

# A.I.D. Research & Development Abstracts



UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (A.I.D.)  
VOLUME 16, NO.2 1990 • JANUARY 1991

## **A.I.D. Research and Development Abstracts**

**ARDA** is published quarterly for the Center for Development Information and Evaluation, Bureau for Program and Policy Coordination, U.S. Agency for International Development, Washington D.C., under Contract No. PDC-0232-C-00-9088-00 by the LTS Corporation.

ISSN 0096 - 1507

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U.S. domestic, \$10.00 book rate, \$15.00 first class

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A.I.D. DIHF  
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*Cover: A Senegalese girl helps to provide for her family's water needs — a chore which may consume as much as half of an African woman's workday.  
(Credit: Agency for International Development)*

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## QUESTIONS AND ANSWERS ABOUT ARDA

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

## QUESTIONS ET REPONSES RELATIVES A ARDA

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

## PREGUNTAS Y RESPUESTAS SOBRE ARDA

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

# USER'S GUIDE TO ARDA CITATIONS

Item number — **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-226  
MF \$1.08/PC \$6.24

## Conducting key informant interviews in developing countries

Kumar, Krishna

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation  
Dec 1989, vi, 37p. + attachment, En  
A.I.D. program design and evaluation methodology report, no. 13  
Includes annotated bibliography

Although key informant interviews are widely conducted in development settings, the quality and nature of the information they generate is often of dubious value and low credibility. To improve the quality of this data collection method, this report provides guidelines for conducting informant interviews in developing countries. After a brief introduction, Section 2 describes the main steps that investigators should take to prepare for the interviews. These include: formulating study questions, reviewing available information, developing a conceptual framework, preparing an interview guide, and selecting key informants. Section 3 details the actual interview process, focusing on meeting and probing informants, wording and sequencing questions, controlling conversations, using translators, and recording the interview. Section 4 profiles simple, practical techniques that can be used to analyze interview data, including summary sheets, descriptive codes, storage and retrieval systems, and presentation of data. Finally, Section 5 describes the steps to take to ensure reliability and validity of the findings by checking the key informant's "representativeness" and reliability, examining the interviewer's own possible bias, and keeping an eye out for negative evidence. Overall, the key informant interview is a good evaluation method since it provides information and insight that cannot be obtained with other methods, provides flexibility to explore new issues, and is inexpensive to conduct. However, certain drawbacks exist as well. Key informant interviews do not provide quantitative data, are susceptible to interviewer biases, and can be unreliable if fewer than 15 persons are interviewed.

002

PN-AAX-231  
MF \$1.08/PC \$4.81

## Impact evaluation of A.I.D. policy reform programs in Dominica and Grenada

Lieberson, Joseph M.; Bowles, W. Donald; Roach, E. LeRoy

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation  
Jan 1990, viii, 32p., En  
A.I.D. impact evaluation report, no. 72  
Related document: PN-ABE-171  
5180096; 5380141

During the period 1985–1989, A.I.D. supported economic policy reforms in Dominica and Grenada — island nations strikingly alike in their socioeconomic make-up. Despite their similarities, however, the countries' experiences with reform were drastically different. In Grenada, A.I.D. had the opportunity to implement a total reform package after the 1983 U.S. intervention toppled the country's Marxist government. Nonetheless, reform efforts, which focused on budget deficit reduction and private sector development, were far from successful. According to the report, these changes failed because they were implemented too rapidly and did not mesh with local business practices, government staff were inadequately trained to implement them, and public and government support and compliance were inadequate. In Dominica, A.I.D.'s approach was more gradual, first focusing on improving management of the existing tax system and only later working on incremental tax changes and new taxes. By any economic measure, the Dominica reform program was a success. It increased revenues, improved tax collection efficiency, and encouraged productive investment. Economic growth picked up sharply and remained strong throughout the reform period. Critical factors in guiding future planning and management of policy reform programs in these and other countries are identified.

# GENERAL DEVELOPMENT

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003

PN-AAX-232  
MF\$1.08/PC \$7.02

## **A.I.D.'s experience with democratic initiatives: a review of regional programs in legal institution building**

Mason, John P.

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

Feb 1990, x, [43]p., En

A.I.D. program evaluation discussion paper, no. 29

A.I.D.'s experience in promoting democratic institutions in developing countries has produced only modest results. To review A.I.D.'s involvement in this area, this report examines the Agency's legal institution building programs, using a set of four criteria — management organization, institution building effectiveness, improvements in human rights, and sustainability. The assessment revealed real constraints in the management organization

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***The assessment revealed real constraints in the management organization of democratic initiatives. While these may result from inadequate coordination with the Mission or A.I.D./W, they may also reflect a lack of full commitment by the Agency to democratic development.***

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of the programs and projects. While these may result from inadequate coordination with the Mission or A.I.D./W, they may also reflect a lack of full commitment by the Agency to democratic development. Further, the more ambitious goals of legal reform or transformation of judicial systems have simply not been met. Much the same is true of human rights improvements; no sense of broad societal changes in attitudes or behavior could be detected. Moreover, in cases tested, it did not appear that democratic initiatives would be sustained after the withdrawal of A.I.D. funding. The report argues, however, that A.I.D. can make a significant contribution to improving legal institutional structures in a country which initiates such

improvement and openly accepts U.S. assistance. It is probably also necessary that the initiating country already possesses a basic legal system on which it can build. Lessons learned are that: (1) to achieve success, the Agency as a whole must transmit the substance and process of democratic development, and not simply the form, to developing countries; (2) regional bureaus must gear program priorities for democratic initiatives to country-specific needs; and (3) Missions must be actively involved in designing and implementing democratic initiatives and not depend simply on a centralized, A.I.D./W effort.

004

\*PN-ABD-554  
MF \$4.32/PC \$47.45

## **Lessons in development: a comparative study of Asia and Latin America**

Naya, Seiji, ed.; Urrutia, Miguel, ed.; et al.

Institute for Contemporary Studies. International Center for Economic Growth

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

(Conference on Comparative Development Experiences of Asia and Latin America, Honolulu, HI, US, 1988)

1989, ix, 361p.: statistical tables, En

9300092

\*Also available from: *International Center for Economic Growth, 243 Kearny St., San Francisco, CA 94108 USA*

Asian and Latin American countries experienced opposite economic trends during the 1970's and 1980's; the former adjusted well to challenging economic conditions and now have some of most rapidly growing economies in the world, while the latter, beset by huge debt burdens and high interest rates, have stagnated. Papers examining this contrast are presented here. Part 1 surveys economic trends in the two regions, while Part 2 presents papers on the regions' trade policies and a comparison of Brazil and South Korea. Papers on efforts at regional cooperation and integration in Southeast Asia, Latin America, and South Asia are included in Part 3. Part 4, on interregional relations, includes papers on U.S. and Japanese roles in the development of both regions, on Latin American trade

with the Asia-Pacific region, and on multilateral trade negotiations. Part 5 outlines issues for further research. Several generalizations can describe the differences in Asian and Latin American growth rates over the past two decades. (1) Compared to Latin America, Asia has had more market-oriented and less-regulated economic policies, more incentives encouraging entrepreneurship and private initiative, and warmer relationships between governments and the private sector. (2) Asia's trade and exchange-rate policies have been more externally oriented. (3) Asia has been more concerned with macroeconomic stability, especially with respect to inflation and debt management. (4) Asia has had more political stability than Latin America, although the latter has exhibited a greater trend toward democratization.

**005** **\*PN-ABD-656**  
**MF \$1.08/PC \$2.34**

## NGOs and the replication trap

Dichter, Thomas W.  
Technoserve, Inc.  
U.S. Agency for International Development (Sponsor)  
1989, 14p., En  
*\*Also available from: Technoserve, 148 East Ave.,  
Norwalk, CT 06851*

Replication — the spread of a project's positive results to another setting — is increasingly accepted in the NGO community as a legitimate development objective. However, there is a tendency to see replication in a mechanistic, one-dimensional "do it once well, then do it again" form. This cookbook approach often neglects crucial factors specific to project setting (e.g., social, political, or economic conditions) which may account for a project's success. This paper identifies five "hidden traps" of replication. First, the pressure to create a "star" project in a limited time has caused NGO's to prematurely declare isolated successes as models. Second, the unpopularity of pilot projects has put pressure on organizations to, at some point, go from prototype to replication. Third, the view of development as "science" rather than as "art" has led to neglect of human factors. Fourth, the increasing concern of donors and practitioners alike about cost reduction can leave the

quality of the reproduced projects in question. Finally, the tendency to overgeneralize from project experience can lead NGO's to disregard sound projects that accidentally failed. While the ambitious goals of replication are achievable, they are not a result of designing something called "replicability" into the project. Hence, what is replicable in development is not a project model, but rather the principles that define development models.

**006** **PN-ABD-736**  
**MF \$3.24/PC \$30.29**

## Asian linkages — NGO collaboration in the 1990's: a five-country study

Private Agencies Collaborating Together  
U.S. Agency for International Development. Bureau for Food for Peace and Voluntary Assistance. Office of Private and Voluntary Cooperation (Sponsor)  
1989, 212p. + appendices: charts, ill., En  
9380264

Just as the PVO community is recognized more and more as a vital liaison to the poor in the Third World, so too is the need for increased collaboration among national and international voluntary organizations. This study examines trends in PVO activities and the potential for improved partnerships in five Asian countries — Bangladesh, Indonesia, Nepal, Thailand, and Sri Lanka. After a regional overview, in-depth reports are provided on the major foreign and indigenous PVO's in each country. Bangladesh has the highest level of foreign PVO involvement of any nation its size, but only a few of the foreign PVO's are committed to strengthening indigenous groups. Foreign PVO's have also been slow to forge relationships with their domestic counterparts in Indonesia, though this trend is changing as formal bonds grow between Indonesian and foreign PVO's. Indigenous PVO's in Nepal are just coming into their own professionally. While several foreign PVO's have assisted them technically, their vast grassroots energies — and those of the more informal people's associations as well — remain largely untapped by donor community. In Thailand, national development-oriented PVO's are a recent phenomenon, emerging only in the 1970's. Foreign voluntary groups also began work during that decade in the area of refugee assistance, and are now

# GENERAL DEVELOPMENT

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in a good position to help Thai organizations. Sri Lanka, unlike other parts of Asia, has had much more success in collaborative efforts as international PVO's and donor agencies have often willingly joined with domestic groups. For each country, the report provides specific recommendations to build and enhance partnership activity between development institutions.

**007**

**PN-ABD-833**

MF \$1.08/PC \$5.33

## **Special summary — social analysis assessment: results, proposed guidelines, and constraints**

Gow, David; Haugen, Christine; et al.  
Development Alternatives, Inc.  
Institute for Development Anthropology, Inc.  
Research Triangle Institute  
U.S. Agency for International Development. Bureau for Program and Policy Coordination. Office of Policy Development and Program Review (Sponsor)  
Dec 1989, 37p., En  
9300082

Social Soundness Analysis (SSA) is a vital planning tool which is used to identify the possible cultural and socio-economic effects of a development project as a way of maximizing project impact. All too often, however, SSA is poorly implemented or used after the fact to justify projects that have already been planned. This paper uses a review of project documentation and case studies to evaluate the current status of SSA within A.I.D., and makes recommendations to improve its usage. SSA is most effective when it offers practical solutions and alternatives to potential problems; key to its effectiveness is recognition of the institutional context and constraints of A.I.D., other donor organizations, and NGO's. SSA should be viewed as an ongoing process which informs the process of implementation, the author argues, rather than a "crystal ball" that is able to foresee any and all possible problems, as is often the case. In such situations the social scientist often is forced to play the role of catalyst (ensuring that technical colleagues keep in mind how the different pieces of a project fit together) or "gadfly" (goadng bureaucrats into taking risks and avoiding their natural predilection to adhere to

established procedures). Comprehensive recommendations are made based on the following key components of SSA design: (1) participants and beneficiaries; (2) sociocultural feasibility and the natural resource base; (3) institutions and organizations; (4) politics and national, regional, and local linkages; (5) indicators and impact; (6) sustainability; and (7) assumptions regarding the nature of the problem and the proposed solutions. For full text of study, see PN-ABD-834; for case studies, see PN-ABD-835.

**008**

**PN-ABD-903**

MF \$2.16/PC \$14.56

## **Sahel development program: 1986–1988 report to Congress**

U.S. Agency for International Development. Bureau for Africa  
Jun 1989, v, 72p. + 2 appendices: charts, statistical tables, En

For more than 10 years, A.I.D. has worked to alleviate the problems of drought, disease, hunger, and poverty which characterize the Sahelian region through its Sahel Development Program (SDP). This report evaluates the SDP's independent activities as well as its collaboration with the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) and the *Club du Sahel*. Chapter I examines the SDP during the period 1986–1988, highlighting funding trends, the focus on policy reform to stimulate agricultural and economic growth, and the development of plans to improve natural resource management and reduce population growth and infant mortality. Developments in Sahel regional, centrally funded, and Africa regional programs are described, followed by individual country profiles. Chapter II provides a long-term retrospective on the ecological and socioeconomic factors that led to the creation of CILSS, the *Club*, and the SDP. The mutual and specific priorities and strategies of the three entities are described. In Chapter III, the results of SDP's efforts during the past 10 years are assessed. Specifically, the chapter covers accomplishments in the areas of agriculture, livestock, ecology/forestry, health, human

resources, and infrastructure. Chapter IV analyzes the events and strategies that will guide assistance efforts in the Sahel through the 1990's, concluding with sector and country plans for A.I.D. activities.

**009**

**PN-ABD-966**  
MF \$1.08/PC \$8.84

## **Cooperation between the Peace Corps and the Agency for International Development: a second report to the Congress of the United States**

Edelman, Mark L.; Coverdell, Paul D.  
Benchmarks, Inc.

U.S. Peace Corps (Sponsor)

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

Aug 1989, i, 63p., En

Over the past decade the Peace Corps and A.I.D. have achieved a high level of cooperation in planning joint programs and strategies to provide a more efficient approach to development assistance. This report to Congress provides an overview of these collaborative efforts. Following a brief introduction, Part II discusses the mechanisms in place to promote cooperation, including the A.I.D./Peace Corps Coordinating Committee, exchange of personnel, and third party initiatives with PVO's. Part III presents the Small Project Assistance (SPA) program, a mechanism for funding village-level Peace Corps projects in food production, income generation, energy, and small enterprise development. Part IV details the technical programs in which the two agencies have cooperated. Areas include: renewable energy technology; forestry and natural resources; oral rehydration therapy; communicable childhood diseases; nutrition; child survival; microenterprise development; basic education; and development education. Finally, Part V provides country-by-country descriptions of A.I.D./Peace Corps programs at the field level. There are currently more than 1,700 Peace Corps volunteers at work in A.I.D.-supported development projects, and more than 135 joint programs (exclusive of SPA projects) being

carried out in 53 countries. The report concludes that these cooperative initiatives are resulting in a more effective U.S. development assistance effort.

**010**

**PN-ABE-062**  
MF \$3.24/PC \$32.24

## **Management reference library abstracts**

Management Sciences for Health

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

10 Jul 1989, ca.250p., En  
9363039

Developed to assist trainers in selecting materials for workshops and training sessions on family planning program management, this bibliography contains nearly 500 abstracts of family planning, health, and management literature. The materials abstracted include background readings, exercises, training tools, course modules, and sample forms. The manual is divided into ten subject areas: cases; finance; human resource management; information, education, and communication; logistics; management information systems; monitoring and evaluation; planning; policy; and training of trainers. Each entry is coded by language (English, French, Spanish, Portuguese), type of material, relevance to family planning, and management skill area.

# GENERAL DEVELOPMENT

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**011**

**PN-ABE-192**

MF \$2.16/PC \$13.65

## **Land tenure in the Middle Jubba: customary tenure and the effect of land registration**

Besteman, Catherine

University of Wisconsin, Madison. Land Tenure Center  
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  
Science and Technology. Office of Forestry, Environ-  
ment and Natural Resources (Sponsor)

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

Sep 1989, xv, 104p.: statistical tables, En  
9365301

A 1975 law makes state leasehold Somalia's only legal form of land tenure. Under this law, those with customary tenure arrangements are subject to eviction by others who register the land in their own name. This study focuses on a sample village in Middle Jubba, where conflict between state leasehold and customary tenure is beginning to emerge. Of the 400 or so farms in the village, only 7 are registered; of these, 5 are held by speculators who dispossessed the former holders. Major findings are as follows. (1) Village farmers have been discouraged from obtaining state tenure by the high cost of registration and a lack of familiarity with government bureaucracy. (2) The law is at odds with traditional farm practices, including multiple parcel holdings, holding of land in bush, and the ability to transfer land to other households. (3) Due to a lack of adequate infrastructure and available agricultural inputs, the law has had little impact on land use. Nonregistered farmers actually have maintained a higher productivity level than registered farmers. (4) Finally, the law encourages speculation and land-grabbing, promotes deforestation (through a provision requiring that the land be developed), and potentially fosters social unrest by allowing state leaseholders to register up to 100 hectares by calling themselves a corporation. It is recommended that registration be conducted systematically, and only in those areas with a clear need. Moreover, alternatives to individualized titling

should be explored, such as village-level registration, which would allow customary tenure arrangements to continue.

**012**

**PN-ABE-197**

MF \$2.16/PC \$17.16

## **Land tenure policy and registration in Somalia: an action plan for legislative and administrative reforms**

Roth, Michael; Lawrance, Jeremy; et al.

University of Wisconsin, Madison. Land Tenure Center  
Somalia. Ministry of Agriculture (Sponsor)

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

Jun 1989, xix, 127p., En  
9365301

Increased demand for land has forced Somali tenure into a state of transition. While customary arrangements are still prevalent on most agricultural land, state tenure is becoming more widespread, particularly in the fertile Shabelle and Jubba river valleys. Officially, all Somali land was placed under government control by the 1975 Agricultural Land Law. However, the Land Law's overly restrictive and expensive tenure process has discouraged registration, especially among small farmers. This report presents recommendations for legislative and administrative reforms aimed at improving Somalia's land tenure policy. It contains a review of land tenure policy and recommendations for changes in the Land Law, followed by an assessment of existing provisions and procedures related to registration of concessions. It further explains a recommended system of land registration based on systematic adjudication. The report then proposes a short-term (5/89-8/90) action plan for drafting and enacting a new or revised Agricultural Land Law, an Adjudication Law, and a Land

Registration Law. The final chapter outlines a longer-term program of research and land registration for 1990 and beyond.

**013**

**PN-ABE-619**  
**MF \$2.16/PC \$25.22**

## **Absorptive capacity for foreign aid**

Reyes, Romeo A.

Syracuse University. Maxwell School of Citizenship and Public Affairs. Metropolitan Studies Program  
U.S. Agency for International Development. Bureau for Science and Technology. Office of Rural and Institutional Development (Sponsor)

Feb 1990, [189]p.: statistical tables, En  
Monograph / Syracuse University. Maxwell School of Citizenship and Public Affairs , no. 20  
9365303

In development literature, a situation in which aid is available to a recipient country but is not fully availed of or utilized is referred to as a gap in *absorptive capacity*. Sec-

tion I of this report provides further clarification of this concept in the broad context of capital, and more particularly in the narrower context of foreign capital and foreign aid. It also identifies and analyzes factors influencing the capacity of recipient countries to absorb aid. A distinction is made between foreign aid available only for investment financing and that available for many other purposes. The attitudes, policies, and decisionmaking processes of both recipient and donor countries are also examined, with emphasis on donors' policy of multiple tying of aid. Section II assesses the capacity of a specific country — the Philippines — to absorb foreign aid, particularly for the remainder of its current plan period (1989–1992), and suggests measures that might enhance its absorptive capacity. The report concludes that the Philippines is experiencing a gap in aid absorptive capacity which is constraining economic growth. Unless there is a dramatic change in the aid delivery mechanism away from project assistance in favor of nonproject assistance (including aid for various types of debt relief), the country will be able to manage only \$1.2 billion–\$1.75 billion annually. This is significantly less than the available annual commitment of \$2.9 billion–\$3.5 billion and the \$2.6 billion required to sustain a 6% growth rate.



*Somali farmers are discouraged from obtaining state land tenure by high registration costs and an intimidating government bureaucracy. Under Somalia's land law, farmers with customary tenure arrangements are subject to eviction by outsiders who register the land in their own name.*

# WOMEN IN DEVELOPMENT

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014

PN-ABD-487

MF \$1.08/PC \$7.02

## Women's economic activities and credit opportunities in the Operation Haute Vallee (OHV) zone, Mali

Luery, Andrea

South-East Consortium for International Development.

Center for Women in Development

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

May 1989, 51p.: statistical tables, En

West Africa's formal financial institutions have proved ineffective for farmers — particularly women, who make up nearly half of the agricultural labor force. This report focuses on the economic resources available to a sample of 56 Malian women from four villages in the southern zone of the Niger River's upper valley. The report describes the women's credit and economic activities and summarizes their perceptions of these activities and their obstacles to obtaining credit. Research findings are then presented in detail, including a net-benefit account of 16 economic enterprises, and a listing of capital requirements for and costs of undertaking income-generating activities. Women in the sample identified their most beneficial economic activities as farming (41%), shea nut production (25%), and commerce (30%). When asked what would facilitate and increase the potential of their work, 59% cited farm equipment, particularly oxen and plow (42%), while 34% chose grinding mills and shea nut presses. In the absence of formal credit opportunities, women have formed local informal savings and loans associations known as *tontines*. It is recommended that efforts to improve women's access to capital focus on strengthening such indigenous infrastructures.

015

PN-ABD-940

MF \$2.16/PC \$23.27

## Mali: women in private enterprise — final report

Lewis, Sydney A.; Russell, Karen

Ernst & Young

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

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

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

Aug 1989, vi, 48p. + 5 annexes, En

940202803

In order to facilitate women's participation in A.I.D. private sector activities, this report explores the role of formal and informal sector female entrepreneurs in Bamako, Mali. Specifically, the report describes: (1) the types of enterprises owned by women and why; (2) constraints to women's business activities and methods of overcoming them; and (3) women's needs and desires for assistance. In the informal sector, the single biggest constraint has been the weak national economy, which has caused a dramatic decline in purchasing power and severely hampered entrepreneurs' ability to sell goods and services. When asked about their problems, these women most often mentioned some immediate material need; they expressed no interest in training. Women in Mali's formal business sector, who are only beginning to establish themselves, face a different set of problems. Lack of access to finance was cited as their major constraint, while government red tape and bureaucratic regulations are also problematic. In addition to funding, the formal sector entrepreneurs identified business training as a critical need. The final chapter contains a series of recommendations for ensuring women's participation in the following USAID/Mali activities: economic policy reform, human resource development, and private voluntary organization co-financing. Profiles of 34 women entrepreneurs in Bamako are appended.



*Lack of access to finance, inadequate business training, and bureaucratic regulations were cited as major constraints by women entrepreneurs in Mali's formal business sector.*

# WOMEN IN DEVELOPMENT

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016

\*PN-ABD-953  
MF \$3.24/PC \$37.05

## Women's ventures: assistance to the informal sector in Latin America

Berger, Marguerite, ed.; Buvinic, Mayra, ed.  
U.S. Agency for International Development. Bureau for  
Program and Policy Coordination. Office of Women  
in Development, Washington, DC (Sponsor)  
1989, xviii, 266p.: statistical tables, En  
Published by Kumarian Press, Inc., West Hartford, CT,  
US

Selected bibliography: p.247-259

Includes index

\*Also available from: Kumarian Press, Inc., 630  
Oakwood Ave., Suite 119, West Hartford, CT 06110-1529  
USA

The increasing participation of women is perhaps the most notable change in the Latin American labor market during the past few decades. While the number of male workers doubled between 1950 and 1980, female workers more than tripled. By 2000, an additional 22 million women will join the labor force. Most of these female entrepreneurs are found in the informal economy, particularly in small-scale service and trading activities, where wages and working conditions are generally worse than those in regularized wage employment. This collection of 14 readings addresses the primary concerns of Latin American women in the informal sector. It has a practical orientation, focusing on existing projects, programs, and policies to determine how interventions can be made more responsive to the needs of women. The readings are organized around four broad subject areas: (1) an overview of the informal sector, specifically the microenterprise segment of that sector, and policies and programs designed to assist it; (2) training and technical assistance activities targeted to the sector; (3) case studies of credit programs for small and microenterprises (the Dominican Republic, Peru, Colombia, Ecuador); and (4) the gender-disaggregated evaluation of assistance programs.

017

PN-ABE-408  
MF \$1.08/PC \$11.31

## Women in development: selections from Kansas State University's vertical file materials

Young, Noel D., ed.; Meyn, Tod L., ed.  
Kansas State University. Office of International Agriculture Programs  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Research and  
University Relations (Sponsor)  
1989, x, 73p., En  
Farming systems research paper series, no.21  
9311282

Women's role in agriculture is now acknowledged as a crucial concern of farming systems research and extension. This bibliography, an update of Martha Tomecek's now out-of-print *Third World Women: A Bibliography*, cites 398 items dealing with women and women's issues drawn from Kansas State University's collection of published and unpublished (fugitive) literature. Entries are grouped according to the following topics: general; culture/society; socioeconomic participation; migration; formal/nonformal education; work and economic development; health, nutrition, fertility, and family planning; formal/informal associations; law and politics; impact of development and modernization; and communications. Includes author, title, and keyword indexes.

018

PN-AAX-223  
MF \$1.08/PC \$5.72

## Indicators for measuring changes in income, food availability and consumption, and the natural resource base

Kumar, Krishna

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

(Impact Indicators Workshop, Arlington, VA, US, 20-22 Jun 1988)

Sep 1989, vi, 36p., En

A.I.D. program design and evaluation methodology, no. 12

Though often confused with concepts such as "data," "targets," or "standards of evaluation," impact indicators are objectively verifiable and replicable variables that measure change in a given phenomenon or process. This report documents the findings of a workshop held in 1988 to identify a set of simple, practical indicators for monitoring the impact of A.I.D.'s agricultural and rural development assistance. Three groups of indicators are discussed: (1) indicators to measure income change, e.g., macro-level indicators such as GNP and GDP and micro-level indicators such as household income and expenditures and indicators of intrahousehold income distribution; (2) indicators to measure changes in food consumption, e.g., per capita calorie intake, food expenditures, and market availability and prices, as well as anthropometric indicators such as weight at birth; and (3) natural resource indicators, including indicators of topsoil erosion, crop yield, actual land use versus soil suitability, surface and groundwater pollution, and the status of rangelands, forests, and wetlands. Good indicators, according to workshop participants, should provide valid measures, be reliable, sensitive to change, replicable, and based on easily accessible data; they should also be measurable quickly and cost-effectively, and be easily understood by policymakers. The attempt to measure impact indicators for every project was agreed to be impractical; instead, program assessments should be based on impact measurements from a sample of projects and on key qualitative studies.

019

PN-AAX-236  
MF \$1.08/PC \$3.38

## A.I.D. economic policy reform program in Mali

Rugh, Michael A.; Cashion, Jerry; et al.

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

Mar 1990, viii, 19p., En

A.I.D. impact evaluation report, no. 74  
6880240

A.I.D.'s 1985-89 Economic Policy Reform Program in Mali had two major objectives: to encourage private sector activity through deregulation and fiscal reform and to improve the efficiency of public services. The program has decontrolled prices, lowered a number of business taxes, introduced a new commercial code, and loosened restrictions on import-export trade. Despite the country's inhospitable economic environment, these reforms have produced impressive benefits for the private sector. The most notable achievement is price decontrol, which has lowered consumer prices across the board. Business tax reductions have enabled some firms to raise production, investment, and employment (although these gains may be offset by a recent increase in business license taxes), and the new commercial code has simplified business registration requirements. Changes in import-export regulations are too recent to be assessed, but their effects are expected to be minimal. Although the reform program has made progress in improving the private sector climate, its impact on public sector efficiency has been marginal at best. An examination of government expenditures indicates that no improvement has been made in the delivery of social services. Finally, while a voluntary early departure program for civil servants has led to real budgetary savings, there is concern that many of the departees will not be able to successfully establish private sector businesses.

020 PN-ABD-355  
MF \$1.08/PC \$10.53

## Trade policies and U.S. economic growth

Ho, Mun S.; Jorgenson, Dale W.

State University of New York at Buffalo. School of Management, Institute for the Study of Free Enterprise

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

(Institute for the Study for Free Enterprise's Conference on Government and Economic Growth and Development, Buffalo, NY, US, 15-16 Sep 1989)

Sep 1989, 81p.: charts, statistical tables, En

This paper uses an innovative method for estimating the impact of reductions in import tariffs and quotas on national welfare. Whereas traditional analyses were made within a static framework (whether using partial or general equilibrium models), this approach uses a dynamic general equilibrium model with full intertemporal equilibrium. With the added time dimension, the model is able to assess long-term policy impacts on economic growth, as well as the usual static welfare effects. Findings from this method indicate that a hypothetical elimination of world tariffs in 1980 would have the following results. The U.S. GNP growth rate would rise from 2.34% per annum to 2.37% for the period 1980-2000. Consumption would rise by 0.16% during that period, and welfare gain would increase to 0.82% in the steady state. Results are even more dramatic when some quotas are eliminated as well: for the period 1980-2000, the U.S. GNP growth rate would rise to 2.38%, and steady state consumption is some 0.31% higher compared to an initial gain of 0.10%. Unlike other general equilibrium models, this one also allows for full substitution among inputs in the production and consumption functions. Furthermore, technical change is endogenous (i.e., it is affected by input prices). This flexibility is of great importance given the sharp swings in commodity prices and the parallel changes in input mix in the past two decades.

021 PN-ABD-357  
MF \$1.08/PC \$3.90

## Human capital responses to technological change in the labor market

Mincer, Jacob

State University of New York at Buffalo. School of Management, Institute for the Study of Free Enterprise

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

(Institute for the Study for Free Enterprise's Conference on Human Capital and Economic Growth, Buffalo, NY, US, 26-27 May 1989)

May 1989, [29]p.: statistical tables, En

Does rapid technological change favor human capital rather than raw unskilled labor? To answer this question, this study analyzes 18 U.S. industrial sectors using annual PSID data on the male labor force (1968-1983) and Jorgenson-Conrad productivity growth indexes (1960-1979). By using rapid productivity growth (RPG) as a measure of technological change, the report explores the effects of RPG on the utilization of human capital in the labor market; on the wage structure; on labor mobility and turnover; and on unemployment. The analysis found that RPG within a sector raises: the percentage of educated workers; the relative wages of more educated personnel; the mobility of educated (especially young) workers; the use of training in the long run; and wage-tenure profiles. Moreover, both separation and unemployment rates in RPG sectors decline in the long term. Therefore, RPG within a sector does increase the demand for education and training of the sectoral work force. Includes 9 tables and a bibliography.

022

**\*PN-ABD-506**  
MF \$1.08/PC \$9.62

## Economics of small-scale wheat production technologies for Kenya

Longmire, Jim; Lugogo, Juma  
International Maize and Wheat Improvement Center  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Agriculture  
(Sponsor)

[1989], v, 65p.: statistical tables, En  
CIMMYT economics working paper, no. 89/01  
936411101

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

In Kenya, maize, in which the country is self-sufficient, is produced largely by smallholders using labor-intensive technologies, whereas wheat, of which the country remains a net importer, is produced on large farms via modern mechanized methods. This study transposes data from other countries (particularly Pakistan), where smallholder wheat technologies are already well established, to assess the likely profitability and comparative advantages of introducing labor-intensive technologies to boost wheat production among Kenyan smallholders. Focusing on Nakuru district, the study covers: (1) current mechanized wheat production; (2) alternative small-scale technologies for growing, harvesting, and threshing wheat; (3) the cost of different wheat and maize technologies for different field sizes, specifically, the time required for operations performed by machinery of different sizes, by bullocks, and by manual labor; and (4) farmer and national profitability of smallholder wheat technology. Results showed that labor-intensive wheat is more profitable than fully mechanized wheat only on fields under 4 hectares in size; further, the opportunity price of inputs suggest that more mechanized technologies are more profitable from the national perspective. A comparative advantage, therefore, generally exists in producing wheat on large farms with machinery-intensive technologies. The study also shows that smallholder wheat in Nakuru district offers little or no advantage over maize in terms of employment,

income, or foreign exchange. Nevertheless, the low opportunity cost of labor suggests that the potential does exist for labor-intensive wheat production in Kenya.

023

**\*PN-ABD-549**  
MF \$2.16/PC \$14.56

## Economics of smallholder maize production in Zimbabwe: implications for food security

Rohrbach, David D.  
Michigan State University. Dept. of Agricultural Economics  
University of Zimbabwe. Dept. of Agricultural Economics and Extension  
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. Zimbabwe (Sponsor)  
U.S. Agency for International Development. Bureau for Africa. Office of Technical Resources (Sponsor)  
1989, xi, 100p.: charts, statistical tables, En  
MSU international development papers. Working paper, no. 11  
9311190

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

Maize production has grown apace in post-independence Zimbabwe, especially among smallholders. Between 1979 and 1985, the harvests of these farmers tripled, constituting one-third of the formal markets. This report briefly reviews the trends in Zimbabwe's maize production, sales, stocks, and trade from 1970 to 1986, and then identifies the key policy, institutional, and technological sources of growth in smallholder production. The implications of these trends for the nation's food security are discussed, including an assessment of the distribution of gains from maize production and sales among smallholders and the factors involved in this distribution. Finally, the challenges facing Zimbabwe to further improve household

food security are examined. According to the report, Zimbabwe is clearly better off as a result of the increase in smallholder maize production. Average household food supplies have sharply increased and rising crop sales have improved average small farm incomes. However, despite the nation's large aggregate production surpluses, a significant proportion of small farmers still face transitory and chronic food deficits. The achievement of food security for all smallholders requires broader distribution of food production gains. Policies should therefore encompass strategies affecting food access as well as food supply.

**024** **PN-ABD-552**  
MF \$2.16/PC \$21.84

## **Study of cereal price interrelationships across markets and commodities at the wholesale and retail levels in Mali**

Mali. National Consultative Commission for Monitoring and Evaluation of Food Strategy  
Michigan State University. Dept. of Agricultural Economics  
U.S. Agency for International Development. Bureau for Africa. Mali (Sponsor)  
1989, viii, 156p.: statistical tables, En  
625097088

Beginning in 1981, the Government of Mali undertook several policy reforms to allow private traders to participate legally in cereal marketing, which up to then had been officially controlled by a parastatal. This study analyzes wholesale and retail market data on millet, sorghum, and maize to assess the impact of these reforms on the efficiency of the cereal marketing system. Its major objective is to determine how different markets are interrelated with respect to price formation, that is, the extent to which forces in one market influence price formation in another. The report also: examines the price interrelationships across the commodities in order to determine the degree of substitutability between the cereals involved; and evaluates the differences and similarities between the three techniques used to analyze the relevant data — bivariate correlations, calculation of margins, and multiple regression techniques. Results showed that the performance of

the Malian cereals marketing system differs across commodities and market levels, but that in general millet and sorghum markets are relatively better integrated than those of maize at both the wholesale and retail levels. Results as to which method of analysis is best were not conclusive.

**025** **PN-ABD-895**  
MF \$1.08/PC \$3.38

## **Coca economy in the Upper Huallaga**

Laity, Jim  
U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Peru (Sponsor)  
13 Jul 1989, 19p., En

Prepared in support of A.I.D. and Government of Peru efforts to stem the flow of coca from the Upper Huallaga Valley, this report presents data on the crop's role in the regional economy. Information covers activities directly related to coca cultivation and processing, as well as those dependent on income generated from coca production. Major findings include the following. Coca cultivation in the region is estimated at 50,000–100,000 ha, with annual dry leaf yields believed to be about 1.3 MT per ha. About 40% of production leaves the valley in paste form and about 60% as cocaine base. The total value of this production is estimated at \$540 million, of which \$375 million accrues to cultivators, small-scale paste producers, and wage laborers. In contrast, legitimate agriculture brings in less than \$50 million. The valley's labor force is estimated at 78,000, including about 15,000 migrant workers from surrounding provinces. While many split their time between coca and other crops, coca production accounts for the full-time equivalent of 40,000 workers. Wage laborers in coca earn about \$12 per day, 2.5–8 times more than laborers in other crops. Cultivator/owners gross about \$3,900 per year from a hectare planted in coca, which is 3–11 times more than the value of other crops. Recommendations for further study are provided.

026

PN-ABD-925  
MF \$1.08/PC \$5.98

## Is the Caribbean Basin initiative working?

Fox, W. James

U.S. Agency for International Development. Bureau for Latin America and the Caribbean. Office of Development Programs

16 Oct 1989, ii + 39p. + annex: statistical tables, En

The major goal of the Caribbean Basin Initiative (CBI) is to expand nontraditional exports from Basin countries by granting these countries U.S. trade preferences. This paper assesses the success of CBI since its initiation in 1984 on the basis of U.S. import trends. Analysis is limited to those CBI countries where A.I.D. has an active economic assistance program (i.e., Belize, Costa Rica, El Salvador, Guatemala, Honduras, the Dominican Republic,

***The Caribbean Basin Initiative has had a significant impact: nontraditional exports have risen from 46% of total exports to the United States in 1983 to almost 70% in 1988; new jobs are being created rapidly; and the Basin region's need for imports to support export expansion has spurred U.S. exports.***

Haiti, Jamaica, and the Eastern Caribbean islands). According to the study, CBI has had a significant impact: (1) nontraditional exports have risen from 46% of total exports to the United States in 1983 to almost 70% in 1988; (2) new jobs are being created rapidly; and (3) the Basin region's need for imports to support export expansion has spurred U.S. exports. These gains have been particularly evident in Costa Rica, Jamaica, the Dominican Republic, and (since 1985) Guatemala, and appear closely related to the willingness of these countries to introduce policy and institutional changes supportive of export growth — a positive trend which may be spreading to other CBI countries. On the negative side, the CBI countries have lost more due to U.S. sugar quotas and poor world prices for traditional commodities than they have gained from growth in nontraditional exports.

027

PN-ABD-943  
MF \$1.08/PC \$4.81

## Guide to debt for development: making international debt crisis work for development

U.S. Overseas Cooperative Development Committee  
Volunteers in Overseas Cooperative Assistance  
Debt-for-Development Coalition

U.S. Agency for International Development (Sponsor)  
Sep 1989, 32p.: chart, statistical tables, En

The Brady Program, announced in 3/89, embraces various innovative approaches to reducing the Third World's \$1.3 trillion debt. One of the new techniques is "debt for development," or the use of debt conversion techniques by nonprofit organizations to achieve development assistance objectives. This nontechnical guide is intended to help managers of these organizations and other development specialists identify opportunities for and carry out debt-for-development projects. The various types of debt conversions, including debt swaps for equity, donations, development, debt, and bonds, are described, followed by steps to arrange a debt-for-development deal and carry out the conversion process. According to the report, debt for development benefits all involved parties. For debtor countries, it reduces the overall hard currency payments required to service external debt. Instead, debt payments are made in local currency and go toward projects that enhance economic development, training, and conservation. For banks, debt for development can reduce arrearages on interest payments and increase the ability of countries to repay their remaining outstanding debt. For nonprofit organizations, these programs can stretch limited funds for development activities and provide opportunities for strengthening programs in countries that receive little or no foreign assistance.

028

PN-ABD-945  
MF \$1.08/PC \$10.01

## Macroeconomic policies in Jordan: implications for horticultural exports

Youngblood, Curtis E.; Scobie, Grant M.; El-Hurani, M. Haitham  
Sigma One Corp.  
U.S. Agency for International Development. Bureau for Asia and Near East. Jordan (Sponsor)  
Aug 1989, x, 64p.: charts, statistical tables, En 2780274

Macroeconomic policies have a significant impact on incentives for horticultural production and marketing in Jordan. This report explores this hypothesis by documenting recent performance in fruit and vegetable exports, linking this performance to the real exchange rate and domestic price behavior, and investigating some of the determinants of the real exchange rate. Chapter 2 highlights salient macroeconomic trends, while Chapter 3 focuses on the foreign trade sector in general and horticultural exports in particular. Various measures of the real exchange rate are derived in Chapter 4, and these form a key element in examining Jordan's ability to compete in export markets (Chapter 5). The report concludes with a preliminary analysis of the major determinants of the real exchange rate, a key measure of the overall effects of macroeconomic policies (Chapter 6). Particular attention is given to the effect of grants, loans, and remittances from the Gulf States on the flow of foreign exchange and the price of the Jordanian dinar. (Author abstract, modified)

029

PN-ABE-123  
MF \$1.08/PC \$9.36

## Market structure and the transition to high-end export products in developing countries

Biggs, Tyler; Yoon, Chang-Ho  
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)  
Jan 1990, ii, [67]p.: charts, statistical tables, En  
Employment and enterprise policy analysis discussion paper, no. 27  
9365426

The ability of a developing country to move into high quality export markets is largely determined by its domestic market structure. To examine this hypothesis, this paper uses U.S. import data for the 1978-87 period to analyze the linkage between export performance (narrowly defined as the transition to higher-quality products) and industrial organization in Korea and Taiwan. Both countries have experienced a rapid expansion and diversification of exports since the 1960's. Export-led growth in the two countries, however, has been accomplished with divergent domestic market structures. Large firms and conglomerates dominate the Korean export market, while small enterprises provide a majority of the output in Taiwan's industrial sector. Over the last 20 years, Korea has moved away from its old export commodity structure at a quicker rate than has Taiwan; it has also made the transition to higher-quality exports faster, with a 100% increase during the period studied compared to Taiwan's 60%. The paper concludes that a market structure dominated by conglomerates does have higher incentives and lower entry costs for many high-quality products and thus will make a more rapid transition in these industries. While smaller businesses may have some success in differentiating their products for niche markets or by just being quick to the market in areas with short product cycles, they generally have more trouble meeting the competition in high-quality markets.

030

\*PN-ABE-126  
MF \$2.16/PC \$14.69

## The Egyptian rice market: a model analysis of the effects of government interventions and subsidies

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

Sep 1989, [ii], 105p.: charts, statistical tables, En  
Working papers on food subsidies, no. 5  
936411114

*\*Also available from: International Food Policy Research  
Institute (IFPRI), 1776 Massachusetts Avenue NW,  
Washington, D.C. 20036-1998 USA*

Price, trade, and exchange rate policies followed by the Egyptian government over the past two decades have had a significant negative effect on agricultural production and exports. In the rice industry, policy has involved government procurement of rice, input subsidies, area and water control, rice distribution to consumers at below-market prices, foreign trade control, and fixed prices for quota rice. These policies have led to a drop in rice acreage from 1.2 million to 985,000 feddans and a deceleration of yield increases. At the same time, demand for rice has grown rapidly, causing a decline in rice exports and foreign exchange. This study presents a historical view of Egyptian rice production, consumption, and marketing channels, followed by an analysis of the institutional framework of government intervention within which the rice market functions. The need for policy reform and various reform approaches are discussed. The report then formulates an econometric model of the Egyptian rice market and discusses the results of the estimation process. The final chapter uses simulation experiments to estimate the historical impact of some of the policies that have been used to influence the Egyptian rice economy.

031

PN-ABE-375  
MF \$2.16/PC \$24.96

## Liberalization and privatization of the financial sector: guidelines and case studies

SRI International  
Ernst & Young  
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  
Private Enterprise, Office of Project Development  
(Sponsor)

Dec 1989, ii, 70p. + 4 annexes, En  
940202803

One of the key constraints to accelerated economic performance in developing countries is the absence of strong, dynamic financial systems. Many if not most Third World financial systems are repressed, primarily as the result of excessive regulation and government interference. Section I of this report presents the argument for privatization and reform of the financial sector, while Section II provides an overview description of the operating components of financial markets in developing countries and assesses the variables that lead to an underdeveloped market. Section III discusses criteria for determining appropriate financial reform and privatization activities. In Section IV, recommendations and a privatization checklist are presented for use by development practitioners involved in financial market development. Section V offers recommended areas for financial policy reform, while Section VI outlines a series of methods and guidelines to privatize financial institutions. The various positive and negative effects of these types of initiatives are examined in Section VII. Case studies of actual privatizations and accompanying policy reforms in seven countries — Bangladesh, Chile, Guinea, Jamaica, Mexico, New Zealand, and the Philippines — are appended, along with comprehensive lists of other financial institution privatizations and of publicly owned financial institutions in countries of interest to A.I.D. (Author abstract, modified)

# ECONOMICS

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032

PN-ABE-378  
MF \$2.16/PC \$21.45

## National export plan for Guatemala: 'Guatemala mil millones' — final report

Ernst & Young  
SRI International  
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. Guatemala  
(Sponsor)  
Jan 1990, iv, 136p. + 2 annexes, En  
940202803

Throughout most of the 1960's and 1970's, Guatemala experienced relatively rapid economic growth within the protective tariff barriers of the Central American Common Market. Since 1980, however, this protected market has collapsed as the result of economic deterioration in the politically unstable countries of Nicaragua and El Salvador. Guatemalan exports to Central America have declined by over 60%, or almost 3.5% of GDP. The plan outlined herein aims to refuel Guatemala's economy by gradually reducing the anti-export bias inherited from several decades of import substitution. The plan — which is named *Guatemala Mil Millones* because it will enable Guatemala to reach \$1 billion in nontraditional exports by 1995 — includes 45 specific recommendations. In the short term (1989-92), the plan calls for several programs to counteract the negative effects of current policies and economic institutions. These programs include special credit lines for exporters, effective and transparent duty-drawback and free-zone programs to ensure access of inputs at competitive prices and reduce costly bureaucratic procedures, and infrastructure improvements to facilitate transport and communication with world markets. In the medium (1993-96) and longer (1997-2000) terms, the plan emphasizes the importance of maintaining a stable, outward-oriented macroeconomic framework, including continued gradual reduction of effective protection rates.

033

PN-ABE-383  
MF \$1.08/PC \$9.23

## Mozambique: foreign investment promotion — final report

Wortman, Miles  
Mozambique. Foreign Investment Promotion Office  
Arthur Young and Co.  
U.S. Agency for International Development. Bureau for  
Africa. Market Development and Investment Staff  
(Sponsor)  
U.S. Agency for International Development. Bureau for  
Private Enterprise. Office of Project Development  
(Sponsor)  
U.S. Agency for International Development. Bureau for  
Africa. Mozambique (Sponsor)  
Jul 1989, 25p. + 3 appendices: statistical tables, En  
940202803

Over the past two years, the Government of Mozambique has shifted its policy toward promoting the private sector, foreign investment, joint ventures, and small enterprise development. A new agency, *Gabinete de Promocao do Investimento Estrangeiro* (GPIE), has been established to promote direct foreign investment and assist in the process of investment negotiation, regulation, and approval. This report identifies GPIE's training requirements, outlines a plan for an improved organizational structure, and suggests appropriate investment promotion strategies. In the current situation, Mozambique can only hope to attract foreign investment via innovative techniques such as public sector financing, exploring the potential of regional markets, developing debt-equity swaps and low capital-investment projects, etc. A major problem facing GPIE in this effort will be to merge the requirements of foreign investors with the types of projects available: while GPIE may identify and conceptually develop projects for investment, the needs of interested investors will force adaptation in project design. Serious private investment without public assistance will only be forthcoming from four sources: the European Community, Japan, the United States, and South Africa.

034

**PN-ABE-384**  
**MF \$1.08/PC \$7.80**

## Strategic plan for investment promotion in Paraguay

SRI International. International Policy Center  
 Arthur Young and Co.

Paraguay. Ministry of Industry and Commerce (Sponsor)

U.S. Agency for International Development. Bureau for Africa. Market Development and Investment Staff (Sponsor)

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. Paraguay (Sponsor)

Jul 1989, 18p. + 5 annexes, En  
 940202803

Since a leadership change in February 1989, Paraguay has taken important steps in attracting private sector investment into its economy. This report analyzes these measures (specifically, Decree-law No. 19/89) and provides a strategic plan to further promote domestic and foreign investment. While the current law represents an important foundation, it should explicitly state the private property guarantees of the Paraguayan constitution, detail the rules and regulations regarding the repatriation of capital and profits, and balance its strong regulatory focus with a definitive statement of the government's interest in attracting investment; these actions should perhaps be supplemented by issuance of a comprehensive investment code. Further, the investment approval process should be made rapid and as automatic as possible and clearly indicate investment incentives and the criteria for approval, perhaps ultimately requiring registration rather than approval for firms that do not request incentives. The report's promotional strategy covers both institutional and programmatic aspects to assist the Ministry of Industry and Commerce in a three-stage investment promotion plan and concludes with a list of key elements of successful investment promotion. Case studies detailing lessons learned from investment experiences in other countries are included.



*Since taking office in 1989, Paraguay President Andres Rodriguez (above left, with U.S. Congressman John Porter) has taken important steps to attract investment.*

035

PN-AAX-227

MF \$2.16/PC \$16.25

## **A.I.D. microenterprise stocktaking: synthesis report**

Boomgard, James J.

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

Dec 1989, xxx,[93]p.: statistical tables, En

A.I.D. evaluation special study, no. 65

A synthesis of A.I.D.'s recent stocktaking of its 32 microenterprise development projects and programs is presented. Three approaches are distinguished: enterprise formation, enterprise expansion, and enterprise transformation (i.e., graduation from the sector). Key findings include, inter alia, the following. (1) Measurement of program impacts — both their magnitude and sustainability — could be considerably improved. (2) Most programs focus on a limited number of beneficiaries, especially when compared to the number reached by financial institutions. The latter, however, cannot meet the long-term needs of microenterprises. (3) Microenterprise programs are well suited to integrating women into the development process and can reach members of the poor majority, but affect the poorest of the poor only indirectly, i.e., by creating jobs. (4) The programs can create productive new employment opportunities, particularly in manufacturing, and often have a significant influence on the development of financial markets. (5) Cost per beneficiary varies widely across programs, being relatively high in formation programs, often low in expansion programs, and high in transformation programs. (6) Cost per dollar loaned varied from \$0.19 for a simple credit program to \$7.68 for a women's enterprise formation program. In general, the available data, while limited, suggest very high returns to investments in microenterprises. (7) To be successful, the implementing agency needs honesty and good management, but not financial sustainability; some form of subsidy is usually required. (8) Programs that provide direct, short-term credit have a better record than do more ambitious transformation programs. However, the needs of the vast majority of microenterprises cannot be satisfied by small working capital loans. The question how to meet these

needs remains unanswered. (9) Successful programs focus first and foremost on developing profitable businesses and on other objectives, e.g., directing resources to disadvantaged groups, only if consistent with this purpose. (10) The role played by credit is much better understood than that played by technical assistance and training. (11) When possible, transformation efforts should focus on graduating programs (from project to commercial funding sources) rather than enterprises.

036

PN-AAX-228

MF \$2.16/PC \$13.00

## **Taking stock of A.I.D.'s microenterprise portfolio: background and conceptual overview**

Boomgard, James J.; De Santis, Dennis; et al.

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

Dec 1989, ix, 38p. + appendix, En

A.I.D. evaluation special study, no. 66

During 1988–1989, A.I.D. undertook a major stocktaking of its microenterprise development activities to identify effective projects and programs and the factors responsible for their success. This paper provides a conceptual overview of microenterprises to help clarify some of the issues involved in the stocktaking exercise. After an introductory review of the exercise, Section 2 presents a brief history of microenterprise development and of A.I.D.'s involvement in it. Section 3 examines the nature and characteristics of microenterprises, locating them midway between the survival activities of the very poorest and more complex small-scale enterprises and identifying the entry barriers between these levels of economic activity. It also presents a framework for comparing programs by distinguishing three approaches to microenterprise development: (1) enterprise formation, which integrates those in the survival-oriented economy into the microeconomy; (2) enterprise expansion, which improves the performance of existing microenterprises; and (3) enterprise transformation, which graduates firms from microenterprises to small-scale enterprises. Section 4 focuses on program performance as measured by the criteria of impact on beneficiaries, cost-

effectiveness, and institutional sustainability. Section 5 outlines the major factors which influence program performance: targeting, strategy, credit tactics, technical assistance/training tactics, and institutional factors. An appendix profiles the 32 microenterprise assistance programs reviewed during the exercise.

**037**

**PN-ABD-471**  
**MF \$3.24/PC \$35.36**

## **Quick reference guide to private sector initiatives in Latin America and the Caribbean**

Ey, David J.; Roth, Kristin J.; Mendez, Michelle A.  
International Science and Technology Institute, Inc.  
U.S. Agency for International Development. Bureau for Latin America and the Caribbean (Sponsor)  
Sep 1989, ca.100p.: charts, En

Since 1982, A.I.D.'s Latin American and Caribbean (LAC) Bureau has paid increasing attention to private sector initiatives. This guide presents brief descriptions of the 103 projects/programs currently in the LAC Bureau's private sector portfolio. Only active projects, which are either funded with Economic Support Fund or Development Assistance funds, or in the case of local currency funding, exceed the equivalent of \$500,000, are included. An initial section presents a Master List of all LAC private sector projects/programs, first by region/country, then according to seven key program areas (policy dialogue, credit/banking, investment/export promotion, privatization, micro/small business support, managerial training, and tourism development). Succeeding sections provide profiles of regional and country projects. Each entry contains reference data (i.e., project title and number, planned completion date, funding level) along with statements of the project's purpose, activities, and results. Budget information is also provided in some cases.

**038**

**PN-ABD-939**  
**MF \$4.32/PC \$39.26**

## **Liberia: small and medium enterprise assessment — final report**

Ernst & Young  
U.S. Agency for International Development. Bureau for Africa. Liberia (Sponsor)  
U.S. Agency for International Development. Bureau for Private Enterprise. Office of Project Development (Sponsor)  
Oct 1989, 2v.: statistical tables, En  
940202803

In Liberia, most small and medium-sized enterprises (SME's) are owned by Liberians or other Africans, and most larger enterprises are owned by foreign nationals. This report aims to define USAID/Liberia's potential role in developing the SME sector, which currently contributes only 6% of GDP and 3%–5% of total employment. An overview of the SME sector is presented first — revealing possible target populations and subsectors for a USAID program — followed by a more general discussion of the Liberian economy and the status of SME's. Subsequent chapters discuss: the financial sector (including the National Bank of Liberia, commercial banks, development finance institutions, and Partnership for Productivity/Liberia); constraints to SME development; and the roles of specific government agencies. According to the report, all businesses, even concession ventures (which are actively promoted in Liberia), face an adverse business climate and the risk of failure. Specific constraints on SME's include a shortage of skilled workers and managers, lack of business training, high levels of competition in many domestic markets, and discrimination against Liberian entrepreneurs. Moreover, while policies to stimulate SME development exist, they are generally not being implemented, and rent seeking occurs at all levels of government. The report concludes with recommendations for programs and projects in the areas of credit; technical assistance, technology transfer, and training; institutional development; export market identification; and policy reform.

# PRIVATE ENTERPRISE

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039

PN-ABE-050

MF \$2.16/PC \$14.82

## MAPS: Kenya, phase III — private sector diagnosis — final report

J.E. Austin Associates

Ernst & Young

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

Nov 1989, 26p. + 24 annexes: charts, statistical tables, En

940202803

More than 700 businesses representing all major sectors of the Kenyan economy were surveyed for this profile of the country's private sector. Questions concerned the general business climate, as well as perceived resource constraints in the areas of credit, labor, energy, transportation, communications, and land. The effectiveness of business associations was also assessed. Major findings include the following: (1) Kenya's regulatory environment is the single greatest constraint on private sector growth. (2) Smaller firms have virtually no access to formal credit. (3) Uncertainty regarding land tenure is a major impediment to the smallest enterprises, particularly women-owned and Kenyan-owned firms. (4) Business associations do not provide the type of assistance most needed and wanted by smaller firms. (5) More linkages between large and small enterprises are needed. (6) There is a substantial degree of interest in exporting. (7) Lack of affordable transportation is a constraint to most firms. (8) Worker productivity is not perceived as a serious problem. (9) Women still face substantial obstacles to full participation in business. Includes statistical results of the survey and a copy of the survey questionnaire.

040

PN-ABE-648

MF \$1.08/PC \$6.24

## Reorienting export production to benefit rural producers: annatto processing in Peru

Hyman, Eric L.; Chavez, Richard J.; Skibiak, John  
Appropriate Technology International

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

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

Aug 1989, 46p.: charts, statistical tables, En  
9365428

One reason for the unequal distribution of wealth between urban and rural areas is the failure of agricultural marketing systems to allow farmers to participate directly in the processing, transport, and resale of their products. A recent project in rural Peru devoted to developing and commercially applying a simple, labor-intensive technology for annatto — a natural food colorant derived from the seeds of the achiote tree (*Bixa orellana*) — demonstrates the inherent advantages of locating processing industries closer to the raw material sources. This report provides a case study of the project. Topics covered include: project description; raw material and product; supply and demand for annatto; growing and harvesting of achiote trees; dehiscing of achiote seeds; annatto processing technology; technical and managerial problems at the processing plant; effects of government policies; impacts on small-scale producers; and financial and economic viability of annatto processing. The study shows that the decentralization of primary processing industries is an effective strategy for rural development where appropriate technologies for small-scale production are available and infrastructure is adequate. However, such rural industries are often constrained by an inability to obtain financing (especially working capital) and to attract and retain capable managers, as well as by the macroeconomic and sectoral policies of governments that favor established, large-scale industries and traders.

041

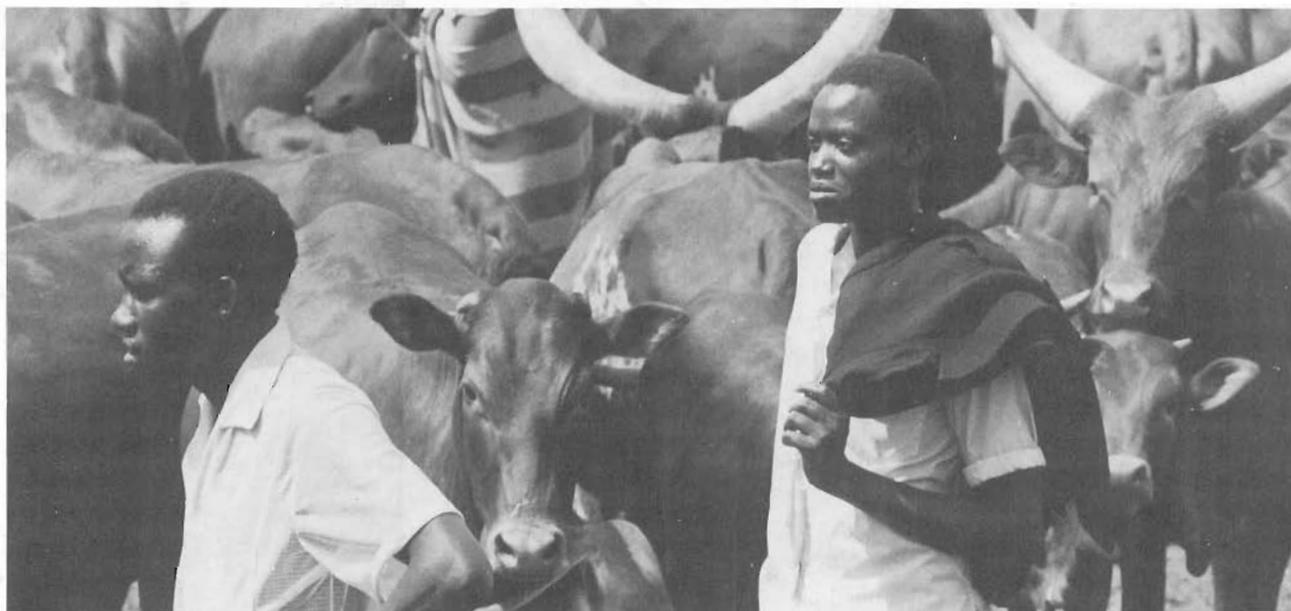
PN-ABE-706  
MF \$3.24/PC \$32.24

## Departed Asians Property Custodian Board: a summary of findings and recommendations for a divestiture program

Garcy, Fred; McCorry, Jesse; M'Poko, Bene  
Center for Privatization  
Scientex Corporation  
U.S. Agency for International Development. Bureau for  
Private Enterprise (Sponsor)  
Sep 1989, 3v.: charts, En  
[Center ] project / Center for Privatization, no. 118  
Contents: v.1. Summary of findings and recommenda-  
tions for a divestiture program — v.2. Study of the  
potential for divestiture — v.3. Appendices  
9400008

Expatriate Asians who were expelled from Uganda in 1972 by the Idi Amin regime were forced to leave behind as many as 7,000 pieces of property, including 200 agricultural, 300 agro-processing, 700 industrial, and 200

residential holdings, with the rest commercial or mixed. These properties, now the responsibility of the Departed Asians Property Custodian Board (DAPCB), were the backbone of Uganda's economy in 1972 and have the potential to make a major impact on the country's rehabilitation and growth. Due to the uncertainty of their ownership, however, the properties have been allowed to deteriorate progressively over the last 17 years and a considerable number are dilapidated and abandoned. In order to provide incentives for proper maintenance and rehabilitation, the Government of Uganda aims to transfer property ownership to the private sector. Volume I of this report summarizes a divestiture plan encompassing: reorganization of the DAPCB; the tendering process; and the financing of purchases from the DACPB. Technical assistance, training, and commodity needs are identified, and recommendations are made regarding policy decisions. A workplan for the sale of the first 25 properties is also provided. Volume II presents an expanded discussion of the privatization strategy and includes more detailed procedures for ensuring a program that is fair and efficient and so can hope to win the support of the majority of Ugandans and of the international donor community as well. (Author abstract, modified)



*Beef cattle ranchers in Uganda. Asians expelled from Uganda by Idi Amin left behind 7,000 pieces of property. Divestiture of these holdings will facilitate substantial expansion of Ugandan agriculture and other private sector activities.*

042

PN-AAX-230  
MF \$2.16/PC \$15.08

## Review of A.I.D. experience with farming systems research and extension projects

Byrnes, Kerry J.

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation  
Jan 1990, xix, 43p. + 7 appendices, En  
A.I.D. evaluation special study, no. 67

A.I.D.'s experience with farming systems research and extension (FSR/E) has been mixed. FSR/E projects have provided opportunities for developing country professionals to acquire training and field experience in this new approach to research. However, most projects have not had the impact on technology development and transfer or institutionalization of FSR/E as had been assumed in project designs. This report, based on a case study review of evaluations of 12 A.I.D.-funded projects, synthesizes the Agency's experience with FSR/E from the mid-1970's to the mid-1980's and assesses the impact of these projects on agricultural development. Major sections of the report overview FSR/E, summarize project experiences, provide lessons learned, and discuss the approach's future in A.I.D. projects. FSR/E's performance has been affected by several key constraints, including a lack of the following: (1) a problem solving approach; (2) effective collaboration across disciplines; (3) links of research with extension; (4) consensus on methodology; (5) stakeholder understanding of FSR/E; (6) agricultural policy and strategy defining FSR/E's role in research and extension; (7) staffing of projects with trained personnel; and (8) government funding to meet recurrent costs. The report concludes that while the FSR/E concept has not been well understood or carried out by project implementers and A.I.D. management, agricultural projects that seek to strengthen technology development and transfer can benefit by using the concept more effectively. (Author abstract, modified)

043

PN-ABC-470  
MF \$1.08/PC \$3.38

## Natural convection grain dryer for humid developing countries

Haque, Ekramul

Kansas State University. Food and Feed Grain Institute  
U.S. Agency for International Development. Bureau for Science and Technology. Office of Nutrition  
(Sponsor)  
Jan 1990, vii, 27p.: ill., En  
Postharvest grain systems R&D research report, no. 33  
9364144

Intended as a "how-to" guide, this paper details the construction and operation of a natural convection grain dryer for humid developing countries using only locally available resources. The dryer can be built from either concrete or mud blocks and does not need any electro-mechanical device for operation. It is modular in design (with a single unit capacity of 300 kg of paddy per 12 hour day operation, on a 6% moisture removal basis, and a capacity of 3 MT per day for a 10-unit size) and operates on a wide range of fuels, including wood, rice husks, and other agricultural byproducts. A 10-unit dryer could be handled by only 2-3 persons. The small length and width of the dryer allows a fire to burn uniformly over its cross section which results in uniform grain drying. Experiments conducted with the dryers in Peru and Belize demonstrated the feasibility of attaining a wide range of drying air temperatures (40 to 75 degrees Celsius) under the grain bed by controlling the fuel and combustion rate. Rough rice was dried from 20% initial moisture to 14% in about an hour. While this is an undesirably high drying rate for rice, it clearly demonstrates the capability of the dryer for application to humid tropics where labor and fuel such as wood, straw, and rice husks are cheap. (Author abstract, modified)

044

\*PN-ABD-486  
MF \$4.32/PC \$48.10

## Annotated bibliography on rodent research in Latin America, 1960–1985

Mitchell, G. Clay; Powe, Florence L.; et al.  
U.N. Food and Agriculture Organization  
U.S. Dept. of Agriculture. Animal and Plant Health  
Inspection Service. Denver Wildlife Research Center  
(Sponsor)  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Agriculture  
(Sponsor)  
1989, 363p., En  
FAO plant production and protection paper, no. 98  
9364173

*\*Also available from: Food and Agriculture Organization  
of the United Nations, Via delle Terme di Caracalla  
00100 Rome, Italy*

From 1950 through 1973, the Food and Agriculture Organization and the World Health Organization published three bibliographies on rodent research. The present work updates the portions of these bibliographies pertaining to Latin America (defined as including Mexico, Central and South America, the Caribbean, and the West Indies), and includes 1,742 citations dating from 1960 through 1985. Entries are listed alphabetically by author and include publications on rodent taxonomy, distribution, biology, ecology, behavior, disease, damage, control, and public health. Publications dealing with rodents as laboratory or test animals are not listed unless they fall under one of these categories. Brief abstracts are provided for most citations, and author, subject, taxonomic, and geographical indexes are included.

045

PN-ABD-551  
MF \$2.16/PC \$25.35

## Analysis of the structure of the wholesale cereals market in Mali

Mehta, Mona  
Mali. National Consultative Commission for Monitoring  
and Evaluation of Food Strategy  
Michigan State University. Dept. of Agricultural Eco-  
nomics  
U.S. Agency for International Development. Bureau for  
Africa. Mali (Sponsor)  
1989, ix, 180p.: statistical tables, En  
625097088

This marketing study analyzes data on coarse grain transactions from four wholesale markets in Mali, where cereals account for 72% of total calorie consumption. The report focuses on the structure of the cereals market, the conduct of wholesalers, and market performance. The role of the cereals market in the context of food security and macroeconomic policy is also examined. Data on marketing activities in the years 1985 and 1988 were analyzed by comparison of means and modal values, cross-tabulations, and frequency distributions. Correlation analyses and cal-

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***Market liberalization has encouraged market entry, increased cereals specialization, and, according to traders, reduced transaction costs and consequently improved efficiency.***

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ulation of spatial and temporal marketing margins provided indicators of market performance. Findings reveal that market liberalization has encouraged market entry, increased cereals specialization, and, according to traders, reduced transaction costs and consequently improved efficiency. However, the liberalization process must be viewed as ongoing and additional policy changes will need to be made. For example, Bamako continues to receive a disproportionate share of market investments, and efforts should be made to enhance the roles of the other markets.

046

\*PN-ABE-269  
MF \$3.24/PC \$37.57

## **Making the link: agricultural research and technology transfer in developing countries**

Kaimowitz, David, ed.

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

1990, xiv, 278p.: charts, En

Published by Westview Press, Boulder, CO, US

Includes references and index

936411113

*\*Also available from: Westview Press, 5500 Central  
Avenue, Boulder, CO 80301 USA*

Agricultural research and technology transfer are poorly linked in developing countries, making research efforts less likely to be relevant and farmers less likely to receive needed information and inputs. This book presents papers from 11 well-known specialists to provide a fresh, multi-disciplinary approach to this problem. Chapter 1 discusses the concept, operations, and management of an agricultural knowledge and information system. Using examples from former British colonies in Africa and Asia, Chapter 2 shows how external pressure on research and technology transfer institutions from public and private entities can improve system performance. Chapter 3 traces the growth and increasing complexity of the demands placed on research and extension agencies by policymakers in Latin America and their effect on links between the two groups. Chapter 4 examines the linkage problem from the perspective of social psychology, while Chapter 5 looks at how on-farm, client-oriented research initiatives in nine countries of Africa, Asia, and Latin America coordinated their activities with extension. Chapter 6 focuses on the research-technology transfer links within the private sector and between the private and public sectors, and on the lessons public managers can learn from their private counterparts. The final chapter summarizes the key points from the

previous papers, grouping these points according to whether they are concerned with political, technical, or organizational factors.

047

PN-ABE-271  
MF \$3.24/PC \$34.19

## **Agricultural development and policy in Senegal: annotated bibliography of recent studies, 1983-89**

Crawford, Eric W.; Bingen, R. James; Versel, Malcolm  
Michigan State University. Dept. of Agricultural Eco-  
nomics

Michigan State University. Institute of International  
Agriculture

U.S. Dept. of Agriculture

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

15 Jan 1990, xiv, 254p., En

6850294; 625097085

Bibliography contains 356 annotations of reports, articles, and books of relevance to agricultural development and policy in Senegal. Most of the studies cited were published since 1983, the period marking the formulation and enunciation of Senegal's New Agricultural Policy. The bibliography is indexed by title, keyword, and relevance to USAID/Senegal program planning. Both English and French materials are covered, but all annotations are in English. Annotations summarize the objectives, time period, methodology, and findings/recommendations of each study.

048

PN-ABE-413  
MF \$1.08/PC \$6.89

## Harvest assessment of cereal production

Tulane / Pragma Group

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

Jan 1990, iii, 50p.: maps, statistical tables, En  
Famine early warning system (FEWS) [country report].  
Mauritania, Mali, Burkina [Faso], Niger, Chad, Sudan, Ethiopia

The 1989/90 cereal crop harvest was average for most countries of the Sahel. However, crop failures and distribution problems are threatening the region's eastern third. The northern regions of Ethiopia showed a grave shortfall in cereal production due to drought-induced crop failure and civil war. To meet the needs of some 3.5 to 5 million people at risk of famine, at least 750,000 metric tons of emergency aid is required. The at-risk population in southern Sudan, while much smaller than that of Ethiopia, is at 275,000 and increasing as fighting intensifies between the government and guerilla soldiers. The internal strife in both countries is hindering or even preventing the delivery of emergency food supplies to the vulnerable areas. Niger will also need emergency food aid to help in meeting localized food shortages. In the other Sahelian countries discussed here (Mauritania, Mali, Burkina Faso, and Chad) and in government-held areas of Sudan, harvests coupled with other resources, i.e., in-country stocks, programmed food aid, food imports, and non-farming activities, will cover national consumption needs. Traditional coping mechanisms appear to be functioning well in localized areas experiencing production shortfalls, except in the highly deficit areas of Niger and in Mauritania's Senegal River valley.

049

\*PN-ABE-507  
MF \$1.08/PC \$2.99

## Impact of new crop technology on the agricultural division of labor in a West African setting

von Braun, Joachim; Webb, Patrick J.R.

International Food Policy Research Institute

U.S. Agency for International Development. Bureau for Science and Technology. Office of Agriculture  
*Economic development and cultural change*, v. 37(3),  
Apr 1989, p. 513-534: statistical tables, En  
936411114

*\*Also available from: International Food Policy Research Institute, 1776 Massachusetts Ave. NW, Washington, DC 20036-1988 USA*

Promoting "women's crops" in agricultural development does not automatically benefit women more than men. In The Gambia, rice has traditionally been grown by women; the introduction of a new rice production technology — centralized pump irrigation — was designed to preserve this customary role even as it promoted income-generating opportunities. Instead, it transformed rice production arrangements and facilitated a series of complex changes affecting the whole division of labor between men and women within the Gambian extended family (compound). Once grown by women on individual farms, rice has become a communal crop grown under the authority of the (male) head of the compound, thus reducing the general opportunity for women to grow rice as a private cash crop (though leading some women to expand individual production of upland export crops such as groundnuts and cotton). This concentration of economic power in the head of the compound increases his ability to impose "taxes" (e.g., cash or in kind contributions) on compound members and to redistribute benefits within the compound. Inefficiencies of resource allocation similar to those stemming from rent-seeking, statist economies may thus develop within the compound "mini-state," with technological change in agriculture being rationed out to (male) household heads. On the other hand, further evolution of the system may lead to the splitting of large compounds into

# AGRICULTURE

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smaller operating units. This may be an advantage for women, who are taxed less by communal agriculture in smaller compounds.

**050**

**\*PN-ABE-511**  
MF \$1.08/PC \$1.43

## External demand constraints for agricultural exports

Koester, Ulrich; Schafer, Hartwig; Valdes, Alberto  
International Food Policy Research Institute  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Agriculture  
(Sponsor)  
*Food policy*, v. 14 (3), Aug 1989, p. 274–283: statistical  
tables, En  
936411114

*\*Also available from: International Food Policy Research  
Institute, 1776 Massachusetts Ave. NW, Washington, DC  
20036-1998 USA*

Structural adjustment policies geared towards export growth are being promoted throughout the developing world. There is considerable skepticism, however, regarding the strategy's potential for success. Critics have cited the following possible constraints: (1) rigidities in domestic output supply responses and (2) the inability of world markets to absorb the volume of exports produced. This report provides an empirical analysis of the prospects for an export-oriented growth strategy in sub-Saharan Africa. Since agriculture plays a dominant role in the region, the focus is on the agriculture sector and agricultural export earnings. The study found that countries such as Ghana and Ivory Coast, which rely heavily on export earnings from cocoa and coffee, are most vulnerable to negative repercussions from increased exports. However, even these countries stand to gain through structural adjustment since revised domestic relative prices may induce diversification in production and exports. Moreover, simultaneous implementation of adjustment policies could be considered a unique chance to integrate African markets and thus loosen their dependence on traditional markets. The report concludes that structural adjustment will be most effective if

industrialized countries open up their borders, especially for trade in processed agricultural products with high labor content.

**051**

**PN-ABE-705**  
MF \$4.32/PC \$48.88

## Madagascar agricultural sector assessment

Dash, Lawrence; Steedman, Charles; et al.  
Devres, Inc.  
U.S. Agency for International Development. Bureau for  
Africa. Madagascar (Sponsor)  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Program (Sponsor)  
9 Feb 1990, v, 189p. + 5 annexes, En  
9361406

While Madagascar has considerable potential to boost agricultural production, the country has been beset by both environmental and policy-related problems. This report presents an analysis of the agricultural sector and provides a series of recommendations regarding the optimal role for USAID/M during 1990–1997. Maintaining soil fertility of cultivated upland soils is probably more difficult in Madagascar than in most other countries. Large areas of potential and existing cropland are already permanently lost due to the country's unusual form of gully erosion. Sheet erosion is further decreasing the productivity of most upland crop soils and threatens rainfed agriculture. These environmental constraints can jeopardize future production if preventive measures are not implemented soon. In addition, very serious damage was done to the agricultural sector by the Government's policies during 1974–1985, when many enterprises were nationalized, prices and marketing were controlled, and the currency was overvalued. Agronomic research on peanuts, cassava, and other crops was stopped dead when the French research institutes departed in 1974, and even contact with the International Rice Research Institute was lost. In the early 1980's, however, reforms were gradually introduced, calling for the decentralization of the economy and private sector involvement in agriculture. Initial improvements were small, but there are indications of continuing and possibly

accelerating progress today. Most of the major needed sectoral policy reforms have now been made. A key recommendation from the report is that USAID/M should focus on those areas that are not being adequately addressed by other donors (cassava research, animal traction) or that allow for collaborative efforts with others (soil erosion, seeds, rural credit).

**052**

**PN-ABE-749**  
MF \$2.16/PC \$15.21

## Moisture sorption of bagged grain stored under tropical conditions

Guritno, Purboyo; Haque, Ekramul; Chung, Do Sup  
Kansas State University. Food and Feed Grain Institute  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Agriculture  
(Sponsor)

Feb 1990, x, 117p.: charts, statistical tables, En  
Postharvest grain systems R&D research report, no. 34  
9364144

In the humid tropics, moisture is possibly the most serious cause of storage losses in grain. This study provides data on the rate of moisture sorption of bagged grain, uses accepted scientific models to explain moisture sorption, and assesses the impact of various bag fibers on moisture sorption rates. Experiments were conducted using shelled corn and rough rice, using three relative humidities, two initial moisture contents, and two types of bags (jute and polypropylene). The equations of Chung, Wicke, Patrick and Payne, and Elovich and Zhabrova were used to fit the experimental data. It was found that moisture at the surface of both jute and polypropylene bags containing shelled corn, and stored for 90 days under conditions of 80% or 90% relative humidity and 26.7 degrees Celsius, increased from an initial level of 14% to about 16%. At this moisture level, grains become very prone to insect and fungal deterioration. However, under the same environmental condition, the moisture content of rough rice did not increase to such a high level. Grain in jute bags adsorbed and desorbed moisture more readily than grain in polypropylene bags. These results correlated well with the adsorption rate equations of Chung and Elovich/Zhabrova.

**053**

**\*PN-ABD-499**  
MF \$4.32/PC \$48.10

## Rice farming systems new directions: proceedings of an international symposium, 31 January–3 February 1987, Rice Research and Training Center, Sakha, Egypt

International Rice Research Institute  
Egypt. Ministry of Agriculture and Land Reclamation  
(Sponsor)  
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. Egypt (Sponsor)  
(International Symposium on Rice Farming Systems  
New Directions, Sakha, EG, 31 Jan–3 Feb 1987)  
1989, 375p.: charts, statistical tables, En  
936411102

*\*Also available from: International Rice Research Institute, P.O. Box 933, 1099 Manila, Philippines*

Although rice does not dominate Egyptian agriculture as it does that of many Asian countries, it is an important crop: it is the most important staple after wheat, the second major foreign exchange earning agricultural commodity, and the most effective and profitable means of reclaiming hundreds of thousands of feddans of salt-affected lands. These proceedings focus on the productivity, stability, and sustainability of Egyptian rice farming systems. Papers concern the following topics: (1) the role of rice in Egyptian and global agriculture in 2000 (four papers), (2) genetic rice improvement (five papers), (3) crop management (eight papers), (4) new directions for rice farming systems (six papers), (5) biotechnology and rice improvement (four papers), and (6) postharvest technology and by-product utilization (three papers). Since the symposium coincided with the dedication of a new rice research complex in Sakha, Egypt, the papers also suggest ways in which this center might assist in human resource development and technology sharing in countries with agro-ecologies similar to those of Egypt. In addition, the report presents

summaries of 35 recent research activities in Egypt and a list of participants' recommendations both to improve rice productivity and to expand the area under rice cultivation.

**054**

**\*PN-ABD-555**

**MF \$3.24/PC \$26.26**

## **Summary proceedings of a workshop on trends and prospects of cassava in the Third World**

Sarma, J.S., ed.

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

(Workshop on Trends and Prospects of Cassava in the  
Third World, Washington, DC, US, 10–12 Aug 1987)  
Jul 1989, vii, 195p.: charts, statistical tables, En  
936411114

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

Cassava is a staple food crop cultivated in several developing countries, largely by small farmers, and is an important source of rural employment, particularly for women. During the past 20 years, cassava production expanded rapidly in Asia in response to increased demand for imports by the European Community, where it is used as livestock feed. There are concerns, however, about the stability of the European demand and also about the likely decline in demand for cassava as a food crop as Third World incomes rise. Papers presented in these conference proceedings examine the trends and prospects for future cassava production, utilization, and trade. The first five papers contain data on the current situation and trends in cassava production and consumption, the yield potentials of cassava, the economics of the crop in Africa, cassava consumption in Latin America, and cassava's potential as a feed source in tropical Latin America. The final six papers present case studies of cassava potential in India, Indonesia, the Philippines, Thailand, Nigeria, and Zaire. There was consensus at the workshop regarding the con-

siderable potential for increasing yields per hectare as well as total output of cassava in the Third World. This is of particular importance for food security in Africa, where it is a major staple. Cassava also has a potentially larger role as livestock feed, as an industrial raw material, and as a foreign exchange earner in several developing countries.

**055**

**\*PN-ABD-556**

**MF \$3.24/PC \$25.87**

## **International Potato Center [CIP], annual report 1989: worldwide potato and sweet potato improvement**

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

1989, xii, 178p.: ill., charts, statistical tables, En  
936411107

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

In the past year, the International Potato Center (CIP) has continued its emphasis on global regionalization, with increased research workloads in Latin America, Africa, and Asia. An emerging CIP priority is for collaborative teams to create improved varieties by crossing local potato varieties with materials from CIP. These teams are comprised of scientists from CIP and national agricultural research systems, and the CIP contributions provide combinations of resistances and tolerances to biotic and abiotic stresses. This annual report highlights major activities in each of the following CIP research thrusts: the collection, maintenance, and utilization of unexploited genetic resources; production and distribution of advanced breeding material; control of bacterial and fungal diseases; control of virus and virus-like diseases; integrated pest management; warm-climate potato and sweet potato production; cool-climate potato and sweet potato production; postharvest technology; seed technology; and food systems research. The report also covers CIP's personnel development, publications, and research and consultancy contracts and special projects.

056

\*PN-ABE-125  
MF \$8.64/PC \$94.51

## Bean production problems in the tropics

Schwartz, Howard F., ed.; Pastor-Corrales, Marcial A., ed.

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

2nd ed., Aug 1989, xiv, 654p.: ill., charts, statistical  
tables, En

936411104

\*Also available from: *International Center for Tropical  
Agriculture, Apartado Aereo 6713, Cali, Columbia*

The common dry bean, *Phaseolus vulgaris*, is the most important food legume for direct human consumption in the world. But its production in tropical climates is besieged by an array of disease, insect, and soil fertility constraints. Diseases are often the greatest problem in tropical bean production, particularly in Latin America. More plant pathogens, greater pathogenic variation, and more virulent isolates of these pathogens are found attacking beans in Latin America and Africa than in temperate regions. The prevalence and importance of each disease, however, varies considerably with locality, season, year, and cultivar. Insect pests also cause considerable pre- and post-harvest damage to bean crops. Some pests are restricted to one continent (e.g., the bean fly in Africa or the bean pod weevil in Mexico and Central America), while other insect pests are widespread in most tropical bean-producing regions (e.g., bruchids and leafhoppers). Finally, in Latin America and Africa, beans are grown on many different soil types, which often limit plant growth and yields because of nutritional deficiencies and toxicities. This book brings together the work of 29 bean researchers to present an exhaustive look at bean production problems in the tropics. Major subjects include: specific fungal, bacterial, viral, and mycoplasma diseases (including leaf spots, rust, anthracnose, root rot, blight, mold, and viruses

transmitted by aphids, beetles, and whiteflies); insects and other pests; and other production constraints, such as nutritional disorders, nematodes, and seed pathology.

057

\*PN-ABE-352  
MF \$2.16/PC \$14.56

## Maize research and development in Pakistan

Pakistan. Agricultural Research Council  
International Maize and Wheat Improvement Center  
U.S. Agency for International Development. Bureau for  
Asia and Near East. Pakistan (Sponsor)  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Agriculture  
(Sponsor)

1989, xi, 100p.: ill., charts, statistical tables, En  
936411101

\*Also available from: *International Maize and Wheat  
Improvement Center, P.O. Box 6-641 Londres 40, Mexico  
00660, D.F. Mexico*

Maize is frequently cited as a crop that was bypassed by Pakistan's green revolutions in wheat and rice, and more recently, cotton. While the returns to investments in maize research and extension have been positive, they have not been nearly as great as in other crops. Major factors that have reduced the potential returns from maize research have been a nonfunctional certified maize seed industry, low input use, poor agronomic practices, and poorly developed market channels. The purpose of this report is to review Pakistan's maize research and development activities over the past 30 years. The evolution of the national maize research system is reviewed, including the collaborative role played by the International Maize and Wheat Improvement Center (CIMMYT). The report then examines the current status of maize production technologies, drawing on various farm-level surveys conducted under the Collaborative Program between CIMMYT, the Pakistan Agricultural Research Council (PARC), and the provincial maize research programs in North West Frontier Province and Punjab. Recommendations are presented for

# AGRICULTURE

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increasing maize productivity in the near term and improving the research and development infrastructure for maize. (Author abstract)

**058**

**\*PN-ABE-711**

MF \$1.08/PC \$5.72

## Evaluation, choice and use of potato varieties in Kenya

Crissman, Linda McArthur

International Potato Center

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

Oct 1989, 44p.: maps, statistical tables, En  
Social Science Department working paper / International Potato Center, no. 1989-1

936411107

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

Potatoes are attractive to many farmers in Kenya because they can be used as both a food and a cash crop. This paper describes the role of the potato in the Kenyan food system, the distribution of potato varieties, and the process farmers use to evaluate and choose them. The Kikuyu and Meru tribal groups are the main potato producers and grow numerous varieties — both “official” and “local.” The most popular local variety, Nyayo, is grown by 53% of farmers, but is not included in the official seed program. In fact, certified seed is used by less than 5% of all farmers; this is because of its high cost and inadequate distribution system, as well as the lack of certified seed for preferred varieties and farmers’ lack of information about the seed program. Farmers use a number of objective and subjective criteria for choosing among varieties. While they may evaluate a particular variety as having agronomic merit, other considerations such as trader preference or the availability of seed can dissuade them from cultivating it. Except in Meru district, most farmers continue planting their own seed or that obtained from neighbors until the seed begins to degenerate. When production levels fall, farmers generally use new varieties to recover former yield levels instead of renovating seed. Meru district, however,

is quite distinct from other production areas because of the stability of a single variety (Kerr’s Pink), the higher level of farmer expertise in husbandry and marketing, and the greater degree of commercialization.

**059**

**\*PN-ABE-712**

MF \$1.08/PC \$9.62

## Seed potato systems in the Philippines: a case study

Crissman, Charles C.

International Potato Center

Philippines. Ministry of Agriculture. National Science & Technology Authority. Philippine Council for Agriculture, Forestry & Natural Resources Research & Development (Sponsor)

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. Philippines (Sponsor)

1989, xi, 68p.: charts, statistical tables, En  
936411107

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

For over a decade, the potato has been a high-priority crop in the Philippines. In cooperation with foreign donors, the government has embarked on a production expansion program that centers on the development or introduction of better adapted varieties and the provision of healthy seed material. Despite these efforts, the Philippine seed system remains dominated by informal, farmer-based production, which is hampered by insufficient supplies and low quality of seed. This evaluation of the country’s seed system begins with a discussion of trends related to potato production, consumption, and marketing. The system’s physical and socioeconomic environment is then described, along with related government activities. Subsequent sections follow the chain of activities in the seed system, including breeding programs, the initial creation of seed supplies, and the multiplication of seed supplies, including the organization of farmer cooperators for bulk multiplication

and quality control. Final sections discuss the work of the private sector and the components of crop protection and storage.

**060**

**PN-ABE-713**  
MF \$1.08/PC \$8.19

## Seed potato systems in Ecuador: a case study

Crissman, Charles C.; Uquillas, Jorge E.  
International Potato Center  
Foundation for Agricultural Development  
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. Ecuador (Sponsor)  
1989, xi, 56p.: charts, statistical tables, En  
936411107

Ecuador's potato seed program is the subject of this case study. Major findings are as follows. (1) Potato production is dominated by small farmers in the sierra (highlands) and is largely market-oriented. (2) Seed from the informal sector accounts for 99% of seed demand. The technology of seed production, storage, management, and marketing in this sector appears unchanged over the last four decades. (3) The formal seed program, which is administered by three Ministry of Agriculture agencies, is significantly underfunded and suffers from poor interagency coordination and an inadequate distribution system. (4) The official program's largest impact has been in the development of improved varieties which have been diffused by the informal seed system. (5) Although the development of a rapid multiplication system for pre-basic seed production has substantially improved the health quality of official seed, the impact of the system has been minimal due to the absence of an effective system for further multiplication and distribution. Moreover, recent research suggests that variety and location are more important than seed health in determining potato yields and profitability. (6) An alternative model of low volume, widely dispersed distribution

designed to take advantage of natural seed production areas appears to be a promising way to connect the official and the informal seed systems.

**061**

**\*PN-ABE-780**  
MF \$1.08/PC \$4.16

## Summary proceedings of the second coordinators' meeting on peanut stripe virus, 1-4 Aug 1989, ICRISAT Center, India

Beckerman, S.R., ed.  
International Crops Research Institute for the Semi-Arid  
Tropics  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Agriculture  
(Sponsor)  
(Coordinators' Meeting on Peanut Stripe Virus, 2nd,  
Patancheru, IN, 1-4 Aug 1989)  
1989, 25p., En, Summaries in En, Fr  
Report no. ICR-89-0053  
936411106  
*\*Also available from: International Crops Research  
Institute for the Semi-Arid Tropics, Patancheru, Andhra  
Pradesh 502 324 India*

Peanut stripe virus disease of groundnut has spread rapidly in groundnut-producing countries, causing significant crop losses. Quarantine strategies are critical in the containment of this seed-transmitted virus because plant breeders frequently exchange germplasm, often between countries. Yet germplasm must be able to move internationally for crops to be significantly improved. A meeting was held at the ICRISAT Center in 1989 which brought together scientists to share their knowledge of and discuss ways to control peanut stripe virus. Country-specific papers detailed research on and occurrences of the groundnut disease in China, India, Indonesia, Japan, Philippines, Thailand, and the United States. Reports on the Peanut Collaborative Research Support Program and a microcomputer-based virus data base were also given. Six technical papers covered seed-borne legume viruses, control of tropical legume viruses, comparison of peanut stripe virus isolates, purification and serological relationships of pea-

nut stripe virus, the molecular basis for potyvirus serology, and use of high-performance liquid chromatographic peptide profiling of coat protein digests. The participants concluded the meeting by making recommendations to further control the spread of the disease, estimate crop losses, and develop management strategies. (Author abstract, modified)

**062**

**\*PN-ABE-134**  
**MF \$2.16/PC \$20.15**

## **Soil fertility and fertilizer management in semiarid tropical India**

Christianson, C. Bruce, ed.

International Fertilizer Development Center  
International Crops Research Institute for the Semi-Arid Tropics

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

(Colloquium on Soil Fertility and Fertilizer Management in Semiarid Tropical India, Patancheru, IN, 10-11 Oct 1988)

Nov 1989, 153p.: charts, statistical tables, En  
Special publication IFDC, no. SP-11  
936411106

*\*Also available from: International Fertilizer Development Center, P.O. Box 2040, Muscle Shoals, Alabama, USA 35662*

The semiarid tropical region of India contributes 40% to overall food production and covers nearly 75% of the country's cultivated land. While the lack of moisture has always been considered the greatest limit to crop production in the region, it is increasingly being recognized that these soils have significant requirements for fertilizer nutrients, including nitrogen, phosphorus, and zinc. Varying rainfall patterns and divergent soil characteristics preclude uniform recommendations on the use of fertilizers, their sources, and methods of application. A fertilizer colloquium, the proceedings of which are contained in this report, was held at ICRISAT Center in 1988 and brought together 86 agricultural scientists to discuss ways to optimize fertilizer strategies in India's semiarid tropics. Twelve papers were

presented covering the following topics: the world fertilizer market; fertilizer production and consumption trends in India; a historical view of soil fertility and management in India; soil fertility problems in Africa; climatic effects on crop productivity and fertilizer use planning; the effects of environment on soil nitrogen availability; the use and management of nitrogen and other nutrient fertilizers; biological nitrogen fixation and organic manures in soil fertility management; economic and social factors of fertilizer use; simulation of nitrogen dynamics in cropping systems; and future fertilizer and soil fertility research needs. Participants emphasized that questions of sustainability of production must be addressed when developing crop management strategies. Production programs that achieve immediate yield increases at the expense of long-term production capacity must be avoided.

**063**

**PN-ABD-965**  
**MF \$3.24/PC \$35.75**

## **Establishing a sustainable shrimp mariculture industry in Ecuador**

Olsen, Stephen; Arriaga, Luis

University of Rhode Island. Coastal Resources Center  
Ecuador. Ministry of Energy and Mines. Directorate  
General of the Environment (Sponsor)

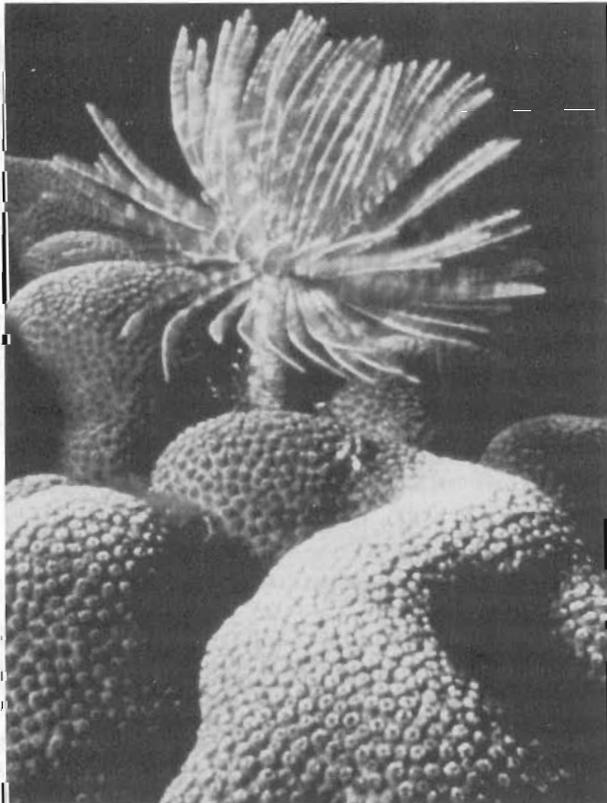
U.S. Agency for International Development. Bureau for Science and Technology. Office of Forestry, Environment and Natural Resources (Sponsor)

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

1989, xv, 276p.: charts, statistical tables, En  
Technical report / international coastal resources management project (CRMP), no. TR-E-6  
9365518

Ecuador's shrimp mariculture industry is booming — it earns more than any other private sector activity in Ecuador. Nevertheless, concerns about declines in shrimp stocks and water quality and increasing international competition are challenging Ecuador to build a shrimp farming industry that is socially and environmentally sustainable at home, and that can compete successfully in a changing world marketplace. A 1986 workshop in Guayaquil brought

together an interdisciplinary team of experts to provide recommendations for an integrated management strategy for the industry. Containing the workshop proceedings, this report covers five major topics — (1) the socioeconomic aspects of shrimp mariculture, (2) legal and institutional factors, (3) environmental issues (the largest section, covering, *inter alia*, red tides, mangrove and salt flat areas, oceanographic characteristics, and the impacts of urban development and of a dam project on shrimp mariculture), (4) the offshore shrimp fishery, and (5) characteristics of the mariculture industry. Key recommendations are to: maintain water quality in estuaries and near hatcheries; protect and manage the wild shrimp stocks that provide the most abundant and cheapest sources of seed shrimp to the industry; overhaul and simplify the permit system governing the siting and operation of ponds and hatcheries; assess the impacts of the Fisheries Law on the shrimp industry; and initiate a public education program to build support for environmental protection measures.



*The Earth Observing System, a sophisticated array of satellite sensors, will significantly increase our knowledge of coral reefs.*

064

PN-ABE-265  
MF \$1.08/PC \$4.55

## Earth observing system and coral reef fisheries

McManus, John W.

University of Rhode Island. International Center for Marine Resource Development

University of the Philippines in the Visayas. College of Fisheries

International Center for Living Aquatic Resources Management

University of Maryland at College Park. College of Agriculture. International Programs

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. Philippines (Sponsor)

Aug 1989, 32p., En

Working paper series / University of Maryland, College of Agriculture, no. 60

9364146

The management of coral reef fisheries has been hampered by insufficient knowledge of their physical and biological characteristics. However, the Earth Observing System (EOS), a sophisticated array of satellite sensors which will be available by the mid-1990's, will increase this knowledge to an unprecedented degree. While currently available satellite data are of only limited value for depths below a few meters, EOS's High-Resolution Imaging Spectrometer (HIRIS) will offer data from more than 30 wavelength bands that penetrate seawater, thus enabling it to discriminate among groups of photosynthetic pigments, particulate content, and a variety of benthic fish habitats. Other EOS instruments will be useful in monitoring variability in the environments of coral reefs by quantifying wave heights, sea surface temperatures, solar incidence, precipitation, and a variety of other factors. However, the complexity of reefs and the volume and complexity of the data will require preparatory research on ways to automate the analyses. In addition, low-cost aerial verification survey methods are needed to enable coral reef scientists in developing countries to utilize EOS data. (Author abstract, modified)

# FOOD AND NUTRITION

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065

PN-ABC-462  
MF \$1.08/PC \$6.11

## Changing food consumption patterns in sub-Saharan Africa

Wilde, Parke

U.S. Agency for International Development. Bureau for Food for Peace and Voluntary Assistance. Office of Program Policy and Management  
Aug 1989, 37p.: statistical tables, En

For the past 25 years, food consumption in sub-Saharan Africa has followed a pattern familiar in the developing world. Traditional staples (roots, tubers, coarse grains) gave way to preferred staples (rice and wheat), which in turn lost much of their share to meat products. In many countries, such trends are the unsurprising result of normal economic growth, but in the context of sub-Saharan Africa's economic recession and agricultural decline — only 14 of 38 sub-Saharan countries were self-sufficient in basic food in 1985 — they pose a danger to food security. In an effort to project the region's food consumption trends in the future, this study examines the consumption changes of the past and evaluates the various hypotheses developed, generally on the basis of meager empirical evidence, to explain them. Section I describes the consumption changes and links them to more general aspects of the African food crisis. Sections II and III examine the two primary determinants of these consumption shifts, namely income and urbanization. Additional factors, including the commercialization of subsistence agriculture and the influence of food aid, are covered in Section IV. Section V draws some preliminary conclusions and suggests policy implications.

066

PN-ABD-893  
MF \$3.24/PC \$28.86

## Development impact of U.S. program food assistance: evidence from the A.I.D. evaluation literature

Bremer-Fox, Jennifer; Bailey, Laura  
Robert R. Nathan Associates, Inc.

U.S. Agency for International Development. Bureau for Food for Peace and Voluntary Assistance. Office of Program Policy and Management (Sponsor)  
Aug 1989, xii, 120p. + 2 appendices: statistical tables, En  
9380700

U.S. program food aid is provided on a loan or grant basis and is generally sold to generate local currency for developmental purposes. In FY 1988, such commodities, totaling 5.4 million MT, accounted for half of all food aid and 16% of economic assistance. This study, largely a synthesis of program evaluations, audits, and related studies, evaluates the development impact of this aid, with special attention to macroeconomic performance, the food sector, and program management. In general, program food aid appears to have a positive impact on the perfor-

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***Program food aid appears to have a positive impact on the performance of recipient countries at the macroeconomic and sectoral level. However, the increasing emphasis on promoting policy reform has produced mixed results.***

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mance of recipient countries at the macroeconomic and sectoral level. However, the increasing emphasis on promoting policy reform has produced mixed results, with just over half of evaluations reporting an improved policy environment. Moreover, given the current program design, food aid is unlikely to have an immediate or direct impact on its primary target — the urban and rural poor. Serving primarily as a balance of payments support, program food aid has generally not added to the food supply

available for consumption. Recommendations for program modification focus on (1) increasing the grant component to reduce the impact on future debt and maximize policy leverage and (2) encouraging the use of food aid-generated resources to alleviate the immediate negative impact of structural adjustment on the poor.

**067**

**PN-ABD-942**  
MF \$2.16/PC \$20.67

## **Laborsaving home and village technology for food processing and preparation**

lavics, John; Ford, Iris; Weil, Robert

U.S. Dept. of Agriculture. Office of International Cooperation and Development. Food Technology Branch  
U.S. Agency for International Development. Bureau for Science and Technology. Office of Nutrition  
(Sponsor)

Sep 1989, iv, 154p.: ill., En  
9365114

Food processing and preparation are among the most time-consuming tasks undertaken by women in developing countries. This study identifies home- and village-level technologies that minimize the time and effort spent performing these duties. After discussing the major processing and preparation tasks and the principles of technology transfer, the report describes 17 technologies for processing staple crops (grains and tubers), oil crops (seeds and nuts), and for cooking and related tasks. Grain and tuber processing technologies include: a dehuller and grinder for millet and sorghum; a mill capable of local manufacture, a water-powered mill, and a hand-held sheller for maize; a grater and screw press for cassava; a manual dehuller for rice; and a thresher, cleaner, and polisher for quinoa. Next, seed and nut processing technologies are discussed: a manual press for sunflower, sesame, and other oilseeds; a sheller for groundnuts; an oil expeller for palm fruit; and a fat extraction unit for the shea nut. Technologies for fuel-efficient cooking include: a three-stone hearth stove; two cookstoves (charcoal and wood); a solar box cooker; a community smokehouse for fish processing; and a technique to reduce the cooking time of beans. In addition, the report briefly describes four laborsaving technologies that are related to

food processing/preparation — a concrete threshing floor, preparation of two “convenience” foods (sori and yam flours), and a water catchment technology. Each description includes a summary of the traditional task which the technology replaces, an estimate of the time the technology will save, and a list of sites where the technologies might be appropriate in terms of cultural acceptance, socioeconomics, and ecology. The study concludes by offering ideas for future activities.

**068**

**\*PN-ABD-956**  
MF \$1.08/PC \$3.77

## **Food security and economic growth in the Sahel: a summary of the September 1989 Sahel cereals workshop**

D'Agostino, Victoire C.; Staatz, John M.

Michigan State University. Dept. of Agricultural Economics

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

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

U.S. Agency for International Development. Bureau for Africa. Office of Sahel and West African Affairs  
(Sponsor)

(Workshop on Food Security and Economic Growth in the Sahel, Washington, DC, US, 6–8 Sep 1989)  
1989, 18p., En

MSU international development papers. Working paper, no. 34

9311190

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

The third annual A.I.D.-sponsored workshop on food security and economic growth in the Sahel was held in Washington, D.C., in September 1989. This paper summarizes the empirical research results presented and related discussions held at the workshop. Subjects covered include: (1) the effects of trade policies on coarse grain production and consumption, (2) comparative advantage and how to increase the competitiveness of Sahelian agri-

# FOOD AND NUTRITION

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culture, (3) food security and regional cereals trade, (4) non-cereals production and trade, and (5) food aid. In organizing the workshop, special emphasis was given to involving participants who had conducted empirical research in Mali, Senegal, and Niger. Seven points are provided as tentative conclusions from the workshop, although not all participants agreed with them. The most important of these are as follows. (1) While there is a need to coordinate trade policies, there appears to be little or no economic justification for a regional protected cereals market in the Sahel. (2) Long-run investment in agronomic, breeding, and marketing research is needed to increase the competitiveness of Sahelian agriculture. (3) Diversification needs to be promoted based on comparative advantage through a community subsector approach. (4) Cereals policy should be placed within a broader context of income generation strategies rather than considered in isolation.

**069**

**\*PN-ABE-098**

MF \$1.08/PC \$11.31

## **World food needs and availabilities, 1989/90: winter**

U.S. Dept. of Agriculture. Economic Research Service.  
International Economics Division  
U.S. Agency for International Development (Sponsor)  
Dec 1989, 79p.: charts, statistical tables, En  
*\*Also available from: ERS-NASS, P.O. Box 1608,  
Rockville, MD 20849-1608 USA*

Global cereal aid needs remain high, despite a continuance of relatively favorable weather in food-deficit countries. This report, the last in the series, provides an estimate of food import and food aid needs in the 1989/90 and 1990/91 trade years for 55 countries, including a detailed analysis for 32 of them. Two alternative measures of food needs are used — *status quo* assessment (the additional food needed to maintain recent levels of food consumption) and nutrition-based assessment (the additional food required to meet minimum daily requirements). The maximum amount of food aid which can be absorbed by the country's delivery system is also assessed. Estimated 1989/90 *status quo* needs of 17 million tons are about the same as for 1988/89. Needs for sub-Saharan Africa are 3.9 million tons, up nearly 580,000 from 1988/89. North African and Latin

American needs also increased, by 340,000 and 350,000, respectively, while Asian needs decreased 1.4 million tons. Nutrition-based needs are down sharply in Asia as well, led by India and the Philippines. But these declines are offset by increases in Africa, particularly Egypt, Sudan, and Ethiopia. Needs in Latin America jumped by nearly 400,000, led by Bolivia and Guatemala. The report also finds that rising cereal prices on world markets, poor export earnings, and continued debt service requirements limit the ability of developing countries to pay for food imports.

**070**

**PN-ABE-162**

MF \$1.08/PC \$4.42

## **Report of the fifth international conference of the international nutrition planners forum: crucial elements of successful community nutrition programs, August 15–18, 1989, Seoul, Korea**

Logical Technical Services Corp. International Nutrition Unit  
Academy for Educational Development, Inc.  
U.S. Agency for International Development. Bureau for Science and Technology. Office of Nutrition (Sponsor)  
(International Conference of the International Nutrition Planners Forum, 5th, Seoul, KR, 15–18 Aug 1989)  
2 Feb 1990, ii, 24p., En  
French ed.: PN-ABF-102  
9365113

Actions to improve the nutritional status of the poor in developing countries have evolved over the past decades from a specific nutrient fortification approach to broader multisectoral strategies linked to community development. This conference report examines case studies of successful community nutrition programs in the following countries: Indonesia, Thailand, India, Tanzania, Brazil, and Bolivia. Brief summaries are also presented of programs in Botswana, the English-speaking Caribbean, Mexico, Nigeria, Peru, the Philippines, Puerto Rico, and Zimbabwe. Drawing from these experiences, the report identifies six elements crucial to the success of nutrition-oriented com-

munity development programs: (1) firm and consistent political commitment reflected in concrete nutrition financing and action; (2) effective community mobilization for active participation; (3) high-quality personnel with strong commitment to community work and leadership skills; (4) appropriate targeting to improve the efficiency and cost-effectiveness of the nutrition intervention; (5) a functional management information system for ongoing monitoring, evaluation, and decisionmaking at both the local and upper levels; and (6) replicability and sustainability.

**071**

**PN-ABE-469**

MF \$2.16/PC \$24.18

## **Establishing the structure of an IGADD national and sub-regional early warning system**

U.S. Dept. of the Interior. Geological Survey. EROS Data Center

Intergovernmental Authority for Drought and Development (Sponsor)

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

Dec 1989, 3v., En

Contents: v.1. Executive summary — v.2. Main report — v.3. Country reports

Related document: PN-ABE-468  
6980510

Famine early warning systems (EWS's) are designed to anticipate emergency situations by providing decision-makers with timely data on nutritional status and food availability. This tripartite report presents a strategic plan for developing such a system for East Africa through the Intergovernmental Authority for Drought and Development (IGADD). Volume I contains a brief summary of the plan, covering a suggested EWS model, IGADD's role in early warning, program priorities and action requirements, and critical system design issues. These findings are presented in greater detail in Volume II. Volume III examines the status and needs for EWS's in the six IGADD member states — Djibouti, Ethiopia, Kenya, Somalia, Sudan, and Uganda. The IGADD early warning community is com-

prised of seven components: six (existing or proposed) national EWS's and a sub-regional system in IGADD's Djibouti headquarters. Under the plan, the national EWS's would be responsible for data collection, analysis, food emergency decisions, and response actions. The sub-regional system would strengthen and support national EWS components by providing technical assistance, data, and services and by helping to raise awareness of the food security situation. Both the national and sub-regional components would be supported by regional technical institutions, most notably the Regional Center for Service in Surveying, Mapping, and Remote Sensing in Nairobi.

**072**

**PN-ABE-754**

MF \$1.08/PC \$8.58

## **Mali — communication for vitamin A: field study in Macina, November 28–December 5, 1989**

Dettwyler, Katherine A.

Academy for Educational Development, Inc.

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

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

5 Dec 1989, ii, 61p. + appendix, En  
9365113

Vitamin A deficiency, an easily prevented disease, is a common cause of blindness and child morbidity and mortality in the developing world. This report, the pilot for a later, more in-depth study, examines the factors affecting Vitamin A nutrition in six villages in the Cercle of Macina in Mali's Segou Region, along with general infant/child feeding practices and local beliefs about the causes of malnutrition. Preliminary findings are based mainly on interviews with 18 women, aged 25–45. While not generally considered such, Vitamin A deficiency seems to be a public health problem in the villages, since everyone is familiar with the symptom of night blindness. Most people think that it is caused by excessive exposure to bright sunlight, and the most common cure is to eat goat liver (an excellent source of Vitamin A). Within the family, young children were said to be given first access to meat and fish,

## FOOD AND NUTRITION

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but empirical observation failed to confirm this. There were very few Vitamin-A rich foods available during the period in which the study was conducted. It is recommended that Vitamin A promotion activities in the area focus on:

new market sources, promotion of shade-drying rather than sun-drying of vegetables, and general improvement of infant feeding practices.



*Plans to improve East Africa's famine preparedness and response are being carried out by the Intergovernmental Authority for Drought and Development.*

073

PN-AAX-235  
MF \$1.08/PC \$4.16**Child survival programs in Egypt**

Tumavick, Nancy; Binnendijk, Annette; et al.  
U.S. Agency for International Development. Bureau for  
Program and Policy Coordination. Center for Devel-  
opment Information and Evaluation  
[1990], vii, 26p.: ill., charts, statistical tables, En  
A.I.D. impact evaluation report, no. 73

In the early 1980's, A.I.D., together with the Govern-  
ment of Egypt, UNICEF, and WHO, developed a strategy  
for child survival focused on two key interventions: oral  
rehydration therapy (ORT) to control diarrheal diseases  
and an expanded program of immunizations (EPI) against  
the six major communicable childhood diseases. This  
report evaluates the performance and health impacts of the  
two programs. Both programs have had high levels of  
success. ORT awareness and use has spread throughout  
Egypt and child nutrition during diarrheal episodes has  
improved. Statistics suggest that an accelerated decline in  
infant and child mortality in the mid-1980's is essentially  
the result of the program, especially of its popularization of  
home and private rehydration. However, the actual inci-  
dence of diarrheal episodes has probably not changed,  
indicating that the program's preventive aspects, ranging  
from promotion of hygiene among mothers to massive  
investments in potable water and sewage systems, have yet  
to prove effective. The EPI program has resulted in rapidly  
increasing and high coverage rates among children for all  
antigens. Although reliable data are not available, EPI has  
most likely reduced both mortality and morbidity, since  
unvaccinated Egyptian children are at significant risk from  
the targeted diseases. On the negative side, coverage rates  
for tetanus toxoid injections of pregnant women have  
lagged considerably in comparison with the rest of the  
program. The rapid success of the two programs is largely  
due to Egypt's unique positive circumstances: the  
population's cultural and linguistic homogeneity and con-  
centration along the Nile; extensive health infrastructure  
and large pool of trained health personnel; availability of  
low-cost ORT and immunization technologies; and wide  
access to television. While these factors limit the programs'  
replicability elsewhere, the programs' flexibility, limited

focus, and use of mass media are broadly applicable. Partly  
because of the success of the two programs, the patterns of  
infant and child mortality are shifting in Egypt, with acute  
respiratory infection now emerging as the leading cause of  
death and hence the main concern of future child survival  
efforts.

074

PN-ABD-548  
MF \$2.16/PC \$20.54**Financing primary health care:  
experiences in pharmaceutical cost  
recovery**

Blakney, Richard B.; Litvack, Jennie I.; Quick,  
Jonathan D.

Management Sciences for Health  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Health (Sponsor)  
May 1989, iv, 157p.: charts, statistical tables, En  
9365969

Many developing countries are turning to pharmaceuti-  
cal cost recovery (PCR) — programs in which donors  
establish a revolving fund to purchase drugs and consumers  
pay the cost of the drugs received — as a method for  
financing primary health care. This paper examines PCR  
experience in eight countries: Ghana, Haiti, Liberia, Mali,  
Nepal, Nigeria, Thailand, and Zaire. Key findings are as  
follows. (1) PCR programs have varied in success, from a  
recovery of 272% of drug costs in Liberia to little or no  
recovery in Mali. (2) Successful programs are those which  
involve the community deeply, are flexible and decen-  
tralized, and are managed by those with the requisite  
financial skills. Also, despite the inevitable and necessary  
tension between financial and public health goals in PCR  
programs, successful programs are those which treat the  
patient as a consumer. (3) Success is ultimately determined  
by cost and consumer willingness to pay, not by govern-  
ment policy. Even those willing to pay for drugs can be  
dissuaded by significant price increases. (4) Most pro-  
grams include mechanisms (e.g., government subsidies) to  
protect vulnerable groups. (5) PCR should be explored  
within a full range of financing options. (6) PCR is not a  
substitute for government health financing. Nor should it  
be made a precondition for programs that provide primary

health care or essential drugs. (7) Many questions remain unanswered regarding PCR's effect on health care patterns and the political and administrative environments required for its success.

**075** **PN-ABD-901**  
MF \$1.08/PC \$5.59

## **Beliefs and attitudes toward infant mortality and modern health care centers in East Cameroon: final report**

Prater, Gwendolyn S.; Azevedo, Mario  
Jackson State University  
U.S. Agency for International Development. Bureau for Science and Technology. Office of Research and University Relations (Sponsor)  
Aug 1989, i, 39p., En  
9365053

In Africa and elsewhere in the developing world, deep-seated cultural assumptions regarding disease, death, and health care are crucial factors in child survival. In eastern Cameroon, the focus of this study, traditional beliefs are considered a major constraint to reducing the area's high infant mortality rate (at least 160 per 100,000 births). Throughout the region, parents perceive children and reproduction with a sense of fatalism and anxiety. Death, disease, spontaneous abortion, sterility, and infertility are explained in terms of supernatural causes (God, witchcraft, sorcery, and curses from ancestors). It is believed that deceased children may transmit diseases to an unborn child or haunt the mother during pregnancy and that unfaithfulness in marriage and the breaking of postpartum abstinence can cause infant death. These beliefs are compounded by detrimental traditional practices, including nutritional taboos that weaken infants physically, making them vulnerable to early death. Moreover, most parents tend not to interfere in other families' affairs, even when children might be abused. The study found that these beliefs and practices generally transcend religion, occupation, and income, and in most cases, even education. Recommendations for considering these attitudes in policy and program design are presented.

**076** **PN-ABE-618**  
MF \$3.24/PC \$26.65

## **Acute lower respiratory infection and child survival in developing countries: understanding the current status and directions for the 1990's**

Gadomski, Anne, ed.  
Johns Hopkins University. School of Hygiene and Public Health. Institute for International Programs  
U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)  
(Workshop on Acute Respiratory Infection and Child Survival in Developing Countries, Washington, DC, US, 2-3 Aug 1989)  
Jan 1990, xvi, 206p.: charts, statistical tables, En  
Cover title: Workshop report — ALRI and child survival in developing countries — understanding the current status and directions for the 1990's  
9365951

Acute lower respiratory tract infections (ALRI), such as pneumonia, bronchiolitis, tracheolaryngitis, and bronchitis, cause over 25% of all deaths among children aged 0-5 in the world today. A 1989 A.I.D.-sponsored workshop, proceedings of which are herein presented, brought together experts from a variety of fields to review the major technical issues surrounding diagnosis and treatment of ALRI and to discuss their programmatic implications. The 22 papers presented at the workshop focused on the following topics: the ALRI activities of A.I.D., the World Health Organization, and UNICEF; state-of-the-art ALRI epidemiology; community-based treatment; operations research in ALRI programs; behavioral aspects of ALRI research and programming; and cost and cost-effectiveness of interventions. The severity and case-fatality of ALRI is greater among children in developing countries, due in part to their poor access to effective health care and the predominance of "co-morbidities," including malnutrition and low birth weight. Such problems as overcrowding and indoor air pollution are also factors. WHO has developed an effective case management approach for community health workers, but the efficacy of ALRI interventions is threatened by growing antibiotic resistance, indicating that curative approaches need to be complemented with preventive mea-

tures, particularly the development of vaccines, nutritional interventions, and low technology approaches to domestic smoke reduction (e.g., vents, windows, smokeless stoves). Further, ALRI treatment should not be carried out in isolation; rather, the improvement of supporting health facilities should take place in parallel or in advance of ALRI programs.

**077****PN-ABE-652****MF \$5.40/PC \$52.39**

### **Strategic planning evaluation study, OFDA non-relief activities**

Management Systems International, Inc.  
U.S. Agency for International Development. Office of  
U.S. Foreign Disaster Assistance (Sponsor)  
26 Feb 1990, 2v.: charts, statistical tables, En  
Contents: v.1. Main text — v.2. Case studies

A.I.D.'s Office of Foreign Disaster Assistance (OFDA) is known primarily as an action-oriented entity providing rapid response to disasters. However, during the period 1979-89, OFDA funded 478 non-relief activities dealing with disaster preparedness and mitigation. This evaluation illustrates the importance of these activities in promoting both disaster preparedness (e.g., via early warning systems, trained search and rescue teams, and public awareness campaigns) and disaster mitigation (e.g., by improving building codes and construction practices, promoting crops that are less susceptible to floods and wind damage). It also identifies program weaknesses, such as a lack of financial and institutional sustainability in many OFDA-supported activities due to an incoherent overall strategy and inconsistently applied design and evaluation processes. The program has also faced problems of high turnover in leadership (seven directors in ten years) and of periodic interruptions when staff are called away to assist in emergency relief. In conclusion, the study suggests changes in the management and conceptualization of the non-relief portfolio; proposes methodologies for design, monitoring, evaluation, and planning; highlights the need for long-term objectives; identifies themes for a comprehensive strategic plan; and suggests changes in OFDA's relationships with

other A.I.D. programs and the donor community. Includes 227 case studies of disaster preparedness/mitigation activities.

**078****PN-ABE-819****MF \$1.08/PC \$2.73**

### **Who gets what?: utilization of health services in Indonesia**

Gish, Oscar; Malik, Ridwan; Sudharto, Paramita  
International Science and Technology Institute, Inc.  
Indonesia. Ministry of Health (Sponsor)  
U.S. Agency for International Development. Bureau for  
Asia and Near East. Indonesia (Sponsor)  
[1989], v, 17p., En  
Health sector financing project: consultant report series,  
no. 28  
4970354

Is the utilization of public health care in Indonesia related to such variables as distance to facilities, insurance status, and income? This study, as part of a larger health finance evaluation, examines the utilization of public health services in ten districts (urban and rural) at four different levels of the health care system — the hospital, health center, subcenter, and community health post. The study found that the average annual contact rate for public health facilities (both curative and preventive care) was 0.8 per capita — a poor figure by international standards. Private sector contacts increase the annual rate to 1.4 per capita. This low overall rate, coupled with its maldistribution, indicate that a significant part of the population is not being reached by the health care system. Those not in the system either live beyond the catchment area (20 km for district hospitals, 6 km for health centers, and 2 km for subcenters) or are unable or unwilling to use the services with any regularity. The study also established a close correlation between service use and both income and insurance status. In one province, the top 9% of income earners made up one-third of all hospital inpatients, one-half of all hospital outpatients, and one-quarter of all health center visitors. In general, insured civil servant families used services about four times more frequently than the rest of the population. The concern over who is using the system must be integrated into ongoing efforts to analyze health care financing

# HEALTH

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systems if these efforts are to contribute to the development of health services which meet the needs of the entire population.

**079** **PN-ABD-892**  
MF \$1.08/PC \$2.73

## **Honduras: field evaluations of *Bacillus thuringiensis* var. *israelensis* (Bti) against *Anopheles* larvae**

Walker, Edward D.; Lacey, Lawrence, A.  
Medical Service Corporation International  
U.S. Agency for International Development. Bureau for  
Science and Technology. Office of Health (Sponsor)  
20 Oct 1989, 18p.: statistical tables, En  
9365948

The discovery and commercial development of the mosquito larvicidal bacterium *Bacillus thuringiensis* var. *israelensis* serotype H-14, or *Bti*, have provided a highly selective and safe biological control agent that will rapidly kill mosquito larvae while leaving mosquito predators and other non-target organisms unharmed. This report summarizes the findings of field trials conducted in Honduras to examine the acute effect of *Bti* application on *Anopheles* larvae and other mosquito populations, the first such evaluation performed in Latin America. The field tests definitively showed that *Bti* was very effective in reducing *Anopheles* larvae to low levels. The tests were done in a sufficient variety of habitats (ricefields, lagoons, a canal, and a flooded pasture), indicating that *Bti* can have broad application to the diverse habitats in which *Anopheles* larvae are found in Honduras. It also demonstrated that granular and liquid formulations of *Bti* worked equally well at high rates of application, and that the two malaria vector species that occur in the test sites, *An. albimanus* and *An. pseudopunctipennis*, were both affected by the *Bti* treatment. The report concludes that although testers used high rates of application, both granular and liquid rates could possibly be reduced by 50–75% and still produce an acceptable percentage reduction of larvae.

**080**

**PN-ABE-303**

MF \$4.32/PC \$39.52

## **Epidemiology and family health survey: Honduras, 1987 — final report**

Family Health International  
Management Sciences for Health  
Association for Family Planning in Honduras  
Honduras. Ministry of Public Health (Sponsor)  
U.S. Agency for International Development. Bureau for  
Latin America and the Caribbean. Honduras  
(Sponsor)  
May 1989, 305p.: charts, statistical tables, En

Health conditions in Honduras are affected by poor environmental hygiene and malnutrition. Diarrheal diseases, acute respiratory infections, immuno-preventable diseases, and malaria continue to be the main causes of child morbidity and mortality, while anemia and problems related to pregnancy are prevalent among women. Between 1981 and 1987, many health programs in Honduras were initiated or expanded, including polio immunization, diarrhea control, breastfeeding promotion, family planning, and AIDS education. This study assesses the impact of these efforts on the basis of interviews conducted with women aged 15–44 years in 10,441 households. Key findings relate to the following: (1) fertility rate; (2) neonatal, infant, and child mortality; (3) breastfeeding patterns and prevalence; (4) prevalence and severity of diarrhea and acute respiratory infections; (5) child immunization coverage; (6) sources of prenatal, delivery, and postpartum care; (7) contraceptive prevalence and use patterns; (8) contraceptive types (orals and sterilization) and sources; (9) reasons for not using contraception; (10) family size preferences, and percentage of mistimed or unplanned pregnancies; (11) the type and impact of counseling on oral contraception; (12) sexual behavior and family planning practices among women 15–24 years; and (13) level of knowledge concerning AIDS and other sexually transmitted diseases.

081 PN-ABE-421  
MF \$1.08/PC \$6.11

**Impact of HIV on pediatric outpatient use at the projet San Fransisco in Kigali, Rwanda**

U.S. Agency for International Development. Bureau for Africa  
U.S. Agency for International Development. Bureau for Africa. Rwanda  
Dec 1989, [22]p. + 23 appendices: statistical tables, En 6980474

In urban Rwanda, where the AIDS virus has infected 10% of children 0–5 years and 30% of 26–40 year olds, a University of California in San Francisco research project is providing free outpatient care to 1,470 randomly selected women and their 4,803 children. This study analyzes clinic data from November 1988 to March 1989 to determine the impact of HIV infection on the cost of child health care. Although data on HIV status were available for only 156 children at the time of the study, analysis of the data indicated that HIV-positive children do pose a greater

***The impact of HIV infection on outpatient health resources in high-prevalence areas of east-central Africa will be appreciable, taxing already scarce supplies and overworked personnel.***

burden on health services. Differences were evident in the number of clinic visits, frequency and type of presenting symptom, and type and cost of medications prescribed. During the study period, HIV-positive children had 1.9 times more clinic visits and 1.7 times higher medication costs than children of uninfected mothers. Half of the HIV-positive children required treatment for dermatitis, versus only 13% of the HIV-negative children, and 56% versus 34% required treatment for cough. According to the report, the impact of HIV infection on outpatient health resources in high-prevalence areas of east-central Africa will be appreciable, taxing already scarce supplies and overworked personnel.

082 PN-ABE-479  
MF \$2.16/PC \$14.56

**Costs of EPI: a review of cost and cost-effectiveness studies (1979–1987)**

Brenzel, Logan  
John Snow, Inc.  
U.S. Agency for International Development. Bureau for Science and Technology. Office of Health (Sponsor)  
Rev. ed. Apr 1989, [106]p.: statistical tables, En 9365927

Evaluative literature dating between 1979 and 1987 on the cost and cost-effectiveness of the Expanded Program of Immunization (EPI) were assessed to help determine the relationship between program costs and coverage levels in the future. The 28 evaluations reviewed were found to vary in quality and to lack a consistent methodology; they were generally conducted on an ad hoc basis and their results have been inadequately disseminated. Nonetheless, three major generalizations can be extracted from the studies. (1) The average cost per child for full immunization coverage is \$13; this figure could be used to estimate the cost of an EPI worldwide, regardless of the approach used. (2) The contributions of national governments to immunization programs (approximately 50%) are lower than reported earlier. With the bulk of EPI costs being borne by international organizations and donor agencies, sustaining EPI by using only government resources will be difficult in many countries, particularly where public health expenditures are already low. (3) The larger the population reached by the EPI, the larger the total program cost. Further, although it appears that average cost declines with increasing coverage rates, insufficient empirical data exist to verify such a conclusion.

# HUMAN SETTLEMENTS

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083

PN-ABD-813  
MF \$1.08/PC \$9.49

## Congressional inquiry on urbanization: summary of cable responses

Pill, Charles

Planning and Development Collaborative International,  
Inc.

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

Sep 1989, 69p.: charts, statistical tables, En

Working paper / U.S. Agency for International Develop-  
ment. Office of Housing and Urban Programs

9401002

Rapid urbanization continues to have a profound impact on many developing countries. This compilation of information from A.I.D. Missions worldwide assesses the potential adverse effects of urbanization and identifies possible remedial actions. The Missions first describe relevant activities, including urban development, economic development, and urban beneficiaries projects. Statistical data are presented on the current and projected trends in urbanization and poverty for each country. The Missions then discuss the importance of urban-related issues to their country development strategy statements and program goals and identify priority urbanization issues and recommended changes in A.I.D. funding and strategies through the year 2000. Host country interest in these concerns is also assessed. Some of the key urban issues identified by the Missions as needing attention over the next decade are: in Latin America/Caribbean, economic development and employment generation, urban planning and land issues, and municipal development and management; in Asia/Near East, social and physical infrastructure, land use and tenure issues, and environmental concerns; and in Africa, off farm and urban employment, municipal management, and environmental concerns, specifically solid and human waste disposal. The Mission reports reveal a wide array of program activities and a distinct diversity among countries and regions in priorities and foci. This variety of experience can serve as a stimulus to all Missions and interna-

tional donor organizations for ideas toward creative solutions to urbanization and related problems and opportunities.

084

PN-ABD-814  
MF \$1.08/PC \$3.90

## Support strategies for informal production of housing and urban services

Lintz, Randolph S.

Deloitte, Haskins and Sells

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

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

Aug 1989, vi, 26p., En

9401008

The informal sector has proved to be the most economical producer of low-cost housing in the developing world, yet its "unofficial" nature has made reaching it with conventional assistance programs difficult. This report focuses on ways in which A.I.D. can encourage informal sector participation in projects to improve the production and quality of shelter and urban services. The report recommends a sectorwide approach consisting of policy dialogue to relax the regulatory environment as well as direct support to the informal sector. Specifically, the report examines the following options for strategic programming: formal sector reforms related to land markets, improving access to credit for low-income households, generating income and employment related to shelter, and expanding urban services. The report also recommends that country-specific analyses be conducted on the following issues: informal land development techniques, squatter settlements and clandestine neighborhoods, informal financial institutions and mechanisms, traditional building materials and practices, employment and income generation, provision of infrastructure, and deregulation.

085

PN-ABD-815  
MF \$2.16/PC \$14.56

## Housing process in Port-au-Prince, Haiti: final report

Fass, Simon; Roy, Carole  
Urban Institute

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

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

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

Jun 1989, 74p.: ill., statistical tables, En

Working paper / U.S. Agency for International Develop-  
ment. Office of Housing and Urban Programs

Housing conditions in Port-au-Prince today are generally the same or worse than they were in 1976, according to this study of housing sector dynamics in the Haitian capital. The major topics covered include: (1) the city's population growth and household income distribution; (2) a comparison of shelter conditions in 1976 and 1988; (3) residents' perceptions of their shelter, as well as their criteria for selecting a housing site; (4) the process residents use to locate properties and establish security of tenure; (5) the distribution of plot and house sizes, along with types and costs of construction; and (6) methods of household financing (e.g., savings, loans, inheritances). While there have been some improvements since 1976 (e.g., in building materials, waste collection, drainage, and water supply), in other ways living conditions have worsened — the price of drinking water has soared, (as have rent and land prices), neighborhood densities have increased substantially, and dwellings are more crowded than ever. A final section concludes that broadening access to ownership should not be viewed as an end in itself. Rather it should be seen as one of several means of improving the health and productivity of the population.

086

PN-ABD-816  
MF \$3.24/PC \$25.61

## Sub-Saharan Africa conference on market towns and rural growth: economic and social linkages — Yamoussoukro, Cote D'Ivoire, January 8–13, 1989

Research Triangle Institute

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

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

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

(Conference on Market Towns and Rural Growth: Eco-  
nomic and Social Linkages, Yamoussoukro, CI,  
8–13 Jan 1989)

1989, vi, 207p.: ill., En

French ed.: PN-ABD-817  
6811002

Market development in Africa has been relatively stagnant over the last few decades compared with experiences in Asia and Latin America. These conference proceedings present eight papers on ways of stimulating rural growth through market town development. Two papers review and critique the current thinking on market towns, their role in building rural-urban linkages, and their relationship to rural economic development. One paper focuses on Senegal's new agricultural policy and its impact on market towns and agricultural growth, while another highlights efforts in Cote d'Ivoire to decentralize management capabilities. Three papers concern the impact on market town growth of, respectively: gender issues, investments in infrastructure, and the role of microenterprises. A final paper describes a research framework used to identify opportunities for expanding rural-urban exchange. Conclusions are then provided from working groups on the following topics: market towns and rural policy development, the integration of rural issues in urban policymaking, the need for strengthening local governments and private

# HUMAN SETTLEMENTS

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sector organizations, and investment strategies for market towns. A synthesis of country action plans developed during the conference is also provided.

**087**

**PN-ABD-908**

**MF \$1.08/PC \$2.99**

## Urbanization in Swaziland

DeGroot, David G.

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

U.S. Agency for International Development. Bureau for Africa. Regional Economic Development Services Office. East and Southern Africa

U.S. Agency for International Development. Bureau for Africa. Swaziland

Oct 1989, [20]p., En

The population of Swaziland's urban Manzini-Matsapha-Mbabane corridor is growing at about twice the rate of the country's rural areas. However, this growth, which is largely due to the government's encouragement of industrialization at Matsapha and which is expected to last at least another decade, has generally been unplanned, unserved, and uncontrolled. It is estimated that at least 60,000 residents of the corridor live in informal or squatter settlements lacking access to all or most basic urban services and infrastructure. A major perceived cause of this problem is the squatter's lack of secure land tenure. Moreover, critical services to the urban population in general are at or beyond capacity, with pollution from inadequate sewerage treatment, degradation of watersheds, and unsanitary abattoirs presenting clear health threats. According to the report, construction of basic infrastructure including serviced homesites could provide a major source of economic activity and employment in the corridor. Although government institutions currently lack the capacity to address these challenges, many of these constraints could be removed through a modest but consistent program of middle- and senior-level expert assistance. A wide range of necessary institutional reforms and initiatives is recommended.

**088**

**PN-ABE-085**

**MF \$2.16/PC \$14.30**

## Niger market town development study: final report

Doan, Peter L.; Lewis, Blane D.

Research Triangle Institute

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

1989, ii, 73p. + 3 appendices: maps, statistical tables, En  
French ed.: PN-ABE-554

6830261

Nearly 90% of the population in Niger depends on an agricultural economy made unstable by drastic climatic fluctuations. Although the rate of urban population growth is high (about 7%), economic opportunities in larger cities are also limited. To prevent further rapid urbanization, policymakers are paying increasing attention to the role of market towns in supporting agricultural production and in providing alternative means of diversifying rural income. It is believed that strong market towns, by stimulating farm and off-farm production and delivering social services, could obviate the need for residents to seek employment elsewhere. Focusing on two of Niger's departments — Dosso and Maradi — this report describes and analyzes the current and potential role of market towns as growth centers in subregional and national economic development (Sections two and three). These sections conclude with an examination of the primary linkages (i.e., production, consumption, and income linkages) between rural areas and urban centers. The report then examines the potential impact of the Government of Niger's plans to gradually decentralize budgetary authority from the national level to lower levels of government (Section four). Next, donor projects in the two regions, and their implications for market town development, are discussed briefly (Section five). The final section proposes a national strategy for the promotion of market towns, concentrating on the identification of policy and infrastructural problems.

089

PD-ABA-548  
MF \$1.08/PC \$7.93

## Helwan housing and community upgrading project for low-income Egyptians: the lessons learned

Planning and Development Collaborative International, Inc.

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

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

1 Feb 1990, iv, 39p. + 7 annexes: statistical tables, En 2630066; 9401002

A.I.D.'s housing and community upgrading project in Helwan, Egypt, has drawn strong criticism. An October 1988 audit showed that, after 10 years and an expenditure of \$134 million, not a single low-income family was living in the new community and many promised improvements in other communities were years behind schedule. In response to an audit recommendation, this report documents the major lessons learned from the project. The project context is described, including issues related to Egypt's economy, the USAID/Egypt Mission, trends in international housing assistance, and the level of professional skills required for the project. Events leading to project authorization are traced, followed by an assessment of the project objectives, the status of the Helwan new community and the community upgrading program, project management and construction, and institutional development. The report concludes that, in spite of myriad problems, the project should not be viewed as a total failure. Since the 1988 audit, progress has been rapid, with some 7,200 plots fully serviced and most community facilities completed. Housing construction is well underway and initial sales have taken place. Ultimately, more than 20,000 new housing units will be available to moderate-income Egyptian households. Moreover, while the project did not follow its planned schedule, a decade is not an unusually long time in the developing world for implementing massive housing projects.

090

PN-ABE-306  
MF \$1.08/PC \$4.81

## Characteristics and perspectives of families displaced from El Chorrillo: results of an informal sample survey conducted in Panama City during January 1990

Gersony, Robert

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

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

Feb 1990, [33]p.: maps, En

The U.S. attack on the Panama Defense Forces in December 1989 destroyed or severely damaged the homes of 1,600–2,000 families in the Chorrillo section of Panama City. This report, based on interviews with 81 Chorrillo residents, assesses the extent of the housing and property losses suffered by the displaced population and their prospects for recovery. El Chorrillo was a low-income neighborhood consisting primarily of condemned wooden buildings for which residents paid neither rent nor utilities. Instead, surplus income had been invested in appliances and other consumer items, including work-related tools and equipment. The loss of these goods left many residents without a means of subsistence — fully two-thirds are now unemployed. Although reports of promised governmental assistance are widespread in the displaced community, only 15% of the families expect the offers to be fulfilled. In this report, a plan is outlined for a cooperative assistance effort by A.I.D. and the Government of Panama. The plan focuses exclusively on meeting housing needs, with no compensation for lost consumer goods. Specifically, the plan would offer each displaced family three options: (1) a new apartment in El Chorrillo, requiring up to two years to complete; (2) a house on a serviced lot in an acceptable location; or (3) a grant of up to \$7,000, roughly the cost of a modest new home.

# ENVIRONMENT AND NATURAL RESOURCES

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091

PN-AAX-233  
MF \$1.08/PC \$5.33

## Preliminary indicators for monitoring changes in the natural resource base

Weber, Fred R.

U.S. Agency for International Development. Bureau for Program and Policy Coordination. Center for Development Information and Evaluation  
Feb 1990, vi, 34p. + attachment, En  
A.I.D. program design and evaluation methodology report, no.14

Since most agricultural and rural development projects call for intensive resource use, they are likely to have both positive and negative impacts on the physical environment. This paper describes ten simple, low-cost indicators which can be used by field personnel as an alternative to sophisticated data collection systems in monitoring these changes. These indicators were selected because they: (1) allow easily measurable, low-cost, rapid data collection; (2) are applicable over a broad range of ecosystems; (3) have a project-level focus; and, where feasible, (4) permit local participation. The paper details how to collect and use these data for soil, water, vegetation, wildlife, and to some extent, areas of scientific, cultural, historical, and religious significance. The most important indicators of impact on the quantity of water are changes in the stream flow, water table, or drainage patterns, while changes in water quality are detected by monitoring physical, chemical, and biological properties. Impacts on soil are measured by observing wind and water erosion and trends in soil productivity, particularly in traditional farm fields. Vegetation is monitored by looking at changes in the ratio of permanent vegetation to open or farmland areas; in the composition and density of the vegetation; and in tree or shrub coverage on farmland or in open areas. To measure the impact on wildlife, the number of species, the size of the animal population, and the extent and quality of the habitat are observed. Finally, areas of special significance should be monitored, according to their importance to the local people (e.g., sacred forests, burial grounds) or to the international scientific community (e.g., sites of geological significance or species diversity).

092

PN-ABD-904  
MF \$1.08/PC \$10.53

## Segou roundtable on local level natural resources management in the Sahel, Segou, Mali, May 22-27, 1989

Shaikh, Asif, ed.

Energy / Development International  
Permanent Interstate Committee for Drought Control in the Sahel (Sponsor)  
Club du Sahel. Organisation for Economic Development Cooperation (Sponsor)  
U.S. Agency for International Development. Bureau for Africa (Sponsor)  
(Segou Roundtable on Local Level Natural Resources Management in the Sahel, Segou, ML, 22-27 May 1989)  
1989, 27p. + 4 appendices: ill., En

In 1989, the *Club du Sahel* and the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) sponsored a meeting in Segou, Mali, for local groups, governments, and international organizations (public sector donors and PVO's) to discuss natural resource management in the Sahel. This report chronicles the Segou Roundtable and begins by looking at the events leading up to the meeting, the participants involved, and the subgroup discussions. The "Segou Declaration" is then detailed. This document established eight principles, which, if acted upon, would create the preconditions necessary for sustainable natural resource management in the Sahel. The Eight Points are: (1) an increase in investments to rehabilitate the land; (2) greater involvement of local communities in resource management; (3) decentralized management to improve efficiency; (4) an increase in the security of land tenure; (5) an increase in local investment through local credit and mobilization of savings; (6) greater participation of women; (7) improvements in information exchange; and (8) a stabilization of the imbalance between population growth and production capacity. The final sections discuss how the Segou Declaration has realigned priorities for natural resource management in the Sahel and outline follow-up efforts needed to ensure the impact of Segou on field efforts.

# ENVIRONMENT AND NATURAL RESOURCES

093

PN-ABD-913  
MF \$1.08/PC \$5.85

## Urban environmental management in developing countries: toward a policy and program agenda

LaNier, Royce; Reeve, Stephen; Young, April  
Technical Support Services, Inc.  
U.S. Agency for International Development. Bureau for  
Private Enterprise. Office of Housing and Urban Pro-  
grams (Sponsor)  
Nov 1989, 43p., En  
9401002

Rapid urbanization is quickly leading to severe environmental degradation in Third World cities — the very ones least capable of undertaking expensive remedial actions such as urban renewal and toxic waste clean-up. This report emphasizes the need for environmentally sensitive management in order to sustain the developing world's urban economic development. It begins by suggesting a conceptual framework for understanding the urban environment's major components — population, ecosystem, infrastructure and land use patterns, economy, and institutions — and the interplay between them. Within this framework, the report discusses the tools, methods, and processes of urban environmental protection and management. Particular emphasis is placed on methods of enhancing economic growth; strengthening local governments and urban institutions; creating better systems for guiding urban growth; improving the delivery and management of urban land, infrastructure, and services; and encouraging private initiative. A possible program and policy agenda for A.I.D.'s Office of Housing and Urban Programs is then proposed, which draws from both past experience and solutions emerging from the above discussions.

094

PN-ABE-011  
MF \$2.16/PC \$15.99

## Circum-Pacific seismic potential, 1989–1999

Nishenko, S.P.  
U.S. Dept. of the Interior. Geological Survey. National  
Earthquake Information Center  
U.S. Agency for International Development. Office of  
U.S. Foreign Disaster Assistance (Sponsor)  
[1989], viii, 126p.: charts, maps, statistical tables, En

When and where will the next damaging earthquake occur in the circum-Pacific region? To determine likely answers, this report summarizes the known seismic history for more than 119 seismic gaps around the region, and describes the potential for future large ( $M_s$  7.0–7.75) and great ( $M_w$  7.76–9.3) earthquake activity in terms of conditional probability for the years 1989–1999. The level of reliability associated with these forecasts varies regionally and is influenced by the completeness of the historic earthquake record and the present understanding of the mode of earthquake rupture in each country. These data are presented in a probabilistic forecast to provide a framework for global comparison. A list is included of the sites most likely to experience a large or great earthquake within the next 10 years: (1) Parkfield, California (93%); (2) Delarof Island, Aleutians (85%); (3) Vankolo Island, Vanuatu (83%); (4) Jama, Ecuador (66%); (5) S. Santo Island, Vanuatu (60%); (6) E. New Britain, New Guinea (59%); (7) W. New Britain, New Guinea (58%); (8) Central Tonga (58%); (9) N. Bougainville, New Guinea (53%); and (10) S.E. Guatemala (51%). For long-term planning, the report provides a listing of the 30 high (i.e., at least 50%) probability regions for a 20-year period (1989–2009). An appendix contains a list of all the gaps studied, their coordinates, the date and magnitude of the most recent large or great earthquake, and probability estimates for 5, 10, and 20 year windows.

# ENVIRONMENT AND NATURAL RESOURCES

095

**PN-ABE-871**  
MF \$1.08/PC \$5.72

## **Conserving tropical forests and biological diversity: 1988–1989 report to Congress on the USAID program**

U.S. Agency for International Development  
1989, 44p.: ill., charts, En

Since the turn of the century, more than half of the world's tropical forests have been lost. Over 11 million hectares of tropical forest are cleared each year, and much larger areas are degraded. This report to Congress emphasizes A.I.D.'s leadership role among international donor agencies in conserving tropical forests and biological diversity while promoting sustained economic growth. In

FY 1989, A.I.D. supported 171 tropical forestry projects, up from 145 in FY 1988, with an increasing percentage of activities concerned with biological diversity. Estimated total obligations for these activities exceeded \$50 million in 1988 and \$76 million in 1989. The report describes some of the key projects, including efforts in Peru, Honduras, Guatemala, Haiti, Costa Rica, Belize, Ecuador, Rwanda, Madagascar, Niger, Mali, Burundi, the Philippines, Nepal, India, Tunisia, Pakistan, and Jordan. The report also provides an overview of regional programs and of centrally funded activities. The projects illustrate the varied approaches taken by A.I.D. and their on-the-ground impact. While some have tested innovative approaches to sustainable resource management, others have built upon earlier program initiatives. Many projects have become models for other donors, and most have demonstrated the crucial relationship between economic development and sound natural resource management.



*Each year more than 11 million hectares of tropical forest are cleared and much larger areas degraded.*

096

PN-ABE-001  
MF \$1.08/PC \$8.58**Final report of wind energy applications and training symposium (WEATS), San Francisco, CA, September 19-27, 1989**

American Wind Energy Association  
U.S. Agency for International Development. Bureau for Science and Technology. Office of Energy (Sponsor) (Wind Energy Applications and Training Symposium [WEATS], San Francisco, CA, US, 19-27 Sep 1989) Sep 1989, [16]p. + 6 attachments: ill., charts, maps, statistical tables, En  
9365730

Many developing countries have a significant demand for expanded wind power production, especially in rural areas where reliance on wood energy is a major factor in deforestation. These conference proceedings contain brief

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***With U.S. funding and technical expertise, many countries could provide ready markets for U.S. wind energy technology and equipment.***

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assessments of the prospects for wind energy development in 12 countries: Chile, Costa Rica, Egypt, India, Jordan, Netherlands Antilles, New Caledonia, Pakistan, Senegal, Tunisia, Uruguay, and Zimbabwe. The assessments cover the current capacity and type of power produced; the percentage of the population with access to the power grid; previous or planned activities to develop wind energy; average wind speeds; governmental agencies responsible for power development; and the involvement of international donors. A prevailing theme throughout the reports is the need for accurate resource data. It is evident that, with U.S. funding and technical expertise, many countries could provide ready markets for U.S. wind energy technology and equipment.

097

PN-ABE-557  
MF \$3.24/PC \$33.28**Bangladesh rural electrification: preliminary assessment — final report**

deLucia and Associates, Inc.  
U.S. Agency for International Development. Bureau for Asia and Near East. Bangladesh (Sponsor)  
Nov 1989, v, 63p. + 10 annexes: charts, statistical tables, En  
3880249; 3880054; 3880070

The rural electrification program in Bangladesh has grown considerably since its initiation over a decade ago and now encompasses 186 Upazilas and 40 cooperatives. This report presents preliminary findings regarding the program's social and economic impacts. The following specific impacts are addressed: (1) the impact of electrified irrigation on productivity output, incomes, and employment in the agricultural sector; (2) the impact of electrification on new and existing small industrial and commercial enterprises; (3) the impact on household economic activities, particularly cottage industries; (4) the impact on family planning decisions and fertility; (5) impacts on social well-being, including education, health, leisure time, the availability of social services, and the role of women; and (6) equity effects in terms of affordability of services, and the distribution of benefits among areas. In economic terms, the program's success is confirmed by the financial performance of the rural electric cooperatives. Almost all are able to meet their operating costs and are expected to be able to pay back their debt. However, while the program is evolving in a positive manner, it has yet to achieve some aspects of institutional maturity associated with a well-functioning rural electrification organization. Further outside assistance is needed not only to expand the physical system, but, more importantly, to strengthen the management system, especially its evaluation capability.

# EDUCATION

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098

PN-AAX-229  
MF \$1.08/PC \$3.38

## **Beyond the neoclassical university: agricultural higher education in the developing world — an interpretive essay**

Hansen, Gary E.

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

Jan 1990, vi, 19p., En

A.I.D. program evaluation report, no.20

Most public agricultural universities in the Third World have developed according to a neoclassical model which limits their ability to remain innovative and responsive to important social needs. This study synthesizes findings of an evaluation of agricultural universities in ten countries (India, Indonesia, Thailand, Brazil, Dominican Republic, Mexico, Ethiopia, Morocco, Nigeria, and Malawi) and explores an approach for revitalizing agricultural education. Four main problems inherent in the neoclassical model are identified. (1) The effectiveness of agricultural universities in promoting rural and agricultural development is often limited by the policy environment. Three factors stand out here: the absence of strong linkages to the Ministry of Agriculture; the lack of autonomy concerning enrollment, programming, and finances, together with weak internal mechanisms for keeping university leaders accountable; and policymakers' conservative views of the role of the university. (2) Another constraining factor is the universities' overemphasis on research in crop and animal production and neglect of broader social and economic concerns and public policy issues. (3) The traditional university is organized around discipline-based departments, their involutory tendencies unchecked by cross-disciplinary structures, strong extension services, or well-organized external constituencies. (4) A final constraint is posed by a highly didactic philosophy of education which views learning as merely transfer of knowledge in the classroom. The paper concludes that a new type of university is needed. This post-neoclassical model would have the following attributes: a broader curriculum to include general issues of rural well-being (e.g., employment, edu-

cation, tenure security) in addition to the subjects of crop and animal production; an innovative, activist orientation toward both educational methods and educational goals, involving increased cooperation among faculty, students, and local citizens; and a new university structure, in which interconnected task groups are clustered around major programmatic themes.

099

PN-ABE-674  
MF \$2.16/PC \$14.95

## **Honduras primary education subsector assessment**

Academy for Educational Development, Inc.  
Juarez and Associates, Inc.

U.S. Agency for International Development. Bureau for  
Latin America and the Caribbean. Office of Develop-  
ment Resources (Sponsor)

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

Dec 1989, [56]p. + 6 annexes: statistical tables, En  
Spanish ed.: PN-ABE-385  
5970000

Except for Panama, Honduras has the highest rate of access to primary education in Central America, with some 90% of children entering the first grade. This achievement is the result of a countrywide school construction campaign and the addition of approximately 800 new teaching positions each year for the last five years. Despite the high access rate, however, the efficiency of the educational system is below that of any other Central American country. Classrooms are in serious disrepair and short supply. Internal efficiency is also low. In 1987, for example, only 46% of those who entered the first grade graduated from sixth grade, compared with the Central American average of 55%. Chapter I of this sector assessment identifies trends in Honduran primary education, focusing on access rates, efficiency, teacher supervision, and educational facilities. Current donor projects in Honduras are also discussed. Subsequent chapters highlight major issues, constraints, and policy implications in the following categories: primary education costs and financing; access, efficiency, and projected costs; facilities; instructional pro-

cesses and practices; multigrade primary schools and school-community relations; teacher training and staff development; and educational administration. Each chapter contains recommendations for further study and dialogue with the Government of Honduras.

100

**PN-ABE-782**

MF \$1.08/PC \$10.27

## **Improving girls' school attendance and achievement in developing countries: a guide to research tools**

Hyde, Karin A.L.

International Science and Technology Institute, Inc.

U.S. Agency for International Development. Bureau for

Science and Technology. Office of Education

(Sponsor)

Oct 1989, 76p., En

9365823

The success of many development projects is closely linked to the level of schooling attained by women beneficiaries, since educated women are more efficient users of contraceptives, agricultural innovations, and health services. Yet in the poorest areas of the world many girls do not enter school or fail to stay long enough to gain any significant benefit. This guide describes 31 methodologies for collecting data on the causes of low female access to education in the developing world. Types of data covered include: child characteristics (5 methods), parents' attitudes and behaviors toward children (15 methods), teacher and school variables (6 methods), and community characteristics (5 methods). The methodologies come in a wide variety of forms (e.g., large-scale survey research, personal interviews, inventories, and observation guides) and from a variety of disciplines (child psychology, human development, economics, demography, anthropology, education, and sociology). For each, the report describes the method's objective and type, the principal investigator or developer, place and date used, subjects, method of administration and pretesting, description, commentary, and bibliography.



*In the developing world, many girls either do not enter school or fail to stay long enough to gain significant benefit.*



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