

A.I.D. RESEARCH & DEVELOPMENT ABSTRACTS



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FOR INTERNATIONAL
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GENERAL DEVELOPMENT

recommendations for conducting research, training, and other activities aimed at integrating women into RRD's FS efforts and provides some insights into ways of implementing these recommendations.

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PN-AAW-364

MF \$1.08/PC \$4.55

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Anderson, Mary B.

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

Feb 1986, ii, 31p., En

Gender manual series. Gender issues in basic education and vocational training

9300200

DPE-0200-0-00-5033

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PN-AAW-570

MF \$2.16/PC \$15.99

Survey of development projects and activities for women in Bangladesh

Schaffer, Teresita C.

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

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PN-AAW-573

MF \$4.32/PC \$39.13

Women's group enterprises : a study of the structure of opportunity on the Kenya coast

McCormack, Jeanne; Walsh, Martin; Nelson, Candace
World Education, Inc.

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

30 Jun 1986, vi, [289]p. : statistical tables, En

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OTR-0078-C-00-2313-00

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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 RESPUESTAS SOBRE ARDA

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

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001

PN-AAL-086

MF \$1.08/PC \$7.41

A.I.D. evaluation handbook

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

Apr 1987, v, 43p. + 4 attachments, En

Report no.TM-3S-12

A.I.D. program design and evaluation methodology report, no.7

To help managers make well-informed decisions, A.I.D. oversees an intricate system, herein described, to monitor and evaluate its development assistance activities at all levels and stages of implementation. An initial overview of the system notes U.S. Government requirements for accountability in the use of development assistance funds; A.I.D.'s focus on meeting management needs; the decentralized nature of the system to allow for flexibility and responsiveness; the multiple types of evaluation activities; and the importance of host country collaboration. A description of the procedural components of the system covers: (1) using past experience in designing new activities; (2) incorporating an information component (i.e., a plan for data collection and analysis activities) in project design; (3) deciding when, how, and what to evaluate; (4) writing an evaluation scope of work; (5) assigning Mission or AID/W backstopping responsibilities; (6) completing the evaluation (e.g., internal review, debriefing, submission requirements); and (7) making the evaluation useful through Mission or AID/W follow-up on recommendations. A concluding section delineates the evaluation responsibilities of Mission and of Regional and Central Bureau personnel. Appendices provide outlines of basic project identification data and of an executive summary, and steps in preparing an annual evaluation plan.

002

PN-AAW-299

MF \$1.08/PC \$1.95

Short introduction to nonproject assistance

Westrick, Daniel

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

30 Jun 1986, [15]p., En

Despite a policy which seems to discourage its use, A.I.D. relies increasingly on "nonproject assistance" (NPA), defined as generalized, short-term, resource support provided to a host country's economy as a whole or to one of its main subsectors. This paper describes five types of NPA - Cash Transfers, Commodity Import Programs, Sector Assistance, and P.L. 480 Titles I and III - and identifies three reasons for NPA's popularity:

(1) NPA serves U.S. foreign policy and security interests; (2) NPA enables A.I.D. Missions to move money quickly in the face of their own and host governments' personnel and management constraints; and (3) NPA facilitates policy dialogue, helps host countries cover recurrent costs, and directly assists the private sector, an increasing focus of the donor community. The paper's final section analyzes key NPA issues - policy reform and conditionality, the use of local currency, A.I.D. and host government accountability, fungibility and additionality, and the projectizing of NPA resources. Appended are a set of indicators for identifying NPA on A.I.D.'s Development Information System (DIS) and an annotated select bibliography on NPA (24 items, 1970-86).

003

PN-AAW-433

MF \$2.16/PC \$19.24

Lectures on development strategy, growth, equity and the political process in southern Asia

Papanek, Gustav F.; Naqvi, Syed Nawab Haider; et al.

Pakistan Institute of Development Economics

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

1986, viii, 147p. : statistical tables, En

Lectures in development economics, no.5

AID/OTR-G-1872

A series of three lectures delivered by Dr. Gustav F. Papanek of Boston University to the Pakistan Institute of Development Economics is reproduced along with discussions and moderator's remarks. The lectures, entitled "Determinants of Income Distribution and Poverty," "Wages, Employment Policies and Poverty: A Different Approach," and "Government Policies on Poverty: Populist versus Growth-oriented Governments in South-East Asia," present the speaker's research and views on economic growth and the distribution of income, the factors that affect labor income, and the relationship between political events and the economic situation. Outlining the policy implications of his thinking, Dr. Papanek concludes that the best, if controversial, strategy for economic development is one that adopts capitalism's efficiency in production, resource allocation, and pricing, but with socialism accepts intervention in the economy to subsidize labor, curb the consumption of the rich, and rapidly expand and subsidize social expenditures. Nineteen tables are included in the texts.

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economic activity and welfare. Resistance to FP is likely to continue until the peasant economy undergoes a major transformation. Fifteen recommendations are provided.

013

PN-AAW-622

MF \$4.32/PC \$39.91

Learning about women and urban services in Latin America and the Caribbean : a report on the women, low - income households and urban services project of the Population Council

Schmink, Marianne; Bruce, Judith; Kohn, Marilyn
Population Council

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

1986, 276p. + appendices : statistical tables, En
912000701

OTR-0007-A-00-1154-00

In response to the dearth of information on access to public services of low-income, urban women in Latin America, working groups were established in Kingston, Jamaica, Lima, Peru, and Mexico City, Mexico to gather information on projects dealing with this subject. This volume is meant to function as a "reader" which transmits the tenor of each of the 14 projects studied and their key activities. The volume contains 18 articles, the first 3 providing an overview of the subject matter, the remainder treating, respectively, shelter and environment (7 articles), food distribution (4 articles), and facilitation of low-income women's access to other services (4 articles). To provide greater breadth to the presentation, several of the articles were written, upon invitation, by researchers from the Equity Policy Center (Washington, D.C.), the Development Planning Unit (University College, London), and the International Center for Research on Women (Washington, D.C.). Longer versions of almost every article, some of which were originally written in English and some in Spanish, are available. Appendices provide a summary of projects; a list of project documents, working group members, and meetings; and author descriptions.



Representatives of private voluntary organizations work in partnership with A.I.D., helping to foster a sense of cooperation between Americans and citizens of developing countries.

ECONOMICS

014

PN-AAW-459

MF \$1.08/PC \$3.12

Spatial analysis of regional marketing systems in the Third World

Painter, Michael
Checchi and Co.

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

(Seminar on Rural / Urban Dynamics in Developing
Regions, LU, 14-17 Oct 1985)

1985, 21p., En
9311135

Because the organization of a market system reflects a region's socioeconomic structure, it may be possible to improve the economic status of people in the region by modifying the location of transport services, bulking facilities, and market centers. This study in the spatial analysis of marketing in developing countries begins by discussing the organization of markets and marketplaces, with emphasis on four market systems described by Carol Smith - interlocking, dendritic, primate, and top-heavy - and their effects on smallholders. A case study of Puno, Peru, describes how, in a growing climate of change, peasants organized rural markets in order to capitalize on some of the increased demand from burgeoning urban centers. This and another case study from Bolivia illustrate how spatial changes in market systems can increase economic opportunities for peasants. The report cautions against misusing spatial analysis and emphasizes the need to recognize other factors contributing to social change, but concludes that spatial analysis, used critically, is a potentially valuable research tool.

015

PN-AAW-558

MF \$1.08/PC \$3.51

Final report : interactions between trade policy and labor market policy and their effects on development

Fields, Gary S.

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

Nov 1986, 27p., En
9300092

A.I.D., while focusing on export promotion as a means to stimulate economic growth in developing countries, recognizes that an effective export-led strategy requires an integrated policy setting. To clarify how trade policies and labor market policies interact to affect economic development, this report summarizes

the main findings and policy implications of five AID-funded research papers, four theoretical and one empirical. The papers' titles are: (1) "Wage Floors and Economic Development", (2) "Modern Sector Enlargement in Alternative Dualistic Development Models", (3) "Developing the Dualistic Economy: Modern Sector Enlargement or Traditional Sector Enrichment?", (4) "Export Promotion and Labor Markets", and (5) "Wage-Setting Institutions and Economic Growth".

016

PN-AAW-574

MF \$1.08/PC \$2.60

Bolivia : country risk / debt service summary analysis

F. Ghadar Associates

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

May 1986, [19]p. : charts, statistical tables, En

A brief analytical overview of Bolivia's economic problems is presented. An introductory section discusses the factors, both internal (e.g., falling gross domestic products, hyperinflation, poorly controlled government expenditures, corruption, illegal drug trafficking) and external (e.g., a weak international market for primary products), which have contributed to Bolivia's severe economic recession. Reform measures undertaken by the Estenssoro government, which took office in 8/85, have improved the economic picture somewhat; however, recovery is far from complete. Brief analyses, supplemented by graphs and charts, are presented of Bolivia's balance of payments situation, debt servicing, level of international reserves, inflation and exchange rate, and import incompressibility. Finally, yearly forecasts of Bolivia's balance of payments situation and debt service ratios for the period 1986-89 are provided, indicating that Bolivia's ability to repay its debts is unlikely to improve substantially for 3 or 4 years. It is therefore recommended that new A.I.D. loans be contingent on Bolivia's repayment of Housing Guaranty arrears and have a grace period of 4-5 years.

017

PN-AAW-582

MF \$4.32/PC \$39.39

Agriculture, employment and enterprise : rural - urban dynamics in A.I.D. development strategy

Rondinelli, Dennis A.

Research Triangle Institute

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

1987, i, 279p., En
9361406

The complex set of relationships that obtain among agriculture, employment, and enterprise development in less developed countries, as well as the rural-urban interactions pervading these relationships, are examined. These issues are discussed as they apply to subsistence and low-surplus agricultural production regions, to regions with economies in transition from subsistence to commercial agriculture, and to urban regions with diversified nonagricultural economies. A major thread running through the analysis is the pervasive impact of rural-urban marketing systems on agriculture, employment, and enterprise development. The conclusions focus on ways in which A.I.D. and developing country governments can promote agricultural development, generate employment, and expand private enterprise by strengthening rural-urban linkages in the food marketing system. A 17-page bibliography (1954-86) is appended. (Author abstract, modified)

018

PN-AAW-793

MF \$1.08/PC \$11.83

Wage floors and economic development

Fields, Gary S.

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

Dec 1986, 91p. : charts, En

Paper no.1 Bibliography, p.85-91

Do the wage floors imposed by such forces as trade unions or minimum wage legislation have good or bad development effects? Basing its analysis on a one-sector model of supply and demand in the labor market, the standard economic textbook views the effects of wage floors as negative, e.g., economic inefficiency and increases in unemployment and poverty. A more sophisticated - but not necessarily contrary - view can be developed by analyzing wage floors within the framework of an economy marked by open employment and by wage dualism (i.e., some sectors are covered by wage floors and some are not). Presentation of such a view is the main burden of the present paper. A labor force of fixed size is assumed in the

analysis, which results in eight propositions concerning the employment and unemployment effects of wage floors and their effect on income distribution and economic efficiency; graphs and equations are used in the discussion. The author stresses the ambiguity of the eight propositions for the wage policy of developing countries, but in general favors letting wages be determined by the labor market over the imposition of wage floors. A 7-page bibliography (1946-85) is provided.

019

PN-AAW-812

MF \$1.08/PC \$3.90

Venture capital process

Arthur Young and Co.

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

Jan 1987, 16p. + appendix : charts, statistical tables, En 9364053

Venture capital (VC) financing provides risk capital for long-term investment to companies in the early stages of development; it is distinguished from conventional financing in that the venture capitalist maintains active participation in the company. This paper first describes the development of the VC industry in the United States, as well as the nature of VC financing, stressing VC's emphasis on private capital gain rather than on social benefits; the partner relationship between the entrepreneur and the venture capitalist; and the three-stage process of investment, management/value-added, and liquidation. Prospects for VC activity in developing countries are then considered. Because it can facilitate technology transfer and strengthen private sector development, VC financing could potentially improve developing economies; its applicability is limited, however, by cultural and structural factors - a lack of the strong, diverse financial markets needed to enable venture capitalists to liquidate holdings; the reluctance of investors to finance medium- and long-term investments; and the unwillingness of owners to dilute their control. Statistics on the VC industry and resources are appended.

PRIVATE ENTERPRISE

020

PN-AAW-353

MF \$1.08/PC \$2.47

Private sector connection to development

Liedholm, Carl

Michigan State University. Dept. of Agricultural Economics

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

1986, 10p. + 5 attachments : statistical tables, En
MSU international development papers, reprint no.1
9311090

DAN-1090-A-00-2087-00

Recent studies on the importance of private small-scale enterprises (SSE's) in developing countries show that SSE's account for the vast bulk of industrial employment and are mainly rural, very small (employing under 5 persons), privately owned, and dependent on local markets. SSE activity appears to be on the increase in most developing countries. Being labor-intensive, SSE's generate more employment than larger firms, and probably use capital more efficiently and generate higher levels of per unit profit. Host governments and donors can improve the policy environment for SSE's by removing existing biases against them and by enhancing the demand for their products. Providing credit to SSE's - the most common form of direct assistance - has proven successful when the loans are for working rather than fixed capital, are screened locally on the basis of the borrower's character, and are initially made for small amounts and for short periods of time. Successful nonfinancial direct assistance projects have been those which are industry- and task-specific, address a single constraint, include prior surveys of the individual industry, and tend to be built on proven existing institutions, even informal ones. Supporting statistical data are appended.

021

PN-AAW-470

MF \$1.08/PC \$1.69

Agency for International Development : current activity in private enterprise development, 1985 - 1988

Christopherson, Kaaren

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

[Feb. 1987], 12p., En

An overview is presented of a major segment of the private enterprise development activities undertaken by A.I.D. in 1985-86 and planned for 1987-88. For purposes of the overview, private enterprise development is defined as activity which aids privately owned, for-

profit entities in the productive, manufacturing, or service sectors. Excluded from consideration are activities such as private sector elements of contraceptive social marketing programs and infrastructure activities such as road construction and water management. The report summarizes major approaches to private enterprises (in this narrow sense) in each of the A.I.D. geographic bureaus and highlights the mechanisms which the bureaus use to meet their objectives; one such vehicle available to all the bureaus is the Revolving Fund of the Bureau for Private Enterprise. Brief descriptions and summaries of sample private enterprise projects in each geographic bureau are included. (Author abstract, modified)

022

PN-AAW-612

MF \$1.08/PC \$.78

Overview of privatization in the South Pacific

Andersen, Gerald R.

U.S. Agency for International Development. Bureau for Asia. Office of Indonesia and South Pacific / ASEAN Affairs (Sponsor)

1 Feb 1987, 5p., En

Among South Pacific countries considering privatization, Papua New Guinea has adopted a novel approach: instead of endless studies, use the free market to privatize government holdings in half a dozen identified corporations. Such a simple process allows for a competitive valuation of the worth of the corporations and opens the sale to public scrutiny. In other South Pacific countries, by contrast, companies targeted for privatization are frequently unattractive to investors because they have been run as subsidized businesses, often for ideological reasons, and protected by monopolies. Yet while some politicians fear that privatization would lead to financial colonialism, with multinational companies dominating local industries, astute government officials throughout the region - though too few citizens - understand the economic benefits of foreign capital. Refusal to privatize means the absence of in-country investment opportunities and resulting capital flight, as well as a limitation on the economy, as governments spend on state-owned and often money-losing enterprises funds that could be used to create jobs and provide the goods and services properly provided by government.

023

PN-AAW-723

MF \$3.24/PC \$37.44

Review of privatization in the Republic of Guinea / Conakry

Marston, Lance; Thomas, Peter A.; Love, Andrea J.
Center for Privatization
Analysis Group, Inc.

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

Oct 1986, 2v. : statistical tables, En
Center project / Center for Privatization, no.18
9400008

A two-part study of the privatization program currently underway in the Republic of Guinea is presented. Part 1 consists mainly of a country profile which provides information on the host government, the political and economic environment, the business climate, financial markets, external influences on privatization, and a review of critical issues. Two brief sections summarize, respectively, the study team's accomplishments and follow-up steps to be taken by the U.S. Government and the private sector. Data, information, and documents relating to privatization in Guinea are included in the appendices. Part 2 presents studies of three small manufacturing firms in the parastatal industrial sector which have been selected for privatization: *Constructions Metalliques de Dixinn (CMD)* and *Societe Guineene de Fabrication (SOGUIFAB)*, both metal firms; and *Societe Guineene de Rechappage*, a rubber tire company. While identifying factors constraining privatization (a legal system in a state of flux, a decayed physical infrastructure, and a serious lack of managerial talent), the study concludes that the privatization program can be successful. A.I.D. should undertake a four-part strategy of environmental assessment, policy dialogue, information dissemination, and, beginning (at once) with the agribusiness sector, implementation support.

024

PN-AAW-738

MF \$1.08/PC \$6.50

Mission on privatization : Senegal

de la Giroday, Jean
Center for Privatization
Analysis Group, Inc.

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

20 Feb 1987, 45p., En
Center project / Center for Privatization, no.29 Cover
document no. and date: Center project no.4, part 1,
April 17, 1986
9400008

The Government of Senegal has affirmed the importance of privatizing state-owned enterprises (SOE's), but private investors in Senegal, and the government itself, lack experience in privatization techniques. This study provides an overview of the situation and defines a framework for the divestiture process. After reviewing the privatization objectives and criteria defined by the Senegalese government, the report outlines what remains to be done. These recommendations call for an open government/private sector dialogue; the removal of institutional/legal obstacles to privatization; greater management education; and exhaustive study of each SOE to be sold in order to determine its suitability for privatization and its potential for profitability. Possible privatization techniques (sale of assets, partial or complete divestiture) and the role of the state after divestiture are discussed. A section on privatization potential defines four groups of SOE's - those to be liquidated, those marked for total divestiture, those targeted for partial privatization, and those to remain state-owned; under the proposed plan, most banks would be subject to partial divestiture; non-strategic manufacturing and service companies would be privatized; and strategic enterprises (e.g., mining and chemical companies, insurance companies) would remain state-owned. Options for financing privatization are noted, and recommendations for A.I.D./World Bank-sponsored technical assistance are provided in conclusion.

025

PN-AAW-739

MF \$1.08/PC \$8.32

Privatization study for the Nyambai sawmill : Republic of Gambia

Crouzet, Jean G.; Baack, Donald H.
Center for Privatization
Analysis Group, Inc.

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

4 Dec 1986, vi, 22p. + 7 annexes : statistical tables, En
Center project / Center for Privatization, no.31
9400008

The Nyambai sawmill, owned and operated by the Government of The Gambia, currently operates at 10% of capacity and produces green lumber which is sold at artificially low prices, resulting in an annual loss of about \$25,000. This feasibility study indicates that privatization of the mill will increase use of the mill's capacity to 60%, allow the mill to produce dry lumber which can be sold at noncontrolled prices, and generate about \$56,000 in revenues for the government through incomes taxes and stumpage fees. With the government committed to divesting unprofitable state-owned enterprises and several investors already interested in the sawmill, the climate for privatization is

PRIVATE ENTERPRISE

favorable. The asking price for the mill should be set at about \$282,000, plus \$100,000 for equipment, repairs, and inventory build-up, payable in a 6-year final maturity agreement. The report recommends A.I.D. technical assistance in using stumpage fees to finance reforestation projects, catalyzing participation of Gambian officials in the privatization process, and ensuring that buyers are selected on the basis of objective criteria. Privatization of the mill should be completed before July 1, 1987.

026

PN-AAW-821

MF \$1.08/PC \$8.06

Plan for privatization (Hotel Quito - Industrias Guapan) : Ecuador

Laport, Robert E.

Center for Privatization

Analysis Group, Inc.

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

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

Center project / Center for Privatization, no.39
9400008

Options for privatizing three enterprises in Ecuador are presented. The first two are addressed to Ecuador's public sector social security system (IESS) and concern two of its holdings, the Hotel Quito and S.A. *Industrias Guapan*, a cement company, both of which present immediate problems to IESS. Following a discussion of IESS' options relative to Hotel Quito, it is recommended that IESS sell the property as is to a local management group which could undertake renovation and possibly expand the physical facilities. The analysis of *Industrias Guapan*, which has undergone most of a planned expansion but which may not have the depth of skills necessary to manage the expanded company efficiently, recommends that: (1) outside technical assistance be retained at least until the completion of the expansion project; (2) IESS begin seeking an international cement producer interested in acquiring at least a majority shareholder position; and (3) IESS use a well known investment or merchant bank to identify this party and assist in structuring a financing package. The third analysis comprises a plan by which the *Corporacion Financiera Nacional*, a government entity and Ecuador's largest development finance company, can divest itself of equity positions in 35 or more companies.



Private small-scale enterprises like this Honduran produce stand play a crucial role in generating growth and employment in developing country economies.

027

PN-AAV-308

MF \$1.08/PC \$6.11

Analysis of the effects of an increase in grain prices : Mauritania

Abt Associates, Inc.

Robert R. Nathan Associates, Inc.

Oklahoma State University. Dept. of Agricultural Economics

Abel, Daft & Earley, Inc.

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

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

[1986], 44p. : charts, statistical tables, En

9364084

DAN-4084-C-00-3087-00

The Government of Mauritania, with the encouragement of A.I.D. and other donors, has taken steps to raise the prices of sorghum and wheat to import parity levels. The potential effects of this policy on grain supply and demand and on A.I.D.'s Food for Peace (FFP) program are herein examined. First, existing price structures for locally produced grains and for food and imports are reviewed and import parity prices for wheat and sorghum are forecast. Next, the current supply of domestically produced grains is assessed by examining both traditional and irrigated agriculture and the limitations they face. Finally, the expected demand response to high grain prices is considered from the perspectives of indigent and affluent population groups in Mauritania. It is concluded that FFP grain imports will probably be increasing over time. The primary benefit of this increase will be the generation of a larger supply of counterpart funds which can be used by the government in projects to help farmers be more responsive to higher prices. Higher grain prices will also likely reduce current abuses in the FFP distribution system. Appendices include projected 1987 wheat and sorghum import parity prices and a 3-page bibliography. (Author abstract, modified.)

028

PN-AAV-547

MF \$1.08/PC \$2.34

Farming systems research : clarification of terms and concepts

Sands, Deborah Merrill

Experimental agriculture, v.22, 1986, p.87-104, En

Farming systems research (FSR) has emerged as a major theme in international agricultural research in the past decade. However, despite widespread use of the term, its meaning and the types of research objectives, approaches, activities, and methods to which it applies

remain ambiguous. The lack of precision in concepts and terms will discredit FSR and jeopardize donor support. This paper seeks to clarify and define the major types of research approaches and activities encompassed by the general term FSR. Six subspecies of FSR are distinguished: farming systems analysis; farming systems adaptive research; farming system component research; farming systems baseline data analysis; new farming systems development; and farming systems research and agricultural development. Examples of each are provided. It is proposed that a new term - research with a Farming Systems Perspective (FSP) - replace FSR as the generic term for research which uses the farming system as the framework for analysis. (Author abstract, modified)

029

*PN-AAV-685

MF \$3.24/PC \$31.07

Bibliografía de trabajos publicados por el CIAT y su personal científico, v.2 = Bibliography of the research papers published by CIAT and its scientific personnel, v.2

Gomez V., Stella

International Center for Tropical Agriculture

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

Jun 1986, 228p., En, Es

936411104

* Also available from: Centro Internacional de Agricultura Tropical, Apartado Aero 6713, Cali, Colombia

This second volume in a bibliographic series cites 1,476 research papers published by the International Center for Tropical Agriculture (CIAT) and its scientific personnel. The subject categories which are listed reflect the research objectives of different CIAT programs and subprograms, including: training, communication and information, agricultural economics and rural development, weeds and herbicides, seeds, soils and fertilizers, swine, maize, animal health and nutrition, agronomy, physiology, rice, beans, tropical pastures, breeding, cassava, plant protection, soybeans, sorghum, and systems and statistics. Author, title, and subject indices are provided. All of the references cited are available in photocopy from CIAT. Some have been microfilmed by IDRC as part of a collaborative program with CIAT, other international agricultural research centers, and the FAO.

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030

PN-AAV-776

MF \$2.16/PC \$17.16

Brazil and the CGIAR centers : a study of their collaboration in agricultural research

Homem de Melo, Fernando Bento

World Bank

Consultative Group on International Agricultural Research

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

1986, vii, 124p. : chart, statistical tables, En

Study paper / Consultative Group on International Agricultural Research, no.9

9364111

An efficient national research system is a precondition for productive collaboration with international agricultural research centers (IARC's), according to this study, which details the changes in Brazil's research system since the early 1970's and the fruits of IARC collaboration with that system. Improvements in Brazilian agricultural research have been due largely to the creation in 1973 of the Brazilian Company of Agricultural Research (EMBRAPA), which generated increased attention to research activities at the federal level and helped correct an unbalanced pattern of technical innovation. The study describes the Brazilian setting and, in some detail, the structure, infrastructure and institutional support, pricing, performance, and policy issues of the agricultural sector. EMBRAPA's structure and its impact on the research system are also discussed. The contribution of IARC's to the national research system, which has consisted mainly in the provision of genetic materials, is reviewed, and descriptive lists of new varieties developed within Brazil's national system - with and without IARC collaboration - are provided. Conclusions and eight pages of references follow.

031

PN-AAV-836

MF \$1.08/PC \$4.68

Microcomputers in the Gambian mixed farming project

Jakus, Paul; Eckert, Jerry

Consortium for International Development

Colorado State University

Gambia. Ministry of Agriculture and Natural Resources (Sponsor)

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

Aug 1986, 32p. : statistical tables, En

Mixed farming and resource management project technical report, no.15

6350203

The Gambian Mixed Farming and Resource Management Project relied on microcomputers for a wide range of functions. Three aspects of the project's computer operations are evaluated, based on feedback from project personnel: (1) the capacity of the computers to serve project needs, the functions for which they were utilized, the adequacy of the software for analytical needs, the ability of computer personnel to satisfy staff needs (recommendations are provided for eliminating the analytical gap between the two groups), and the advantages and disadvantages of on-site computing; (2) formal training programs in BASIC, LOTUS, word processing, STATPAC, and MSTAT, as well as technical problems encountered and their resolution; and (3) the transfer of the computing capability to the Gambian Government. The effectiveness of this transfer remains in doubt, and an integrated 3-year plan for computer training and institutional transfer is outlined. Issues to be considered before developing a microcomputer facility in a developing country are outlined in concluding remarks.

032

PN-AAW-188

MF \$2.16/PC \$17.16

Panama : agricultural sector assessment

Conklin, Frank S.

U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Panama

Sep 1986, xi, 60p. + attachments : statistical tables, En Spanish ed.: PN-AAW-618

The first single and comprehensive source of data on its subject, this study examines the recent development and present condition of Panama's agricultural sector. After reviewing the sector's role in Panama's economy and its natural and human resource base, the study details sector structure in terms of: (1) employment; (2) farm size and land use; (3) farm organization (farmland distribution, crop and livestock production on private farms, *asentamientos* and cooperatives); (4) agro-industry; and (5) public sector activities in providing agricultural inputs and information, generating and transferring technology, and setting pricing policies. Description of the production and profitability of basic food/feed commodities and export crops leads to an analysis of: economic policies affecting the agricultural sector; sector performance; distributional issues; natural resource management; recent and proposed attempts at deregulating agricultural marketing; and the anticipated market response to these changes. Concluding that sector performance is low while its potential is high, the study presents recommendations regarding agricultural policy, technology generation and transfer, and natural resource management. Annexed are an 8-page bibliography (1966-86) and 48 tables.

033

PN-AAW-357

MF \$3.24/PC \$26.39

Workshop report : regenerative farming systems, Washington, DC : December 10-11, 1985

Rodale Institute

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

(Regenerative Farming Systems Workshop, Washington, DC, US, 10-11 Dec 1985) 1985, 216p. : charts, statistical tables, En

Regenerative farming - an approach to farming which stresses local capacities and resources and low-input, soil-conserving technologies as a way of solving problems caused by the inappropriate technologies associated with the Green Revolution - was the subject of a December 1985 workshop held in Washington, D.C., and hosted by Rodale Institute, a leader in the field. Presented here are the texts of seven papers presented at the workshop, along with summaries of the discussions that followed the presentations. The papers were as follows: (1) "Internal Sources and External Inputs: The Two Sources of All Production Needs"; (2) "Resource Efficient Farming Systems and Technologies"; (3) "Research Needs for Soil Fertility and the Development of Resource Efficient Technologies"; (4) "Agricultural Policy"; (5) "Programming Implementation of Regenerative Agriculture"; (6) "The Regeneration of Africa: Resources, Needs and Capacities: Inventories for Mobilization"; and (7) "Information Needs and Capacities for Collecting, Processing, Packaging, and Disseminating Ideas on Regenerative Agriculture". A summary of future actions for A.I.D. and Rodale is appended.

034

PN-AAW-495

MF \$2.16/PC \$13.65

Assessment of hillside agriculture in two watersheds of Jamaica

Armstrong, George; Bims, Hamilton; et al.

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)

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

Mar 1986, v.p. : statistical tables, En 9311135

Researchers have sought for over 40 years to understand why Jamaican hillside agriculture is characterized

by natural resource depletion, soil erosion, and suboptimal performance. Presented herein are recommendations by a multidisciplinary team (an economist, two anthropologists, a soils scientist, and an agroforester) for improving Jamaican hillside agricultural systems and programs, especially those affecting small farmers. The recommendations are based upon assessments of agricultural problems in Rio Cobre and Rio Minho watersheds. The report discloses a picture of widespread inefficiencies in land allocation, crop production, and marketing which past development activities have not been able to overcome; it emphasizes the complexity of the farmers' situation and their relative inability to respond appropriately due to ecological, economic, and social factors. Simultaneous actions are recommended to rationalize land use patterns, improve marketing methods, stimulate the development of a new farm leadership group, and improve practical farmer training in the face of a diminishing extension force. Techniques for implementation of the recommendations are outlined. Technical reports prepared by each of the team members comprise the bulk of the volume.

035

PN-AAW-537

MF \$1.08/PC \$2.73

Impact of development efforts on agricultural wage labor

Pokarel, Bholu N.; Shivakoti, Ganesh P.

Winrock International Institute for Agricultural Development

Nepal. Ministry of Agriculture (Sponsor)

German Agency for Technical Cooperation (Sponsor)

International Development Research Centre (Sponsor)

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

Dec 1986, [16]p. : statistical tables, En

Rural poverty research paper series, no. 1 3670149

To assess the impact of development activities on agricultural wage laborers, Nepal's poorest group, a sample survey was conducted of 40 laborers. This report presents survey data regarding place of origin, family size and labor supply, education, landholding, ethnicity, age, employment, agricultural wage, perception about development activities, and the impact of development on quality of life. Major findings included the following. (1) Institutional employers have stable, but lower, wage rates than do private farms. (2) Some 40% of respondents feel that the government does nothing to better their lot; the rest believe that the government provides jobs, maintains law and order, and distributes land. Most of those owning more than 1 ha of land believe government activities to be beneficial. (3) Average wage rates are increasing faster than the price of cereal grains. (4) Development impacts are limited: the quality of cereal consumed has increased for only

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20% of the respondents, only 40% reported changes in clothing fabric used or size of wardrobe, and only 12.5% reported going to the movies more frequently. It is recommended that future development programs be oriented directly to agricultural wage laborers' needs and that new wage rates be fixed for both peak and slack seasons.

036

***PN-AAW-751**

MF \$3.24/PC \$32.76

U.S. agriculture and Third World development : the critical linkage

Purcell, Randall B.; Morrison, Elizabeth
Curry Foundation

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

1987, xi, 258p. : charts, statistical tables, En Published by Lynne Rienner Publishers, Inc.

* Also available from: *Lynne Rienner Publishers, 948 North St., no.8, Boulder, CO 80302 USA. \$26.50 plus postage (\$2 book rate or \$4 UPS)*

Faced with the fact that U.S. agricultural exports are dwindling while millions in the Third World need but cannot afford more food, this study argues the paradox that the development of Third World agriculture will increase demand for U.S. food products and improve the ability to pay for them. In pursuing this argument, this book presents: (1) a paper on global trends in food production and consumption, which identifies the world's major agricultural importers and exporters and the amount of trade which the United States can expect with the Third World; (2) papers on successful and unsuccessful policies in Kenya, Tanzania, Latin America, China, and the Philippines, with an eye towards links between economic and agricultural development and trade; and (3) papers on the main issues in the U.S.-Third World agricultural relationship, namely, macroeconomic and trade policy and food assistance. A final paper, based on a review of the previous papers and on a discussion of the pertinent issues at an international conference of experts, analyzes policy options that would promote a harmonious relationship between U.S. and Third World agriculture. Included are 20 figures and 30 tables.

037

PN-AAW-797

MF \$4.32/PC \$38.48

Seed production technology

Srivastava, J.P.; Simarski, L.T.

International Center for Agricultural Research in the Dry Areas

1986, viii, 287p. : ill., statistical tables, En

Intended as a reference work for all concerned with seed production, processing, marketing, and distribution as well as for agricultural policymakers, this practical guide provides information distilled from both the experience of the national research programs of the Middle East and North Africa - the focus of the International Center for Agricultural Research in the Dry Areas (ICARDA) - and the expertise of individuals who have conducted seed technology training courses in the region. The first section gives an overview of the seed production situation in the ICARDA region and outlines the components of a seed production industry. Case studies that follow on the seed industries in the Netherlands, India, Kenya, and Syria illustrate how seed industries have developed in different countries. The bulk of the handbook is devoted to techniques and methods for seed production, including the certification, testing, processing, storage, and marketing of seed. Producing seed of the crops on which ICARDA concentrates - cereals, lentils, forage crops, chickpeas - has special problems, which are addressed in the final section. The book contains photographs, statistical data, illustrations, and a 9-page list of useful publications. (Author abstract, modified)

038

PN-AAW-823

MF \$1.08/PC \$4.55

Postharvest handling of strawberries for export in Costa Rica

Ramos, Miguel Perez

University of Idaho. Postharvest Institute for Perishables
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

Feb 1987, 32p. : ill., charts, statistical tables, En
GTS report, PIP/Costa Rica/Feb 87/no.84
9311323

DAN-1323-A-00-0256-00

Strawberry export markets are usually very sophisticated and command top quality produce, and Costa Rica must improve its postharvest handling and infrastructure to compete in these markets. This report, the product of a 5-week consultancy, describes existing strawberry harvest and postharvest practices in Costa Rica and recommends improvements in three areas: (1) harvesting methods and immediate postharvest operations, including cleaning, grading, and field packing of the fruit, as well as storage facilities, transportation, and handling from farm to the wholesale warehouse; (2) export infrastructure, including quality control methods, cold storage methods, packing, handling, and transportation of export produce; and (3) institutional support services, including research, technology transfer, cooperative marketing, and credit. The report also outlines a program for transferring or improv-

ing technologies to implement the changes recommended.

039

***PN-AAV-178**

MF \$5.40/PC \$52.52

Abstracts on cassava (*Manihot esculenta* Crantz), v.12

West, Mabel Vargas de

International Center for Tropical Agriculture

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

Apr 1986, 3v., En

936411104

* Also available from: CIAT, Communications and Information Support Unit, Apartado Aero 6713, Cali, Columbia

Presented here are the three volumes of the 1986 edition of CIAT's journal of analytical abstracts on cassava (*Manihot esculenta* Crantz). A total of 654 abstracts provide condensed information from journal articles, booklets, mimeographed reports, theses, manuals, and other conventional and nonconventional material, categorized into the following broad disciplinary fields: botany, taxonomy, and geographical distribution; plant anatomy and morphology; plant physiology; cultivation; plant pathology; pest control and entomology; genetics and plant breeding; nutrition; processing, products, and uses; economics and development; and associated commodities. Author and subject indices (these are cumulative in the third volume) are included. The CIAT Documentation Center can conduct mechanized bibliographic searches of its entire document collection to select abstracts of articles pertinent to a topic of interest; full texts of all the articles abstracted are available through CIAT, and instructions for requesting them are provided.

040

***PN-AAW-412**

MF \$1.08/PC \$2.73

Tissue culture for elimination of pathogens

Lizarraga, Rolando; Tovar, Pilar; et al.

International Potato Center

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

1986, 21p. : statistical tables, En

Specialized technology document / International Potato Center, no.3

936411107

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

Methods being used by the International Potato Center (CIP) for removing potato plant pathogens and producing pathogen-free plants for international distribution and propagation are described. Attention is given in turn to the advantages and disadvantages of, and CIP experience with, each of the following methods for eliminating pathogens: thermotherapy; chemotherapy; surface sterilization; the use of antibiotics; and meristem isolation and culture. The storage (long- and short-term) and maintenance of pathogen-tested, *in vitro* plant cultures are also discussed, and a short appendix identifies the media used by the CIP. A 16-item bibliography is included.

041

***PN-AAW-414**

MF \$1.08/PC \$2.60

Parasitic nematodes of potatoes

Jatala, Parviz

International Potato Center

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

1986, 19p. : ill., En

Technical information bulletin / International Potato Center, no.8

936411107

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

Technical information is presented on the nematode - a microscopic, unsegmented roundworm which inhabits soil and water and can cause damage to potatoes, reducing their yield by 20% and making their tuber quality unfit for human consumption. More than 40 species of nematodes infect potatoes, but only 11 of these are major potato pests; a table lists these by their scientific and common names and shows their distribution according to climate. All potato nematodes feed on roots and/or tubers. Infected plants show above-ground symptoms similar to those caused by root injury, fertilizer deficiency, and inability to withstand drought. Below-ground symptoms typical for each nematode genus are identified and depicted in illustrations and photographs; these symptoms are especially important, since nematodes are invisible to the naked eye, and special training and equipment are needed to detect them. The report also describes the morphology and biological habits of nematodes, soil factors affecting nematodes, and ways to monitor nematode infestation. Eight measures for preventing and controlling potato nematodes are given, including: quarantine, crop rotation, sanitation, heat treatment, resistant varieties, and toxic chemicals.

AGRICULTURE

042

PN-AAW-474

MF \$1.08/PC \$8.19

Nitrogen fixation by tropical agricultural legumes, NIFTAL, University of Hawaii / USAID : annual report 1985

Bohlool, B. Ben

University of Hawaii at Manoa. College of Tropical Agriculture and Human Resources. Dept. of Agronomy and Soil Science

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

[1986], 60p. : statistical tables, En

NifDOC 86:1201

9310613

DAN-0613-C-00-2064-00

To help developing country farmers reduce their dependence on nitrogen fertilizers, the AID-supported NifTAL Project sponsors research and helps rhizobium and legume programs in the tropics more effectively exploit the rhizobium-legume symbiosis, or biological nitrogen fixation. This review presents, in both summary and detailed forms, NifTAL's 1985 accomplishments in the areas of: (1) outreach, i.e., NifTAL's contributions to the International Network of Legume Inoculation Trials (which services 34 countries), the Zamare Project in Zambia, the Indo/US Science and Technology Initiative, and germplasm resource conservation, inoculant production, and antisera development; (2) information dissemination; (3) training for professionals; and (4) research. Accomplishments in the latter area are outlined in summaries of results of: nine ongoing experiments; research to improve legume symbiosis in infertile soils; and work in Thailand on the economic evaluation of biological nitrogen fixation. Abstracts of 12 papers published in 1985 are also included. Appendices include a 7-page bibliography of NifTAL publications (1975-85).

043

PN-AAW-475

MF \$1.08/PC \$11.96

Cereal technology development - west African semi-arid tropics : a farming systems perspective

Thomas, D. Woods

Purdue University. School of Agriculture. Division of International Programs in Agriculture

Purdue University. International Education and Research U.S. Agency for International Development. Bureau for Africa. Office of Regional Affairs (Sponsor)

[1986], 85p. : ill., charts, maps, statistical tables, En

6980393

AFR-C-1472

Major aspects of the farming systems research (FSR) activities conducted under the Semi-Arid Food Grain Research and Development Project are described. The report's two principal chapters present basic methodological concepts potentially useful elsewhere in the West African semi-arid tropics (WASAT) regarding baseline studies, on-farm trials, technology evaluation, whole-farm modeling, micro vs. macro approaches to FSR, and institutional aspects, and describe the results of the project's technology evaluations. The latter focused on five areas: (1) soil fertility/water retention (tied ridges, diguettes/dikes, complex chemical fertilizers, indigenous rock phosphate, animal manure and composting, mulch, plowing/green manuring); (2) labor-saving technologies (animal traction, the mechanical ridge tier, herbicides); (3) improved varieties; (4) crop associations; and (5) present and future sequencing of technology adoption. Also included are an overview of the production environment in the WASAT and a discussion of policy implications and future avenues for research and extension. Five tables illustrate the text; an 8-page list of primarily recent references, a short administrative report, and a list of publications generated through project research are appended.

044

*PN-AAW-485

MF \$1.08/PC \$10.66

Cereal improvements in dry areas : cooperative cereal improvement in Tunisia (1980-1985)

Maamouri, Ali; Deghais, Mahmoud; et al.

International Center for Agricultural Research in the Dry Areas

Tunisia. Ministry of Agriculture (Sponsor)

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

Apr 1986, 81p. : chart, map, statistical tables, En Cover title: Cereal improvement in dry areas : a report on the Tunisia cooperative cereal improvement project

936411112

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

The International Center for Agricultural Research in the Dry Areas (ICARDA) and the Government of Tunisia have collaborated since 1980 on a project to improve winter cereals, especially barley. This paper provides detailed discussion of barley breeding and cereal pathology research conducted by ICARDA and its principal partner in the project, the *Institut National de la Recherche Agronomique de Tunisie* (INRAT). The breeding program has identified and released from ICARDA's international nurseries three varieties (Roho, Taj, and Faiz) which have, on average, outyielded local cultivars by 30% and are now in commercial cultivation. A fourth variety (Rihane's'), which is more disease-resistant than

the released varieties and has higher yields across various rainfall conditions, is currently being tested. The pathology program has: evaluated thousands of wheat and barley varieties for disease resistance; identified and begun large-scale trials of two lines - Bobwhite 1 and Sunbird's' - that are resistant to septoria leaf blotch, yellow rust, and tan spot, and have high yield potential as well; developed a practical method for screening against barley stripe disease; and generally improved ICARDA germplasm resistance to septoria leaf blotch under Tunisian conditions. Results of research on the grain quality of durum wheat, bread wheat, and barley lines are also outlined. Project training is reviewed more briefly and areas for future research are identified.

045

***PN-AAW-619**

MF \$2.16/PC \$21.71

Genetic resources of tropical and subtropical fruits and nuts (excluding Musa)

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

Jul 1986, 160p. : statistical tables, En
936411111

* Also available from: IBPGR c/o FAO, Via delle Terme di Caracalla, 00100 Rome, Italy. Available free

Information relevant to the conservation of genetic resources of 31 mainly tropical and subtropical fruit and nut crops is given in this compendium, which addresses questions about the factors affecting the state of genetic erosion in fruit trees and forms conclusions regarding the need for genetic resources conservation. The crops discussed range from those of major international importance (although some major crops such as banana and plantain are excluded) to locally important species grown only on a home-garden scale. The crops vary in contribution to diet, and some may be interesting less because of the fruit itself than for a wide range of actual or potential uses in medicine, industry, or agriculture. Each chapter contains a general introduction to a crop, or a few related crops, and specific information on: taxonomy and botany; origin, distribution, and ecology; agronomy, diseases, and pests; genetics and improvement; and germplasm conservation. Most chapters contain a table summarizing the existing germplasm collections around the world; data in the tables relate to a companion publication (Directory of Germplasm Collections 6.1. Tropical and Sub-Tropical Fruits and Nut Trees, PN-AAQ-594) which gives further details on collections and addresses. A 26-page bibliography is appended.

046

PN-AAW-703

MF \$1.08/PC \$5.52

Interaction between rhizobial inoculation and fertilizer nitrogen in five cowpea cultivars

Fernandez, George C.J.; Miller, J. Creighton Jr.
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

HortScience, v.21(6), Dec 1986, p.1345-1348 : charts, statistical table, En

9310610

BST-0610-P-AG-2170-00

The effects of rhizobial inoculation with commercial cowpea 'EL' mixed strain inoculant (as compared with noninoculation) and of four levels (0, 14, 28, and 84 kg per ha) of fertilizer nitrogen on yield and nitrogen fixation components in cowpea were investigated in a field study. Plants were grown on a vertic albaqualf, fine, montmorillonitic, thermal soil with a pH of 6.7. Three high (H) and two low (L) nitrogen-fixing cowpea cultivars, 'H-California Blackeye No. 5,' 'H-Brown Crowder,' 'H-Tennessee White Crowder,' 'L-Lady,' and 'L-Mississippi Silver', were used. In inoculated plants, nitrogen fixation was significantly reduced with increasing nitrogen levels. Although high-fixing cultivars produced more and larger nodules and expressed higher nitrogenase activity than the low fixers, no significant differences in top dry weight and total nitrogen per plant were observed between these groups at the time of flowering. Seed yield was greater in rhizobia-inoculated plants than in the noninoculated, fumigated controls, but a significant linear seed yield increase was observed in the controls when nitrogen levels were increased. The addition of fertilizer nitrogen to cowpeas inoculated at planting did not increase seed yield. Seed and biomass yield were influenced by nitrogen fixation in low-fixing cultivars. (Author abstract, modified)

047

PN-AAW-536

MF \$1.08/PC \$4.42

Fertilizer price policy in Nepal

Wallace, Michael B.
Winrock International Institute for Agricultural Development

Nepal. Ministry of Agriculture (Sponsor)
German Agency for Technical Cooperation (Sponsor)
Canada. International Development Agency (Sponsor)
U.S. Agency for International Development. Bureau for Asia and Near East. Nepal (Sponsor)

Nov 1986, [29]p. : charts, statistical tables, En
Research and planning paper series, no.6

3670149

ASB-0148-C-00-5171-00

AGRICULTURE

The history of fertilizer use and price policy in Nepal is reviewed, with particular emphasis on the fertilizer price subsidy. Although fertilizer use has dramatically increased since it was officially introduced 20 years ago, the price subsidy has not led to significant overall increases in crop production. The economic and equity effects of this price subsidy are conceptually and empirically analyzed in this study, and policy options are suggested. The scope for increasing the impact of fertilizer price policy is found, however, to be limited. Financial constraints restrict the government's ability to transport substantial quantities of fertilizers into the hills and mountains, while political considerations ensure that Kathmandu Valley farmers receive preference. The most important factor constraining Nepal's price policies, however, is the long open border with India, which effectively prevents Nepal from implementing an independent price policy. Included are 13 tables, 6 figures, and results of a survey of 264 farmers who used fertilizer on the 1983-84 wheat crop. (Author abstract, modified)

048

*PN-AAW-636

MF \$1.08/PC \$10.53

Guidelines for using soil taxonomy in the names of soil maps units

Van Wambeke, A.; Forbes, T.R.

U.S. Dept. Of Agriculture. Soil Conservation Service.
Soil Management Support Services

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

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

May 1986, v. 75p. : ill., charts, statistical tables, En
SMSS technical monograph, no.10

9311194

DAN-1194-C-00-0239-00

* Also available from: Program Leader, Soil Management Support Service, Soil Conservation Service, P.O. Box 2890, Washington, DC 20013 USA

Provided herein are guidelines and conventions for using *Soil Taxonomy* - an international soil classification system - for the naming of map units in soil resource inventories. Use of *Soil Taxonomy*, it is noted, will provide a strong basis for communicating soil information across national and regional boundaries. Successive chapters of this handbook: (1) discuss definitions and concepts which are important for understanding maps and classifications; (2) explain the different reference systems which can be used for naming soils on soil resource inventory maps; (3) describe kinds of soil resource inventories and their appropriate map units; and (4) provide the conventions and rules governing the English-language naming of primary and secondary map units. Included are two technical appendices,

the script of a supplementary slide set, 19 figures, and 6 tables. (Author abstract, modified)

049

PN-AAW-900

MF \$1.08/PC \$1.82

Structure and dynamics of fertilizer subsidy : the case of Bangladesh

Ahmed, Raisuddin

International Food Policy Research Institute

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

Food policy, v.12(1), Feb 1987, p.63-75 : statistical tables, En. Reprint no.103

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

Investigation of the structure and dynamics of a fertilizer subsidy - particularly, who is subsidizing whom and for what type of fertilizers - is an important prerequisite to study of a subsidy's impact. Such an investigation is presented in this case study of fertilizer subsidies in Bangladesh, which may represent developing countries in a general manner. The paper first considers the costs of producing fertilizer domestically, of importing fertilizer, and of distributing it, and draws implications for the pricing of fertilizer for farmers. An estimate of the subsidy based on these costs is then calculated at 25% of costs in 1983-4. It is noted, however, that while the government terms this 25% a subsidy to farmers, farmers usually receive less, and that the government's procedure of using fertilizer production cost as a basis for determining subsidy creates serious distortions. Suggested as the solution to these distortions is the pricing of fertilizers on the basis of world prices, which will in due time shift the onus of correcting distortions from farmers to industries.

050

PN-AAW-391

MF \$1.08/PC \$2.21

Water charges : a tool for improving irrigation performance?

Small, Leslie E.

U.N. Food and Agriculture Organization (Sponsor)

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

(Expert Consultation on Irrigation Water Charges, Rome, IT, 22-26 Sep 1986)

26 Sep 1986, 16p. : statistical tables, En

Paper no.8

Policies for financing irrigation services have the potential to affect the management and performance of public irrigation systems. For this to happen, however, appropriate institutional arrangements are needed to establish responsibility and authority over four key processes: allocating resources to irrigation; implementing irrigation services; collecting resources from beneficiaries; and controlling the resources collected. The key to institutional control is financial autonomy for the irrigation agency. Autonomy is needed to link the provision of irrigation services with the collection of (and control over) beneficiary resources and to give water users a sense of ownership; autonomy may also improve investment decisions if the agency has input into the investment decision process. Because water charges seldom involve water pricing, they have far less potential to increase the efficiency of farmers' water use than is frequently assumed. While many organizational and financial problems may be encountered in establishing financial autonomy, movement in that direction, where possible, seems desirable. Experience with private irrigation systems shows that even poor farmers can pay large amounts for good quality irrigation services: by improving irrigation performance, water charges may ultimately increase farmer income. (Author abstract, modified)

051

PN-AAW-393

MF \$1.08/PC \$2.34

Irrigation system recurrent cost recovery : a pragmatic approach

Svendsen, Mark

U.N. Food and Agriculture Organization (Sponsor)

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

(Expert Consultation on Irrigation Water Charges, Rome, IT, 22-26 Sep 1986)

26 Sep 1986, 17p., En

Paper no.10

The "performance" of an irrigation system is used as a standard in resolving the increasingly evident problem of how donors can meet the recurring costs of the operation and maintenance (O&M) of public irrigation systems in developing countries. The author first notes that, contrary to what is generally assumed: (1) no linkage exists between fee levels and efficient water allocation (a water pricing mechanism does not itself impose restraint in water use) and (2) the link between increased funding and improved O&M is doubtful. The author then outlines a two-tiered, pragmatic approach to cost recovery, which subordinates equity and efficiency goals to bringing revenues and expenditure into line: (1) devolving O&M responsibilities and control as far as actually feasible to farmers, thereby decreasing government costs, and (2) increasing irrigation fees. Also dis-

cussed, however, are several fundamental problems which can thwart most of the advantages of raising fees. Examples used in this discussion highlight progress made in the Philippines in moving toward a self-supporting, accountable irrigation service.

052

PN-AAW-395

MF \$1.08/PC \$1.95

Dominance of the internal rate of return as a planning criteria and the treatment of O & M costs in feasibility studies

Tiffen, Mary

U.N. Food and Agriculture Organization (Sponsor)

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

(Expert Consultation on Irrigation Water Charges, Rome, IT, 22-26 Sep 1986)

26 Sep 1986, 14p. : chart, statistical table, En

Paper no.12

The current emphasis on using the predicted internal rate of return (IRR) as a deciding factor for irrigation project funding has in practice tended to subvert project sustainability goals, particularly those related to the recovery of operations and maintenance (O&M) costs from farmers. The IRR's defects as a planning tool are due to its biases against projects with high initial capital costs (even durable projects with low maintenance costs); against phased, as opposed to rapid, implementation; and against projects that opt for flexible, safer designs, rather than absolute maximization of expected benefits. Also, the IRR underemphasizes the risk of unplanned outcomes, and its cost-benefit analyses are extremely vulnerable to manipulation. A review of socioeconomic and institutional problems reported in recent evaluations of 50 irrigation projects indicates recurrent problems with O&M cost recovery and a clear linkage between farmers' income and their O&M payments. However, donor guidelines for the preparation of irrigation feasibility studies vary in the level of importance to which they assign farm income and O&M costs. Implications for project design - to increase sustainability, lower O&M costs, and enhance their recovery - are addressed in conclusion, and specific modifications to the IRR suggested.

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053

PN-AAW-396

MF \$1.08/PC \$4.16

Pakistan : irrigation water charges and recurrent cost recovery

Chaudhry, Muhammad A.

U.N. Food and Agriculture Organization (Sponsor)

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

(Expert Consultation on Irrigation Water Charges, Rome, IT, 22-26 Sep 1986)

26 Sep 1986, 31p. : statistical tables, En
Paper no.13

The question of raising water charges in Pakistan to make them compatible with relevant economic indicators needs urgent attention in view of the consistently increasing revenue-expenditure gap in irrigation systems and the huge investments being made in system rehabilitation. This paper examines the existing level and structure of water charges in Pakistan with regard to the recovery of recurrent costs. Individual sections of the study: (1) provide an overview of irrigated agriculture and irrigation systems in Pakistan; (2) review the historical background and current status of water pricing policy; (3) discuss cost recovery, irrigation subsidies, and "target level" water charges; (4) examine the present procedure for budgeting for operations and maintenance (O&M) costs as well as the requirements for full O&M funding; and (5) present major conclusions and policy recommendations. (Author abstract, modified)

054

PN-AAW-399

MF \$1.08/PC \$1.82

Nigeria : irrigation water charges in Nigeria

Akinola, J.A.

Nigeria. Federal Ministry of Agriculture, Water Resources and Rural Development

U.N. Food and Agriculture Organization (Sponsor)

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

26 Sep 1986, 10p. + annex : map, statistical table, En
Paper no.16

Large public irrigation systems are a recent phenomenon in Nigeria, and the government is only now beginning to formulate policies on irrigation system financing and cost recovery. Existing fees for irrigation water are insignificant compared to actual operations and maintenance (O&M) costs, and a new policy is being formulated for public irrigation O&M, under which the federal government will bear the cost of headworks and irrigation infrastructure while O&M costs are borne by farmer-beneficiaries. In addition, a new water law,

currently in draft form, should strengthen the role of the agencies responsible for imposing water assessments. Given the production increases made possible by irrigation and the high level of subsidies in other sectoral programs (e.g., for credit, inputs, etc.), farmers should very easily be able to pay full O&M costs. Finally, large private schemes are nonexistent in Nigeria, and the government has no policies aimed at stimulating such; some of its general agricultural policies, however, could directly or indirectly encourage the growth of private irrigation.

055

PN-AAW-422

MF \$1.08/PC \$7.02

Small - scale and smallholder irrigation in Zimbabwe : analysis of opportunities for improvements

Podmore, Terence H.; McConnen, Richard J.; Hungwe, Alois

Consortium for International Development

Colorado State University. University Services Center

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

Nov 1986, iv, 50p. : ill., map, statistical tables, En
WMS report, no.48
9364127

AID/DSAN-C-0058

Assistance to Zimbabwe's small-scale irrigation sector, according to this report, must focus on expanding the country's already impressive irrigation program in such a way as to also increase the magnitude of irrigation's contribution to Zimbabwe's overall development. The bulk of the report discusses specific suggestions to: (1) monitor and evaluate irrigation water use and other irrigation scheme features; (2) strengthen programs to build effective irrigation associations and irrigation management committees; (3) improve analysis of intra- and inter-year water allocation and of irrigation's contribution to economic growth, equity, and stability; (4) develop field-level institutions and procedures to increase the potential of small-scale irrigation schemes, with emphasis on coordinating efforts at all levels between the Irrigation Department and the Ministry of Water Resources and Development; (5) train personnel to design, implement, operate, and maintain water pumping systems in order to increase system reliability and reduce costs; (6) utilize the national Farm Irrigation Fund (constraints to this use are discussed); (7) develop the full-fledged university and technical training programs needed to sustain long-term irrigation development; and (8) field-test ideas and techniques developed in activities 1-7. (Author abstract, modified)

056

PN-AAW-835

MF \$1.08/PC \$2.86

Rapid appraisal to improve canal irrigation performance : experience and options

Chambers, Robert; Carruthers, Ian
International Irrigation Management Institute
Oct 1986, 18p., En
IIMI pub 86-10
IIMI research paper, no.3
9364127

The use of rapid rural appraisal (RAR) in evaluating ways to improve canal irrigation systems is discussed. Drawing on experience in Asia, four situations in appraising irrigation systems are reviewed: (1) the use of overly generalized appraisals in standardized irrigation programs such as India's Command Area Development Authority; (2) the development of theoretical frameworks of appraisal (The Water Management Synthesis diagnostic methodology and Bottrall's appraisal framework); (3) appraisals which failed to lead to action (e.g., those conducted 1975-80 by India's Central Water Utilization Team); and (4) appraisals which did lead to action (the World Bank's use of visiting experts followed by an investment program in India, and a "do-it-yourself" program in the Morna project). Such experiences show that: RRA techniques are less expensive and more beneficial than standard (or completely individual) programs; canal irrigation systems should be appraised in their entirety; continuity and commitment are required for irrigation implementation; and, most importantly, an operational plan for water distribution, which focuses appraisal on what can be done without delay, is necessary. Practical aspects of RRA are discussed, including: assembling an appraisal team and identifying information sources; ways of offsetting appraisal biases; RRA procedures; and pitfalls to be avoided in developing recommendations.

057

PN-AAW-837

MF \$1.08/PC \$6.89

Skimming the water : rent - seeking and the performance of public irrigation systems

Repetto, Robert
World Resources Institute
Dec 1986, 47p. : charts, statistical tables, En
Research report / World Resources Institute, no.4

The political economy of public irrigation systems in the Third World leads to poor use of water and of invested capital. Pervasive rent seeking, which stems from the divorce of benefits from financial responsibility, distorts investment decisions, the design and operation of irrigation systems, and patterns of water use. The

consequences are inefficient, inequitable, fiscally disastrous, wasteful of increasingly scarce water, and environmentally harmful. Drawing on country assessments of China, India, Bangladesh, Pakistan, Mexico, and the United States commissioned by World Resources Institute, along with numerous other country studies and research reports, this paper discusses the adverse effects of current financing policies in public irrigation. Individual sections of the paper discuss: (1) common problems with irrigation systems in the Third World; (2) the concept of rent-seeking behavior and its general implications for economic behavior; (3) the history of the development of U.S. Government-sponsored irrigation systems as an example of how the performance of irrigation systems is affected by rent-seeking arrangements in the long run; (4) connections between Third World financing policies and common irrigation system problems; (5) bureaucratic and economic forces in the Third World resisting policy change; and (6) general strategies and specific recommendations for improving current practices. (Author abstract, modified)

058

PN-AAW-839

MF \$2.16/PC \$15.86

Inadequate management and declining infrastructure : the critical recurring cost problem facing irrigation in Asia

Easter, K. William
University of Minnesota. Institute of Agriculture, Forestry and Home Economics. Dept. of Agricultural and Applied Economics
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)
Jan 1987, i, 113p. : charts, statistical table, En
Economic report no.ER87-2
9361406
DAN-4127-C-00-2086-00

The issue of recurring operation and maintenance (O&M) costs for irrigation systems in Asia is reviewed in this paper, which synthesizes four country studies. The paper first describes the conceptual water management model used in this analysis and the model's application to O&M problems. Water fee collection policies for the four countries - Nepal, Sri Lanka, India, and the Philippines - are then summarized, and each country is evaluated according to its performance in dealing with recurring cost problems. (While the four country reports are of uneven quality, they do provide a basis for comparison. Also, the Nepal and Sri Lanka studies are quite limited by a lack of experience in these countries in irrigation fee collection, and the India study is limited in that it was restricted to government projects in Maharashtra state.) Next, options for increasing investment in O&M are reviewed in the context of the four countries. Finally, criteria for setting water fees are sug-

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gested and the problems associated with charging a uniform fee across all projects are highlighted. The conclusion identifies conditions necessary for a significant increase in collections. A 5-page bibliography (1959-86) is appended. (Author abstract, modified)

059

*PN-AAW-468

MF \$1.08/PC \$8.84

Productivity of transhumant Fulani cattle in the inner Niger delta of Mali

Wagenaar, K.T.; Diallo, A.; Sayers, A.R.
International Livestock Centre for Africa
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)

Dec 1986, ix, 57p. : charts, map, statistical tables, En
ILCA research report, no.13
936411109

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

A range of performance traits and the productivity of transhumant Sudanese Fulani Zebu cattle in the inner Niger delta of Mali were evaluated. Analyses were based on data collected on 2,550 animals in 3 herds from 12/78 to 3/83. The results indicated high calf mortality, low reproductive performance, and moderate milk production. A negative correlation was found between cows' milk production and reproductive performance. Average productivity per cow was low and highly variable over both seasons and years. The results of the study were compared with findings reported in the literature on Sudanese Fulani cattle in Mali and on both the related White Fulani strain in Nigeria and the Gobra in Senegal. The major interventions proposed for increasing the overall productivity of the Sudanese Fulani cattle in the Niger delta concern improvements of the *harima* pastures through irrigation and fertilization; this would provide high-quality forage near the village for milking cows, and feed supplementation for improving calf survival and growth rate. A total of 40 tables and 26 figures are included. (Author abstract, modified)

060

*PN-AAW-469

MF \$2.16/PC \$15.47

Livestock production in central Mali : long-term studies on cattle and small ruminants in the agropastoral system

Wilson, R.T.
International Livestock Centre for Africa
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture)
Dec 1986, xi, 111p. : ill., charts, maps, En
ILCA research report, no.14

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

Studies on traditional livestock husbandry within mixed farming systems in the West African Sahel, with special reference to Mali, are analyzed and reported. The studies provide data over 6 years from two agropastoral subsystems, cattle and small ruminants (sheep and goats), and allow direct comparison of the three species under identical environmental and management conditions. Results clearly demonstrate both the superiority of the small ruminants over cattle in terms of meat production and the complementarity of the goats and sheep in their contribution to human nutrition. The seasonal nature and inefficiency of reproduction in cattle are contrasted with the much less seasonal and far more rapid process in goats and sheep. The dependence of cattle on limited grazing resources results in massive short-term fluctuations in weight and over the long term has caused an alarming reduction in mature body size. Goats and sheep, which have more eclectic dietary habits, are less subject to weight changes. Also, the considerable circumstantial evidence obtained after completion of the studies indicates that goats and sheep suffer drought conditions less severely than do cattle. In contrast to the small ruminants' superior efficiency in most of the parameters studied, however, their early death rate is much higher than that of cattle. *Ceteris paribus*, the individual management ability of owners and herders can be a major constraint to productivity for both cattle and small ruminants. It is recommended that, except for veterinary inputs, solutions to identified constraints be provided from within existing systems. Included are 56 tables, 51 figures, and a 55-item bibliography (1952-85). (Author abstract, modified)

061

PN-AAW-543

MF \$1.08/PC \$0.91

USAID - supported animal research

Haines, C.E.; Warren, W.P.

U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Symposium on Potentials for Animal Production in Lesser Developed Countries at the Annual Meeting of the American Society of Animal Science, 77th, Athens, GA, US, 14 Aug 1985)

Journal of animal science, v.63, 1986, p.1600-1606 : statistical table, En

AID-funded livestock research projects during the period 1975-85 are reviewed. Some of these projects were entirely related to livestock, but often the livestock research was merely one component of a complex research project. The projects were country-specific, regional, or worldwide. Generally, livestock research programs were funded for 3 to 10 years, and were supported by different bureaus, divisions, and offices within A.I.D. or jointly funded with other international donors. Several of the International Agricultural Research Centers also received A.I.D. support for activities concerned with livestock research. Annual funding per project varied from \$15,000 to \$4 million. Some projects gave attention to only one species of livestock while others included several species for the purpose of improving the production of milk, meat, fiber, or draft power. Although A.I.D. also funds other programs on livestock that involve policies, development, and technology transfer, the total subject of livestock received only a small portion of the overall A.I.D. focus on agriculture. The amount of A.I.D. support to livestock research, as well as to livestock production in developing countries, is on the decline. (Author abstract, modified)

062

PN-AAW-757

MF \$2.16/PC \$18.85

Veterinary epidemiology and economics in Africa : a manual for use in the design and appraisal of livestock health policy

Putt, S.N.H.; Shaw, A.P.M.; et al.

International Livestock Centre for Africa

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

Jan 1987, xvii, 130p. : ill., charts, statistical tables, En
ILCA manual, no.3
936411109

* Also available from: Agribookstore, IADS Operations, Inc., 1611 N. Kent St., Suite 600, Arlington, VA 22209 USA

Animal disease control programs require complex decisions regarding the priority of the diseases to be controlled and the allocation of scarce resources among a range of available control strategies. This manual sets out basic techniques for planning, monitoring, and evaluating livestock disease control programs in Africa in the most efficient way. Successive chapters discuss: (1) basic concepts and definitions of epidemiology; (2) the use of descriptive statistics for summarizing epidemiological data; (3) types of epidemiological studies and sampling techniques; (4) statistical methods in the analysis of epidemiological data; (5) basic economic principles applicable to the planning and evaluation of animal disease control programs; (6) estimating the costs of livestock diseases and the benefits of their control; and (7) the principles of cost-benefit analysis. The manual includes 62 tables and 16 figures.

063

PN-AAW-625

MF \$1.08/PC \$6.11

Cooperatively managed Panamanian rural fish ponds : the integrated approach

Lovshin, L.L.; Schwartz, N.B. et al.

Auburn University. International Center for Aquaculture. Agricultural Experiment Station

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

Dec 1986, 47p. : ill., map, statistical tables, En

Research and development series / International Center for Aquaculture, no.33

9311314

Major empirical results are presented of studies conducted to measure the impact on 22 rural Panamanian communities of a pilot project to integrate livestock and other agricultural activities with a communal approach to aquaculture. Successive chapters discuss: (1) the project's technical interventions (fish species selected, pond layout and management, associated animal husbandry, gardening, silviculture, credit, and technology transfer) and the results of these interventions; (2) the project's nutritional impact - in terms of child height and weight and family diet and budget - on pilot, control, and traditional communities; (3) socioeconomic factors which promoted or retarded project success, the social features of community members who joined project groups, and the technical proficiency of these groups; and (4) the economic impact in terms of budget and rate-of-return analyses based on both primary and secondary data, of the various integrated production systems tested. Thirty-four statistical tables support these analyses. A brief final section summarizes the benefits gained in the project.

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064

PN-AAW-650

MF \$4.32/PC \$38.35

Aquaculture of milkfish (*Chanos chanos*) : state of the art

Lee, Cheng-Sheng; Gordon, Malcolm S.; Watanabe, Wade O.

Oceanic Institute

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

1986, xv, 284p. : ill., charts, statistical tables, En

9364161

DAN-4151-A-4055-00

Although it is one of the most extensively farmed marine bony fishes on earth, the milkfish (*Chanos chanos*) remains one of the least known and understood of the major finfish species. This book provides as complete a summary as possible of current knowledge (through December 1985) of milkfish and the milkfish industry. A compilation of chapters written by milkfish experts, the book opens with a chapter on milkfish biology, summarizing what is known about milkfish in the wild and discussing topics not covered elsewhere in the book. Chapters on genetic variation within the species and on reproduction follow. Succeeding chapters describe the traditional milkfish industry, from fry capture, distribution, and rearing through growth of the fish to market size. Detailed descriptions are given of culture practices in different countries, aspects of pond design and management, nutrition, and common diseases. The final chapter considers the economics of milkfish farming. A concluding summary highlights points integral to the previous chapters and indicates important directions for both near- and long-term future research. References are provided with each chapter. (Author abstract, modified)

065

PN-AAW-710

MF \$1.08/PC \$6.11

Technology and tradition in west African maritime fisheries : Tombo, Sierra Leone

Hendrix, Melvin K.

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)

1982, ii, 43p., En

ICMRD working paper, no.8

9364024

DAN-4024-A-00-2072-00

Based on fieldwork undertaken in 1982, this paper provides a historical overview of a West African

maritime community whose subsistence is based solely upon the production and exchange of fishery products. The primary locus of the study is Tombo, Sierra Leone, a village of about 8,000 inhabitants, situated near the southernmost extension of the Freetown peninsula, on the north shores of Yawri Bay. Separate sections examine the history of West Atlantic peasant fisheries; the historical background of Tombo; the socioeconomic and technological development of the Tombo fishery from the mid-nineteenth century through 1950; and changes to the fishery thereafter, through which Tombo has developed into an industrial center for the production and exchange of fishery products in Sierra Leone. The study concludes that, with the growing participation of the fishery in the capitalist economy, Tombo fishermen have begun to share problems faced by all peasant producers in Africa, namely, lack of postharvest support services, low purchasing power, and difficulty obtaining an equitable return for their labor in the market place.

066

PN-AAW-711

MF \$1.08/PC \$3.77

Surveillance and enforcement operations in the Costa Rican tuna fishery

Lepiz, Luis Guillermo; Sutinen, Jon G.

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)

Feb 1985, 27p. : charts, En

ICMRD working paper, no.14

9364024

DAN-4024-A-00-2072-00

Enforcement and surveillance operations for the Pacific tuna fishery in the extended economic zone (EEZ) of Costa Rica are examined. A zero-one integer programming model is used to optimize the allocation of sea patrol vessels and assess the cost of a surveillance program. Results suggest that a surveillance and enforcement program for Costa Rica should place special attention on the fishing activities along EEZ boundaries with Panama and Colombia. The program should be dynamic and adaptive, accounting for seasonal and sub-seasonal changes in the fishery. Under the assumption of unilateral enforcement of a tuna policy for Costa Rica, the program is likely to cost nearly 50% of the income from user fees, which are estimated to be in the range of U.S.\$2-2.5 million under current conditions in the fishery. (Author abstract)

067

*PN-AAV-726

MF \$1.08/PC \$11.96

Regional cooperation to improve food security in Southern and Eastern African countries

Koester, Ulrich

International Food Policy Research Institute

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

Jul 1986, 89p. : map, statistical tables, En

Research report / International Food Policy Research Institute, no.53

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

While regional cooperation is a viable option for developing countries seeking food security, it is, as this report shows, not unproblematic. The report focuses specifically on the Southern African Development Coordination Conference (SADCC), a group of nine countries seeking increased autarky from the Republic of South Africa. Following summary and introductory chapters and a discussion of the SADCC approach to cooperation, Chapter 4 of the report examines the economic theory of integration to see if food security is better achieved through regional or global cooperation; the determinants of success or failure of regional cooperation schemes are investigated. Chapter 5 assesses other integration schemes (e.g., the European Community) and identifies obstacles to integration. Chapter 6 explores how an integration scheme for the SADCC countries could help to stabilize consumption and expand trade, thus improving income growth and food security. In Chapter 7, alternative means of stabilizing food consumption within the SADCC region (e.g., harmonizing production schedules, establishing a regional grain stockpile, developing a foreign exchange stabilization scheme) are explored; the advantages and drawbacks of each of these strategies are identified. (Author abstract, modified)

068

PN-AAW-501

MF \$2.16/PC \$24.05

Food consumption, nutrient intake and agricultural production in India

Evenson, Robert E.

U.S. Dept. of Agriculture. Office of International Cooperation and Development. Technical Assistance Division. Nutrition Economics Group (Sponsor)

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

Oct 1986, 40p. + 4 appendices : charts, statistical tables, En

USAID/India occasional paper, no.3

Over the past 15 years India has moved from a substantial foodgrain importing position to one in which substantial foodgrain stocks are being held. Using food consumption data from the National Sample Survey Organization and the National Nutrition Monitoring Bureau, this paper assesses the nutritional impact of this improved situation on the poor. The first section briefly assesses changes in food consumption in India from 1952 to 1982-83, discusses the relationship between changes in food consumption and changes in foodgrain production, and addresses policy issues relating to food, nutrition, and agriculture. Tables and figures provide supporting data. The second half consists of lengthy appendices which: (1) review Indian food consumption, poverty, and nutrition studies; (2) detail the analytical methodology used by the study; (3) describe the basic consumer behavior model; and (4) present tables on the consumption of basic commodities, *per capita* nutrient intake, and the poverty rate. The main conclusion is that food consumption and nutritional intake remained roughly constant over the period studied for the rural poor and actually declined for the urban poor. A total of 165 references (1937-86) are cited.

069

PN-AAW-535

MF \$1.08/PC \$3.25

Transport cost minimization for Nepal's subsidized foodgrain program : a proposed model

Rawal, Tilak

Winrock International Institute for Agricultural Development

Nepal. Ministry of Agriculture (Sponsor)

German Agency for Technical Cooperation (Sponsor)

Canada. International Development Agency (Sponsor)

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

Nov 1986, [20]p. : statistical tables, En

Research and planning paper series, no.5

3670149

A model for minimizing the transport expenses of the Nepal Food Corporation (NFC) is proposed in light of an analysis of Nepal's food grain distribution system. The history of public sector involvement in foodgrain distribution since 1946 is sketched, and the contrast between the grain-surplus Tarai and the increasingly food-deficit hill areas emphasized. Actual grain distribution by region for the years 1975/76-1982/83 is analyzed, as are NFC's prices for procuring and selling grain and its means for transporting it. On the basis of the proximity of food-deficit regions to supply points in the Tarai, the country is redivided into 10 regions and a linear programming model is proposed which provides a least-cost solution to transporting grain from surplus to deficit areas. Related suggestions for revising the

FOOD & NUTRITION

government's procurement, distribution, export, and storage systems conclude the study. Eleven tables illustrate the text.

070

***PN-AAW-553**
MF \$1.08/PC \$9.10

World food needs and availabilities, 1986/87 : winter update

U.S. Dept. of Agriculture. Economic Research Service. International Economics Division
U.S. Agency for International Development (Sponsor)
Feb 1987, iv, 61p. : statistical tables, En
* *Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 USA*

This second update of "World Food Needs and Availabilities, 1986/87" provides current summaries of food needs in Africa, the Middle East, Asia, and Latin America (areas where needs remain basically unchanged from the previous report), as well as revised reports on 12 countries having significantly changed food needs - Burkina Faso, Chad, Mauritania, Senegal, Sudan, Mozambique, Lesotho, Lebanon, Bangladesh, Nepal, Bolivia, and Ecuador. Detailed country tables and narratives provide information on the quantities and dollar values of assessed additional food needs, including the need for cereals, pulses, vegetable oils, and dairy products; a summary section covers additional needs for cereal, the main commodity in international food aid. The report presents two alternative measures of overall food import requirements (commercial plus concessional) and of the additional food needs of each country for 1986/87 and 1987/88: (1) *status quo* need based on achieved levels of food consumption; and (2) nutrition-based need based on the FAO's minimum recommended dietary intake. The report also estimates the maximum amount of food imports a country can absorb - a maximum which often limits the quantity of nutrition-based needs that can physically be provided. The gap between maximum absorbable and nutrition-based need is one measure of the seriousness of a country's food problem.

071

PN-AAW-638

MF \$1.08/PC \$2.60

Thriposha product and program

Hornstein, Irwin
U.S. Dept. of Agriculture. Office of International Cooperation and Development. Food Technology Branch
U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)
Jan 1986, 17p. : ill., chart, En
9310831

The successes of the Thriposha program in Sri Lanka, which provides a take-home food supplement and health services for children and pregnant or lactating women, are discussed. Thriposha is a supplement consisting of 40% locally grown and processed corn and soya and 60% of a donated U.S. blend of corn, soya, non-fat dried milk, minerals, and vitamins. The program, which is a joint effort of the Ministry of Health and CARE, supported by A.I.D., combines a number of elements which give it particular interest: use of the innovative extrusion food processing technology, which has enabled it to reduce costs and produce a centrally processed product with excellent acceptability; conversion from full reliance on imported commodities to a high percentage of indigenous foods; use of product name and packaging to create a strong positive image for a supplementary food; demonstration that take-home feeding can achieve nutritional impact when combined with other nutrition and health services; and the introduction of the supplement through commercial channels as a complement to the donation element. This paper recounts the history of the Thriposha program, its costs, services (including onsite feeding, through which 15% of recipients are served), impacts, and initial efforts to distribute the product commercially. Sources of further information on the Thriposha program and on extrusion technology are noted.

072

PN-AAW-298

MF \$1.08/PC \$.91

R & RS Staff information paper : a working definition of child survival in the Agency for International Development

Christopherson, Kaaren

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation
1986, [7]p., En

In an effort to provide a precise understanding of child survival (CS), a recent addition to A.I.D.'s development assistance lexicon, this paper distinguishes three groups of development assistance interventions and identifies their relation to CS efforts. The three groups are: (1) the direct CS interventions identified in the A.I.D. Administrator's April 1986 statement on CS strategy (the primary interventions of oral rehydration therapy and immunization and secondary interventions in the areas of birth spacing and child nutrition); (2) other interventions having direct impact on CS (control and treatment of infectious and vector-borne diseases and efforts in water and sanitation, maternal and primary health care, health communications, and health financing); and (3) activities in which CS may be a minor objective or a side benefit (food distribution, food hygiene, and maternal and child literacy). A select 10-item bibliography (1978-86) is appended.

073

PN-AAW-556

MF \$1.08/PC \$4.81

Background paper on health research priorities

Elliott, Veronica

Birch and Davis Associates, Inc.

U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)
15 Oct 1986, [35]p. : statistical tables, En

Research priorities for A.I.D.'s Office of Health are the focus of this report. To establish the context in which A.I.D. health research is conducted, an introductory chapter reviews disease patterns and the causes of morbidity and mortality in the developing world and distinguishes different types of health research. Chapter two reports the research agenda outlined by six groups of medical experts convened or assisted by A.I.D. (or, in one case, WHO) since 1982, including, inter alia, the Workshop on Priorities in Biotechnology Research for International Development, the A.I.D. Malaria Strategy Workshop, and the Task Force for Child Survival. In Chapter three, the comparative advantages and disadvantages of A.I.D. as a research funding source are outlined, and recommendations are made regarding the

scope of A.I.D.'s health research program and its management and coordination within the Agency. Seven priority research areas are identified: (1) low birth weight and strategies for prevention (emphasis on maternal infections); (2) health behaviors (including market research); (3) epidemiology (including development of an extensive field database); (4) cost-effective ways of preventing and treating diseases causing large numbers of lost school or work days; (5) barriers to immunization program effectiveness; (6) diagnostic tools; and (7) improved rehydration salts.

074

PN-AAW-720

MF \$1.08/PC \$8.19

Report on malaria control for the health systems management project of El Salvador

Pletsch, Donald J.

Medical Service Consultants, Inc.

U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)
Jun 1986, 33p. + 13 annexes : charts, maps, statistical tables, En

9365948

DPE-5948-C-00-5044-00

A malaria control (MC) program which has been proposed to succeed current AID-assisted MC in El Salvador is reviewed. Section 1 describes the country's MC history, as well as existing control programs, their constraints (especially funding restrictions and the resistance of *Anopheles albimanus* to almost all available insecticides), and government responses to these constraints. Section 2 cites MC accomplishments to date as background to a description of the proposed A.I.D. program, which will be a component of the Health Systems Management Project, and provides technical analyses of the program's spraying, surveillance, operations research, health education, training, biological control, and insecticide handling activities. The program's environmental aspects, sustainability, and impact on women are briefly discussed, and planned outputs and inputs are described. The report finds that the proposed intervention is well designed and technically sound; in particular, planned operations research in innovative estuary source reduction methods may benefit not only El Salvador, but other Pacific coast countries as well. Without the MC program, it is concluded, an early resurgence of malaria may be unavoidable. Thirteen appendices provide supporting documentation.

075

PN-AAW-620

MF \$2.16/PC \$17.16

Final evaluation : USAID / Burkina Faso rural water supply project

Roark, Philip; Kittle, Bonnie; et al.
Camp Dresser and McKee, Inc.

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

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

Aug 1986, viii, 101p. + 2 appendices : ill., charts, statistical tables, En

WASH field report, no.191 WASH activity no.243

9365942; 6860228

5942-C-00-4085-00

A 7-person, interdisciplinary team conducted a final evaluation of A.I.D.'s Rural Water Supply Project in Burkina Faso, which lasted from 1980 to 1986; emphasis is on the 1984-86 extension period. The project reached most of its objectives and may generally be considered a success. Its construction of 678 wells has significantly increased the availability of water; project continuation is recommended so that remaining water needs may be met. The success ratio in constructing wells with acceptable yields improved over time, exceeding 90% for both drilled and hand-dug wells during the last campaign. The Moyno pump employed by the project has been moderately successful in avoiding breakdowns; however, comparative tests indicate that other pumps may be more suitable to Burkinabe conditions. The project's greatest failure was undoubtedly the lack of a functioning system to maintain the pumps. A new, innovative maintenance system which relies on the private sector has recently been formed, but is not yet in operation. Periodic evaluation of the maintenance system is recommended. While the project's combination of a water component with a health component was innovative, the two components have not proceeded in tandem, the latter having been operational only for the last 2 years. Interministerial coordination improved markedly during the extension period with the naming of a technical coordination committee composed of two technical directors and a team leader from Dimpex, the technical assistance contractor. The addition of a national director to oversee all project operations is recommended. A random survey found that sanitary storing and use of water was not common among villagers. Distance to the water point, irrespective of water quality, continued to be the overriding factor determining water use. Within a pilot zone established to test an integrated water and health approach,

results were somewhat better. In the future, health education and village extension (animation) should precede well construction. Unit costs of well construction were rather high; future projects should utilize the private sector for drilling wells. Efficiency could also be improved if wages were based on production. The management systems established by the project are appropriate and constitute a model for other development projects of this kind; more attention should be given to their application, however. (Author abstract, modified)

076

PN-AAW-621

MF \$1.08/PC \$4.03

Training of community operators in operations and maintenance for rural potable water systems in Bolivia

Titus, Amy A.

Camp Dresser and McKee, Inc.

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

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

Feb 1987, iv, 34p., En, Es

WASH field report, no.204 WASH activity no.260

9365942

5942-C-00-4085-00

An 8-day training course on operations and maintenance (O&M) of rural potable water systems was conducted for 20 community operators and 30 community council members in Paracaya, Bolivia, early in 1987. In the course - the last phase of the assistance provided to the Department of Environmental Sanitation (DSA) by the Water and Sanitation for Health (WASH) Project - 14 *tecnicos* (paraprofessional technicians) pilot-tested an O&M manual they had developed during a previous training-of-trainers workshop 2 months earlier. The pilot course was judged a success on the basis of the skills and knowledge exhibited by its participants and by their oral and written comments. The course design was adequate, and the *tecnicos* proved themselves able to conduct training using the principles of adult education, to develop effective training materials, and to apply and transmit their technical expertise to others. If WASH assistance is to be effective in the long run, however, DSA and USAID/B must support the development of O&M plans and make the transition from system construction to O&M. Actions needed to attain this end are specified. Four appendices and five tables are attached. (Author abstract, modified)

077

PN-AAW-549

MF \$1.08/PC \$5.20

Studies and research in spontaneous housing : annotated bibliography

USL International, Inc.

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

Jan 1986, [37]p., En

This annotated bibliography represents about 40% of the documents reviewed in a 1985 A.I.D. search of the literature on unregulated or spontaneous housing (SH). Selection for inclusion in the bibliography was made on the basis of a study's currency (all but two items were completed in the 1980's); direct analysis of the shelter, finance, and urban issues affecting SH; and usefulness to analysts and program managers. The bibliography is divided into the following categories: (1) resource mobilization practices and credit mechanisms; (2) building materials and construction practices; (3) land tenure and registration; (4) the role of renters; (5) community participation in upgrading sites and services projects; (6) the squatter invasion and the development process; (7) employment and income formation patterns of residents of SH communities; (8) the impact of access to infrastructure on SH investment and development; (9) how low-income housing and SH markets function at specific sites; (10) an overview of SH (definition, operating characteristics, participants, lessons learned, etc.); and (11) the design and evaluation of housing projects with spontaneous components. Studies that are felt to be particularly important are marked with an asterisk, and a list of sources is annexed. (Author abstract, modified)

078

PN-AAW-550

MF \$2.16/PC \$17.16

Housing finance system in Kenya, volume I

USL International, Inc.

Urban Institute

Kenya. Ministry of Housing and Social Services (Sponsor)

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

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

May 1986, 112p. : statistical tables, En 6150225

The structure of the Kenyan housing finance system is analyzed to determine its adequacy for satisfying the mortgage credit needs of the rapidly urbanizing Kenyan economy. Chapter one places the housing sector within a macroeconomic context. It shows the declin-

ing share of the GDP and of fixed capital stock in residential housing, contrasts these trends with those that would more normally be associated with current changes in urbanization, population, and income, and suggests that financial policy has constrained the supply of housing credit. An estimate of housing needs concludes the chapter. Chapter two briefly overviews government housing programs and their financing. Chapter three describes the overall financial sector as a framework for housing finance and outlines the dramatic changes in financial innovation in Kenya, identifies some of the problems with this evolution, and indicates important beneficial reforms and trends now taking place; it concludes with a review of macro financial policy and its impact on housing finance. Chapter four focuses on housing finance institutions, their growth, regulatory problems, resource mobilization and lending activities, and liquidity needs. Chapter five considers how housing needs, financial policy generally, and the current housing finance system interact to affect resource mobilization; it also discusses some of the broader macroeconomic problems with the current system. Chapter six provides recommendations. A study of the role of the informal housing sector is being published separately. (Author abstract, modified)

079

PN-AAW-551

MF \$2.16/PC \$23.92

Developing a housing finance strategy for Honduras

Rourk, Phillip; Struyk, Raymond J.; et al.

Urban Institute

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

Aug 1986, iv, 70p. + 5 annexes : charts, statistical tables, En U.I. project 3597

A strategy for generating the investment resources required to meet Honduras' acute housing needs for the 1985-1990 period is presented. An introduction reviews current economic and housing circumstances in Honduras and recent developments in housing policy. In the remaining four chapters, the paper: (1) defines the size of the housing resource gap by contrasting 1985-1990 housing needs with resources currently going into the sector, using the difference as a target for designing policies to mobilize additional resources; (2) discusses options for mobilizing these resources within the Honduran financial system; (3) defines a specific package of initiatives - i.e., mobilizing savings, selling housing bonds on market terms, and equalizing competition and channeling available credit to housing - designed to develop a domestic private sector resource base for housing finance, and estimates the extent to which these initiatives will mobilize savings and generate housing credit; and (4) presents estimates developed

HOUSING

through simulations of the Housing Quality Model (HQM) of the impact of increased savings and formal housing credit availability on the adequacy of low-income shelter. The text includes 15 tables; the second half of the document comprises four appendices which provide supporting data and a fifth which describes the HQM.

080

PN-AAW-555

MF \$2.16/PC \$14.56

Proceedings of the tenth conference on housing and urban development in Sub-Saharan Africa, 1986 : public and private sector partnerships in housing and urban development

Zimbabwe. Ministry of Construction and National Housing (Sponsor)

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

(Public and Private Sector Partnerships in Housing and Urban Development, Conference on Housing and Urban Development in Sub-Saharan Africa, 10th, Harare, ZW, 26-28 Feb 1986)

Feb 1986, 110p. : ill., En Background paper: PN-AAV-555

How partnerships between public and private sector housing institutions can help meet the shelter needs of African populations, especially in rapidly expanding urban centers, was the focus of the tenth conference on housing and urban development in sub-Saharan Africa held in February, 1986 in Zimbabwe. These proceedings of the conference include the texts of: (1) the keynote address; (2) two panel presentations on public and private sector partnerships in housing and in urban development; and (3) reports from committees formed to discuss partnerships in these two areas at greater length. The committee reports include both general recommendations and reports from subcommittees.

081

*PN-AAW-765

MF \$1.08/PC \$8.97

Symposium : shelter policy and planning in developing countries

Burby, Raymond J.; Kaiser, Edward; et al.

American Planning Association

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

(Symposium on Shelter Policy and Planning in Developing Countries, US,

1987, p.170-234 : ill., charts, map, statistical tables, En Journal of the American Planning Association, v.53(2)

* *American Planning Association, 1313 East 60th St., Chicago, IL 60637-2891 USA. Single issues \$8.00*

A recurrent theme in this collection of symposium papers is that urban shelter goals in developing countries will be realized through private sector, self-help, and community efforts, with limited government involvement in housing provision. The introduction defines basic housing concepts and sets up a framework, largely the perspective of donors and international organizations, for reading the papers. The initial papers discuss: (1) the scale of the housing problem, developing a typology of the housing market and the variety of low-income settlements and arguing for a revision of basic policy norms; (2) lessons from the housing sector applicable to the provision of water and sanitation services, arguing that conventional technology and centralized delivery are inappropriate for low-income communities; and (3) housing for the ultra-poor, using the example of Haiti to suggest that housing policy and design standards should address the need of these families to use shelter in producing income. Presented next are case studies describing: (1) problems encountered when the Government of Liberia introduced alternative shelter programs, and the self-help solutions that emerged; (2) informal land and housing markets in Istanbul, Turkey, and government practice in granting tenure; and (3) housing issues and policies in post-1949 China, including systems of communal ownership and of housing finance. A final paper presents a computer-based model for estimating housing needs in developing countries.

082

PN-AAW-766

MF \$2.16/PC \$14.43

Assessing housing needs and policy alternatives in developing countries

Struyk, Raymond J.

Urban Institute

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

Feb 1987, iii, 59p. + 4 annexes : statistical tables, En 9401002

As a contribution to the International Year of Shelter for the Homeless, A.I.D. sponsored the development of the Housing Needs Assessment Methodology (HNAM) as a tool in developing housing policy options. This monograph: (1) presents an overview of the HNAM, which, it is noted, extends the well-known U.N. Component Method by computing the investment levels required to satisfy housing needs; (2) summarizes HNAM use in determining housing needs in 10 countries; and (3) analyzes and discusses the policy implications of factors influencing housing needs, including changes in population and urbanization and housing affordability. A final section explores the extent to which use of the HNAM has spurred changes in countries' housing policies and has provided insights into possible use in other countries. The study includes substantial supporting data - 16 tables, 3 figures, general references and references to country studies, and three technical appendices.

083

PN-AAW-767

MF \$1.08/PC \$10.92

Encouraging private initiative

LaNier, Royce; Oman, Carol A.; Reeve, Stephen
Technical Support Services, Inc.

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

Apr 1987, 79p. : ill., charts, En 9401002

In order to promote a healthy housing industry in developing countries, this monograph suggests potential new roles for both the public and private sectors in meeting shelter needs, examines various approaches to encouraging private sector initiative, and uses the experiences of A.I.D.'s Office of Housing and Urban Programs to illustrate models for expanded private sector contribution. The first part of the report discusses the principal components of a shelter program: appropriate mechanisms for distribution of housing and housing assistance; access to land; provision of infrastructure and urban services; production of building materials; and the construction and financing of housing units. Part two presents overall strategies for encouraging private initiatives, including a series of public policy options which may be adopted to promote the private sector shelter industry and improve the shelter investment strategies of the public sector. Ways of evaluating the appropriateness of individual approaches are suggested. (Author abstract, modified)



Private sector participation and community self-help are key components of A.I.D.'s housing development strategy.

ENVIRONMENT & NATURAL RESOURCES

084

PN-AAW-424

MF \$1.08/PC \$9.49

Zaire : a country profile

Evaluation Technologies, Inc.

U.S. Agency for International Development. Office of U.S. Foreign Disaster Assistance (Sponsor)
Dec 1986, v, 65p. : maps, statistical tables, En

One of a series of country-level baseline studies, this profile presents information on Zaire pertinent to the planning and relief operations of the Office of U.S. Foreign Disaster Assistance. Individual sections cover: general information; government; disaster preparedness; population; health, nutrition, and housing; the economy; agriculture; physical geography; transportation and logistics; and power and communications. Appended is a 48-item bibliography of private, U.S. Government, and World Bank references which is intended to guide the reader toward fuller, more current sources.

085

PN-AAW-488

MF \$1.08/PC \$5.33

Fragile lands in Peru : report to the S&T - LAC fragile lands working group

Painter, Michael; Carroll, Thomas; et al.

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)

Apr 1985, ii, 36p. : charts, map, En
9311135

DAN-1135-A-00-1078-00

Findings of a March/April 1985 visit to Peru by a team from A.I.D.'s Fragile Lands Working Group are presented. Section one presents a general discussion of fragile lands (namely, lands that have proven to be highly subject to deterioration under common agricultural, silvicultural, and pastoral use systems and management practices) and defines some key concepts related to fragility (e.g., level of resistance and resilience to natural and manmade perturbations; linkages to adjacent systems; interactions between major regional systems; long-term, sustained yield management). Section two focuses on Peru's Sierra and Selva regions, outlining the unique needs of each and the relationship between them. Section three outlines the social, economic, and ecological processes that characterize development projects located on fragile lands in Peru. Section four focuses on structural issues which, in the Peruvian context, constrain the resolution of the problems related to fragile lands. Conclusions and recommendations in section five concern areas of convergence between the objectives of USAID/P and dis-

cuss Development Strategies for Fragile Lands (DES-FIL) Project being designed by the Working Group.

086

PN-AAW-500

MF \$1.08/PC \$3.90

Local institutions, tenure, and resource management in East Africa

Little, Peter D.; Brokensha, David

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)

(Conference on the Scramble for Resources : Conservation Policies in Africa, 1884-1984, Cambridge, GB, 19-20 Apr 1985)

Dec 1985, 28p., En
9311135

DAN-1135-A-00-1078-00

Until recently, range and forest lands in East Africa were managed as common property, often by neighborhood and clan based groups. This report examines the role of local institutions and communities in taking over that task. Particular attention is given to those variables that are likely to make local resource management systems ineffective. The conceptual framework adopted herein demonstrates that a change in tenure patterns is only one of many factors that may affect natural resource use and that the causal effects of tenure changes are often difficult to isolate from other variables, such as changes in the level of decisionmaking, wealth differentiation, commercial market linkages, and demographic pressure. Case materials drawn from the authors' research in Kenya are presented within an historical framework and special attention is given to continuities and discontinuities in resource management policy from the colonial to the postcolonial period. In each of the case studies, a similar set of issues are addressed; where appropriate, materials from other areas of East and Southern Africa are presented. (Author abstract, modified)

ENVIRONMENT & NATURAL RESOURCES

087

PN-AAW-731

MF \$1.08/PC \$5.33

Management of coastal habitats in Sri Lanka : report of a workshop, May 12 - 15, 1986, Colombo, Sri Lanka

University of Rhode Island

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

(Workshop on the Management of Coastal Habitats in Sri Lanka, Colombo, LK, 12-15 May 1986)

May 1986, 36p., En

CRMP technical report no.1

9365518

LAC-5518-A-00-5054-00

A workshop on the management of coastal habitats in Sri Lanka was held at the Sri Lanka Foundation Institute in May 1986. Following a summary of concerns common to all coastal areas, this report provides outlines of the technical sessions, which focused on the eight coastal habitat types: coral reefs; estuaries; lagoons; seagrass beds; salt marshes; mangroves; barrier beaches and spits; and coastal sand dunes. Workshop findings will be incorporated in the Sri Lanka Coastal Zone Management Plan which is being prepared by the Coast Conservation Department. (Author abstract, modified)

088

PN-AAW-801

MF \$1.08/PC \$11.44

Mozambique : a country profile

King, Dennis J.

Evaluation Technologies, Inc.

U.S. Agency for International Development. Office of U.S. Foreign Disaster Assistance (Sponsor)

Apr 1987, iv, 81p. : charts, maps, statistical tables, En
AID/SOD/PDC-C-3345

Designed to provide baseline data on Mozambique in support of the planning and relief operations of the Office of U.S. Foreign Disaster Assistance, this document: (1) presents general information about Mozambique on such topics as, inter alia, travel and visa requirements, ethnic groups and culture, language, history, government, and communications; (2) discusses Mozambique's disaster vulnerability by providing a description of its physical environment and its susceptibility to natural disasters (e.g., droughts, famine/food shortages, epidemics and diseases, cyclones and storms) along with a brief disaster history; and (3) discusses local resources which could be drawn upon in the event of a natural disaster. This latter section includes, but is not limited to, a description of Mozambique's lead disaster relief organization; water and energy resources; road,

air, rail, and marine transport; housing, health, and agriculture sectors; and voluntary agencies. Appendices include case reports on disasters that occurred in Mozambique in 1984 and 1985. A 2-page bibliography (1982-87) is included.

089

*PN-AAW-565

MF \$1.08/PC \$5.07

Watershed management in the Upper Gambia River Basin : report on a planning consultancy to the River Basin Development Office, AID/Senegal

Freeman, Peter H.

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

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

Feb 1987, i, 34p. + 5 attachments : chart, map, statistical table, En

6250012

RA/FA/87-03

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

Findings of a consultancy to help the Gambia River Basin Development Organization (OMVG) expand its current program to include a strategy for watershed management (WM) are reported. Following a review of geophysical and institutional issues affecting WM in the Fouta Djallon watershed in Guinea, whence 70% of the Gambia River's waters originate, data are presented on (1) sedimentation threats to proposed large and small dams in the upper Gambia River Basin and (2) the extent of soil erosion in the upper basin. Recommendations are made for OMVG attention to potential sedimentation and erosion problems. The potential role of a planned environmental monitoring laboratory at Labe, Guinea as a focal point for WM in the upper basin is then considered, and constraints upon OMVG work in WM are briefly discussed. In conclusion, it is suggested that the OMVG take a pragmatic and gradualist approach to defining its WM role; specific steps to be taken within such an approach are outlined. Appendices include 19 references (1962-86) and a list of WM documents delivered to the OMVG.

ENVIRONMENT & NATURAL RESOURCES

090

PN-AAW-532

MF \$1.08/PC \$3.64

Socioeconomic factors leading to deforestation in Nepal

Shrestha, Ramrajya L.

Winrock International Institute for Agricultural Development

Nepal. Ministry of Agriculture (Sponsor)

German Agency for Technical Cooperation (Sponsor)

Canada. International Development Agency (Sponsor)

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

Nov 1986, [24]p. : statistical tables, En

Research and planning paper series, no.2

3670149

ASB-0148-C-00-5171-00

The scale of deforestation occurring in Nepal over

the last decade has largely gone undocumented. This report, while not providing exact figures, indicates the magnitude of the problem and delineates the socioeconomic factors which underlie it. Specifically, the study examines the extent of dependency on forest reserves for fuelwood, timber, fodder, and land and the consequent deforestation in one Tarai and two hill panchayats, as well as the attitudes of farmers, local leaders, and foresters towards deforestation and afforestation activities. An analysis of the government's forest policy shows that spending on afforestation is extremely low compared to the rate of deforestation; in 15 years of development planning only 20,000 ha of land have been afforested while more than 2 million ha of forest have disappeared. Due to the great dependency of the local people on the forest and their tendency not to recognize their role in deforestation, the report concludes that formal government programs alone will not work - only the coordinated efforts of the government and the communities will save Nepal's forests.

091 **PN-AAV-766**
MF \$1.08/PC \$12.61

Enhanced energy recovery from the exhaust gases of basic oxygen furnaces through operation at pressure

Shenoy, Neena Suresh; Wilson, David Gordon
 Massachusetts Institute of Technology. Technology and Development Program
 Cairo University

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

Jul 1985, 98p. : ill., charts, statistical tables, En
 TDP report, no.85-6
 2630061
 263-0061-C-00-1001-00

This theoretical preliminary-design study examines the possibility of producing 14 MW of net power from the exhaust gases of 3 small basic oxygen furnaces in the Helwan Plant of Egypt's Iron and Steel Company. Major changes required include: (1) enabling furnaces to operate under a pressure of three atmospheres; (2) tripling oxygen pressure; (3) increasing the temperature of compressed oxygen by heat exchange with the turbine exhaust flow; (4) confining the gases leaving the furnaces to ducts connected to a common duct through a one-way valve that would open only when furnace duct pressure exceeds that in the common duct; and (5) adding steam to reduce the temperature of the pressurized exhaust gas, which would then flow through a single-stage reduction turbine equipped with variable-angle nozzle vanes to maintain the pressure during flow variations (the added steam increases the turbine's power output). The turbine exhaust gases would flow through rotary ceramic heat exchangers, incorporating a neutral-gas purge stage and heating pressurized oxygen for the lances. The gases would go to a waste heat boiler, a cooler, and probably a water wash before being ducted to gas mains for use in the plant. Such a process promises large benefits and considerable risks. More design studies and experimental trials should be undertaken. (Author abstract, modified)

092 **PN-AAW-466**
MF \$1.08/PC \$8.71

Design of a new program of external financing for the development of small hydroelectric power plants

Arthur D. Little, Inc.
 Peru. Public Electricity Enterprise (Sponsor)
 U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Peru (Sponsor)
 24 Nov 1986, v.p. : charts, statistical tables, En
 ADL 56855 Spanish ed.: PN-AAW-183
 5270226

Preliminary information which ELECTROPERU (Peru's public electricity company) can use in soliciting external financing for a continuation of the AID-funded Development of Small Hydroelectric Plants Project is presented. The report: (1) analyzes the role of small hydroelectric power plants (SHPP's) in the Peruvian Government's overall development plans and in its plans to expand rural electrification; (2) determines how many SHPP's ELECTROPERU can construct in the next 5 years; (3) provides preliminary cost estimates and a cost-benefit analysis of the proposed continuation of the A.I.D. project; (4) recommends ways in which ELECTROPERU can avoid the procurement and contracting delays encountered during the A.I.D. project and increase the number of SHPP's constructed, and suggests an appropriate mechanism for implementing the proposed continuation; and (5) identifies additional studies needed to prepare a project for consideration by international development agencies such as the World Bank or the Inter-American Development Bank. A description of the A.I.D. methodology for the economic evaluation of SHPP projects is included among the appendices. (Author abstract, modified)

093 **PN-AAW-502**
MF \$2.16/PC \$16.25

Fuel alcohol production in Honduras : a technical and economic analysis

Jacobs, Alan; Tugwell, Franklin; et al.
 RONCO Consulting Corp.
 U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor)
 Apr 1986, ii, 62p. + 4 appendices : ill., charts, statistical tables, En
 9365709
 LAC-5709-C-00-5067-00

Investment in the production of fuel ethanol in Honduras can be justified only as a means of preventing the large losses which the sugar industry suffers when world sugar prices are low; however, the risks involved in such an investment are high. Thus concludes this study, which examines the technical and economic aspects of diverting sugar from sale on the world market to alcohol production. Successive chapters review: (1) technology options for ethanol facilities; (2) the specific attributes of Honduras' eight sugar mills as candidates for annexed distilleries (stressing mill size and characteristics, location relative to alcohol markets, and availability of markets for byproducts); (3) the costs and benefits of distillery investments, i.e., likely internal rates of return under a variety of market price conditions, the implications of different investment terms, and impacts on foreign exchange; (4) implementation issues (risk and benefit sharing within the industry, the roles of the private and public sectors, financing, and domestic subsidies); and (5) employment in the sugar cane in-

dustry and the implications of an ethanol program for the rural economy. Recommendations are contained in each section and offered in summary. Appendices present information on the potential dedication of a sugar factory to alcohol, the U.S. alcohol market and trade issues, sugar company profiles, and financial data tables.

094

PN-AAW-572

MF \$1.08/PC \$7.28

Economic and social impact of rural electrification in Bangladesh

Timberg, Thomas A.

Robert R. Nathan Associates, Inc.

Martin Marietta Energy Systems, Inc. Oak Ridge National Laboratory

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

2 Dec 1986, v, 51p. : statistical tables , En

A cost-benefit analysis of the social and economic impacts of rural electrification (RE) in Bangladesh is herein presented, based on secondary data from Bangladesh's Rural Electrification Board and from earlier electrification impact studies, supplemented by interviews with beneficiaries in nine rural electricity cooperatives. Following a discussion of different approaches to cost-benefit analysis (e.g., the willingness-to-pay vs. the cost savings approach), results are presented, showing that despite the difficulties inherent in institutionalizing an RE bureaucracy within a largely patrimonial society like Bangladesh, RE has been welcomed by young and old alike. It has had positive effects in saving energy and reducing energy costs, increasing production and employment opportunities and improving social (e.g., health, greater social awareness) and political (e.g., the distribution of power) conditions. The report concludes with recommendations for (1) the full-scale impact evaluation needed in analyzing a long-term, dynamic, and institution-building effort such as RE and (2) enhancing RE's social impact.

095

PN-AAW-611

MF \$3.24/PC \$32.63

Multidisciplinary approach to renewable energy in developing countries

Hitzhusen, Fredrick J.; Macgregor, Robert D.

Ohio State University

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

1987, x, 255p. : ill., charts, maps, statistical tables, En
Published by Publishing Horizons, Inc.

Studies aimed at reversing the increasingly serious deterioration of renewable energy (RE) resources in developing countries and the resulting threat to human well-being are presented. The studies, which focused on the two sources of RE - wood and hydroelectric power - were conducted in the Dominican Republic, Costa Rica, Barbados, the Philippines, India, Ghana, and Egypt by members of the Tropical Renewable Resources Program, a multidisciplinary consortium of scientists at Ohio State University. Chapters in Part I, on RE production and use characteristics, examine: improved methods for estimating the yield and heating value of standing biomass; seedling survival and growth rates in fuelwood plantations; the end use of energy in rural households; and the potential of nonconventional RE sources such as solar ponds. The chapters in Part II, on the feasibility analysis of RE options, illustrate financial and economic analysis, energy accounting, and environmental impact assessment. Chapters in Part III, on implementing RE projects, discuss anthropological, political, social, and environmental education aspects of RE projects; the delineation of property rights, political competition and patronage, centralization, and the role of local farmer organizations are some of the concepts discussed. A final chapter briefly describes the general methods and findings.

096

PN-AAW-759

MF \$1.08/PC \$2.60

Viable alternative energy for rural Nepalese villages : a case study of Gobar gas

Devkota, Govinda Prasad

Winrock International Institute for Agricultural Development

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

Dec 1986, 14p. : statistical tables, En

Forestry research paper series, no.2

367014403

An experimental program to introduce household biogas plants in the Nepalese village of Sakhawani is described. An introductory section describes biogas technology and its advantages. Biogas is a methane gas produced from fermented animal dung and other agricultural wastes for use in lighting, cooking, and running agricultural machinery. In addition, slurry used to produce the gas can subsequently be used as animal feed and fertilizer. Systematic conversion of all cattle dung to biogas could reduce Nepal's reliance on diminishing forest resources by up to 75%. In the experimental program, which was conducted by the Gobar Gas Co., a private concern, use of the plants reduced the time used in cooking by 30% and in cleaning cooking utensils by 50% and kept the home free from smoke. Each plant owner saved approximately

NRs.2250 on firewood alone, and the biogas-powered lamps installed in the plant owners' homes reduced kerosene costs and burned more brightly than traditional lamps. In the summer, enough gas was produced for cooking and lighting for 6-15 people, depending on the size of the plant. On the negative side, gas production, dependent on warm temperatures, is deficient by about 40% in the winter, when it is needed most, and initial capital costs of installation are high (over NRs.15,000). A key recommendation is for higher government subsidies to make plants more affordable. Included are 10 tables and a financial analysis of a domestic biogas plant.

097

PN-AAW-764

MF \$1.08/PC \$3.64

Improved stoves in minimization of fuelwood consumption in Nepal

Joshee, Bharat Raj

Winrock International Institute for Agricultural Development

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

Dec 1986, 21p. : statistical tables, En

Forestry research paper series, no.7

367014403

Two village panchayats near Kathmandu were studied to help determine the effectiveness of improved stoves in minimizing fuelwood consumption in Nepal. Introductory sections of the study provide general information on household energy consumption (i.e., fuelwood consumption patterns, economic costs, and the impacts of fuel pricing policies) and the use of improved stoves (effectiveness, distribution, and problem areas for adoption) in Nepal. Next, findings are presented on socioeconomic characteristics of the study populations, the number and type of stoves used, the time required to cook, construction costs, adverse health effects of the stoves and taboos on their use, and reasons for abandoning stoves. Linkages between fuelwood consumption and ethnicity, literacy, labor use, occupation, income, and size of household are analyzed through tabular and multiple regression techniques, and findings on the extent of consumption relative to other fuels, fuelwood source, and purpose of fuelwood consumption are presented. There are two main conclusions. (1) While improved stoves could help reduce fuelwood consumption, their use has been minimal in the study area, due mostly to inadequate training of householders in use of the stoves, design defects, and improper location in the kitchen. (2) The lack of subsidiary occupations is the main cause of the rapid deforestation of the study area. Eight tables are included.



Energy-efficient cookstoves can help curb the consumption of scarce fuelwood which must be hauled over great distances in many developing countries.

098

PN-AAL-084

MF \$2.16/PC \$19.11

Promoting appropriate technology change in small - scale enterprises : an evaluation of Appropriate Technology International's role

Delp, Peter; Velasquez, Antonio; et al.
Devres, Inc.

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

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

Nov 1986, xii, 31p. + 9 appendices : charts, statistical tables, En

A.I.D. evaluation special study, no.45
9365428

Appropriate Technology International (ATI), a private, nonprofit development assistance organization, was created through a 1976 Congressional mandate to experiment with and develop new approaches to technology development and transfer. This evaluation study, based on field visits to ATI projects, analyzes ATI's success to date. ATI's unique role in economic development assistance - to link appropriate technology and small-scale enterprise development within an experimental learning framework - is inherently risky. Thus, it is not expected that each ATI project will be successful. Still, ATI has met all quantifiable performance indicators under its current cooperative agreement with A.I.D., and its overall capacity to plan and implement projects has grown steadily (though not without accompanying weaknesses). The direction, quality, and impact of its technology development activities have also in general improved, although ATI's concentrated attention on the replication of hard technologies has diminished other important aspects of its mission, particularly the development and transfer of innovative soft technology. Projects under the cooperative agreement have not yet matured enough to provide many benefits to the poor. With regard to project planning, ATI has significantly improved its technical and commercial appraisals, although further refinement and more consistent application are needed for the latter. More careful attention to market analysis and the assessment of implementing organizations' capabilities is also needed. ATI's field management allows for a responsive, flexible working style, which, however, has the disadvantage of weakening ATI's ability to learn from its experience; lessons learned have not been systematically identified and disseminated. Monitoring and evaluation systems should be revised and integrated with planning and field supervision. Some aspects of the A.I.D. system and in particular its oversight role impede attainment of ATI objectives; also, better communications with Missions are needed. Finally, although A.I.D. financial support is

declining, ATI has not yet succeeded in finding other funding sources.

099

PN-AAW-649

MF \$1.08/PC \$5.59

Beyond the flipchart : three decades of development communication

Academy for Educational Development, Inc.

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

1985, iv, 40p. : ill., charts, statistical table, En
9311231

Lessons learned in the evolution of development communications are presented. The four types of strategies most often used in development communications (i.e., media-based, instructional design, participation, and marketing strategies) are discussed in relation to two vital concerns: (1) the importance of language, culture, and politics; and (2) sectoral (i.e., agriculture, population, education, health, and nutrition) interests. The use for development purposes of the various forms of modern communications media (television, radio, print media) is sketched, as is that of traditional/folk media and of other media such as slides and tape recorders. Particular attention is given to the development uses of the most advanced communications technologies (telecommunications and computers). Development communications, it is noted in conclusion, is currently shifting away from media-specific planning towards a systems approach and the related use of hybrid development communications strategies. Three fundamental principles underlying this shift - orientation to the audience, the focusing on specific development messages, and the growing realization that diverse media serve diverse but interrelated purposes - are discussed.

100

PN-AAW-897

MF \$1.08/PC \$2.47

Microcomputers in development management : lessons from research and experience -- a dissemination report

Smith, Kenneth Alan; Sensenig, Barton

University of Maryland, College Park. Colleges of Agriculture and Life Sciences. International Development and Management Center

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

Nov 1986, ii, [16]p., En
9365317

IIA-5317-B-00-2250-00

General lessons learned about microcomputer (MC) introduction, use, and institutionalization in host country institutions are summarized. These generalizations are as follows. (1) Rapid survey of and consideration for existing bureaucratic structures and power relationships is crucial to the successful introduction of MC's. MC's should be introduced to solve a problem perceived as pressing by host country officials and should be used to build information processing capability in the host institution. Both initial and recurrent investments in physical and human capital need to be weighed. (2) The adoption and use of MC technology creates information-related jobs. MC's can be used by a wide range of in-

dividuals, including those with minimal education. MC users should be trained to use the information MC's can provide. MC managers must understand the limits and potential of the technology. (3) Change agents can and should facilitate institutionalization. Users need to perceive the value of using MC-derived information in achieving their goals and to assume responsibility for long-term expense, maintenance, and system development. Action guidelines accompany each of these generalizations. The report also notes a number of unresolved questions, the most important of which concerns identifying and adapting effective strategies for introducing MC-based information processing.



The adoption of microcomputer technology provides an invaluable tool for development management and can create information-related jobs for a wide range of individuals.

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