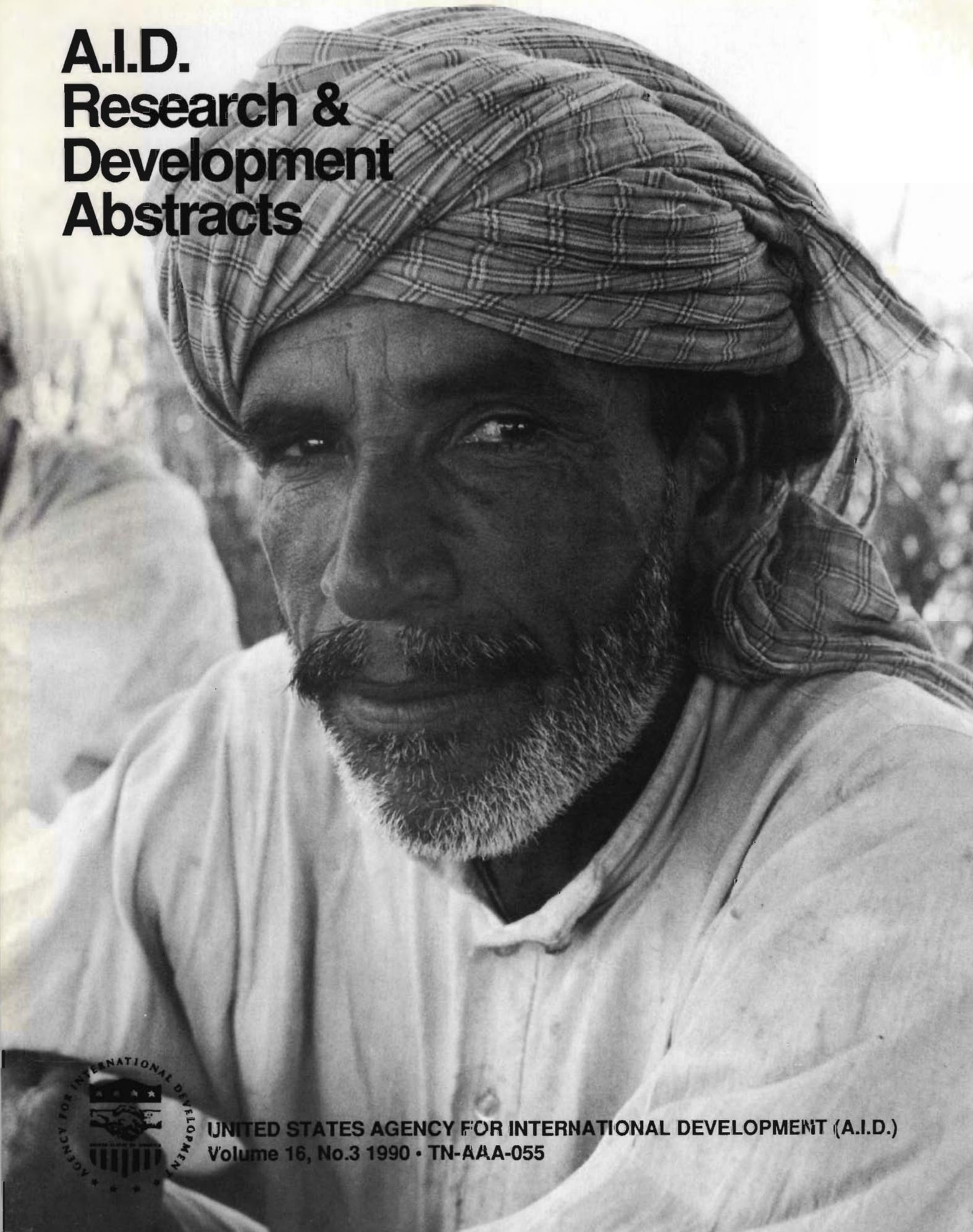


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A.I.D. Research and Development Abstracts

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Cover: Farmer Omer Hyat grows wheat on irrigated land in Pakistan. Conservation of existing irrigation supplies in Pakistan is becoming more and more important as the demand for irrigation water increases and new sources of supply become harder to find. (Credit: Agency for International Development)

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QUESTIONS AND ANSWERS ABOUT ARDA

What is ARDA?	ARDA, "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 ARDA is to transfer development and technical information to active practitioners in development assistance.
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What material is abstracted in ARDA?	ARDA 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 ARDA PPC/CDIE/DI Agency for International Development Washington, D.C. 20523 U.S.A.

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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 ARDA PPC/CDIE/DI Agency for International Development Washington, D.C. 20523 U.S.A.

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¿Que es ARDA?	ARDA, "A.I.D. Research and Development Abstracts" (Resúmenes de Investigación y Desarrollo de A.I.D.) es una revista que se publica cuatro veces al año por la División de Información sobre el Desarrollo del Centro de Información y de Evaluación del Desarrollo, Negociado de Coordinación de Programas y Políticas.
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USER'S GUIDE TO ARDA CITATIONS

Item number — **055** — ***PN-ABC-681** — Document number
MF \$2.16/PC \$14.95 — Microfiche/paper copy prices

Title — **Tilapia genetic resources for aquaculture : proceedings of the workshop on tilapia genetic resources for aquaculture, 23-24 March 1987, Bangkok, Thailand**

Author (s) — Pullin, R.S.V., ed.
 Institutions — International Center for Living Aquatic Resources Management
 U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)
 Meeting — (Workshop on Tilapia Genetic Resources for Aquaculture, Bangkok, TH, 23-24 Mar 1987)
 Supplementary notes — 1988, v, 108p. : ill., maps, statistical tables, En — Serial title (if any), date, pagination, language
 ICLARM contribution no.457
 ICLARM conference proceedings, no.16
 Project number — 9311050
 Availability note — **Also available from: International Center for Living Aquatic Resources Management, MC P.O. Box 1501, Makati, Metro Manila, Philippines*

Tilapia are African fish that are used in warmwater aquaculture throughout the world. Some species, such as the Nile tilapia (*Oreochromis niloticus*), are highly versatile, herbivorous-microphagous feeders well suited to low technology farming systems. However, tilapia culture outside of Africa is based on a narrow genetic base taken from a few founder populations, while Africa itself, which possesses a wealth of tilapia genetic resources, is hard pressed in developing these resources for aquaculture and in conserving wild tilapia populations, many of which are threatened by irreversible change or loss. A variety of issues cognate to this situation were discussed at an international symposium held in March, 1987. These proceedings contain formal presentations on: (1) tilapia resources in Africa in general (two papers); (2) wild and cultured tilapia genetic resources in Africa (Cameroon, Ivory Coast, Ghana, Madagascar, Malawi, Zimbabwe) and elsewhere (Philippines, Thailand, Singapore and Malaysia, Israel, the United States); (3) methods used in tilapia identification and genetic research (six papers); and (4) gene banks and culture collections (two papers).

Abstract

001

PN-AAX-239
MF \$1.08/PC \$4.03

Development impacts of program food aid: a synthesis of donor findings and current trends and strategies

Vondal, Patricia J.

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

(Meeting of the Expert Group on Evaluation of the Development Assistance Committee, Organization for Economic Cooperation and Development, US, Feb 1990)

Jun 1990, [21]p., En

A.I.D. program evaluation discussion paper, no.30

Over the past two decades, donor food aid programs have had their greatest impact on the macroeconomic level in the form of balance of payments and budgetary support; in many cases, these programs were critical to sustaining debtor governments. Recently, however, the severe strain of structural adjustment programs on the poor has renewed interest in the uses of program food aid for its original

The severe strain of structural adjustment programs on the poor has renewed interest in the uses of program food aid for its original objective — the alleviation of hunger.

objective — the alleviation of hunger. Accordingly, many donors have attempted to influence recipient governments to use local currency generations for agricultural projects and to reform their food policies. In general, however, this approach has been hampered by limited managerial and financial resources when only one donor is involved, as well as by the complexity of food security issues. Multi-donor approaches, which have been coordinated by the World Food Programme and focused on implementing food and agriculture policy reforms, have proven more promising. Several related lessons have been learned from these coordinated efforts. (1) To attain the goal of food security, donors and recipient governments must negotiate

a set of mutually supportive strategies for the use of donor common funds. (2) These negotiations must be supported by multi-year commitments of donor support. (3) The strategies developed must be based on a joint, unbiased analysis of the underlying causes of food insecurity in the recipient country. (4) The use of food aid to alleviate hunger requires that vulnerable groups be identified at the program planning stage.

002

PN-ABE-920
MF \$5.40/PC \$51.09

Critical connections: communication for the future

U.S. Congress. Office of Technology Assessment
U.S. Agency for International Development. Bureau for Science and Technology (Sponsor)
Jan 1990, vii, 395p.: ill., charts, En

Technological advances, abetted by deregulation and an increasingly competitive economic climate, are causing fundamental changes in the U.S. communications infrastructure. These technologies hold both promise and threat in such key social areas as business, the democratic process, culture, and the individual quality and style of life; their concrete evolution and application, as well as who will be affected positively or negatively, will depend on decisions being made in both the private and public sectors. This report examines this emerging communications environment and suggests possible strategies and options for consideration by U.S. lawmakers, concluding that the U.S. Congress take the lead in instituting a national communications policy. Possible congressional strategies include: (1) establishing priorities and allocating organizational responsibilities; (2) developing an ongoing organizational mechanism (outside of Congress) to resolve policy inconsistencies and jurisdictional disputes; (3) providing an interagency and/or interjurisdictional mechanism for coordinating communication policy and resolving jurisdictional issues; and (4) creating an institutional basis for facilitating coordination and cooperation among government agencies, industry providers, and communication users.

GENERAL DEVELOPMENT

003

PN-ABE-963
MF \$1.08/PC \$9.10

Methodological review: a handbook for excellence in focus group research

Debus, Mary
Porter, Novelli and Associates
Academy for Educational Development, Inc.
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Education
(Sponsor)
[1989], 55p. + attachment, En
9311018

Focus group research is a fast, easy, and practical way to conduct marketing studies. This report provides a step-by-step manual on conducting focus group research and suggests modifications for adapting its use to Third World realities. Topics covered include: (1) an overview of qualitative research (a type of formative research aimed at obtaining detailed responses on what people think and how they feel); (2) the two leading qualitative methods — individual indepth interviews and focus groups — and when to use each of them; (3) the process of setting up a focus group (a case study is included); (4) preparation and use of a topic guide; (5) group discussion techniques, approaches, and other “tricks of the trade;” (6) a moderator’s characteristics, style, and experience; (7) stages of focus group sessions; (8) special problems that can occur (e.g., excessive compliance or lack of interest by the group, loss of control); and (9) the preparation of a focus group report (a sample format is provided). Focus groups generally stimulate rich responses and foster the development of new ideas. The sponsor is able to observe these discussions and gain further insights into the respondents’ behaviors and attitudes. Finally, focus groups can be completed more quickly and generally at a lower cost than a series of indepth interviews.

004

PN-ABF-059
MF \$1.08/PC \$5.85

Rope and the box: Gambian saving strategies and what they imply for international aid in the Sahel

Shipton, Parker
Ohio State University. Dept. of Agricultural Economics
and Rural Sociology
World Bank (Sponsor)
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Rural and Institu-
tional Development (Sponsor)
U.S. Agency for International Development. Bureau for
Africa. Market Development and Investment Staff
(Sponsor)
(Seminar on Informal Financial Markets in Develop-
ment, Washington, DC, US, 18–20 Oct 1989)
Oct 1989, [44]p., En
9365315

In The Gambia, rural development efforts concentrate heavily on the provision of credit, with little consideration given to improving local savings systems. This paper describes the country’s indigenous and other saving mechanisms, starting with those closest to a rural home and proceeding outward. Findings are based mainly on indepth interviews with farmers in five villages in Upper River Division, MacCarthy Island Division, and Western Division. The most common form of saving is investment in material goods, such as livestock, jewelry, stored crops, tools, and household goods. Cash saving methods are secondary and include storing the cash in locked boxes, entrusting it to rural deposit-takers, or requesting that wages be deferred. Most villages also have mechanisms that combine savings and credit. The most common is the *kafo*, a village labor pool which may save money from membership dues and provide loans to members. A newer mechanism is the *osusu*, or rotating savings and credit association, to which all members make fixed contributions of money at regular intervals. At each interval, one member takes all the money until the cycle is completed. Both *kafos* and *osusus* seem to be most important among women. The commercial banking system is almost useless for rural people since farmers perceive banks as remote, intimidat-

ing, and not fully trustworthy, while bank officials imagine smallholding farmers as too poor and financially inactive to be of interest. The report recommends that savings components be incorporated in credit programs when the institution in question is financially sound and can build upon existing social networks.

005

PN-ABF-292

MF \$1.08/PC \$8.71

Food subsidies: a study of targeting alternatives for Tunisia

Kramer, Carol S.

Academy for Educational Development, Inc.

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

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

Mar 1990, viii, 38p. + appendix: charts, statistical tables, En

9300082

Like many other countries, Tunisia is strapped with a longstanding and increasingly unaffordable food subsidy program. In 1988, the program represented 8.5% of government expenditures and 77.6% of the net government deficit. While cutbacks are necessary, the Government of Tunisia must ensure their political acceptability while also maintaining the food consumption levels of the most vulnerable population groups. This report analyzes food subsidies in Tunisia and alternative means of targeting these subsidies. Part I describes major features of the country's food subsidy program, develops a framework for assessing targeting options in the Tunisian context, and provides descriptive statistics on food consumption patterns. Part II examines international experience with food subsidies and food subsidy targeting efforts and summarizes the major lessons learned. Part III presents a preliminary analysis of the short- and medium-term relevance of subsidy reform policies for Tunisia. These policies include: (1) targeted and self-targeted price subsidies incorporating new product development, (2) increased direct food distribution, (3) food stamps, and (4) income enhancement efforts. (Author abstract)

006

PN-ABF-491

MF \$1.08/PC \$5.59

Responding to change: private voluntarism and international development, 1990 report

U.S. Agency for International Development. Advisory Committee on Voluntary Foreign Aid
1990, 44p., En: charts, statistical tables

What effect will the collapse of the post-World War II era have on U.S. voluntary development assistance? To examine this question, this report by the Advisory Committee on Voluntary Foreign Aid looks at the emerging international trends and their implications for the future content and direction of private volunteerism. Five themes are cited as particularly important: (1) the advent of the global marketplace; (2) new concepts of national security — from an "East vs. West" perspective to one that considers such issues as trade, pollution, natural resources, and food scarcity; (3) the disappearance of the North-South dichotomy and the growing complexity of U.S. relationships with developing countries; (4) the growth and maturation of the international PVO community; and (5) an uncertain private and public funding base for U.S. PVO's. As a result of these trends, U.S. PVO's during the 1990's will: encounter an ever widening array of choices and opportunities for assistance; change their roles and methods of assistance, e.g., by shifting emphasis from direct project implementation to advocacy, public education, and facilitating of indigenous efforts; form cooperative institutional alliances with host country PVO's, other U.S. PVO's, and businesses; face new challenges to secure a resource base; and be required to deal proactively with these tumultuous changes. The report concludes that the fundamental conditions that have shaped and supported the U.S. foreign assistance program have changed so dramatically that the program must be recast to reflect these new conditions. In a new foreign aid structure, PVO's can and should play a much more integral role than is currently the case.

WOMEN IN DEVELOPMENT

007

PN-ABF-235

MF \$3.24/PC \$28.21

Women in development: A.I.D.'s experience, 1973-1985 — vol. II: ten field studies

Goddard, Paula O., ed.

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

Dec 1989, viii, 207p. + attachment, En

A.I.D. [evaluation] working paper, no.131

Vol. I: PN-AAL-087

In connection with a conference held at the end of the U.N. Decade for Women (1975-85), A.I.D.'s Center for Development Information and Evaluation conducted a study of the Agency's women in development (WID) activities for the period 1973-85. The final report consisted of 2 volumes — a synthesis volume (PN-AAL-087), and the present volume, which presents ten case studies developed in the course of the research. The cases cover the following topics: (1) the extent to which women were integrated as faculty members and students under a project to expand the Botswana Agricultural College; (2) the impact on women of the Accelerated Mahaweli Program, a vast, multi-donor river basin development project in Sri Lanka; (3) gender issues in the Northeast Rainfed Agricultural Development Project in Thailand; (4) the unplanned effects on women of the Association for the Development of Microenterprise, Inc. (ADEMI) Project in the Dominican Republic; (5) the effect of gender division of labor associated with a new food processing plant under the ALCOSA Agribusiness Project in Guatemala; (6) women's incentives to participate in the Arid and Semi-Arid Lands Project in Kenya; (7) the integration of gender issues in the Resource Conservation and Utilization Project in western Nepal; (8) the Appropriate Technology for Rural Women Project, sponsored by the Inter-American Commission of Women, Organization of American States; (9) the achievements of the Industrial and Commercial Job Training for Women Project in Morocco; and (10) the Caribbean Agricultural Extension Project, which initially targeted women but dropped this objective in a later phase.

008

PN-ABF-548

MF \$2.16/PC \$20.67

Report on women in the legal profession in Latin America — an assessment of: Guatemala, Costa Rica and Peru

Vargas, Philip G.

Management Sciences for Development, Inc.

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

15 Apr 1990, ii, 120p. + attachment: statistical tables, En

Latin American law schools have made great strides in increasing women's enrollment, with women now comprising about half of entering students. Nonetheless, as evidenced by this study of the justice systems in Costa Rica, Guatemala, and Peru, and women's status in the legal professions of these countries, Latin American women still face considerable obstacles to advancement in the field of law. Five key problems are identified. (1) Latin American culture is steeped in sexism, with women relegated to the roles of homemaker and mother, all other responsibilities being seen as not only secondary but "unnatural." This traditional "machismo" culture is the root of the other four problems. (2) Many female law school graduates do not go on to practice because of commitments to childrearing and a lack of day care services. (3) Private law firms have strong prejudices against hiring women, which denies women the chance to learn from more experienced lawyers. (4) Although more women are hired by the public sector, they are treated as outsiders and often passed over for promotions. (5) Contempt for women in the legal profession is especially strong in the more remote outlying areas, where justice systems are most fragile. Recommendations focus on strategies to motivate and enable women practitioners to help themselves as they support and learn from one another.

009

PN-AAX-237

MF \$2.16/PC \$13.39

Promoting trade and investment in constrained environments: A.I.D. experience in Latin America and the Caribbean

Louis Berger International, Inc. Development Economics Group

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

May 1990, xv, 42p. + 3 appendices: charts, statistical tables, En

A.I.D. evaluation special study, no.69

Since 1974, A.I.D. has disbursed more than \$675 million for more than 120 trade and investment projects. The majority of these funds were spent in Latin America and the Caribbean, where country experiences with foreign trade are widely diverse. While A.I.D. projects in strong exporting countries have often been successful, there is some doubt as to their impact in constrained economic environments. This report reviews 15 projects, with emphasis on the following variables: the country's productive structure; the policy environment; the export capability of the target group; host country support; project delivery mechanisms (public sector, private sector, or mixed); A.I.D. management effectiveness; and level of risk. The report also classifies the 15 projects according to three generic types: the transmitter approach, which relies mostly on developing and transmitting market information by maintaining data bases and answering investor/exporter queries; the facilitator approach, which provides multisectoral, general investment and export promotion services; and the promoter approach, which offers enterprise-specific technical assistance and brokering services to a limited targeting, its focus on demonstrating project impacts early on, and its flexibility in allowing project managers to change the objectives, scope, and level of funding of a project in response to market forces.

010

PN-AAX-240

MF \$1.08/PC \$3.77

Development finance institutions: a discussion of donor experience

McKean, Cressida S.

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

(Meeting of the Expert Group on Evaluation of the Development Assistance Committee, Organization for Economic Cooperation and Development, US, Feb 1990)

Jul 1990, 15p. + attachment, En

A.I.D. program evaluation discussion paper, no.31

Development finance institutions (DFI's) have for several decades been key instruments of donors aiming to fill long-term credit gaps and channel financial resources to priority groups. A recent review of donor evaluation reports of DFI projects shows, however, that these intermediaries have had and may continue to have considerable difficulty achieving these ends. Three particular problems are highlighted. (1) DFI-directed credit programs have encountered serious problems in reaching targeted beneficiaries, especially the informal sector and marginal farmers. (2) The poor financial and management performance of many DFI's has caused some donors to question their sustainability. (3) DFI's have not proven effective in strengthening Third World financial markets due to increasing competition from commercial banks and other long-term credit sources and the restrictive financial policies of many host countries. Moreover, donors themselves have operated at cross purposes by supporting a multiplicity of DFI's aimed at a wide range of economic sectors. The result has been confusion among sub-borrowers and inefficient use of loan funds. It is recommended that donors: (1) adopt more coordinated responses to promoting DFI's; (2) encourage DFI's to lower the administrative cost of loans, charge real positive interest rates, and emphasize credit and financial market development; (3) reconsider the objective of DFI self-sustainability; and (4) support policy reforms to increase competition among DFI's.

ECONOMICS

011

PN-ABE-906
MF \$1.08/PC \$5.07

Policies and measures for rural employment in Asia

Meyer, Richard L.

Ohio State University. Dept. of Agricultural Economics and Rural Sociology

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

(Asian Productivity Organization's Symposium on Measures for Rural Employment Generation, Tokyo, JP, 5-12 Sep 1989)

Rev. ed.

Nov 1989, 36p.: statistical tables, En

Economics and sociology occasional paper, no.1603
9365315

At current stages of development, the rural sectors of many Asian countries will have to absorb much of the expansion in work force in the foreseeable future. This paper examines the factors that influence employment generation in these sectors. After a brief discussion of employment performance in developing countries generally and in Asia specifically, the report discusses issues associated with agricultural performance and its impact on employment, and then reviews policies and measures to stimulate rural employment, both for agriculture and for small and medium industries. In the newly industrialized Asian countries, outward-looking, labor-intensive growth strategies have successfully contributed to rapid growth with high employment. In many less-developed Asian countries, however, both the agricultural and small-scale industrial sectors suffer from discrimination because of government policies biased towards large-scale industries and urban areas. Policy recommendations are to: remove policy distortions that create the current economic bias; implement broad sector-wide programs such as agricultural research, irrigation, transportation, education, and communication; and target assistance programs to specific problems.

012

PN-ABE-907
MF \$1.08/PC \$3.77

Foreign assistance and domestic financial markets in the developing countries

Gonzalez Vega, Claudio

Ohio State University. Dept. of Agricultural Economics and Rural Sociology

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

Oct 1989, 26p., En

Economics and sociology occasional paper, no.1621
9365315

International donor response to the Central American economic crisis has largely been in the form of abundant financial assistance. The United States, for example, allocated \$8.4 billion to the region for fiscal years 1984-1989. This paper raises questions regarding the effectiveness of such assistance, claiming that it may have actually neutralized the healthy impact of crises on the evolution of economic policies. That is, by bailing governments out, foreign aid has allowed the persistence of unsustainable consumption levels and distorting policies, thereby postponing and increasing the inevitable social costs of a weak economy. In extreme cases, assistance may have made it possible for the public sector to enter into productive activities in direct competition with existing or potential private investors. Financed with foreign savings, these state-owned enterprises may have crowded out private firms in credit portfolios and in access to specific resources. Characterized by high capital-output ratios, the public sector ventures have added little to social profitability. In conclusion, the paper states that foreign financial assistance can facilitate the economic recovery of Central America only if it does not substitute for necessary domestic reforms.

013

PN-ABE-985
MF \$1.08/PC \$4.42

On minimalist credit programs

Biggs, Tyler S.; Snodgrass, Donald R.; Srivastava, Pradeep
Harvard University. Harvard Institute for International Development
U.S. Agency for International Development. Bureau for Program and Policy Coordination. Office of Economic Affairs (Sponsor)
Mar 1990, 32p., En
Development discussion paper, economic policy series/
Harvard Institute for International Development, no.331
9300095

Minimalist credit programs have been recently implemented in some developing countries to lend small amounts of money to the poor and landless. This paper evaluates the success and replicability of three of these programs — the Grameen Bank in Bangladesh, the Badan Kredit Kecamatan (BKK) in Central Java, Indonesia, and the General Rural Credit (KUPEDES), also in Indonesia. All three programs have had a positive impact on rural poverty. Grameen and BKK have extended credit to the poorest 20%–30% of the rural population and have enjoyed exceedingly high rates of repayment. They are successful in that they have payment schedules calling for frequent, small payments; no collateral requirements; a willingness to lend for a variety of activities (nonagricultural); and the ability to lend in cash rather than in kind. On the negative side, these programs are difficult to sustain without subsidies and to replicate in other environments. KUPEDES has had an even greater impact, with a lending rate 15 times that of Grameen or BKK, since, in contrast to the others, it targets borrowers in the middle and upper levels of rural income. Thus, although KUPEDES is the easiest program to replicate, it leaves the poorest rural households still relying on traditional, informal credit sources. Recommendations concern possible alternatives to the currently fashionable minimalist credit model.

014

PN-ABF-012
MF \$1.08/PC \$6.11

Macroeconomic developments in Yemen

Hood, Ronald D.
International Science and Technology Institute, Inc.
U.S. Agency for International Development. Bureau for Asia and Near East. Yemen (Sponsor)
Jan 1990, iv, 18p. + 3 annexes: statistical tables, En

New and upsetting economic forces are at work in the Yemen Arab Republic [now the Republic of Yemen]. The opening of the migrant labor market in the Gulf States in the 1970's has absorbed as much as 15% of the Yemeni population, much of it from traditional rural communities. A slack in the demand for this market in the early 1980's caused a drop in worker remittances and a surge in foreign borrowing, leading to increases in foreign debt and fiscal deficits. Government attempts to rectify the situation by restricting foreign exchange transactions have strangled the flow of imported inputs needed by industry and agriculture and led to an excess capacity in manufacturing. The government's foreign exchange reserves are critically low, and government restrictions have stifled the growth of foreign currency deposits in domestic banks. The latter are also weak in their ability to mobilize domestic savings. While oil revenues will help resolve some of these problems, there is need for immediate reform of the exchange and trade regimes, medium-term improvement of tax collection measures, and changes in the domestic banking system.

ECONOMICS

015

PN-ABF-291

MF \$2.16/PC \$16.51

Proceedings: role of market towns in national economic development

Rondinelli, Dennis A., ed.

Research Triangle Institute

Nepal. Ministry of Housing and Physical Planning

(Sponsor)

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

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

(Role of Market Towns in National Economic Development, Kathmandu, NP, 11-14 Sep 1989)

1990, 121p. + annex: maps, statistical tables, En

Market towns and small urban centers play crucial, though still largely unrecognized, roles in improving agricultural marketing, fostering trade, and providing commercial and public services in developing countries. This report presents six papers given at a 1989 seminar on the development role of market towns in South Asia, particularly in Nepal. The first paper provides an overview of the role of market towns in Asia's economic development and suggests policies and programs for enhancing rural-urban linkages to stimulate economic growth. The second paper discusses the historical evolution of urbanization in Nepal and identifies the roles of market towns and cities in the country's physical and economic development. The third paper profiles the economies of three small market towns in Nepal, while the fourth explores the economic feasibility of market town development in Asia and suggests a method for analyzing the costs and benefits of proposed projects. An approach to analyzing market towns which has been applied successfully in more than 12 countries is described in the fifth paper. The last discusses the lessons learned from recent projects which aimed to strengthen the financial capacity of Nepalese market towns. (Author abstract, modified)

016

PN-ABF-366

MF \$1.08/PC \$6.76

Developing an A.I.D. trade and investment strategy

Sanders, Edward G.; Koskella, Richard T.; Batwin, Wayne A.

International Planning and Analysis Center, Inc.

WPI, Inc.

U.S. Agency for International Development. Bureau for Private Enterprise. Office of Project Development (Sponsor)

Jun 1990, v, 44p., En

9402028

Trade and investment issues are receiving increased attention due to a number of forces, including market globalization, privatization, intensifying competition, and growing trade conflicts. This study reviews A.I.D.'s trade and investment portfolio and develops a strategy for improving Agency efforts in these areas. The study asserts that, while many developing countries are likely to seek assistance in trade and investment, A.I.D. is not well prepared to meet their needs. The Agency has not devoted the resources necessary to influence broader U.S. bilateral and multilateral trade and investment policies or made a concerted effort to identify methods of advancing U.S. commercial interests in conjunction with the promotion of economic development in the Third World. Much of A.I.D.'s nonproject assistance is in the form of cash grants with no commercial focus, while Commodity Import Programs, though more commercially oriented, are often inefficient. There is also resistance within A.I.D. to helping U.S. business, even if this may be the most effective method of promoting development. The study concludes that increased efforts in the areas of trade and investment would have significant development benefits, but success would require a sizable increase in staff resources and strong commitment by top management.

017

PN-ABF-488
MF \$1.08/PC \$5.85**Katapila moneylenders and informal financial markets in Malawi**

Bolnick, Bruce R.

Harvard University. Harvard Institute for International Development

Development Alternatives, Inc.

Michigan State University

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

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

May 1990, [42]p., En

Employment and enterprise policy analysis discussion papers, no.28

9365426

In Malawi, established small-scale entrepreneurs with legitimate and productive credit needs typically have no access to formal sector loans. The country's informal financial market is also limited, lacking many institutions found in other developing countries (e.g., market banks, deposit collectors, money guards, finance companies, and pawnshops). After a brief survey of the country's formal and informal financial markets, this paper focuses on one of the few sources of informal credit — the urban moneylender, or *katapila*. The paper details the operations and character of one of Lilongwe's most prominent *katapilas* on the basis of an extensive interview. An important finding is that the *katapila's* interest rates (about 40%) are far too high to be justified by his business costs. A conservative estimate of the interviewee's economic profits is in excess of 100% per annum. Borrowers appear to take on *katapila* loans because they can be arranged promptly, involve low transactions costs, and bear no restrictions on the use of funds. It is believed that most of these loans are used for emergency needs rather than for productive investments. Policy implications for promoting more efficient informal finance are addressed.

018

PN-ABF-558
MF \$3.24/PC \$26.65**Final report: Tunisia, urban implications of export-oriented economic development**

Planning and Development Collaborative International, Inc.

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

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

May 1990, vi, [142]p. + 6 annexes: statistical tables, En

The Government of Tunisia's ongoing economic adjustment programs and related policy initiatives are creating a positive environment for export promotion. However, the transition to an export-oriented economy would have significant implications for the country's urban infrastructure and populations, especially in the densely populated east coast, where most of the export enterprises are expected to locate. This report assesses the country's capacity to take advantage of these new economic opportunities on the basis of available institutional capacity, human resources, and economic infrastructure in the affected cities. Individual chapters discuss: (1) Tunisia's urban setting in terms of the national space plan, the national transportation network, urban population, housing and land, and the environment; (2) employment and related policies; (3) infrastructure services; (4) the roles of regional councils, governorates, and municipalities; and (5) municipal finance (i.e., revenues, expenditures, and reserves). A final chapter summarizes the urban implications of an export promotion strategy and recommends a series of program guidelines. A major conclusion is that only a small number of urban areas are capable of fully and positively responding to the new export-oriented policies and programs. Even in these areas, success will be dependent on a partnership between local government and entrepreneurs, cooperative efforts of all levels of government.

ECONOMICS

019

PN-ABF-750
MF \$2.16/PC \$14.17

Caribbean Basin financing opportunities: a guide to financing trade and investment in Central America and the Caribbean Basin

Rauner, Julie M.

U.S. Dept. of Commerce. International Trade Administration

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

Apr 1990, 110p., En

The Caribbean Basin Initiative has helped generate new investment opportunities in Central America and the Caribbean and a corresponding surge in nontraditional exports to the United States. This guide identifies more than 75 financing mechanisms and institutions that support domestic and foreign investment and trade in the Caribbean Basin by supplementing the limited financing that is available from local commercial banks. The report provides background information, eligibility requirements, application procedures, and key contacts for each of these 75 financing sources, which are divided into four types: (1) bilateral programs of the United States (e.g., Export-Import Bank) and other developed countries; (2) international and regional sources (e.g., Caribbean Development Bank, the World Bank's International Finance Corporation); (3) private organizations (e.g., Latin American Export Bank); and (4) institutions in individual member countries. Appendices include a functional table of contents (by sector, country, and type of financing), a chart of the major financial indicators (by country), and a listing of Caribbean Basin financial institutions (by country).

020

PN-ABF-875
MF \$2.16/PC \$20.28

Peri-urban economic growth in Africa: peri-urban studies in Africa — annotated and general bibliographies

Baydas, Mayada, comp.; Cochrane, Jeff, comp.; et al.

University of Wisconsin at Madison. Land Tenure Center

Ohio State University

Institute for Development Anthropology, Inc.

Clark University

Virginia Polytechnic Institute and State University

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

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

1990, iii, 153p., En

9365452; 9365301; 9365315

The literature of peri-urban economies in sub-Saharan Africa is documented in this bibliographic review. The report, not intended to be comprehensive, focuses on writings that pertain to land, labor, and financial markets. Part I provides over 100 annotated references, which are selected from the general listing of over 500 sources presented in Part II. Because the literature on peri-urban economies in Africa is often uneven and ill-defined, the report also addresses several ancillary topics (e.g., urban housing, informal sector) and examines the literature of other world regions. Citation of theoretical works is limited, since most are not based on African materials nor always relevant to the African context. Several points can be made about the selected materials. (1) Many of the sources address peri-urban economies only tangentially. (2) The peri-urban zone is not explicitly modeled or analyzed in a way that yields a precise definition of the concept and useful methodologies for research. Francophone researchers have gone the furthest in this area. (3) Geographic coverage of peri-urban economies in Africa is uneven, with emphasis given to Nigeria, Kenya, Zambia, Senegal, Uganda, Ghana, and Cameroon. Coverage of peri-urban economies in certain countries also corre-

sponds to particular time periods (e.g., Uganda during the 1950–60's, Zambia during the 1960–70's). (4) Several African research institutions and universities have stressed peri-urban research and in so doing have created large databases — *Office de la Recherche Scientifique et Tech-*

nique Outre-Mer in Francophone west and central Africa, government universities in Nigeria, and, in east and central Africa, the Makerere Institute of Social Research (Uganda), the Institute of African Studies (Zambia), and the University of Zambia's Department of Geography.



A young Nigerian learns the shoe making trade at the industrial development center at Owerri in Eastern Nigeria.

PRIVATE ENTERPRISE

021

PN-ABF-013

MF \$1.08/PC \$11.83

Background paper for the technology initiative for the private sector

Black, Ronald P.

International Science and Technology Institute, Inc.

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

Jan 1990, iii, 84p., En

To help improve Sri Lanka's export competitiveness in an increasingly international market environment, USAID/SL is designing a possible Technology Initiative for the Private Sector (TIPS) project. This paper provides a background analysis for the project and is based on an examination of five industrial sectors—light engineering, gems and jewelry, rubber products, food processing, and ceramics. Instead of a traditional institution-building focus, the TIPS project would seek to institutionalize key business practices in the private sector. These practices include: conducting industrial research and development on a systematic and planned basis within firms; providing in-house company training for employees based on training needs assessments and plans; creating a self-sustaining unit designed to meet the information needs of industry; and enhancing and institutionalizing a dialogue between industry and the Sri Lankan government. The gems and jewelry sector has the greatest potential to use technological inputs to increase its export competitiveness and generate employment. Food processing and rubber products follow; both could benefit from biotechnology inputs. Ceramics has a large employment potential and possesses most of the necessary raw materials, but also has large public sector involvement. Finally, light engineering is or could be supportive of most other manufacturing sectors. Given the current security situation, USAID/SL should focus on adapting existing rather than developing new technology, with priority emphasis on providing factory floor technical assistance.

022

PN-ABF-554

MF \$4.32/PC \$44.07

Informal sector: a compendium of the literature as of April – May 1990 (compiled from various bibliographies)

Beittel, June

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

May 1990, v.p., En

Derived from various commercial and public sector data bases, this bibliography of development-oriented literature on the informal sector provides hundreds of citations of English, French, and Spanish language documents. The bibliography was compiled from the following sources: (1) studies and project documents from A.I.D.'s Development Information System; (2) selected reports and studies from the World Bank's Integrated Bibliographic Information System; (3) commercial data base citations from Social Scisearch, Pais International, Economic Literature Index, and CAB Abstracts; and (4) publications from the International Labour Organization's (ILO) Documents data base. The commercial database listings (which together with those from the ILO constitute the bulk of the report) are divided into six subsections, covering Africa, Asia and the Near East, Latin America and the Caribbean, Europe and Eastern Europe, general theoretical articles, and women in the informal sector.

023

PN-ABF-600
MF \$1.08/PC \$8.06

Prospects for enhancing the performance of micro and small-scale nonfarm enterprises in Niger

Mead, Donald C.; Dichter, Thomas; et al.
Development Alternatives, Inc.
Michigan State University

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

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

Feb 1990, xi, 54p.: statistical tables, En
6830261; 9365448

While nonfarm small and microenterprises (SME's) in Niger are growing rapidly in terms both of number of enterprises and people, their economic growth has been less dynamic. This study examines Niger's SME sector and assesses the growth prospects for individual subsectors (mats, skins and leather products, metal products, and transport). It also provides recommendations concerning policies, regulations, and direct interventions to enhance small enterprise economic growth. Growth of these nonfarm enterprises depends largely on Niger's ability to: (1) increase domestic demand in primary sectors, such as agriculture and natural resources; (2) expand its share in export markets, especially for hides, skins, and leather products; and (3) eliminate the bottlenecks or distortions in the economy stemming from policy, regulatory, and social impediments or by limited access to new technologies and markets. The study concludes that the current system of market taxes is regressive and discourages participation in commercial activities by small entrepreneurs. It also drains limited rural purchasing power into the hands of those with expenditure patterns geared towards imported goods. Decreased reliance on such taxes, perhaps by efforts to capture a larger share of transport expenses for the government budget, could help promote small enterprises. There is also a need to improve product and market development either through direct extension (with PVO's playing the leading role) or by strengthening market-based

systems involving prices and traders and developing mechanisms that can provide cost-effective ways of reaching large numbers of dispersed suppliers.

024

PN-ABF-602
MF \$1.08/PC \$6.63

Dynamics of small-scale industry in Africa and the role of policy

Liedholm, Carl

Development Alternatives, Inc.

Harvard University. Harvard Institute for International Development

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

Jan 1990, iii, 50p.: statistical tables, En
9365426; 9365448

In most African countries, small manufacturing enterprises account for the overwhelming majority of industries and the bulk of industrial employment. While most research on these enterprises has focused on a single point in time, this study emphasizes firm dynamics (firm creation, evolution, and disappearance) and the way these dynamics vary by country, stage of firm development, industrial sector, and policy environment. Static studies are reviewed in Section I to provide a context for the examination of dynamic issues. Section II summarizes macro-level evidence of firm dynamics in Africa and updates the material covered in previous studies. In Section III, macro-level demographics are disaggregated in an attempt to shed additional light on the evolutionary (and devolutionary) process of individual firms. The final section examines the effects of policy on small-firm dynamics. Macro-level findings indicate that small African firms are evolving, with a shift toward somewhat larger firms that are based in larger localities and producing more modern products. Micro studies on the other hand indicate that the vast majority of new African firms are microenterprises, relatively few of which have been able to expand to the level of small or medium-sized firms. Policy and regulatory

PRIVATE ENTERPRISE

constraints seem to be more significant the larger the firm is at the time of its growth, although the degree of constraint appears to vary by country.

025

PN-ABF-710

MF \$2.16/PC \$19.89

Challenging the crisis in Peru: job and income generation through microenterprise development (guidelines for a USAID strategy)

Kritz, Ernesto H.; O'Brien, Eliana Chavez; et al.
International Science and Technology Institute, Inc.
U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Regional Development Office (Sponsor)
U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Peru (Sponsor)
Jan 1990, xvii, 121p. + 3 annexes: charts, statistical tables, En
5980619

Peru's current economic crisis has further weakened the country's already fragile labor market. Lacking opportunities for formal sector employment, poor Peruvians have had to create jobs in the informal sector, which now employs about 900,000 persons (nearly half of them women) and over 40% of Lima's labor force. However, between 1987 and 1989, average incomes in this sector dropped by 60%. This report provides an overview of the role of informal microenterprises in the Peruvian economy, covering the major theoretical viewpoints through which the informal sector has been analyzed, the sector's structure, and the relation between investment in the sector and technological diversity. The report then describes the impact of government policies on the sector during the 1985-89 period of economic reactivation, as well as related legislation, support institutions (i.e., government agencies, business associations, research groups, and others), and recent experiences with microenterprise promotion. The remainder of the report presents guidelines for a microenterprise development strategy. A comprehensive approach is recommended which would include components to improve access to credit, markets, production techniques,

and management skills, along with regulatory and administrative reform. It is estimated that an investment of \$10 million in such a program could create 28,500 jobs over a 10-year period.

026

PN-ABF-833

MF \$2.16/PC \$16.51

Social dimensions of entrepreneurship in Africa

Handwerker, W. Penn; Pratt, Marion, comp.
Institute for Development Anthropology, Inc.
Development Alternatives, Inc.
Research Triangle Institute
U.S. Agency for International Development. Bureau for Africa (Sponsor)
Apr 1990, 125p.: charts, En
PDC-5315-I-11-8101-00

Many outside observers claim that Africans lack the proper mentality for entrepreneurship because family values outweigh commercial values. They point out that even successful entrepreneurs tend to invest profits in housing and land for relatives or diversify their holdings and place relatives in charge. This report claims that while African businesspeople do tend to maintain close ties with relatives and friends, these ties actually facilitate entrepreneurship by providing security in a risky business climate. The most serious impediment to entrepreneurship is not lack of ability, but government corruption, the legacy of colonial political systems which held nearly complete control over access to education, jobs, and income. African governments merely took over the single-channel resource structure created by the colonial powers, allowing those who control government (almost solely men) also to control access to the resources of the world industrial system. As a result, Africans with educational or occupational aspirations find that political contacts far outweigh the importance of individual efforts, knowledge, or competence. It is recommended that the power of public sector patrons be reduced by creating new sources of patronage in individuals and organizations and by subjecting both old and new patrons to performance constraints. The report also calls for pro-

viding entrepreneurs assistance directly and independently of government organizations. A 37-page general bibliography plus 24 pages of selected annotations are appended.

027

PN-ABG-210
MF \$4.32/PC \$43.68

Final report: entrepreneurship training and the strengthening of entrepreneurial performance

Management Systems International, Inc.

U.S. Agency for International Development. Bureau for Asia and Private Enterprise. Office of Small, Micro and Informal Enterprise (Sponsor)

Oct 1990, v, 132p. + attachments: ill., charts, En 9365314

Can behavioral approaches to entrepreneurship training improve business performance? This report explores this question by documenting the results of an experimental behavioral training program developed under A.I.D.'s Enterprise and Small Development Project. Background chapters review existing literature on the characteristics of entrepreneurs and examine past behavioral training programs for entrepreneurs and the findings of impact studies of such programs. The report then describes the A.I.D. project's development of an experimental behavioral training program, its field testing in Malawi, and the results of an evaluation of the program. The evaluation compared the behavioral and performance changes in 45 workshop participants over a 24-month period with those of a control group of entrepreneurs. It focused on 10 Personal Entrepreneurial Characteristics — opportunity seeking and initiative; persistence; risk taking; demand for efficiency/quality; commitment to work; goal setting; information seeking; systematic planning/monitoring; persuasion and networking; and independence and self-confidence. Findings suggest that short-term behavioral training may have a significant impact on entrepreneurial behavior and

economic performance. Greater growth in sales and in employment were observed for program trainees in comparison to the control group. The research also intimates that there is a core set of behavioral characteristics associated with successful entrepreneurial performance, and that a number of these may be teachable. Limitations of the research and some further implications are noted in conclusion.



A young man works at a loom. Informal sector employment like this accounts for 900,000 jobs in Peru.

028

*PN-ABE-877

MF \$1.08/PC \$8.45

1988 / 89 annual report: Consultative Group on International Agricultural Research

Consultative Group on International Agricultural Research

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

Oct 1989, iv, 58p.: ill., charts, statistical tables, En 9364111

**Also available from: Consultative Group on International Agricultural Research, CGIAR Secretariat, 1818 H Street, NW, Washington, DC 20433 USA*

In 1989, the Consultative Group on International Agricultural Research (CGIAR) broadened its mandate to include research on the utilization of renewable resources related to agriculture, in particular, forestry. It is the Group's first step toward adopting an expanded vision and enlarged constituency for the coming decade, while at the same time affirming its initial purpose — to expand food production in developing countries. This 1988/89 annual report examines key aspects of the CGIAR, including its new program initiatives, ongoing relationship with national programs, postharvest research, and financial status. Over the past year, the Group reviewed the work of ten international centers outside the CGIAR system to assess how the research conducted at those centers might be integrated with that of the CGIAR. In addition, a system-wide committee began exploring the means by which all CGIAR-supported research could address the problem of farming systems sustainability. Opportunities were outlined for collaboration among centers, and between centers and national agricultural research systems. The CGIAR also renewed its commitment to strengthening the relationship between international centers and national research systems. (Author abstract, modified)

029

PN-ABE-878

MF \$3.24/PC \$34.06

Yemen Arab Republic: farm prices and incentives

Tweeten, Luther; Rassas, Bechir; Earley, Thomas
Abt Associates, Inc.

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

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

Oct 1989, vii, 249p.: charts, statistical tables, En
Technical report / agricultural policy analysis project, phase II, no.104
9364084

The substantial economic progress made by the Yemen Arab Republic (YAR) since its founding in 1962 has been largely driven by foreign grants and worker remittances. While the recent decline in these resources promises to be offset by revenues from oil production, known and anticipated reserves are expected to last only 15 years at the current rate of extraction, leaving agriculture as the country's dominant economic base. This report, prepared shortly before the merger of the YAR and the People's Democratic Republic of Yemen, examines the YAR's potential for agricultural development, with emphasis on farm prices and incentives. Two major objectives are to explore the effects of agricultural import restrictions on the pricing structure and to investigate comparative advantage of various products. Major constraints to agricultural development are identified as limited water supplies, fragmented landholdings, inadequate supporting infrastructure, and macroeconomic and trade policies inhibiting growth. Domestic prices for all commodities are well above international prices — 7–8 times higher in some cases. While the YAR has comparative advantage in fruits, vegetables, and poultry, it is unlikely to have comparative advantage in coffee, and has a clear comparative disadvantage in cereals. The report concludes that substantial economic progress would be made by expanding outlays for infrastructure and social services while phasing out market interventions such as import duties and exchange and price controls.

030

PN-ABE-879
MF \$1.08/PC \$6.11

Guatemala: strengthening the agricultural sector information base and policy analysis capability

Coutu, Arthur J.; O'Donnell, J.
Abt Associates, Inc.

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

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

Feb 1990, ii, 39p.: statistical tables, En
9364084

In Guatemala, agricultural policy decisions appear to be based on limited research, with continuous, self-serving input from lobbyists. There is almost no history of apolitical or non-advocacy policy research, and current efforts are constrained by an inadequate data base, limited personnel, lack of support for non-advocacy investigations, and a general impression that objective analyses are esoteric and irrelevant. In light of Guatemala's movement towards a more market-oriented economy, there is a clear need for strengthening the modes of objective agricultural policy analysis. This paper addresses the nature of this challenge in the context of Guatemala's agricultural development. It examines past and present actions on agricultural policy analysis within public and private institutions and explores the decisionmaking process. Recommendations concern the following objectives: strengthening the capacity for more objective agricultural policy analysis, enhancing the information system, and establishing criteria for the development of a possible agricultural policy research agenda.

031

PN-ABF-026
MF \$1.08/PC \$4.94

Cotton in Africa: an analysis of differences in performance

Lele, Uma; Van de Walle, Nicolas; Gbetibouo, Mathurin
World Bank

U.S. Agency for International Development. Bureau for Africa
[1989], 36p.: charts, statistical tables, En

Since the early 1970's, cotton production in francophone Africa has been superior to that of anglophone countries (except Zimbabwe), even though many of the latter had previously excelled. This paper examines differences in the output performance of six countries — francophone Cameroon and Senegal and anglophone Nigeria, Kenya, Tanzania, and Malawi. Dynamic production in Cameroon

While differences in macroeconomic and sectoral pricing policies appear to have been critical, institutional factors have been fundamental in explaining the sustained growth of cotton production in francophone countries.

and Senegal is attributed largely to the *Compagnie Française pour le Développement des Fibres Textiles* (CFDT), the semi-private parent company of the francophone cotton parastatals. The CFDT approach has led to technology development and extension and assured the availability of inputs and marketing and processing facilities. In particular, it has provided adequate financing for the cotton sector, ensuring timely payments to farmers. In the anglophone countries, faulty mechanisms and procedures for paying producer prices and ensuring input supplies have seriously undermined sector performance. The difference is particularly striking in Kenya, which has otherwise made impressive strides in several crops. The central conclusion of the paper is that, while differences in macroeconomic and sectoral pricing policies appear to have been critical,

institutional factors have been fundamental in explaining the sustained growth of cotton production in francophone countries.

032 **PN-ABF-027**
MF \$1.08/PC \$5.46

State-federal relations in Nigerian agriculture

Idachaba, F.S.
World Bank
U.S. Agency for International Development. Bureau for Africa
[1989], 40p.: charts, statistical tables, En

The roles of local, state, and federal governments in Nigeria's agricultural development are examined in this report. After a historical review of government involvement in agriculture, the paper presents an analytical framework for assigning fiscal responsibility for agricultural programs among the tiers of government. Twelve major criteria for these assignments are identified: externalities, indivisibilities, multiplier effects, public goods attributes, risk, national security, agro-ecological diversity, international politics, regional equity, special ecological circumstances, political economy variables, and foreign exchange constraints. The next section presents case studies of state-federal relations in the following areas: fertilizer procurement and distribution, agricultural research, river basin development authorities, and World Bank-assisted agricultural development projects. The final section identifies the critical issues in local-state-federal relations in Nigerian agriculture, including constitutional provisions, the role of local governments, project autonomy, rural infrastructures, agricultural research, spatial/regional specialization in production, data collection, human capital, institutional credit, institutional arrangements, and the demand- and supply-side approaches to state-federal relations.

033 ***PN-ABF-118**
MF \$6.48/PC \$70.72

Methods for diagnosing research system constraints and assessing the impact of agricultural research: proceedings of the ISNAR / Rutgers agricultural technology management workshop, 6-8 July 1988, Rutgers University, New Jersey, USA

Echeverria, Ruben G., ed.
International Service for National Agricultural Research
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)
(ISNAR / Rutgers Agricultural Technology Management Workshop, New Brunswick, NJ, US, 6-8 Jul 1988)
1990, 2v.: charts, statistical tables, En
936411113

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

Papers in this collection aim to develop a consensus methodology for assessing and diagnosing constraints to agricultural research. Volume I focuses on the diagnosis of research system problems and covers the following approaches: agricultural technology management, the ISNAR-Rutgers agricultural technology management systems approach, the International Program for Agricultural Knowledge Systems from the University of Illinois, the systematic constraints analysis process from the University of Hawaii, and diverse approaches focusing on special cases such as sub-Saharan Africa, small developing countries, agroforestry institutes, private sector foundations, and postharvest fishery research projects. Papers in Volume II discuss issues related to agricultural research impact assessment. General papers focus on the measurement of producer and consumer surplus gains from quality improvement in crop varieties, the concept of excess burden associated with the use of tax funds to support research, and the question of omitting private sector research when measuring the impact of public research. Regional cases focus on Latin America and include studies evalu-

ating the impact of research at three different levels: a regional system (the Caribbean Agricultural Research and Development Institute), a country (Peru), and specific commodities (pastures, cassava). (Author abstract, modified)

034

PN-ABF-141

MF \$2.16/PC \$20.41

Horticultural marketing and export in Senegal: constraints, opportunities and policy issues

Holtzman, John S.; Stathacos, Charles J.D.; Wittenberg, Thomas

Abt Associates, Inc.

University of Idaho. Postharvest Institute for Perishables
Deloitte, Haskins and Sells

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

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

Dec 1989, xx, 134p.: charts, statistical tables, En

French ed.: PN-ABF-075

9365447

Senegal's horticultural export industry has several notable advantages. Whereas North African and Spanish competitors must use greenhouses during the winter months, Senegalese products can be grown outdoors. Moreover, Senegal's proximity to Europe and the large volume of air traffic from Dakar to European markets allow for low air freight costs relative to many sub-Saharan competitors. Despite these advantages, however, Senegal's share in the European horticultural market has declined since the late 1970's, as competition from alternative suppliers dramatically increased. This report provides an overview of Senegal's horticultural production, marketing, and export and identifies constraints to expansion — notably, the lack of supportive policies and incentive schemes. It describes trends in exports to Western European markets in terms of specific crops and countries and summarizes the opinions of European importers regarding Senegalese horticultural products. The report then assesses the potential for ex-

panding exports to alternative markets, including West Africa and the United States. Final sections explore the possibility of developing joint ventures to promote Senegalese horticultural exports, identify information gaps, and present recommendations for a horticultural subsector action plan.

035

PN-ABF-192

MF \$2.16/PC \$18.85

Food security and agricultural diversification in Guatemala: analysis of interrelationships and implications for policy

Warnken, Philip; Carrera, Jaime; et al.

Abt Associates, Inc.

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

Apr 1990, 2v.: statistical tables, En

9364084

Guatemalan agriculture has diversified rapidly over the past decade. A sharp increase in the production and export of nontraditional agricultural goods has changed the structure of the country's agriculture, enhanced national export capacity, markedly increased the income of many families, and contributed significantly to rural employment. At the same time, food security has deteriorated, as the country has come to depend more and more on food imports (especially food aid), indicating a lack of capacity to provide domestically grown staples to a rising population. Though agricultural diversification and food security are both important to the government, there are notable differences in policies and strategies among government agencies and officials, resulting in unclear national policies and poorly coordinated programs. While Guatemala's crop diversification strategy is sound, new government programs and investments are required to offset the resultant income and food security risks. Three areas in particular need prompt attention: land tenure problems; low agricultural productivity; and poor natural resources management. On the positive side, the limited available data

AGRICULTURE

indicate that recent macroeconomic policy has been generally beneficial to both agricultural diversification and food security.

036

PN-ABF-252

MF \$1.08/PC \$5.98

Hacienda dissolution, peasant struggle, and land market in Ecuador's central highlands (Canton Colta, Chimborazo Province)

Turner, Mark

University of Wisconsin at Madison. Land Tenure Center

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

(Land Tenure Center / Centro Andino de Accion Popular Workshop: Mercados de Tierras en America Latina, Quito, EC, 12-14 Sep 1988)

Nov 1989, 44p., En

9365453

In the Ecuadorean highlands, an agrarian structure long dominated by the hacienda system has been transformed into one characterized by small-scale production on private parcels. This study focuses on the transformation process in the Colta canton of Chimborazo Province, where the hacienda system persisted as late as the early 1970's. Although the land market in Colta was stimulated by agrarian reform, the study contends that the dissolution of haciendas was primarily driven by: (1) the fragmentation of landed estates by inheritance since the early 20th century and (2) the nearly constant, even everyday struggles between landlords and peasants over access to hacienda resources. Methods through which peasants weakened the hacienda system include withholding labor, persistent theft, footdragging, absenteeism, and temporary labor migration. In each case, the struggles were shaped by the peasants' economic interests (e.g., demands for irrigated plots by farmers and for traditional grazing land by pastoralists). This study describes three land transfers in Colta, showing how each reflects the local power relations between landlord and peasant. In conclusion, it recommends that

the Government of Ecuador implement a program to extend peasant access to those hacienda lands which remain in the hands of the agrarian bourgeoisie.

037

PN-ABF-254

MF \$1.08/PC \$9.49

Land reform in the People's Republic of China, 1978-1988

Bruce, John W.; Harrell, Paula

University of Wisconsin at Madison. Land Tenure Center

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

Dec 1989, vii, 70p., En

9365453

Since 1978, a series of reform initiatives have moved Chinese agriculture from a highly collectivized system to a smallholder, household-based system of production. This paper explores the dynamics of land reform in China during the period 1978-88, focusing on the two basic reform models that have evolved on the local level. The first — "land tenure" reform — has been developed to a high degree in Meitan County of Guizhou Province, but also reflects changes occurring on a broad scale across the country. The reform aims to consolidate household land use rights and create a new facilitating role (as opposed to a command role) for the collective as farming moves toward increasing specialization and commercialization. It also promotes the development of a market in land use rights and the use of such rights as collateral for credit. The second model of land reform — "scale reform" — has developed in economically more advanced areas, among which Southern Jiangsu Province is prominent. In these areas, the rapid rural industrialization by township and village enterprises (T&VE's) over the last decade has led to a major outflow of labor from an agricultural sector fragmented by micro-holdings. Increasingly, T&VE's have subsidized otherwise unprofitable grain production, thereby generating a reform model which promotes land consolidation and concentration into units to provide full-time farmers with incomes comparable to those of workers in

rural industries. It is unclear what impact the current reaction against economic liberalization will have upon the two models. Scale operations reform appears to be more secure than land tenure reform, as it is a planned adjustment by local governments and does not rely upon market forces to the same extent as the land tenure model. Nonetheless, the reforms discussed here originated not with central planning agencies but in local and provincial initiatives. For this reason, they may survive if not thrive in today's difficult and confused policy environment.

038 **PN-ABF-295**
MF \$2.16/PC \$23.92

Comparative analyses of the effects of increased commercialization of subsistence agriculture on production, consumption and nutrition

von Braun, Joachim; Kennedy, Eileen; Bouis, Howarth
International Food Policy Research Institute
U.S. Agency for International Development, Bureau for
Program and Policy Coordination, Office of Policy
Development and Program Review (Sponsor)
Nov 1989, viii, 175p.: charts, statistical tables, En
9300096

The effects of the commercialization of agriculture on household-level food security and nutrition are not necessarily positive. This report presents results of research conducted on households in six countries — The Gambia, Guatemala, Kenya, the Philippines, Malawi, and Rwanda — undergoing a transition from semi-subsistence farming to a mix of staple food and cash crop production. Findings concern the effects of commercialization on: staple food production, income and income use, food and nonfood expenditures, calorie availability, and the health and nutritional status of women and preschoolers. Key findings are as follows. (1) Commercialization increases household food security the most when resulting income and employment are concentrated among the malnourished poor. (2) Smallholders make a conscious effort to maintain subsistence food production along with new cash crops. (3) Research and extension policies, as well as inputs for subsistence crops, are critical for a viable commercializa-

tion strategy. (4) Employment effects on the poor are very crop-specific. (5) Commercialization substantially expands the demand for hired labor. (6) Commercialization has positive income effects, but not necessarily for all households or for all components of the process. (7) Women's work in cash crops and their direct control over income is much less than men's and often disproportional to their labor input. (8) In households with rising income, the total amount spent on food increases; expenditures for health, housing, and clothing also tend to rise. (9) Poor households use incremental income to build up their asset base. Policy support, specifically, the rapid development of rural financial markets, is thus of utmost importance in the commercialization process. (10) The income-consumption link leads to positive effects on child nutrition. However, these improvements are not large and decrease at the margin. Also, positive effects of income on child health are overshadowed by poor community health and sanitation environments.

039 **PN-ABF-680**
MF \$1.08/PC \$6.89

On the viability of agricultural development banks: *Banco Agricola de la Republica Dominicana*

Graham, Douglas H.; Poyo, Jeffrey; Aguilera, Nelson
Ohio State University. Dept. of Agricultural Economics
and Rural Sociology
U.S. Agency for International Development, Bureau for
Science and Technology, Office of Rural and Institutional
Development (Sponsor)
U.S. Agency for International Development, Bureau for
Latin America and the Caribbean, Dominican Republic
(Sponsor)
May 1990, 49p.: charts, statistical tables, En
Economics and sociology occasional paper, no.1729
9365315

The *Banco Agricola de la Republica Dominicana* (BAGRICOLA) possesses the classic features of a nonviable agricultural development bank. An unfavorable macroeconomic environment has penalized the bank's earnings while agricultural sector policies have penalized

the bank's customers. Government and international donor targeting of credit to high-risk and default-prone clientele have further weakened incentives for the bank to incorporate internal administrative procedures and practices to protect its financial viability. This review of BAGRICOLA's recent performance begins with an examination of the Dominican Republic's deteriorating macroeconomic environment, increasing fiscal and current account deficits, and highly fragmented financial markets. The report then assesses BAGRICOLA's own financial status, which is characterized by operating losses, and a growing number of delinquent loans, exacerbated by erosion of the real value of its outstanding portfolio due to inflation. Systematic analysis of BAGRICOLA's nonperforming loan portfolio underscores the inappropriate and misleading delinquency and default indicators used by the bank and the role of the government and international donors in aggravating this problem. The final section presents guidelines for the bank, the government, and donors to allow BAGRICOLA a reasonable set of options for gaining greater financial viability. (Author abstract, modified)

040

PN-ABF-715

MF \$1.08/PC \$6.24

Assessment of the coffee industry in Jamaica

Black, Dorothy J.

U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Jamaica
13 Apr 1990, 37p.: statistical tables, En

Jamaica's mild tasting, large bean coffee commands the highest prices in the world. This report assesses the Jamaican coffee industry, especially the non-Blue Mountain coffee sector, with a focus on its potential for expansion and on the constraints thereto. Topics covered include the industry's history, legal and institutional framework, and present status; the role of the Coffee Industry Board and its subsidiaries; deregulation; coffee cooperatives; foreign involvement; and planned development over the next five years. Because Japan purchases around 80% of Jamaican coffee, demand is price inelastic and consistently exceeds

supply by a large margin. However, because Jamaican yields are low and production and processing costs are high, the coffee grower's average expected return is 22-23%. With the cost of commercial borrowing at over 35%, coffee is thus a poor investment unless the farmer can obtain below-market rates on his loans. Although yields are expected to more than double by the end of the decade, expansion of the coffee industry is constrained by: (1) a shortage of long-term financing at reasonable interest rates, especially for small farmers; (2) high fixed processing costs spread over a low volume of coffee; (3) inadequate roads in coffee producing areas; (4) a shortage of nursery seedlings; and (5) a lack of management and leadership in the non-Blue Mountain cooperatives. A.I.D. can play a significant role here, especially by strengthening coffee cooperatives, helping reduce processing costs, improving roads, and funding credit programs.

041

*PN-ABF-785

MF \$2.16/PC \$15.99

Horticultural exports of developing countries: past performances, future prospects, and policy issues

Islam, Nurul

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

Apr 1990, 121p.: charts, statistical tables, En
Research report / International Food Policy Research Institute, no.80

936411114

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

Third World horticultural exports, which constitute about 17% of the world market, hold significant potential for agricultural diversification, employment expansion, and foreign exchange earnings. This report on the world horticulture trade emphasizes the role of developing countries and covers about 150 fruit and vegetable products over a 25-year period. Individual chapters discuss: major prod-

ucts, exporters, and markets; determinants of export performance; trade barriers against horticultural exports; future prospects; and policy issues. To date, Third World horticultural exports have been dominated by a limited number of countries, with the top four exporters accounting for 80%–100% of total exports in many commodities. Future prospects will depend predominantly on the growth of demand in developed countries, which is expected to expand rapidly as a result of greater familiarity with exotic horticultural products and increased concern for health and nutrition. To capture an increasing share of world markets, developing countries need to reduce costs and improve quality through extension services, farmer training, site-specific research and development, and the development of suitable institutional mechanisms, economies of scale, and market information systems. A reduction of trade barriers in the principal export markets is needed to complement this effort.

042

***PN-ABF-265**

MF \$9.72/PC \$109.85

International bibliography of rice research: 1988 supplement

Zamora, Milagros, comp.

International Rice Research Institute. Library and Documentation Center

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

1989, xii, 832p., En

936411102

**Also available from: Library and Documentation Center, International Rice Research Institute, P.O. Box 933, 1099 Manila, Philippines*

A follow-on to the 1951–60 Bibliography and the 1961–87 Supplements, this 8,468-item bibliography of rice research worldwide contains references published in 1988 as well as those published from 1971–87 but not included in earlier editions. Major topics include, inter alia: rice physiology and genetics; agrometeorological aspects; water supply and management; soils; agronomy; mechanization; seeds; pests and diseases; storage, transportation, and

processing; quality and grading; food and non-food use; and economic and social aspects. All items cited are available at the International Rice Research Library. Includes author and subject indexes and a list of translations also available in the IRRI library.

043

***PN-ABF-323**

MF \$6.48/PC \$68.77

World perspectives on barley yellow dwarf: proceedings of the international workshop, July 6–11, 1987, Udine, Italy

Burnett, P.A., ed.

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

(International Workshop: World Perspectives on Barley Yellow Dwarf, Udine, IT, 6–11 Jul 1987)

1990, xvi, 511p.: ill., charts, statistical tables, En
936411101

**Also available from: International Maize and Wheat Improvement Center, Lisboa 27, Apdo. Postal 6-641, 06600 Mexico, D.F. Mexico*

Barley yellow dwarf virus (BYDV) is a phloem-restricted pathogen which infects most cereals and grasses worldwide, causing yellowing, reddening, and brittleness of leaves, dwarfing, and reduction in size and in number of ears and grains. The disease, which is transmitted by more than 20 species of aphids, causes annual crop losses ranging from 1–3%, though in certain years and locations losses can rise as high as 20–30%. Other diseases, such as rusts or other foliar diseases, often mask BYDV, the effects of which become more apparent once resistance to these diseases has been reached. Recent research on monitoring and control of aphid vectors and on development of resistant cereal cultivars has improved the prospect of minimizing losses from BYDV infections. This report presents the proceedings of an international workshop, attended by researchers from some 35 countries, on the current and future status of BYDV research. The report contains the

texts of 98 — mostly brief — papers, grouped under four headings: the worldwide situation; virology; ecology and epidemiology; and BYDV control.

044 ***PN-ABF-536**
MF \$1.08/PC \$3.77

Artificial hybridization in groundnut

Nigam, S.N.; Rao, M.J. Vasudeva; Gibbons, R.W.
International Crops Research Institute for the Semi-Arid Tropics
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)
1990, 27p.: ill., En, Summaries in En, Fr, Es
ICRISAT information bulletin, no.29
936411106
**Also available from: International Crops Research Institute for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324 India*

Artificial hybridization is an integral part of groundnut (*Arachis hypogaea* L.) breeding. The success rate of such artificial hybridization depends largely on a proper understanding of the groundnut's flower structure and its biology, adoption of an appropriate hybridization procedure, adequately trained personnel, and careful environmental control during and after the pollination stage. This bulletin describes the procedures for artificial hybridization in groundnut followed at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), and presents suggestions on how to organize a successful groundnut hybridization program. Two related activities — the maintenance of parental lines and confirmation of hybridity — are also discussed. The bulletin is intended to be used as a practical guide to plan and carry out artificial hybridization in groundnut, both in the field and the greenhouse. (Author abstract, modified)

045 ***PN-ABF-537**
MF \$1.08/PC \$3.77

Nitrogen nutrition of groundnut in alfisols

Nambiar, P.T.C.
International Crops Research Institute for the Semi-Arid Tropics
U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture (Sponsor)
1990, 28p.: ill., charts, En, Summaries in En, Fr
ICRISAT information bulletin, no.30
936411106
**Also available from: International Crops Research Institute for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324 India*

Legumes, because of their high protein content, require large amounts of nitrogen to produce good yields. Groundnut (*Arachis hypogaea* L.) is capable of obtaining its nitrogen requirements from both symbiotic nitrogen fixation by root nodules and from soil nitrogen. Symbiotic nitrogen fixation is part of the plant's metabolism and can provide a regulated and continuous supply, whereas soil nitrogen is most abundant after fertilization and decreases thereafter. This bulletin examines the use of both nitrogen utilization pathways to maximize crop productivity of groundnut. Most of the results discussed come from experiments conducted in alfisols with *Bradyrhizobium* (rhizobia that nodulate groundnut) inoculation and fertilizer-N. Additional information is provided on host cultivar specificity and on applying research results in the field. The report notes that increasing the nitrogen fixation capability of groundnut through plant breeding, while possible, is very difficult to achieve in practice.

046

*PN-ABF-598
MF \$3.24/PC \$32.63

**Directory of germplasm collections:
4. vegetables — *Abelmoschus*, *Allium*,
Amaranthus, Brassicaceae, *Capsicum*,
Cucurbitaceae, *Lycopersicon*, *Solanum*
and other vegetables**

Bettencourt, E.; Konopka, J.
International Board for Plant Genetic Resources
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
1990, 250p., En
936411111
*Also available from: *International Board for Plant
Genetic Resources, Via delle Sette Chiese 142, 00145
Rome, Italy*

This directory — one in a series on all major crops issued by the International Board for Genetic Resources — provides information on the location of vegetable germplasm collections. The directory replaces the first edition published in 1982 and differs from it by using a standard set of headings for each entry. Listings are provided for *Abelmoschus*, *Allium*, *Amaranthus*, brassicaceae, *Capsicum*, cucurbitaceae, *Lycopersicon*, *Solanum*, and other vegetables. Each entry includes the germplasm center's name and address; the curator/person in charge; a description of collection holdings; brief notes on methods of collection maintenance and duplication, availability, quarantine, and evaluation; and the extent of documentation. In cases where it has not been possible to verify all the taxonomic names used, they have been included as cited by curators. Further, where a name was used that is generally regarded as no longer valid for that species, it has been retained as being the name still used by curators and hence as useful in identifying accessions. An index of species is provided.

047

*PN-ABF-706
MF \$3.24/PC \$34.97

**Directory of germplasm collections: 3.
cereals — *Avena*, *Hordeum*, millets,
Oryza, *Secale*, *Sorghum*, *Triticum*, *Zea*
and pseudocereals**

Bettencourt, E.; Konopka, J.
International Board for Plant Genetic Resources
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
1990, v, 264p., En
936411111
*Also available from: *International Board for Plant
Genetic Resources, Via delle Sette Chiese 142, 00145
Rome, Italy*

This directory provides information on the location of cereal germplasm collections, and is one a series on all major crops issued by the International Board for Genetic Resources. As the second edition on cereals, the directory replaces previous volumes and differs from them by using a standardized format. Listings are provided for eight cereal grains — *Avena*, *Hordeum*, millets, *Oryza*, *Secale*, *Sorghum*, *Triticum*, and *Zea* — and for various pseudocereals. Each entry includes the germplasm collection's name and address; the curator/person in charge; a description of collection holdings; brief notes on methods of collection maintenance and duplication, availability, quarantine, and evaluation; and the extent of documentation. An index of species is provided.

AGRICULTURE

048

PN-ABF-240
MF \$5.40/PC \$54.73

Keys to soil taxonomy by soil survey staff

U.S. Dept. Of Agriculture. Soil Conservation Service.
Soil Management Support Services
Virginia Polytechnic Institute and State University
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
1990, 422p., En 4th ed. rev.
SMSS technical monograph, no.19
9311229

Intended for soil surveyors, this technical monograph provides the taxonomic keys required for the classification of soil in a form that can be used easily in the field, and incorporates all taxonomic revisions which have been approved since this publication was first issued in 1983. It includes: all amendments approved to date and published in *National Soil Taxonomy Handbook* issues 1-13; the recommendations of the International Committee on Low Activity Clays, the International Committee on Oxisols, and the International Committee on Andisols; and a revised format to the *Keys to Subgroups*. Chapter topics include: soil classification, mineral and organic soil properties and horizons, family differentiae, taxonomic class of a soil, alfisols, andisols, aridisols, entisols, histosols, inceptisols, mollisols, oxisols, spodosols, ultisols, and vertisols.

049

PN-ABF-314
MF \$1.08/PC \$4.03

Fertilizer situation and markets in Malawi

Williams, Lewis B.; Allgood, John H.
International Fertilizer Development Center
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
Mar 1990, 25p.: charts, statistical tables, En
IFDC paper series, no.P-12
9310054

As a landlocked country with long and expensive supply lines, Malawi is at a decided disadvantage in importing, exporting, and distributing essential commodities. This position underscores Malawi's need for self-sufficiency in agriculture, which is the mainstay of the nation's economy, accounting for 40% of the gross domestic product and 95% of export earnings. Fertilizer marketing in Malawi is in the early stages of development. Fertilizer use increased at an average of 6% per annum during the past decade and totaled 43,000 tons in 1988. The country has two independent fertilizer marketing systems — one serving the smallholder and the other the large estates. The smallholder system is subsidized and serves approximately 1.2 million farmers who cultivate 1.3 million hectares, or about 78% of the total area. The 1988/89 fertilizer subsidy amounted to about 42% of the total fertilizer cost. The estate system is private and operates on a free market basis. According to this report, the outlook for the Malawi fertilizer sector is favorable, particularly in the smallholder sector. With increased emphasis on fertilizer marketing and increased food production, it is expected that fertilizer use will increase by an average of 7.8% per year during the next 7 years and total 206,000 tons in 1995. The smallholder sector will account for 52% of the market.

050 **PN-ABF-376**
MF \$2.16/PC \$17.29

Soil moisture and temperature regimes of southern India — Andhra Pradesh, Karnataka, Kerala, Tamil Nadu

Eswaran, H.; Mosi, D.; Manickam, T.S.
U.S. Dept. Of Agriculture. Soil Conservation Service.
Soil Management Support Services
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
1990, v, 135p.: charts, statistical tables, En
9311229

Computer simulations of the soil moisture and temperature regimes of the southern Indian States of Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu are presented in this report. Chapters 2-4 define soil regimes in accordance with *Soil Taxonomy* and explain the procedures and criteria employed by Van Wambeke to subdivide and classify the regimes, while Chapter 5 describes the Newhall Simulation Model and its modifications. Appendices, which constitute the bulk of the volume, present the simulations themselves, which, it is stressed, are not meant to substitute for actual physical measurement. The simulations are primarily based on climatic data provided by the India Meteorological Department.

051 **PN-ABE-895**
MF \$3.24/PC \$32.89

Conducting on-farm animal research: procedures and economic analysis

Amir, Pervaiz; Knipscheer, Hendrik C.
Winrock International Institute for Agricultural
Development
International Development Research Centre
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
1989, xiv, 244p.: charts, statistical tables, En
9311328

On-farm animal research (OFAR) has been a neglected component of farming systems research due to such factors as its high cost, the marketing constraints on increased production, and the popular belief that only commercial animal production is profitable. To address these problems and overcome past research deficiencies, this book provides a general guide and reference manual on OFAR for junior- and middle-level researchers and extension workers who have at least a B.S. degree. Individual chapters cover: animal research within farming systems research; principles of animal production; basic economic concepts for OFAR trials; statistical analysis of OFAR; screening of animal technologies before on-farm testing; guidelines for conducting OFAR; methods of OFAR economic analysis; animal marketing; risk of new technologies; and institutional constraints to OFAR (highlighting Asia). The report provides a glossary and bibliography as well as chapter summaries and written exercises.

AGRICULTURE

052

*PN-ABF-175
MF \$1.08/PC \$6.11

Culture of common carp in floating net cages

Costa-Pierce, Barry A.; Rusydi; et al.
International Center for Living Aquatic Resources
Management
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
1989, 42p.: ill., En
ICLARM contribution no.572
ICLARM education series, no.7
9311050

*Also available from: *International Center for Living Aquatic Resources Management, MC P.O. Box 1501, Makati, Metro Manila, Philippines*

A technique for growing common carp in a floating net cage is described herein through simple step-by-step illustrations and instructions. The guidebook covers all required steps, including net cage construction; site selection; fish seed selection, transport, and stocking; recordkeeping; feeding; weighing; harvesting; marketing; and postharvest maintenance. Cage construction requires only seven basic materials — cement, bamboo, oil drums, netting, nails, plastic rope, and wood. Empty paint tins fastened with strong wire can serve as anchors for the net. The technique was developed for the Saguling and Cirata Reservoirs in Bandung, Indonesia, but may easily be adapted to other locations. Additional guidebooks in this series include *Growing Fish in Pen Systems* (PN-ABF-178), *A Small-scale Hatchery for Common Carp* (PN-ABF-176), and *Growing Fish in Cages* (PN-ABF-177).

053

*PN-ABF-179
MF \$1.08/PC \$9.10

Biology and culture of mussels of the genus *Perna*

Vakily, J.M.
German Agency for Technical Cooperation
International Center for Living Aquatic Resources
Management
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Agriculture
(Sponsor)
1989, iv, 63p.: ill., En
ICLARM contribution no.494
ICLARM studies and reviews, no.17
9311050

*Also available from: *International Center for Living Aquatic Resources Management, MC P.O. Box 1501, Makati, Metro Manila, Philippines*

Mussels of the genus *Perna* are an inexpensive, nutritious source of animal protein and are potentially an abundant resource for coastal aquaculture for tropical countries. However, only three countries — the Philippines, Thailand, and New Zealand — are currently farming *Perna* on an intensive commercial scale. This report summarizes present knowledge on the biology and culture of *Perna*. A first section describes the biology and ecology of the three species of *Perna* (*P. viridis*, *P. canaliculus*, and *P. perna*), while a second overviews culture systems, emphasizing such advanced techniques as raft and longline systems. The remaining sections discuss postharvest handling of live and processed mussels, public health and economic aspects, future research needs, and the outlook for the mussel industry. While biological problems pose no significant barrier to mussel culture, certain socioeconomic factors must be addressed before industrial-scale production can be considered. For instance, consumer acceptance of mussel products is generally low, due to the sanitation problems often encountered in mussel culture (causing sporadic outbreaks of disease) and to the negative image of mussels as the "poor man's oyster." This leaves the mussel industry with a dilemma. To keep the price of the end product low, the mussel farmer's profit margin must kept minimal; this, however, deters improvements in quality

and production, which in turn hinders the opening of new markets. Equally constraining is a marketing system that favors middlemen at the expense of mussel farmers. An

integrated approach to overcoming these constraints is suggested, focusing on quality control and adequate economic returns to mussel farmers.



A group of fishermen tending their nets in the Philippines.

FOOD AND NUTRITION

054

PN-ABF-428
MF \$2.16/PC \$13.52

Evaluation of nutrition education messages for supplementary feeding: the Bangladesh experience

Brown, Laurine; Zeitlin, Marian

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

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

U.S. Agency for International Development. Bureau for Asia and Near East. Office of Technical Resources (Sponsor)

Sep 1989, v, 52p. + 3 appendices: ill., charts, statistical tables, En
9300082

Traditionally, infants in Bangladesh are breastfed until well into the second or third year, and while supplementary foods are provided, these are generally insufficient to sustain normal growth. This report evaluates the impact of nutrition education on the infant feeding practices of impoverished rural Bangladeshi mothers and on the growth of their weaning age infants. Activities included in-home demonstrations of recipes as well as techniques to enrich foods from the family pot with energy (e.g., oil and molasses), protein (e.g., milk, fish, or legume flour), and vegetables and fruits. Hygienic preparation of foods was stressed, and mothers were encouraged to continue breastfeeding, while at the same time frequently and persistently feeding new foods. A total of 117 children between 4–14 months were involved in the study. Findings are very encouraging, with behavioral changes evident in many of the mothers' feeding practices. Even after two years, the messages were still remembered by many of the mothers. Food refusal, due to anorexia stemming from frequent infectious illnesses, was identified as a major barrier to adequate consumption; other barriers included seasonal food shortages, inability to purchase foods due to poverty, and limited time of the mothers to prepare food and attentively feed their babies. The study concludes that, while increased intake of energy-enriched weaning foods

is likely to reduce the degree of growth faltering, it cannot sustain ideal growth rates, given other economic and environmental barriers in rural Bangladesh.

055

***PN-ABF-449**
MF \$1.08/PC \$9.75

Effects of agricultural commercialization on land tenure, household resource allocation, and nutrition in the Philippines

Bouis, Howarth E.; Haddad, Lawrence J.

International Food Policy Research Institute

Xavier University. Research Institute for Mindanao Culture

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

Jan 1990, 72p.: statistical tables, En

Research report / International Food Policy Research Institute, no.79

Earlier larger edition: PN-ABA-144

936411114; 9300096

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

Agricultural commercialization is often blamed as a cause of malnutrition since it diverts food resources away from local consumption. On the other hand, proponents claim that cash crops actually improve nutrition levels by raising incomes through overall economic growth. This study presents a detailed analysis of the effects of agricultural commercialization in the Philippine province of Bukidnon, an area dominated by semi-subsistence corn production until the establishment of a sugar mill in 1977. Smallholder landowners and renters who made the transition to sugar production have earned substantially higher profits than corn producers (an average of \$225 per ha per year for sugar compared with \$100 for corn), although this was in part due to declining corn yields. Surprisingly, however, increased incomes for sugar producers have not translated into improved nutritional status, especially for preschoolers. Instead, households have purchased more ex-

pensive foods and allotted them primarily to adults, who were already meeting recommended calorie intakes. Recommendations are presented for production and nutrition policies aimed at enhancing the beneficial factors of commercialization while minimizing its harmful effects.

056

PN-ABF-595

MF \$1.08/PC \$7.41

Vulnerability assessment [Mauritania, Mali, Burkina Faso, Niger, Chad, Sudan, Ethiopia]

Tulane / Pragma Group

U.S. Agency for International Development. Bureau for Africa. Office of Technical Resources (Sponsor)

Jun 1990, 51p.: maps, statistical tables, En

Famine early warning system (FEWS) country report

Social upheaval has increased vulnerability to famine in the Sahel. This report assesses food security in seven countries in the region — Mauritania, Mali, Burkina Faso, Niger, Chad, Sudan, and Ethiopia — focusing on the socioeconomic factors that affect access to food. Forced relocations in Mauritania have placed 80,000 people at risk in 1990, while civil war has endangered 2–3 million people in both Sudan and Ethiopia. Poor environmental and agroclimatic conditions are primarily responsible for the extremely vulnerable groups in Mali (200,000), Niger (160,000), and Chad (19,000). Although these groups are receiving assistance, the at-risk population in Mali was hurt by response delays arising from government and donor disagreement over levels and locations of vulnerability. Populations in Burkina Faso are only moderately vulnerable as the 1990/91 agricultural season begins, but a poor 1990/91 rain and agricultural season would increase vulnerability and probability of famine in Burkina and throughout the region. While the report's analysis is country-specific, some regional patterns do emerge. (1) Most of those at risk — the overwhelming majority of whom are in Sudan and Ethiopia — are not currently receiving substantial food assistance. (2) Armed conflict, not drought, is the primary reason for the vulnerability of over half of the at-risk populations. (3) Agriculturalists and agropastoralists, rather than pastoralists, make up most of the extremely

vulnerable groups. (4) Over half of the at-risk populations are not, or are only tenuously, under the control of the governments of the countries in which they reside. (5) Most at-risk groups have experienced at least two similar periods of food insecurity in the last five years (particularly following the 1984 and 1987 harvests).



Civil war has threatened 2–3 million people with famine in Sudan and Ethiopia.

057

PN-AAX-238
MF \$1.08/PC \$4.94

Child survival in Indonesia

Dichter, Phyllis; White, Michael; et al.

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

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

Jun 1990, 31p.: ill., charts, En

A.I.D. impact evaluation report, no.75

Indonesia's child survival program, a top government priority, has had a positive impact on child health and appears to be reducing infant and child mortality. The program has also strengthened the country's primary health care system by rapidly expanding services outside the physical and administrative confines of the existing public health facilities. Principal achievements include: a rapid expansion of community-level health posts (*posyandus*), which deliver child survival interventions nationwide; high rates of child immunization (65% for DPT3 and 50% for measles); successful education of mothers in oral rehydration therapy; and nationwide expansion of growth monitoring and nutrition education through the *posyandus*. Much of the program's success can be attributed to the incremental growth of highly focused and vertical efforts to deliver key services, beginning with family planning and nutrition in the 1970's and later adding immunization and diarrheal disease control. By 1985, the country began large-scale efforts to integrate these services at the community level. A.I.D. has played a critical role in stimulating and shaping the program, providing \$60 million (over and above support for family planning) and supporting more than 25 bilateral, private voluntary organization, and central projects over the last decade. Key elements of A.I.D.'s contribution include: sustained commitment and support for highly focused programs (family planning, immunization), effective policy dialogue coupled with research, provision of some operational costs for major activities, provision of supplemental support from centrally funded A.I.D. programs, collaboration with other donors, and investment in training and education. Despite the child survival program's achievements, however, sustainability

is still in question. Additional efforts are needed to ensure the long-term financial basis, consolidate activities, and solidify political support and popular demand.

058

PN-ABE-962
MF \$1.08/PC \$7.02

Consumer demand and satisfaction: the hidden key to successful privatization

Smith, William A.

Academy for Educational Development, Inc.

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

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

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

[1989], vii, 45p. + attachment: ill., En

9311018

Consumer satisfaction through responsible marketing is central to the successful privatization of health care services, according to this study, prepared for A.I.D.'s Asia/Near East Bureau. The study's main section explores several consumer issues pertinent to privatization. These include the need to: keep price strategies socially equitable; maintain the quality of privatized health care; deliver services that meet consumers' real — and changing — rather than imagined health needs; develop ethical advertising standards; conduct marketing research; treat consumers as members of a community rather than isolated individuals; and use consumer needs as the focal point of public/private sector partnerships. Related lessons from the Asia/Near East Bureau's experience are noted. (1) Piecemeal programs do not work. (2) Coverage, timeliness, and credibility are all necessary to influence consumers. (3) Consumer research is fundamental to success in four domains — product, place, price, and promotion. (4) The program must monitor changing consumer needs. (5) Simplicity of product, message, and distribution is essential. (6) Acceptance is increased when a range of methods, brands, and practices

are offered. Action options in the areas of policy dialogue, program development, consumer research, and training are presented in conclusion.

059 **PN-ABF-030**
MF \$1.08/PC \$3.77

Lifestyles for survival: the role of social marketing in mass education

Smith, William A.

Academy for Educational Development, Inc.
University of Pennsylvania. Annenberg School of Communications

Applied Communication Technology

Porter, Novelli and Associates

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

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

Oct 1989, 27p., En
9311018

Lifestyle behavior — in such areas as eating, smoking, sexual activity, and personal health care — is the major cause of disease in the world today. This booklet describes the role that social marketing can play in the large-scale educational and motivational effort needed to help people modify unhealthy behavior. Moving beyond the ad hoc health education strategies of the past, social marketing involves a process of comprehensive research and planning, incorporating the theories and methods of several disciplines. Marketing provides a framework for selecting and segmenting audiences and for promoting products and services. Behavior analysis supplies tools for investigating existing health-related practices, defining and teaching new practices, and identifying opportunities to motivate changes. Anthropology assesses the perceptions and values that underlie existing practices and suggests mechanisms for linking new ideas to traditional values. A successful social marketing program can produce changes in behavior because it: (1) is fundamentally centered on the audience and systematically consults the consumer throughout the design and implementation processes; (2)

targets its activities by setting narrow objectives and by segmenting the audience into groups which can be reached and influenced; (3) considers all the factors that influence change, such as the behaviors themselves, obstacles to new practices, and means of communication and education; (4) integrates delivery systems (e.g., mass media, interpersonal, print) so that they bolster each other with the same clear message; and (5) uses empirical data — not just experience, intuition, or anecdotes — to support and guide health decisions. Contains brief descriptions of social marketing success stories from around the world.

060 **PN-ABF-089**
MF \$1.08/PC \$10.92

Media promotion of breastfeeding: a decade's experience

Green, Cynthia P.

Academy for Educational Development, Inc.

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

Jul 1989, v, 81p.: ill., En

Companion document: PN-ABF-527
9365113

Most breastfeeding promotion programs are not making adequate use of the mass media to teach new mothers specific breastfeeding skills while combating societal pressures against breastfeeding. This guide reviews the breastfeeding promotion programs of more than 25 countries in an effort to determine what works and what does not, how to develop cost-effective media campaigns, how to determine a program's effectiveness, and how to ensure long-term sustainability. Nearly all of the programs reviewed use printed materials (e.g., booklets and posters) to support the counseling of pregnant women and new mothers, but few are employing social marketing techniques to develop strategies and materials. The study found that general messages promoting the benefits of breastfeeding are not effective since they do not address the major obstacles to breastfeeding, such as difficulty in initiating and continuing breastfeeding, lack of social support, and decreased milk supply. The study also found

that breastfeeding promotion should be placed within a larger institutional framework to assure permanent funding and staff and coordination with related health activities. Successful programs use media as part of a long-term promotion strategy, rather than as sporadic, short-lived campaigns, and provide training on specific skills on a continuing basis.

061

PN-ABF-275

MF \$2.16/PC \$21.84

Training and practice of traditional birth attendants in Guatemala

Putney, Pamela J.; Smith, Barry
Management Sciences for Health
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. Guatemala
(Sponsor)
18 Dec 1989, vii, 48p. + 7 appendices: ill., En
Spanish ed.: PN-ABF-276
9365969

Although the traditional birth attendant (TBA) is the major provider of health care for women in Guatemala, she receives little recognition or support from the Guatemalan health care system. This study explores the midwifery practices of TBA's among the Mayan population in Guatemala's highlands, where infant and maternal mortality rates rank among the highest in Latin America, and assesses the TBA training programs being implemented by the Ministry of Health and by private and international agencies. The training programs have had a positive influence on some harmful traditional practices (e.g., the use of alcohol by TBA's and their laboring patients, encouraging women to push too early in labor) and have introduced beneficial new procedures (e.g., washing hands, screening and referring high-risk patients, providing nutrition counseling). Unfortunately, three positive traditional practices have been vigorously discouraged by trainers — the upright delivery position, external version in the case of malpresentation of the fetus, and cauterization of the umbilical cord. Training has also failed to discourage the widespread

but highly dangerous use of oxytocics to hasten the process of labor. The study concludes that despite the existence of several exciting and innovative programs, the training courses in general are using inappropriate and ineffective materials, and are trying to apply a western, urban, hospital-based birthing model to TBA training. A list of recommendations is provided concerning how midwifery practice could best be supported or modified to enable it to make a maximum contribution to maternal and child health.

062

PN-ABF-324

MF \$1.08/PC \$8.32

Managing a communication program on immunization: a decision-making guide

Cabanero-Verzosa, Cecilia; Bernaje, Marietta G.; et al.
Academy for Educational Development, Inc.
Philippines. Dept. of Health (Sponsor)
U.S. Agency for International Development. Bureau for
Science and Technology. Office of Health (Sponsor)
Dec 1989, vii, 63p.: ill., En
9311018

The Metro Manila Measles Vaccination Campaign tested the feasibility of using an integrated communication methodology to help the Philippine Department of Health (DOH) increase the rate of measles immunization. The campaign relied on the use of the mass media as well as face-to-face communication at the health center between mothers and health workers. In addition, it tested the effectiveness of using a single-minded message to persuade mothers to bring their children to the health centers. Ultimately, the campaign was an experiment in forging partnerships between health care providers and mothers; between the communications team and the health service delivery team; and between the DOH and the private sector. This case study recounts the story of this partnership and details how the communications team developed the campaign, reviewed and utilized research data on the intended audience, and designed and pretested materials.

Overall, the campaign was successful, doubling the measles vaccination coverage rates from 23% to 45%. (Author abstract, modified)

063

PN-ABF-347

MF \$2.16/PC \$23.01

EPI essentials: a guide for program officers

Rawn, Cynthia; Hirschhorn, Norbert
John Snow, Inc.

U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)
2nd ed.

Aug 1989, 172p.: ill., charts, En
9365927

Successful Expanded Program of Immunization (EPI) initiatives involve meticulous orchestration: it makes little sense to plan vaccination strategies but deliver spoiled vaccines; to train health workers but fail to educate families; and to possess sophisticated hardware yet fail to understand the "software" of human behavior and response to EPI. To assist in EPI implementation, this handbook expounds the concepts and processes of EPI and is intended primarily for development agency staff who are involved with immunization programs, but are not EPI experts. Chapter I outlines program organization under five components — Administration and organization, Logistics, Information-education-communication, Vaccines, and Evaluation (ALIVE). Chapter II examines key epidemiological facts on the target diseases (measles, neonatal tetanus, pertussis, polio, diphtheria, tuberculosis, and others) and how they affect EPI strategies. It includes a program design checklist for USAID Missions or PVO's implementing immunization projects. Chapter III, the heart of the manual, explains the inner workings of an immunization program, including delivery strategies, vaccination schedules and individual vaccines and their administration, logistics (the cold chain, injection equipment), health worker training, and socio-behavioral aspects. Program evaluation is highlighted in Chapter IV, covering monitoring and supervision, vaccination coverage assessments and reporting, disease surveillance, cost analyses, and rapid

and comprehensive program evaluation. It stresses the need for evaluation at all levels — local (where vaccine is given), regional/district, and national. The difficulty of sustaining an EPI is discussed briefly in conclusion. An appendix indicates sources of information and equipment, books and manuals, articles, audiovisuals, and newsletters.

064

PN-ABF-460

MF \$1.08/PC \$7.41

Promising PVO strategies in growth monitoring and promotion — a report on a workshop sponsored by the nutrition communication project of the Academy for Educational Development in coordination with the Office of Nutrition of A.I.D.

Shorr, Irwin J.; Uccellani, Valerie; Ferrara, Dennis, ed.
Academy for Educational Development, Inc.

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

(Workshop on Promising PVO Strategies in Growth Monitoring / Promotion, Washington, DC, US,
15–17 Jun 1989)

Jun 1989, iv, 55p., En
9365113

Growth monitoring and promotion (GM/P) offer an opportunity to improve child health through early detection of growth faltering and through reinforcement of adequate growth. However, the implementation of GM/P is difficult for the following reasons: it depends on the preventative concept that poor growth means poor health; it uses a tool (the growth chart) that is widely misread and misused; its messages must be built on an in-depth understanding of health beliefs, practices, and resources; and its cost efficiency is hard to document. These workshop proceedings discuss ways in which private voluntary organizations have identified and solved problems related to GM/P. Three major topics are covered: program design, communications, and GM/P techniques and tools. Case studies are presented on efforts in The Gambia, the Dominican Republic, Bangladesh, Guatemala, Bolivia, Ghana,

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Haiti, Ecuador, and India. A major finding of the workshop is that GM/P is not a good entry point for working with a community that has had no previous primary health care or child survival programs. Ideally, a PVO would establish itself in a community and develop a rapport with its members before a GM/P program is designed and introduced. Also key to the success of such programs is the active participation of mothers in the entire GM/P process.

065

PN-ABF-596

MF \$1.08/PC \$10.14

Health care financing in Latin America and the Caribbean, 1985-89: findings and recommendations

Gwynne, Gretchen; Zschock, Dieter K.
State University of New York at Stony Brook
Group Health Association of America
International Resources Group, Ltd.
U.S. Agency for International Development. Bureau for Latin America and the Caribbean (Sponsor)
Sep 1989, xiv, 65p., En
Health care financing in Latin America and the Caribbean research report, no.10
5980632

As the result of economic crises, public health care expenditures and quality have declined in most Latin American countries. This report presents findings on health care financing in ten countries — Belize, Bolivia, the Dominican Republic, El Salvador, Ecuador, Guatemala, Peru, St. Lucia, Jamaica, and Honduras. Background information on the countries' economies, health systems, and donor health policies is followed by research findings on three topics: health care costs, household demand for health care, and the feasibility of alternatives to financing health care from general tax revenues (e.g., social security programs, private prepaid risk-sharing plans, and user fees). The report recommends that donors continue to emphasize public health care, but broaden their scope to include assistance to medical care programs under social security. These two subsectors account for two-thirds or more of total health sector financing in the countries reviewed, and they have the main responsibility for serving

the low- and middle-income population. Cost containment efforts should target large hospitals operated by ministries of health and social security institutions and focus on limiting personnel budgets and redirecting ambulatory care from hospitals to primary health care facilities.

066

PN-ABF-787

MF \$1.08/PC \$12.22

Utilization of formal services for maternal nutrition and health care in the Third World

Leslie, Joanne; Gupta, Geeta Rao
International Center for Research on Women
U.S. Agency for International Development. Bureau for Science and Technology. Office of Nutrition (Sponsor)
U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)
1989, 90p., En
9311010

Every year nearly half a million Third World women die from pregnancy-related causes and millions more suffer from disabilities and malnutrition related to pregnancy and childbirth. While studies indicate that an overwhelming majority of these cases could be prevented through proper care, in fact less than a third of pregnant women in the developing world receive any formal prenatal care. This paper reviews relevant economic, sociological, and anthropological studies to identify factors constraining utilization of formal maternal nutrition and health care services. Service-related factors such as physical distance, hours of availability, and transportation difficulties, together with long waiting times and inadequate supplies, emerged repeatedly as key constraints. These problems are frequently exacerbated by the poor technical and interpersonal skills of the maternal care providers and widespread corruption within the formal health system. The main user-related factor appears to be the demands on women's time. Emergencies apart, women use formal childbirth services far less than they do formal prenatal services, due to conditions specific to the childbirth experience — the availability of family support and care, the need for privacy

and emotional support (provided traditionally by female birth attendants), higher costs, and the difficulty of traveling. The latter difficulty was also a major reason why use of maternal care differs from use of general health care. Recommendations for further research are presented.

067

PN-ABF-839

MF \$1.08/PC \$8.32

Neonatal tetanus elimination: issues and future directions — meeting proceedings

John Snow, Inc.
Management Sciences for Health
U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)
(Neonatal Tetanus Elimination: Issues and Future Directions Meeting, Alexandria, VA, US, 9–11 Jan 1990)
1990, 44p. + 5 annexes, En
9365927; 9365966

Every year an estimated 750,000 newborns in the Third World die from tetanus, a disease easily prevented by vaccinations for girls and women as well as by safe, hygienic delivery practices. Neonatal tetanus is the most under-reported lethal infection, largely because it kills its victims one by one rather than in mass epidemics and because it typically occurs among the illiterate and poor who often ascribe it to supernatural causes. This report documents the proceedings of a meeting of international experts in immunization and maternal/child health to promote collaboration on neonatal tetanus. The meeting covered seven broad themes. (1) Increased awareness is needed by health planners, providers, women, and their families about prevention of neonatal tetanus. (2) Within the Expanded Program of Immunization (EPI), equal emphasis must be given to tetanus toxoid immunization of women. (3) Because EPI and maternal/child health staff have a joint role in eliminating neonatal tetanus, close collaboration between the two is required at each level of the health delivery chain. (4) Girls and all women of childbearing age — not only pregnant women — should be the target for tetanus toxoid immunization. (5) Every service contact with women should be used to increase

tetanus toxoid coverage. (6) Improved indicators and records are needed to strengthen program monitoring. (7) Cost guidelines can assist program managers to select control strategies.

068

PN-ABF-942

MF \$1.08/PC \$4.29

Economic burden of sustainable EPI: implications for donor policy

Rosenthal, Gerald
John Snow, Inc.
U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)
Feb 1990, 13p. + attachments: charts, statistical tables, En
9365927

Expanded Programs of Immunization (EPI) have made historic progress over the past decade by raising coverage rates from 10% to 50% in the developing world. But can developing countries bear the economic burden of sustaining these programs? This study projects the ability of 50 sample countries to support EPI in the year 2000 and considers the implications of these projections for donor strategies. The analysis focuses on four basic questions: What will the EPI target rate of 80% coverage cost? What will the countries be able to afford? At what cost to the countries would the EPI targets be affordable? Will economic growth make the targets affordable? The study found that, while increases in economic growth and reductions in the cost of immunization and in the size of the target population would improve economic capacity to support EPI, many countries (particularly African) will remain incapable of achieving coverage targets within the foreseeable future. In fact, many countries would be hard pressed even to allocate the amounts of resources required to maintain existing coverage levels without external resources. Consequently, donors should not make EPI sustainability (i.e., independence from donor funding) a precondition for support, but should help countries move towards sustainability. This can be done through: (1) general initiatives to lessen the economic burden of EPI (by expanding the country's resource base and by reducing

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the costs); and (2) country-specific partnerships that are based on shared goals and commitments and realistic assumptions.

069

PN-ABF-704

MF \$1.08/PC \$8.32

HIV infection and AIDS: a report to Congress on the USAID program for prevention and control

U.S. Agency for International Development
Jul 1990, 64p.: ill., charts, maps, statistical tables, En
Earlier ed.: PN-ABE-995

Although multilateral and bilateral donors have made considerable progress in implementing HIV/AIDS prevention programs in the developing world, the number of new AIDS cases continues to increase rapidly, especially

in central Africa. This report presents data on AIDS prevalence, patterns of transmission, and impact in developing countries. Progress made in AIDS-related education is also described. The report then summarizes the 48 bilateral programs implemented so far by USAID Missions. These programs involve four types of activities: (1) monitoring the incidence and prevalence of HIV/AIDS within countries; (2) increasing government and public awareness of AIDS and the options for preventing HIV infection; (3) assisting developing countries with the design and implementation of HIV prevention programs; and (4) conducting intervention-oriented applied research. A.I.D. efforts also complement and support activities of the World Health Organization, to which A.I.D. contributes both financial and technical resources. The report concludes that continued progress in the 1990's will be critically dependent on implementing programs on a wider scale than possible to date and on strengthening the capacity of developing countries to undertake programs for the long term.



A mobile health unit supplied by A.I.D. makes a visit to a village in Chad.

070

PN-ABF-714
MF \$1.08/PC \$5.20

Bangladesh: population sector review

Huber, Sallie Craig; Cleland, John; et al.

Dual & Associates, Inc.

International Science and Technology Institute, Inc.

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

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

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

25 Jul 1990, viii, 22p. + 3 appendices, En

Report no.89-064-110

3880050; 9363024

When A.I.D. began its family planning program in Bangladesh in 1971, the country had one of the world's highest total fertility rates. Bangladesh has, however, been able to reverse this trend and achieve slow, yet clearly measurable progress on two basic demographic indicators — a decline in the total fertility rate (7.1% to 4.9%) and a rise in the contraceptive prevalence rate (8% to 33%). This sector review documents this development. Individual chapters assess the impact of the government's National Family Planning Program on fertility over the past 15 years; discuss the relative importance of A.I.D.'s and other donors' contribution to this effort; outline a strategy for the future; and make specific recommendations for the next 5-year period. The study argues that continued external funding and technical assistance are critically important to maintaining the program's current momentum in the short run. It also recommends that during the next planning period, A.I.D. and other donors concentrate on strengthening management and cost-effective delivery and on increasing access to improved contraceptive services.

071

PN-ABF-747
MF \$1.08/PC \$9.75

Tunisia: population strategy for the 1990's

Pillsbury, Barbara; Maguire, Elizabeth; et al.

Dual & Associates, Inc.

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

6 Aug 1990, xi, 52p. + 3 appendices: charts, statistical tables, En

9363024

With its progressive policies and vigorous family planning (FP) program, Tunisia has achieved the highest level of contraceptive use in the Middle East and Africa, and is among the leaders of developing countries in recognizing the importance of FP. The semiautonomous National Office for the Family and Population (ONFP) serves as a model for A.I.D. assistance, combining private sector, market-related objectives with its FP strategies. This paper details a strategy for ONFP, A.I.D., and other donors to follow during the 1990's. Chapter topics include: country/policy context and the impact of past A.I.D. assistance; Tunisian and A.I.D. overall policy goals for the 1990's; FP objectives and strategies for the 1990's; ONFP's strategy of privatization, integration (of FP into basic health services), and transformation (from the role of provider to coordinator); financial resources; the role of A.I.D.; and priorities for action. Major conclusions are as follows. (1) Despite current high contraceptive use, overall fertility and population growth rates remain high at 4.3% and 2.4%, respectively. Total contraceptive prevalence is now about 50%, but 10% is for less effective, traditional methods. (2) Further advances in FP are needed, since reducing the population growth rate is essential for carrying out risky economic and political reforms, i.e., structural adjustment. (3) Political commitment to FP remains strong. (4) ONFP has an appropriate but ambitious strategy of evolving from a government monopoly providing free FP services into a coordinator of services provided largely via the marketplace and paid for increasingly by consumers. (5) Despite growing

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capacities, the ONFP will continue to need external assistance to implement its strategy and achieve self-sufficiency.

072

PN-ABF-384
MF \$1.08/PC \$6.37

Family planning practice guidelines for HIO [Health Insurance Organization] service providers

Ali, Faraq; Kulmindar, Johal; O'Hanley, Kelly
John Snow, Inc.

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

5 Apr 1990, 46p.: ill., En
9363034

Practical guidelines are presented herein for providing family planning services through polyclinics run by health insurance organizations. Intended for use by clinic medical staff, the report gives instructions on providing the following types of contraceptives: birth control pills, IUD's, injectables, condoms, and vaginal foaming tablets. Patients desiring Norplant® or other contraceptive services unavailable at the polyclinic will be referred to other facilities. For each available method, the report provides a general description, failure rates, contraindications, directions for use, and advice on handling new acceptors as well as continuing users. The report also contains sections on dealing with clients who are breastfeeding and on managing common gynecological conditions, including trichomonas vaginitis, candidiasis, bacterial vaginosis, gonorrhoea, and chlamydia. Infection control practices for clinic staff are also covered.

073

PN-ABF-386
MF \$2.16/PC \$15.47

Achieving financial self-reliance: a manual for managers of non-governmental organizations involved in family planning

Epstein, Eve E.
John Snow, Inc.
Birch and Davis Associates, Inc.
Coverdale Organization, Inc.
John Short and Associates, Inc.

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

May 1990], ii, 111p. + appendix, En
9363034

Rising costs and increased competition for dwindling donor funds are straining the budgets of the nongovernmental organizations (NGO's) that provide family planning services to millions of people in the developing world. This manual, designed for the managers of these NGO's, introduces two sets of techniques for strengthening the financial viability of family planning providers. Part I focuses on improving financial management, describing internal changes that every NGO can make in its own operations. Specifically, it examines six areas that are key to increased financial self-reliance: fund accounting, budgeting and cash flow projection, costing and pricing, building a cash reserve, creative management of donor funds, and feasibility analysis. Part II focuses on creating and taking advantage of income generation opportunities. Based on the experiences of ten NGO's, it describes six strategies used to earn money and reduce reliance on grants and donations. These include local fundraising, investments, innovative marketing of NGO services, and various types of fees. Unlike those presented in Part I, these strategies depend to some extent on external factors, and may be inappropriate for some environments or may conflict with local laws governing NGO's. However, most of the strategies offer significant flexibility, and virtually any environment will permit at least one or two of them.

074

PN-ABF-625
MF \$1.08/PC \$1.30**Norplant® contraceptive subdermal implants: two-year experience in Singapore**

Singh, K.; Viegas, O.A.C.; et al.

Family Health International

U.S. Agency for International Development. Bureau for
Science and Technology. Office of Population
(Sponsor)*Advances in contraception*, v.5(2), Jun 1989, p.13-21:
statistical tables, En

Report no.89-33

9363041

Norplant® contraceptive implants are proving to be the most significant family planning advance in 15 years. The Norplant® system consists of six subdermal Silastic capsules containing 36 mg of levonorgestrel and is effective for five years. This paper presents the results of a two-year

While potential constraints to widespread use include cost, physician time, production capacity, and distribution, the Norplant® contraceptive system offers a highly effective, acceptable, reversible, and safe method of contraception.

study of 100 implant acceptors in Singapore, and evaluates the effectiveness, acceptability, and safety of this contraceptive method. Results were encouraging, with no pregnancies occurring during the first two years of use. Desire for planned pregnancy and disruption of menstrual rhythm accounted for 20 of 21 implant removals. The continuation rate was 79% after two years, while the post-removal conception rate in women desiring pregnancy was 90% at the end of one year; all the women involved had full-term, normal vaginal deliveries. Potential constraints to widespread use include cost, physician time, production capacity, and distribution. Nonetheless, this study concludes that

the Norplant® contraceptive system offers a highly effective, acceptable, reversible, and safe method of contraception.

075

PN-ABF-849
MF \$1.08/PC \$3.51**Enterprise in Zimbabwe: a strategic approach to private sector family planning**

Fort, Catherine J.

John Snow, Inc.

Birch and Davis Associates, Inc.

Coverdale Organization, Inc.

John Short and Associates, Inc.

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

Jun 1990, iii, 21p., En

9363034

In 1986, A.I.D. initiated a project to expand workplace-based family planning services in Zimbabwe. The project began by establishing subprojects with five private companies representing key economic sectors. It also funded the development of informational materials to motivate male workers and the performance of costs-averted analyses on two of the subprojects. As result of the subprojects, contraceptive prevalence and/or couple-years of protection more than doubled in the target populations, with most clients being either dropouts from former programs or transfer acceptors from the public sector. Four of the participating firms have made family planning services a permanent benefit for their employees, and — except for one company which receives donated contraceptives — all now cover the entire cost of their programs. Additionally, three “spin-off” replication activities have developed, and with project assistance, the Zimbabwe National Family Planning Council has established a permanent unit to support private sector family planning services. Sustainability was also served by the project’s ability to demonstrate both monetary and non-monetary benefits of the programs. It is estimated

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that the Government of Zimbabwe could save as much as \$1 million per year by shifting fiscal responsibility for family planning services to the private sector.

076

PN-ABG-093

MF \$1.08/PC \$1.56

Insertion site complications during the first year of Norplant® use

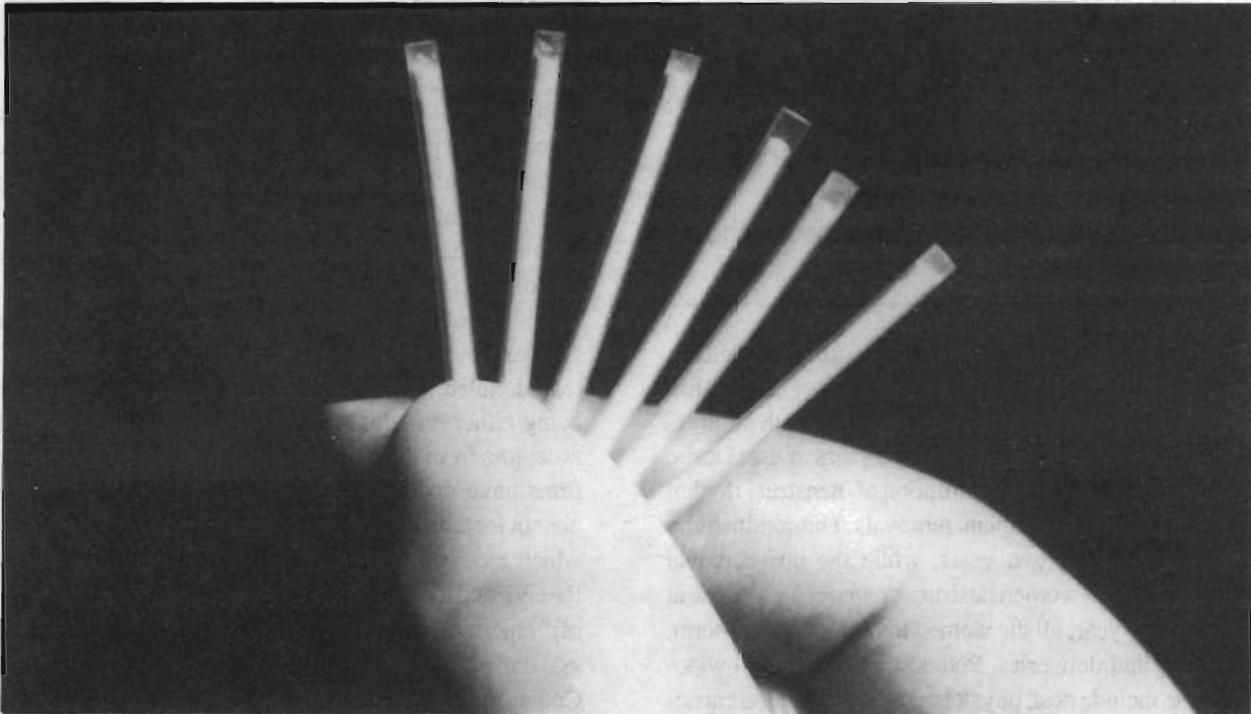
Klavon, Susan L.; Grubb, Gary S.
Family Health International

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

Contraception, v.41(1), Jan 1990, p.27-37: charts, En
9363041

While much has been written about side effects of Norplant® contraceptive subdermal implants, multi-country trial data on insertion site complications have so far

been limited to infection rates. This paper fills this gap by examining the various reactions to Norplant® experienced by 2,674 acceptors from 7 countries over a 12-month period. The incidence rates of infection (0.8%), expulsion (0.4%), and local reaction (4.7%) varied widely among countries and clinics within a country. In contrast to previous reports that insertion site complications occur during the first few weeks of use, these data show that a substantial proportion of insertion site infections (34.6%) and implant expulsions (64.3%) were reported after the first 2 months of use, and that 35.7% of local reactions were only reported after 4.5 months. Of the 16 women with infections who did not have the implants immediately removed, 8 eventually required or requested removal, indicating that the International Committee for Contraceptive Research's recommendation for immediate removal in case of infection is appropriate. It remains uncertain, however, whether the variations among acceptors are due to reporting, differences in insertion technique, post-insertion hygienic practices, or physiologic differences. (Author abstract, modified)



Norplant® contraceptive subdermal implants provide protection from pregnancy for five years.

077

PN-ABF-005

MF \$2.16/PC \$16.12

Land tenure reform in Senegal: an economic study from the Peanut Basin

Golan, Elise H.

University of Wisconsin at Madison. Land Tenure Center

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

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

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

Jan 1990, vii, 137p.: statistical tables, En

LTC research paper, no.101

Bibliography: pp.55-57

9365301

Despite the 1964 Law of National Domain, requiring official registration of private land, only about 2% of Senegalese land is titled. In the country's agricultural heart, the Peanut Basin, the vast majority of farmers hold land under varying forms of customary law. This report focuses on two villages in the Basin to assess Senegal's various tenure arrangements and their impact on land management practices and socioeconomic structures. In Section I, the study setting and local farming systems are described, followed by an outline of the research methodology. Section II discusses efforts by the colonial government to impose a system of individualized land registration. It then examines the characteristics and current land management practices of farmers with registered land in the sample villages. Section III explains the Law of National Domain and examines the relationship between tenure security and land management in the sample villages. It is found that farmers in one village have relatively less tenure security than those in the other. Section IV describes the influence of tenure security on the socioeconomic structures of the samples, while conclusions and policy implications are presented in Section V. (Author abstract, modified)

078

PN-ABF-249

MF \$1.08/PC \$7.28

Dynamics of land tenure on the Bakel small irrigated perimeters: final report on the Land Tenure Center research program

Bloch, Peter C.

University of Wisconsin at Madison. Land Tenure Center

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

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

Nov 1989, iii, 54p.: statistical tables, En

9365453; 6850280

Field research was conducted from 1986 to 1989 to determine the effect of traditional land tenure/allocation arrangements on agricultural performance in A.I.D.'s village-level irrigated perimeters project in Bakel, Senegal. Against a background description of the relevant legal, policy, and social factors, this report summarizes the results of this research and discusses its policy implications. Results generally confirmed the four hypotheses which guided the research. (1) Access to irrigated land in Bakel is not static, but has changed over time, though generally to the benefit to those who belonged to the original perimeters. (2) Traditional influence over control and allocation of land by elites, while still strong, has been weakened by the application of the national land law and the concomitant creation of the system of rural communities. (3) Women have been included in producer groups in some areas — though such membership does not automatically give women control of their land — while in others they have lost access to land which they farmed traditionally. (4) Constraints on access have limited irrigation performance. These constraints have been various, ranging from inconsistent management by SAED (the parastatal in charge of river basin development in Senegal), to the debt burden incurred by producer groups, to social conflict among competing groups. Policy implications and specific recommendations on integrating land tenure issues in perimeter design are detailed in conclusion.

HUMAN SETTLEMENTS

079

PN-ABF-250
MF \$1.08/PC \$3.12

Security of tenure in Africa — a presentation to the Agency for International Development: findings of a program of comparative research and their policy and programmatic implications — agenda and briefing papers

University of Wisconsin at Madison. Land Tenure Center

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

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

(Presentation to the Agency for International Development: Findings of a Program of Comparative Research and Their Policy and Programmatic Implications, Washington, DC, US, 19-20 Apr 1990)

Apr 1990, v, 19p., En
9365453

Programs to promote security of land tenure in Africa have widely varying impacts both within and across locales. This report documents comparative research on land tenure in Senegal, Somalia, Uganda, and Kenya and the resultant policy and programmatic implications. The cases studied involve: registration situations which range from rough recordkeeping by local land committees through voluntary formal land registration to formal, compulsory registration of all holdings; tenure situations varying from unwritten use permits through state leasehold rights to freehold; and agricultural development contexts ranging from stagnation to vitality. The Senegal studies focus on the impact of the country's ongoing land tenure reform, which places farmers' security of title in the hands of local committees and stresses regular use as the basis for rights to land. The Somalia studies compare landholders with and without long-term leasehold titles from the state to those with holdings of relatively high value in the Jubba and Shabelle Valleys. The Uganda effort examines the effects of the conversion of smallholders from customary tenure to freehold, and considers the impact of diverse tenures —

freehold, customary tenure, and tenancies — on investment and land use. The last study examines the impact of varying tenure status in an area of Kenya with a diversified and vigorous agriculture and an active land market. All four countries have experienced government intervention expressly intended to increase security of tenure. Future titling programs should incorporate this experience and not rely on theoretical models alone. (Author abstract, modified)

080

PN-ABF-270
MF \$2.16/PC \$15.60

Final report: urban sector study, Sri Lanka

Planning and Development Collaborative International, Inc.

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

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

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

Mar 1990, 91p. + annexes: maps, statistical tables, En
9401002

Sri Lanka has not experienced the rapid urbanization characteristic of other countries in its income group. Whereas urban population growth is typically twice the overall growth rate, Sri Lankan urban areas actually grew more slowly than rural areas during the period 1971-1981. Population distribution has remained relatively constant since the 1960's, with only about 20% of Sri Lankans living in urban areas. However, while the rural areas are dominant in terms of population, the country's economic strength lies in nonagricultural, primarily industrial production. Concentrated in Colombo and other large cities, this production contributes 73% to GDP. Chapter I of this report provides a review of Sri Lanka's urban sector, while Chapter II identifies preliminary findings in the following areas: urban growth trends, spatial distribution of poverty, the impact of the Government's new devolution of admin-

istrative structure on provincial councils and local authorities, the impact of urbanization in Colombo, and urban-rural linkages. Chapter III presents a checklist of possible areas for USAID/SL intervention, covering activities related to land, infrastructure, finance, and development planning.

081

PN-ABF-296

MF \$1.08/PC \$6.37

Policy statement of the African Development Bank concerning urban development, Cote d'Ivoire

Planning and Development Collaborative International, Inc.

U.S. Agency for International Development. Bureau for Private Enterprise. Office of Project Development (Sponsor)

U.S. Agency for International Development. Bureau for Africa. Regional Economic Development Services Office. West Africa (Sponsor)

May 1990, 47p.: statistical tables, En

French ed.: PN-ABF-297

6240434; 9401008

Africa currently has the highest rate of urban growth of any region in the world. The effects of this enormous growth, which is expected to skyrocket even further over the next 35 years, will fall primarily upon cities and towns already strained by substantial deficits in housing, infrastructure, and health and education services; worsening environmental problems; very high unemployment levels; and weak administrative systems. This document identifies some of the potentials and problems arising from Africa's rapid urban growth and sets forth an appropriate response for the African Development Bank (ADB), located in Cote d'Ivoire. A brief overview of urban development in Africa is followed by an examination of the role of urbanization in development, the problems caused by this trend, and issues to be addressed in establishing an urban policy framework. The report then looks at the urban operations and experiences of the ADB and other development agencies. It focuses on difficulties encountered and the lessons that can be applied to future programs. The

final section sets out policy guidelines that can be used as a basis for future ADB lending activities and for stimulating dialogue between the ADB and member countries concerning urban development issues. (Author abstract, modified)

082

PN-ABF-430

MF \$1.08/PC \$10.92

Urban strategy assistance: Indonesia

McCullough, James ; Rondinelli, Dennis; et al.
Research Triangle Institute

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

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

Mar 1990, xi, 66p. + annex: charts, statistical tables, En

Indonesia's financial and managerial resources are being strained by an urban population which threatens to grow from 52 million in 1990 to 152 million in the year 2025. The urban labor force, which more than doubled between 1971 and 1985 and which may double again between 1990 and the year 2000, is employed primarily in the informal sector and is characterized by a high level of underemployment (30%-40%). Accordingly, the Government has designed an urban development strategy which will increase public investment in urban services by 100% over the next five years, while improving the capacity of local governments to contribute to and to manage this investment. This report identifies ways in which A.I.D. can support the Government's urbanization initiatives. Programming recommendations are presented in five target areas: employment and job creation, regional economic development, urban finance, decentralization and privatization of urban services, and urban environmental management. These target areas reflect on the one hand A.I.D.'s own comparative advantage and on the other the Government of Indonesia's shift in emphasis from physical planning towards the more pressing needs of financing and managing urban services.

HUMAN SETTLEMENTS

083

PN-ABF-461

MF \$1.08/PC \$11.05

Costa Rica: municipal development diagnosis and policy proposal

Stout, Donald E.; Austin, Allen G.; et al.

Research Triangle Institute

U.S. Agency for International Development. Bureau for Private Enterprise. Office of Project Development (Sponsor)

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

1990, 83p., En

Spanish ed.: PN-ABF-462

9401008

In Costa Rica, central government institutions have nearly complete control of local public sector goods and services. Control is exercised through laws, authority over revenue and funding sources, and fiscal controls and auditing powers. This dominance of the central government is draining the nation's economy, with almost all budget revenues being absorbed by recurrent expenditures. As a result, support is growing for decentralizing resources and responsibilities to municipalities and the more productive private sector. This report analyzes the kinds of decentralization that could be carried out without constitutional or legislative changes, relying solely on administrative actions by the executive branch. Four such methods are described: deconcentration, delegation, devolution, and privatization/deregulation. The report emphasizes that, given Costa Rica's long history with centralized government, successful decentralization strategies must respond to social, as well as technical constraints and provide a sufficiently long time frame to accommodate incremental change. Recommendations for A.I.D. highlight the importance of involving, but also restructuring the role of, the *Instituto de Fomento y Asesoría Municipal*, the premiere municipal advisory agency in Latin America. Appendices include case histories of decentralization experience in Colombia and Indonesia.

084

PN-ABF-583

MF \$1.08/PC \$9.62

Delhi case study: formal serviced land development

Billand, Charles J.

Planning and Development Collaborative International, Inc.

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

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

Apr 1990, v.p.: ill., charts, En

940100893

In India, land prices have spiraled since Independence, with neither the public nor the formal private sector able to meet demands for serviced sites. Increasingly, Indians of all income levels have resorted to illegal land acquisition and resale. In Delhi alone, there were more than 700 unauthorized colonies with a population of about 1.2 million as of 1983. In discussing the delivery of formal serviced land in Delhi, this study reviews the historical evolution of the land development issue to develop a typology of nine types of residential lands: informal settlements, traditional villages, unauthorized colonies, public housing plots, government employee housing, public housing flats, housing cooperatives, authorized colonies, and old city housing. For each type, the study describes the sector (i.e., private formal, private informal, or public), population served, development character, and land tenure. The study also discusses policies and regulations affecting urban land delivery, systems for allocation and disposal of land for shelter, funding sources for land development and methods of allocation, and the roles and linkages of the formal private and public sectors. The report concludes that the major problems facing the public sector in delivering land are legal constraints to acquisition, inefficient administration, coordination of off-site infrastructure, and lack of a land information system. For the private sector, major obstacles are access to land, lack of off-site infrastructure, delays in obtaining sanctions, and availability of financing.

085

PN-ABF-553
MF \$2.16/PC \$17.68

Transformation of the housing sector in Poland and Hungary

Hussey, Pamela B.; Telgarsky, Jeffery P.; et al.
Urban Institute

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

Mar 1990, vi, 128p.: statistical tables, En
Working paper / U.S. Agency for International Development. Office of Housing and Urban Programs
940100895

Under the former regimes of both Hungary and Poland, pervasive administrative control, along with a low priority on housing, led to massive subsidies and chronic shortages in the housing sector. Waiting times for obtaining a state-provided apartment still range from 15 to 30 years in Poland and from 4 to 10 years in Hungary. This report describes and contrasts the housing sectors of the two countries in their demographic and economic contexts, and assesses the needed levels of technical assistance and training. In terms of housing finance, Hungary's financial markets are more developed, making it possible for financial institutions to raise funds by selling debt instruments in the capital market; neither country, however, has yet to achieve market interest rates in the housing sector. In regard to construction, the most striking difference between the two countries is that Hungary's urban residential construction industry is dominant, while Poland's is only nascent. Poland also faces more serious problems regarding the availability of building materials and construction equipment. On the positive side, owner-occupied housing now appears to exchange openly and at market rates in both countries — a major change in the past two years. The efficiency with which the market operates can clearly be improved, but this is likely to happen in due course as more brokerage services and better information develop. Moreover, mortgage finance, at least with moderate loan-to-value ratios, appears to be generally available, although it is expensive and competition among lenders is very limited. In the rental market, while deep subsidies remain, both countries are moving to reduce them.

086

PN-ABF-652
MF \$1.08/PC \$5.72

Selling Eastern Europe's social housing stock: proceed with caution

Katsura, Harold M.; Struyk, Raymond J.
Urban Institute

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

Jul 1990, iii, 38p., En
940100895

In the centrally planned economies of Eastern Europe, a large share of the housing stock, particularly in urban areas, is state-owned and often rented at nominal amounts. Worsening economic conditions in these countries have generated interest in privatizing the social housing sector in order to reduce budgetary outlays for construction, operation, and maintenance. This paper helps determine the feasibility of such privatization by reviewing the experiences of three countries — China, Hungary, and the United Kingdom — that have already tried to sell state-owned housing to their citizens. The programs are assessed in terms of their success in encouraging sales by: raising rents, rationalizing borrowing terms, clarifying and strengthening property rights, and stimulating the demand to hold housing as an asset. While the United Kingdom has had some success, sales have been poor in China and Hungary because of confused property rights and strong tenant protections. In all cases, purchasers have paid far less than the market price. A final section considers actions that should accompany the privatization of state rental stock (protecting the poorest families in the necessary process of raising rents, providing market rate financing for the purchasing of units, and privatizing the management of properties), stresses the broader goals of privatization (housing market equity and efficiency), and offers insights for avoiding a misguided privatization effort, such as would occur, for example, if units were sold at such low prices and with such heavily subsidized loans that the sales actually resulted in an additional drain on government finance.

ENVIRONMENT AND NATURAL RESOURCES

087

PN-ABC-904
MF \$1.08/PC \$4.03

Natural resources management: issues and lessons from Rwanda

Chew, Siew Tuan

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

Apr 1990, x, 19p. + attachment, En

A.I.D. evaluation occasional paper, no.35

Rwanda is an exception among low-income developing countries in that it has given high priority to environmental and natural resource management (NRM) issues. This paper describes A.I.D.'s support for these efforts and explores the possibility of integrating them into agricultural and rural development programs in Rwanda and elsewhere in sub-Saharan Africa. Major findings are as follows. (1) Government support is a prerequisite to developing the long-term strategies needed to address specific NRM issues. (2) Developing appropriate NRM technologies is a complex undertaking requiring site-specific applied research. (3) Donors should appreciate the difficulty host countries face in balancing NRM with development, conservation, and equity objectives. (4) USAID/Rwanda assistance has covered a wide range of NRM activities, many of them complementary to those of other donors, some part of a coordinated multi-donor effort. Such collaboration is especially necessary in complex projects. (5) The Mission's program includes several innovative and potentially replicable approaches, including the promotion of ecotourism in conjunction with wildlife conservation and park management, and agroforestry and fish farming to conserve soil and water resources while increasing farm productivity. Since such activities often require costly investments and yield their ecological and economic benefits only in the long term, a broader framework than simple cost-benefit analysis might be needed in attempting to incorporate them into USAID/Rwanda's agricultural and rural development portfolio.

088

*PN-ABF-028
MF \$1.08/PC \$7.41

Evaluation of biodiversity projects

National Academy of Sciences. National Research Council. Board on Biology

U.S. Agency for International Development. Office of the Science Advisor (Sponsor)

1989, x, 50p., En

Published by National Academy Press

9365538

**Also available from: National Research Council, Board on Biology, 2101 Constitution Avenue, NW, Washington, DC US 20418*

Based in part on recommendations generated at a workshop attended by 14 experts in conservation biology, ecology, systematics, and economic development, this report presents guidelines for evaluating proposed, current, and completed biodiversity projects. The guidelines cover four kinds of projects that A.I.D. might be expected to evaluate: ecosystems and habitats, species, habitat classification and inventory, and genetic resources. For each kind of project, four categories of evaluation criteria are offered: biological, social and economic, institutional capability, and linkage. The guidelines are primarily in the form of checklist questions, with questions in each category preceded by general guidance. The report also stresses the importance of linkages — to other local and national programs and to international organizations — in the evaluation process. While not including education and training as a specific category, the report stresses their importance and recommends support for education and training projects. Appendixes list sources of further guidance in project evaluation. (Author abstract, modified)

ENVIRONMENT AND NATURAL RESOURCES

089

PN-ABF-101

MF \$2.16/PC \$22.23

Directory of country environmental studies: an annotated bibliography of environmental and natural resource profiles and assessments

Baker, Douglas S., ed.; Tunstall, Daniel B., ed.
World Resources Institute. Center for International Development and Environment
Logical Technical Services Corp.
U.S. Agency for International Development. Bureau for Science and Technology. Office of Forestry, Environment and Natural Resources (Sponsor)
Apr 1990, v, 171p.: charts, En
9361406

With the recent environmental awakening on the part of many countries and donors, policymakers are paying increasing attention to the environmental factors in economic development. This directory serves as a resource for environmentally sound planning by providing detailed listings of more than 220 major natural resource and environmental assessments. The primary focus is on reports or profiles that evaluate the condition and trends of a country's major natural resources — air, water, land, minerals, plants, and animals — and link the abundance, condition, and use of these resources to economic development. Also included are natural resource management strategies and action plans that provide substantial justification and analysis of the resource situation in a country or region, along with plans and priorities for action. Most reports are multisectoral in scope, while others cover a single sector, such as forestry, biological diversity, or coastal zone resources. The directory includes studies from programs supported by donors, international nongovernmental organizations, and indigenous developing country organizations. The directory is in English but includes coverage of reports written in French, Portuguese, and Spanish. (Author abstract, modified)

090

*PN-ABF-329

MF \$3.24/PC \$34.84

Ecotourism: the potentials and pitfalls

Boo, Elizabeth
World Wildlife Fund — U.S.
U.S. Agency for International Development. Bureau for Latin America and the Caribbean (Sponsor)
1990, 2v.: statistical tables, En
5980605
**Also available from: World Wildlife Fund, Box 4866, Hampden Post Office, Baltimore, Maryland 21211 USA*

The protected natural areas of developing countries are becoming increasingly popular vacation destinations for both international and domestic travelers; U.S. tourists alone made more than 4 million nature-oriented trips to foreign countries in 1980. However, while the "ecotourism"

The "ecotourism" (or nature tourism) trend may generate revenue for local and regional economies, but it also places potentially destructive demands on ecosystems and natural resources.

(or nature tourism) trend may generate revenue for local and regional economies, it also places potentially destructive demands on ecosystems and natural resources. This study focuses on the impact of ecotourism in five Latin American and Caribbean countries — Belize, Costa Rica, Dominica, Ecuador, and Mexico — where the influx of nature-loving tourists is known to be significant. It documents the overall characteristics, effects, and growth potential of ecotourism and presents case studies of two protected areas in each of the five countries. Many of the park sites included in the study are inadequately protected and managed, and most lack funds for these activities. While only minimal tourism-related environmental degradation was discovered in the parks, comprehensive scientific studies have yet to be conducted. In conclusion, the study highlights critical issues in the development of ecotourism and recommends tourism-oriented measures to improve protected area planning and management throughout the region.

ENVIRONMENT AND NATURAL RESOURCES

091

*PN-ABF-479
MF \$1.08/PC \$10.01

Coral reef protection strategy for Phuket and surrounding islands

Lemay, Michele H.; Chansang, Hansa
University of Rhode Island. Coastal Resources Center
Thailand. Dept. of Technical and Economic Cooperation
(Sponsor)

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

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

1989, xv, 64p.: ill., En
4930341; 9365518

**Also available from: Thailand Coastal Resources
Management Project, Office of National Environment
Board, 60/1 Soi Pibulwattana, Rama 6 Road, Bangkok
10400 Thailand*

Located in the tropical Andaman Sea, Thailand's Phuket island offers ideal conditions for the growth of coral reefs. Stretching 50 km along the island's west and south coasts, these diverse reef communities have been a major source of food and income throughout the island's history and remain so today. This report outlines a strategy for the sustainable management of the reefs of Phuket and of its neighbor islands. The report describes the distribution of the reefs and their current status, distinguishing those which are extensively or moderately damaged from those in relatively or very good condition. Major uses of the reefs — tourism/recreation, fishing, shell and coral collection and trade, and the aquarium fish trade — are also identified. Management recommendations focus on tourism, recreation, and public education; sustainable fisheries; water quality maintenance and monitoring; and laws, policies, and institutional coordination. A final section identifies nine priority projects for immediate implementation.

092

PN-ABF-821
MF \$2.16/PC \$15.47

Participatory rapid rural appraisal in Wollo, Ethiopia: peasant association planning for natural resource management

Scoones, Ian, ed.; McCracken, Jennifer, ed.
International Institute for Environment and
Development

Ethiopian Red Cross Society. UMCC-DPP (Upper Mille
and Cheleka Catchments Disaster Prevention
Programme)

U.S. Agency for International Development. Bureau for
Africa. Ethiopia (Sponsor)
Jul 1989, [93]p.: ill., charts, maps, statistical tables, En
9365517

A study carried out following the 1984/85 famine in Ethiopia found that vast areas of cultivated and grazing land in Wollo Province were being severely degraded by accelerated soil erosion. The Ethiopian government responded by initiating numerous forestry, hillside closure, and other natural resource management projects. However, success has been limited, presumably due to a lack of community involvement in the planning process. This report presents results of a Rapid Rural Appraisal (RRA) aimed at increasing participation by peasant associations in managing two contrasting environments — the Bededo highlands and the comparatively less fertile and less densely populated Graramba lowlands. Under the RRA, environmental, agricultural, and attitudinal profiles of each peasant association were developed. On the basis of this information, preliminary assessments of development opportunities in the two areas were prepared and brought to the communities for group revision. Finalized assessments were then used to develop recommendations for further practical action, including policy review, research, and project implementation.

ENVIRONMENT AND NATURAL RESOURCES

093

*PN-ABF-889
MF \$1.08/PC \$1.56

Environmental aspects of agricultural development

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

Jul 1990, 12p., En

IFPRI policy briefs, no.6

936411114

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

Environmental problems, such as salinization, water-logging, deforestation, and desertification, are steadily degrading an already taxed agricultural resource base in the developing world. This report provides five policy briefs which examine some of the key issues surrounding sustainable agriculture in environmentally sensitive areas of Africa, Asia, and Latin America. The topics discussed include: (1) the environmental effects of surface irrigation systems in India; (2) sustainable rainfed farming systems in West Asia and North Africa; (3) deforestation and poverty in the hill regions of Nepal and their links with agricultural productivity; (4) the three major issues affecting agricultural sustainability in the Sahel — appropriate production systems, farmer incentives, and the effects of policy on these incentives; and (5) the environmental and health aspects of agricultural settlement in the western Amazon Basin.

094

PN-ABF-243
MF \$1.08/PC \$5.46

Toward a global climate change program for Brazil

Johnson, Twig; Hester, James; et al.

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

May 1990, 35p. + attachment: charts, En

Recognizing the potential adverse climatic effects of the extensive clearing and burning of trees in the Amazon region, the Government of Brazil, in a sharp policy reversal, is now putting environmental management at the top of its political agenda. At the same time the U.S. Congress has passed new legislation mandating that A.I.D. support global climate change (GCC) programs in key countries, offering the first opportunity in decades for environmental cooperation between the United States and Brazil. This study provides a strategic overview and detailed description of the A.I.D./Brazil GCC program, which will have a five-year timeframe and will be implemented in cooperation with other donors, including the World Bank and the Inter-American Development Bank. While focusing on deforestation, the program will include an energy efficiency component. Among the major GCC activities will be to: (1) provide U.S. postdoctoral training in natural resources macro-economic policy for influential Brazilian economists; (2) support interdisciplinary environmental research and comparative policy analyses; (3) establish a new Brazilian NGO — the Institute for Energy Efficiency; and (4) develop collaborative activities between key Brazilian agencies and the U.S. Environmental Protection Agency, the U.S. Forest Service, and the World Wildlife Fund and other U.S. PVO's.

095

PN-ABF-134
MF \$2.16/PC \$21.06

Energy inefficiency in the Asia / Near East region and its environmental implications

RCG / Hagler, Bailly, Inc.

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

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

Jun 1989, v.p.: charts, statistical tables, En 9365728

In the Asia/Near East region, energy use is extremely inefficient in all economic sectors. Commercial energy consumption per capita is higher than in other countries with similar income levels, and electric power transmission and distribution losses exceed 20% in many countries. Although energy conservation policies and programs have been initiated throughout the region, these efforts have been small and uncoordinated, and do not begin to adequately address the region's energy conservation potential and need. This report assesses the current and projected energy situation and needs in the region and describes the status of energy efficiency. It examines the environmental implications of energy supply and use, with specific focus on energy infrastructure and fossil fuel combustion. Energy efficiency activities and achievements are described for Bangladesh, India, Indonesia, Pakistan, the Philippines, Sri Lanka, Thailand, Egypt, Jordan, Morocco, and Tunisia, as well as for two other countries — Costa Rica and Singapore — which have recently implemented energy efficiency activities that could be replicated in Asia/Near East countries. In conclusion, the report recommends that, in addition to energy efficiency, complementary efforts need to be made to promote the use of cleaner fuels and encourage the incorporation of environmental considerations into all major energy decisions.

096

PN-ABF-540
MF \$1.08/PC \$5.20

Energy from rice residues

Mahin, Dean B.

Winrock International

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

Mar 1990, 40p.: ill., En

Bioenergy systems report series
9365709

Developing countries produce millions of tons of rice husks and straw as a byproduct of harvesting rice. Although some of these rice residues are used for fuel or other purposes, most are burned for disposal or just dumped. However, since the mid-1980's, industrial plants for rice residue utilization have been installed in several countries and are planned in a number of others. This report provides information on systems to produce energy from rice residues that are commercially available in the United States, Europe, and various developing countries, with an emphasis on those currently used or sold on an international level. Specifically reviewed are the use of rice husks to produce: (1) industrial process heat either directly from furnaces or by generating low pressure steam in boilers; (2) mechanical and electrical power for rice milling via steam engine systems, steam turbine/generator systems, and gasifier/engine systems; and (3) electric power for the grid. The outlook for producing energy from rice straw is also assessed. In addition, the prospects for the use of energy from husks or straw in the processing of rice bran are reviewed.

097

***PN-ABE-945**
MF \$2.16/PC \$19.50

School, work and equity: educational reform in Rwanda

Hoben, Susan J.

Boston University. Dept. of Economics. African Studies Center

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Rwanda's 1979 educational reform called for the radical restructuring of educational institutions and a complete revision of the curriculum. The goal of the reform was to provide universal access to a system specifically designed to meet Rwanda's human resource needs. Following a review of Rwanda's educational history since colonial times and of the agenda of the 1979 reform, this book evaluates the reform's impact, with special focus on the issues of equity and human resource development. Part II describes the institutional structure of Rwandan education, covering the formal primary and secondary schooling systems; other relevant institutions, such as the national university and ministries concerned with education; and nonformal education and informal training programs. Part III looks at how Rwanda's educational system relates to the country's broader social and economic context, with emphasis on access to education and the issues of education for employment. A major criticism of the reform is its narrow and rigorous focus on vocational training, notably agricultural education at the upper primary level. Although this strategy was in vogue in 1970's, experts now feel that vocational training is best reserved for short, pre-service programs, and that schools should aim at instilling solid science, math, and communications skills and so with developing a people capable of reacting flexibly to new demands and opportunities.

098

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Training for disadvantaged South Africans: review and design — executive summary

Bryant, Brenda; Bhoola, Furhana; et al.

Creative Associates International, Inc.

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

U.S. Agency for International Development. Bureau for Africa. Office of Southern African Affairs (Sponsor)
2 Jul 1989, [10]p., En

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6900213; 9311109

Since 1982, A.I.D. has funded scholarships for 1,275 disadvantaged South Africans, including 662 undergraduates at South African universities and technical schools and 613 graduates and undergraduates studying in U.S. colleges and universities. This report, based in part on interviews with 280 current and former participants, summarizes a larger study and is in two parts. Part One evaluates the program to date, covering the program's history; recruitment, screening and selection procedures; testing requirements; placement processes; the orientations available to participants; the relative advantages of studying in the United States or in South Africa; and program monitoring and follow-up. Part Two recommends and briefly describes an Integrated Training and Technical Assistance Program aimed at building a cadre of skilled technicians and professionals who can influence organizational change, strengthening the management skills of qualified technicians and professionals, and developing institutions with the capacity to provide educational leadership and build South Africa's human potential.

EDUCATION

099

PN-ABF-482
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Interactive radio instruction: confronting crisis in basic education

Zirker, Joan McTigue

Education Development Center, Inc.

Academy for Educational Development, Inc.

Friend Dialogues of North Carolina, Inc.

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

[1990], 91p.: ill., charts, En

A.I.D. science and technology in development series
9365818

Interactive radio instruction (IRI) offers an inexpensive and effective model for providing basic education, and is practical for utilization throughout the developing world. This monograph documents A.I.D.'s growing experience with IRI since 1973 and discusses the role of the interactive radio model in educational development. After an introductory chapter on IRI's role in basic education, Chapters 2-5 examine the evolution of IRI by looking at several A.I.D. projects, particularly: the 1973 Radio Math project in Nicaragua from which IRI was developed; the 1979 Radio Language Arts project in Kenya, which expanded the methodology for use in language training; the 1982 Radio-Assisted Community Basic Education project in the Dominican Republic, which moved IRI out of the classroom and into nonformal educational activities; and the 1986 Honduran Radio Learning Project, which differs in almost every respect from the past projects (except instructionally) and is part of the new generation of IRI projects. Chapter 6 summarizes past and present experiences with IRI, while Chapter 7 looks at future directions for the interactive radio model. According to the study, IRI is different from other educational innovations and methods, such as textbook development and teacher training, because it puts the child at the center of the process of learning. This helps foster children's interest and excitement in learning. A discussion of program sustainability and costs is included among the appendices.

100

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Thailand: fostering private participation in the development of labor force skills — final report

Ernst & Young

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

U.S. Agency for International Development. Bureau for
Private Enterprise. Office of Project Development
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Thailand's educational and training structure has been unable to keep pace with the changing demands of the economy. As a result, serious gaps have evolved between the needs of the private sector — especially as perceived by the U.S. business community in Thailand — and the output of Thai educational and training institutions. This study examines constraints to developing labor force skills in Thailand, highlighting the private and public responses thereto and the shortcomings of the Thai education system, and proposes a strategy for future A.I.D. assistance. The most significant labor force gaps are found in the areas of engineering, management, technical/skilled labor, and English-language skills. Thailand's private higher educational system has expanded rapidly and in the future will play a larger role in bridging these gaps, but currently faces several problems in regard to the quantity and quality of faculty, the relevance the curriculum (overemphasis on theory), and pedagogical skills (not enough use of interactive methods). To address these constraints, the study recommends that A.I.D. strategy focus on: (1) fostering the development of mutually beneficial partnerships between business and educational institutions to address labor force needs; (2) fostering linkages to utilize U.S. expertise in education and training to lessen the Thai labor force gap; and (3) supporting private sector efforts to influence policies affecting labor skills development.

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