

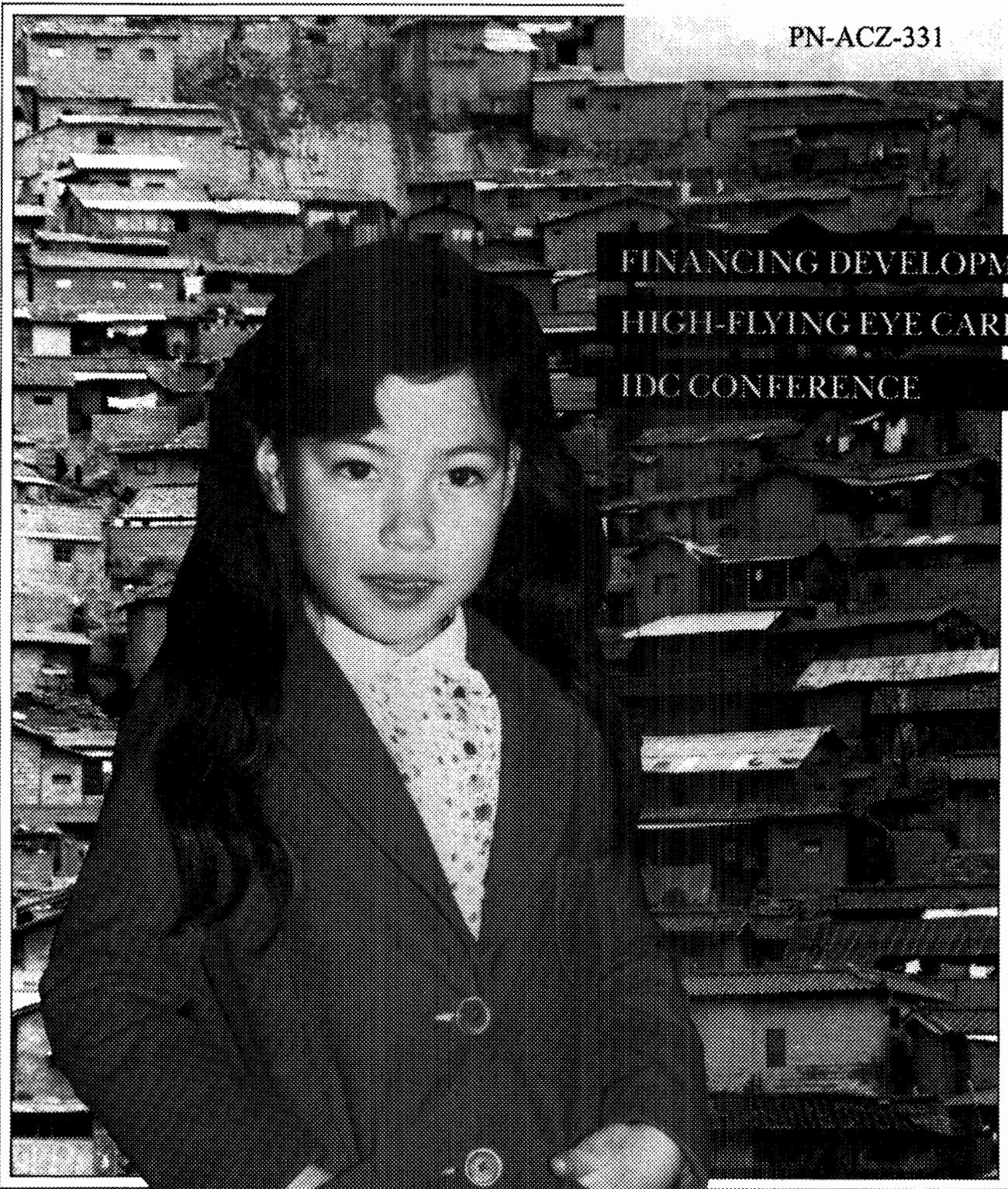
AGENCY FOR INTERNATIONAL DEVELOPMENT

SEPTEMBER 1983

HORIZONS

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FINANCING DEVELOPMENT

HIGH-FLYING EYE CARE

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On the cover: A Korean-American girl turns on the charm for the camera. She has an American sponsor and is seen regularly by a caseworker. Other Amerasians, living in cities throughout Asia, are not as fortunate. Article begins on page 16.

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ACCENT ON

DEVELOPMENT



U.S. AID UP TO DEVELOPING NATIONS:

The United States provided \$8.2 billion of official development assistance to developing countries in 1982, its largest amount to date. Industrialized countries belonging to the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) gave assistance totaling \$27.9 billion, or 9% more than in 1981. This represents 0.39% of DAC countries' gross national products, compared to 0.35% in 1981. DAC assistance to the 36 least developed countries continues to increase in real terms, accounting for 7% of the combined GNP of these countries and one-third of their imports.



TOOTHACHES

menaced more people in the developing world than in industrialized countries in 1982, according to a report on oral health given at the 36th World Health Assembly. The state of oral health is deteriorating in most Third World countries, particularly in urban areas, while improving in the developed world. Twenty years ago, the trend was reversed. But preventive programs against dental decay and periodontal—gum and tissue—diseases have been carried out in developed countries and neglected, in large part, in developing countries.

The oral health of a population is measured by the average number of decayed, missing and filled (DMF) teeth in a 12-year old person. According to the World Health Organization, the DMF-teeth index was about 4.1 (5 for urban areas) for the Third World in 1982, and 3.3 for the industrialized world.

Twenty years ago, the index was less than 1 DMF-teeth for most less developed nations, and as high as 10 for developed countries.

Some industrialized countries have one dentist for every 1,000 people. In contrast, there may be one dentist for every 20,000 to 100,000 people in a developing country. However, training more Third World dentists—prohibitively expensive—may not

be the answer. The greatest need is for primary health care workers trained in preventive measures, dental assistants and, only when necessary, dentists.



ZAPPING THE MEDFLY:

Egypt is about to undertake a \$19.3 million project with the UN International Atomic Energy Agency (IAEA) to use radiation to sterilize and thus eradicate the Mediterranean fruitfly that infests citrus and stone fruits, reducing their quality and quantity. Plans call for construction of a network of facilities to raise and release billions of sterile insects. To date, the Medfly has been eradicated from the Italian islands of Procida and Capri as well as large areas of Central America, including Mexico, using IAEA equipment and facilities.

The project hopes to eradicate the Medfly from Egypt within four years using the sterile flies, bait sprays and suitable quarantine procedures. According to IAEA, it is economically feasible, environmentally acceptable and effective. Previous eradication plans used imported pesticides which alone cost up to \$60 per acre.

The technique is considered to be a supplement to methods where only conventional agricultural chemicals are used. A group of African countries are already preparing a long-term plan using radiation to combat the tsetse fly.



ELECTRONIC CLASSROOMS:

In classrooms throughout Indonesia, students will be sitting in front of television screens; but instead of watching a TV show, they will be watching an electronic blackboard.

The electronic classrooms are being set up under an AID contract to Aregon International as part of AID's Rural Satellite Program which will connect 11 campuses of the Eastern Islands University Association. The Advanced Graphics System creates alphageometric graphics and text and displays them in eight-color, high resolution format.

The system is composed of two parts: a studio and a terminal. A microcomputer-based device accepts information from a keyboard, light pen, digitizing pad and video camera. A microprocessor-based unit accepts the graphic images from either a voice grade telephone line or an audio cassette player.

Because information can be concurrently displayed at the point of origin and transmitted to a central teaching site and other remote locations equipped with TV monitors and light pens, students and instructors can interact, even though they are thousands of miles apart. By using a standard audio cassette player and a TV set, homebound or isolated students also can benefit from the system.



S.O.S. Many of the world's refugees are located in developing countries—countries that are already struggling to meet the needs of their populations and have limited resources to spare.

The Office of the UN High Commissioner for Refugees (UNHCR) has published a manager's guide for emergencies that can help use the limited resources in the best way possible. The *Handbook for Emergencies* covers a wide range of associated subjects: needs assessments, supplies, logistics, site selection, sanitation and field level management. The book outlines the responsibilities of governments, UN organizations and nongovernment organizations. It emphasizes the need to involve the refugees and promote their self-sufficiency and to work for durable solutions—voluntary repatriation, local integration or third country resettlement.

For copies, contact UNHCR, Palais des Nations, 1211 Geneva 10, Switzerland.



JUST A PHONE CALL AWAY: Fishers in the small Costa Rican village of Costa de Pajaros are dialing away on their village's new telephone. They are calling buyers to find the highest bidder for their catch before sending it to market. The new telephone service, financed as part of a \$12.2 million Inter-American Development Bank loan, has been a boon not only for the fishers but for all of the village's 625 people.



OPEN WIDE AND SAY "AHH." Using aerosols to administer measles vaccine may be the technological shortcut that will make eradication possible by the end of the decade. The aerosol is a noninvasive method that can be safely used with limited training and is likely to be acceptable to parents. Evidence also indicates that a measles vaccine given by aerosol will immunize a higher proportion of children in the four to six month age group, which is considerably earlier than measles vaccine by injection.

This is one solution suggested in *New Developments in Tropical Medicine II*, published by the National Council for International Health. Topics range from educational strategies in tropical public health to logical approaches to primary care problems. Whooping cough, tropical fevers, dermatological diseases, severe diarrhea, leprosy, eye disease and blindness, acute respiratory infections, bronchopulmonary diseases, tuberculosis, Chagas' disease and onchocerciasis are covered.

To order, write to NCIH, 2100 Pennsylvania Ave. NW, Suite 740, Washington, DC 20037.



FISHING FOR A SOLUTION: Poor sanitation on Indonesian fishing boats, coupled with poor processing techniques, leave but three days before sardines, caught for *pindang*—boiled salted sardines—go sour. Insects infest them, mold grows on them and they become discolored and rancid.

About 75% of Indonesia's sardine catch does not meet the standards of canneries, so it is sold raw to be boiled, fried, salted or made into fish meal.

A part of the daily diet for many Indonesians, *pindang* is popular, especially among low-income groups, because it is lower in salt than dried salted fish and looks more like fresh fish.

Researchers at Brawijaya University, in cooperation with the ASEAN Project on Food Waste Materials, are studying ways to delay the spoiling of boiled salted sardines and to improve handling and processing of sardines for *pindang* production. The main microbial sources of contamination appear to be salt and sea water. Researchers are trying to suppress the initial bacterial count, thereby delaying the process of rigor mortis. Experimenters have used a solution of salt plus potassium sorbate (with acetic acid to control acidity) as a preservative/antioxidant to be added to the fish while still on board, reports the *ASEAN Food Handling Newsletter*. If experiments show that fishers can use sea water as a basis for the potassium sorbate solution, the experiments may lead to a cheap, practical alternative to ice for preserving fish at sea.



PUTTING IT IN GEAR: The obstacle to private sector development in the Caribbean wasn't lack of private resources, but suitable projects to fund, according to a 1980 task force report on private sector activities in the Caribbean, sponsored by the Caribbean Group for Cooperation in Economic Development, and jointly funded by the UN Development Program (UNDP) and the Caribbean Development Bank. By 1981, a technical cooperation project, the Caribbean Project Development Facility (CPDF), was in business,

helping project sponsors design "bankable" projects. The facility helps governments and the private sector in the Caribbean identify, promote and develop promising medium-sized investment projects. Financed by AID, UNDP, Canada, the Netherlands, the Inter-American Development Bank and the Caribbean Development Bank, it also assists firms in the region prepare projects for financing by interested investors, bilateral agencies or other financial institutions.

In less than two years of operation, the project, executed by the International Finance Corp., is paying off. Over 60 projects have been looked at, a \$16 million financing package—\$5.2 million from banks and investors in direct response to CPDF—has been completed, covering five major investment projects in four countries; two projects with a total investment of \$2.6 million are in final preparation; five projects are near completion and 25 other proposals are being developed.

AID is providing \$1 million of CPDF's funds.



FEEL A SONG COMING ON? If it's one that encourages good health practices, you may want to share it with the Child-to-Child Program. The program teaches and encourages older school children to become involved in the health and development of their younger brothers and sisters. Child-to-Child is collecting words and music—original songs, translations of songs which are not in English, musical scores, lyrics and cassette/tape recordings—of popular songs which promote good health care habits. Write to: Duncan Guthrie or David Morley, Child-to-Child Program, Institute of Child Health, 30 Guilford St., London WC1N 1EH, United Kingdom.



SOCIAL FORESTRY: The Ford Foundation reports that although India may soon be able to produce enough food for its 700 million people, there may not be enough fuel to cook it. And what supply of traditional fuels there is—40% of India's source of fuel, of which about 68% is fuelwood—is diminishing rapidly.

Replenishing the forests of India is complicated by the fact that a considerable portion of the land still available for trees and grasses is publicly owned, and therefore not tended to on a regular basis. These common lands—everybody's property but nobody's responsibility—account for 35% of India's total area and are the constant victims of erosion and uncontrollable flooding.

The Indian government has turned to "social forestry" programs to help to increase fuelwood supplies and restore these lands. The name is self-explanatory: villagers are organized to plant

trees and fodder crops on the degraded lands and to carry out other soil and water conservation measures such as building small check dams to control erosion and flooding. Another major objective is to help the large number of landless.

Out of these reforestation and conservation efforts emerged the Society for the Promotion of Wasteland Development last year, a nongovernmental organization that provides technical, managerial and financial assistance to community-based groups engaged in social forestry projects. The society draws together groups interested in social forestry, as well as specialists in rural development, channeling public and private funds into joint efforts and providing technical assistance to launch projects.

Some 400,000 trees in different regions of the country were planted last year through the society's efforts. A project combines money from corporations, seedlings from state forestry departments, labor from villagers and advice from scientists on the spacing and fertilizing of the new plants. The society also has sponsored research at agricultural universities on tree planting and fertilization and on improving the energy efficiency of cooking stoves. Soon, the society hopes to offer integrated packages of land and water management, reforestation and pasture development to rescue degrading land throughout India.

Such nongovernmental organization efforts help to complement larger scale Indian government and donor-assisted project activities which are directed toward alleviating these same problems. AID is assisting India with several projects in the areas of social forestry and alternative energy. For example, AID is helping the state governments of Madhya Pradesh and Maharashtra carry out their social forestry programs. These programs work with villagers in setting up community tree lots and private nurseries on marginal lands. Other donor organizations, such as the World Bank, are also providing assistance and support.



SHELTER WORKSHOP: AID's housing and urban development office is sponsoring a shelter training workshop for senior professionals from developing countries. The month-long program, scheduled for October, will cover: cost recovery, settlement upgrading, target group identification, savings mobilization, financial management, and the analysis and definition of appropriate public/private sector roles in the housing sector. Work/study exercises based on case studies, talks by leading professionals, field trips, and country presentations will be included. Contact: AID/PRE/H. Room 625, SA-12, Washington, DC 20523.



THE PEOPLE OF MALEKHU, a small village 20 miles from Nepal's capital, Kathmandu, are among 4% of the country's population who have access to electricity. Malekhu's electrification, however, doesn't come from a grid or hydroelectric project—it comes from an updated version of the traditional Himalayan water mill or *ghatta*. Formerly used only to grind grain, an improved model directs the flow of water at the spoon-shaped vanes of the water wheel and comes with a longer shaft on which belts to drive generators and other machinery can be attached. The new mill was developed by UNICEF and Indian appropriate technology groups. The UN Development Program is funding 20 mini-hydro projects with capacities ranging from 40-780 kilowatts. But the improved water mills, most of which are only three to 10 kilowatts, may meet local electricity needs faster as they can be built with local materials and skills. Much of the country's hydroelectric potential is theoretical, writes Yojana Sharma for *Earthscan*, because many of its rivers suffer sharp seasonal fluctuations and because it's hard to build dams in the Himalayas. Cement cracks and sets poorly at high altitudes, materials must be flown in and experienced labor is scarce.



AN AREA THE SIZE OF SENEGAL—about 20 million hectares—deteriorates each year to the point of zero or negative economic returns. The estimated value of annual production lost because of damaged land, according to a United Nations study on financing, is over \$26 billion, equivalent to the 1979 Gross National Product of Thailand or Colombia.



DICTIONARIES ARE LOOKING UP with the publication of the Volunteers in Technical Assistance's (VITA) new one on renewable energy. The first comprehensive source for terms in the rapidly growing renewable energy field, it contains words not commonly found in conventional dictionaries along with words whose meanings change in the context of renewable energy. The illustrated 496-page dictionary covers some 1,000 terms dealing with solar, wind, small-scale hydropower, biomass and other renewable energy sources. Each term is defined in English, French and Spanish, and cross-referenced for easy translations.

To order, write VITA, Suite 200, 1815 N. Lynn St., Arlington, VA 22209 or telephone (703) 276-1800.



A DIRECTORY OF FOOD POLICY INSTITUTES has been compiled by the Development Center of the Organization for Economic Cooperation and Development (OECD). It provides basic information, outlining characteristics and priorities of the institutions. The guide includes institutions engaged in education and training, technology transfer, and project financing as well as research. Contact: Duncan Miller and Morag Soranna, OECD Development Center Publications, IPC Science and Technology Press Ltd., PO Box 63, Westbury House, Bury Street, Guildford, Surrey GU2 5BH, U.K.



THE GIANT CLAM, contrary to its undeserved reputation as a "killer," is a gentle predator. It also may prove to be an inexpensive source of protein for Pacific islanders, and an important economic source as well.

Several species of giant clams and their smaller relatives once were an important food source throughout the Indo-Pacific. But overfishing and environmental alteration have reduced clam populations, pushing them to the brink of extinction.

Under a \$198,000, two-year grant funded by AID's Office of the Science Advisor and managed by AID's Bureau for Science and Technology, the University of California at Santa Barbara is researching the developmental physiology and biochemistry of giant clams.

There are two genera: *Tridacna* and *Hippopus*. The tridacnids maintain a population of algae in their tissue. In this symbiotic relationship, the algae feed the clams by photosynthesis but manage not to be eaten themselves. Hence much of tridacnids' food needs can be satisfied by light alone.

Studies in Palau, Western Caroline Islands, have shown that raising giant clams from eggs is feasible. With conventional culture, mortality during larval stages can be as high as 99%; but if particulate and dissolved organic nutrients are provided, survival can be increased by 40%.



THE ARNAB NEWSLETTER, a quarterly publication of the African Research Network for Agricultural Byproducts (ARNAB), has renewed publication after a one-year break.

ARNAB has found that field adoption of technology for better use of crop residue lags behind research efforts. Accordingly, the newsletter will seek readers' views on ways to make crop residue research applicable to most African smallholder livestock producers.

For sample copies of the newsletter and requests to be added to the mailing list, write AID/S&T, Room 209, SA-18, Washington, DC 20523.

AID BULLETIN

Health Experts Meet to Promote Oral Rehydration Therapy

AID Administrator McPherson has pledged to seek "near universal availability" of oral rehydration therapy (ORT) within 10 years. McPherson made this commitment at the International Conference on Oral Rehydration Therapy, June 7-10, in Washington, DC. About 600 persons from over 80 countries attended the meeting sponsored by AID in cooperation with the International Center for Diarrhoeal Disease Research in Bangladesh (ICDDR/B), UNICEF, and the World Health Organization (WHO).

The Administrator outlined a five-point program which AID will use to help reach this goal: all AID-supported primary health care projects will stress ORT; AID missions will be directed to strengthen existing ORT activities and introduce ORT where it does not exist; ORT will be an integral part of a new worldwide AID program to promote the use of effective health technologies; AID's long-standing support for diarrheal disease research in cooperation with ICDDR/B, WHO, and other institutions will continue; and AID and the Peace Corps will work together to further promote ORT use at the community level.

Addresses by Vice President George Bush and Secretary of Health and Human Services Margaret M. Heckler underscored

the importance the United States attached to the conference.

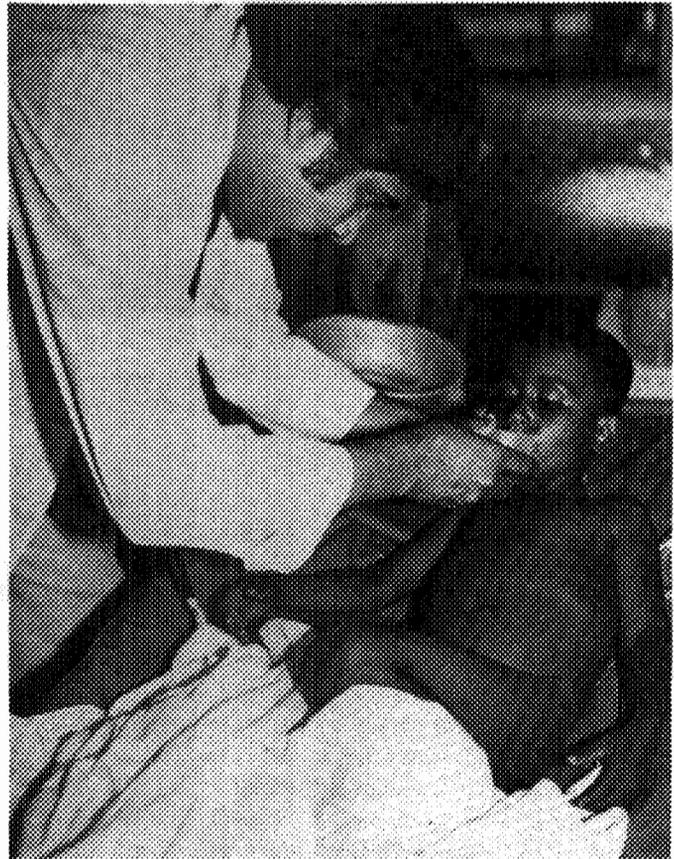
Bush told conferees, including many of the world's leading scientists, physicians, and health officials, that the Reagan Administration is "committed to the broad and full application of oral rehydration therapy."



Vice President George Bush addressed the ORT conference.

Heckler referred to the conference as an "historic turning point" in the battle against diarrheal diseases.

In a keynote address, Halldan Mabler, WHO director-general, called diarrheal diseases "a symbol of underdevelopment." Five hundred million children are afflicted annually, resulting in five million deaths. "Social and economic progress cannot take place when the malnutrition that goes hand-in-hand with diarrheal diseases saps the initiative and potential and encourages the dependence of those affected by this debilitating symptom," he said.



A child suffering from dehydration, brought on by diarrheal disease, is given lifesaving oral rehydration therapy.

Since 1971, WHO and UNICEF have recommended a standard ORT formula now used worldwide. These prepared packets, which

cost about 8 cents apiece, consist of sodium chloride, sodium bi-carbonate, potassium chloride, and glucose. These packets can be used to treat all age groups.

For patients who can still drink, ORT packets and homemade solutions are preferable to expensive intravenous treatment because preparation requires little formal education, needs no sterile equipment, is inexpensive, and allows parents to participate in the care of their children. Yet even these low-cost packets are too costly for many developing countries to provide to every family; the 50 million packets produced each



UNICEF's Exec. Dir. James Grant (left), and A.A. Muhiith, Bangladesh's minister of finance and planning, spoke on the diseases' effect on development.

year are adequate to treat just under 5% of all diarrheal cases.

Conference participants examined the scientific and technical basis for ORT, practical considerations in the management of diarrheal disease and various ways in which ORT programs have been carried out.

Speakers stressed the need to incorporate ORT into each country's primary health care system—public education, growth monitoring, breastfeeding, immunization, proper nutrition, particularly for pregnant women and children, and safe water and basic sanitation. Ultimately, such a system can reduce the incidence of diarrheal diseases and make ORT more effective when needed. Isolated ORT programs were seen as justifiable where primary health care infrastructure is either absent or underdeveloped.

Mothers are keys to the success of ORT. With the mother participating in child health care, children can be assured of vital early replacement of fluids lost through diarrhea.

There also is an important relationship between the education and role of women within their society and the prevention and treatment of diarrheal diseases. A mother's ability to read is closely associated with lowered infant mortality. Women who work in the commercial sector, said Dr. Richard Cash, director of the Office of International Health at Harvard's School of Public Health,



Dr. Lincoln Chen of the Ford Foundation (left), confers with Natalie McPherson of the conference's Technical Advisory Committee; AID Administrator McPherson; and Dr. Clifford Pease, deputy director of AID's Office of Health and chairman of the Technical Advisory Committee.

have a greater awareness of weights and measures—important skills in preparing ORT. Where male children have greater value, boys are brought to health facilities for treatment more frequently than girls, with lower mortality rates as a result.

Speakers discussed methods used to train mothers in ORT, ranging from promotion through the church at Sunday services to traditional community healers in Brazil, to national training centers in Egypt which have graduated several hundred paraprofessionals.

Summarizing the proceedings, Ford Foundation's representative in India, Dr. Lincoln Chen, outlined several issues fundamental to effective use of ORT:

- Because the disease ravages the small intestines, impairing its ability to absorb nutrients, diarrhea is both a nutritional and infectious problem. Thus, rehydration alone is not sufficient. Personal and household hygiene, water and sanitation problems must be dealt with as well

as nutritional and health problems.

- Continuing to feed the child is important during both the active and recovery stages of the disease. The use of food supplements with frequent, high-calorie feedings for several days following diarrhea may be a major intervention strategy. Catch-up or spurt growth resulting from this intensive feeding can bring the child back to his normal growth curve.

- For intervention to be effective, mothers must be partners in the delivery of ORT. Home-based pro-

grams require understanding the user's perspective, the constraints that a mother faces, and the resources at her disposal. Intervention must aim to support a sustained, interactive, communicative relationship with the mother.

- Health systems should introduce ORT in the field, clinics, and hospitals, backed wherever possible by intravenous fluids. The health system also should produce and distribute packets.

- Doctors and other health professionals must be convinced that ORT is appro-



Also speaking at the conference were (from left) Nyle Brady, AID senior assistant administrator for science and technology; Dr. William Greenough III and Dr. Mujibur Rahaman, director and senior scientist, respectively, of ICDDR/B.

priate and effective. This will help gain the support of mothers, decision makers, governments, and the public. Diarrhea and oral rehydration should be emphasized in medical school curricula and doctors should be urged to use ORT.

- Integrating ORT into primary health care systems is essential. Primary health care is the ultimate goal and ORT—because of its effectiveness—can help build confidence in a health system.

- Ensuring access to ORT requires looking beyond the health system. Other delivery vehicles, such as primary schools, religious organizations, non-governmental and voluntary agencies, community groups, traditional health systems, and the private commercial sector, should be strengthened to this end. In addition, mass media campaigns, radio, newspapers, bill-boards, and special materials are effective tools which should be used. Some of these are particularly helpful in reaching the illiterate.

- Of immediate need is the development of simple, reliable indicators and methods to measure, analyze, and interpret the diverse ORT field experience throughout the world. Critical examination of performance is essential as ORT activity increases.

- Any research on amino acid fortification and cereal-based solutions to enhance the body's absorption of the life-saving fluids should be subjected to field trials as soon as possible. ■

Reich Named Adviser to Secretary of State Shultz

Otto Juan Reich, AID's assistant administrator for Latin America and the Caribbean (LAC), has been appointed an adviser to Secretary of State Shultz. Reich, who will report directly to the Secretary and hold the personal rank of ambassador, will coordinate foreign and domestic public policy efforts related to Latin America with special emphasis on Central America. He replaces Ambassador Richard Stone, who was recently named special envoy to Central America.

Reich said he sees his primary role as acquainting both the domestic and foreign public with U.S. policy in Latin America. In particular, he said he hopes "to assist in helping the American people better understand the current situation in Central America, and what is at stake for them and for the people of that region. I believe when people have a better understanding of the situation, they will increase their support of the Administration's objectives."

Reich will work closely with all government officials involved in the region's policy efforts, especially Ambassador Stone and Assistant Secretary of State for Inter-American Affairs Langhorne Motley.

Cuban-born Reich brings a lifetime of professional and personal experience in Latin American affairs to his new position. Before joining AID in 1981, he was



Otto Juan Reich

director of Washington operations for the Council of the Americas, a private, nonprofit organization of more than 200 U.S. corporations, representing nearly 90% of private U.S. investment in Latin America.

Reich also was a community development coordinator for Miami, FL (1975-76). As the international representative for the Florida Department of Commerce (1973-75), Reich pro-

moted the state's industry in Latin America and the Caribbean.

A research fellow with the Center for Strategic and International Studies (1971-72), Reich concentrated primarily on foreign policy issues in Latin America. He was staff assistant to Rep. W.R. Hull Jr. (D-MO), handling legislative and constituent affairs.

As a civil affairs officer in the Panama Canal Zone with the U.S. Army (1966-69), Reich worked with the Panamanian government during a period of widespread unrest, on civic action and political-military affairs.

Born in Havana, Reich emigrated to the United States in 1960. He received a bachelor's degree from the University of North Carolina (1966) and a master's degree in Latin American studies from Georgetown University (1973). ■

AID/NOAA Project to Develop Tidal Wave Warning System in South America

AID's Office of U.S. Foreign Disaster Assistance (OFDA) is providing the National Oceanic and Atmospheric Administration (NOAA) with a \$235,000 first-year grant for a pilot study which, within three years, will lead to developing a tsunami early warning system for coastal South America.

The Japanese word for "harbor wave," a tsunami is a tidal wave which packs a devastatingly destructive force. Tsunamis are particularly prevalent along the shores of the Pacific Ocean—one of the earth's most seismically active areas. The project will develop, test and evaluate the warning system in either

Peru or Chile, two particularly tsunami-prone areas.

Tsunamis are caused when a large earthquake occurs under or near the ocean floor, triggering a series of ocean waves of extremely long length and duration. They travel with amazing speed across the ocean, exceeding 600 miles per hour. Although a tsunami's length from crest to crest may be 100 miles or more, its height from trough to crest may be only a few feet. But when the tsunami waves reach the shallow coastal waters, while slowed down, their height may be more than 100 feet, striking with killer force. Without using advanced technology, tsunamis caused by near-shore earthquakes cannot be detected before they crash into the coastline. They cannot be felt aboard ships under which they pass, nor can they be seen from the air.

This is what the AID/NOAA project intends to counter. The early warning system will monitor closely the occurrence of underwater earthquakes and confirm generation of a tsunami offshore, warning countries whose coastal zones are in the path of its advance.

Eddie Bernard, director of NOAA's Pacific Marine Environmental Lab in Seattle, WA, points out that more than 70,000 people in the Pacific Basin lost their lives to tsunamis in the last 135 years. Today, however, "regional warning systems, using existing technology, can alert people in the threatened areas within minutes, giving them time

to leave the coastal areas," he says.

The area affected by tsunamis, touched off by a single ocean-bottom earthquake, is astonishing. In May 1960, a major earthquake off the coast of Chile brought death and destruction to Hawaii, the Philippines, Okinawa and Japan. Waves of 15 to 35 feet razed



Early warning of tidal waves will help coastal inhabitants escape to higher ground.

the Hawaiian city of Hilo, leaving 61 dead and causing property losses of \$22 million. In northern Japan and Okinawa, 180 people were missing or dead after the waves' impact. Twenty died in the Philippines, and over \$500,000 in damage was reported along the U.S. coast. Meanwhile, all Chilean coastal towns between the 36th and 44th parallels were either destroyed or severely damaged.

The only early warning systems are in the United States (Alaska and Hawaii), Japan and the Soviet Union. Other nations bordering the Pacific—most of them developing—rely on the Pacific Tsunami Warning System (PTWS) in Hawaii where seismic instruments throughout the ocean basin are monitored around the clock.

When an earthquake occurs strong enough to generate a tsunami, PTWS alerts people in its path. It is relatively easy to predict when a tsunami will arrive because its speed is proportionate to the square root of the water's depth.

However, PTWS has its limitations. Areas within one hour's travel time from

the earthquake's epicenter cannot be warned before it's too late.

"The time between when the earthquake occurs and wave formation is confirmed by automated analysis through satellite telemetry is minutes," says Paul Krumpe, OFDA's disaster early warning program coordinator. "The system we plan to use—the Geostationary Operational Environmental Satellite (GOES) telemetry link, combined with tsunami modeling and run-up analysis—will enable early warning of vulnerable population centers within minutes of tsunami generation off shore."

The AID/NOAA pilot study is called THRUST (Tsunami Hazard Reduction Utilizing Systems Technology). In THRUST, when an earthquake occurs it will

activate coastal seismic instruments, which in turn transmit signals to the GOES West satellite system.

The signal travels from the satellite to NOAA's Command Data Acquisition (CDA) station at Wallops Island, VA. After confirming the earthquake and the seismic sea waves, a signal from CDA trips an alarm device at the THRUST site in the host country. PTWS in Hawaii is warned at the same time—sooner than if it had used its own system.

"It now takes at least an hour after an earthquake to warn the people in the Pacific Basin," says Bernard. But with the regional tsunami warning system, he explains, it will take no more than 10 minutes. When notified that a tsunami is in progress, the local center will evaluate the threat using the computer models and alert the people in the endangered areas.

The THRUST project will develop one experimental site in either Chile or Peru. NOAA's Bernard will lead the site selection team which includes OFDA's Krumpe, James Lander of the U.S. World Data Center—a complex in Boulder, CO—and other contractors, such as tsunami modeling experts.

"Tsunami researchers are very interested in the outcome of THRUST," Krumpe says. "The money AID has contributed has prompted the tsunami research community to the point where the Japanese recently expressed interest in building a similar capability." ■

The Changing Employment Pattern in the Developing World

For some years, the services sector has been the fastest growing segment of many industrialized economies and the one looked to by governments to take up the slack as employment in agriculture and industry declines. Now a similar expansion of the services sector can be detected in the developing countries as well, according to an International Labour Organization (ILO) economist. Indeed, the trend is so marked that if it continues, "those who see agricultural development as the key to overall development might be running against the course of history," Michael Hopkins says.

His research, carried out under the ILO World Employment Program, reaches the conclusion that industry and, especially, services are rapidly outstripping agriculture as the main providers of jobs and major contributors to gross domestic product (GDP) in the developing world.

Background data for this analytical survey come from 92 developing countries and cover some 2,254 million people or 97% of the developing world's population. (The People's Republic of China is excluded from the study, except for some data on its labor force.)

The findings show that in the 1960-1980 period, agriculture's share of GDP in the 92 countries almost halved, falling from 31% to 17%. Its share of the labor force, meanwhile, dropped from 72.6% to 59.1% during the same period.

At the same time, industry boosted its GDP share in developing countries from 30% to 39% and its contingent of the labor force from 13% to 20%. However, industry's great leap forward in developing countries came in



In developing countries, more and more people are earning their living by providing services to others.

the 1960s, in the heyday of import substitution, when its share of GDP soared from 30% to 38%. Third World industrial expansion slowed considerably in the 1970s when its portion of GDP only inched forward by 0.5%.



For most developing countries, the growth sector over the 1960-1980 period has been that of services, which gained momentum in the 1970s, and by the end of the decade accounted for about 44% of the developing world's GDP.

The services share of the labor force also increased, from 14.5% to 21%. Currently, the services sector ranks as the second most important provider of jobs in the developing world, after agriculture.

Whatever the major contributing factor of this trend may be, the services sector in developing countries has become so important that "new research is called for in the dynamics of both the industrial and services sectors as major job absorbers in the future and, in particular, to give more weight to the relatively understudied services sector in developing countries," Hopkins says.

He warns, however, that the pace of change in the structure of the Third World labor force has to be



More jobs accompany the increasingly heavy demands on the resources of hotels and restaurants.

reckoned against both a worldwide recession, which has impeded economic growth and increased unemployment, and the persistence of widespread underemployment and poverty in many areas of the developing world.

For example, economic growth rates in the developing nations have fallen from an average 5.5% recorded in 1970-1980 to around 1% in 1981 and 1982. For most regions of the developing world, this means that population, which is increasing by about 2.2% a year, is now outstripping economic growth.

Latin America, the Middle East and Africa have been hardest hit by falling economic growth rates. Brightening the picture in Asia is the rapid expansion of the newly industrializing countries (NICs), such as Hong Kong, the Republic of Korea, and Singapore, where growth



rates of 7% were achieved during the past two decades.

If growth rates continue to lag in the Third World, unemployment rates could rise substantially in the next few years, perhaps even double. From now until the year 2000, the unemployment situation could worsen unless a growth momentum is restored coupled with greatly improved income distribution. The number of jobless will continue to swell because of expected hefty increases in the labor force's size, especially in the poorer regions. In the less prosperous Latin American countries, for example, the labor force is expected to grow by 3% a year during 1980-2000, as compared to 2.4% a year during 1960-1980. In the non-oil exporting countries of Africa and the Middle East, projections are for a rise of 2.8% a year over 1980-2000, compared to 1.9% a year during 1960-1980.

In Asia, too, the labor force is expected to grow faster in the future than in the past. In India, for example, it is projected to increase by 2.2% a year in the next two decades, compared to 1.9% a year during 1960-1980.

Unemployment figures alone, however, fail to give a true picture of the job situation in the Third World, since they do not reflect the acute underemployment and poverty which exist there. Hopkins's extrapolations from available data show a rise of underemployment (i.e., lack of worker access to productive jobs commensurate with their skills) in developing countries (excluding China) from 421 million to 448 million persons over the 1974-1982 period. Underemployment was not as prevalent in the NICs in Asia, despite sagging growth rates in the 1980s. The worst situation was in tropical Africa's poorest countries, where underemployment rose from 55 million to 76 million persons in 1974-1982. ■

Based on article in ILO Information.

MIAC Helps U.S. Universities Prep for Work in Development

Representatives from AID, the Board for International Food and Agricultural Development (BIFAD) and the universities that make up the Midamerica International Agricultural Consortium (MIAC) gathered for a working session that promises to forge a better partnership between AID and the academic community. Kansas State University hosted a pre-departure orientation to ready two team members of the Botswana Agricultural Technological Improvement program for field work.

"The objective," says Vernon Larson of Kansas State, "is to help prepare U.S. professors and their families to work and live more successfully in other cultures and countries, and to gain a fuller understanding of AID operations and missions."

The focus on pre-departure orientation follows a U.S. General Accounting Office (GAO) 1981 recommendation that new vigor be brought to the international work of U.S. universities.

The pre-departure orientation program for project team members from American universities going overseas was developed last year. It spotlights individual training on-campus and in the field. "Individual" is the key word. "Team members go out incrementally," explains Jean Weidemann, BIFAD's chief of institutional and human resources who attended the session. "It's a misconception that university team members leave for the field at the same time."

The week-long session addressed cultural, social, political and economic characteristics of countries; expected or potential problems that might

come up with host country counterparts, and the operation of the AID mission and AID procedures. An entire day was spent on institution building using case studies. Team leader David Norman from Kansas State returned from Botswana—where he and four other team members have been laying the groundwork for the past year—to give his perspective on the project.

To get an overview of how an "ideal" or model orientation might be conducted, other universities and consortia sent representatives to observe and participate in the orientation program so that they could replicate it.

MIAC is a non-profit organization committed to worldwide agricultural development. It is comprised of five Midwest land-grant universities: Iowa State, Kansas State, University of Missouri, University of Nebraska and Oklahoma State. Three other regional consortia with which AID contracts are the Southeast Consortium for International Development (SECID), the Midwestern Universities Consortium for International

Activities, Inc. (MUCIA) and the Consortium for International Development (CID) for Western states.

MIAC, through grants and contracts, uses agricultural faculties for teaching, research and extension in agricultural development.

The consortium's goals are to (1) combine university resources in order to strengthen and build upon the universities' international agricultural outreach services; (2) complement the strong areas in each member university and, at the same time, give faculty the chance to take part in worldwide agricultural development activities; (3) strengthen and enrich the academic and technical staffs at the universities; (4) coordinate universities' activities and take advantage of the geographic proximity of the member universities to respond effectively and quickly to need.

At present, MIAC is involved in several projects funded primarily by AID, including the Morocco Dry Land Agricultural Research project; Botswana Agricultural Technological Improvement program; a Technical Services to Mission (TSM) proj-

Botswanan villagers prepare grain, probably sorghum, for meal. Studying the country's cultural, socioeconomic, and political characteristics was part of the orientation session.



ect at AID's regional office for East Africa where assistance has been provided in Kenya, Rwanda, Uganda and the Seychelles; and the Tunisian Agricultural Technology Transfer project.

Different MIAC institutions take the lead in projects that include research and technical assistance by university staff in host countries and participant training in the United States for developing country graduate students. In Tunisia, for example, the University of Missouri heads the program geared to transfer U.S. technology to Tunisian agriculturalists. The University of Missouri is working with the Ministry of Agriculture there to carry out the four-year, \$4 million program. Tunisian graduate students receive special training at MIAC institutions and other institutions—like Utah State for irrigation management or University of California because the climate there is similar to that in Tunisia—where special kinds of ex-



The AID/MIAC project in Botswana works to find technologies that can be adopted and adapted by local farmers. KSU team leader, Dr. David Norman, is pictured in participating farmer's field.

pertise are required. This project, like those in Morocco and Botswana, has a dryland agriculture focus.

"Our five universities have significant similarities," explains J. Wendell McKinsey, an agricultural economist at the University of

Missouri and MIAC's executive director. "At the same time," he continues, "they have geographic variations—ranging from the dryland areas of western Nebraska, Kansas, and Oklahoma, to the heavy rainfall farm belt of eastern Iowa and Missouri. From north to south, we cover the spectrum of field crops. Developing countries span that spectrum also, and the research interest and scientific expertise of our faculty enable us to address the problems encountered by developing countries under those varying geographic conditions.

"There seems to be broad expectation that university involvement in international development will increase over time. We are convinced," McKinsey concludes, "that a combination of resources from a group of universities that have some similarities but still cover a wide gamut of technologies offers a sound way to make that contribution." ■

Purdue, Alabama A&M Join in Cereals Research for Niger

With a Title XII AID grant, Purdue University and Alabama A&M University have set out to develop major food grains and teach farmers in Niger how to put research findings into practice. The Niger Cereals Research Project, begun last year, is funded by a five-year, \$9.26 million grant.

Roughly 90% of the work force in Niger is engaged in some aspect of herding or agriculture. Working with the National Institute of Agricultural Research of Niger, the project aims to develop a research system for the country, focusing on institution building and human resource development. Nigerien students will be brought to the United States for training, while U.S. university staff will travel to the African nation to conduct basic and applied research. Constraints to increasing farmers'



Different varieties of sorghum are grown on a Purdue test plot.

productivity will be analyzed and improvements in Nigerien farming systems will be tested.

Increased production of millet,

sorghum and cowpeas will be emphasized. Millet and sorghum are staple foods of most Nigeriens; cowpeas a main cash crop. ■

LESSONS LEARNED

AID's Course in Basic Education

By Marion Kohashi Warren

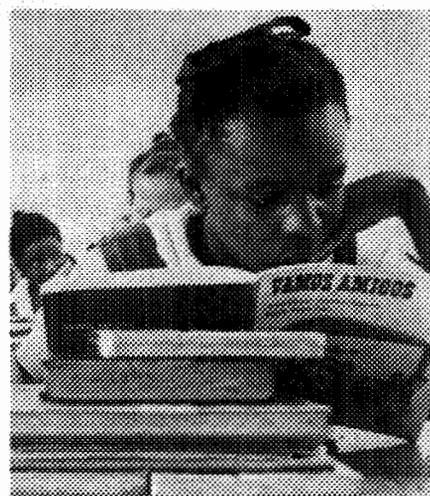
Throughout its history, AID has been a major contributor to educational development. Of the eleven projects and programs evaluated by AID's Office of Evaluation, all were deemed fair to great successes. The Agency has helped establish institutions; constructed schools; strengthened management skills; donated equipment; and introduced reforms that in some countries have profoundly changed the character of formal education. In recent years, however, steadily declining resources coupled with growing awareness of other development problems gradually led to reduced emphasis on education. Although commitment to education has stabilized over the past five years, there was during the 1970s a precipitous decline in AID's funding for human resources development in general and basic education in particular. Grant assistance fell from about \$336 million for the period 1960-1965 to about \$234 million for the period 1971-1976. In constant 1970 dollars, this represents a 55% drop from 1960 to 1976. Loan assistance underwent a comparable, though less severe decline, dropping 45% from 1966 to 1976. For comparison, total education and human resources development assistance now averages \$100 million to \$120 million annually.

These trends were in part a response to budget constraints and changes in program emphases. Also, there was a growing debate within AID, centered on whether involvement in the education sector was the best use of foreign assistance funds.

Lacking evidence of the overall impact and significance of past AID education programs, the debate was not empirically well grounded. Impact evaluations, therefore, were con-

ducted to assess the extent that completed AID-funded education projects left a lasting social, economic, or institutional imprint on countries in which they were done. The lessons derived from these evaluations are reflected in the Agency policy paper on Basic Education and Technical Training (December 1982) and are being applied to programs in education.

The projects and programs evaluated included two in Africa, four in Asia, one in the Near East, and four in Latin America. They covered a wide range of AID development activities over the last 30 years, includ-



AID's education activities span the spectrum—from teaching children to read to setting up education systems.

ing the founding of institutions and institutional processes; curricula reform; distance teaching; vocational and non-formal education for out-of-school adults; teacher training; construction and equipping of facilities; and third country training for professional educators. AID's total expense for these projects and programs is conservatively estimated at \$235 million.

In February 1982, AID, host country, and other donor representatives gathered in Marriottsville, MD, for a three-day conference to make policy recommendations to the Agency based

on their field experiences and the evidence from these evaluations. A summary report and conference recommendations will be published in 1984.

The evaluations represent a good initial probing of AID's performance in the education sector. However, they are incomplete. They examine education qua education; none examines the education components that are major portions of projects in other sectors. They examine only a fraction of the education activities in which the Agency has been involved.

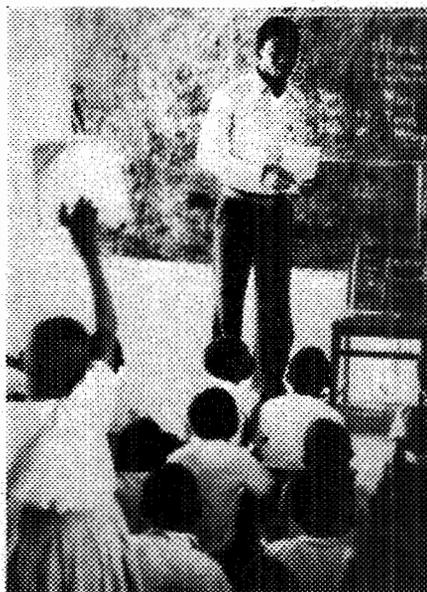
Impact evaluations uniformly argue that Agency education projects and programs have had widespread, enduring, positive impact. Conservative estimates, for example, are that the training provided by the evaluated projects benefited at least 200,000 persons directly and about two million indirectly. Although data are inconclusive, they show that about an additional two to three million people benefited from construction, equipment, and textbook distribution components of the projects reviewed. Many former participant trainees now occupy high-level positions in their respective countries. Thus, for example, of 15 participants trained under the Nigeria project, four have become permanent secretaries; five are heads of Ministry of Education Inspectorates; three are deans or department chairmen in universities; and three are principals of secondary or post-secondary schools. In some cases, the numbers trained are impressive. In Brazil, 60,000 professionals received in-service training from 1952 to 1972; in Thailand, 80,000 rural adults received vocational training between 1966 and 1972.

Closer examination of the beneficiary groups reveals some correlation between the size and longevity of the country program, and the variety of groups benefited. The Philippines' Project IMPACT, the smallest and last of the projects evaluated, benefited mainly rural school children.

Programs in Nepal, Paraguay, Afghanistan, Brazil, and Colombia, had impact on a much broader spectrum of their countries' populations, including professional educators, rural adults (both men and women), school-aged children, university students, and participant trainees. These programs were also the largest, most complex, and longest of the education programs examined, lasting 20 to 30 years.

In other words, projects and programs that have had the most pervasive impact involved a wide variety of well-financed interventions aimed at solving a number of interrelated sector problems. This is not to argue for massive education projects, but rather for realistic expectations that limited impact can be presumed to result from limited input. To achieve enduring and widespread impact would most likely require a substantial commitment of resources over a long period, for interventions aimed at solving a variety of sector problems simultaneously.

Is there evidence of subsequent social or economic impact resulting from the widespread exposure of beneficiaries to project interventions? Graduates of evaluated project schools in Thailand are employed by the thousands, many having become highly successful entrepreneurs. But, the full extent of this economic impact has never been measured. According to the general research literature, access to education is partly responsible for reducing birth rates, improving health practices, increasing agricultural production, and changing perceptions of individual and group effectiveness; but evidence on Agency contributions to economic and social change is sparse, and should perhaps be the focus of more systematic study. A truly well-structured, comprehensive review of past AID education projects would provide a far more complete picture of impact, and be a more informed source for determining policy.



With the help of a radio, a Kenyan teaches a first grade class.

Evidence of institutional impact is much stronger, and well-documented by the evaluation reports. All established institutions are still in operation, despite occasional instances of considerable stress from surrounding circumstances.

The Korean Educational Development Institute is today one of the world's largest education research organizations. As the research, planning, and policy arm of the Ministry of Education, it is the originator of the instructional system recently extended to all government elementary schools throughout Korea. Well-supported by a highly trained staff, sophisticated facilities, and a generous budget, it may well exert more influence over lower education in Korea than does any single educational institution within any other country.

In Nigeria, the Institute of Education was established to develop materials, curricula and techniques intended to improve the quality of teacher education. Despite a devastating civil war, during which the institute's responsibilities were distributed among six new states, the institute was able to maintain its key

role in the difficult process of forging a new consensus on examinations and curricula in teacher training. At the same time, Nigeria's education system came under strong pressure to turn out more teachers for an expanding school population and a campaign for universal primary education (UPE). The institute's emphasis on quality was largely supplanted by an emphasis on quantity. Increased numbers of teacher college graduates have been accompanied by a decline in certification examination pass rates. Other factors, such as automatic promotions, the lack of incentives, and low salaries, have also detracted from the emphasis on quality. Despite these problems, the institute has continued the curriculum reform effort begun under the project, and is about to publish revised teaching materials first written under project auspices 15 years ago. The institute is today a major influential force in teacher education. As teacher training colleges grow in numbers, they continue to reflect a philosophy of education first introduced by the institute.

Elsewhere, in Brazil, Colombia, Paraguay, and Nepal, projects and programs helped create whole sections of government education bureaucracies at both local and national levels. Educational planning, data collection and analysis, textbook production, research, and policy formulation, became significant areas of government administration in these countries in large part due to Agency interventions. The established institutions are today among the most visible examples of sustained development and serve to reinforce, once again, the importance of institution building in development projects.

In contrast, AID efforts to reform school curricula appear to have had less lasting impact. In Paraguay, Nepal, Nigeria, and elsewhere project advisers and counterparts introduced new teaching materials, wrote student texts and teacher guides,

created primary, secondary, and teacher training curricula in a wide range of subjects, and provided the structure and substance for training teachers in non-traditional teaching techniques. In every case, one purpose for the curricula reform was to promote a learning system that would be more practical, more efficient, and more effective than the traditional system.

In Paraguay, about 10% of both primary and secondary schools actually use their new curricula. Elsewhere, evidence suggests little or no use either of the new curricula or the teaching techniques. In Nepal and Nigeria, rote memorization, so characteristic of traditional formal schooling, continues to prevail; and, in Nepal particularly, the quality of instruction remains very poor.

The relative ineffectiveness of curricula reform can be traced to numerous causes, one of which was simply the required investment in equipment, materials, and training which countries and projects were either unable or unwilling to supply in the amounts, or for the lengths of time, required. Schools in Paraguay, for example, have a chronic shortage of materials necessary to implement new school curricula. In Nepal, the vocational education program introduced by U.S. technical advisers proved to be inappropriate for the country's general level of development, and far beyond the financial means of so poor a country to support on a continuing basis. Project designers also failed to take into account the strong cultural bias and economic incentives that lead Nepali students to select academic coursework over vocational training.

In Nepal, Paraguay, and Nigeria, teachers were very poorly paid, and offered few incentives for the additional skill, imagination, and work required by the new curricula and teaching techniques. In Nepal and Nigeria, automatic promotions, heavy pressure to pass students, widespread



Classroom furnishings in most schools are spartan by U.S. standards. Here a Peace Corps Volunteer teaches math to sixth graders in Nepal.

cheating on examinations, and the practice of patronage, also may have undermined teacher motivation to improve teaching approaches.

Project designers must consider host country policy, structural, financial, and cultural constraints. Projects either must be designed so as to minimize the effects of the constraints, or include plans to modify the constraints themselves.

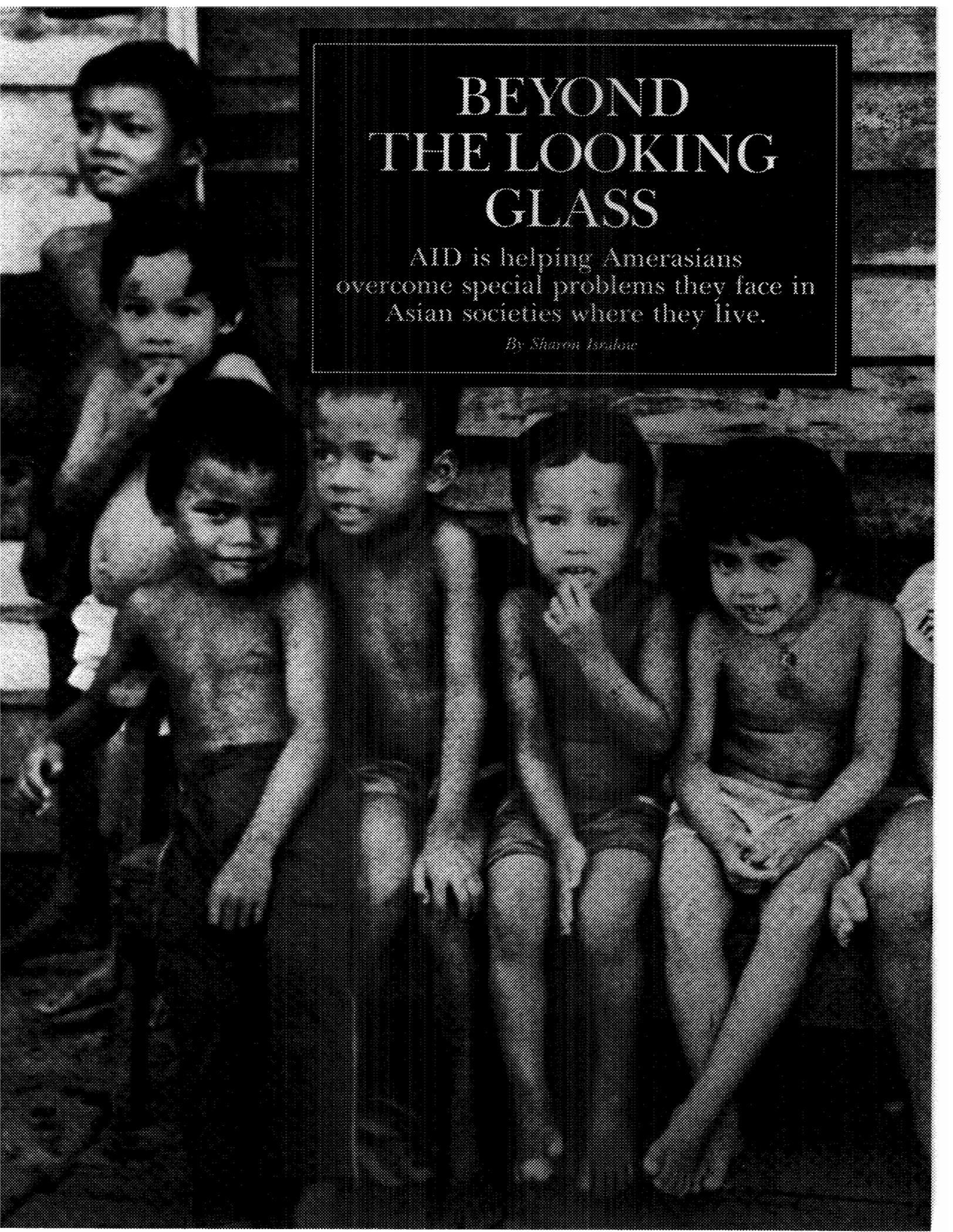
In conclusion, the impact evaluations confirm that in almost all developing countries there has been enormous progress in the education sector over the past 30 years. Access at all levels of the formal system has become more equitable; administrative, planning, training, and research capabilities exist where either none or few existed before; and institutions have become more numerous and more professional in their operations. Impact evaluations clearly show that AID contributed to this progress.

Problems, however, remain. Over the past 30 years the number of school-aged children has outpaced the number of institutions to handle them. Access to institutions remains highly variable—far better in metropolitan areas than in rural areas;

far better for boys than for girls, and far better for the rich than the poor. Quality ranges from poor to dismal, except among the wealthiest communities. Managerial skills continue to be deficient. Meanwhile, badly overcrowded facilities, huge education budgets, and developing countries' official commitment to universal primary education, attest to the great demand for educational services.

Participants at the Marriottsville conference strongly recommended that AID continue support for projects—such as the IMPACT project in the Philippines—that represent efforts to find viable, cost-effective alternatives to traditional schooling systems. The Agency should also support projects that encourage greater private sector involvement in education, both to relieve financial pressures on public revenues and to encourage greater diversification and spread of educational services. ■

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BEYOND THE LOOKING GLASS

AID is helping Amerasians
overcome special problems they face in
Asian societies where they live.

By Sharon Isralovic

It's a ritual repeated month after month throughout Korea. Through the large double doors of a whitewashed church in the town of Pyongtaek march four staffers of the Pearl S. Buck Foundation's Korea branch. They pull vestibule tables and a piano bench in front of a pew and begin their work. The children soon arrive, one by one. All have clearly discernible Western features.

These children are Amerasians, part of a group of some 2,500 in Korea. Pyongtaek is near Osan, a military city about an hour's drive from Seoul. The children, almost all the progeny of U.S. soldiers stationed in Korea, are part of a large number of youngsters matched with American sponsors by the Pearl S. Buck Foundation. They come faithfully to the church to receive an envelope of money—two months' stipend—sent by their sponsors. And they are handed a piece of paper on which they are asked to write their sponsors a letter.

The transactions are duly recorded. As the children sit down to compose their missives—sometimes just a line or two—their mothers or grandmothers line up to sign the necessary forms.

Often the children have their pictures taken, to be sent with their letters to their American sponsors.

By noon, the children are gone, the piano bench and vestibule tables are back in place and the church is empty.

The Pearl S. Buck Foundation is only one private voluntary organization (PVO) using AID and private funds to benefit Amerasian children in Korea and elsewhere. AID also has provided funds to the International Human Assistance Program (IHAP) and Good Shepherd Sisters. All three organizations offer support services to disadvantaged children of mixed heritage in Asia by finding them adoptive parents in the United States or by helping them learn skills so they may be assimilated into the Asian societies where they live. Other individuals, organizations, U.S. military personnel and their families also have provided voluntary, unofficial aid.

AID's main purpose is to support the



economic development of poorer nations through various programs in such areas as agriculture, business, health, science and technology, and nutrition. Supportive programs—like those for Amerasian children—express a sense of the American peoples' responsibility and concern for the plight of others, and at the same time, work to develop any nation's most important natural resource—its people. In that spirit, AID works through private voluntary agencies to help Amerasians become more productive members of their communities and, by so doing, contribute to the economic and social health of their nations.

These churches, PVOs and civic groups, all of which have helped people in the United States, have brought to bear their experience, knowledge, and understanding of the problems facing mixed-race children growing up in Asian societies. Using PVOs is an example of AID's effort to harness the creativity and concern of the private sector to contribute to the development process.

In 1978 a provision was added to the Foreign Assistance Act earmarking \$2 million to assist disadvantaged children in Asia. AID's Bureau for Asia carries out that congressional mandate by administering the funds through Operational Program Grants to PVOs. As a result, several projects have been funded in education, training, and health as well as in birth record verification.

Recent public attention—garnered and mobilized by Rev. Alfred Vincent Keane, a Maryknoll priest—has been riveted on reports of efforts to reach out to these children.

Rep. Stewart McKinney (R-CT) in 1979 and again in 1981, and Sen. Jeremiah Denton (R-AL) have sponsored legislation that changed Amerasians' status in the ranking order for U.S. immigration visas. Instead of falling into the last categories—Sixth Preference and Nonpreference—Amerasians are now ranked along with other sons and daughters of U.S. citizens. The legislation received strong support from the Reagan Administration.

The law now allows Amerasians to use personal testimony, photographs, letters, and physical appearance to prove American parentage. The goal, said McKinney in testimony before the House Immigration Subcommittee, was not "to identify the actual father, but just to establish that the young person is the offspring of a U.S. citizen." At the same time, according to McKinney, the law does not increase the number of immigrants admitted to

"Orderly Departure Program." Under the program, negotiated in 1980 by the UN High Commissioner for Refugees (UNHCR), the Vietnamese-Americans and their mothers and half brothers and sisters are brought to the United States as refugees. Thus the purpose and spirit of the new legislation is fulfilled in a situation in which its consular processing requirements would be difficult to apply. Since October 1982, some 300 Viet-



President Reagan signs Amerasian Immigration into law as Julie Tripp, a Korean-American, looks on. Her adopted uncle is Father Keane.

this country each year.

The legislation applies to Amerasians born from 1950 until the law was enacted (Oct. 22, 1982), and requires that each have a sponsor who will be legally and financially responsible for five years or until the young person reaches 21. The sponsor provision is stricter for Amerasians than for other immigrants, but, according to McKinney, was included "to answer fears that these children will be merely dumped on our streets, rather than those of Korea or Vietnam."

Since the new law was enacted, the largest number of Amerasians to enter the United States have come from Vietnam. Because the United States does not have diplomatic or consular relations with Vietnam, it was decided to take advantage of the so-called

nameless-Americans have entered the United States—some as U.S. citizens being reunited with their fathers or other relatives who had been pressing for their release, others as refugees being allowed to depart with their mothers and families. The Vietnamese-Americans have been assisted by the State Department's Bureau for Refugee Programs and the private voluntary agencies active in refugee resettlement.

Congress looks to PVOs to ease the Amerasians' transition to the United States. Juanita Donaghey on Sen. Denton's staff explained: "We didn't want to set up a new program. We saw there were PVOs dealing with Amerasians on a day-to-day basis who were eager and willing to cooperate. They are in the countries working

with the children, they have identified them, notified them that immigration may be an option, and can help them gather the documentation necessary to apply for visas."

Thanks to AID-supported PVOs and other organizations, an infrastructure is in place to help Amerasians and other children in need in the various countries of the region. AID grants for \$150,000 and \$135,000 to the Pearl S. Buck Foundation, for example, have helped Amerasian children get medical care and education. The funds also have helped track down birth records necessary to prove American parentage.

In addition to approximately 2,500 Amerasians in Korea, there are an estimated 5,000 to 10,000 in Thailand, more than 25,000 in the Philippines and an estimated 8,000 to 20,000 in Vietnam. Amerasians also live in Laos, Cambodia, Okinawa, and Taiwan where civilian workforces and U.S. troops are or were deployed.

Over the past 30 years there have been millions of Americans in Asia—soldiers alone totaled over a quarter of a million during the Korean War years; more than two million in Vietnam between 1965 and 1973. Today there are a dozen U.S. military installations scattered along the fringes of East Asia not to mention civilian missions. Fourteen thousand U.S. military personnel are based in the Philippines; over 40,000 in Korea.

In societies that pride themselves on their ethnic homogeneity like Korea and Thailand, as well as culturally xenophobic groups such as the lowland Vietnamese, it is not surprising that blue eyes, blond hair, black skin or towering height do not fit in. Wild Seed, Dust of Life, and Souvenir Baby are some of the insulting nicknames Amerasian children bear.

In Vietnam, some mixed-race children are not allowed to go to school, and they carry identification cards marked *Ng Lai* or mixed people. Children with darker skin are particularly singled out. One reason, explained East-West Center Fellow Gerald C. Hickey, is because in the

lowlands in Vietnam, as in other Asian societies, light skin is valued, particularly for females, as a mark of status or class.¹ Prejudice against dark-skinned people also extends to Vietnamese from the highlands, and accounts for some of the animosity among cultures in that country.

While the plight of Amerasians is evident throughout Asia, the difficulties besetting them are perhaps greater in Korea than anywhere else. Korea is a "Confucian society" defined by a rigid hierarchy. It is an ethnically homogeneous country that considers both the father and racial purity sovereign. In the Far East, it is the father who gives a child his name, ancestry, family, and all the necessary relations and social position that are needed for marriage, schooling, and meaningful employment. In most cases, the family will not permit a daughter to place her child on the family register; instead she is encouraged to start her own family register. It would be difficult for the child later on to enter into a good marriage or get a good education: hope for the future is slim.

There is little upward mobility for Amerasians. The only two professions where mixed-race youth can now make a dent—and a name for themselves—are entertainment and sports. One Amerasian teenager, Yoon Soo Il, topped the rock 'n' roll charts with two hit singles last year. However, as most Koreans will say, entertainment and athletics are not considered prestigious professions.

In Korea, an AID grant of \$212,000 to the Good Shepherd Sisters helps make it possible for older Amerasian girls past adoptable age to develop skills, assists unwed mothers awaiting birth of mixed-blood children, and aids in the adoption/sponsorship of Amerasian children 10-13 years old. AID also funded Pearl S. Buck to do a census of Amerasian youth and helped start an Amerasian apprenticeship program.

1. Gerald C. Hickey is the author of a two-volume ethnohistory of Vietnam (*Sons of the Mountains and Free in the Forest*), Yale University Press, 1982.

The law modifies the immigration statute which denied Amerasians their true immigration status.

*With blue eyes, dark skin,
or towering height,
Amerasians are clearly
different from others in the
Asian societies where they
live. When they look in the
mirror, they, too, see a
stranger.*

It is in Korea—a country now seeing its second generation of Amerasians—where for the last 12 years Father Keane, known as *o-pa* or “father” to over 1,000 children, runs an orphanage and works on behalf of mixed-race children. Father Keane helps the children get to the United States through legal channels. Since 1977, he has placed over 1,200 children in American homes—about 200 a year.

Keane's involvement with Amerasians began on Christmas Eve in 1970 when a group of unkempt, dirty children came to his newly founded parish at Pukp'yong—an Army town housing over 16,000 soldiers at the time—for handouts from the American priest. Father Keane asked who the children were. The Koreans present said they were the mixed bloods and pointed to a hill where they lived. The next day, Keane went to the hill and found 30 children huddled together in an unheated room—clutching each other, keeping alive by body heat.

“I took them downtown and bought them a Chinese meal. That was their Christmas and mine,” he said.

In 1976, when his term in San Kok Dong parish was to end, Keane mentioned in an off-chance remark to his housekeeper that he was glad he could help take care of all the mixed-blood children in his parish. She exclaimed, “What?!” and walked him to an area—commonly referred to as “the corridor”—located below the demilitarized zone where Keane found many mixed-race children living in varying stages of poverty and filth.

From that day on, he said, “it was my dream that these children—as much our heritage as Asia's—would have the freedom to choose.” In a month, he had 46 Amerasians living in the rectory with him.

Keane emphasized that the decision to put a child up for adoption is very difficult for both mother and child. “It is because they love their children and want them to have a good future,” stated Keane, “that mothers give them up for adoption.” Mothers of children adopted in 1976 still ask him about

their child's welfare, he said. Father Keane usually has a photograph and update for them.

In addition to helping Amerasians get to the United States where their chances are greater for a fuller life, Keane's efforts have weakened the adoption black market where mixed-race children were prime bait.

“When I got involved in this work,” he explained, “there used to be adoption brokers. American adoption agencies would contact brokers who would, in turn, find mothers who were in debt, and pressure them into selling their children for a small amount of money.” Babies were sold for as little as \$50, then resold in the West for thousands, with brokers raking in a handsome profit. Keane protested the practice to Korean authorities who immediately issued orders denying those brokers rights to handle children.

In about 100 cases, the children—more often girls than boys—have been exploited. “One boy who was adopted at age six and brought to Chicago,” recalled Keane, “was abused and returned to Korea at age 11.” His “parents” sold him to a man who ran a Chinese restaurant in Seoul. “I used to walk the streets looking for these children. The first time I saw Alan—that's his name—he was so scared.” said Keane. “Three months later, he walked into my house and said, ‘Can I stay with you?’ . . . I eventually found the family in Chicago to sign papers to get him readopted through legal channels. He's in Alaska now, doing extremely well.” Pulling Alan's and another boy's photograph out of a pile, Keane parenthetically added: “I found this boy living in an ash can. He's been adopted by a family in Minneapolis.”

To be legally adopted, however, U.S. law requires that children be under 16. The age limit for legal adoption was recently raised from 14. For the older children, regular immigration, until last October, was the only channel open which in practice guaranteed they would not get to the United States.

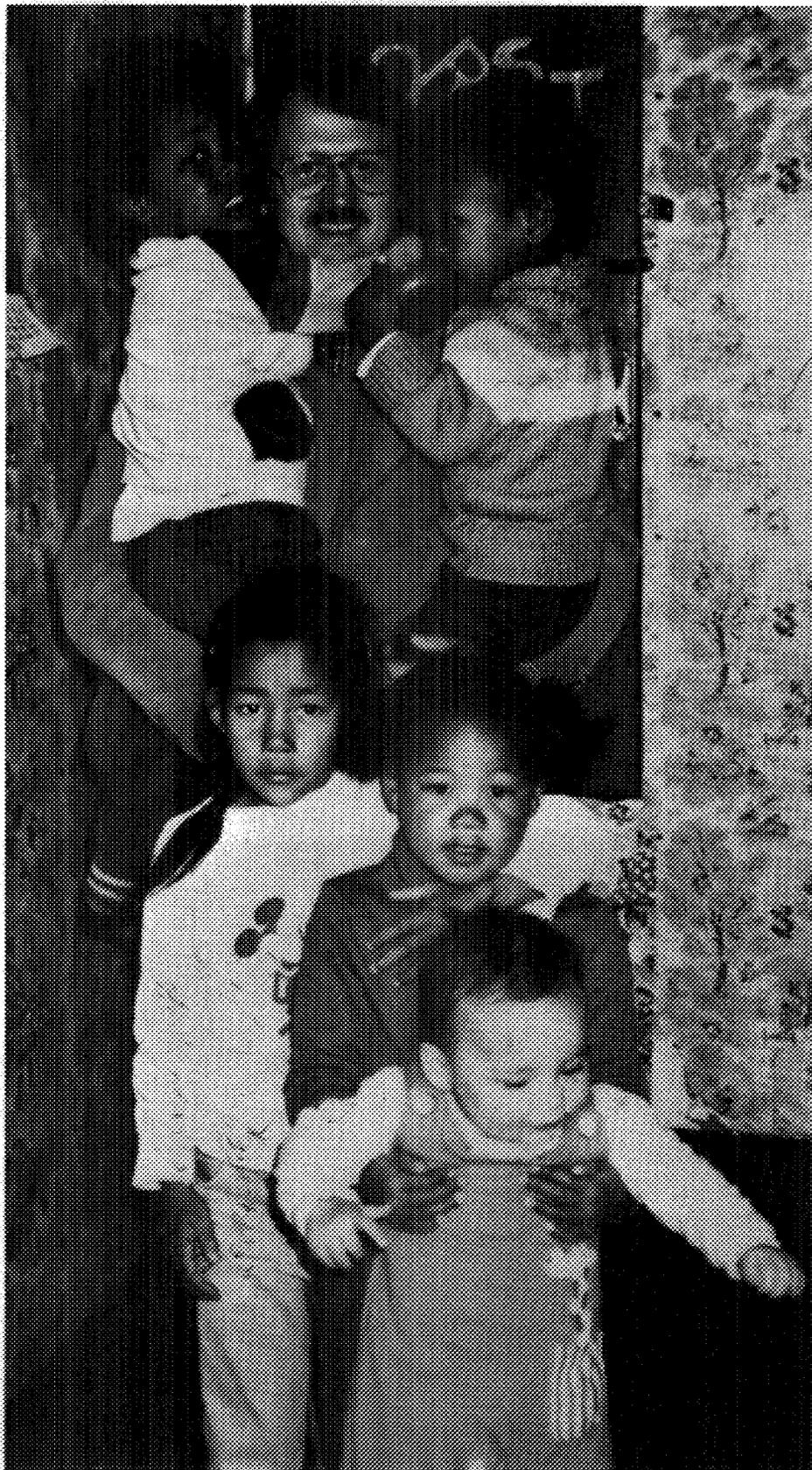
In Korea, children belong to the father. Even after 10 years' absence, if

the father were to return and say "I want my child," the mother would give up the child to the father because that is her duty. It is the mother's responsibility to rear the children well for him. They support their children by working menial jobs, and some enter into prostitution.

Some children, however, are abandoned. Even in an all-Korean relationship, when a woman remarries, she does not take the children into the new family. She turns them over to a relative of the father who, dictated by Confucian ethics, accepts responsibility. When there is no husband—and consequently no relatives—she may abandon the child.

Referring to an abandoned child who is a U.S. citizen as a result of the father having legally married the mother, Bill Paupe, AID's South Pacific regional development officer who has served in Korea and Vietnam and was a member of an inter-agency task force that worked with refugees in Guam, explained: "A child abandoned by the father significantly lowers the mother's chance of entering into another liaison that may, she thinks, lead to marriage. So, she tries to put that child up for adoption if the child is not too old to be legally adopted. She may abandon the child if he or she is past the age for legal adoption in the United States." The problem, however, is that the child is a U.S. citizen and the father's whereabouts are unknown. A child cannot, by law, be put up for adoption unless both parents agree. Keane tries to locate the father with the help of the U.S. embassy. The embassy sends a letter to the father's last known address. If he can't be found or if the father doesn't take steps to bring the child to the United States, Keane takes the document to a U.S. judge who declares the child legally abandoned, thus enabling the child to be adopted. "We did that with a lot of children—in only a few cases did the father actually want the child," the priest said. Of the 1,200 Keane placed, about 150 were legitimized U.S. citizens from birth.

For those children who have been



Pearl S. Buck Foundation's resident director in Korea, Donald Haffner, stressed that appearance is only skin deep. "Inside, Amerasians are 100% Korean," he said. He considers adoption a last resort.

legitimized—who have U.S. passports—and are subsequently abandoned by their father, the adoption process is less complicated than for children without documentation. Once in the United States, such children receive protection under state child welfare laws. However, if children are abandoned overseas and don't know U.S. law, which is more often the case, they rarely exercise their rights to U.S. citizenship.

Every foreign father who lives in Korea must get a residence permit within 10 days for his child. When the father leaves and fails to do this, most Korean mothers do not know what to do and frequently either register the child as a Korean or do nothing. The child, then, is in the country illegally. The first time Keane went to the Korean immigration office to straighten out a case of a child with no residence permit as required of all foreigners, he found there was a large fine—accumulated over time—being demanded because of this violation of Korean law. Once the Korean authorities found out the situa-

tion, however, they required only a token fine.

There is an additional wrinkle to helping children get adopted who are American citizens. Only American adoption agencies can legally handle U.S. citizens. Adoption agencies are reluctant to incur expenses—airfare, board and lodging—or get involved in a case until the father has been located and relinquished rights to the child or the child has been declared legally abandoned. In the interim, children are placed in foster care.

Foster care is provided by U.S. civilians, or servicemen's families. Although the U.S. Army has no official program for Amerasians, there are voluntary programs, according to an Army spokesperson, and the unofficial aid and voluntary support from U.S. military personnel and organizations have been significant. Service personnel generously support St. Vincent's and provide special grants for educating children in the United States.

It was Paupe, said Keane, who suggested that children be sent to the United States for an education. The

idea was a good one. In Korea, children who are U.S. citizens have to attend a special school for foreigners which costs about \$1,800 a year—clearly unaffordable for most mothers. Also, with an American education, Amerasians could be more easily placed with U.S. companies. Cultural barriers, too, are lowered when a person earns a larger income.

It is not surprising that older children who are eligible for legal adoption are less likely to be adopted than are babies. By most accounts, it is this group of older children who suffer the greatest degree of discrimination and have the most serious adjustment problems. They grew up on the streets and lived through post-war Korea. They were the first Amerasians Korea had known. An extreme example is that of a boy from Pusan serving a jail sentence for murder. One evening on his way home from night school, a group of Korean boys closed in on him and prepared to peel off the flesh of his face with a broken bottle "to see what was under his American skin." The boy ran to a house for help, grabbed a



In Korea, Amerasian youth pick up stipends from Pearl S. Buck Foundation sponsors. Because their mothers work, the children often are brought by their grandmothers, who sign the required forms with a thumbprint or to-jang—a personal stamp.

knife and killed one of the group. In Korea, whoever's crime is most violent, is punished. People with criminal records cannot get U.S. visas. By and large, however, most Amerasians do not suffer this degree of harassment, said Keane.

Younger children are sometimes rejected, too. The case of an American man who befriended and later wanted to adopt two Amerasian girls illustrates this. The man, who was working in Korea, took them out on weekends. He eventually got special permission to adopt the girls, even though their mother had not agreed. But, as the man began to understand the children as they talked, he became disillusioned and rejected them. Calling it the "puppy dog syndrome," Donald Haffner, Pearl S. Buck director in Korea, explained: "The children used the language they had become accustomed to with their mother who worked in a bar—and it was vulgar. The man was unable to accept it."

There has been some debate over the years—before the option of immigration was open—about what direction assistance should take. On the one hand, some support agencies, like Pearl S. Buck and IHAP, believe assimilation within the home country is the best tack, although not the only one. Pearl S. Buck was recently named bursar agent for the Korean government to pay a social welfare stipend to Amerasians.

The foundation has a sponsorship program where American private citizens pay \$21 a month to help support an Amerasian child in Asia. Of that sum, \$9 goes directly to the youth, about \$7 is used for social services—textbooks, school equipment, medical care, counseling—with the remainder going into the general fund, a till that keeps the communication lines between American sponsor and child open. "The money itself isn't much," said Haffner, but because of the contact, "caseworkers are alerted to other needs like money for school or medical attention. Also," he pointed out, "the foundation gives the children a chance to realize that all Americans aren't

like the guys who left them."

Haffner thinks adoption or sponsorship is the simplistic answer. Writing in *Korus*, the Army's newspaper for U.S. servicemen stationed in Korea, Haffner noted that there are now second-generation Amerasians being born in Korea, and that the solution is not to tell parents that their babies should be adopted out of the country. While he agreed that each case must be handled individually and with an open mind, he also contended that a child should stay with his or her mother when possible.

"If the mother doesn't want the child, then we have a different ball game. But most Amerasian mothers," he continued, "as is true of most mothers the world over, love their children and the children are better off with them."

John Shade, the Foundation's executive director, too, argued that immigration to the United States will not ease the discrimination faced by those Amerasians staying in Asia. "If we're going to make a change," he claimed, "it should be in the quality of life, in job opportunities and the education level they can achieve" in Asian societies. Shade, however, is enthusiastic about the new legislation which allows for easier entry for Amerasians to the United States and the role Pearl Buck can play in that transition.

Bill Paupe and Father Keane hone in on the fact that these children are half-American. With the new law, more Amerasians will have the opportunity to come to the United States to start a new life, and, based on Keane's experience, these "wild seeds" will take root and grow. Perhaps prospects for the future are best expressed by one Amerasian woman currently studying at Gonzaga University who wrote to Father Keane: "We who never knew what it was to love and hope in the past will now be able to give that love and hope to others. What you gave us has become a little seed planted deeply in our hearts." ■

Sharon Isralow is assistant editor of Horizons.

Now that the option to immigrate is open, Amerasians can choose which aspect of their heritage they wish to follow.

CO-FINANCING: A USEFUL DEVELOPMENT FINANCE TOOL

Both public and private resources should be mobilized to address LDCs' immediate problems and realize long-term potential.

By Neal Riden

Co-financing as used in this article refers to any formal arrangement under which AID loan or grant funds are associated with funds from one or more different sources (private or public) outside the borrowing country in the financing of a particular project or program. Participation can be in the form of joint or parallel financing. Joint financing refers to a co-financing arrangement for which there is a common list of goods and services and where financing of all or certain items are shared between co-lenders in agreed proportions. Parallel financing refers to a co-financing operation in which each co-lender finances different goods and services or distinct parts of a project.

The role of co-financing and the potential for its expanded use as a method of development finance have been subjects of increasing attention by the international development community over the past several years. This stepped-up interest in co-financing arrangements has occurred during a period in which there has been a deterioration of economic conditions in most of the industrial countries, a rapid increase in the resource needs of the less developed countries (LDCs), and reduced growth in Official Development Assistance (ODA). It has thus become clear to a broad segment of the development community that if LDCs are to address their more immediate problems, and over the longer term realize their potential, more effective efforts must be put forth to mobilize all available resources, both public and private, and to increase their efficient use.

AID has recently completed a review of its experience with co-financing over the past several years and has reaffirmed that co-financing is a useful method of development finance that offers the potential for leveraging and increasing the effectiveness of its resources, within the context of respective country development strategies. Such financing arrangements, moreover, may enhance the prospects of the adoption of appropriate economic policies by developing countries.

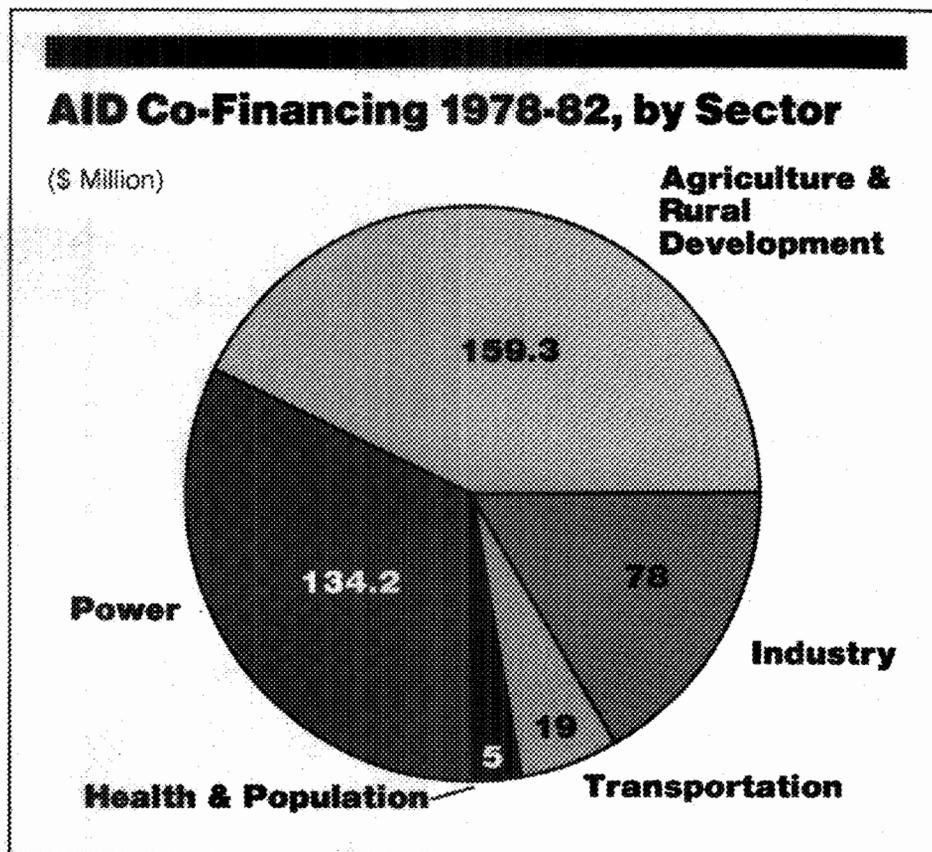
AID Experience

AID's participation in co-financing arrangements, both joint and parallel, has represented a very modest proportion of its total program. Although complete data are not available, a preliminary review confirms that over the past five years AID has participated in 17 co-financing arrangements with other official sources. Almost all have been in association with the World Bank (IBRD/IDA); one project was in conjunction with the European Economic Community (EEC). In these undertakings, AID funded \$396 million of \$1.592 billion in external

finance provided for investments that totaled \$2.748 billion. AID's total assistance commitments over the 1978-82 period amounted to \$21.194 billion. Project participation ranged from providing \$1 million in 1979 for technical assistance for a \$21 million project in the Arab Republic of Yemen to establish agricultural and livestock secondary schools, to \$40 million of a \$260 million urea plant to help meet Pakistan's growing demand for nitrogenous fertilizer.

Co-financed projects in agriculture and rural development account for the largest number of projects in which the Agency participated over this period. These sectors also were given high priority by the World Bank, which resulted in a concurrence of interest in the poorer developing countries. Moreover, AID has found that project identification and preparation by the World Bank can save AID considerable manpower in those cases in which there is a convergence of interests and objectives. In addition, their presence during loan negotiations has proven beneficial in achieving degrees of conditionality that bilateral donors view as desirable but are often unable to achieve when acting alone or in concert with other bilateral donors. On the other hand, potential manpower savings in the project identification and preparation process must be measured against the possibly greater administrative difficulty involved in implementing co-financed rather than single donor projects. Even in cases in which administrative difficulties are not encountered, AID needs to be sufficiently involved in the project implementation process to assure that agreed upon policy measures are not put aside in the interest of maintaining a project's schedule.

AID's participation in co-financing arrangements has, in most cases, been in the form of parallel financing, also heavily used by other donors. Parallel financing permits each participant in a co-financing arrangement to follow its own administrative procedures, criteria and preferences,



and to place restrictions on procurement. This latter advantage is important to AID, given its source/origin and other procurement restrictions.¹ Parallel financing also allows participants to be more clearly identified with particular parts of projects than is the case for joint financing. On the other hand, parallel financing may put additional administrative pressure on LDC government officials, and thereby make it less attractive, since they are required to deal with the differing criteria and operational procedures of a number of financial participants at the same time. Other problems that have been encountered generally have been associated with project implementation, centering on the necessity of keeping the separate but related parts of projects

sharply focused and in harmony.

Although AID's procurement regulations are better suited to parallel financing, they do not preclude participation in co-financing arrangements in a joint financing manner.² Instead, there is a presumption that AID will operate in a manner that does not require the frequent use of waivers. Moreover, it is sometimes possible, with careful design and prior planning, for AID to participate in joint financing arrangements without the use of waivers. AID's Southern Access Road project in Sudan, begun in 1980, is an example. In that project joint financing could be used because AID had considerable assurance before making a formal commitment that the bulk of procurement from its financing would be U.S. source/origin. AID procurement policies and regulations

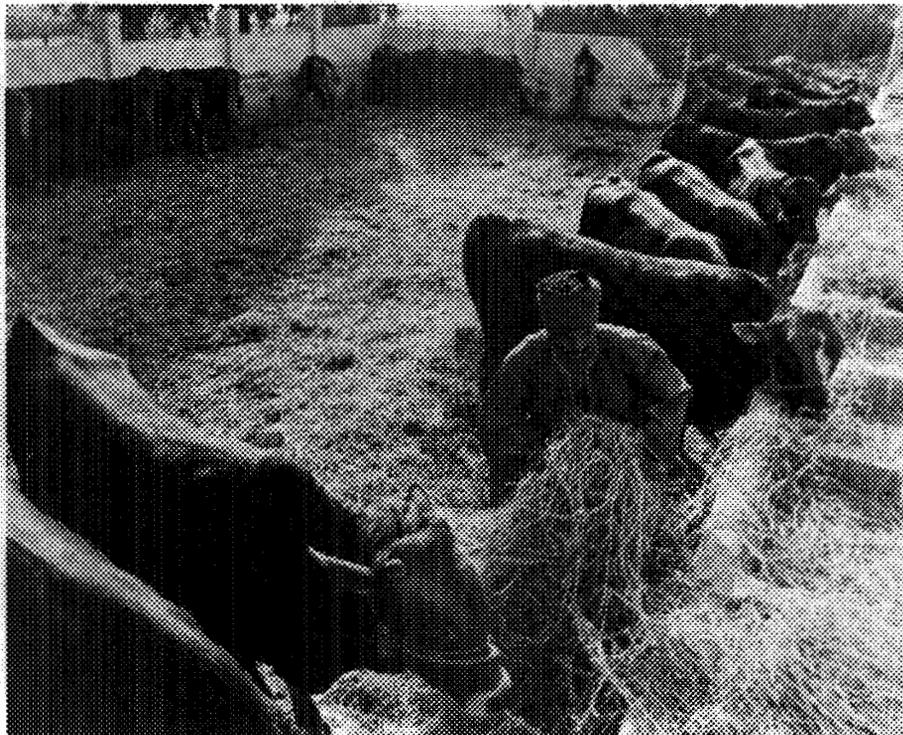
1. Procurement of goods and services by recipients of AID development loans is restricted to suppliers in the United States and the developing countries. The same is true for development grants in the case of countries on the United Nations list of least developed countries, but other countries are restricted solely to suppliers in the United States.

2. Procurement under a parallel co-financing arrangement is left to each co-lender, and thus takes place in accordance with their respective procedures, whereas under joint financing procurement is by the lead agency and usually is by international competitive tender.

AID Co-Financing Projects, by Country*

(\$ Million)	Provided by AID	Total Cost of Projects
Africa		
Chad	9.0	21.9
Ivory Coast	3.7	21.1
Kenya	4.0	61.3
Senegal	12.8	106.1
Somalia	43.1	151.1
Asia		
India	55.6	908.6
Pakistan	85.0	378.1
Latin America		
Guyana	7.5	42.8
Haiti	1.6	5.2
Near East		
Egypt	100.0	465.9
Jordan	38.0	428.8
Syria	34.2	135.8
Yemen (A.R.)	1.0	21.4
Total	395.5	2,748.1

*Four projects in Somalia; two in Pakistan; one in all others



The largest number of AID co-financed projects were in agriculture and rural development.

apply to all AID projects, whether or not co-financing is involved. These policies and regulations involve more than just restrictions on the source and origin of goods. Other restrictions apply to the eligibility of commodities, delivery services, and suppliers and contractors; competitive procedures; maximum prices for commodities, and cargo preference. Some restrictions, but not all, can be waived in appropriate cases.

Developing countries usually prefer joint financing arrangements under a single lead agency, since they view them as administratively simpler than parallel arrangements. Experience under parallel arrangements might be improved if the Agency examines more closely, before becoming involved, potential coordination problems. It then would be better prepared, in conjunction with other

co-financiers, to quickly address these problems if they arise. AID also should provide technical assistance when needed to the developing countries to enhance their capacity to deal with complex administrative undertakings, particularly those directly related to managing co-financing operations.

AID Co-Financing with Private Sources

A major positive reason for AID's enhanced interest in co-financing is a keener appreciation of its potential for increasing the involvement of the foreign private sector in the development process. This aspect of co-financing complements the Agency's somewhat broader private sector initiative that, among other things, includes direct loans to indigenous private firms. However, except for a leasing

project in Peru in 1982 in which it participated in parallel form with the International Finance Corporation (IFC) and a private French bank, AID has not entered into any direct co-financing arrangements in recent years in which there were foreign private sector providers of risk-bearing loan funds. Nevertheless, consistent with its role as a residual lender, AID is actively interested in sponsoring or participating in co-financing arrangements in which it may serve as a catalyst for private investors who would not otherwise undertake loan investments in developing countries. However, when co-financing arrangements involve the financing of foreign goods and services, they must be structured so as to be consistent with U.S. trade policy, particularly its obligations under the Organization for Economic Cooperation and Devel-

opment (OECD) Guidelines for Officially Supported Export Credits (called the OECD Arrangement).

The OECD Arrangement

The Arrangement is an informal agreement among OECD countries governing officially supported export credits. One portion of the Arrangement deals with "tied aid credits," defined as follows:

"... a credit with a grant element of less than 25%, which is provided for development aid purposes and which is financed either exclusively from public funds, or as a mixed credit partly from public and partly from private funds."

Such tied aid credits with less than a 20% grant element are prohibited by the terms of the Arrangement. Tied aid credits between 20% and 25% may be provided subject to prior notification to the other signatories to the Arrangement.

The United States supports these limitations on mixed financing. They have little practical effect on AID's co-financing efforts, however, since co-financing in which AID participates will almost always exceed 25% grant, which is the threshold for official development assistance under DAC definitions.

Joint and Parallel Financing

Under the Arrangement, AID can participate in co-financing operations that include private sector resources that take the form of joint financing. However, within the context of its own policy, and U.S. trade policy as well, it can do so only in cases in which its loan carries terms that are not more concessional than provided for under the Arrangement. Specifically, AID's policy allows the "combining" of AID resources. These are made available on concessional terms with those from private sources in a single transaction only in cases in which an otherwise low and responsive U.S. exporter stands to lose a sale due to concessional financing offered in the form of a

mixed credit in support of a non-U.S. exporter.

On the other hand, AID can initiate parallel financing undertakings with private sources of funds in which its credit carries Arrangement conforming or non-conforming terms. Even so, AID cannot provide a credit with a grant element of less than 20%.³ To do so would violate the no-derogation

3. In addition, the Development Assistance Committee of the OECD (OECD/DAC), of which the United States is a member, recently adopted a set of Guiding Principles for the Use of Aid in Association with Export Credits and Other Market Funds. OECD/DAC members agreed to refrain from providing associated financing, in which there is an ODA component, with a combined grant element of below 20%. There are, however, no prior reporting requirements with respect to members' derogations. Moreover, for purposes of computing the grant element only officially supported export credits, ODA, and other official flows are included. The grant element of officially supported export credits is considered to be zero for this purpose.

provision in the Arrangement, which the United States government strongly supports. Moreover, if AID planned to provide a credit with a grant element of at least 20% but less than 25%, a 10-day notification to other Arrangement participants would be required before making a commitment. This would provide them an opportunity to match the credit exactly (term for term), or with other support. Of course, until the whole prior notification procedure is worked through, AID could not be sure of the project, since other participants may match and be chosen, and it may have already made considerable investment in preparing a project. On the other hand, if the grant element is 25% (the ODA threshold level) or higher, prior notification would not be required and

World Bank Co-Financing

The World Bank is testing new instruments designed to increase the participation of commercial banks in World Bank project loans to developing countries. In the fiscal year ending June 30, 1982, co-financing of World Bank projects and programs totaled \$7.424 billion, including \$3.3 billion with commercial banks.

The new instruments are intended to help increase the flow of private capital to developing nations; they will supplement the World Bank's present methods of co-financing with the private sector.

Under the existing system, if co-financing for a World Bank-financed project is needed and desired by the borrower, the World Bank helps arrange the financing. However, the World Bank and the commercial banks enter into separate loan agreements with the borrowing country. The commercial bank loans have been on market terms.

The new instruments mean that in selected cases the World Bank, besides making a direct project loan, also will participate in the financing from commercial sources. This program is being tested over the next year, with a total of \$500 million available for participation in commercial co-financing loans.

The three new approaches for co-financing are intended to provide better maturities to developing country borrowers than are available from a direct market operation.

The program's pilot phase will include 15 to 20 lending operations, and will be completed within a two-year period. Estimating that the World Bank's share of each commercial transaction would be approximately 20%, the pilot program could result in total co-financing of about \$2.5 billion. These funds will be used to finance high quality investment projects already deemed suitable for World Bank lending in those countries which the Bank judges to be creditworthy.

other participants would not have an opportunity to match.

Implementation

Among the elements that AID considers important in identifying co-financing opportunities with external private sources of funds involving indigenous private sector firms, aside from AID's regular requirements, are:

- the regulatory climate in respective developing countries for private business,
- the economic policy framework,
- the potential contribution to achieving AID country-specific development objectives,
- projected financial profitability of the project, and
- the creditworthiness of private sector participants for commercial loans and their capacity to provide the required managerial, technical, and financial participation to implement and maintain the flow of economic benefits that justify AID's participation in a specific project.

To assist AID missions in this process, the Agency has established a co-financing working group with particular expertise on co-financing arrangements with private sector sources of funds that involve indigenous private sector firms, as well as the public sector. Missions can use the group's expertise to help identify and evaluate potential private co-financings, as well as assist in the design and financial packaging of specific projects.

Even with a concerted effort to identify AID activities amenable to co-financing with external private sector lenders the amount of AID resources used for such co-financing arrangements will probably be modest over the next several years. For most of the low-income developing countries in which AID operates, the market's perception of their creditworthiness sharply limits their access to private risk-bearing, external medium- to long-term credit. Most co-financings that involve external private sector loans over the next several years are expected to continue to be concentrated on the middle to higher income

countries. To be sure, in the present world economic environment, external private lenders have become very cautious about lending even to these countries. On the other hand, opportunities to participate in AID-sponsored co-financing arrangements offer external lenders the assurance that their loan proceeds are being used for high priority investment purposes. In addition, the availability of AID's economic analysis may help external private lenders develop a broader and longer-term perspective on specific country

Co-financing is a mechanism to apply AID resources efficiently—it should not become an end in itself.

economic prospects. This may, in turn, encourage international private lenders to maintain their exposure during periods in which developing countries face short- to medium-term liquidity problems.

Conclusions

While co-financing offers a number of advantages in applying AID resources, particular care must be exercised to insure that co-financing does not become an end in itself, but rather remains a mechanism among other alternatives to be used to apply AID resources efficiently. Against the background of its experience, legislative and general policy framework, AID will promote and participate in co-financing arrangements as part of respective country development strategies. Fundamentally, AID's role will continue as a residual lender, and source/origin regulations will apply in most cases. Therefore, AID will tend to favor the parallel form, but not to the preclusion of joint financing

arrangements in appropriate circumstances.

Co-financing arrangements that involve AID direct loans to indigenous private sector firms will be made at a blend rate that is at or near market rates of interest, with repayment periods determined by the financial characteristics and other relevant factors. Moreover, each such loan, when denominated and repayable in foreign currencies, must include features satisfactory to the Agency with regard to the foreign exchange risk coverage. These parameters are included primarily to preserve and strengthen the role of private market forces in the resource allocation process. These requirements, moreover, may support AID's efforts to encourage appropriate economic policies.

Private international bank participation in AID-sponsored co-financing arrangements should generally be in the form of risk lending as a means of enhancing the prospects for additionality over the medium to longer term. While AID, in appropriate circumstances, is willing to provide "comfort" in various forms, consistent with prudent financial management, the Agency generally will not link its loans to those of other co-financing participants through the use of mandatory cross-default clauses. AID is agreeable, however, to loan linkage through the use of optional cross-default clauses. Under this type of linkage each lender can make an independent determination, rather than be bound to take default action based on an associated lender's decision.

Finally, AID will limit its sponsorship and participation in co-financing arrangements to those structured in a manner consistent with the Agency's own prohibition on the initiation of mixed credits, and the U. S. government's obligations under both formal and informal international agreements. ■

Neal Riden is senior financial economist in the Economic Affairs Office of AID's Bureau for Program and Policy Coordination.



SETTING SIGHTS HIGH

A DC-8 prepares for takeoff. On board are three ophthalmologists, a nurse-anesthetist, operating nurses, a medical systems engineer and technicians. Packed with medical equipment, this is no ordinary plane. It is a flying hospital called Project ORBIS, a fully equipped eye care unit. Lifting off the runway, Project ORBIS begins its second international tour to Latin America—stopping at Costa Rica and Peru, as well as both Colombia and Jamaica for a second time—to promote better eye care for all. ORBIS is an example of the private sector's contributing to the improvement of health in developing countries through equipment, skills and time.

ORBIS is a nonprofit organization whose benefactors include major U.S. oil companies, surgical supply houses, electronics corporations, airlines, hotel chains, foreign governments and private citizens. AID contributed \$1 million in fiscal 1979—about one-third of the funds needed to refurbish the airplane. During fiscal 1982 and 1983, AID provided matching grants of \$750,000 and \$500,000, respectively, to help cover the costs of Project ORBIS's first year of operation. AID

With a boost from AID, the private sector pools its resources for flying eye hospital.

By Paulyette Rogers-Hunter

Deputy Administrator Jay Morris announced recently that another \$200,000 would be granted to ORBIS to help cover costs of its second trip to Latin America. To date, ORBIS has received over \$8 million in contributions, grants, supplies and equipment. It costs approximately \$3 million a year to operate.

ORBIS began in March 1982 with a 13-month voyage. During the trip, it spent one to four weeks in 22 countries—both developing and developed. Among the countries benefiting from ORBIS's visit were Turkey, Pakistan, Germany, China, England, Thailand, Jordan, Tunisia, the United Arab

Emirates and Jamaica. That first voyage was an important landmark in the 10-year history of ORBIS—the Latin word for "eye or globe"—and its founder and medical director David R. Paton.

When Paton was Department of Ophthalmology chairman at Baylor College of Medicine, he began work on ORBIS by compiling a list of medical personnel to act as advisers to the project. The original plan called for traveling with equipment stored in trunks, setting up temporary facilities in hospitals, then packing up and moving on to the next stop. The thought of an airplane as the mobile eye hospital was ideal.

The plane, donated by United Airlines, has an operating room, recovery rooms, research library, examination and treatment area and classroom. It is equipped with generators—and special power lines to reduce vibrations—to supply power throughout the stay, a potable water supply and a system to sterilize instruments. The instruments are hung from the ceiling to eliminate vibrations from the floor. The jet can easily land in over 1,100 airports around the world.

The idea of a traveling medical facility is not new, but the theory



Doctors and medical students watch operations from the plane's classroom.

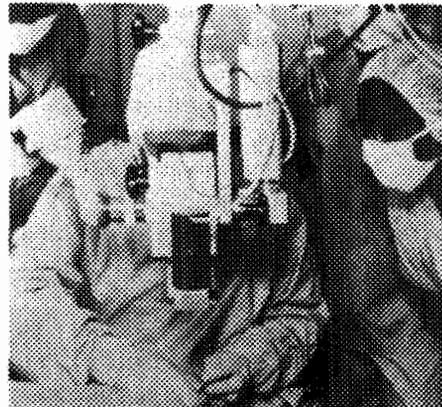
behind ORBIS differs from the well-known *Good Ship Hope* because it places more emphasis on training doctors than on treating patients. Visiting 20 countries each year and training 50-100 doctors in each country visited, ORBIS can improve the skills of over 1,000 doctors each year. In turn, if each ORBIS-trained doctor treats one patient daily for a year, more than 250,000 persons will benefit from ORBIS technology. By the end of the decade ORBIS plans to reach 12 million persons.

ORBIS visits take place when a foreign government or ophthalmological society extends an invitation. A visit usually begins with a press conference where host government officials and other dignitaries exchange formal greetings with the crew. These press conferences help promote public awareness of ORBIS in the visited country.

After the formalities, ORBIS goes to work. The staff begins by performing surgery and other teaching sessions for the host country doctors, who gradually

take over and perform the surgical procedures themselves. The plane's modern equipment, including audio-visual equipment, transmits operations and other procedures to an on-board, 18-seat classroom where doctors and medical students can observe. In some cases, television monitors are set up in airport terminals to accommodate larger groups.

Up to six operations a day are scheduled for patients, selected by host

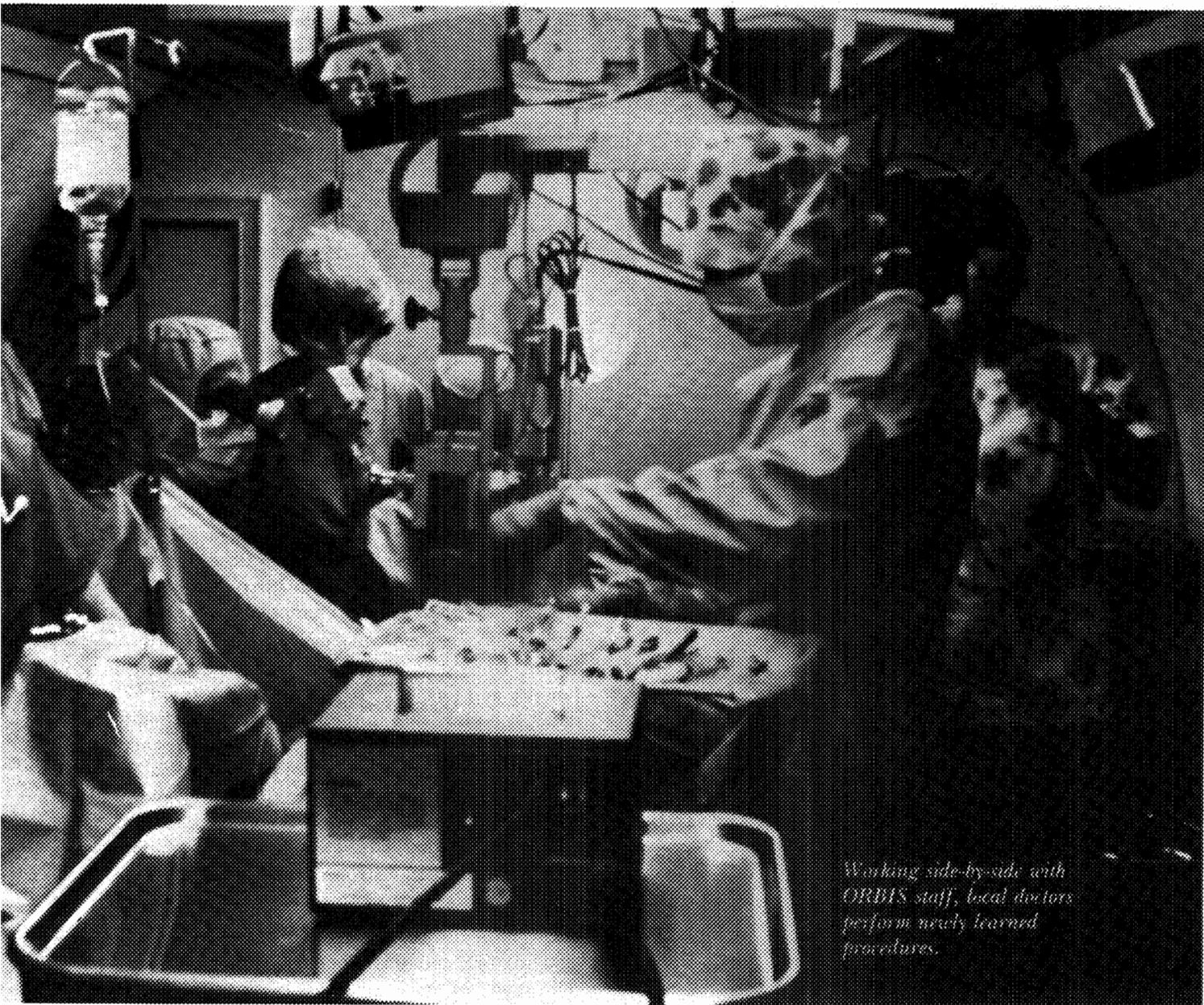


ORBIS offers modern surgical techniques to developing countries.



country doctors. Results of the operations are the most dramatic manifestations of ORBIS's visits. In Dubai, a 6-year-old child with a lacerated cornea underwent a delicate 90-minute operation. He now is able to enjoy normal vision—and a normal childhood—with the aid of a contact lens.

Because of ORBIS, a 7-year-old Peruvian girl, blind for most of her life, received a corneal transplant and was able to see again. This operation is common in some countries but not in hers. Until the success of her operation, national laws had prohibited transplanting human organs.



Working side-by-side with ORBIS staff, local doctors perform newly learned procedures.

Although ORBIS uses modern surgical tools such as laser and an operating microscope, its main purpose is to share up-to-date technology—that is also readily available and practical—and preventive health care with counterparts in other countries. Therefore, basic surgical instruments, such as a scalpel, are used to demonstrate surgical procedures where they are all that is required. This teaching method enables doctors in countries with limited facilities to make the most of what instruments they have. On its second tour, pre- and post-operative nursing care, as well as the importance

of long-term patient monitoring, will be taught by ORBIS nurses.

Another important aspect of an ORBIS visit is the two-way transfer of knowledge. On a visit to the People's Republic of China in October 1982, ORBIS surgeons who demonstrated cataract surgery, corneal transplants and laser surgery marveled at the Chinese ophthalmologists' use of acupuncture in eye surgery.

A discussion and review of techniques learned conclude the visits. ORBIS staffers leave doctors and medical students with videotapes (where practical) and written materials

for future reference. Host country doctors further spread ORBIS's techniques in teaching other doctors in their country.

An estimated 42 million people worldwide are blind and a half billion others suffer from eye diseases which threaten vision. Over half these illnesses could be cured by modern surgical techniques if enough doctors knew of them. Project ORBIS was created to spread such vision throughout the world. ■

Paulyette Rogers-Hunter was on detail this spring to AID's Office of Public Affairs.

SPECIAL REPORT

WORLD DEVELOPMENT IN PERSPECTIVE

Conference Prompts
'Nuts-and-Bolts'
Discussions on What
America Can Do.

More than 1,000 people gathered in Washington, DC in early summer to take a hard look at U.S. policy toward developing countries and their economic and social development. The International Development Conference was the largest national meeting on development in 30 years.

Clifton R. Wharton Jr., chancellor of the State University of New York, opened the meeting by stating that international development is in a period of reappraisal—as a policy and as a profession. “We need to ask technical, ‘nuts-and-bolts’ questions” about approaches to development. “We also need to ask probing questions about the fundamental assumptions and goals of our development assistance efforts.”

After assessing U.S. development efforts over the past 35 years, Wharton concluded, “A return to guiding principles will not be adequate in itself. Today’s crossroads for international development also demand that we . . . take stock of our experience to date. We need to identify which development activities have worked and which have not, and to analyze the characteristics common to success.”

Looking at the world as seen from the Third World, Donald Mills, former UN ambassador from Jamaica and former chairman of the Group of 77 said, “It is clear that in the present most difficult circumstances, while all developing countries are seriously affected, the impact of today’s critical conditions varies from country to country. . . . Nevertheless, there are many issues on which developing countries share a common view, and they have demonstrated a strong determination to press for changes in the structure and operations of the international economic system. . . .

“The world today is caught in a crisis,” Mills continued, “or more accurately in a number of crises which have come together in a manner such as to leave a widespread feeling of anxiety and even fear about the future and about the prospects of moving to an era of peaceful development and progress. . . . If we are to have any hope of moving into such a position in the years ahead we must look searchingly at the past, at the events, the actions, and the attitudes which surrounded them, and try to understand what has led us to the present. . . .

“The world economy is experiencing a state of recession,” Mills said. “World trade has been shrinking; countries have resorted to protectionism, and the industrialized countries have been experiencing extraordinarily high rates of unemployment and a decline in fixed capital investment. These conditions have had a marked impact on developing countries, which have suffered considerable losses in

earnings as a result of the fall in commodity prices."

Mills explained that countries with access to capital markets have incurred heavy indebtedness, and this burden has been increased as a result of high interest rates. "Today, caught in a situation of high interest rates, loss of export earnings, and restricted access to the developed countries' markets, there is increasing fear that many of these countries will be unable to repay their debts." At the same time, Mills said, "some industrialized countries are moving away from multilateralism and placing the emphasis more and more on bilateral cooperation, linked in some cases with political conditions."

At the second plenary session, two leaders of the development community, AID Administrator Peter McPherson and Commonwealth Secretary General Shridath Ramphal, engaged in a spirited exchange.

McPherson outlined the opportunities for developing countries to lay a foundation for enduring, broadly based economic growth. Despite the world economic crisis, McPherson said, we are left facing two diverging paths: "one spiraling downward to stagnation and instability, and one ascending toward prosperity and peace."

Each path is marked by the policies of developing countries, McPherson said. The downward path is the path flawed by economic weaknesses. These weaknesses include: heavy reliance on the state for production of goods and services; distortions in price which lead to distortions in incentives; excessive aggregate demand, usually a result of the state's inability to finance its activities.

"I can understand why countries tried these unfortunate policies," McPherson said. "In some countries, the colonial power left an institutional inheritance of marketing boards and government control of production. . . . Other countries properly feared excessive dependence on an unstable and unequal world economy. . . . But for whatever cause, the result of statism was basically the same—an inefficient and inequitable economy."

For example, small farmers in most sub-Saharan countries are paid only 25%-50% of the true value of their export crops by their governments, said McPherson, citing a World Bank report. The governments keep the difference between the price paid to the farmer and the price received on the world market. The difference, in effect, is a 25%-50% tax on the farmer.

In at least 39 developing countries, the farmers' average income is less than one-quarter that of those who do not farm. Given these counterproductive policies, it is no wonder that agricultural imports in sub-Saharan Africa quadrupled from 1970 to 1978, McPherson said.

The alternative to the downward spiraling path for developing countries is to make a substantial effort to restructure the economy, restoring the market as a system for allocating resources and production incentives.

"There is no doubt," McPherson said, "that I am calling for governments of less developed countries (LDCs) to make hard choices and to turn their backs on decades of statism and privilege in favor of markets and fairness. . . . The United States and other donors can and should help the LDCs make these changes."

McPherson noted recent progress made in many countries: divestiture of parastatals in Jamaica, Chile, Malawi, Bangladesh, Somalia, the Philippines, and Zaire; International Monetary Fund (IMF) stabilization programs in more than 25 LDCs, leading to reductions in aggregate demand, particularly in the public sector; and more appropriate pricing of agricultural inputs and products in several countries.

Secretary General Ramphal called McPherson's speech "a litany of problems in the South." He addressed the need for wisdom and leadership, particularly from the North, to bring the world economy out of the economic crisis.

Since 1973, the North has been vexed by OPEC's antics, and, as a result, the North has allowed the South to weary itself in inconclusive dialogue, he said. Throughout these 10 years of tiring dialogue and countless UN sessions and conferences on development, Ramphal maintained, "it has been the South, by and large, putting forward ideas, proposals, demands, and the North, by and large, rejecting them. The intellectual effort, the innovation, far from perfect though it was, came mainly from the South. From the North came lectures on the South's technical imperfection, its counterproductive efforts, its unacceptability to parliaments and congresses; and sometimes just plain NO."

On the other hand, Ramphal observed, the North would act when it felt its interests were threatened. "The International Energy Agency was formed within months of a perceived 'energy crisis,'" he said. More recently, the debt crisis mobilized developed countries when they saw their interests threatened.

Ramphal said that as a friend of the North he was trying to point out the need for leading countries of the North to change their attitudes toward the South. But he did not absolve the South of its responsibilities. He said he believed Western democracies are capable of doing much more to promote economic growth in the South. The North talks about its concern for the South, but does not always follow through, and

has even taken actions that have run counter to what it says.

As to what the United States can do, he concluded, "Be true to your highest traditions; to yourself be true; you could not then be false to a world which badly needs the strength of enlightened American leadership."

Administrator McPherson countered the Secretary General's remarks, saying that the developing countries' policies have been the damaging factor resulting in the economic hardships of those countries. If donor aid is to be used most effectively, the developing countries must help themselves by changing their policies.

Ramphal said he would not defend the policies of developing countries, because he, too, felt they were bad. But he would not back down from his premise that the North, and particularly the United States, must change its attitude toward the South.

One possible action recommended was adjusting the international trade and finance structure. At the IDC's concluding session, World Bank Vice President Anne Krueger recommended greater use of concessional funding in lieu of private capital markets financing for long-term development needs. She also warned of continuing protectionist policies during the economic recovery. Continuing those policies will hurt the developed countries who impose them, she said. Developing countries, even if less affected, cannot afford any economic setback. "For the developing countries," she noted, "there is little doubt that success in development will hinge to a great extent on access to international markets."

Farooq Sobhan, Bangladesh's UN ambassador and Group of 77 chairman, shared the LDC's perception of the global economic crisis. He reminded the audience that while developing countries recognize the gravity of 30 million unemployed in the Organization for Economic Cooperation and Development (OECD) countries, more than that number are unemployed in Brazil alone. India has twice as many unemployed, and about 50% of the Bangladesh workforce is idle. Sobhan also noted the economic interdependence of the developing and developed worlds, saying four of every five U.S. jobs created between 1978-80 were export-oriented.

Integrating developing countries into the institutions that govern the international economic and political systems and eliminating absolute poverty are the two great challenges for the United States, observed John Sewell, Overseas Development Council president. "A country established as this one was—on a set of very basic and very important principles—ignores the international application of those same principles only at its own peril."

U.S. Policy To Promote World Development

"The foundation of development lies in the meaning, aspirations, and worth of each individual," began Allen Wallis, undersecretary of state for economic affairs, in his address to the IDC audience. "Its realization is in human fulfillment, in the opportunity for all men and women to realize freely their full potential. . . . Government provides the framework—the protection of law and the assurance of opportunity—within which individuals can reach their full potential and contribute to national development. . . . It is no accident that those countries that have allowed free play for personal initiative and economic rewards for success now produce more than one-half of the world's product."

Wallis said the U.S. contribution to development is to tell LDCs the lessons of its experience. "The sooner LDCs turn their backs on the false claims and real failures of socialism, the sooner they reject the philosophy of compulsion, coercion, and command, the sooner will they open the way to accelerated, meaningful development."

The most significant step that the United States can take to promote Third World development, said Wallis, is to restore sustained non-inflationary economic growth in the United States. "When you consider the billions of dollars of imports from the developing world to the United States alone, not to mention the imports from the other developed countries, direct aid pales by comparison," he said.

As the world's largest trading nation and the developing world's largest customer, the United States must ensure an open trading system that benefits both the United States and LDCs, the undersecretary said.

"Closely related to trade . . . is private investment," Wallis said. Not only does foreign investment provide LDCs added financial resources, but it also promotes long-term growth by providing technology, management know-how, and access to international markets. Wallis noted that for 1975-80 U.S. direct private investment in the Third World grew at about 20% a year.

Wallis emphasized that, even for the poorest countries, trade is more important than aid because trade helps them to help themselves. He predicted that the 1980s will not see increases in foreign aid comparable to those of the 1970s. "Calls by some developing nations for massive gifts are completely unrealistic," he said.

Limited aid resources should be used in countries that can use it well to expand trade and attract investment, Wallis said. "The relative role of concessional aid is diminishing. In fact, this aid is increasing, but trade and borrowing in private markets are increasing much faster."

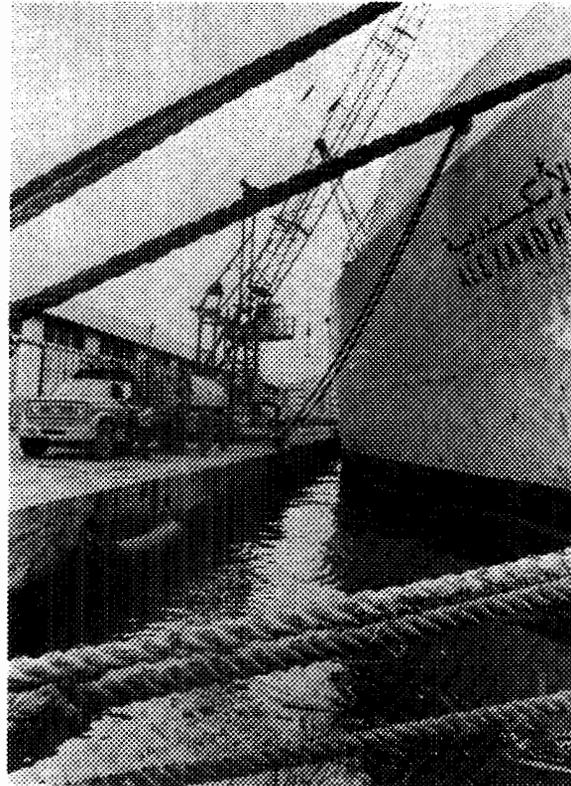
Wallis suggested several steps to resolve the LDC debt problem: debtor countries should follow sound economic policies; international financial resources, through the IMF, should support countries during the adjustment; lending countries' governments and central banks should provide short-term, transitional financing; commercial banks and export credit agencies must continue a flow of finance to debtor countries that are undertaking IMF-supported adjustments; and sustained noninflationary economic growth must take place in LDCs.

International Banking: A Crisis or Not?

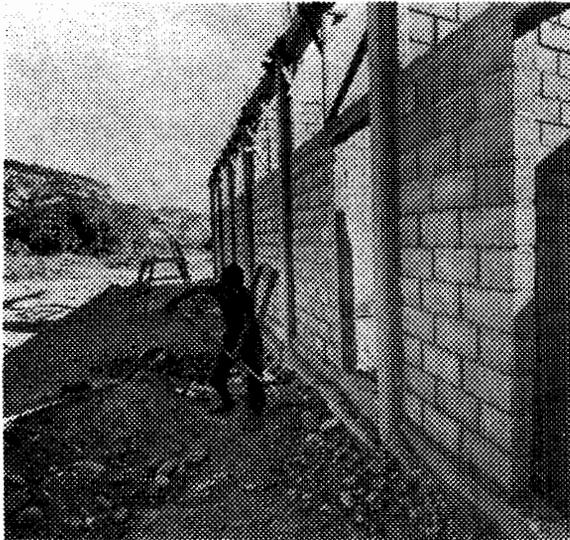
While two IDC panels—one of private bankers, the other of public sector economists—debated whether the present international banking system could handle a financial crisis, they also disagreed on whether there is a crisis. According to Chandra Hardy, the World Bank's senior economist for East Africa, the crisis stage has already been reached. The development community, especially bankers, must have greater awareness of the plight of the debt-ridden LDCs. She acknowledged that many LDC creditors do not consider the current situation a crisis as the banks have continued, so far at least, to receive debt payments. But Hardy predicted that in the next year the debt problem will get worse, and will not be without repercussions for international bankers. She noted that over the next year about \$300 billion will come due of the \$700 billion lent to LDCs. While many bankers see rescheduling as an acceptable solution, Hardy disagrees, calling rescheduling "too little, too late." Recent emergency measures have, she agreed, prevented a collapse, but the "unsung heroes" are not the commercial banks and the IMF, but the LDCs who have, until now, shouldered these huge payments. The global economic slowdown and a quadrupling of debt in the last 10 years have caused a substantial widening of LDC deficits, Hardy said. LDC trade has declined as well. Hardy said rescheduling agreements are temporary reprieves, allowing for a few years' delay in principal payments, but followed by tougher loan terms than before the rescheduling.

"Two fundamental inadequacies exist in the international monetary system," said John Williamson, a senior fellow at the Institute for International Economics. First, the exchange markets are not accurately valuing different currencies. The U.S. dollar, for example, is "tremendously overvalued." An overvalued currency can force nations to adopt protectionist measures which then worsen the terms of trade for LDCs that must increase trade to achieve economic growth.

Williamson's comments were met with skepticism by Marc Leland, the Treasury Department's assistant



Undersecretary of State for Economic Affairs Allen Wallis: Even for the poorest countries, trade is more important than aid because trade helps them to help themselves.



Expanded U.S. efforts are helping Latin Americans meet their basic human needs.

secretary for international affairs, who noted that in just two years interest rates have fallen dramatically, inflation has been brought under control, and an economic recovery is under way. What should the U.S. dollar's proper value be, Leland asked. Over the past 10 years, Leland said, many countries have complained about the dollar's value. At times, said Leland, "we've been accused of keeping its value artificially low, and now we're scolded for it being too strong." Williamson's idea of changing underlying currency rates through market intervention "is not only unnatural, but counterproductive," Leland said.

Williamson's second concern was the almost "intolerable lack of policy coordination . . . especially among the industrialized West," in trying to solve the economic dilemma. He gave two reasons: international negotiations, "an explicit form of policy coordination," have regressed in recent years, including a breakdown of the Bretton Woods agreement; and, nations have found it more difficult to reach constructive agreements on substantive problems. He warned that U.S. economic policies could cause higher interest rates, further weaken commodity prices and more protectionist policies by governments worldwide.

"Bretton Woods, too, proved not to be the answer," Leland responded, because it was "based on the false assumption" that industrialized nations would "pursue common or shared economic policies." Abandoning the fight against inflation now would be a costly mistake. "Real interest rates," he said, "reflect the concern of the financial markets that inflation may not yet be fully under control."

Leland agreed that protectionism must be avoided. He also agreed that commercial banks must continue to keep their lending windows open to the LDCs, or the consequences could prove disastrous.

"I don't think we'll see LDC defaults," began George J. Clark, Citibank's executive vice president, who was on the second financial panel. "The problem is the media have done an excellent job of distorting the facts and figures, giving the public the perception that things are much worse than they really are." This is not to say that dangers do not exist. They do, Clark said, and banks "must accept a significant portion of the blame" for today's situation. As a group, he continued, banks did not foresee the consequences of such events as the oil price shocks of 1974 and 1978, the inflation of the late 1970s and the global recession that began in 1979.

Why did the banks not see this crisis coming? In lending large amounts of funds to LDCs, Clark said, bankers thought they "were doing something useful." At the time, "exports of non-oil-producing developing nations were growing at a rate in excess of 20% a year," but as exports rose so did LDC debt. When

export growth slowed in 1980, these countries were left with huge debt burdens and dwindling foreign exchange earnings.

To help avoid such oversights in the future, according to George Votja, chief financial officer at Phibro/Solomon Brothers, commercial banks must adopt a policy of "anticipatory risk management" instead of reacting to events as they happen. "More effective lines of communications and understanding between the banking community and debtor nations must be opened," Votja told the IDC audience, noting that this is already occurring. Both Clark and Votja were extremely enthusiastic about the Institute for International Finance in Washington, DC. Established by more than 700 banks to create a better understanding of the international banking system, the institute plans to foster better cooperation among banks; review debtor country policies; and educate bankers on the Third World.

Contrary to what many believe, the panelists said, commercial banks generally favor increased regulations, such as additional, more detailed, reporting requirements. Many bankers also would like laws revised to allow large insurance companies, pension funds, and other financial institutions to lend to LDCs. "Broadening the base of lending," said Votja, "is extremely important for the future. Regulators must assist us in building a more durable lending base." If banking regulation is not handled well, panelists warned, many banks will avoid further international lending activity.

Panelists criticized the Heinz-Proxmire bill now before Congress. The bill grew out of the Reagan Administration's proposal to increase IMF quotas by \$32 billion, including a U.S. contribution of \$8.4 billion, which critics call a "bank bail out." Congress, said Clark, found "commercial banks to be a convenient scapegoat." Heinz-Proxmire would give bank regulators power to impose country limits on bank lending, would force banks to increase loan-loss reserves, and would stretch out their up-front syndication fees over the life of the loans. Bankers are critical of the country limits and loan-loss reserves. Country limits could have serious effects, "not only on the banking system, but in global politics as well," Clark said. If limits were imposed now, the largest debtors would be ineligible for any "fresh credit, thereby defeating the purpose behind IMF adjustment packages." The increased reserve requirements, Clark said, would force banks to try to collect on outstanding principal, "causing severe difficulties" for the already hard-pressed LDCs.

The panel's consensus was that a new institution to refinance Third World debt, a return to the gold standard, and fixed exchange rates were not likely or desirable. "We ought to work with the system we

have," said Votja, "and avoid any radical solutions."

Attention should be focused on identifying the system's strengths and weaknesses, broadening the current lending base, establishing a "secondary market" for LDC loans, and working toward improved management and technical assistance methods to help banks better monitor and reschedule debts.

U.S. Response in Critical Regions of the World

Latin America

Ambassador Otto Reich, newly appointed adviser to the Secretary of State and AID's assistant administrator for Latin America and the Caribbean, was the opening speaker in an animated session on the region. Reich outlined U.S. goals in Latin America:

- shore up the democratic political center, strengthen reformist governments;
- use economic assistance to strike at the causes of poverty;
- use security assistance to protect the region; and
- engage in legitimate discussions where possible.

Reich emphasized the continuity of the U.S. government's efforts, noting that, since 1949, economic assistance compared to military assistance to the region has been, and is, much higher. In all, \$2.3 billion has been in economic assistance compared to \$292 million in military assistance. The United States is providing more economic assistance there now than ever, Reich said.

There are generally held misconceptions about El Salvador that have confused the American people, Reich said.

The first is the perception that the United States is overemphasizing military assistance in El Salvador. However, quoting President Reagan, Reich said that no amount of economic assistance will be sufficient, "if the guerrillas believe they can win by force."

Another misconception is that U.S. activities in El Salvador neglect social and political inequities. Reich insisted that this, too, is untrue, pointing to U.S. support of economic, social, and political reforms.

First, the United States is helping the region stabilize itself economically with quick-disbursing, balance-of-payment funds. There also are expanded efforts to meet basic human needs by increasing economic opportunities through, for example, private sector activities. The increase in those benefiting from economic and development assistance programs, Reich said, will continue, if the guerrillas stop destroying that nation's infrastructure.

The success of the land reform itself indicates the change in El Salvador, Reich said. Approximately 500,000 Salvadoran farmers have now benefited from the land reform program. After the March 1982

election, some special interest groups worked against the program and held up progress; but, after constant pressure from the *campesinos* themselves, the process continued. This is an example, Reich said, that democracy is genuinely beginning to take hold.

Richard S. Newfarmer, senior fellow and director of trade and industrial policy programs, Overseas Development Council, said the most important issue in El Salvador is "bringing about political and military stability. The longer the battle goes on, the more the future is being mortgaged." He said with continued warfare comes greater destruction of infrastructure necessary for economic growth and stability. Military conflict diverts resources away from development toward immediate survival and protection of property. As warfare continues, the more skilled labor will leave the country. These are the people who will be needed the most to rebuild once the fighting stops, Newfarmer said.

Russ Marks, Council of the Americas president, tied the rapid growth of industry and investment in Latin America in the 1960s to the impending creation of a Central American common market. When this did not come about, investment fell off. Coupled with increasing hostilities, the situation caused interest in investment to decline markedly. Many firms have combined their Latin American and Asian divisions—a sign of changing corporate interests. All of this bodes ill for the region's development, Marks said.

"The only bright spot on the horizon," Marks said, "is the Caribbean Basin Initiative," providing Congress allows freer access to U.S. markets, thus making investment in plant and equipment improvement potentially profitable.

Africa

Instead of warfare, sub-Saharan Africa is facing food crises, escalating populations, droughts, deforestation, soil erosion and refugees. For most of the region's countries, independent for less than 25 years, food production is the most crucial issue, said Mialineo Tao, Lesotho's ambassador to the United States. "These countries are asking for more substantial attention over a greater period of time." Assistance to Africa should be equal to that going to the Middle East, Tao asserted. "The United States should have constructive relations with all African countries and not choose between countries. American business should look to the future, to independent Africa, rather than South Africa."

Tao said that Western investors are not truly interested in African development because they ask for greater tax breaks and benefits for investments there than they get at home.

"People going to Africa should not be engaged in a voyage of discovery," Tao continued, "but in a voyage of long-term commitment." An African constituency needs to be built in the United States from the grassroots, Tao concluded.

Walter Carrington, director of Howard University's international studies department and former ambassador to Senegal, said, "Black Africa is the last retreat of the cold war. The question is 'What is America willing to do?'"

Jonathan McCade, chief of Accelerated Impact Program's (AIP) Sahel West Africa projects, said that AIP's goal is to break the trap of poverty by helping nations become self-sufficient. Pointing to the Reagan Administration's programs and policies to broaden incentives for farmers, for technology transfer and private sector involvement, McCade said, "Social effectiveness is not enough. There also must be economic effectiveness."

Eastern and southern Africa are suffering the worst drought in 40 years, affecting about 18 countries, noted Joseph Kennedy, Africare's director for international development. "And, though 70% of the people in Africa suffer from malnutrition, the resources are there, in land and water, for food self-sufficiency. African countries need technical and financial assistance. The question is: is there the will to provide it?"

Asia

In contrast to Africa, South Asia is a region where the United States has taken interest for years. "After 10 years in South Asia—and triggered in part by the USSR's invasion of Afghanistan—the United States is looking closely at the region," said Walter Andersen, U.S. State Department analyst for India and Indian Ocean Affairs. Andersen reported on the three goals of U.S. policy for the region.

First, the United States will support a high level of political stability in South Asia. While the region has both domestic and bilateral problems, he said, it's relatively stable both domestically and regionally. For example, Andersen noted, India and Pakistan recently agreed to establish a joint commission to resolve some of their differences. India and Bangladesh are working out a plan to share the water from the Ganges River.

Second, the United States will encourage Asian countries to pursue generally moderate economic and political policies. All countries in the region, said Andersen, seek friendly relations with the United States and there is greater reliance on market mechanisms and free enterprise in all of them. He outlined the political systems of South Asian countries, pointing to Sri Lanka and India—countries with democratic political systems and

dynamic political parties—as having had recent peaceful changes in administration.

A third goal, said Andersen, is to limit the potential for Soviet expansion or for instability in the region.

“It’s not inconsistent to talk about South Asia as being both an area with massive poverty and one where development is moving along,” said panelist John Mellor, director of the International Food Policy Research Institute (IFPRI). The major concentration of poor people in the world is in South Asia. In terms of numbers and depth of poverty, 300-400 million people cannot obtain the minimal required calories. At the same time, the development process is going well, with high rates of growth relative to per person income, he said. This situation suggests that development—implying poverty—is taken care of, so attention can be turned away from South Asia. But, Mellor said, remember that the initial development base—incomes—was extremely low. So it is difficult to establish savings; that is, it is hard to increase capital stock.

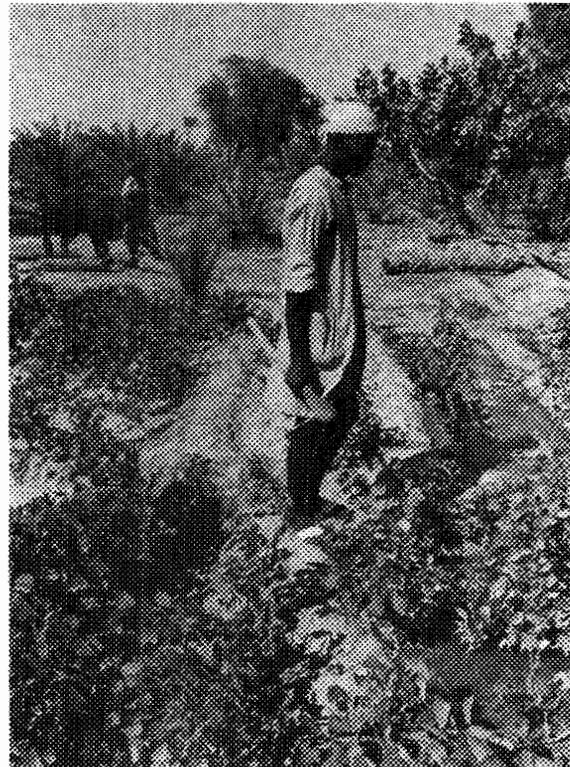
Mellor said the West should help the development process by putting in more resources since it’s going so well already. He pointed out some lessons to be drawn from the Asian experience:

- In South Asia, a major foreign assistance effort to train people and build institutions boosted development. It is important to build national institutions and train people at high levels to maintain the institutions.
- Development takes a lot of time. “We should think in terms of a 10, 15 or 20 year span,” he said, noting it has taken 15 years to build land grant colleges in South Asia and 60-70 years in the United States.
- The formation of an agricultural development lobby is important.

By skillfully disseminating agricultural technology, a high agricultural growth rate throughout South Asia has been achieved. “They’re still lacking rural electrification, ports and storage systems; nevertheless,” said Mellor, “they’re moving ahead.” Small and medium scale enterprise’s growth tends to be private enterprise oriented, which has led to more growth, employment and income for poor people.

“We’re at one in our view with all major national donors and international institutions that South Asia is the world’s largest challenge in terms of economic and social development,” said Eugene Staples, deputy assistant administrator for AID’s Bureau for Asia. The United States gives the region high priority as is evident in the fiscal 1983 budget.

“AID sees forbidding long-term problems,” reported Staples, including, “population growth on top of already large population pressure by people and



Africa has the resources for food self-sufficiency, but needs technical and financial assistance.



Barbara Huddleston of IFPRI: Where there is a need for food aid, there also should be a dialogue on food distribution, rationing, and pricing policies.

animals on natural resources, masses left out of progress, the need for more institution building and institutional reform in terms of political and economic organizations, education and human institutions."

But Staples then noted, "In virtually every capital in South Asia, there is tolerance for listening to ideas about economic development. Growing realization of the importance of the private sector is one reason. Private enterprise is one way to solve problems the public sector hasn't been able to deal with adequately."

South Asia, he continued, "is in a difficult ecological crisis. Something must be done," urged Staples, "to plant trees, stop erosion, restore the natural landscape for obvious reasons—more fodder and more fuelwood. Recognition of these problems is having all kinds of effects on the psychology of leaders in South Asia."

Near East

Energy and agriculture were also among the issues discussed by the Middle East panel. Jarod Hazelton, research director at the Texas Research League, urged developing agricultural exports to provide capital to finance industrial growth. Agricultural development also frees labor that can be employed in industry.

Hazelton said donors should think less about structure and be more flexible in program planning. Structures already exist in Middle Eastern agricultural systems that could be points of entry for development programs. Hazelton urged attention to non-irrigated systems, because they also have an accessible system whereby decisions are made, which is often missed or ignored by development experts who press new technology on farmers.

Rural to urban migration is another problem in the Middle East. Richard Robarts, executive director of the Near East Foundation, suggested several remedies, including more agricultural jobs, improved rural/urban trade, small farmer credit and expanded extension services. Robarts praised the increasing role that private voluntary organizations are playing in rural development in the Middle East.

The Middle East's emphasis on industrialization and state-of-the-art technologies is out of proportion with the economic and social contribution that the industrial sector actually makes, according to Del Roy, president of Development Decision International. Seen as a symbol of modernization, expensive industrial projects often are undertaken that cannot be operated efficiently or productively. The highly inefficient industries depend on public sector subsidies for their existence.

Subsidizing energy-intensive industries has a

serious effect on economic development, agreed Ibrahim Elwan, the World Bank's senior energy economist. He noted that the majority of Middle East countries depend on oil to build their infrastructure. Paradoxically, countries dependent on imported energy are now better off because they perceived their problem early on and took policy steps to cut back their energy consumption.

Hunger and Food Security: Problems and Prospects

The hunger equation has five parts, said Charles Hanrahan, deputy director for global analysis for USDA's Economic Research Service: food availability, the world food system's ability to respond to food crises, malnutrition, poverty, and long- and short-term considerations for overcoming malnutrition.

Food is available, he said. World food production continued to grow in the 1970s—just as it had for the two previous decades—with most rapid increases in developing countries. Per person food production also increased, but, because of fast population growth, production per person was lower in developing countries than in developed countries. The increases are due to high-yielding seed varieties, and improved technology and infrastructure.

Food imports, which have added to the availability of food supplies, should not be taken as evidence of failure of the food production system, Hanrahan said. "In general, food self-sufficiency may not be the appropriate policy. It may be more efficient to allocate resources to export production and import some portion of food supply."

The world food system's ability to respond to food crises, with modern communication and transportation networks, has greatly reduced the possibility of widespread food shortages due to natural catastrophe, he said. But, he noted, while food production and trade in foodstuffs are up in low-income countries, malnutrition persists.

The long-term solution to hunger, he said, is more investment in infrastructure, research and development of new technologies, and investment in human resources.

Patricia Young, World Food Day coordinator, said that, reduced to absolutes, people are hungry because of injustice, poverty, and lack of public will. She challenged the human race to ask itself "How much do we care if people are hungry? How much do we care about what happens to others?"

Hunger is the other side of the poverty coin, said John Mellor of IFPRI. Rapid decline in poverty is associated with increased agricultural production and decreased agricultural prices. He noted that two ways to increase production and lower prices are

good weather (which cannot be controlled) and yield-increasing technology.

Food security is having a reliable supply of adequate nutrition at acceptable cost, said Montague Yudelman, director of agriculture and rural development of the World Bank's central project staff and part of a panel that addressed food security. Discussion centered on the relationship between supply and demand, the effect different stock/demand ratios have on world food security, and measures that could better insure adequate nutrition.

Yudelman discussed the requirements for food security: supply, demand, distribution, access, adequate income and programs for vulnerable groups. On the supply side, production and trade should assure adequate and increasing food supplies; on the demand side, there should be employment and adequate income levels; both are linked by a distribution system that provides consumers with food.

Yudelman noted that generally global production has been growing faster than population, with Africa as the major exception. "We shouldn't underestimate the great achievements that have taken place or the potential for great achievements," he said.

Expansion in international trade—with a shrinking number of suppliers and rising number of importers—has meant adequate world food supplies. This explosion in trade largely is a result of development, he said. Because of the shrinking number of suppliers, Yudelman continued, the decisions made in America have a strong bearing on world food security and grain availability.

Over the last 10 years, the World Bank has shifted its focus to small farmers—helping them to increase production. Agricultural research accounts for 25% of all World Bank lending. In the last five years, the Bank has committed \$5 billion to agricultural development. The largest funded sector has been irrigation—the sector responsible for the "yield revolution," Yudelman said.

Barbara Huddleston, an IFPRI research fellow, said food stocks and the P.L. 480 program help stabilize world and domestic market prices. There is support for commodity transfer to meet food needs, she said, and outlined ways to maximize food aid's effect.

Quantifying the need for P.L. 480 is difficult, Huddleston said. There is a lack of information on exactly how much hunger there is. To estimate nutritional gaps, total production is studied to see what portion goes to food use instead of feed, as well as pre- and postharvest food loss. The techniques to measure nutritional standards and the standards themselves are not well developed, she said.

Huddleston said where there is a need for food aid, there also should be a dialogue on food distribu-

tion, rationing, and pricing policies—not random dumping.

She pointed out that the policy environment in Africa is not well developed; current policy provides cheap food to urban populations and rural production has not been linked to urban consumption. Increasing bulk food aid in such countries, she said, "would foster imports and discourage reliance on rural agricultural development. Thinking about food aid must be done at the country level," she explained, both in terms of evaluation and policy. She urged a coordinated approach with P.L. 480 as part of a development package.

Scott Steele, chief of the international affairs and commodity program for USDA's Office of the Budget and Program Analysis, traced the history of food security issues and the U.S. position. In the early 1970s, the food problem became an economic problem as well. In 1974, the international community responded: the UN Food and Agriculture Organization (FAO) recommended countries hold stocks; the World Food Council was established to be the FAO's Technical Committee on World Food Security, recommending policy actions and guidelines to governments on how to operate their stock policies. Today, 70 countries have national reserve schemes to provide a buffer for international market instability.

There is still much hunger, and the question is whether a global arrangement will have an impact on that. We need to put more emphases on national efforts, Steele said.

We've come through a major period of instability, Steele added. But now there are reserve programs and a greater awareness of food security problems, and "things won't reoccur the way they did in the past."

The Roles of U.S. Agriculture, Labor, and Business

Representatives of U.S. agriculture, labor and business discussed how they can contribute to development.

Bob Bergland, chairman of Farmland International and former USDA chief, described a world with two agricultural empires: the small, rich nations, and the Third World which accounts for 3 billion people but produces half the food it requires. "We are dependent mightily on this imperfect, unwieldy, dangerous world."

Bergland urged more cooperation between private and public U.S. enterprise to help the Third World and increased support of multilateral agencies by U.S. agriculture, saying it "has to be an advocate of questions that deal with stark poverty in the Third World. The question is, 'How do we, a rich family, live in a poor neighborhood?'"

Sol C. Chaikin, president of the Ladies Garment Workers Union, delved into the trade policy debate, tracing its origins from the developing countries' export-led industrialization to current trade policies and global economic problems. He suggested that trade policy with import quotas being allocated on a global basis was a good starting point for a human needs approach to development. Linking increased imports to the U.S. economy's ability to absorb them avoids massive disruption in domestic markets resulting from fluctuations in output from developing countries and political pressure for protectionism. Negotiated import quotas also would prompt developing countries to produce more goods and services for domestic use, he said.

In conducting routine business, Ralph A. Pfeiffer Jr., chairman of the U.S. Council for International Business and president of IBM's Far East operations, said "business provides large infusions of capital, provides goods and services, creates labor and funds—directly and indirectly—to build infrastructures, and transfers urgently needed skills to the developing world." U.S. corporate investments in developing countries total \$57 billion, and 11 of the United States' top 20 trading partners are developing countries. Many U.S. firms, he said, also help meet basic needs of developing countries—and conduct good business—through humanitarian or "good corporate citizenship" efforts, he said. In Thailand, for example, Exxon Corporation helped build clinics, schools and dams. ITT created sewing factories, community farms and fishing industries in Nigeria; and, in Liberia, Firestone built hospitals and schools.

Pfeiffer addressed three points: the role of U.S. business in closing the gap between developing and developed nations; enhancement of the contributions of business; and steps business can take to speed development. To strengthen two-way trade, Pfeiffer urged more U.S. bilateral trade agreements with developing countries such as those with Panama and Egypt.

Pfeiffer said international development agencies should provide investment capital and should liberalize lending formulas; long-term capital financing of development projects should not fall victim to short-term austerity requirements.

"Business can contribute most by pursuing its business interests" in harmony with national goals of host countries, said Pfeiffer. "One of the most valuable business contributions is in the area of education. Business expertise and management skills are sorely needed in developing countries."

Three areas to explore are: expanded corporate leaves of absence programs for corporate and managerial experts; greater use of the growing pool of retired executives; and exchange programs that

bring LDC entrepreneurs into contact with multi-lateral experts.

Science and Technology: Myth and Reality

Science and Technology (S&T) are closely intertwined with successful development strategies, said J. Thomas Ratchford, associate executive officer of the American Association for the Advancement of Science. The United States has a unique opportunity to marshal science and technology for development through its scientific and engineering communities. And AID is doing just that, said John Eriksson, AID's deputy assistant administrator for research in the Bureau for Science and Technology, who outlined S&T's role in AID's policies and programs. He said AID Administrator McPherson views the Agency as the main instrument for U.S. support of development-oriented research and expects a marked increase in AID-funded research. AID continues to provide long-term support for creating and strengthening LDC research institutions. Whenever possible, research will be done by LDC researchers and institutions.

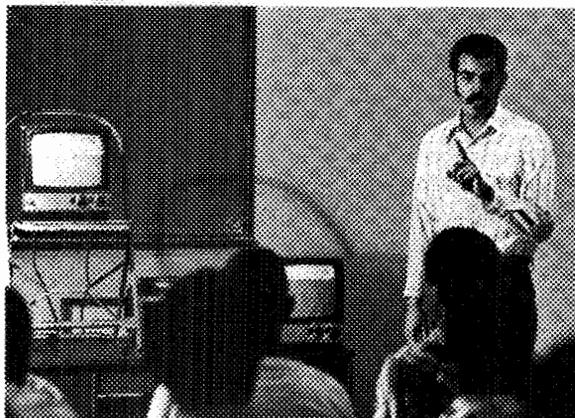
"The performance and potential of development-oriented research provide real hope that sustained improvement in the well-being of the world population is possible," he concluded.

Universities are the starting point where the scientific, technological and sociological knowledge needed for development is created and interpreted, said Anthropology Professor Nancy Gouzalez from the University of Maryland. The increasing number of foreign students studying in the United States is analogous, she said, to the number of U.S. students who, in the early days of U.S. development, went to Europe for advanced scientific training. By 1981, there were 311,882 foreign students enrolled in 2,734 U.S. institutions. But most of these students have come from developed, middle-income or politically distressed countries, rather than those countries that need trained personnel the most. The number of students from poorer countries could be increased if the language, education and financial barriers were removed, she suggested.

Communications Technology as a Development Strategy

Communications is a critical element of development programs, agreed four experts on the communications panel.

An AID-sponsored film, "A Way to Bridge the Distance," focused on the problem of getting health messages to people in remote or isolated areas. It featured two AID projects—a technical school in Guatemala and a nutrition education project in the Philippines.



Agricultural education for small farmers is one application of communications in development.

The panel defined communications as the effort that supports the educational needs of development activities. Any communications plan requires a commitment by the national government, systematic planning, audience testing and continuous evaluation, said the panelists. They emphasized that communication efforts support program goals and are not an end unto themselves. Tony Meyer, an international communications specialist in AID's education office, suggested that communications projects that exist only during the life of the project have little or no lasting effect in a given community. He insisted that communications must be institutionalized.

Meyer manages the Mass Media and Health Practices project, which is carried out by the Academy for Educational Development (AED) in The Gambia and Honduras (see *Horizons*, April 1983). Meyer said AID has been able to apply lessons learned from the project. "In this sense, it was a prototype," he explained. "We've taken a concept and applied it to two completely different countries, with different political, economic, social and cultural aspects, and have shown that we can reach and teach people in remote areas how to help themselves insofar as a serious world health problem is concerned. Furthermore, we know without a doubt that it is transferable and that developing country governments can integrate the concept into their development plans."

Barbara Searle, a World Bank education specialist, pointed out that producing good programs is difficult and expensive. While satellite communications and microcomputers are areas due more attention, the cost-benefit ratio of such investments, considering the high cost of equipment, energy and shortage of country- or problem-specific material, must be considered. Computer software was cited as an example.

Popular Participation: The Challenges for Self-Reliance

People in developing countries have a tremendous amount of untapped creativity, said one IDC panel, and donors should encourage the growth of this creativity and not continue with the attitude of "What are we going to do for them?" What is needed, the panel concluded, is popular participation: "getting the populace involved in helping itself by bringing the management level down to the local level."

Ted Owens of Appropriate Technology International (ATI), noted that it has been 10 years since Congress passed legislation spelling out the popular participation concept. "Many private voluntary organizations supported this concept years before the legislation passed," Owens said, "believing that

much of the aid provided did not reach the targeted recipients and that the decision makers and planners in the public sector were too far removed to create the most effective development plans. The implementation of popular participation in the public sector, however, has been meager at best." Government officials in recipient countries and in the United States have been unwilling to decentralize, asserted Owens. Politicians in the Third World fear the loss of their political power. In Washington, there is a lack of understanding of how to carry out the many changes needed in planning procedures and authority.

In contrast, Owens said, private sector organizations have included program recipients in the planning stages, resulting in improved quality of projects. Industrial decentralization is the main thrust of ATI's programs, which include setting up food processing plants in villages.

Phil Johnston of CARE said that most of CARE's projects are designed to promote self-help and self-reliance. Working increasingly with indigenous PVOs, CARE believes that if it helps the PVOs to be independent, it ultimately will help the people receiving the aid to be independent as well.

Patricia Kutzner of World Hunger Education Service discussed the role of women in development saying that women's expertise must be drawn upon because women spend most of their lives in development: by growing food, making articles and utensils, and producing and nurturing human lives. An exchange of information is needed to learn from women what their needs are and then to get the benefits of available resources to them.

However, the biggest impediment to exchanging information is the lack of trust. Foreigners, government officials (even on the local level), women of a higher social or educational level, younger persons and even neighbors are suspect. To build trust, sustained personal contact is needed. One of the best ways to communicate with rural women is through indigenous PVOs, which are uniquely able to adapt information from development agencies to each situation. The panelists agreed that local PVOs worldwide are doing excellent work and have been successful in encouraging popular participation. ■

Contributors to this article were AID staff members Daryl Borgquist of the Bureau for Program and Policy Coordination; Vera Connolly of the Bureau of Food for Peace and Voluntary Assistance; Alexanderina Shuler of the Bureau for Science and Technology; and James Bednar, Ellen Clifford, Sharon Isralow, and Rose Jourdain of the Office of Public Affairs. Also contributing was Marc Brazil, formerly with AID's Bureau for External Relations, now of the National Security Council staff.

TECH TRANSFER

Rice Husks Into Logs

By Jerry Lundquist

With a little ingenuity and a mountain of agricultural waste, a small enterprise on the outskirts of Bangkok, Thailand, may have part of the solution to the problem of diminishing forests in many countries. The enterprise is S.P. Energy. The waste product is rice husks.

The brainchild of Sayan Panpinij, the company has developed three machines that transform rice husks into burnable "logs." Rice husks are produced in huge quantities by rice mills throughout the world. Disposing of this waste product is costly for millers. Thailand alone produced nearly 3.5 million tons of rice hulls in 1979-80. From the waste, S.P. Energy produces up to four tons of logs a day, 100 tons a month, and is selling all it makes.

The idea for this process started years ago when Sayan Panpinij and his brother listened to their grandfather's complaints about the difficulty of burning or otherwise getting

rid of the rice husks from his mill. A more recent inspiration came when the brothers visited a sawmill in Korankan, Thailand, where they saw how sawdust was converted into fuel logs.

"It has been many years since my grandfather owned a rice mill," Sayan Panpinij recalls. "He always had problems with rice husks. He had no place to keep them. It cost money to move and burn them."

The Panpinij's completed their first rice husk log maker in January 1980, using a combination of heat and pressure to form the logs. Initially the mechanical power was provided by a used Toyota gasoline engine, but this was soon replaced by an electric motor to gain more flexibility in speed control.

One problem was the moisture in the rice husks that turned to steam in the extrusion cylinder. The brothers countered this by drying the husks first. They then found that grinding the husks not only reduced the moisture content, but also improved the overall performance of the equipment and made a better product.

The first model of the log extruder was a success, but the brothers could see room for improvement. Volunteers in Technical Assistance (VITA),

funded in large part by AID, provided a \$2,500 grant to continue development of this promising extrusion process for producing useful fuel from rice husks.

The second and third extruders, constructed in part with assistance from VITA, each incorporate improvements over the previous model. The present design produces 75 kilograms of rice husk fuel logs an hour from each extrusion head—almost four times the output of the first model. The newest machine requires less maintenance and uses less power. It features twin extruder heads, each with a selective speed control, that can be used independently or simultaneously. Smoke control, too, is improved.

The newest version is smaller, costs less to build, and is easier to transport than some similar machines built in the United States. It costs less to operate and maintain, has a higher extrusion rate, and produces better fuel logs.

A twin-extruder machine can be operated by one person who feeds the rice husks into the hopper atop the machine, removes the logs from below the extruder, and stacks them for cooling. (Three persons could operate four machines.)

The Thailand Institute of Scientific and Technological Research estimates that about 80 to 100 similar machines are being used in the country today, most of them designed for other feed (fuel) such as bagasse or sawdust. One or two factories in Thailand produce the machines.

Most of S.P. Energy's logs are bought by the Thai Ministry of the Interior, which uses them for fuel at refugee camps—at a rate of 300 to 400 tons a month—thus saving the trees around the camp. Industries, particularly foundries, and crematoria also buy the product, the latter because the logs' ashes absorb natural odors. Households are not much of a market yet because of the cost, smoke, and fumes.



Mountains of rice husks, which would otherwise be burned as waste, are carted to the log-making machines.

The Paupinijs are working on ways to eliminate the smoke produced by their rice husk logs, and predict that consumer demand for the logs will rise as the cost of wood and charcoal increases.

Part of the brothers' supply of rice husks comes from the factory owned by their grandfather but now operated under lease; but demand is so high that they accept truckloads of husks from other rice mills, which are happy to get rid of them.

Optimistic about their machine's future, the Panpinijs may benefit from additional VITA assistance to improve the lead turns on the screw and the extruder cylinder. Another problem, VITA cautions, is the high replacement rate for parts in the extrusion mechanism, which wear out quickly and need to be maintained or replaced on a regular basis.

Machine Details

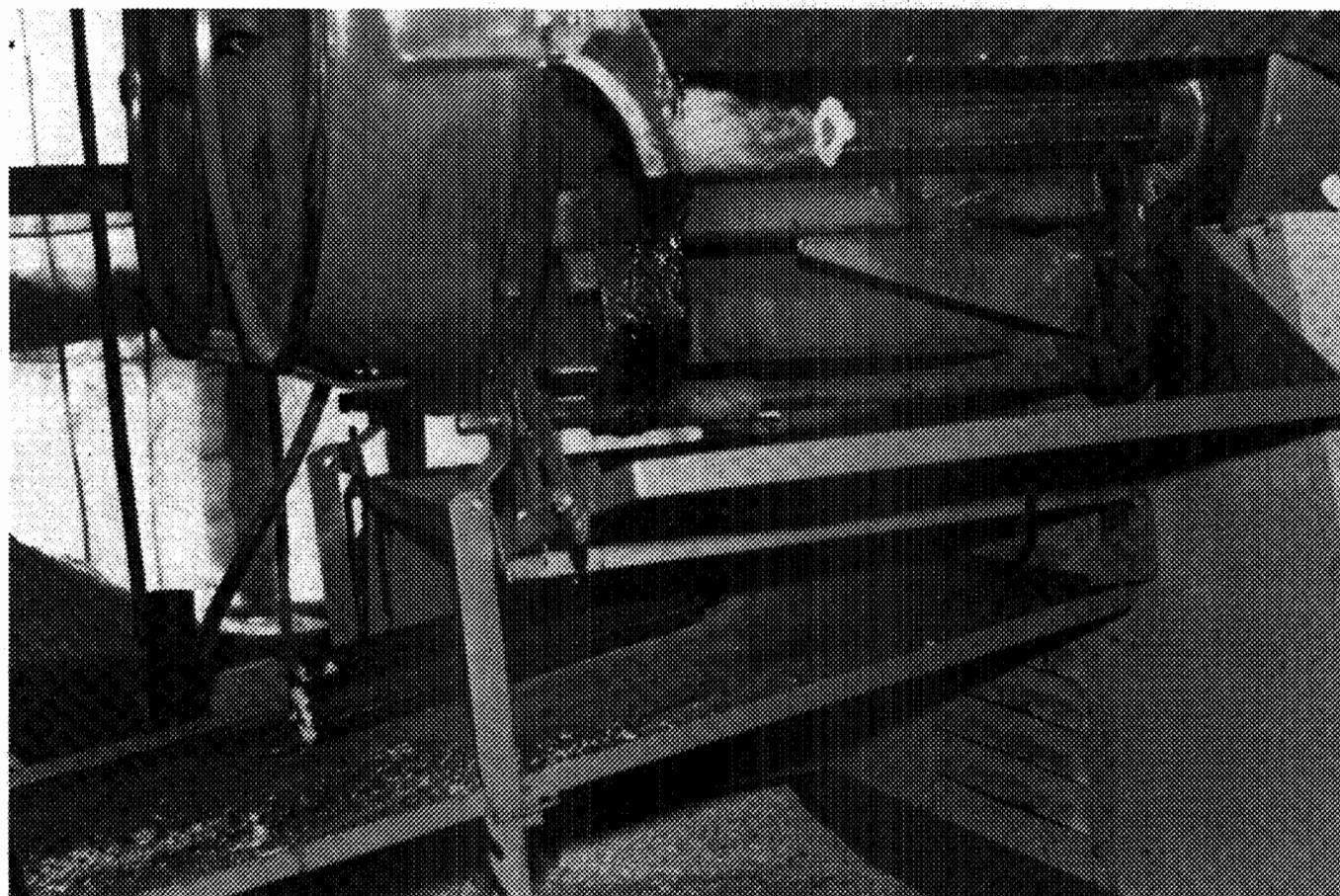
The rice husk log extruder has three parts: a hopper into which the husks are dumped, a screw-fed extrusion cylinder, and an adjustable cutting unit that cuts the logs any length between 25 and 45 cm. Each log is 3.6 cm in diameter and weighs 0.80-1.20 kg. The machine is 150 cm wide by 275 cm long by 110 cm high.

In five minutes, the extrusion cylinder heats up to its operating temperature of 450 degrees Celsius, at which point the drive motor switch can be turned on. From this point until shutdown, the machine operates with automatic temperature control for the extrusion cylinder and a magnetic overload switch to turn off the motor. The fuel logs are moved into a pile where they cool for about five hours. Then they are ready to be packed in rice sacks, about 70 kg in each.

VITA is looking at ways to transfer the technology to other developing countries with significant amounts of rice husk wastes.

For more information, contact VITA, 1815 North Lynn St., Arlington, VA 22209.

Jerry Lundquist is a "VITA Volunteer."



A steaming log (upper right) emerges from the extruder. The machine operates at 450 degrees Celsius.

BOOKCASE

Reaching the Rural Population

Progress in Rural Extension and Community Development. Vol. 1: Extension and Relative Advantage in Rural Development

Edited by Gwyn E. Jones and Maurice J. Rolls, Agricultural Extension and Rural Development Centre, University of Reading, United Kingdom, John Wiley and Sons, New York, 1982; 336 pp. \$45.00.

A review by Eric Chetwynd, Jr.



Jones and Rolls have compiled a useful volume on rural extension and community development, although they leave

it to the reader to build the bridge between the two themes. Their approach is general and comprehensive, covering history, theory, practice, critique and future implications. Treatment of extension—two-thirds of the book—is much more complete than that of community development, in which the two most instructive contributions are a chapter by Lane Holdcroft on the “Rise and Fall of Community Development” and one by A.T. Ariyaratne on a successful community development movement in Sri Lanka. A lengthy final chapter by Eugene J. Meehan and Charles Reilly on the Inter-American Foundation (IAF) experience with local development programs is not relevant to the community development or extension themes, but does explain IAF’s approach.

The period covered by the book takes us up to but not into contemporary development thinking. Most of the literature covers the 1970s; the latest reference cited is dated 1980. Although the book short-changes current production and employment

concerns, focusing instead on the “basic human needs” and “poor majority” concepts of the 1970s, some chapters offer a useful look into that period and earlier and suggest lessons important to development in the 1980s. Holdcroft, for example, in critiquing the community development movement, suggests that future rural development projects should include an income-producing centerpiece, “usually one which entails increasing agricultural output through introducing a profitable ‘package’ of technology.” With this in place, “other components such as health, sanitation and education can follow.”

I recommend the book to missions and institutions with existing or emerging rural and agricultural development programs that require local participation. Sections critiquing extension and community development programs and discussing alternative approaches and future implications will be especially helpful to program managers and developers.

Chris Garforth’s chapter, “Reaching the Rural Poor: A Review of Extension Strategies and Methods,” discusses successful extension programs. Several factors emerge as keys to their success: clear definition of objectives; area and region specificity in analyzing bottleneck problems and developing extension approaches to them; fusion of extension and research; and adapting appropriate methods to the problem, for example, group extension methods, use of popular theater, local participation in extension programs and linking with delivery of goods and services.

A problem presented in several extension papers is that extension services tend to work with small groups of progressive farmers, expecting the results to spread to other, less innovative, farmer groups by demonstration and word of mouth. These papers emphasize the fallacy of this assumption and suggest that greater socioeconomic interpretation

of farmers—“why small farmers do what they do”—is needed as a basis for developing breakthrough extension programs that will spread the benefits of innovation to large numbers of farmers. This may lead to specific targeting of extension programs on problem or hard-to-reach groups.

This kind of targeting, and the analysis of and interaction with target groups, may require institutional changes. Just as the extension worker often works to change values and alter traditions, the extension agency may have to undergo institutional changes to work effectively with the client. This “bureaucratic reorientation” is a very active subject in fields such as forestry for rural development, irrigation and farming systems. Implied in such change is the need for careful selection and training of extension workers because of the greater demands of today’s more complex programs. It is useful for extension workers, for example, to understand group extension practices, social and cultural adaptations and new media uses. These institutional requirements are very well set out in Bert Huizinga’s chapter, “Rural Extension and the Search for Institutional Arrangements for Small Farmer Development.”

The book contains two chapters on health extension in community development. “Influencing the Health of a Community,” by C.M.E. Matthews, drives home the importance of knowing and understanding the client population. For example, it is difficult to convince some families and communities to boil their drinking water. Often, little distinction is made between boiling and heating water. Cooling boiled water for drinking by adding cold water, thus cancelling the effect of boiling in the first place, is common. The extension worker is faced with changing local values and perceptions or using traditional values to create change. This requires understanding social, cultural, be-

havioral and economic values and using extension methods appropriate to the situation—a tall order in any field.

An interesting phenomenon reported in several chapters is the appearance of private extension services in the absence of regular government programs. One especially successful experience is reported by Roberto Volpi in a chapter on Italy's commercial extension services. The now famous Borgo a Mozzano agricultural project had a profound influence on extension development in Italy and, through its international training center, has become important to developing countries. Started and run by a multinational industrial group (Royal Dutch Shell), the program concentrates not only on the farm unit but also on the region in which it functions.

The community development movement is a good example of one of the shortcomings of global development policy—its propensity to yield to faddism. The "in" development concept of the decade spanning the mid-1950s to the mid-1960s was community development. As Holdcroft points out, the expectations were far too great. Its inability to "measure up" was a major factor in its demise and abandonment by the international donor community. Another reasonably viable approach, even if flawed, was thrown out.

We are indebted to Holdcroft and others who have extracted lessons from this developmental phase and to others such as William R. Miner's "Seven Case Capsules from Korea's Community Development Program" (1961) and "Manpower for Independence: The Role of a Technical Assistance Project in the Evolution of a National Community Development Program in Kenya" (1976).

Perhaps the most important lesson learned from the community devel-

opment experience, which dominates current programs, is the need to have, as Holdcroft states, a "productive centerpiece." For example, agricultural productivity and employment creation are at the heart of much of AID's program. Moreover, it is true that this theme tended to be incidental to many of the community development programs with their focus on community improvement *per se*.

Not all of them failed, however. Korea and Taiwan had very successful community development programs, and Jones and Rollis detail a strikingly successful community development movement in Sri Lanka. The Sarvodaya Shramadana Movement was started in 1958 as a private, non-political organization founded on local Buddhist principles. Sarvodaya Shramadana, according to author A.T. Ariyaratne, means "the awakening of all in society by the mutual sharing of one's time, thought and energy." Two reasons for the movement's success are its development of community programs for various functional, age and occupational groups, and its strong emphasis on local leadership. The movement spread to more than 3,600 Sri Lankan villages.

In AID there's talk of "community based development," a concept quite different from traditional community development, even though the distinction is a subtle one. In community development the core was development of the community. In "community based development," the notion is the community as an important vehicle for development. The lessons of the community development movement, as set out in the Jones and Rollis book, should prove instructive. ■

Eric Chetwynd is chief of the regional and rural development division in AID's Office of Multisectoral Development, Bureau for Science and Technology.

CARD CATALOGUE

Priorities in Biotechnology Research for International Development: Proceedings of a Workshop

National Academy of Sciences, National Research Council; AID, Bureau for Science and Technology 1982, 261 pp.

Recent developments in biotechnological research are likely to have a major impact in developing countries on economic activities involving food, chemistry, pharmaceuticals, energy and the environment. This report presents proceedings of an international conference held to assess biotechnology's implications for AID programs.

Opening remarks and keynote addresses focus on priorities in and Third World perspectives on biotechnology. Presented next are reports by working groups on vaccines, animal production, monoclonal antibodies, energy, biological nitrogen fixation and plant cell and tissue culture. Each report describes problems in developing countries that might be solved by specific biotechnologies. Research priorities and institutional arrangements for undertaking such research are also discussed. A detailed list of priorities for AID funding of biotechnological research is included.

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INTERNATIONAL CALENDAR

SEPTEMBER

10th Congress of the International Federation for Preventive Hygiene and Social Medicine, Heidelberg, West Germany. The theme is "Preventive Medicine and Primary Health Care." Contact: Prof. Vietthues, German Society for Social Medicine, University of Bochum-Querenburg, D-4630 Bochum-Querenburg, Federal Republic of Germany

15-17 U.S. National Security Interests in the Pacific Region conference, sponsored by the Hoover Institution, Stanford, CA

15-25 Telecommunications trade mission to Indonesia, Singapore, Malaysia. Contact: (202) 377-0396

17-19 WHG (World Health Organization) Executive Sub-group meeting on "Tropical Diseases," Geneva, Switzerland

18-19 JCARD (Joint Committee on Agricultural Research and Development) meeting, sponsored by the Board for International Food and Agricultural Development (BIFAD), Washington, DC. Contact: (202) 632-8532

18-21 Waterpower '83 international Conference on Hydropower, sponsored by the Tennessee Valley Authority and the University of Tennessee. The theme is "Waterpower Today and Tomorrow." Contact: R.G. Damer, Chairman, Technical Program Committee, Waterpower '83, TVA, 400 West Summit Hill Drive, W11A6, Knoxville, TN 37902 or the University of Tennessee, Department of Conferences and Non-credit Programs, 2016 Lake Ave., Knoxville, TN 37996-3515

18-23 12th World Energy conference, New Delhi, India. Special emphasis will be on energy problems of developing countries.

19-23 West African conference/workshop on Vertebrate Pests of West African Crops, Niamey, Niger. Contact: Carl Castleton, USAID/Bisseau, Washington, DC 20523

19-Oct. 21 Workshop on planning and management of service delivery programs in family planning, health and development, offered by the Center for Development and Population Activities. Contact: Joan Favor, Administrative Coordinator, CEDPA, 1717 Massachusetts Ave. NW, Suite 202, Washington, DC 20036; telephone (202) 667-1142

20 UN General Assembly, 38th Session, begins. New York, NY. Contact: (202) 296-5370

20-23 Preparatory Meeting of the Mixed Commission for Scientific and Technical Cooperation, Mexico City, Mexico. Contact: AID, Office of Foreign Disaster Assistance, Room 1262, Washington, DC 20523

20-23 6th International Pneumoconiosis conference, Bochum, Federal Republic of

Germany. Contact: International Labor Office, Washington Branch, 1750 New York Ave. NW, Washington, DC 20006

25-30 11th International Law conference, sponsored by World Peace Through Law, Cairo, Egypt

26 World Bank Development Committee meeting, Washington, DC. Contact: (202) 477-5423

26-30 1st International Symposium on "The Use of Soybean in Tropical and Sub-Tropical Cropping Systems," Tsukuba Science City, Japan. Contact: Office of Information Services, AVRDC, PO Box 42, Shanhua, Tainan 741 Taiwan or S. Motomura, Tropical Agricultural Research Center, Yatobe, Tsukuba, Ibaraki 305, Japan

26-Oct. 1 Meeting of Experts on Methods of Training Needs Assessment, Turin, Italy. Contact: International Labor Office, Washington Branch, 1750 New York Ave. NW, Washington, DC 20006

26-Dec. 2 Course on problems and alternative development strategies, sponsored by the Latin American Institute for Economic and Social Planning, Santiago, Chile. Contact: (202) 296-0822

27-30 FAO (Food and Agriculture Organization) Expert Consultation on Coconut Research, Acapulco, Mexico. Contact: Dr. Poetiray, FAO, Plant Protection Service, Via delle Terme di Caracalla, 00100 Rome, Italy

27-30 World Bank/International Monetary Fund annual meeting, Washington, DC. Contact: (202) 477-5423

29 BIFAD (Board for International Food and Agricultural Development) meeting, Washington, DC. Contact: (202) 632-9048

OCTOBER

International Study Workshop on Tsetse Behavior and Population Ecology, ICIPE, Nairobi, Kenya. Contact: The Training Officer, International Center of Insect Physiology and Ecology, PO Box 30772, Nairobi, Kenya

1-10 FAO Codex Committee on Pesticides Residues meeting, The Hague, the Netherlands. Contact: Dr. McNally, Food and Agriculture Organization, Plant Protection Service, Via delle Terme di Caracalla, 00100 Rome, Italy

2-7 1st Arab Gulf Agricultural trade fair, Abu Dhabi, United Arab Emirates

3 FAO Codex Ad Hoc Working Group on Pesticide Residue Problems in Developing Countries, The Hague, the Netherlands. Contact: Dr. McNally, FAO, Plant Protection Service, Via delle Terme di Caracalla, 00100 Rome, Italy

3-4 International Workshop on Plant Protection, Tel Aviv, Israel. Contact: The Organ-

izing Committee—Agritech '83, PO Box 50084, Tel Aviv 61500, Israel

3-4 UNCTAD Trade and Development board meeting, 27th session, Geneva, Switzerland. Contact: (202) 296-5370

3-6 Agritech '83, Incorporating the 3rd International Conference on Irrigation, Tel Aviv, Israel. Planning and operation of irrigation systems will be discussed. Contact: Rafi Glick, The Organizing Committee, PO Box 50084, Tel Aviv 61500, Israel

3-7 FAO Expert Consultation on Crop Loss, Rome, Italy. Contact: L. Chiarappa, Food and Agriculture Organization, Plant Protection Service, Via delle Terme di Caracalla, 00100 Rome, Italy

3-14 Short Course on New Developments in Vector Control, University of South Carolina, McClellanville, SC. Contact: Edgar A. Smith, Director, Center for Public Health Research, PO Box 699, McClellanville, SC 29458

3-14 GATT (General Agreement on Tariffs and Trade) Committee on Trade and Agriculture meeting, Geneva, Switzerland

3-21 Maintenance and Production Management Training Program, sponsored by the International Fertilizer Development Center, Muscle Shoals, AL. Contact: IFDC, PO Box 2040, Muscle Shoals, AL 35660; telephone (205) 381-6600

4-6 9th Bird Control seminar, Bowling Green, OH. Contact: William B. Jackson, Center for Environmental Research and Services, 124 Hayes Hall, Bowling Green State University, Bowling Green, OH 43403

4-13 6th African Regional conference, Tunis, Tunisia. Contact: International Labor Office, Washington Branch, 1750 New York Ave. NW, Washington, DC 20006

10-12 FAO Committee of Experts on Pest Control, Rome, Italy. Contact: Dr. Traboulsi, Food and Agriculture Organization, Plant Protection Service, Via delle Terme di Caracalla, 00100 Rome, Italy

10-21 UN Committee on Food Aid Policies and Programs, Rome, Italy. Contact: (202) 296-5370

11-12 EPPO (European Plant Protection Organization) Working Party on Pesticides for Plant Protection, Helsinki, Finland. Contact: G. Mathys, EPPO, 1, rue Le Notre, 75016 Paris, France

Information for International Calendar was largely provided by Cook, Ruel & Assoc., Inc., of Washington, publishers of International Agenda.

Any additions or corrections should be addressed to "International Calendar," Horizons, Room 4890 NS, Washington, D.C. 20523 or telephone (202) 632-4330.

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