handbook, written in terms accessible to the non-economist, shows how an analysis of the "private" (using market prices) and the "economic" profitability (using opportunity costs) of a productive sector can provide answers to various questions such as the following. (1) How (privately) profitable is production for export versus production for the domestic market and how sensitive is this profitability to various government policies? (2) In terms of economic profitability, what are the foreign exchange savings or earnings effects of producing a particular good, what other products should be produced, and what should the supporting policies be? (3) Is the present mix of policies hurting efficient or supporting inefficient producers? The handbook explains step-by-step how to conduct private and economic profitability analyses in terms of one activity - the export of flowers. A final chapter examines the results of private and economic profitability analyses for seven nontraditional export firms in Ecuador and for Zimbabwe's manufacturing sector. Extensive tables and a program for computerized analysis are included.



Support for small, labor intensive firms is integral to A.I.D.'s private enterprise promotion policy.

013

PN-AAZ-467

MF \$1.08/PC \$3.51

Divestiture of underperforming assets : a guide for privatisation?

Floor, Richard E.; Madigan, Denise R.; Young, Jean A.
Center for Privatization
U.S. Agency for International Development. Bureau for
Private Enterprise (Sponsor)
1 Aug 1986, 26p., En

Despite the growing trend towards privatization among Third World governments, there remains considerable doubt about the best way for a government to implement a "privatization plan." This document argues that the experience of private corporations in the divestiture of unprofitable assets offers a close analogy to the problems of governmental privatization efforts. To explore this analogy, the author develops a hypothetical comparison between a small Third World country seeking to privatize its public busing enterprise and a manufacturer of high tech hardware seeking to divest itself of its unprofitable service and repair division. The comparison revolves around the need of both entities to: (1) understand the political and economic motivation behind privatization; (2) evaluate the profitability of the enterprise to be divested; (3) choose a divestment structure and a method of disposition; (4) structure the debt of divested/privatized enterprises in order to maximize leverage; (5) specify the conditions to be attached to the disposition in order to ensure that broader corporate or public policy interests are not jeopardized by the divestiture; and (6) assess the importance of third party (i.e., customer, supplier, and employee) relationships. The paper concludes by calling for additional research to identify those variables that can promote successful privatization in a variety of circumstances.

014

PN-AAZ-557

MF \$1.08/PC \$12.74

Privatization prospects in Nepal

Ritchie, Lyell Hale
U.S. Agency for International Development. Bureau for
Asia and Near East. Nepal
Dec 1987, 72p. + appendices, En
3670249
367-0249-00-7034-00

The prospects for increasing the scope of privatization under the Government of Nepal's (GON) current Five-Year Plan are assessed. An initial section limits the scope of the study to public enterprises (as distinct from public services and the trading sector) and defines privatization as the sale of at least 51% of the outstanding equity capital from government or parastatal entities to the private sector, along with the transfer of management. The study then describes the creation of public enterprises

over the past 30 plus years and the current privatization situation, the manufacturing sector receiving primary attention. There follow brief descriptions of the operations and status of five government-owned businesses - Balaju Yantra Shala (an engineering service and training center), the Butwal Spinning Mill, the Janakpur Cigarette Factory, the Nepal Oil Corporation, and Rastriya Beema Sansthan (the national insurance company) - with a view to determining the extent to which each still belongs in the public sector. Statutory and financial constraints on privatization and possible GON policy constraints are then examined. A final section presents detailed conclusions and recommendations. Extensive lists of GON statutes regarding privatization are appended, along with a list of enterprises owned directly or indirectly by the GON.

015

PN-ABA-365

MF \$1.08/PC \$2.86

Financial services for small and micro enterprises : a need for policy changes and innovation

Meyer, Richard L.; Nagarajan, Geetha
Robert R. Nathan Associates, Inc.
Ohio State University. Dept. of Agricultural Economics
and Rural Sociology
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Rural and
Institutional Development (Sponsor)
Rev. ed. 28 Jan 1988, 19p., En
Economics and sociology occasional paper, no.1432
References: p.18-19
Revised version of paper presented at the Seminar on
the Potential for Financial Innovation in Small and
Micro Enterprise Promotion
9365315
DAN-5315-A-00-2070-00

The current interest in developing small and microenterprise financing projects is reminiscent of earlier attempts to finance special small farmer credit projects. This paper reviews the generally negative experience of those efforts and identifies areas of policy change and innovation which can guide the design of microenterprise projects. The experience of the Grameen Bank in Bangladesh is also reviewed as one of the most interesting innovations in providing small loans to the rural poor. (Author abstract, modified)

PRIVATE ENTERPRISE

016

PN-ABA-438

MF \$1.08/PC \$4.55

Comparative experience with microenterprise projects

Timberg, Thomas A.

World Bank

Inter-American Development Bank

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

(World Conference on Support for Microenterprises, Washington, DC, US, 6-9 Jun 1988)

1988, 33p. : statistical tables, En
CSM report no.2

Micro- and small enterprises, which exist in some form in almost every country in the world, have over the last two decades become critical elements in development strategies to reduce poverty. This paper presents a comparative overview of the experiences of microenterprise programs on three continents, noting that while the methods and aims of the programs are much the same despite location, there is a difference in the motivation of their promoters. Efforts in Asia - such as the Indian IRDP program, which is probably the most extensive and is based on the longest experience, the Grameen Bank in Bangladesh, and the Badan Kredit Kecamatan in Indonesia - are promoted primarily as equity measures and derive their support from those concerned about poverty in their societies. Latin American programs, on the other hand, have typically been launched by private voluntary organizations, sometimes with external funding and sometimes with support from local elites or even the public sector; many are motivated by a political desire to incorporate the informal sector into the larger society. The prototype programs are those promoted by *Accion*, national development foundations, and other indigenous groups; their volume is still so small, however, that no broad effects can yet be recorded. African efforts, like those in Asia, are concerned with the welfare of the poor, but with less of an interest in systemic impact. These programs, which include the efforts of various non-governmental organizations in Kenya and of the former Partnership for Productivity, are generally too recent to provide conclusive results. Includes references.

017

PN-ABA-449

MF \$1.08/PC \$3.90

Venture capital for microenterprise development : the VCAT model

Croucher, Jack; Gupta, S.K.

World Bank

Inter-American Development Bank

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

(World Conference on Support for Microenterprises, Washington, DC, US, 6-9 Jun 1988)

11 May 1988, 25p. + attachment, En
CSM report no.15

Although sufficient capital for investment in small-scale enterprises exists in most developing countries, very little is directed toward rural microenterprises. This is due not only to the physical separation of rural areas from banking centers, but also to their economic and social separation and the consequent difficulty that traditional lenders have in assessing risk and profitability. This report describes one potential solution - the Venture Capital Company for the Application of Appropriate Technology (VCAT), which is a joint program of Appropriate Technology International (ATI) and the Industrial Development Bank of India. The VCAT differs from standard venture capital investors in that its primary purpose is not a high rate of return, but rather (1) the linking of appropriate technology research and development institutions with the productive sector and (2) the promotion of socioeconomic development. The paper presents organizational details (e.g., on VCAT's project identification and analysis methods) and, in conclusion, relates how VCAT has made use of ATI's experience in other countries in developing its capital venture strategy. A draft financial projections model for VCAT is included.

018

PN-ABA-455

MF \$1.08/PC \$7.15

Breaking the entrepreneurial bottleneck in the late - developing countries : is there a useful role for government?

Kilby, Peter
World Bank

Inter-American Development Bank
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Rural and
Institutional Development

(World Conference on Support for Microenterprises,
Washington, DC, US, 6-9 Jun 1988)

Mar 1988, 41p. + attachment : statistical tables, En
CSM report no.44

How can governments help break the bottleneck which constrains entrepreneurship in developing countries? To answer this question, this conference paper reviews major theories of entrepreneurial behavior, adding evidence as to why the bottleneck mostly affects medium to large firms. A review of the history of entrepreneurial development focuses on two centralized government programs - the Indian model, which has served since the 1950's as the template for small industrial programs, and Kenya's influential, donor-supported program of direct assistance to entrepreneurs. The Kenyan program contained three elements: shifting a significant number of management functions from the entrepreneur to the program itself; providing comprehensive inputs at concessional prices; and augmenting entrepreneurial capacity through training and technical assistance. This program was remarkably unsuccessful for larger enterprises, however, despite a macro policy environment which favored entrepreneurial growth. The paper reaches two major conclusions: that programs based on the Indian model coddle entrepreneurs, in effect denying them critical learning experiences in business management; and that the bottleneck constraining entrepreneurship is mainly due neither to an unfavorable macro environment, nor to inefficiencies in the areas commonly considered central to entrepreneurs (e.g., the ability to perceive opportunity, mobilize capital, take risk), but to problems in the routine areas of coordination and control, areas which become increasingly important as firms grow to beyond 10-20 employees.

019

PN-ABA-460

MF \$1.08/PC \$4.29

From multiple rural activity to rural industrialization : the role of microenterprise in the development process

Nowak, Maria
World Bank

Inter-American Development Bank
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Rural and
Institutional Development

(World Conference on Support for Microenterprises,
Washington, DC, US, 6-9 Jun 1988)

1988, 32p., En
CSM report no.55

Despite donors' recent emphasis on structural adjustment programs, it has become clear that policy changes in the industrial, agricultural, or public sectors are inadequate to solve the Third World's economic problems. Arguing from experiences in sub-Saharan Africa, this paper suggests that rural microenterprise could be the key to generating both industrial and agricultural growth in Third World countries, while ensuring a more equitable distribution of income. Africa's experience shows that such enterprises are in a unique position to promote not only entrepreneurial development and new jobs, but also increased farm yield, enhanced agricultural output through processing activities, expanded rural markets, and reduced rural to urban migration. The paper briefly discusses the development of alternative economic models capable of expressing the reality of the rural informal sector, and then at greater length outlines the major constraints on microenterprise development - inadequate access to capital, training, and technology - and some responses to these. A concluding section suggests that assistance to microenterprises need not be costly if it relies on (1) the creation of trade organizations rather than cumbersome extension services; and (2) lending at commercial, not subsidized, rates. Includes references.

PRIVATE ENTERPRISE

020

PN-ABA-465

MF \$1.08/PC \$1.69

Institutional shortcomings of NGO's and donor agencies affecting microenterprise support activities

Buijs, Pieter

World Bank

Inter-American Development Bank

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

(World Conference on Support for Microenterprises, Washington, DC, US, 6-9 Jun 1988)

1988, 9p., En

CSM report no.60

Support to the microenterprise sector in the form of entrepreneurial training, credit programs, or policy initiatives is often hindered by institutional shortcomings on the part of the two main actors in this field - indigenous non-governmental organizations (NGO's) and the donor agencies which finance them. This conference discussion paper briefly discusses these shortcomings, stressing how (1) NGO's are oriented to serving the disadvantaged rather than to developing economically viable microenterprises, and (2) donor agencies focus on short-rather than long-term achievements and often withdraw financial support from their client NGO's, all the while neglecting the latter's professional and management development. These shortcomings lead to microenterprise support projects which are muddled in design and marked during implementation by conflicting operational approaches, radical mid-course changes, and divergent criteria for project success. Donors should realize that microenterprise development projects cannot be funded in isolation, but should include in their design provisions for developing within NGO's the capacity for providing a full range of business support services.

021

PN-ABA-466

MF \$1.08/PC \$2.08

Support for microenterprises

Okelo, E.M.

World Bank

Inter-American Development Bank

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

(World Conference on Support for Microenterprises, Washington, DC, US, 6-9 Jun 1988)

30 May 1988, 15p., En

CSM report no.61

Since the 1970's, the role of microenterprises (ME's) in African economies has become a major development concern. This paper analyzes the problems of ME development - particularly those run by women - and proposes ways to alleviate them. An initial review of the major characteristics of African ME's highlights the large extent to which they are operated by women as well as the features that make ME's a highly dynamic economic development force - the proprietor's motivation, the enterprise's flexibility, and the small amount of capital needed for start-up. The major constraints to ME development, reviewed next, include shortage of financing, market problems, inadequate access to low-cost technologies, government policies favoring larger enterprises, and societal and legal devaluation of women's work. In response, the paper suggests 12 areas in which government policies could be modified in order to support ME development, including: innovative credit schemes, e.g., credit for personal (vs. business) needs, and in-kind credit; relaxation of interest rates and loan terms; provision of working rather than fixed capital; increased support by formal credit institutions; managerial skills building; greater policy focus on increasing rural incomes, e.g., through agricultural pricing; increased subcontracting possibilities; elimination of subsidies that favor large-scale producers; and encouragement of attitudinal changes toward women.

022

***PN-AAZ-203**

MF \$1.08/PC \$3.12

Agriculture in the Uruguay round : interests of developing countries

Valdes, Alberto

International Food Policy Research Institute

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

World Bank economic review, v.1(4), 1987, p.571-593 : statistical tables, En. Reprint no.111

936411114

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

While agriculture is favored and protected in developed countries, it is frequently constrained in developing countries by trade policies which support industry at the expense of agricultural production. Generally, developing countries would benefit from having the agricultural policies of the more powerful countries bound by international rules on trade, but there are differences even among the developing countries as to which products should be liberalized. Even if such conflicts did not exist, politically feasible means to obtain such compliance are elusive. This article first highlights some traditional and emerging issues of interest to developing countries related to trade policies and negotiations on agricultural products within the framework of the General Agreement on Tariffs and Trade (GATT). This is followed by a presentation of the findings of several studies on trade liberalization in agriculture. The complex pattern of agricultural protection in the countries that belong to the Organisation for Economic Cooperation and Development (OECD) and its implications for the diverse exports of developing countries are central themes in the second section. The last section presents some thoughts on what developing countries should ask for and offer in the upcoming Uruguay Round of the Multilateral Trade Negotiations. (Author abstract, modified)

023

PN-AAZ-496

MF \$1.08/PC \$12.61

Guidelines on information sources for agricultural import and export analysis

Abel, Daft & Earley, Inc.

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

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

Dec 1987, [94]p. : charts, statistical tables, En 9364084

DAN-4084-C-00-3087-00

Background information on agricultural trade issues is provided in this report, along with a discussion of key information sources of value to A.I.D. personnel needing to analyze import and export issues, e.g., when developing agricultural sector strategies or preparing for policy dialogue with host countries. The report contains eight chapters, covering: (1) an overview of information sources; (2) A.I.D. policies on supporting agricultural export development; (3) the relationship of the General Agreement on Tariffs and Trade (GATT) to developing countries; (4) practical aspects of trading agricultural products; (5) general commodity and policy publications; (6-8) market and policy developments specific to the grain, oilseed, and fruit and vegetable sectors. In particular, the information sources reported for specific commodities are generally recognized as the most authoritative and reliable for world, regional, and country situations. Most of the information sources discussed are in English, but important material published in other languages is included. The report includes instructions on how to obtain the information sources it describes.

024

PN-AAZ-533

MF \$4.32/PC \$43.29

Contract farming, the private sector, and the state : an annotated and comprehensive bibliography with particular reference to Africa

de Treville, Diana

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)

Nov 1986, 329p., En

Working paper no.2

9311135

DAN-1135-A-00-1078-00

Contract farming has existed in North America in a variety of institutional forms since the 1930's, but it has more recently become of increasing importance in the Third World, particularly in Africa. Provided here are both an annotated and a comprehensive bibliography focusing on four approaches to contract farming - agribusiness, agricultural economics, agronomics, and social science. Most entries (703 are included in the annotated section and 722 in the comprehensive section) are specific to Africa and to contract farming; however, there are also entries based on non-African experiences (presented for comparative purposes) and some which are not specific to contract farming (presented to illustrate the broader economic context in which contract farming takes place). Among the more important contextual issues covered are credit, extension, socioeconomic differentiation, labor, marketing, technology transfer, intermediaries, national and donor policy, and food security. The bibliographies cite both regular source

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materials and fugitive materials. Topical indexes are provided for both bibliographies and are organized according to themes developed out of the literature rather than by keywords from existing thesauri (although they also include commodity and geographical references). The index for the comprehensive bibliography is specifically organized to reflect areas of contextual interest.

025

PN-AAZ-555

MF \$3.24/PC \$31.46

Report on the first international meeting of national agricultural research systems and the second IFARD global convention : the impact of research on national agricultural development

Webster, Brian; Valverde, Carlos; Fletcher, Alan
International Federation of Agricultural Research
Systems for Development

International Service for National Agricultural Research
Technical Center for Agricultural and Rural Cooperation
Brazilian Agricultural Research Corp.

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

(International Meeting of National Agricultural Research
Systems, 1st and IFARD Global Convention, 2nd : the
Impact of Research on National Agricultural
Development, Brasilia, BR, 6-11 Oct 1986)

Jul 1987, 265p. : ill., charts, statistical tables, En
936411113

National agricultural research systems are essential to expanding food production and promoting agricultural development in the Third World, but collaboration among individual research systems needs to be improved. So concluded the First International Meeting of National Agricultural Research Systems and the Second IFARD (International Federation of Agricultural Research Systems for Development) Global Convention, held in Brasilia in October, 1986. This document provides the proceedings of the meeting, including 15 papers presented in three panels on: (1) the role of research in increasing food production, (2) networking as a means of increasing the efficiency of agricultural research, and (3) strategies for strengthening national agricultural research systems. The meeting closed with a presentation of conclusions and recommendations and the formulation of the IFARD "Brasilia Declaration", 1986. This declaration follows the "Bellagio Declaration, 1977" and the "New Delhi Declaration, 1979" as a third expression of the concern felt in the developing world over the perilous state of agriculture and food supply.

026

PN-AAZ-653

MF \$3.24/PC \$31.33

Opportunities to assist developing countries in the proper use of agricultural and industrial chemicals : report of the Committee on Health and Environment

Prewitt, Kenneth; Barcena-Ibarra, Alicia; et al.
Committee on Health and Environment
Conservation Foundation

U.S. Agency for International Development. Bureau for
Science and Technology. Office of Forestry,
Environment and Natural Resources (Sponsor)
18 Feb 1988, 2v., En
9361406
DHR-1406-G-SS-7023-00

People in Third World countries use only 25% of the world's pesticides, yet they suffer half the acute poisonings reported worldwide and between 73% and 99% of the deaths. While many of the issues surrounding the use of pesticides and other toxic chemicals in developing countries are beyond A.I.D.'s control, very few are beyond its influence. This report was prepared by the Committee on Health and Environment, which was formed by A.I.D. pursuant to the Foreign Assistance Appropriation Act of 1987 specifically to examine opportunities for promoting the proper use of agricultural and industrial chemicals, and of alternatives such as integrated pest management. Volume one provides an overview of the economic, health, and environmental costs developing countries incur from improper pesticide and chemical use, explains the Committee's findings and major conclusions, and presents detailed action recommendations for A.I.D. Volume two provides the source information the Committee used to reach its conclusions; included are sections on A.I.D.'s and other donors' environmental policies, the activities of other U.S. government agencies operating abroad, and lessons learned from integrated pest management programs, along with a 35-page bibliography.

027

PN-AAZ-654

MF \$1.08/PC \$10.92

From agronomic data to farmer recommendations : an economics training manual

Perrin, Richard; Winkelmann, Donald; et al.
International Maize and Wheat Improvement Center
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)

Rev. ed. 1988, v, 79p. : charts, statistical tables, En
936411101

Economic analysis of on-farm research is essential in order for agronomists to make adequate recommendations to farmers. This document, a completely revised version of a CIMMYT manual which first appeared in 1976, is designed as both a classroom text for agricultural researchers and an independent study reference. The manual is divided into five sections: (1) an overview of economic analysis; (2) the partial budget (including chapters on variable costs and on gross field benefits, net benefits, and the partial budget); (3) marginal analysis (with chapters on the net benefit curve and the marginal rate of return, the minimum acceptable rate of return, and the use of marginal analysis to make recommendations); (4) variability (including chapters discussing recommendation domains and statistical analysis, yield variability and minimum returns analysis, and price variability and sensitivity analysis); and (5) a checklist for reporting the results of an economic analysis. Numerous charts and tables are included.

028

PN-AAZ-663

MF \$1.08/PC \$4.03

Assistance to developing country agriculture and U.S. agricultural exports : three perspectives on the current debate

Schuh, G. Edward; Kellogg, Earl D.; Paarlberg, Robert L.
Consortium for International Cooperation in Higher
Education
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)

Mar 1987, 28p., En

Has increased assistance to agricultural development in the Third World contributed to the recent decline in U.S. agricultural exports? Different perspectives on this question are presented in the three papers contained herein. The first, by Dr. G. Edward Schuh, lists six changes over the last 25 years that have substantially altered the international economic situation - especially in terms of the size and importance of capital markets as compared to commodity markets - and reviews the implications of these changes for the United States. The

second, by Dr. Earl D. Kellogg, presents evidence that Third World agricultural development has not caused the decline in U.S. exports and that, in fact, there is potentially a positive relationship between the two. The last, by Dr. Robert L. Paarlberg, describes the policy changes, farm and nonfarm, needed in both developing countries and the United States if the United States is going to realize Dr. Kellogg's scenario and find new agricultural markets in the developing world. (Author abstract, modified)

029

PN-AAZ-732

MF \$1.08/PC \$4.03

Strengthening collaboration in biotechnology : international agricultural research and the private sector

U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Program
(Strengthening Collaboration in Biotechnology :
International Agricultural Research and the Private
Sector, Arlington, VA, US, 17-21 Apr 1988)

Apr 1988, [30]p., En
9361406

Provided here, in abstract form, are the proceedings of a conference sponsored by A.I.D. to promote the collaboration of international agricultural research centers (IARC's) and the private sector in projects to apply biotechnology advances to agriculture. In all, 32 abstracts are presented, addressing: (1) recent technical advances in vaccines, cell and tissue culture, molecular technologies, biosafety, wide crosses, conservation of genetic resources, and pathology/diagnostics; (2) national biotechnology programs; and (3) specific instances of and opportunities for collaborative biotechnology research/commercialization projects conducted by IARC's, the private sector, and/or other institutions.

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030

PN-AAZ-896

MF \$2.16/PC \$13.65

Response farming in rainfed agriculture

Stewart, J. Ian

World Hunger Alleviation Through Response Farming Foundation

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

1988, x, 103p. : ill., charts, maps, statistical tables, En
Published by WHARF Foundation Press
9364021

Response farming is an approach to farming which combines seasonal prediction of rainfall level and intensity with corresponding recommendations regarding farmer planting and water management practices. Concentrating on recent advances in rainfall prediction research, this book provides a comprehensive review of response farming, with special reference to rainfed agriculture in the semiarid regions of the developing world. Separate sections discuss: (1) the relationship between variable rainfall and response farming; (2) the predictive behavior of seasonal rainfall; (3) case studies of the role of response farming food crop production in the Mediterranean (Morocco, Cyprus, and Jordan), West Africa (Niger), East Africa (Kenya), the Sudano-Sahelian zone, and the Asian subcontinent (Nepal and India); and (3) the current state of response farming and its future. Includes references, charts, illustrations, and nine appendices.

031

PN-ABA-009

MF \$2.16/PC \$13.26

Reorientation of the agricultural sector : a strategy to accelerate application of science to increase agricultural productivity in Ecuador

North Carolina State University

Ecuador. Ministry of Agriculture and Livestock (Sponsor)

U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Ecuador (Sponsor)

U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Regional Development Office (Sponsor)

Feb 1987, iii, 96p. : charts, statistical tables, En
Spanish ed.: PN-ABA-010
5180005

A research, extension, and education (REE) strategy is key to increasing the productivity of Ecuador's lagging agricultural sector. Currently, however, Ecuadorian REE institutions are dispersed, uncoordinated, and beset with problems. Agricultural schools, focusing on vocational skills, are not producing a flow of people knowledgeable

in basic science and its agricultural applications. The extension system lacks highly trained personnel (especially extension-education leaders) and suffers from low morale, low operating budgets, poor linkages with research, inadequate focus on technology transfer, and inability to deal with on-farm water management as a way to increase yield. Research has fared the best of REE system components, but also possesses similar problems, as well as unstable long-term research objectives due to frequent leadership changes in the National Institute of Agricultural and Livestock Research. In light of these problems, the present study proposes a science-dependent strategy to refocus Ecuadorian agriculture on productivity by strengthening and integrating REE components. Recommendations are to: (1) stress use of the sciences to resolve production problems rather than solely to increase tillable area; (2) create an Agricultural Research Foundation to improve technology generation and integrate it with extension and education; (3) unify extension efforts in accordance with farmer clientele groups; and (4) strengthen the scientific thrust of the three levels of agricultural education (technical, university, postgraduate). (Author abstract, modified)

032

PN-ABA-019

MF \$2.16/PC \$14.69

Eastern Caribbean agricultural sector strategy : volumes I and II

Brown, Albert L. Scaff; Chapman, James A.; Ciutu, Arthur
Chemonics International Consulting Division

U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Regional Development Office (Sponsor)

U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Barbados (Sponsor)

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

Jun 1988, 2v. : statistical tables, En
5380000; 9361406
PDC-1406-I-00-7007-00

The agricultural sectors of countries in the Organisation of Eastern Caribbean States (OECS) are facing a number of similar constraints - relatively small labor forces, limited arable land that is intensely cultivated and prone to erosion, small farm size, low productivity, and declining competitiveness in regional and international markets. This document provides an overview of the agriculture sectors of six OECS nations (Antigua and Barbuda, St. Kitts-Nevis, Dominica, St. Vincent and the Grenadines, Grenada, and St. Lucia), reviews current A.I.D. and other donor assistance, and outlines a regional agricultural development strategy. The document concludes that it will be difficult to adjust overall agricultural production and marketing in order to increase farm incomes and foreign exchange earnings, and proposes a

series of soil and water conservation activities and policy initiatives designed to (1) maintain (or, to the extent possible, raise) incomes of the rural poor; (2) stabilize foreign exchange earnings/savings from agriculture; and (3) maintain and enhance the natural resource base. Annexes include an assessment of the agricultural technology system in the Eastern Caribbean and a discussion of P.L. 480 programming for Guyana.

033

***PN-ABA-226**

MF \$7.56/PC \$78.26

Small farm equipment for developing countries -- proceedings of the international conference : past experiences and future priorities, 2-6 Sept 1985

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

(International Conference on Small Farm Equipment for Developing Countries : Past Experiences and Future Priorities, Manila, PH, 2-6 Sep 1985)

1986, 629p. : ill., charts, statistical tables, En
936411102

* Also available from: *International Rice Research Institute, P.O. Box 933, Manila, Philippines*

Smallholder agriculture plays a vital role in the economies of most developing countries; in Asia, for example, over 60% of the farms are less than 2 ha in size. Recent improvements in crop varieties, irrigation, and agricultural inputs have made these small farms more and more productive, but mechanization is required to gain the full benefit of new technologies. This document presents the texts of 42 papers given at an international conference on the problem of mechanizing small farms. The papers mainly address the problem of farm mechanization in Africa and Asia, and are arranged in 10 broad categories: (1) the role of small farm equipment; (2) land preparation; (3) irrigation; (4) seeding and planting; (5) plant protection and soil fertility; (6) harvesting; (7) threshing; (8) grain drying; (9) improving research and development, manufacturing, marketing, extension, and use of small farm equipment; and (10) defining priorities for small farm equipment. The document concludes with a number of recommendations for improving mechanization in central Africa, strengthening national and international institutions, stimulating local manufacture of farm equipment, improving the marketing and accessibility of equipment, and identifying appropriate equipment for small farms. Includes charts, illustrations, and references.

034

PN-ABA-315

MF \$1.08/PC \$3.12

Development of fragile lands : theory and practice

Gow, David
Development Strategies for Fragile Lands Development Alternatives, Inc.
Tropical Research and Development, Inc.
Earth Satellite Corp.
Social Consultants International
U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development (Sponsor)
(Fragile Lands of Latin America : the Search for Sustainable Uses, New Orleans, LA, US, 17-19 Mar 1988)

May 1988, 21p., En

9365438

527-0000-C-00-7841-00; DHR-5438-C-00-6054-00

A web of connected problems - poverty, inappropriate government policies and technologies, and inadequate institutions - have made the agricultural development of fragile lands and their environmental degradation nearly synonymous in many developing countries. Based on the experience of the Development Strategies for Fragile Lands (DESFIL) project, this paper discusses a number of interventions designed to achieve "sustainable development", i.e., to create self-sustaining improvements in human capability and well-being based on analyses of the interaction among energy, population pressures, and the ecology. A number of development options are discussed in general terms, including direct interventions (investments in land maintenance and productivity), indirect interventions (technology generation, monitoring resource status, policy reform, land tenure reform), and outside interventions (alternatives to use of fragile lands, measures to reduce off-site effects). More specifically, DESFIL's experiences in implementing two activities - establishing a Technical Secretariat for Watershed Development to reverse the degradation of Haiti's upper watersheds, and conducting a study of biological diversity in Peru - are discussed. The paper concludes that an integrated approach to sustainable development of fragile lands should include: strong political commitment from the host government, appropriate technological interventions, institutional and local organization strengthening, environmental education and extension, and conservation and development. Includes 3-page bibliography.

AGRICULTURE

035

PN-ABA-316

MF \$1.08/PC \$7.93

Sustainable uses for steep slopes, workshop proceedings -- volume II : synthesis report

Hanrahan, Michael S.

Development Strategies for Fragile Lands
Development Alternatives, Inc.

Tropical Research and Development, Inc.
Earth Satellite Corp.

Social Consultants International

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
Latin America and the Caribbean. Ecuador (Sponsor)
(Sustainable Uses for Steep Slopes, Quito and Salcedo,
EC, 19-24 Sep 1987)

Sep 1987, xiii, 49p., En

9365438

DHR-5438-C-00-6054-00

Experiences in developing intensified, yet sustainable, uses of fragile, steeply sloped areas in the Andean highlands were examined in a workshop held in Ecuador in September 1987. This workshop report synthesizes the workshop's working group discussions and formal papers, providing recommendations for the design and management of future steep slope development projects. Among the major topics covered are: experiences with degradation control projects; overgrazing and other intensive uses of very high areas (above 3,500 meters); institutional factors contributing to resource degradation; campesino perceptions; strategic planning; and the desirability of incentives for farmer participation in conservation efforts. Working group recommendations are to: ensure that steep slope projects have an interdisciplinary focus and utilize local talents and traditions; emphasize non-agricultural development in very high areas; develop an improved information base (i.e., provide more funding for research, project monitoring and evaluation, and information dissemination); and improve coordination among development agencies. The workshop program, a 3-page bibliography, and a list of participants are included.

036

*PN-ABA-393

MF \$2.16/PC \$19.24

Nature and impact of the green revolution in Bangladesh

Hossain, Mahabub

International Food Policy Research Institute
Bangladesh Institute of Development Studies

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

Jul 1988, 146p. : charts, statistical tables, En

Research report / International Food Policy Research
Institute, no.67

936411114

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

Contrary to the experience of the "green revolution" in India, the introduction of new agricultural technology can benefit the poorest of the poor. Thus concludes this analysis of the effects of modern rice technologies on productivity and equity in Bangladesh. The study notes that while large farmers made great gains in profits and family income, the landless also benefited substantially. (Returns to small and tenant farmers were mixed as these groups invested a greater percentage of their income on inputs.) The landless seemed to benefit from technology adoption primarily from the increased wage labor opportunities offered by large farmers and secondarily from expanded opportunities for off-farm employment. It is noted, however, that the high-income farmers tend to reinvest income in land, which may cause further concentration of landholdings and greater inequality in the distribution of agricultural income. A final section discusses policy alternatives for further diffusing new rice technology, suggesting that agricultural development programs be funded in part by siphoning off some of the surplus income of the larger farmers (e.g., through more taxation or fewer subsidies), as foreign aid will probably be difficult to mobilize given the current situation in international cereals trade. Includes 73 tables and an 8-page bibliography.

037

*PN-ABA-397

MF \$1.08/PC \$9.23

Prospects for agricultural production and food deficits in West Asia and North Africa : the role of high - elevation areas

Oram, Peter

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

Apr 1988, viii, 63p. : charts, statistical tables, En
936411114

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

In the harsh and physically isolated upland plateau and mountain areas which constitute almost half the agricultural land of the main producing countries of West Asia (including the Middle East) and North Africa, food production has been unable to keep pace with a burgeoning demand that threatens to make the region the largest food, feedgrain, and livestock importer in the developing world by the year 2000. This report examines the status and prospects for agricultural development in these high-elevation areas. It begins by describing the region's unique ecological and socioeconomic features and how they have helped widen the gap between food demand and domestic supply. It then explores the sources of agricultural growth, noting the rapidly shrinking potential for "horizontal" expansion and stressing the increasing importance of using available technology, multiple cropping, and reduction of fallow wherever feasible (the dearth of funds for research and extension in the region make adoption of new technology an unlikely source of growth). Agricultural growth will also require price adjustments and increased attention to infrastructure linking agriculture and other sectors. Highlighting the need for a holistic approach to increasing production in the region (especially of key crops such as wheat and pulses), the paper supports a move away from the current unrealistic emphasis on food self-sufficiency toward food security by exploiting the comparative advantages of agroecological zones through increased intra- and interregional trade. It admits that this will require major policy shifts in land use and production patterns and will increase the importance of providing market-competitive produce.

038

PN-ABA-768

MF \$2.16/PC \$20.54

Tropical products transport handbook

McGregor, Brian M.

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

Aug 1987, viii, 148p. : ill., En
Agriculture handbook no.668

This handbook provides transportation recommendations for 117 kinds of fruits and vegetables, live plants, and cut flowers produced in tropical, subtropical, and temperate climates. Specific information is provided for potted plants, cut flowers, and florist greens. Included are guidelines for grading, packaging, precooling, choosing the best mode of transportation, checking transport equipment before loading, loading practices, and storage and transit procedures. In order to emphasize the essentials of successful transportation of these perishable products, the information is presented in a brief manner with many illustrations. Appended are pertinent U.S. regulations and sources of information and U.S. grade standards. (Author abstract, modified)

039

*PN-ABA-815

MF \$1.08/PC \$7.80

Institutionalizing farming systems research and extension : Cornell University's experience in Ecuador and the Philippines

Cornick, Tully R.; Kline, Wesley; et al.

Cornell University. New York State College of Agriculture
and Life Sciences

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

Jul 1987, 53p., En

Cornell international agriculture mimeograph, no.115
9311282

* Also available from: *Cornell University, International
Agriculture Program, P.O. Box 16, Roberts Hall, Ithaca,
NY 14853 USA. Single copies free. Additional copies
25 cents each*

In the last decade, researchers and donors have come under increasing pressure to review with a critical eye both the accomplishments and shortcomings of farming systems research and extension (FSR/E). This document briefly synthesizes the lessons learned from two FSR/E projects - the Philippines Farming Systems Project in Eastern Visayas and the Bean-Cowpea Collaborative Research Project in Ecuador - in which Cornell University was an active participant. Because of the occasional differences between the two projects, contrasting experiences and lessons are presented, true to the

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range and variability encompassed by FSR/E. Training issues and approaches are covered first, followed by discussions of interdisciplinarity and of methodological issues in research. Institutional and administrative concerns, while not central to FSR/E, do affect its workings, and these are considered in the penultimate section. The authors conclude that ultimately, the success of FSR/E will be measured by the extent to which Third World countries have adopted and institutionalized its three essential elements: interdisciplinarity, a holistic approach to the production system, and farmer participation. (Author abstract, modified)

040

***PN-ABA-936**

MF \$4.32/PC \$38.48

Arid lands research institutions : a world directory

Hutchinson, Barbara S.; Varady, Robert G.
University of Arizona. Office of Arid Lands Studies
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
U.S. Agency for International Development. Bureau for
Asia and Near East (Sponsor)
U.S. Agency for International Development. Bureau for
Africa (Sponsor)
3rd ed. 1988, vi, 290p., En
Published by Allerton Press, Inc.
9364021

** Also available from: Allerton Press, 150 Fifth Avenue,
New York, NY 10011 USA*

This third edition of the University of Arizona's world directory of institutions engaged in arid lands research presents brief profiles of 414 institutions in 65 countries as well as of 25 international organizations. Individual entries, which include address and telephone number, date established, purpose, areas of research, facilities, staff, and publications, are arranged alphabetically by and within country. For geographical reference, the names of major global regions are added opposite the country name at the top of each page. A final section includes international organizations such as those of the United Nations. As in previous editions, the information in the directory derives almost entirely from direct correspondence with the institutions involved. New entries were identified by consulting internal files at the University's Office of Arid Lands Studies and published sources such as the *Annotated Directory of Organizations Dealing with Desertification Control and Dryland Development* of the U.N. Environment Programme. Both institution and subject indexes are provided. (Author abstract, modified)

041

***PN-AAZ-955**

MF \$1.08/PC \$5.07

True potato seed : past and present uses

Malagamba, Patricio; Monares, Anibal
International Potato Center
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
1988, iii, 40p. : ill., En
936411107

** Also available from: International Potato Center, Apartado 5969, Lima, Peru*

In the past decade the demand for potatoes in developing countries has outstripped population growth, but problems in distributing potato seed tubers in warm tropical areas of Africa and Asia have made meeting this demand difficult and expensive. This report holds up true potato seed (TPS) as an efficient alternative to the seed tuber in making the potato available to tropical farmers. TPS offers several advantages over seed tubers: (1) it can cost only a tenth of what farmers usually pay for seed tubers; (2) it minimizes problems associated with tuber-transmitted disease; (3) TPS can be stored inexpensively in warm, humid areas for several years, and reduces the need for the specialized storage facilities tubers require; (4) TPS can be inexpensively transported to remote regions, while perishable tubers can be very expensive to transport; (5) TPS can reduce farmers' dependence on seed certification schemes, which are often plagued with technical and institutional problems and perform poorly. The report outlines the history of TPS, TPS production and utilization systems, and TPS's role in small-scale food production. Includes illustrations, references (1961-87).

042

***PN-AAZ-962**

MF \$2.16/PC \$20.28

Breeding strategies for resistance to the rusts of wheat

Simmonds, N.W.; Rajaram, S.
International Maize and Wheat Improvement Center
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
(International Workshop on Breeding Strategies for
Resistance to Rusts of Wheat, Mexico City, MX,
29 Jun - 1 Jul 1987)
1988, 151p. : charts, statistical tables, En, Summaries in
Es, Fr
936411101

** Also available from: International Maize and Wheat Improvement Center, Lisboa 27, Apartado Postal 6-641,
06600 Mexico, DF, Mexico*

The proceedings of an international conference convened at the International Maize and Wheat Improvement Center (CIMMYT) in Mexico June 29-July 1 1987, this document presents ten papers that outline a broad breeding strategy to develop the necessary resistance to control leaf, stem, and yellow rusts in wheat. The first seven chapters focus exclusively on the three rusts and discuss among other points the role of specific genes, diversity, and the use of polygenic, partial, and durable resistances. Chapter eight addresses disease management through variety mixtures, based on experience with barley powdery mildew - a concept with obvious application to rusts. Chapter nine outlines current approaches at CIMMYT in breeding wheat for rust resistance. Finally, chapter ten gives voice to a consensus approach to breeding rust-resistant wheat varieties. Includes charts, tables, and references. (Author abstract, modified)

043

***PN-ABA-493**

MF \$1.08/PC \$5.59

Bibliography of plant materials tested for activity against stored - product insects

Burroughs, Rosemary; Schenck-Hamlin, Donna; Wright, Valerie

Kansas State University. Food and Feed Grains Institute
Kansas State University. Kansas State Agricultural Experiment Station. Dept. of Grain Science and Industry

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

Aug 1988, vii, 37p., En

Research report / Kansas State University, Food & Feed Grains Institute, no.29

On cover: Postharvest grain systems R & D
9364144

DAN-4144-A-00-5095-00

** Also available from: Postharvest Documentation Service of the Food and Feed Grains Institute, Kansas State University, Manhattan, Kansas 66506 USA*

Some traditional agricultural systems use native plant materials to protect stored grain and legumes from destructive insects. This bibliography, developed to assist persons interested in finding inexpensive alternatives to manufactured pesticides, documents laboratory investigations and field observations of the effectiveness of various plant parts, extracts, oils, and their chemical components in controlling stored-products pests. The materials covered have been used as insecticides, repellants, growth regulators, or barriers. The bibliography includes 309 citations and three indexes, the latter covering, respectively, plant species, vegetable oils, and crop residues. All the cited documents are available in paper copy or microfiche from the Postharvest Documentation Service of the Food and Feed Grains Institute. (Author abstract, modified)

044

***PN-ABA-512**

MF \$4.32/PC \$42.90

Plant breeding and the nutritive value of crop residues : proceedings of a workshop held at ILCA, Addis Ababa, Ethiopia, 7-10 December 1987

Reed, Jess D.; Capper, Brian S.; Neate, Paul J.H.
International Livestock Centre for Africa

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

(Workshop of Plant Breeding and the Nutritive Value of Crop Residues, Addis Ababa, ET, 7-10 Dec 1987)

Jun 1988, xi, 334p. : charts, statistical tables, En
936411109

** Also available from: International Livestock Centre for Africa, P.O. Box 5689, Addis Ababa, Ethiopia*

The proceedings of a workshop held in Addis Ababa in December 1987, this document contains 12 papers on topics related to the use of crop residues as livestock feed in smallholder crop/livestock farming systems, and the role of plant breeding in maintaining or improving the residues' nutritive value. The papers, which were presented by scientists from a number of disciplines, cover five broad areas: (1) the importance of crop residues as feed resources in smallholder farming systems; (2) problems involving feed chemistry and ruminant nutritional needs; (3) case studies of the effect of genotype and environment on the nutritional value of crop residues; (4) the influence of plant breeding on the nutritional value of residues; and (5) future prospects for improving residue nutritional value. The document concludes that international and national agricultural research centers should pay more attention to residue yield and quality when breeding cereal crops; 14 specific recommendations are made.

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045

PN-ABA-584

MF \$2.16/PC \$22.23

Cowpeas (*Vigna unguiculata* L. walp)

International Institute of Tropical Agriculture.

International Grain Legume Information Centre
Consultative Group on International Agricultural
Research (Sponsor)

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

Dec 1987, v, 164p., En

Abstracts of world literature, v.5, 1983-1985.

Includes author index

936411103

This fifth volume of Cowpea Abstracts contains 579 entries, representing a compilation of world literature on cowpeas for the years 1983-85. Each entry includes basic citation information and a short abstract. The abstracts are arranged in broad subject categories covering cowpea evolution, genetics and cytogenetics, physiology, breeding, agronomy, disease and pest control, processing, economics, and nutrition. Includes author and subject indexes. The volume also includes a number of pre-1983 papers that were not included in earlier volumes.

046

***PN-ABA-995**

MF \$2.16/PC \$19.24

Faba bean germplasm catalog : pure line collection

Robertson, Larry D.; El Sherbeeney, Mohamed
International Center for Agricultural Research in the Dry
Areas

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

Jul 1988, viii, 140p. : charts, statistical tables, En
936411112

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

In pursual of its mandate to improve faba beans, the International Center for Agricultural Research in the Dry Areas (ICARDA) has assembled a collection of 3,305 faba bean landraces, from which 5,009 pure lines have been derived. This catalogue presents evaluative data gathered during the 1985/86 season in North Syria on 840 of these pure lines. The data cover 43 descriptors under the major headings of: flowering and floral characteristics (5 descriptors); time to maturity; plant height; growth habit; susceptibility to lodging; branches (2 descriptors); pod disposition (4 descriptors); pod shattering; stem, leaf, pod, and seed characteristics (3, 4, 6, and 6 descriptors, respectively); yield (3 descriptors); autofer-

tility; male fertility; winterkill; and aphid susceptibility (2 descriptors). The catalogue includes a brief analysis of faba bean characteristics by country of origin, along with information on querying the ICARDA database and on obtaining faba bean germplasm from ICARDA.

047

PN-AAZ-509

MF \$1.08/PC \$11.83

Fertilizer marketing systems and policies in developing countries

Mudahar, Mohinder S.; Kapusta, Edwin C.
Sigma One Corp.

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

Dec 1986, 78p. + attachments, En
9311096

DHR-1096-C-00-6037-00

The crucial role that fertilizers play in increasing agricultural productivity is universally recognized. This paper provides an overview of fertilizer marketing systems and policies (FMSP's) in the developing world. More specifically, it discusses the role of fertilizer marketing; compares FMSP's in seven selected Third World countries; and then describes the evolution of a new FMSP in Bangladesh. With A.I.D.'s support, Bangladesh has experimented with major policy reforms in the area of fertilizer marketing, including privatization of retail trade, fertilizer price deregulation, and reduction in fertilizer subsidies. The paper's analysis of FMSP's in Bangladesh and the other selected countries provides the basis for detailed recommendations for improving fertilizer marketing operations, costs, organizations, and policies elsewhere in the developing world. Suggestions for research and technical assistance are included as well. (Author abstract, modified)

048

PN-ABA-321

MF \$1.08/PC \$4.68

Developing irrigated agriculture : a socio-technical approach -- water management synthesis II project report

Lattimore, Dan; Fowler, Darlene

Consortium for International Development

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

Mar 1988, 33p. : ill. (some col.), charts, maps, statistical
tables, En

Includes bibliography
9364127

The basic approach and major accomplishments of the recently completed Water Management Synthesis II Project (WMS II) are outlined in this final contractor

report. Initial sections stress the project's use of interdisciplinary, field-level teams of expatriate and host country personnel and its focus on synthesizing social and technical aspects in solving irrigation problems. Succeeding sections: (1) summarize efforts to support A.I.D. Missions, especially in regard to irrigation project design, diagnostic analysis, and the use of the latter in developing a Management Training and Planning Program for irrigated agriculture; (2) detail activities to strengthen national irrigation capabilities via projects in Thailand and Peru and international workshops on irrigation system rehabilitation, the use of microcomputers as a management tool, and the need for host bureaucracies to adopt a socio-technical rather than a purely technical irrigation strategy; (3) describe efforts to promote farmer participation in irrigation management, improve small-scale irrigation systems, and correlate on-farm and main system irrigation management; and (4) describe follow-on efforts to WMS II. A final section draws on joint field studies in Zimbabwe, Niger, and Rwanda to synthesize lessons learned during WMS II regarding the diagnosis of irrigation systems. Includes a complete list of WMS publications and audiovisual materials.

049

*PN-AAZ-371

MF \$1.08/PC \$6.89

Economic analysis of livestock trials

Crawford, Eric W.

Michigan State University. Dept. of Agricultural Economics

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

1988, x, 38p. : graphs, statistical tables, En

MSU international development papers. Reprint, no.7

Originally presented as a paper at the workshop "la Recherche zootechnique en milieu paysan," at Mbour, Senegal, 2-9 Feb. 1986, and published by the Dept. of Agrarian Systems and Rural Economic Research, Senegal Agricultural Research Institute

French ed.: PN-AAZ-123

6850223

685-0223-C-00-1064-00

* Also available from: *MSU International Development Papers, Dept. of Agricultural Economics, Agricultural Hall, Michigan State University, East Lansing, MI 48824-1039 USA*

Although the economic analysis of livestock trials is in some ways more complex than that for agronomic trials, far less literature is available on the former. This paper presents a general method for conducting economic analysis which can be applied to livestock trials set up to formulate recommendations for a target group of producers. After outlining the characteristics distinguishing livestock from agronomic trials, the study describes two key concepts underlying its methodological approach (partial budget and marginal analysis), identifies the data required for the analysis, and discusses

problems that may arise in calculating costs and rate of return. Succeeding sections discuss: (1) the stages of the analysis (including construction of a partial budget); (2) the identification of superior and inferior treatments; and (3) the analysis of profitability. Examples of analyses for intensive fattening trials, herd-level trials, and calculating the losses caused by trypanosomiasis are provided. Statistical significance and data processing options are briefly considered in two concluding sections.

050

PN-ABA-608

MF \$4.32/PC \$39.91

Index to livestock literature microfiched by the ILCA / IDRC team in Kenya

Berhane, Tesfai; Teklu, Sirak

International Livestock Centre for Africa. Documentation Services

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

Apr 1988, viii, 303p., En

IDRC-MP-KE-1794/84

936411109

During a visit to Kenya in 1984, a team from the International Livestock Centre for Africa (ILCA) selected and microfiched 1,794 documents for ILCA's collection of nonconventional literature on livestock in tropical Africa. This index represents a compilation of these documents. The index includes bibliographic, subject, author, and institution indices. A wide range of topics are covered, including, inter alia, extension, legislation, economics, soil sciences, plant sciences, pests, animal health, feeds, agricultural engineering, water management, ecology, nutrition, food processing, and pollution.

051

PN-AAZ-763

MF \$1.08/PC \$9.88

Recommended actions for the United States Agency for International Development in support of fisheries development

Idyll, Clarence; Norton, Virgil

Chemomics International Consulting Division

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

Feb 1988, v, 67p., En

Work order no.6

9361406

PDC-1406-I-00-7007-00

A comprehensive review of the fisheries sector (including aquaculture) in the developing world is herein presented along with recommendations for future A.I.D.

AGRICULTURE

fisheries assistance. Chapter one, on the economic contributions of the fisheries sector, covers: harvest of natural marine stocks; production from inland waters and aquaculture; consumption; demand; economic aspects (trade, employment, prices, income); and the potential for expanded production. Constraints to fishery development are identified in Chapter two, including the common property nature of marine fisheries, environmental vulnerability, inadequate institutional support, and inefficient distribution and marketing systems. The final chapter briefly reviews the current state of A.I.D. and other donors' assistance to the sector and makes suggestions concerning A.I.D.'s future role. The key recommendations are that: (1) A.I.D.'s Bureau for Science and Technology/Office of Agriculture (S&T/AGR) focus more narrowly on the management of fishery resources and protection of the aquatic environment; and (2) other A.I.D. offices take the lead in promoting small-scale aquaculture (potentially the best means of increasing food fish supplies) and artisanal fisheries (which already produce almost half the fish for the developing world).

052

PN-AAZ-940

MF \$1.08/PC \$11.44

Evaluating the potential of fishermen's organizations in developing countries

Pollnac, Richard

University of Rhode Island. International Center for Marine Resource Development

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

1988, v, 79p. : ill., charts, En
9364024

DAN-4024-A-00-7073-00

Despite increasing awareness over the last few decades of the important role fishermen's organizations (FO's), and especially cooperatives, play in the development process, the development and use of FO's has been characterized more by failure than success. This handbook contains guidelines for obtaining social and cultural information which can be used to evaluate the potential for establishing FO's and, later, to support their operations. The first chapter examines the role of FO's in fishery development and includes a brief outline of the various types of FO's. This is followed by two chapters which explain the need for sociocultural information and identify general sociocultural factors that influence the success of FO's; attention is also given to particular aspects of fishing as an occupation that are related to

problems in developing FO's. The final three chapters outline the kinds of information needed for the development of FO's (e.g., membership, economic factors, government support); provide detail on the acquisition of the necessary data through review of written records, surveys, and interviews; and present techniques for converting the data into information of use in the decision-making process throughout the development cycle. (Author abstract, modified)

053

PN-AAZ-941

MF \$3.24/PC \$33.41

Postharvest fishery losses : proceedings of an international workshop held April 12-16, 1987, at the University of Rhode Island, Kingston, RI

Morrissey, Michael T.

University of Rhode Island. International Center for Marine Resource Development

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

(International Workshop on Postharvest Fishery Losses, Kingston, RI, US, 12-16 Apr 1987)

1988, v, 250p. : ill., charts, statistical tables, En
9364024

DAN-4024-A-00-2072-00

In many developing countries, reducing postharvest (PF) fishery losses could help to alleviate shortages of dietary protein and stabilize the commercialization of fish and fishery products. Guidelines for such a reduction are included in these proceedings of an international conference on the subject. The guidelines cover policy implementation in developing countries, fish handling and preservation, quality control and inspection, fish processing, and training. The bulk of the text consists of 21 papers on topics which include, inter alia: the influence of policy on PH fishery losses; fishery losses in Mexico, Ecuador, and the Philippines; quality assurance methods in developing countries; the transfer of improved fish handling technologies to developing countries; methods of reducing losses in traditionally processed fish and in fresh fish; control of insect infestation; sociocultural aspects of PH fishery losses; PH losses in artisanal fisheries in West Africa; developing country acceptance of fish mince and other new products; and the role of the Inter-American Development bank in Latin America fisheries. Includes a summary of a conference roundtable, references, charts, and illustrations.

054

PN-ABA-993

MF \$2.16/PC \$15.47

ICLARM report : 1987

Maclean, Jay L.; Dizon, Leticia B.

International Center for Living Aquatic Resources Management

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

1988, viii, 110p. : ill., charts, En 9311050

Successes in Asia, Africa, the South Pacific, and Latin America, as well as intensive linkages with fishery and aquaculture research institutions worldwide, testify to the increasingly global and international nature of the Inter-

national Center for Living Aquatic Resources Management (ICLARM) and its programs, according to the Center's 1987 annual report. The bulk of the report details achievements in two areas - aquatic resource assessment and management, and aquaculture - with emphasis on summaries of projects (eight in the first area, nine in the second); information on future plans, advisory services, and papers and reports published is also provided. Treated more briefly are ICLARM's efforts in information, education and training, and the social sciences. ICLARM's successes, it is pointed out, have placed it on the horns of a dilemma: whether to continue to pursue its basic research in areas of broad international concern solely by collaborating with national institutions, or to develop new, centralized facilities of its own. While the latter seems the logical option, it would represent a change in ICLARM's research strategy, which has always included components of institutional cooperation and development of national expertise.



Fish are a major source of dietary protein for these Liberian villagers.

FOOD AND NUTRITION

055

PN-AAZ-586

MF \$1.08/PC \$6.24

Food aid and economic policy reform

Block, Steven ; Bremer, Jennifer; Hanrahan, Charles E.
Abt Associates, Inc.

Robert R. Nathan Associates, Inc.

Abel, Daft & Earley, Inc.

Oklahoma State University. Dept. of Agricultural
Economics

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

Mar 1988, vii, 39p., En

Report no. AAI #88-6

APAP staff paper, no.12

9364084

DAN-4084-C-00-3087-00

Food aid can support economic policy reform in developing countries by helping recipient governments protect the poor from the pains of economic adjustment. This study, produced by A.I.D.'s Agricultural Policy Analysis Project (APAP), examines the use of U.S. food aid programs in supporting policy change and describes some recent experiences with such programs. Part One discusses the advantages and disadvantages of several P.L. 480 program structures (e.g., multi-year agreements, multi-donor programs, creation of buffer stocks, programming the use of local currency generations, and financing the implementation costs of reform) in encouraging agricultural policy reforms. It also reviews food aid's potential to promote food security, and provides a summary of lessons learned by APAP on the role of food aid in supporting agricultural price reforms. Part Two presents case studies of the effectiveness of food aid in encouraging macroeconomic policy reform in Guinea, restructuring cereals markets in Mali, and promoting food security in Bangladesh. A general finding is that while food aid can be used to support broad macroeconomic policy reform and structural adjustment, it is most effective when used to support agricultural price reform or to promote increased food security.

056

*PN-AAZ-984

MF \$1.08/PC \$1.82

Relationship between food production and consumption variability : policy implications for developing countries

Sahn, David E.; Braun, Joachim von

International Food Policy Research Institute

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

Journal of agricultural economics, v.38(2), May 1987,
p.315-327 : statistical tables, En. Reprint no.115
9364062; 936411114

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

An analysis is made of the extent to which increases in inter-year instability in food consumption at the national level are attributable to parallel increases in food production resulting from the adoption of modern agricultural technology. The study begins with an analysis of production and consumption variability in the pre- and post-Green Revolution eras in 38 countries. In an attempt to further explain the pattern of variability in food consumption across the sample countries, multivariate analyses were employed to estimate the transmission of production variability into consumption variability. The data analyzed indicate that increased production instability does translate into increased fluctuations in consumption; however, year-to-year consumption variability at the country level has declined over the past 25 years due to the improved stocking operations and trade practices which accompany economic growth. Finally, various policy interventions designed to help reduce the effects of increased production variability, including policy options, price and supply stabilization, infrastructure development, and targeted programs (e.g., employment- and income-generation schemes, crop insurance programs) are considered. (Author abstract, modified)

057

*PN-ABA-394

MF \$1.08/PC \$1.82

Opportunities in the international economy for meeting the food requirements of the developing countries

Mellor, John W.

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

International political economy yearbook, v.3, 1987,
p.47-59 : statistical tables, En. Reprint no.118

Hollist, W. Ladd; Tullis, F. LaMond

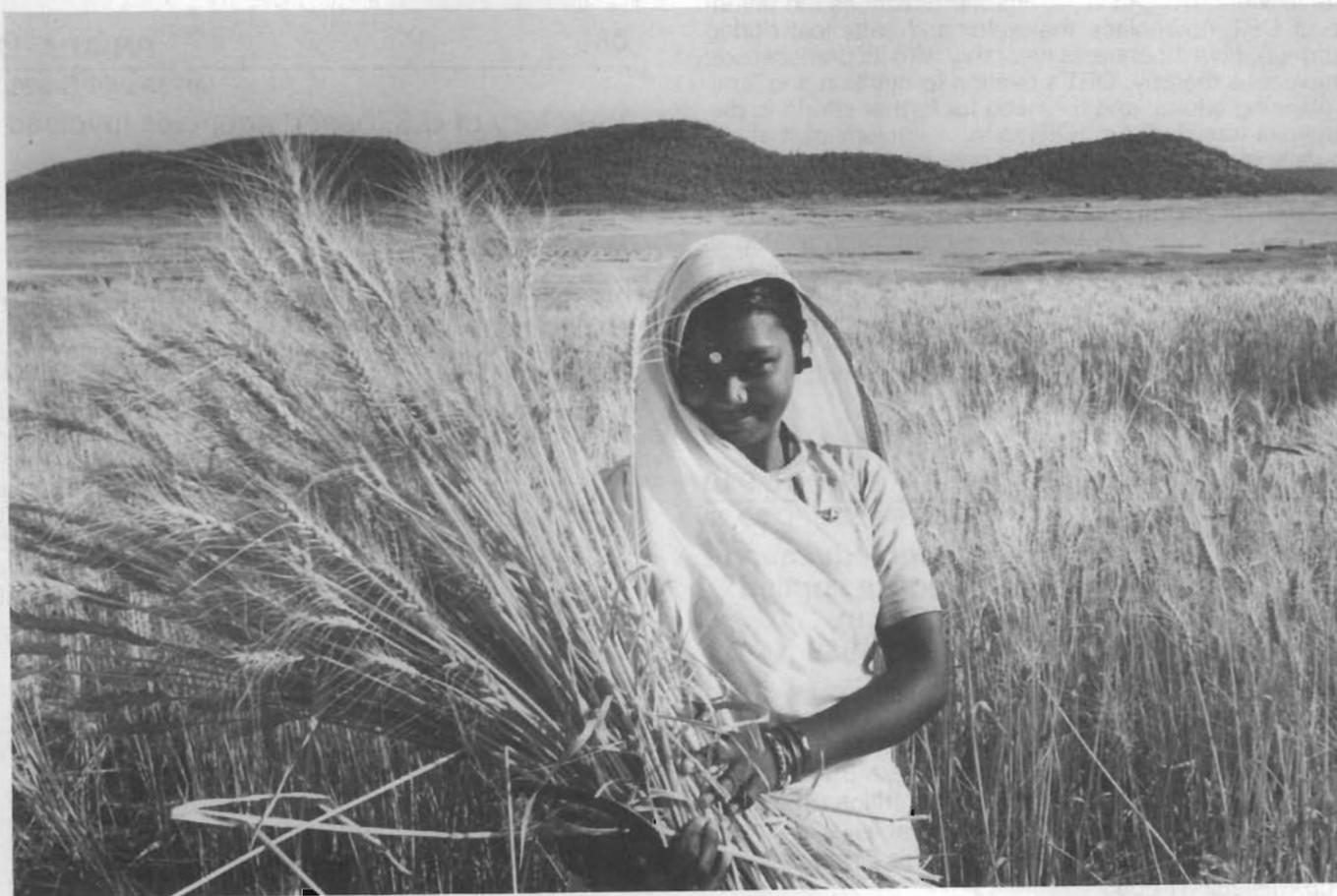
Published by Lynne Rienner Publishers, Inc.

Title of volume 3: *Pursuing food security -- strategies
and obstacles in Africa, Asia, Latin America, and the
Middle East*

936411114

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

Human suffering arising from food insecurity in the Third World could be assuaged through increased exchanges of food, capital, and technology between developed and developing countries. To argue this hypothesis, this article first identifies the food security needs facing the Third World and then analyzes the pro's and con's of donor food aid programs. Such programs, it insists, must promote rather than hinder increased food production by Third World countries themselves. Production increases, aided by the influx of capital and the direct and multiplier effects of technological exchange, would not only raise the total amount of food available, but would increase poor people's access to food, their purchasing power, and their employment opportunities. On the policy level, developed countries can promote agricultural growth in the Third World by: (1) providing expertise in the social, biological, and physical sciences; (2) underwriting the costly infrastructural improvements needed to increase Third World food production; (3) liberalizing trade restrictions so as to encourage labor-intensive exports by Third World countries; and (4) revising the structures used by institutions such as the International Monetary Fund for financing food trade to Third World countries.



Helping to feed the world continues to be an A.I.D. priority.

058

PN-AAZ-606

MF \$2.16/PC \$15.60

Oral rehydration therapy : a revolution in child survival

Snyder, Gerald S.

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

1988, xvi, 112p. : ill., charts, En

A.I.D. science and technology in development series

Published by Oelgeschlager, Gunn and Hain, Publishers, Inc.

9361406

DAN-1406-I-00-5096-00

Safe, effective, and inexpensive, oral rehydration therapy (ORT) has emerged as the cornerstone of international efforts to reduce child mortality resulting from the nearly one billion diarrheal episodes per year in children under five in the developing world. This study, drawing on the vast ORT literature and the expertise of the 1,200 participants in the second International Conference on ORT (ICORT II), presents a comprehensive overview of ORT. An initial chapter describes the rationale of ORT (to replace the water and salts lost during diarrhea); how it contrasts favorably with its predecessor, intravenous therapy; ORT's relation to nutrition and family planning efforts; and the need for further efforts to disseminate knowledge of ORT and to implement it at the household level. Succeeding chapters discuss: (1) the development of ORT technology and ORT's emergence as the dominant anti-diarrheal therapy following the 1971 Indo-Pakistani war; (2) worldwide distribution strategies for oral rehydration salts; (3) the need to integrate ORT with other health interventions, including breastfeeding; (4) the relation of water infrastructure to diarrhea and other diseases; and (5) future directions for ORT. Includes 19 figures, glossary, four appendices, and references.

059

PN-AAZ-910

MF \$1.08/PC \$9.23

Growth monitoring and nutrition education : impact evaluation of an effective applied nutrition program in the Dominican Republic, CRS/CARITAS, 1983-1986

Logical Technical Services Corp.

U.S. Dept. of Health and Human Services. Public Health Service. Office of International Health

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

Feb 1988, viii, 61p. : graphs, statistical tables, En

U.S. Dept. of Health and Human Services contract no.OIH-282-81-0095

BST-0249-R-HI-2254

An impact evaluation of the CARITAS/Catholic Relief Services Applied Nutrition Education Program (ANEP) in the Dominican Republic was carried out in 1987, three years after the program had been restructured to target at-risk families and focus on home-based growth monitoring and individualized nutrition education, using women's self-reliance and social marketing strategies. The evaluation used pre-post comparisons of participants' knowledge, practices, and children's nutritional status, and made comparisons of the same variables using matched participant and nonparticipant communities. Data indicated significant behavioral changes, and differences in key health and nutritional practices. Overall prevalence of moderate-to-severe malnutrition was reduced by more than one half after 2-3 years of program participation. There were consistent improvements in nutritional status in program children over time and as compared to nonprogram populations. ANEP's success was attributed to its careful selection of communities and selection and training of personnel, to its strong supervisory system and operationally defined activities, and to its effective communication strategies and in-built system for monitoring and evaluation. (Author abstract, modified)

060

PN-ABA-121

MF \$3.24/PC \$26.78

Directory of U.S. based agencies involved in international health : 1988 edition

National Council for International Health

U.S. Agency for International Development (Sponsor)

May 1988, [201]p., En

Produced by the National Council for International Health, this directory lists over 300 agencies active in international health assistance, including civic groups, foundations, labor unions, private voluntary organizations, professional associations, consulting/small business firms, U.S. government agencies, and transnational corporations. Each listing provides a brief statement of the organization's goals, budget, size of staff, activities, and countries in which it operates, along with basic information about addresses, phone numbers, and contacts. Also included are charts designed to identify organizations according to their activities and countries of operation.

061

PN-ABA-125

MF \$3.24/PC \$33.41

Directory : partners in immunization in child survival countries

John Snow, Inc.

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

Mar 1988, : maps, statistical tables, En 9365927

DPE-5927-C-00-5068-00

Focused, national-level information and detailed maps characterize this directory - thought to be the only one of its kind - of immunization activities implemented in developing countries by government agencies, major donors, and (primarily U.S. based) private voluntary organizations (PVO's). The directory is a product of the Resources in Child Health (REACH) project and highlights the 22 countries designated by A.I.D. as "Child Survival Emphasis" countries, as well as several where REACH has provided technical assistance for Expanded Programs of Immunization. For each country, the following categories of immunization-specific information are covered: national policies; program history and scope; delivery strategies; technical aspects; official immunization schedule; coverage rate; vaccine sources; and the names and addresses of key personnel of the Ministry of Health, WHO, UNICEF, A.I.D., and other donors and PVO's working in the country. Specific activities of these organizations are described with respect to their major purpose, duration and funding level, geographic area, and target population.

062

PN-ABA-225

MF \$2.16/PC \$18.98

Communication for child survival

Rasmuson, Mark R.; Seidel, Renata E.; et al. Academy for Educational Development, Inc. University of Pennsylvania. Annenberg School of Communications

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

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

Jun 1988, viii, 144p. : ill., En 9311018

This manual presents a systematic public health communication methodology for child survival programs. It provides detailed descriptions of: (1) public health communication and its role in child survival programs; (2) three disciplines which have significantly influenced public health communication - social marketing, behavior analysis, and anthropology; (3) the three stages of the communications methodology - planning, intervention,

and monitoring/evaluation; and (4) methods for assuring the continued application or "institutionalization" of a public health communication strategy. The strategy as applied to child survival has been tested in A.I.D. projects in more than ten countries. The examples used here are drawn largely from two A.I.D. projects, the Mass Media and Health Practices Project (MMHP) and the Communication for Child Survival Project (HEALTHCOM), which have assisted national child survival programs in several countries, focusing on a range of health areas including oral rehydration therapy, immunization, nutrition, breastfeeding, growth monitoring, and others. Annexes include a 5-page bibliography, sample communications materials, and case studies from Egypt, Pakistan, Honduras, The Gambia, Tanzania, and Tunisia. (Author abstract, modified)

063

PN-AAZ-852

MF \$3.24/PC \$36.53

U.S. capacity to address tropical infectious disease problems

National Academy of Sciences. National Research Council. Office of International Affairs. Board on Science and Technology for International Development

National Academy of Sciences. National Research Council. Institute of Medicine

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

1987, xvii, 177p. + appendix : statistical tables, En References: p.172-177

Published by National Academy Press

Conclusions and recommendations: PN-AAZ-853

9361406

DPE-1406-G-SS-4071-00

The next few decades offer a historic opportunity to make progress against tropical infectious diseases through a combination of new biological research methods and new economic and social approaches to health improvement. This study reviews the United States' capacity to contribute to tropical disease control. The study examined important categories of talent (clinicians, biomedical scientists, and specialists in public health and disease control); training and research capacities; and current efforts in tropical disease surveillance, diagnosis, treatment, and control. It found that the United States is contributing significantly, but at a level less than it could and should. Tropical health is outside the mainstream of U.S. health concerns, the maintenance of competence in tropical diseases tends to be taken for granted, and the state of the field is seldom assessed. The study concludes that the United States could contribute much more with only modest increases in resources. Specific recommendations are to: provide more funding for training and research; broaden research to include social and public health aspects; encourage epidemiological studies; give continued attention to the

development of new technologies; improve interagency and international collaboration; and provide greater support to strengthening the capacities of developing countries.

064

PN-AAZ-959

MF \$1.08/PC \$6.24

Maternal morbidity from guinea worm in Nigeria and its impact on child survival

Brieger, William R.; Watts, Susan; Yacoob, May
Camp Dresser and McKee, Inc.

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

Jun 1988, viii, 42p., En, Summaries in Fr

WASH field report, no.232

WASH activity no.424

9365942

DPE-5942-C-00-4085-00

Research was conducted at two sites in Nigeria in early 1988 to determine the impact of guinea worm on maternal and child health. Mothers of children aged 2 years and under were the primary target; in-depth interviews were conducted with 42 mothers suffering from guinea worm. Analysis was based on four major variables: self-care; child care; domestic activities; and economic pursuits. Findings indicated that during bouts with guinea worm, women's mobility was severely impaired, affecting their self-care functions as well as their ability to perform normal chores both inside and outside of the home. As women's income supports most of the costs incurred for child care, loss of work time had a direct impact on providing for the children. In addition, mothers were less able to attend to their children, particularly if the children needed health care. Affected mothers and children received some aid from family and friends, but economic activities often took the well members away from the home, leaving the sick members alone. The study stresses the need to link guinea worm control and water supply projects with child survival programs, and the importance of women's participation in these programs.

065

PN-AAZ-336

MF \$1.08/PC \$9.88

Guidelines for institutional assessment : water and wastewater institutions

Cullivan, Donald; Tippet, Bruce; et al.
Camp Dresser and McKee, Inc.

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

Feb 1988, iii, 73p., En

WASH technical report, no.37

WASH activity no.146

9365942

DPE-5942-C-00-4085-00

Arguing from the premise that the basic problems facing the water and wastewater (W&WW) sector are institutional in nature, this document provides a set of procedures for diagnosing deficiencies in W&WW institutions. The guidelines are based on team field investigation procedures which identify, define, and verify institutional performance using functional categories which were developed through field analyses of W&WW institutions in two developing countries. In order of relative importance, the categories are: (1) organizational autonomy; (2) top leadership; (3) management and administrative systems; (4) commercial and consumer orientation; (5) technical capability, along with staff development and maintenance; and (6) organizational culture, along with interactions with key external institutions. To ensure rigor and balance, it is suggested that the analysis take place in five steps: data analysis by individual team members and then by the team as a whole; synthesis of findings, including the weighting of different dimensions; preliminary presentation of the analysis to a review committee; and reverification of findings prior to final presentation. The intended end result of the procedure is a defined profile of institutional strengths and weaknesses which can be used for designing institutional improvement projects.

066

PN-AAZ-712

MF \$1.08/PC \$5.72

Domestic water supply and sanitation in irrigation projects

Tillman, Robert E. ; Tobin, William R.; Roark, Philip
Camp Dresser and McKee, Inc.

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

May 1988, vi, 42p. : charts, statistical tables, En

WASH field report, no.237

WASH activity no.208

9365942

DPE-5942-C-00-4085-00

Serving some 880,000 ha along the Blue Nile in Sudan, the Gezira-Managil Irrigation Scheme has led to dramatic increases in occurrences of malaria, schistosomiasis, diarrhea, and other water-related diseases. This study uses Gezira-Managil as a case in point to draw the attention of project planners to the problem of disease control in irrigated areas. For schistosomiasis, the study recommends a six-point control plan of providing safe domestic water supplies, modifying human behavior through education, modifying snail habitats, implementing biological controls, applying molluscicides, and providing chemotherapy. In the Sudan, a program using most of these measures costs about \$2.40 per capita per year. It is suggested that similar multifaceted programs, with appropriate modifications for different vectors, can be used to control and treat malaria and other water-related diseases. Health education, community participation, and sanitation facilities are key features; immunization

and oral rehydration therapy can also play important roles. In the Sudan, an integrated program to control all major irrigation-related diseases costs \$6.00 per capita per annum. These costs, it is concluded, represent only a small percentage of total irrigation infrastructure costs, but are likely to yield a high return on investment in terms of increased human productivity and well-being. Includes a 2-page bibliography (1973-88).

067

PN-AAZ-770

MF \$2.16/PC \$14.95

Selection of drilling rigs for rural water supply

Preble, Ralph E.; Roark, Philip
Camp Dresser and McKee, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
Apr 1988, vii, 131p. : ill., En
WASH technical report, no.42
9365942
DPE-5942-C-00-4085-00

Too often rural well-drilling projects have employed rigs that are too large for the job, resulting in unnecessarily high costs and reduced flexibility in reaching isolated locations. This report describes the conditions under which rural water supply projects are typically constructed and provides guidelines for the selection of appropriate drilling rigs. Discussed in turn are: (1) general considerations (e.g., site accessibility, aquifer characteristics); (2) drilling methods (cable tool drilling, rotary drilling, rotary percussion drilling, and reverse rotary drilling); (3) specific drilling rig considerations (e.g., rig weight, maintenance, procedures for different types of wells); (4) accessory equipment; and (5) training needs. Basic criteria for rig selection include: the capability of drilling to 75 meters; boreholes for 4-6 inch casing; both rotary and air percussion capability; light weight; and low cost. The report includes a chart comparing selected rigs currently on the market (literature provided by the manufacturers is appended). Includes bibliography (1951-88).

068

PN-AAZ-920

MF \$1.08/PC \$8.45

Managing institutional development projects : water and sanitation sector

Edwards, Daniel B.
Camp Dresser and McKee, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
May 1988, iii, 64p., En
WASH technical report, no.49
WASH activity no.326
9365942
DPE-5942-C-00-4085-00

Developed on the basis of seven years' work with a water and sanitation project in Sri Lanka, this manual is designed to provide practical and immediately useful information on how to plan and manage institution-building projects in the water and sanitation sector. Elements of successful projects are discussed first, in a section covering pre-design and design issues, specification of goals, sequencing of activities, and project start-up. Lessons learned - primarily from the author's own field experience - are then set forth under the following headings: change management; the nature of the consulting relationship; skills and technology transfer; managing the process of institutional change (steering and management committees, focus groups, task forces); project review mechanisms (monitoring workshops, formal evaluation); decisionmaking in the cultural setting; and managing external forces. Most of these lessons are applicable to institution building in other sectors as well. Appended are a short bibliography and a number of worksheets to be used in evaluating institutional performance.

069

PN-AAZ-957

MF \$1.08/PC \$10.92

Teaching about guinea worm prevention : a manual for secondary school teachers

Smith, Jason; Yacoob, May
Camp Dresser and McKee, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
Feb 1988, 94p., En
WASH field report, no.223
WASH activity no.375
9365942
DPE-5942-C-00-4085-00

Developed for use by secondary-level teachers in Nigeria, this guide for the prevention of guinea worm can be adapted for use in other countries. The basic premise of the guide is that secondary students are highly respected in many villages and can serve as agents of change. The message to be imparted through the stu-

dents is that communities should take the initiative for building and maintaining a potable water source, which, coupled with preventive health practices, is the only practical means to stop the spread of the disease. The guide consists of a set of lesson plans and supporting background materials. It includes content material as well as suggestions for classroom activities to show students how to inform their parents and siblings about the prevention of guinea worm. Also provided are an outline for a training workshop for teachers who will be using the guide, a 3-page bibliography, and reprints of eight pertinent articles.

070

PN-AAZ-958

MF \$2.16/PC \$14.17

Workshop on guinea worm control at the community level : a training guide

Brieger, William R.; Rosensweig, Fred
Camp Dresser and McKee, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
Jan 1988, iii, 83p. + attachment, En
WASH technical report, no.50
WASH activity no.375
9365942
DPE-5942-C-00-4085-00

Provided here is a training guide for conducting a two and a half day workshop for rural health personnel who are responsible for guinea worm control. These may be health assistants, nurses, health inspectors, or other district-level health workers, but not village-level primary health care workers. The workshop is designed to be led by those having experience in guinea worm control and nonformal education techniques; its seven sessions focus on increasing participants' understanding of the causes and prevention of guinea worm, improving their communication skills, and presenting them with methods for mobilizing resources for a guinea worm control project. A participatory training methodology, including group discussions, case studies, and small group and individual tasks, is employed. The guide, which was pilot tested at two sites in Nigeria, includes handouts for participants and suggestions for an optional field exercise.

071

PN-AAZ-960

MF \$1.08/PC \$8.58

Adding guinea worm control components : guidelines for water and sanitation projects

Prins, Agma; Yacoob, May
Camp Dresser and McKee, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
May 1988, iii, 73p., En
WASH technical report, no.51
WASH activity no.368
9365942
DPE-5942-C-00-4085-00

As elimination of guinea worm disease has come to the forefront of development issues, A.I.D. has committed itself to adding a guinea worm disease control element to all existing A.I.D. water projects. Using Togo as a case study, this document provides step by step guidelines for adapting the World Health Organization's guinea worm control strategy to local realities. This strategy includes: surveillance to identify affected areas and monitor the disease's impact; targeting endemic areas for development of potable water sources; chemical control of cyclops (the disease vector); and community health education. Brief descriptions of various projects in Togo, conducted by A.I.D., UNICEF, and World Neighbors, illustrate how each implemented their own guinea worm control activity. The document notes the advantages of adding a guinea worm control component to an existing project, e.g., the presence of trained personnel, available materials and equipment, and established rapport with villagers. It also notes that adding-on can overburden those same resources, and recommends that careful research and planning be done before an add-on is implemented. Community involvement in planning, executing, and evaluating guinea worm control activities, it is suggested, is the key means of ensuring long-term success.

072

PN-ABA-092

MF \$1.08/PC \$7.67

Water vending and development : lessons from two countries

Whittington, Dale; Lauria, Donald; et al.
Camp Dresser and McKee, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
May 1988, viii, 53p. : ill., charts, maps, statistical tables,
En Selected bibliography, p.58
WASH technical report, no.45
WASH activity no.185
9365942
DPE-5942-C-00-4085-00

The ubiquity of water vending in developing countries clearly shows that households are willing and able to pay substantial amounts of money for water - much more than would be necessary for a piped distribution system with yard taps. In fact, data show that households supplied by vendors generally pay more for 20 liters of water than those supplied 500 liters per day from a piped system. (In one area studied, a new piped system with yard taps could be built for an annual per capita cost of about \$10-\$15.) However, funds from donor agencies and national governments are simply not sufficient to supply piped systems universally. This paper reviews the characteristics of water vending, based mainly on data drawn from two case studies, conducted in rural Kenya and periurban Tegucigalpa, Honduras, which surveyed the sources and patterns of water use, the distribution of water, and the supply and demand for vended water. Findings suggest that in some circumstances vending may be the most appropriate and least costly water delivery systems. A final chapter on improving water systems analyzes the justifications, possible methods, and costs for public sector intervention in water vending. Fourteen figures and 7 tables are included.

073

PN-ABA-105

MF \$3.24/PC \$35.23

Workshop design for well improvement : protecting open wells

Nagorski, Maria; Pineo, Charles; et al.
Camp Dresser and McKee, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
May 1988, v, 243p. + attachment : ill., En
WASH technical report, no.34
WASH activity no.116
9365942
DPE-5942-C-00-4085-00

As both technical skills and community development skills are required for village-based well improvement projects, this training workshop guide attempts to strike a balance between the two. Its overall focus is on projects to make shallow open wells more sanitary by constructing a headwall and an apron. The material is divided into 20 training sessions, each intended to last from a half to a full day. Topics include: (1) the differences between unimproved and improved wells; (2) the project cycle; (3) community well assessment; (4) construction techniques (e.g., excavating for the foundation, building a concrete block foundation, mixing and pouring concrete blocks, apron and headwall designs, mixing and pouring the apron); (5) user education; (6) cost estimating and planning; (7) headwall construction; and (8) evaluation. This guide is written for experienced trainers; the workshop it outlines is suitable for government ministry staff, extension workers, Peace Corps volunteers, or others involved in improving rural community water supply. Includes 33 handouts for use in the workshop.

POPULATION

074

PN-AAZ-473

MF \$3.24/PC \$28.99

Compendium of short and long term management training opportunities for family planning program managers from developing countries

Bullen, Rebecca; Buxbaum, Ann; et al.
Management Sciences for Health
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Population
(Sponsor)
Oct 1987, ca.125p., En
9363039
DPE-3039-C-00-5075-00

As the need for family planning (FP) services increases worldwide, so does the need to train competent FP program managers. This compendium, a product of A.I.D.'s FP Management Training Project, identifies short-term (less than 9 months), long-term (9-12 months), and/or individualized training programs that can help build skills appropriate to FP managers in developing countries. Included specifically are: (1) lists of U.S. short-term training programs in 15 management skill areas and of U.S. long-term training programs by degree; (2) descriptions, by institution, of both the short- and the long-term programs; (3) summary matrices for the two types of programs; and (4) a directory of Third World institutions which offer FP management training programs at the regional level. The academic and professional institutions listed are drawn from both the public and the private sectors. It is noted that a user-friendly database has been created to permit continual updating of the information contained herein. A 22-item bibliography of directories is included among the appendices.

075

PN-AAZ-894

MF \$1.08/PC \$4.42

Framework for economic analysis of family planning projects : a case study of the planned Niger family health and demography project

Barlow, Robin
International Science and Technology Institute, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Population
(Sponsor)
31 May 1988, iii, 23p. + appendix : statistical tables, En
Report no.87-111-060
Population technical assistance project occasional papers, no.1
6830258; 9363024
DPE-3024-C-00-4063-00

The cost-benefit analysis of family planning (FP) projects has always been problematic, since a typical FP project will raise per capita income over the short term but decrease total income over the long term as the labor force shrinks. Using the Family Health and Demography Project in Niger as an example, this study presents a new methodology for the cost-benefit analysis of FP projects which estimates the costs and benefits, cost-effectiveness, recurrent costs, and cost-recovery possibilities of a project. The study concludes that the Niger project is likely to have a favorable effect on the growth of per capita gross domestic product, which will be about 3.8% higher after 15 years of FP activities. In addition, the FP activities are likely to produce budgetary savings in certain sectors, such as education, health care, urban services, and housing, and to contribute to self-sufficiency in agriculture. The project should generate 420,105 couple years of contraceptive protection at a cost of about \$22 per couple year, and by the end of the 5-year project period recurrent costs should not exceed \$900,000. On the other hand, cost-recovery measures, such as charging fees for visits to FP clinics, probably are not advisable.

076

PN-AAZ-909

MF \$4.32/PC \$43.55

Contraceptive social marketing (CSM) assessment

International Science and Technology Institute, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Population
(Sponsor)

9 Jun 1988, 2v., En

Report no. 87-125-067

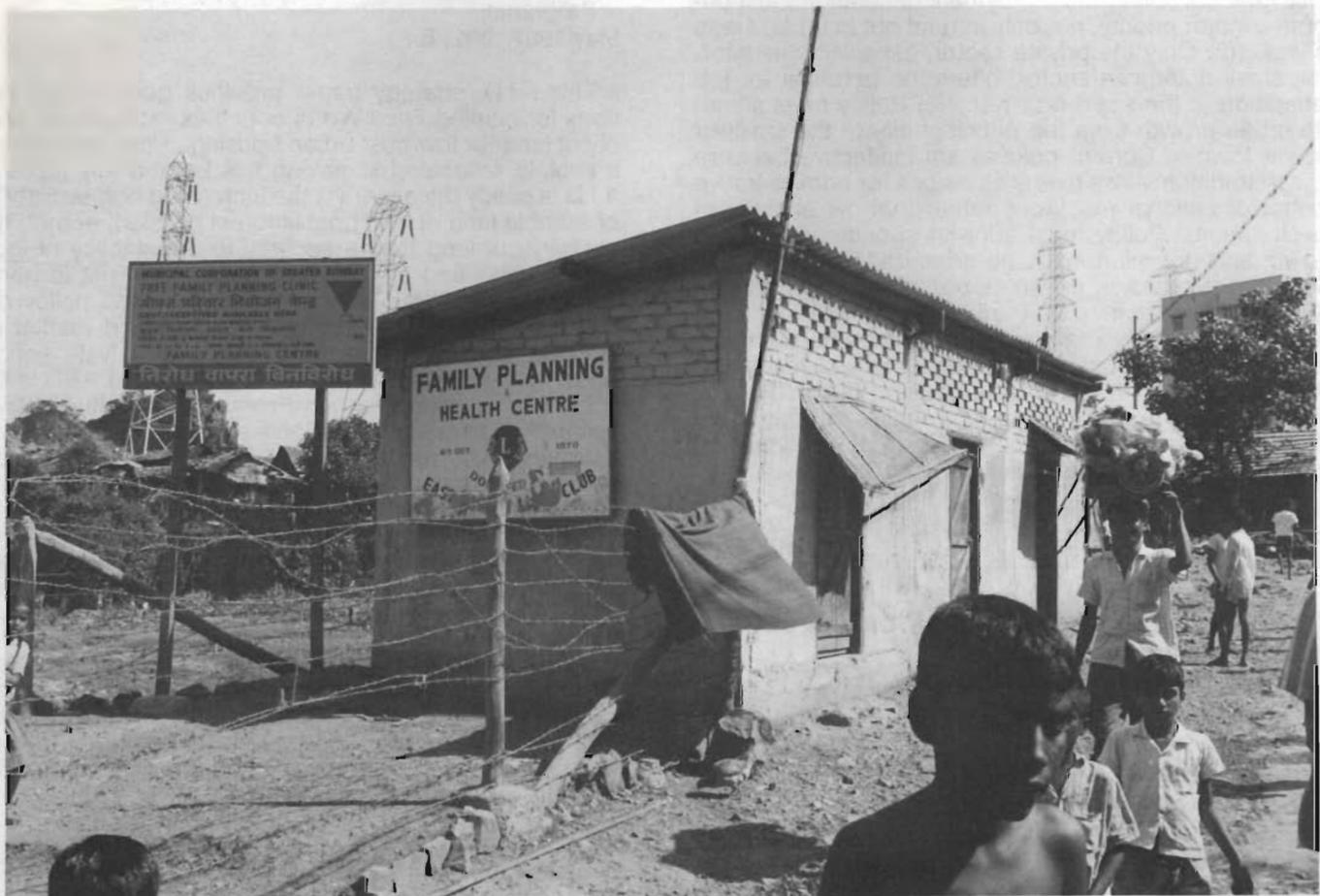
Contents: v.1. Worldwide review -- v.2. Six country
reports

9363024

DPE-3024-C-00-4063-00; DPE-3024-Z-00-7079-00

A.I.D.'s efforts to provide family planning (FP) services through contraceptive social marketing (CSM) programs are herein reviewed. With increased interest in the involvement of the private sector in FP initiatives, attention

has focused on CSM, which puts primary emphasis on the role of the commercial sector in the sale of contraceptives. The report is based primarily on in-depth reviews of programs in Nigeria, Ghana, Indonesia, Pakistan, the Dominican Republic, and Mexico, but also includes a review of CSM efforts worldwide. The major conclusion is that CSM programs are providing increasingly available, quality FP methods at affordable prices by melding commercial expertise with strong government support. Secondly, the wide variety of management configurations, marketing techniques, products employed, and procurement/distribution modes used by the various programs has advanced considerably the level of understanding of what works and does not work in CSM programming. The major weakness of CSM projects has been their inability to recover their costs. As most have used subsidized products, the issue of reconciling social goals with marketing objectives remains. Lessons learned and recommendations are provided in seven areas: management; marketing (promotion and advertising); products; pricing; brand names; distribution; and financing.



This family planning health center serves a slum area in Bombay.

HUMAN SETTLEMENTS

077

PN-AAZ-696

MF \$1.08/PC \$5.59

Urban implications of national development in Southern Africa

Van Huyck, Alfred P.

Planning and Development Collaborative International, Inc.

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

20 Mar 1988, 37p. : ill., En

Key issues facing countries of the Southern Africa Development Coordination Council (SADCC) in light of the over 89 million new urban citizens expected by 2020 are discussed in this paper, which challenges much of the present thinking about urbanization. Major points are as follows. (1) Targeted priority investments in agriculture, regional transportation, and communications will not absorb the rapidly growing rural labor force at the scale needed. Off-farm employment generation must become a major priority, not only in rural but in urban areas as well. (2) Only the private sector, especially the informal, small enterprise sector, offers the potential for job generation at the scale required. (3) Policy must stimulate urban growth from the principal city to the smallest market towns. Current policies are ineffective because African tradition views towns as places for administrative control of national resources rather than as engines of development. Policy must support spontaneous urban growth and not micro-manage urbanization. (4) Key to the entire process is decentralized urban management by "entrepreneurial urban managers" stressing job generation and development. (5) Successful urbanization will require a concurrent development of residential settlement areas with affordable housing built mainly by the informal sector, access to land tenure supported by efficient land policies, and the provision of self-financing urban infrastructure affordable by the poor.

078

PN-AAZ-717

MF \$1.08/PC \$7.80

Urbanization in African development : issues and opportunities

Garnett, Harry; Merrill, Sally; Miller, John D.

Abt Associates, Inc.

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

Mar 1988, viii, 50p., En
PDC-0000-1-00-6187-00

Africa is rapidly becoming urbanized, and within the next 20 years most African nations will pass the point at which more than half of their population will be living in urban areas. This paper contributes to the formation of

an A.I.D. urban policy for Africa, an explicit statement of which has been lacking. It begins by summarizing urbanization trends in Sub-Saharan Africa and analyzing A.I.D.'s overall African priorities with respect to their actual or potential urban content. It then outlines the role that urbanization plays in the overall development process. The more important urban development programs - secondary and market towns, municipal services, local resource mobilization, land management, small businesses, and urban upgrading - are discussed next. A final section presents country-specific options for A.I.D.'s responses to urban development needs. A 5-page bibliography is included.

079

PN-AAZ-719

MF \$1.08/PC \$2.47

Strategies for intervention in the urban land sector

U.S. Agency for International Development. Bureau for Private Enterprise. Office of Housing and Urban Programs

May 1987, 16p., En

This A.I.D. strategy paper provides guidance on options for helping Third World countries increase the supply of land for low-cost urban housing. Part I establishes a twofold rationale for making this issue a key focus of A.I.D.'s policy dialogue: (1) the increasing non-availability of suitable land due to population expansion; and (2) the centrality of land tenure security to the stability of local communities and to their willingness to invest in home improvements. Part II specifies A.I.D.'s land policy objectives, including land tenure security, land market efficiency, and government promotion of private action. After setting out the intervention priorities of A.I.D.'s Office of Housing and Urban Programs, Part III identifies suitable kinds of capital projects and technical assistance activities. The former include financing land assembly and development by private developers and informal sector brokers or through public-private partnerships; the latter include work in land information and data assembly, land use standards/affordability, and land problem diagnostics. The final section addresses implementation strategies and organizational roles. A short diagnostic visit is suggested, with a possible follow-up mission to assess land issues in greater detail and conduct a project feasibility analysis. Land, it is noted, should be an explicit component of Housing Guaranty Program capital projects. Finally, the report suggests ways that training can advance land sector goals and identifies a research agenda. (Author abstract, modified)

ENVIRONMENT AND NATURAL RESOURCES

080

PN-ABA-143

MF \$1.08/PC \$2.60

Environmental assessments of development projects : a preliminary review of A.I.D.'s experience

Chew, Siew Tuan

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

Jun 1988, vi, 15p., En References, p.15

A.I.D. evaluation occasional paper, no.17

Since the late 1970's donors and host country governments alike have become concerned with reversing the environmental degradation taking place in many Third World nations and limiting the adverse impact of development projects on the environment. This study describes, and reviews the effectiveness of, A.I.D.'s system for assessing the potential environmental impacts of proposed projects. Using examples of projects that were revised after environmental review, the study discusses A.I.D.'s methods for classifying the environmental risks of development projects (the so-called black, grey, and white lists), and the impact of the assessment process on revising project designs and implementation. Experience indicates that in many cases the assessments have helped project designers to identify and address significant environmental issues, and that they provide a forum for host country officials to voice their concerns about project impacts. The system is less effective, however, in screening activities indirectly funded by A.I.D. (e.g., activities of A.I.D.-supported intermediary credit institutions) and it does not provide guidance on how to detect or address unforeseen negative effects that might occur during implementation. Another potential problem is that budget-conscious Missions, fearing expensive project redesigns, might avoid the process altogether by funding only those projects on the "white list," i.e., that qualify for a categorical exclusion.

081

PN-ABA-773

MF \$4.32/PC \$48.75

World resources 1987 : a report

World Resources Institute

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)

1987, xiii, 369p. : ill., charts, maps, statistical tables, En
Includes index.

Published by Basic Books, Inc.

9361406

LAC-1406-G-SS-5080-00

This comprehensive assessment of the global resource base provides essential economic, ecological, and agricultural data for 146 countries. The book is organized into four parts. Part I is a brief essay which identifies key themes that run through the book and attempts to draw connections among related resource trends. Part II reviews global resources in 10 basic categories (population and health, human settlements, food and agriculture, forests and rangelands, wildlife and habitat, energy, freshwater, oceans and coasts, atmosphere and climate, and policies and institutions), and devotes a chapter to global systems and cycles (the carbon cycle, ocean circulation, geosphere-biosphere relations) in an attempt to show how a given phenomenon can cut across many different categories. Part III discusses in detail two issues of particular interest: managing hazardous wastes and achieving sustainable development in Sub-Saharan Africa. Part IV provides basic data tables on all the subjects discussed under Part II. Includes numerous charts, maps, a full index, and references. This report is also cross-referenced with its predecessor volume, *World Resources 1986*.

082

PN-ABA-797

MF \$1.08/PC \$2.99

Nature - oriented tourism in Costa Rica and Ecuador : diagnosis of research needs and project opportunities

Laarman, Jan G.

Southeastern Center for Forest Economics Research
North Carolina State University. School of Forest
Resources

Duke University. School of Forestry and Environmental
Studies

U.S. Dept. of Agriculture. Office of International
Cooperation and Development. Forest Service.
Southeastern Forest Experiment Station

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

Jun 1986, 18p., En

FPEI working paper series, no.6

Cover date: June 1987

9365519

Both Ecuador and Costa Rica have a rich variety of ecosystems and natural diversity, providing a significant opportunity to increase their revenues from nature-oriented tourism. This paper is a preliminary investigation of the opportunities for projects to promote the growth of such "ecotourism." The author discusses each country with respect to its: natural history attractions (including, e.g., parks, reserves, specific varieties of flora and fauna, active volcanoes); image among natural historians; rationale for encouraging nature-oriented tourism; and the structure of the tourist industry. Constraints on nature-oriented tourism - inadequate in-

ENVIRONMENT AND NATURAL RESOURCES

frastructure and facilities, shortages of park service personnel and experienced guides, poor park management, and inadequate protection of visitors - are examined as well, along with the need to put much greater emphasis on marketing and promotion. Recommendations are made in three broad areas: promotion, marketing, and management.

083

PN-ABA-934

MF \$1.08/PC \$7.67

Marketing nature - oriented tourism for rural development and wildlands management in developing countries : a bibliography

Ingram, C. Denise; Durst, Patrick B.
U.S. Dept. of Agriculture. Office of International Cooperation and Development. Forest Service.
Southeastern Forest Experiment Station
Southeastern Center for Forest Economics Research
North Carolina State University. School of Forest Resources
U.S. Agency for International Development. Bureau for Science and Technology. Office of Forestry, Environment and Natural Resources (Sponsor)
Jul 1987, 54p., En
General technical report SE-44
9365519

Nature-oriented or wildlands tourism is tourism undertaken in natural habitats, whether for the sake of scientific study, wilderness adventure trips, or some less exacting combination of both. This bibliography, one of the first of its kind, cites a variety of publications - descriptive case studies, project summaries, marketing manuals, research reports, and methodological reviews - on the interrelated subjects of nature-oriented tourism, tourism marketing, and wildlands conservation. In all, 262 citations, most of them dating from 1976 and after, are provided under five broad categories: information sources, planning and development, wildlands management, tourism impacts, and marketing and promotion. Each citation includes a brief annotation, and author and geographic indexes are provided.

084

PN-AAZ-912

MF \$1.08/PC \$11.44

Diagnostic surveys and management information systems in agroforestry project implementation : a case study from Rwanda

Gibson, David C.; Muller, Eva U.
International Council for Research in Agroforestry
Cooperative for American Relief Everywhere, Inc.
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)
Aug 1987, 81p. : statistical tables, En
ICRAF working paper, no.49

A diagnostic survey was used to develop the agroforestry extension strategy of the CARE Gituza Forestry Project in Rwanda. In addition to providing valuable information about the pre-project state of farming systems and land-use, the survey identified the local issues around which the extension program was constructed and periodically monitored. Based on the survey results, an information management system for project monitoring was developed, which supplied critical information about the extension service's ability to respond, in a sustainable way, to farmer-identified needs and interests. The findings of the diagnostic and follow-up surveys were thus translated directly into agroforestry extension training as well as day-to-day management decisions. Preliminary evidence gained from one year's use of the monitoring system suggests that the project has a significant and positive impact on farming practices and that the described methodology is a practical way of assuring continuous participation from the project beneficiaries. (Author abstract)

085

PN-ABA-176

MF \$1.08/PC \$7.41

Modeling growth and yield of multipurpose tree species

Adams, Norma R.; Cady, Foster B.

Winrock International Institute for Agricultural Development

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

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 Asia and Near East. Office of Technical Resources (Sponsor)

1988, 57p. : charts, statistical tables, En

Multipurpose tree species network technical series, v.1
9365547

LAC-5547-C-00-5124-00

This collection of five technical papers discusses the use of simulation models for predicting the growth and yield patterns of multipurpose tree species (MPTS), which are increasingly used by Third World farmers for purposes ranging from increasing fuel, fodder, and income to controlling erosion and restoring degraded lands. Such models can provide the basis for recommendations to help farmers match tree species with specific sites and evaluate various tree management practices. The papers, respectively: (1) outline the information needed for MPTS yield prediction, with a stress on the importance of coordinated experiments in different environments but under the same measurement standards as a means of establishing minimum data sets for modeling; (2) review various existing simulation models of tree and stand growth; (3) analyze the importance of short-rotation systems in designing a model to predict MPTS yield; (4) discuss the influence of drought stress on modeling MPTS yield and outline an approach to simulating the effects of various durations of drought on biomass production; and (5) argue the need to understand the interaction of biological and physical processes with management systems for producing reliable models of tree growth. Includes references.



A nursery worker sorts seedlings in preparation for planting.

086

PN-AAZ-552

MF \$1.08/PC \$11.83

Report to Congress -- power shortages in developing countries : magnitude, impacts, solutions, and the role of the private sector

U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy
Mar 1988, xii, 73p., En
9365728

Energy shortfalls seriously constrain economic growth in over half of all A.I.D.-assisted countries. However, because many of these countries already spend some 25% of their budget on power, it is not feasible for a greater share of that budget to be allocated to meet an increasing energy demand. This report, written in response to a Congressional request, describes this dilemma and outlines A.I.D.'s role in developing a solution. In Chapter 1, the power crisis in developing countries is defined and the potential impacts on developing countries are analyzed. In Chapter 2, the role of electricity in economic development is discussed, as is the importance to the United States of electric power development in developing countries. Chapter 3 identifies policy, institutional, and technological approaches to resolving power shortages, while Chapter 4 outlines A.I.D.'s commitment to a private-sector strategy for alleviating power supply problems and identifies appropriate incentives for private sector involvement in energy development. Finally, Chapter 5 defines A.I.D.'s plan for implementing this strategy, especially through policy dialogue and institution-building initiatives. In response to a specific request from Congress, the report discusses the feasibility of developing an Energy Guaranty Program modeled on A.I.D.'s Housing Guaranty Program, suggesting that there are not currently enough private power projects being negotiated to warrant the establishment of a new program.

087

PN-ABA-256

MF \$1.08/PC \$11.70

Energy in West and Central Africa : issues, problems, and donor activities -- final report

RCG / Hagler, Bailly, Inc.
U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor)
Jul 1988, 15p. + 2 annexes : charts, statistical tables, En
Report no.88-12B
HBI reference no.88-4204
9365728
DHR-5728-Z-00-7014-00

West and Central Africa have substantial energy resources, yet remain highly dependent on imported petroleum for meeting the energy needs of the modern sector and on fuelwood for meeting household needs.

This report presents an overview of the energy situation in 24 West and Central African nations, detailing the disposition of fuelwood, hydroelectric, petroleum, and biomass resources in the region and focusing on a number of key problems facing the energy sector, including (1) inadequate data for energy planning; (2) deforestation and fuelwood shortages; (3) power system inefficiency and unreliability; (4) poor petroleum sector procurement, marketing, and distribution; (5) lack of skilled personnel and adequate institutional frameworks to implement energy policies and programs; (6) inefficiency of energy end use; and (7) inefficient pricing policies. Other sections of the report discuss the energy assistance programs of major bilateral and multilateral donors and make some preliminary recommendations for A.I.D. energy activities. Appendices include a selective bibliography and a summary of country energy assessments.

088

PN-ABA-309

MF \$1.08/PC \$7.15

Energy requirements for rural development

Jones, Donald W.
Martin Marietta Energy Systems, Inc. Oak Ridge National Laboratory
U.S. Dept. of Energy (Sponsor)
U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor)
Jun 1988, vii, 52p. : statistical tables, En
ORNL-6468
9365728

Underlying this study on the role of energy in the development of rural areas is a cautionary note which advises against assuming that rural energy use is necessarily and completely conducted within the agricultural sector. The study points out that the percentage of energy use for purely agricultural activities is actually quite small; however, the effects of farm modernization techniques such as mechanization, irrigation, the use of high-yielding seed varieties and commercial fertilizers, and infrastructural development - all of which are analyzed herein - do have a direct bearing on overall energy use in rural areas. The paper focuses on energy use at the production rather than household level, noting that a significant amount of literature is available on the latter. Energy use as a result of industrial development, a vital but often overlooked aspect of rural development, is also discussed. The report does not depend heavily on numerical data; however, it does attempt to assemble some data which are directly and indirectly related to rural energy use so that they will be accessible in one place.

089

PN-ABA-497

MF \$2.16/PC \$23.14

Fuelwood and charcoal research in the Dominican Republic

Knudson, Douglas M.; Chaney, William R.; Reynoso, Franklin A.

Dominican Republic. Higher Institute of Agriculture National Commission on Energy Policy
Purdue University. Dept. of Forestry and Natural Resources

U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Dominican Republic (Sponsor)

1988, 181p. : ill., statistical tables, En
5170144

517-0144-C-00-300-00

Although the Dominican Republic has the resources to be a net exporter of wood products, wood remains the country's third most costly import. This document presents the results of the first major forestry research effort in the Dominican Republic. Discussed at length are findings in three broad areas of research: characterization and management of native dry forests (including control of understory vegetation, thinning, enrichment planting, and sprout management); plantation establishment and management (including cost projections, the identification and evaluation of lead species, and recommended spacing, weeding, pruning, and fertilization practices); and charcoal production (including traditional methods of wood drying, the performance of various drying kilns, and marketing of wood and charcoal). A final section addresses policy constraints on reforestation. The authors conclude that if the current pattern of deforestation is to be curbed, the Dominican Government will need to encourage private reforestation efforts, protect remaining native forests (in part by more effectively protecting national parks and preserves), and put idle agricultural land into forest production. Includes illustrations, references.

090

PN-ABA-932

MF \$1.08/PC \$3.25

Bioenergy systems report : prospects in developing countries for energy from urban solid wastesU.S. Agency for International Development. Bureau for Science and Technology. Office of Energy
Sep 1988, 24p. : ill., En
9365709

The severe health and environmental hazards posed by inadequate waste collection systems in the rapidly growing cities of the Third World have stimulated interest in the waste-to-energy options developed in industrialized countries over the past 20 years. This technico-economic study, the first of its kind, provides: (1) a comparative analysis of the characteristics of urban solid wastes in the United States, Europe, and developing countries; (2) basic information on the characteristics and operation of the two main types of waste-to-energy systems used in the developed world - landfill gas (LFG) systems and waste combustion systems; and (3) a preliminary assessment of the feasibility of using these systems in developing countries. Main conclusions are as follows. (1) Present technology for the recovery and utilization of LFG appears to be suitable for developing country use, although the design of LFG projects would have to be modified to accommodate higher initial gas production rates and the shorter productive life of each landfill. (2) Several types of waste combustion systems with rotary combustors appear to have the capability of utilizing the types of wastes that are available in most developing country cities.

091

*PN-ABA-933

MF \$1.08/PC \$8.19

Impacts of inadequate electricity supply in developing countriesJones, Donald W.; Sanghvi, Arun P.; Hillsman, Edward L.
Martin Marietta Energy Systems, Inc. Oak Ridge National Laboratory

U.S. Dept. of Energy (Sponsor)

U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor)
Aug 1988, ix, 56p. : statistical tables, En

ORNL-6436

9365728

BST-5728-P-ER-4257-01

* Also available from: National Technical Information Service, Dept. of Commerce, 5285 Port Royal Road, Springfield, VA 22161 USA

Many developing countries are experiencing growth in the demand for electricity that exceeds their ability to increase production capacity. Unreliable electricity sup-

ENERGY

plies and unserved demands are the consequences. In India and Pakistan in the early 1980's, the costs of low-quality and unreliable electricity supplies in the manufacturing sectors alone were in the range of 1.5-1.8% of the gross national product; losses in the commercial and agricultural sectors and consumer surplus losses in households would raise these loss estimates. Nor is continued expansion of generation capacity likely to be a viable option. Aggregate expansion costs for the 1985-94 period in Third World countries are estimated to be \$520 billion in 1985 prices. This amount does not appear to be available in world capital markets, while rearrangement of

national development expenditures to accommodate further power sector spending is constrained by the fact that the power sector typically claims 25-40% of government capital expenditures already. Price reform could cut demand growth by half, but even this would leave serious capital problems for the macroeconomies. Finally, coal-fired capacity could be expanded, but this would cause major increases in atmospheric emissions unless cleaner - and costly - technologies are used. Includes 4 pages of references (1971-87). (Author abstract, modified)



Providing light for children to study by is but one way in which rural electrification can enhance the quality of life.

092

PN-AAX-206

MF \$2.16/PC \$15.21

Universities for development : report of the joint Indo - U.S. impact evaluation of the Indian agricultural universities

Busch, Lawrence

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

Sep 1988, xix, [96]p., En

A.I.D. project impact evaluation report, no.68

From 1955 to 1972, A.I.D. contracted with several U.S. land grant universities to help India establish eight agricultural universities. Today, India boasts 28 State Agricultural Universities (SAU's), and the SAU system, together with the Indian Council for Agricultural Research (ICAR), has become the world's second largest agricultural scientific establishment, with numerous achievements in agricultural education, research, and extension. The SAU's have developed the capacity to train students through the Ph.D. level, provided technical support to various state extension services, and made a considerable impact on Indian agriculture in terms of personnel, productivity, and technology development and transfer. Besides detailing these achievements and the factors contributing to them, this study, part of a worldwide review of A.I.D.'s support to higher education in agriculture, documents: (1) the historical development of the SAU's and their current structure; (2) their conformity with the ICAR Model Act; and (3) the issues which, in the view of SAU faculty and others in India, now face the system given the changing nature of world agriculture. Pressing management issues include: (1) strategic planning to build new constituencies; (2) the isolation of the SAU's and the overcentralization of the SAU system; (3) compromises in regard to faculty quality; (4) faculty uncertainty about the mission of the SAU's; (5) high staff turnover and in some cases very high levels of faculty vacancies, resulting in heavy teaching loads and student frustration; and (6) the inadequate representation of women both in professional disciplines and among the student body. Key educational issues are: (1) lack of staff in the social sciences; (2) outmoded methodologies for teaching and for extension education; (3) severe limitations in regard to the basic sciences; (4) the high number of students from urban rather than rural areas; and (5-6) the need to develop an interdisciplinary approach to research and expand job opportunities for graduates. The report concludes that the crucial test for SAU's in the next decade will be to develop into "proactive, environment-shaping" organizations. This can only be accomplished by forging new links with other agricultural institutions (e.g., the state irrigation departments) and, more importantly, by ensuring the continued political support of the Government of India. Includes a 7-page bibliography.

093

PN-AAX-207

MF \$1.08/PC \$12.09

Kasetsart University in Thailand : an analysis of institutional evolution and development impact

Eriksen, J.H.; Compton, J.L.; et al.

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

Sep 1988, xiii, 26p. + 8 appendices + bibliography : charts, statistical tables, En

A.I.D. project impact evaluation report, no.69
3980249

Founded in 1943, Kasetsart University's (KU's) original goal was to provide trained personnel to Thailand's Ministry of Agriculture and other public sector agricultural agencies. More than 40 years and some 38,270 graduates later, the university is entering a new phase: the transition from agricultural school to a broad-based academic institution capable of providing skilled graduates to Thailand's growing private sector. This document reviews KU's institutional development and draws valuable lessons for the development of agricultural universities in general. KU has participated in several programs which have fundamentally improved Thai agriculture. Of special interest is the National Corn and Sorghum Research Program, which has provided Thai farmers with improved maize varieties and cultural practices, resulting in a hundredfold increase in maize production. KU has also influenced the development of Thailand's world-renowned tropical fruit industry and has been instrumental in developing specialty crops such as honey, straw mushrooms, tropical orchids, and silk. KU scientists have contributed to supplying the Thai people with low-cost, high-quality protein supplements and have helped fight environmental degradation by participating in soil mapping, land use classification, and remote sensing activities. A number of lessons can be derived from KU's experience. (1) The role of agricultural higher education needs to be reconceptualized in order to enhance the relevance of agricultural schools and facilities. (2) Universities should develop strategic mechanisms for integrating diverse faculties and research programs around a common, institutional goal. (3) New forms of university organization are needed to provide more opportunities for students and faculty to engage in active, problem-oriented learning activities. (4) Universities should be held accountable for the relevance of their programs to the needs of the community. (5) The university should encourage and support leaders capable of introducing change and innovation within the university. (6) Donors and host governments should more effectively address long-term faculty development needs. (7) External donors should focus more on developing ties between the university and its outside policy, scientific, and industrial constituencies. Includes a 10-page bibliography.

094

PN-ABA-775

MF \$3.24/PC \$28.34

Improving the efficiency of educational systems : indicators of educational effectiveness and efficiency

Windham, Douglas M.

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)

Jan 1988, x, 212p. : charts, statistical tables, En

Final edition of PN-AAZ-418

9365823

DPE-5823-C-00-4013-00

While there has been increased interest in educational efficiency analysis in fiscally constrained developing nations, many educational practitioners resist the use of quantitative measures to assess educational performance. This monograph, written for mid-level educational planners in developing nations, attempts to identify appropriate quantitative indicators of educational effectiveness and efficiency and discusses how such indicators can be used at multiple levels of the educational system. Major sections treat: (1) conceptual and definitional issues related to measuring educational effectiveness and efficiency; (2) input and output measures of educational efficiency; (3) four alternative forms of efficiency analysis (benefit-cost analysis, cost-effectiveness analysis, least-cost analysis, cost-utility analysis); and (4) the relevance for policymakers of efficiency indicators, especially in relation to educational management information systems. Includes a 34-page bibliography. (Author abstract, modified)



Knowledge is the beginning of self-actualization.

TECHNOLOGY, INDUSTRY, AND COMMUNICATION

095

PN-AAZ-360

MF \$1.08/PC \$2.21

Implementing communications in development projects : new directions

Ray, Howard E.

Academy for Educational Development, Inc.

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

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 Development and Development Administration (Sponsor)

(Conference on Agricultural Development : Systems and Communication, Galilee, RI, US, 1-4 Jun 1987)

Jun 1987, 16p., En

9365826

DPE-5826-C-00-5054-00

Poorly designed communications programs frequently impede the transfer of improved agricultural technology to farmers. This address, delivered by the Director of A.I.D.'s worldwide Communication for Technology Transfer in Agriculture (CTTA) project, explores new strategies for improving researcher-farmer communication. After briefly discussing three new approaches (social marketing, behavioral analysis, farming systems research and extension) and the techniques developed in a number of donor projects (INTERPAKS in Ecuador, Pakistan, and Peru, PRODERITH in Mexico, Basic Village Education in Guatemala, and Mass Media and Health Practices in Honduras and The Gambia), the author describes the steps in the CTTA project's communication process - initial investigation, designing a communication strategy and materials, testing the latter, producing the materials, delivering information to specific audiences, reception by the audience, and formative and summative evaluation of the process, together with ongoing monitoring and related training and support. Orienting farmers to the process, targeting change to their actual and varying needs, and use of differing media for different purposes are identified as vital elements of the communications process.

096

PN-AAZ-554

MF \$2.16/PC \$18.46

Final report : an assessment of information demands for remote sensing and geographic information system technologies

Brooner, William G.; Maughan, Paul M.; Thibault, David A.

Earth Satellite Corp.

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

Feb 1988, vi, 109p. + 3 appendices : maps, En

Task order no. 01

9361406

PDC-1406-I-00-7070-00

A review of the published record and onsite inspection on five continents underpin this assessment of the potential benefits of new applications of remote sensing (RS) and geographic-based information system (GIS) technologies. Following a review of A.I.D.'s involvement in RS programs and of selected examples of RS and GIS programs of other major donors, the paper presents detailed findings on: (1) developing country demand for RS/GIS information on geology and soils, hydrology and geohydrology, agriculture and livestock, forests and woodlots, ecology, and land planning; and (2) current and planned RS technologies (including a variety of earth resources satellites, environmental satellites, satellite ground receiving stations, and digital image processing systems) and GIS technologies. Key conclusions concern: the value of RS and GIS technologies to A.I.D.; the value of GIS technologies in project design, implementation, and evaluation, as well as the mainly political rather than technical barriers to their adoption; and the demonstrated ability of developing countries to employ both RS and GIS technologies. Recommendations for action by A.I.D., both by itself and in concert with other donors, are presented. Includes references, a list of selected sources of image processing and GIS systems, and explanatory tables and graphs.

TECHNOLOGY, INDUSTRY, AND COMMUNICATION

097

***PN-AAZ-589**

MF \$4.32/PC \$41.73

Macro-policies for appropriate technology in developing countries

Stewart, Frances

Appropriate Technology International

U.S. Agency for International Development. Bureau for

Science and Technology. Office of Rural and

Institutional Development (Sponsor)

1987, x, 315p. : ill., charts, statistical tables, En

Published by Westview Press

9365428

DAN-5428-A-00-3047-00

* Also available from: Westview Press, 5500 Central Ave., Boulder, CO 80301 USA

Although the concept of appropriate technology has been acknowledged for two decades as an integral part of any development strategy that aims to combine economic growth with equity, it has not gained wide acceptance in the developing world. This collection of essays argues that a major reason for this failure has been a focus on micro-interventions to the frequent neglect of the macro-policies which determine the context in which all technology choices are made. The introduction discusses macro-policies in terms of four broad categories (those affecting the objectives of decisionmakers, those determining the availability and price of resources, those influencing markets, and those disseminating knowledge about technological alternatives); the critical importance of the proportion of resources controlled by different types of organizations is stressed. A series of case studies of government policies in developing countries - six covering technology choice in rural areas and two relating more to the urban industrial sector - explore the political economy of appropriate macro-policies and determine which policies have best promoted appropriate technology and which societal groups are likely to benefit from alternative policies and technologies. (Author abstract, modified)

098

PN-AAZ-769

MF \$1.08/PC \$8.00

Project evaluation and implementation

RCG / Hagler, Bailly, Inc.

U.S. Agency for International Development. Bureau for

Science and Technology. Office of Energy (Sponsor)

Apr 1988, v.p., En HBC reference no.88-4261

9365728

DHR-5728-Z-00-7014-00

Since many worthwhile energy projects are delayed or lost altogether due to poorly prepared investment cases, this manual was prepared to help managers in industrial plants to (1) identify opportunities for investments in energy efficiency improvements, (2) evaluate the long-

term value and risk sensitivity of these investments, and (3) implement those projects that meet management criteria and are approved. The manual is divided into three sections: Project Identification, in which a summary of recommended procedures is given; Evaluation, in which various methods of evaluating and ranking potential capital investments, such as Net Present Value or Internal Rate of Return, are discussed and illustrated with comprehensive examples and case studies drawn from actual plant experiences; and Implementation, in which important aspects of this process are listed and the monitoring of project results is reviewed. (Author abstract, modified)

099

PN-AAZ-771

MF \$1.08/PC \$5.20

Overview and literature review : opportunities to commercialize life science technology in Southeast Asia

Resources Development Foundation

U.S. Agency for International Development. Bureau for

Science and Technology. Office of Program (Sponsor)

Apr 1988, ii, 38p., En

9361406

DAN-1406-G-SS-7099-00

Life science technologies (LST's) - a broad term encompassing activities ranging from cell culture and recombinant DNA technology to molecular diagnostics, bioconversion, and microbial fermentation - have already had a profound impact on the world's health care, agriculture, and specialty chemical industries, but commercial use has been largely confined to industrialized nations. Based on a literature review, this paper explores the potential for expanding the commercial application of LST's in developing countries, with a focus on activities in crop improvement, pest management, bioconversion of plant material, microbial fermentation and immobilized enzyme technology, human and animal health care, algae culture, and aquaculture. The degree to which each of these technologies has penetrated the private sector in the Third World is discussed, and a list of unmet needs and suggestions for future action is provided. The paper finds that while significant headway is being made in the commercialization of agricultural plant improvement, bioconversion, and aquaculture technologies, LST adoption in the private sector is often hampered by lack of expertise and capital, inadequate infrastructure, and poor market access. Commercialization of these technologies, it is concluded, can best be encouraged by supporting effective international and national research programs. Appendices include 11 pages of references, definitions of LST's, and examples of specific biotechnology research being conducted in developing countries.

100

PN-ABA-937

MF \$1.08/PC \$5.33

Design of micro-projects and macro-policies : examples from three of ATI's projects in Africa

Hyman, Eric L.

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

27 Jun 1988, 39p., En

9365428

DAN-5428-A-00-3047-00

Three case studies of Appropriate Technology International's experience in Africa of the influence of macro-policies on appropriate technology micro-projects are presented. The first project, palm oil extraction in Cameroon, shows how trade restrictions and a domestic price floor have supported this sector, while inefficiencies in large-scale production by parastatals have opened up opportunities for artisanal production. The second project, improved charcoal stoves in Kenya, illustrates how public sector research and development and a benevolent government attitude toward the informal sector can lead to rapid production and marketing of a simple new technology. The final example, ferrocement fishing boats in Malawi, was unsuccessful because of low levels of investment and entrepreneurial capacity in the sector and the negative effects of controlled price ceil-



The aim of technology transfer is to help developing countries become agents of their own development.

SUBJECT AND GEOGRAPHIC INDEX

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