

PEACE CORPS TIMES



Focus - The Gambia

July/August 1980

From the Director

Peace Corps is, always has been and always will be unique. But these are especially exciting and gratifying times for us all. We are currently the beneficiaries of public and Congressional support the likes of which haven't been seen since Peace Corps' inception.

In the past several months, the Congress has passed legislation which will greatly affect Peace Corps' future. Funds have been authorized that will make it possible for us to begin our Congressionally-directed expansion to 10,000 Volunteers. Also, due to the good offices of RPCV/Dominican Republic, Senator Chris Dodd, the Senate Foreign Relations Committee now has a Western Hemisphere and Peace Corps Subcommittee, which provides oversight for us.

We are currently in the process of expanding some programs and beginning new ones in Cape Verde, Guinea Bissau, Equitorial Guinea and the Comoros. And, we are exploring the possibilities of returning to former Peace Corps countries such as the Sudan, Chad, Republic of Guinea, Pakistan, Bangladesh and Somalia.

Last year our Future Team spent considerable time in developing long range plans for the agency. We are now moving forward with those plans. We are moving toward management support which will allow PCVs to be more effective in their work. This is a critical part of our forward plan as we plan to increase the number of Trainees next year by 25 percent.

The Africa Food Systems Initiative (AFSI) which was begun last year in Mali, Niger and Lesotho will be expanded next year into Guinea, Senegal, Sierra Leone and the Central African Republic.

And based on AFSI's early successes, we are launching another important program there, the African Small Business Assistance Project (ASAP) which is designed to help small and middle-size businesses.

We are instituting a Farmer to Farmer program in collaboration with the Volun-



equivalent to ROTC with tuition, books and living allowance support for 3rd and 4th year college students in exchange for a commitment to subsequent Volunteer service. This idea was the brainchild of Peace Corps' good friend, Father Theodore Hesburgh President Emeritus of Notre Dame.

Peace Corps is now 26 years old. We have come of age. Because of the work of former Volunteers and those of you in the field today, Peace Corps is no longer thought of as the "kiddie corps" but as serious men and women in development work using grass roots methods that succeed. I know I can count on your support to help make our plans for an even brighter future a reality.

A handwritten signature in black ink, appearing to read "Loret" or "Loret Miller Ruppe".

Loret Miller Ruppe

teer Overseas Cooperative Assistance (VOCA) organization. American farmers will soon be supplying expert advice on a two, three, six or 12 month basis to PCVs in the field. This is a technical component to augment our agriculture/natural resource workers who are generalists. A pilot project of six-month tours for college faculty and students with greatly needed expertise has been established. Harvard has just agreed to such abbreviated Peace Corps tours in Jamaica, Fiji and Malawi for its fifth-year dentistry students on a rotation basis.

And we are now laying the groundwork for another "first," Peace Corps' Islamic World Conference which we will hold in Washington next year. We need papers from those of you with degrees in Arabic and Islamic studies or who have served in Islamic countries that will inform, educate and provoke discussion in order to help us understand those countries' needs and to serve them better.

Another prospect on the horizon may also come from the Congress. Senator Claiborne Pell, Chairman of the Foreign Relations Committee, has introduced a plan to institute a Peace Corps/National Service



Peace Corps Times

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To The Times

Dear Peace Corps Times:

One of the ideas that came out of the recent worldwide Peace Corps country directors' meeting was a so-called "standards of excellence" pledge to which all new volunteers would be compelled to swear. At a general meeting, the volunteers of Peace Corps/Nepal discussed the pledge and some of the background discussion leading to it. Overall we find the pledge highly objectionable; the policy's purpose is unclear and its effect is patronizing.

The pledge contains specific statements regarding cultural sensitivity, judging one's effectiveness, and overall volunteer excellence. To be administered in addition to the oath now taken by volunteers when they swear in, it would be optional for current volunteers but mandatory for new ones.

Last month Peace Corps/Washington asked for comments on a draft of the pledge: in effect, asking volunteers to respond to a solution without having discussed the problem. The purpose behind this proposed pledge is a mystery. What problem or situation led to the notion that this was needed in the first place? What objective is it supposed to accomplish? If there was any discussion of these questions at all, it was obviously done without generally soliciting the input of volunteers.

To propose something dealing with issues such as cultural sensitivity, evaluating success and volunteer excellence implies that someone thinks there are problems in those areas. (Otherwise, why try to fix them?) Although neither Peace Corps/Washington nor the country directors have directly said so, we can only assume that somewhere within Peace Corps administration someone is dissatisfied with the quality of the volunteers currently entering Peace Corps service. Yet, if this is indeed the case, why hasn't this issue been raised with the volunteers themselves?

If the objective is to raise volunteer excellence, forcing volunteers to subscribe to a pledge will not meet that objective. The majority of volunteers who do take their jobs seriously and who have high personal standards of excellence will gain nothing extra from a pledge, and indeed to take such an oath could be considered by some as a violation of personal ethics. (Many conscientious people object in principle to taking any pledge at all.) These volunteers are well aware of the special demands made upon them, but those demands come from the job and the volunteers' own commitment to do it well. Swearing to a pledge only affirms the demands of administrators, not of the job itself.

Likewise, the minority of volunteers who abuse the responsibilities and privileges of Peace Corps service probably will not change their behavior just because they have sworn to a collection of words they

never took seriously in the first place. And country directors already have plenty of options for dealing with such exceptional cases; a signed pledge won't add anything to what a country director can do.

Besides the fact that the pledge itself would do nothing to meet the apparent objective of raising volunteer excellence, the tone and content of the pledge is offensive and patronizing to most volunteers in Peace Corps/Nepal who take their jobs seriously. It presumes that volunteers are incapable of adequately evaluating their own living environment and work situations, and requires volunteers to abdicate decisions on their own behavior and lifestyle to Peace Corps administration.

In addition, subscribing to such a pledge raises the possibility that Peace Corps administration could exercise authority in areas of a volunteer's life that are considered private in the United States. We want to be clearly understood on this point: American citizens do not forfeit their right to privacy when they join Peace Corps.

There are better ways to address the issues of volunteer excellence, effectiveness and cultural sensitivity. Strategies for pre-selection screening and pre-service training would directly meet those needs (assuming the needs have been clearly identified beforehand). However, because the challenges vary so widely from country to country, we feel that a universal document or training design for all countries would not be effective. It would be much better if the volunteers and staff in each country came up with their own training strategies, as many countries such as Nepal have already done. For those countries that haven't, there would be great value in a volunteer-generated document that clearly and concisely describes the kinds of problems new volunteers will most likely have to confront regarding social and cultural norms, evaluating job effectiveness and personal behavior. These points should be discussed during staging and pre-service training, with the understanding that each volunteer will ultimately be responsible for deciding how to deal with them. An oath would be unnecessary.

As a general guideline, a statement of excellence has possible merit. Such a document could be created, read and discussed. But forced subscription to such a pledge makes it meaningless as a reflection of sincere personal commitment. There is no reason to burden new volunteers with such a disrespectful policy.

Sincerely,
Volunteer Council
Peace Corps/Nepal

Dear Nepal Volunteer Council,

Thanks for your very thoughtful letter. I understand that some of your number met recently in Nepal with Elizabeth White, Director of the Office of Special Services, who is working on the proposed pledge. More information on the status of the proposed standards will be published in a subsequent issue of the Times.

The Editor

Beyond War Award

The prestigious Beyond War Foundation has selected all 120,000 current and returned Peace Corps Volunteers and staff as winners of its 1987 Beyond War Award. This award is presented annually to honor the group or individual who has made an outstanding contribution toward building a world "beyond war" and includes a check for \$10,000.

As the chosen group Peace Corps is in impressive company with the other winners since Beyond War's founding. In 1983 the National Conference of Catholic Bishops (U.S.A.) received the first Beyond War Award for their pastoral letter drawing worldwide attention to the fact that we must "summon the moral courage... to say 'no' to weapons of mass destruction."

The International Physicians for the Prevention of Nuclear War (IPPNW) won in 1984 for educating the world that nuclear war is not survivable. "Nuclear weapons are a shared mortal enemy. We either live together or die together. There is no other alternative."

In 1985 the Five Continent Peace Initiative, the heads of governments of Mexico, Sweden, Greece, Argentina, Tanzania and India received the award for their call to the people of the world to rally to a common effort: "Nuclear war can be prevented if our voices are joined in a universal demand in defence of our right to live."

The Contadora Group...Colombia, Mexico, Panama and Venezuela... were presented with the award in 1986 for their dedicated efforts toward the resolution of conflict without violence in Central America. They stated, "The use of force is an approach that does not dissolve but aggravates underlying tensions."

The Story Behind the Beyond War Award

This is not the first time Peace Corps has earned such a valued honor but have you ever wondered how these awards come about or if they indeed just "fall from the blue."

(Continued on page 7)

Focus—The Gambia

About the country...

Population: 750,000
Land Area: 4,361 square miles, about four-fifths the size of Connecticut
Cities: Banjul (pop. 40,000), the capital
Languages: English (official), Mandika, Wolof, Fula, other indigenous languages
Religions: Muslim 95%, remainder Christian and traditional beliefs
Terrain: Savanna
Climate: Sub-tropical

The Gambia is often described as a finger protruding from the Atlantic Ocean into West Africa. The country runs from the sea for 300 miles along both banks of the Gambia River. Its borders generally extend from 10 to 15 miles from the river's banks. And, as one would surmise, the country draws its life from the river. The Gambia is bordered on three sides by Senegal with whom it maintains a very special relationship.

The Gambia was first written about in 470 B.C. by Hanno, a Carthaginian. Since that time several African empires have claimed the river basin. As a result many groups arrived as conquerors and stayed. Later, Britain, France and other European powers struggled for dominance over the river country. Britain finally emerged as the pre-eminent nation and the country became a British Colony in 1843. The Gambia received its own executive legislative councils in 1901 and gradually progressed toward self government.

During World War II, Gambian troops fought with the Allies and Banjul served as a stop for the U.S. Army Air Corps and port of call for Allied naval convoys. President Franklin Roosevelt stayed overnight in Banjul en route to and from the Casablanca Conference, marking the first visit to the African Continent by a sitting American President.

The Gambia achieved independence in 1965 as a constitutional monarchy within the British Commonwealth. In 1970, by referendum, the Gambia became a republic on April 24.

Most Americans were unfamiliar with The Gambia until some ten years ago. That was when the author, Alex Haley, traced his origins and ancestor, Kunta Kinte, to its shores. His search became the book, and later the TV mini-series, "Roots." Through Haley's work, many Americans got their first glimpse of life in The Gambia. The few that were knowledgeable about the West African nation were more than likely



John Wiess, a math and science teacher at Kerewan Secondary Technical School, relaxes after school with a cup of tea with his "family." Here Mr. Jookunda N'Jie, head of the compound, "arranges some warge (tea)" which results in a strong Chinese green tea prepared with sugar and mint. Weiss is from Birmingham, Mich., He graduated from the University of Michigan with a degree in cell and molecular biology and worked in a cancer research lab at the university before joining Peace Corps.



Laura Erikson of San Jose, Calif., is a forester in the Mandingo village of Fula Bantang. Here she and a village woman carry water for the seedlings in the combination garden-orchard. A resident of this village, she is particularly concerned with teaching forestry conservation and preservation through the creation of village woodlots. Prior to Peace Corps Laura worked at the Bitterroot National Forest in Montana. She holds a degree in resource conservation from the University of Montana.

Focus—The Gambia

former Peace Corps Volunteers. Peace Corps has served the people of The Gambia for the past twenty years.

Peace Corps was invited to The Gambia in 1967. Seventeen Volunteers were in-country that year. They were mechanics, co-op organizers, carpenters, construction specialists and one was an electrical engineer. In late 1969, the first group of education Volunteers arrived. Since that time education Volunteers have been the mainstay of Peace Corps' program there.

Currently, Peace Corps/The Gambia fields about fifty Volunteers. Twenty PCVs are involved in **Education**. In addition to classroom teaching of math and science, Education Volunteers have branched out into functional literacy programs and are developing new educational materials.

Eight Volunteers work as **Nurse-Tutors**. In this program, PCVs teach basic nursing skills to students in the State Nursing School in Banjul and the Community Health Nursing School in Mansakanko. They also direct classes in health education, primary health care and environmental health. As secondary projects, many trek to villages and supervise clinics, make home visits and do nutritional surveys.

As in many Peace Corps countries, Peace Corps/The Gambia has an active **Forestry Extension Program**. Eight PCVs are currently working in nursery management and extension, promoting conservation activities village organizations. Most forestry Volunteers work in beekeeping and in improved wood stove production as related projects.

In the area of **Soil Conservation**, eight Volunteers are assigned to the AID/Gambia Agriculture Research and Diversification Program. Here they work with both crop and animal extension to increase crop production, to utilize crop residue as feed and assist the livestock owners' association with animal health programs.

One PCV works as a **Business Advisor/Trainer** with The Gambian Indigenous Business Advisory Services (IBAS) advisors with on-the-job training in business management, loan proposals and business skills.

In 1980, a National Women's Council was established by the government and administered by the Women's Bureau. A PCV was requested to help the bureau establish a reference center concerning status and needs of rural women and to assist in training field workers. A Volunteer helps coordinate **WID** activities into all phases of Peace Corps programs.

During 1988, a new program, Winrock International/Seed Production, is expected to begin. Four PCVs will be involved. The goals of this project will be to improve the on-farm seed production techniques and support seed multiplication.



LynnKay Brown, a nurse-tutor, teaches basic nursing and pediatrics to community health nurses. At a vaccination clinic at the Mansa Konko Health Center, she discusses methods with Ibrima Ceesay. An experienced nurse, Brown, of Salt Lake City, also holds both a bachelor's and master's degree in art history from the University of Utah.



PCV educators working together to develop the Kanifing Teacher Resource Center, discuss distribution of 13,315 pounds of books donated by the World Bank Volunteer Service Book Project. Pictured are PCVs LeRoy and Doris Morton (2nd & 4th from left) Country Director Lacey O'Neal (center in headband), Sally N'Jie, the National Librarian and counterparts, (standing) Richard N'Jie and Momodou Jallow. LeRoy received his BA in education from Kansas State University and master's in education administration from San Jose University. Doris graduated from Long Beach State and holds a master's from Pepperdine.

Focus—The Gambia



Former Dean of the School of Nursing at the University of Wisconsin, Val Prock settles into her new career as a teacher in Mansakonko. She is pictured here in her new home.



Ken Foon Lee teaches a Form 2 math class at the Gunjur Secondary Technical school. About 50 students are enrolled in his classes. Ken is from Brooklyn and graduated from the University of Wisconsin.

About the cover—Chris Haynes, whose site is Kontaur Fula Kunda, is a forester and field extension worker. Here he helps Wassu Tree Nursery attendants prepare 2,600 "poly" pots for planting with mango, cashew, guava and other fruit tree seeds. Prior to Peace Corps service, Haynes worked for the U.S. Forest Service. He is from Lowell, Mass., and received his degree in forestry from the University of Maine.

Frock photo on this page by Deedie Runkel. All others by Carolyn Watson.

RPCV Group Formed

Partly as a result of their wonderful reunion during Peace Corps' 25th Anniversary Conference and to fill a long-time need, RPCVs have formed a new organization, Friends of The Gambia and Senegal. Marty Pipp is serving as the first chairperson. Members of the steering Committee are: Graeme Frelick (TG), John Hand (S) and George Scharffenberger, (RPCV-S and staff-TG).

They welcome inquiries and articles from current Volunteers for their newsletter, GAMBEGL. For more information write to: Friends of The Gambia and Senegal, 4620-48th St. NW, Washington, D.C. 20016.



Lesa Langan, a graphic artist working as an information assistant for the Soil and Management Unit, reviews posters with Ibrima Sonko and Bintou Marang. Prior to Peace Corps, Lesa, a fine arts grad from Western Kentucky University, worked as a commercial artist for the Environmental Education Programs.

From the Newsletters

This interesting and very appropriate letter to parents and/or guardians of soon-to-be home PCVs appeared in Peace Corps/Gambia's newsletter, THE BANTABA. Make just a few word substitutions of your own local language and you can clip it and send it home to your family.

Dear Parent or Guardian:

Your son or daughter will soon be COS-ing and returning Stateside. You may notice slightly different behavior than when s/he left. This is nothing to cause alarm, as it simply proves the RPCV has managed to adapt and (so-so) survive in another culture. However, to see the transition, we make the following suggestions:

We strongly urge you to meet your progeny in a pick-up truck jammed with friends, neighbors and any household pets available. Knowing the penchant of PCVs to maintain contact at home, we realize a truck full of friends, relatives and even immediate family may be hard to obtain. Nevertheless, it is your duty to try. Hired strangers would certainly be acceptable.

Upon meeting your son or daughter, you should be ready to shake hands and continue to hold hands until s/he has gone through the extensive greetings in the local language. The RPCV will be able to perform Asalamalekum in his/her sleep, you need only provide an open ear, be patient before it wears off.

You must expect a whale of a palaver upon reaching the truck; make the RPCV sweat before you succumb to allowing front seat privilege, if you indeed decide to do so. Pushing, shoving and elbowing to get into the vehicle is normal. It'll wear off. Also, inflate your asking price and whittle it down in minute segments.

You must not be alarmed at the tendency of your son or daughter to repeat "yo" after someone makes a point, or to make "cluck" sounds with their tongue, or give long "swallow-gasps" as if they were choking on a groundnut (sorry, I mean peanut).

Upon reaching home, you must expect to take time with said RPCV. Explain the functions of the toilet and make your son or daughter take a test to be sure they've grasped the significance of this device. Be sure they have no notes written in their hands or have their copybooks out. RPCVs in the Education field are especially adept at spying and you will probably be unable to catch them, even with a lie detector set. However, you must present a bluffing challenge so they will sit for the exam. And whatever you do, to avoid plumbing problems, don't ever subscribe to Newsweek! You should have buckets on hand, as you will not be able to explain the shower or bath in one day. You may also wish to lay in a supply of candles or lanterns, though some RPCVs do know how to use light switches.

Be patient if at dinner time your offspring prefers to ball up the rice in his/her hand or pretends there's fufu in the soup. Slowly s/he will progress to the spoon and even the fork someday and eventually you will be able to take your son or daughter out to a nice restaurant without risking great embarrassment.

Clothing: Donate the used articles of clothing, blindfold the RPCV, kidnap him/her to the mall and force the RPCV to at least try on a pair of Calvins. Eventually s/he will frequent the JC Pennys and Bloomingdales for a new wardrobe. Explain the pricetag and that there is no first and last price.

Finally, under no circumstances are you to play the television until at least two months after the return of your son or

daughter. RPCVs have been known to go into severe open mole or nerdism and stare at the machine relentlessly. Surprisingly, some of the best programs reported by these volunteers were those witnessed during the test pattern. You can use TV constructively by switching on Sesame Street. S/he can relate to the special English and their vocabulary will soon progress and forget phrase like "fine fine" or "I'm on it small small."

Taking time with your personal RPCV will help ease him/her back into the mainstream of America. Within a year's time, most are functioning at real jobs with no greater than 50% absenteeism.

Yours for total returning involvement.

Sincerely,
PC/The Gambia

(Beyond War...from page 3)

In March Director Ruppe received a letter from Margaret L. Staley, Director of the Beyond War Award. It stated, in part:

"You are cordially invited to make a nomination for the 1987 Beyond War Award. Each year this opportunity is extended personally to prominent individuals throughout the world.

The Award is presented annually to honor the group or individual who has made an outstanding contemporary contribution toward building a world beyond war.

We welcome your participation in the Beyond War nomination process and hope to hear from you."

Our Director responded with this award-winning letter:

"I nominate 120,000 current and Returned Peace Corps Volunteers for the 1987 Beyond War Award. These Americans... young and old, men and women, people of every creed and race... work to remove the conditions that bring on war... conditions of hunger, disease, poverty, illiteracy and despair. Today, in 62 countries and territories, 5,500 Peace Corps Volunteers dig irrigation systems, plant trees, teach English, mathematics and science, establish farmer cooperatives, train nutritionists, organize special education courses, develop small business skills. Today, in communities all across the United States, approximately 115,000 Returned Peace Corps Volunteers act as ambassadors and spokespersons for the peoples of the more than 90 countries in which they once served. Peace Corps Volunteers practice a new type of patriotism that recognizes that service to humanity is the highest possible service to one's nation, that development is another name for peace.

"In teaching a Moroccan deaf child to communicate, in helping a Paraguayan farmer to stop soil erosion, in introducing

computer technology to Thai health workers, Peace Corps Volunteers make tangible contributions to human welfare. Their actions also banish despair, change attitudes and give hope. Peace Corps Volunteers build more than dams or institutions. They help a people help themselves and in doing so produce a groundswell for peace.

"Returned Peace Corps Volunteers are couriers of peace. They have seen the world and speak its languages. They know that global interdependence is a reality, not a catchword. They tell their families, friends and neighbors of a Bolivian mother's anguished cry for a little boy who just died from measles, of a Kenyan villager's joy for a bountiful harvest, of a disabled Filipino youth's pride in learning to read braille. They teach their fellow Americans, every day, that the problems of developing nations are problems of America, that the world is our home, that humankind is one.

"Current and Returned Peace Corps Volunteers represent a great, quiet and growing force for peace...for a world without war, for a world without the conditions that cause war. They are working as individuals and in groups such as the National Council of Returned Peace Corps Volunteers, for increased foreign assistance, creating a sense of global citizenship, reminding all of our common humanity. Last April during National Volunteer Week, for instance, more than 2,000 Returned Peace Corps Volunteers visited their local schools and community groups to increase public awareness of development and global interdependence issues.

"I believe that the Beyond War Foundation should honor these 120,000 current and Returned Peace Corps Volunteers, this new breed of veterans, veterans against war, veterans of a continuing people to people movement for peace through mutual development."

Knowing you are a part of our 120,000 Peace Corps representatives should make you feel very good about your work.

Overseas Mail Or "Waiting for Godot"

Even though your recruiter may have told you how important mail would be in your life overseas, you probably never guessed it could be the ultimate joy or bane of your existence as a Peace Corps Volunteer.

Just establishing the correspondence flow chart is a major coup. (During my entire three years as a Volunteer, my most important correspondent and I never once accomplished the usual back-and-forth, question-and-answer letter writing procedure. Our missives to each other always crossed in mid-Pacific and the flow was blown.)

As you've no doubt discovered, setting up the pattern requires exquisite mathematical calculation. It takes at least two days' worth of free time for you to write a good letter. (And that's if you are lucky enough to have electricity and can see what you're writing at night when your primary job is done for the day.) Getting it to the post office is the "X" factor and the length of time it takes depends on whether your site is out in the hinterlands. Then you have to figure on at least two or three more days after you post it for the letter to leave your country, and plan on a minimum of two weeks until it arrives in the hands of your intended reader.

You should give your correspondent a week or two to answer, and another couple of weeks for the response to brave the waves or survive the flight and finally be placed in your mailbox. Then enter the "X" factor to get it to your site and you've completed the (two month!) flow chart for correspondence. (Nothing good, in or out of Peace Corps, is ever easy!)

And so it goes for letter writing. But what of packages?

In Peace Corps there are two varieties of "things that come in small packages." The first is the personal category... more cotton underwear, your photos that have been developed and printed at home, M&Ms, the paperbacks you want sent, herbal teas, dehydrated soup mixes and an endless list of things that are unobtainable in your country. These can be sent two ways: sea mail which takes forever, or air mail which costs a fortune. Either way, you are likely to have to pay high customs duty in an amount which almost seems to be at the whim of the local post office staff. And there is always the danger of your package never arriving at all.

Diplomatic Pouch is the very impressive term for having things mailed to you that are considered necessities for your work or program. You must get written permission from your Country Director to have these items sent to you. Only then may you request your family or friends or an institution to send them. The procedure is this:

1. The sender mails the package via regular or air U.S. Postal Department mail to Headquarters at 814



Carole Cook, Country Desk Officer for Belize and the Eastern Caribbean, and Bill Strassberger, Country Desk Assistant for Niger, Cameroon and Gabon demonstrate two problems with Diplomatic Pouch... glass and a too-wide package.

Conn Ave NW, Washington, DC 20526

2. Your Country Desk Officer must examine all package contents for eligibility. Any non-conforming items will be returned to the sender.
3. If the package complies with regulations, it will then be repackaged and placed in the Diplomatic Pouch to be sent to the State Department in Washington where it is sealed and taken to the airport.
4. ALL PACKAGES MUST CONFORM TO SIZE AND WEIGHT REGULATIONS.
5. Maximum weight is 40 pounds.
6. Maximum dimensions are: length 26 inches, height 16 inches, width 13 inches; for a total of 84 inches length and girth combined.

In addition, the State Department diplomatic pouch may be used for Volunteers and Trainees for the shipment of items vital for health and welfare such as prescription medicines and eyeglasses. Legal and financial documents including checks and money orders may also be sent by pouch.

All pouched materials leave either Washington National or Dulles airports on regular commercial airlines and travel only to those countries having American Embassies. Peace Corps vehicles pick up all packages at the embassies and take them back to the Peace Corps office.

Factor "X" is again involved... the time it takes to get the package to your site.

Yes, there can be flaws even in this State Department procedure. There is no guarantee that every package will arrive safely, just as there can be no guarantee that the

U.S. Postal Service will always deliver every single item safely.

Oversize is a common problem. Just recently a typewriter arrived in the Peace Corps mail room. Someone had it sent from the factory not realizing the insulating packaging would put it over the size limitation. The only recourse was to return it to the sender.

Glass containers should never be sent through any mail. A package of glass beakers intended for a science teacher arrived in Washington in shatters. And baseball bats for a physical education teacher were much too long to fit into the pouch.

Books are frequent offenders in the overweight category. Make certain the people who may be shipping packages to you pay strict attention to the size and weight limitations.

The only alternatives are to ship non-qualifying packages back to the senders or to send them regular air mail or slow sea mail to you. But here's a warning... you may have already COSED by the time the sea mail arrives.

Diplomatic pouch can be slow, too. The handling, sorting, inspecting and re-packing take time. In Peace Corps' only mail room at Headquarters, during the past ten months, more than 40 TONS of pouch mail was processed by only four employees.

The one happy thing about Diplomatic Pouch mail is there is no customs duty!

Plan ahead, have your correspondents weigh and measure everything and then plan on using plenty of patience. Remember, in Peace Corps or anywhere, nothing good is ever easy.

Gloria Ross

Public Affairs Ventures Forth—Into Africa

Into Africa...is an account of Peace Corps' Director of Public Affairs, Deedie Runkel's recent visit to Volunteers in West Africa. The Mauritania segment of her visit will appear in the next issue.

SENEGAL

It was complete happenstance that the day I visited Joyce Millen in her village in the Casamance of Senegal, a health lecture on diarrhea and oral rehydration had attracted quite a good crowd under a huge mango tree along the road. While for most first-time travelers to Africa this might not have been so scintillating, for me it was as good as a Broadway opening. It was worth all the hours spent in preparation for the trip, worth quite a bit to someone who had heretofore had only second-hand reports, personal stories and photographs to rely on for information. Here in altogether brilliant color and dynamic action...proof that all we say and boast about the Peace Corps was true!

Why was it so special?

Because the young man giving the lecture had been chosen by the village to go for a year's training with Joyce's guidance, and this was his debut. The village had been concerned about the high rate of infant mortality, and now, with 70 of his neighbors there to learn from his relaxed, informative, confident presentation, both he and we can be assured that fewer babies will die from diarrhea. And none of it would even have occurred if it weren't for Joyce and the Corps de la Paix!

The Casamance provided a chance for me to see firsthand all the groundwork being laid for the introduction of the Africa Food Systems Initiative (AFSI) to Senegal. Along with a team of consultants from both Senegal and the United States, I visited with Governors, Chiefs, Chefs de Service, ministry officials, heads of organizations and entire villages, to share with them our plans for long-term programming and discover what they felt the greatest barriers to food security were. The eagerness with which each of these levels of officialdom and the villagers themselves welcomed the opportunity to plan jointly for the future was a testament to the credibility and respect Peace Corps is accorded after 25 years, and exciting for a visitor to behold.

Clearly another sign of respect for the Peace Corps was the warmth with which this visitor was received, in spite of clumsy attempts to eat politely with a rarely-used right hand, speak fractured Djola greetings and French, and photograph less than 10 children per picture.

Sharing some of the last moments of training with a new set of Volunteers at the new training center in Thies brought a chance to almost taste the anticipation as



Susan Gannon of Douglaston, N.Y., works as a soil and water management extensionist for the Gambian Department of Agriculture. Here she helps villagers install fence posts at their new garden site. She is a graduate of the University of California, Berkeley.

well as ease some of the lingering fears...will I ever learn the language...do I really know anything...will help be there when I need it?

THE GAMBIA

An elbow-shaped country that lies completely within Senegal, The Gambia is a former British colony that is vibrant, small and full of contrasts. Fast developing as an ocean resort for Europeans, the capitol city of Banjul presents a study of developing world contrasts of extreme plenty and desperate needs. Long a part of the development scene in the Gambia, the Peace Corps presence there ranges from providing nursing teachers for several schools to active woodlot and ag extension programs to school teachers to beekeeping...a challenge for Volunteers and staff alike.

Former Olympic runner Lacey O'Neal's leadership as Country Director provides the inspiration to all as they tackle the inevitable sprints and hurdles of Peace Corps work.

"On trek" up country in the Gambia, we checked in on newly-assigned Volunteers still in various stages of accommodation and adjustment to their new jobs...Joan Savory still working to get her house painted, but had her shower under control; Val Prock and Claire Miller had begun teaching at the Community Health Nurses' School, in spite of Claire being challenged by her first amoeba attack...Howard Uible working on a massive irrigated rice project,

setting up repair schedules for tractors and establishing record-keeping procedures...Laura Erickson, Susan Gannon, Becky Sherry, Paul Clements, Susan Gannon and so many others with so much work in progress. School partnership programs, woodlots thriving, so many seeds and relationships clearly well-nourished and flourishing.

Volunteer Lisa Palm works in the Women's Bureau, a government office with a much-heavier program burden than there is budget and staff to accomplish. Marshalling the resources of many other organizations to find some ways to "start small" was on the top of Lisa's agenda.

On Radio Gambia during the last day of my visit there, I was asked to comment on some of the reasons I believed Peace Corps Volunteers were effective in what they did, and why Americans would come so far to work so hard in a different culture. I remember talking some about our responsibility as neighbors in an interdependent world, as well as the evidence I'd seen with my own eyes that Volunteers accomplished quite a bit.

But then I described the great impact Volunteers have on Americans when they return from Peace Corps...that they become examples of how an individual can make a difference, teachers of world culture and geography, advocates of people-to-people diplomacy, and partners with their country of service forever. It is this continuing ripple effect that makes Peace Corps service such a powerful tool for world peace.

Deedie Runkel

PEACE CORPS PARTNERS ARE BUSY!

The last issue of Peace Corps Times included a column about Peace Corps Partnership Program projects and cultural exchanges. Some specific projects were considered as examples. This issue takes a look at some of the interesting things donors to Peace Corps Partnership projects have been doing lately to fund such projects.

Sir Dawda Jawara, President of The Gambia, visited Big Thompson Elementary School in Ft. Collins, Colorado last December to congratulate the students on their cultural exchange and fundraising activities on behalf of a Peace Corps Partnership education project in Kanifeng, The Gambia. The children at Big Thompson produced a booklet describing life in the United States for their Gambian friends. The book has been reproduced and distributed to over 60 Gambian schools. Scholastic News recently ran a cover story about the students of Big Thompson and their partnership.

Students at Corcoran High School in Syracuse, New York are selling notecards they have designed. The notecards depict major crops in the tropics. Proceeds will benefit their Partnership with the people of Koussakpou, Benin, who are digging a well to serve their community. The High Schoolers have also made presentations about Benin and their Partnership there to children at a local elementary school.

A three-day interdisciplinary academic program on world hunger at Glencoe Central School in Illinois stimulated students to take action outside the classroom. Fourth through eighth grade students in the school raised sufficient funds to complete three projects. They selected a well in Dimansouri, Benin, a garden and poultry project at Boiram Primary School in The Gambia and a fence for the Rio Grande School grounds in Honduras which will protect students' agricultural projects.

The Napa Rotary Club in California recently met to raise funds for the construction of a school in Buen Hombre, Dominican Republic. They had arranged to tape record a collect call from Peace Corps Volunteer Vincent Ferriole, a former member coordinating the project, and played the tape to the assembled Rotarians at a luncheon. At 1:18 p.m. organizers started accepting pledges for the project and by 1:30 p.m. they had raised more than the necessary \$5,000.00 to complete the project. The twelve minutes it took to reach their goal must be an all time record for speed—and organizers said it beat bake sales!!

Ms. Reema Xoyamayagua of San Angelo, Texas is conducting a cultural exchange between her day care/nursery school students and the children of the Ati Day Care/Feeding Center project in Malay, the Philippines. The children in San Angelo



Big Thompson Elementary sixth-grader Amy Ebel blushes while greeting Gambian President Jawara during a presentation by the Loveland (Colorado) students. Jawara was given a book on the American way of life by the students who have corresponded with youngsters from The Gambia. (Photo—The Coloradan)

are preparing artwork destined for the walls of the Ati Day Care Center. It is not often that preschool children get involved in the Partnership Program. We congratulate them on making friends overseas at such an early age!

The West Cascade Returned Peace Corps Volunteers (Eugene, Oregon) are raising funds for three projects in Latin America. They are an aqueduct project in The Dominican Republic, a water system for an orphanage in Ecuador and equipment for a home economics class at a school in Honduras. The funds are being raised through the sale of sweatshirts inscribed with the message "Peace as Policy" and the image of a pair of hands forming the shape of a dove. They have also designed cards with this message.

The Students of The Hillside Avenue School in Cranford, New Jersey are serving dishes from Senegal, West Africa as part of their fundraising for the Laty School project in Senegal. Bon Appetit!

The seventh grade students at Dwight Englewood School in Englewood, New Jersey were delighted when their Partnership with Koutchogou, Benin extended beyond their school. An article in the local paper inspired third graders at St. Paul's School in Ramsey, New Jersey to assist with fundraising. St. Paul's students gave up candy during Lent and donated the money they would have spent to the well project in Koutchogou. One day, students had the opportunity to wear jeans to school—for a small fee which was then donated to the well! Dwight Englewood teacher Betsy Carson commented, "my kids realized they had an impact." The participation by St. Paul's was spontaneous and

encouraged Dwight Englewood students tremendously.

Fundraising for the well in Koutchogou has been a year-long effort and students at Dwight Englewood have been very creative. Some cooked meals for their parents in impromptu "restaurants." One girl held a magic show with her brother and charged admission. Another student decorated a can with information about the well and got permission to place it in a store downtown to collect funds.

At school the class instituted small monetary "penalties" (for chewing gum, using the wrong name for a student, etc.) The "Buck Awards" were a real innovation. Every student would donate one dollar upon completion of a writing assignment. Then the entire class would vote to select the best paper and the winner was awarded a buck. The remainder went to the well.

One of the most inspiring techniques started when Ms. Carson kept a water glass with her all day long. Each time she used water—to wash, drink, or feed her cat—she put a coin in her glass. At the end of the day she and her students saw how important and valuable water is and many students adopted the same technique.

Now they look forward to sending a cross-cultural exchange box. A translation of The Wizard of Oz in both French and English was done by one student who then illustrated the story book for the exchange. Students are also sending home-made alphabet, number and color books, a baseball, an American flag, various t-shirts and a jar of peanut butter. They have already received photographs and a flag of Benin from their Overseas Partners and more is on the way.

PCVs in Development Education

What do Tamara Walkingstick (Nepal), Ed Warmuth (Dominican Republic), Leslie Moore (Ecuador), Kinney Thiele (Sierra Leone), and Julie Dargis (Morocco) have in common? All of these Volunteers who are completing service this summer have been selected as participants in Peace Corps' Volunteers in Development Education (VIDE) program.

VIDE is a response by Peace Corps to the challenge thrown out by the U.S. Southern Governors Association Advisory Council on International Education. The Council's report, Cornerstone of Competition, is an action plan designed to build international perspectives in the schools, businesses, and communities around the country.

The Council, chaired by Virginia Governor Gerald L. Baliles, looked at the state of international awareness among business, government and educational leaders. It developed recommendations that called for action at all levels of government as well as action from schools and the business community.

Three areas of importance to Peace Corps Volunteers were identified: geographic and cultural awareness, economic issues, and political issues.

Geographic and cultural awareness: In order to develop a sophisticated level of international understanding, it is essential to learn how "place" influences cultures and economies. Geography is more than knowing the names of capital cities and mountain ranges; it is the study of people, their environments, and their resources. Peace Corps Volunteers, through their work, understand our interdependence with other peoples of the world. The VIDE program participants will offer information to students, community groups, and civic organizations about their role as Volunteers that will help Americans develop a greater awareness of the cultural differences in our world.

Economic issues: The Council's report states it very simply: "Americans have not responded to a basic fact: the best jobs, largest markets, and greatest profits belong to those who understand the country with which they are doing business." In addition to strong technical backgrounds, Americans must possess the political and economic awareness necessary to do business with people from countries and backgrounds very different from our own. Peace Corps Volunteers, having worked side-by-side with many of the people from the countries the U.S. does business with, must help American businessmen and women develop the necessary skills and adaptability. VIDE participants will be talking to business groups, Rotary organizations, and Virginia World Trade Center representatives to enhance their education and cultural awareness so that they can be ever more effective in helping world econo-

mies grow. Political issues: We do not understand other cultures and customs and are paying a high price for that ignorance. Our ability to collect information is virtually unsurpassed. However, our ability to use that information to understand the people and the events with which we deal is satisfactory, at best. The Council's report wants us to consider the following: "The U.S. Foreign Service is the only foreign service in the world that a person can enter without fluency in another language. A General Accounting Office report revealed that only 71% of all posts identified by the Foreign Service as 'language essential' are filled by qualified persons." Over and over again, Peace Corps Volunteers are said to be the United States' best ambassadors. We must share them with America as well. VIDE participants will be sharing with the men, women, and children of Virginia what they learned and what they saw as Peace Corps Volunteers.

The Peace Corps VIDE participants, selected to serve for a period of six weeks in the cities, towns, and rural areas of Virginia, will make up part of a team of three which will identify the needs in the field of development education areawide, and develop solutions to address those needs.

Community leaders, educators, service club members, agricultural extension agents, and other motivated citizens will compliment the VIDE team. Funding for the VIDE program comes from Peace Corps, the Virginia World Trade Center, and the local communities which will be hosting the VIDE participants. Tamara, Ed, Leslie, Kinney, and Julie know the world and the cultures of the people who inhabit it. All Peace Corps Volunteers do. Peace Corps Volunteers speak the language of America's friends, potential business partners, and foes. Peace Corps Volunteers must help America take charge of its future or else it will take charge of us. The Southern Governors' Association's Advisory Council on International Education adroitly sums up our dilemma: "It is a very real possibility that in ten years we will know relatively less about the developing world than we know now. That is a frightening prospect. There is no time to waste." Peace Corps Volunteers have a responsibility to see that time is not wasted:

—Margaret Pollack

(Editor's note: the actual activities of the VIDE participants will be reported on in a future issue of the Peace Corps Times.)

World Food Day

What: WORLD FOOD DAY, October 16, was established 7 years ago to draw people's attention to the problem of world hunger and commemorate the founding of the United Nations Food and Agriculture Organization (FAO) in 1945.

Where: World Food Day is observed in over 150 countries and by every state in the U.S. An FAO/World Food Day contact has been appointed in the majority of Peace Corps countries and will be planning local events that Volunteers can get involved with now!

Who: World Food Day is unique in that it brings together old and young, rich and poor to take part in activities geared to raise the issue of hunger in the world. World Food Day provides a means of bringing together all sectors of the population to address problems of food, agriculture, health and poverty in the community.

Why: The reasons to recognize and celebrate World Food Day are as varied as the cultural differences between countries. In the U.S., much of the celebration of World Food Day focuses on practical ways Americans can redirect an overabundance of food to those who need it. Communities in developing nations often use World Food Day to enhance country's agricultural and

health-related projects. This year Peace Corps Volunteers have been recognized by the FAO headquarters in Rome as being a key link to making World Food Day a "global" success!

How: Current Peace Corps Volunteers can join in the international celebration of World Food Day. Volunteers are encouraged to:

1. Send us your food-related Partnership projects. They will be included in a mailing to over 150 USDA Cooperative Extension groups and various RPCV organizations.
2. Organize fun events in your community! A list of ideas for lesson plans, contests and festivals is being sent to Volunteers soon. This is a great opportunity to put some excitement into your on-going projects and enhance your role in the community.
3. Contact your country's Ministry of Agriculture, Ministry of Health or Ministry of Education to find out if plans are already underway for World Food Day. Many countries have national World Food Day coordinators or FAO contacts who

(Continued on page 12)

Life After Peace Corps

Parlay Your New Language Into A Job After Service

The language you are learning now may lead to a very interesting job after Peace Corps service.

The Voice of America is usually in the market for translators as writers, editors and broadcasters for its network. Salaries range from \$22,458 to \$32,567. VOA broadcasts 24 hours a day, 7 days a week.

For more information or for copies of the job announcements: write to: Mary Jo Morgan, Returned Volunteer Services, Peace Corps, Room 1107, 806 Conn. NW, Washington, D.C. 20526

Shriver Awards

Thomas Burwell a PCV in Belize and Pamela Wessels, serving in Mali have been selected as the first two winners of the Shriver Peace Worker Program awards. Alternates are Gordon Malaise, Solomon Islands and Stacey Chacker, Central African Republic.

Burwell and Wessels will begin a year's study this fall at the Kennedy Institute of Ethics at Georgetown University. The award provides for academic expenses, all living expenses, books and travel for the academic year. Upon successful completion of the year's program, each Peace Worker will be given a cash grant of \$2,500.

All interested second and third year PCVs are encouraged to apply for next year's program which will start in the fall of 1988. (Deadline for this year's application was May 1.) Your Country headquarters will have information on how to apply for the program.

William and Brenda Remmes, who served in Ghana and Cameroon respectively in the 1960's, are the winners of the Sargent Shriver Award for Humanitarian Service. The award, which includes a check for \$1,000, was made at the July conference of the National Council of Returned Peace Corps Volunteers in Madison, Wisc.

The Remmes, who live in Woodland, North Carolina, received the award for their continuing commitment to the humanitarian ideals of Peace Corps. William Remmes has been instrumental in expanding a non-profit health clinic serving 5,000 people to a network of 5 clinics serving 50,000 patients. Brenda Remmes has helped expand pre-schools and start Lamaze classes and education programs for teenage mothers.

VOA broadcasts in the following languages:	
Albanian	Lao
Amharic	Latvian
Arabic	Lithuanian
Armenian	Pashto
Azerbaijani	Polish
Bangla	Portuguese/Africa
Bulgarian	Portuguese/Brazil
Burmese	Portuguese/Portugal
Chinese	Romanian
Creole	Russian
Czech	Serbo-Croatian
Dari	Slovak
Estonian	Slovene
Farsi	Spanish/Europe
French	Spanish/Latin America
Georgian	Swahili
Hausa	Thai
Hindi	Turkish
Hungarian	Ukrainian
Indonesian	Urdu
Khmer	Uzbek
Korean	Vietnamese

(World Food Day...from page 11)

will be able to assist you in planning events in your community or find ways for you to join in events they have already scheduled. Volunteers in the past have been on the national World Food Day planning committees. The FAO headquarters in Rome will be contacting your country director concerning World Food Day plans and a list of possible contacts is also being sent to you soon.

4. Share enthusiasm and World Food Day plans with other Volunteers, your country director or APCD, your host national counterparts, and your friends and family in the U.S. Any posters, lesson plans, contests, or award-winning essays connected with World Food Day would be very welcome at Peace Corps/Washington.

Please send any accomplishments to: Office of Private Sector Relations, Suite 1107, 806 Connecticut N.W., Washington, D.C. 20526.

Mary Ann Haley

Your Best Shot Photo Contest

A new and on-going "Best Shot" photo contest begins with the Times September/October issue. All Volunteers and staff are eligible and the topics are up to you. They should reflect your Peace Corps experience...your assignment, site or the people you work with are a few examples. Black and white prints are best for reproduction but the Times will accept slides. Be sure to write your name and address on the backs of all submissions so we can return them to you.

Awards are negotiable depending on the winners' whims. Favorite treats including M&Ms, herbal teas, film or other hard-to-get items are all on the list. A photo credit and short bio in the Times are certainties!

Air mail your Best Shot to: Peace Corps Times, M-1214, 806 Conn Ave. NW, Washington, DC 20526.

Reader Survey

Thanks to all of you who took the time and trouble to respond to the survey.

The responses were much as anticipated—more photos, more stories about Volunteers and more information about your future after Peace Corps service.

About the former—if things work out, we may be able to add a couple of pages on a regular basis which would allow more of both, if we have them. In this issue we have made one large, actually smaller type, to see if that can help. About jobs after service—for obvious reasons we usually can not post job openings, the exception being the VOA announcement on this page. However, we are working with Returned Volunteer Services to try to bring you more general information about jobs and education opportunities.

We do have a few requests on this end. We need copies of your newsletters, so please ask your editors to send them DIRECTLY to the Times. Also, we need your participation with photos. (See above story.) And although we receive very few, we do welcome signed letters to the editor.

The next issue will feature work and photos by Peace Corps Volunteers in Tanzania. In the November-December issue, we will feature the Central American country of Belize.

From the Field

Biogas Lamps/Morocco

This article is the second of a two-part series on the practical use of biogas. In the last issue of the ICE ALMANAC we dealt with the use of biogas for stoves. In this issue we cover lamps using biogas. The report from which this article is taken was developed by C.D.E.R. (Committee for the Development of Renewable Energy) with assistance from Peace Corps Volunteers. (Illustrations referred to will follow this article.)

Several different types of lamps using biogas were tested by C.D.E.R., in 1985 and 1986. From these tests, it was determined that several types of existing butane lamps could be easily adapted to biogas usage, and that other types of lamps could be fabricated using available plumbing and lamp hardware.

The amount of light produced for the biogas lamps was limited due to the gas pressures used in the test (maximum of 15 mbar) but was found to approach the equivalent of a 30 watt electric light bulb.

ALL BIOGAS AND BUTANE LAMPS REQUIRE VENTILATION IN ORDER TO AVOID ASPHIXIATION.

Description of Lamps

The types of lamps described here are mantle lamps, sometimes called incandescent gas lamps.

The basic components of two mantle lamps are shown in figures 1 through 5. In operation, the biogas passes through a valve and then exits through a small hole called the jet. The jet can be part of the valve as in figure 6, or separate. The biogas leaving the jet at high velocity creates a slight pressure reduction around the jet. This slight pressure reduction causes air to be sucked in through the primary air ports or air ports. This air is mixed with the biogas as it travels to the diffuser. The diffuser head serves to slow down the biogas/air mixture and distribute it evenly to the mantle. The mantle, made of chemically treated cloth, glows as it is heated by the burning biogas.

The mantle becomes hottest, and consequently glows brightest, when the flame of the biogas burns at its surface. The mantle is often surrounded by a glass globe which protects it from the wind.

Basic Theory

Primary Air

The size of the flame can be changed by controlling the amount of "primary air" mixed with the gas before it reaches the diffuser. If the primary air ports do not allow enough air into the mixture, the flame becomes too large, passing through the mantle and burning outside it, thus reducing the amount of light produced. If, on the other hand, the primary air ports allow in too much primary air, the biogas flame is too small and burns inside of the mantle, again causing a reduction of light.

In the tests, the principle problem was a lack of primary air in the mixture, especially at gas pressures below 15 cm of water column (15 cm WC or about 15 mbar). The following had an effect on the amount of primary air mixed with the biogas:

- Primary air ports—up to a point, larger air ports increase the proportion of primary air. Conversely, blocking or reducing the size of the primary air ports reduces primary air.
- Jet size—smaller jets increase the proportion of primary air. Jets used in the experiments ranged from 0.8 mm to 1.2 mm diameter.
- Gas pressure—higher gas pressures increase the proportion of primary air. None of the lamps tested functioned efficiently at pressures below 10 cm of water column (WC) and some required 20 cm WC.
- Flow restrictions—primary air is increased by short mixing tubes with a minimum of bends. Problems were encountered with sharp bends in the tubing and with manufacturing defects. Commonly found manufacturing defects include "burrs" or sharp pieces of metal projecting into the tube near the air ports or ends of the tube, and misaligned jets (not pointing towards the center of the tube).
- Diffuser—larger diffuser hole areas increase their proportion of primary air. The hole area can be increased either by making more holes or by enlarging

the existing holes. In figure 7, a larger center hole was created by connecting a group of smaller holes. This was done by using a nail to carefully scratch away the ceramic material separating the existing holes.

Mantle Size

It was found that the mantle size had an effect on lamp performance. If a mantle was too small, the biogas would pass through and burn outside it, producing little light. If the mantle was too big, however, the flame would not heat it enough to glow brightly.

The mantles used for lamps 1, 2, 3, and 5 were for butane lamps of 300 to 400 candle power and were found to be too large for the biogas lamps operating at lower pressures (under 20 cm WC). In these cases, the mantle was attached above the normal position so that less would be below the diffuser (see figure 8).

The sizes and shapes taken by the mantles varied. It was found, however, that the effect of this variation on the performance of the lamps could be minimized by regulating the primary air as shown in figure 9.

Valves and Jets

It was found that the type of valve used had a large influence on the lamps. The valves recommended are low-pressure gas valves, the type used for stoves having pressure regulators. These valves, similar to the one in figure 6, allow the gas to pass through with little restriction or pressure drop.

The type of valve normally used for butane lamps and high pressure butane stoves, on the other hand, can cause a large pressure drop. It was found that these valves caused a reduction in pressure of 30–50 percent. Since most of the lamps are sensitive to pressures below 15 cm WC, any valve causing a large pressure drop is to be avoided. In general, valves that screw directly into butane bottles tend to be restrictive and should be avoided when the biogas pressure will be below 30–50 cm WC.

In all of the tests, the jet assemblies were the same type as used for the original

(Continued on page 14)

(Lamps from 13)

butane lamps. These jet assemblies consisted of a piece of brass with a jet hole drilled into one end. Sometimes the entire jet assembly is simply called the "jet". The brass is threaded to allow the assembly to be screwed into the lamp base and into the valve. When low-pressure valves were used, a section of plastic tubing was used to join the valve and the jet assembly. The gas tube was screwed directly on to the threads of the jet assembly and held with a hose clamp.

It was found that jets tended to clog with foreign materials and had to be removed and cleaned periodically. Also, a jet assembly must be easily replaceable if it is made of brass, steel, or copper since these materials corrode over time.

Adapted Butane Lamps

Lamps 1, 2, and 3 were locally available butane lamps that were tested with biogas. Lamps 2 and 3 (figures 2 and 3) functioned on biogas with little problem, producing light the equivalent to that of 15- to 25-watt electric light bulbs. Lamp 3 initially had poor performance due to sharp pieces of steel projecting into the mixing tube, restricting flow. These pieces of steel, created by the drilling of the primary air ports, were easily removed using a file. After the pieces of steel were removed, the lamp performed better since it entrained more primary air. Similar manufacturing defects were seen in other lamps, so these lamps should always be inspected. Lamp 1 had a defect that could not be corrected (see figure 1) and performed poorly.

The performance of lamps 2 and 3 seemed to vary greatly due to manufacturing differences from lamp to lamp. For example, some lamps functioned better with a jet of 1.0 mm diameter while others required a smaller jet of 0.8 mm diameter. Likewise, some lamps functioned well with an unmodified diffuser head while others required a diffuser with an enlarged center hole (see figure 7).

The primary air ports may require regulation to maximize lamp performance. The primary air may be regulated by covering

the ports with a hose clamp or with a sleeve as shown in figure 9.

It is likely that other butane lamps can be adapted to biogas usage with little difficulty provided that they have sufficient diffuser hole and primary air port area.

Modified and Fabricated Lamps

Two different lamps were fabricated out of parts available in Marrakech. Lamp 4 was made from available lamp and stove parts and was the only upright lamp tested (see figures 4 and 10). The diffuser is from a large (150 watt) "PRECIGAZ" butane lamp. It was found that the smaller diffuser head, which had fewer holes, was too restrictive. Two different lamp bases were used during the testing. Base 1 was made from the base of a high-pressure butane stove which was already threaded to accommodate a jet assembly. The stove head was cut off and the upper portion of the base drilled to allow the end of the diffuser to fit inside it. Base 2 was the original base for the "PRECIGAZ" butane lamp. Both of the bases have enlarged primary air ports as seen in figure 10. Both bases can be used with a primary air regulating sleeve as seen in figure 9. Lamp 4 used the larger of the two sizes of lamp mantles available for upright lamps.

Lamp 4 was found to work best at pressures of 15 cm WC and above, with a 0.9 mm or 1.0 mm diameter jet size.

The second fabricated lamp is seen in figure 5. This lamp was an inverted-mantle lamp made out of plumbing parts and using a ceramic diffuser and reflector originally designed for butane lamps. Lamp 5 entrained primary air more effectively than any other lamp tested and therefore could produce the most light at gas pressures down to 8 cm WC. Unfortunately, however, the method used for attaching the handle caused occasional gas leaks and the jet assembly became hot enough during testing to damage the plastic gas-supply tube. Therefore, although this type of lamp has promise, it requires further refinements.

Adjusting Lamps

Mantle—For inverted lamps such as lamps 1, 2, and 3, the mantle should be initially tied onto the bottom of the diffuser. The first time a mantle is used, it is a flexible cloth. As it is initially lit, the cloth burns and forms a fragile skeleton. After the cloth burns for a moment, the gas should be turned on. The pressure of the gas will cause the mantle to take a rounded shape. The gas should be alternately turned off and on until the mantle has turned completely white and glows.

If after experimentation it is found that the available mantles are too large, a mantle can be attached in the middle of, or above, the ceramic diffuser. This allows less of the mantle to hang below the diffuser. The shortened mantle may take the proper shape more often if it is tied a second time at the normal attachment point as seen in figure 8. This arrangement, however, is very fragile.

—For upright lamps such as lamp 4, the mantle should be tied at the upper and lower attachment points. If possible, the lamp should be inverted for several seconds the first time a new mantle is lit. The lamp is then held upright and the gas is alternately turned off and on until the mantle is completely white. If the lamp is not inverted initially, the mantle often does not take the proper shape.

—In general, the shapes and sizes of mantles vary. It was found that there were fewer problems with variations in mantle shapes at pressures above 15 cm WC or gas flowrates above 120 liters/hour.

ICE Almanac

ICE Director

Maureen Delaney

Editor

David Thomas

Networking

Trish Heady

The ICE ALMANAC features a variety of Volunteer ideas and technologies which can be adapted locally, and highlights particular program areas with notes and recommendations from programming specialists in the Office of Training and Program Support.

Information Collection and Exchange (ICE) is Peace Corps' central technical information unit. Contributions, requests for technical information or correspondence concerning the ALMANAC should be sent to: Peace Corps, ICE, Rm. M-707, 806 Connecticut Ave., NW, Washington, DC 20526.

Recommended Jet Sizes for Lamps 2 and 3

	Jet Diameter (mm)	Notes
10-15 cm WC	0.8 or 0.9	Use modified ceramic diffuser. May require primary primary air regulation.
15 + cm WC	0.9 or 1.0	May require modified ceramic diffuser and primary primary air regulation.

Pressure—It is important to adjust a lamp at the pressure of use. For a variable pressure digester, such as a Chinese type, it is better if the lamp can function efficiently at a relatively low pressure. The lamp should be first adjusted at a low pressure then tested at the high pressure. If a lamp does not function well at high pressures, the gas valve can be partially closed to reduce the gas flow rate.

Jet—It was found that small variations in jet holes can have an effect on the gas flow rate. For this reason jets of apparently the same diameter may give differing results from a lamp. From this experience it is recommended to test several different jets on each lamp to find which one gives the best performance.

Before adjusting a particular lamp in order to maximize its light output, it is important to know that the light output of lamps will often pass through three different stages during operation.

First Stage—If a lamp is cold, it will not produce much light immediately after ignition. This is because the flame will burn only on the outside of the mantle. This stage may last several minutes while the lamp warms itself to operating temperature. If a lamp is difficult to ignite, partially covering the primary air ports or reducing the gas flow during ignition can be helpful. Occasionally a lamp will not pass through this first stage and go immediately to the second stage.

Second Stage—After the lamp has warmed sufficiently, the flame will suddenly move to the inside surface of the mantle. This change is often accompanied by a gentle "pop" or a change in the sound of the lamp. This change can sometimes be triggered more quickly by a gentle puff of air blown at the mantle. The light given off by the lamp changes at this point. The amount of light may further change, however, as the lamp becomes hotter over the next 20–60 minutes.

Third Stage—In the third stage, the lamp has come to a stable operating temperature and the light produced is at a constant level. It may take an hour for the lamp to reach this final stage. The lamps should be adjusted to provide the maximum amount of light at this stage. It was found that some lamps required more primary air as they became hotter. For example, if lamp 2 were adjusted immediately after it entered the second stage, the flame would move outside the mantle and the amount of light produced would decrease after 30 minutes of operation. If the primary air ports were further opened at this point, however, the amount of light would increase to the original level. In general, inverted mantle lamps, such as lamps 2, 3, and 5, changed more than the others as they became hot.

GUIDE TO TROUBLESHOOTING LAMPS

Several problems that were found during testing are listed here. It is recommended to try the solutions in the order given.

Problem	Possible Causes*	Proposed Solutions*
Lamp will not ignite	1 2 3 4	A, B C C, D E
Lamp not bright immediately after ignition	5	D, F
Flame outside of mantle	6 7 8	G, H I J, K, L, M
Lamp not bright, but no flame outside of mantle	1 3 9	A, B D O
Mantle unevenly lit	10 11 12	P Q R
Bottom of mantle not glowing but top of mantle bright	3 9	D O
Flame pulses	13	S

Causes	Solutions
1—No gas flow or low gas pressure	A—Verify that there is sufficient gas pressure B—Look for a blockage in the gas line and clear it
2—Gas flowrate too high	C—Reduce gas flowrate (partially close valve)
3—Too much primary air	D—Partially cover primary air ports
4—Carbon dioxide content of gas too high	E—Wait until digester produces a higher methane content gas
5—Lamp not yet heated to operating temperature	F—Wait and let lamp heat itself for several minutes after ignition
6—Lack of primary air	G—Open primary air ports H—Increase gas pressure (if possible)
7—Mantle too small	I—Try larger mantle
8—Lack of primary air	J—Look for and fix manufacturing flaw or flow restriction K—Increase diffuser hole area (see fig. 7) or L—Use smaller jet M—Enlarge primary air ports
9—Mantle too big	O—Use smaller mantle or attach mantle higher than normal (for example, above the ceramic diffuser head, see fig. 8)
10—Mantle shape not correct	P—Try new mantle
11—Diffuser holes partially blocked	Q—Clear blockage
12—Manufacturing defect	R—Look for and repair manufacturing flaw
12—Water in gas line	S—Remove water from gas piping

Method for Adjustment

Step 1—Place mantle or lamp and burn as above. If two different size jets are to be tested, use the larger one first.

Step 2—Turn on gas, and light mantle. If mantle is difficult to light, partially cover the primary air holes or reduce the gas flow during ignition.

(Continued on page 17)

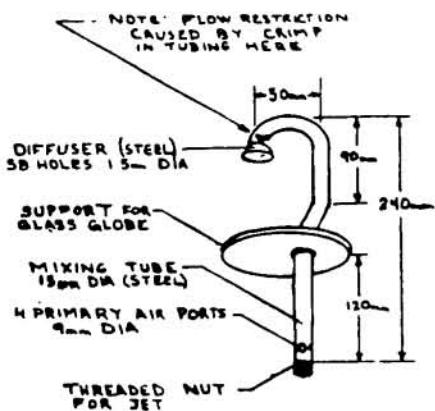


fig 1 LAMP 1

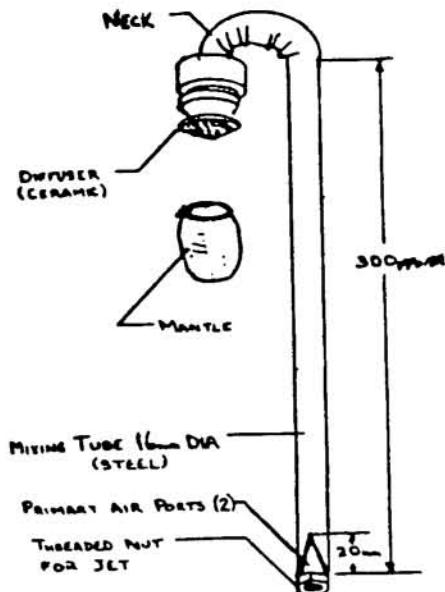


fig 2 LAMP 2

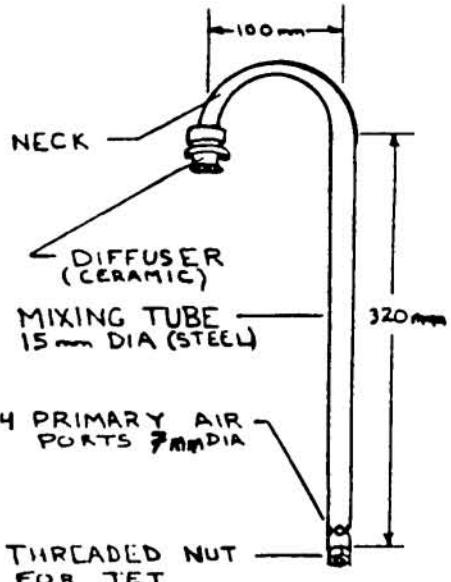


fig 3 LAMP 3

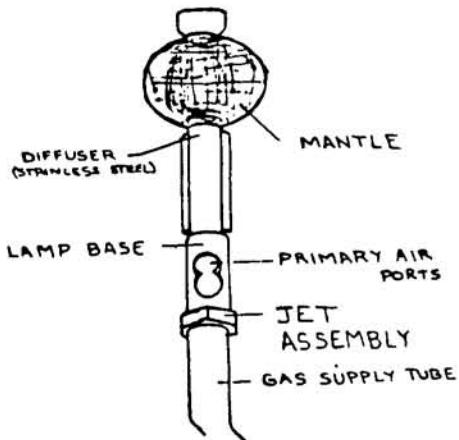


fig 4 LAMP 4 ASSEMBLED
(PRIMARY AIR REGULATING SLEEVE NOT SHOWN)

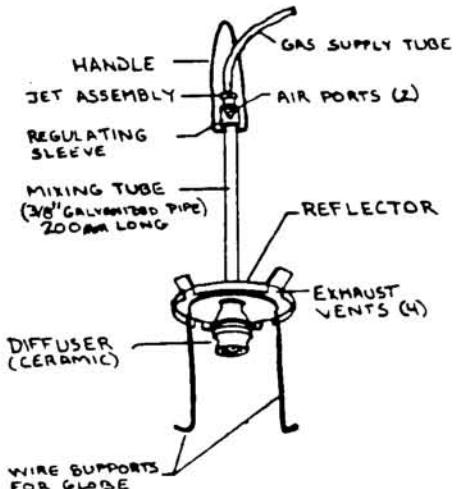
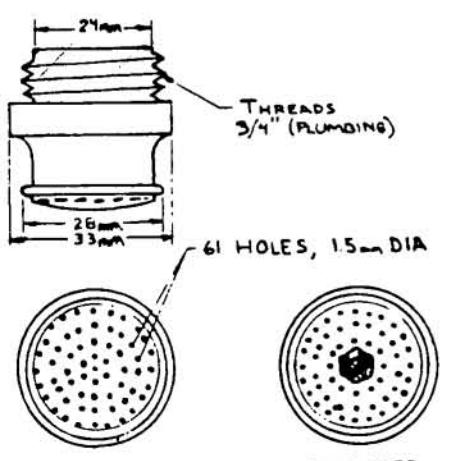


fig 5 LAMP 5



CERAMIC DIFFUSERS
Fig 7

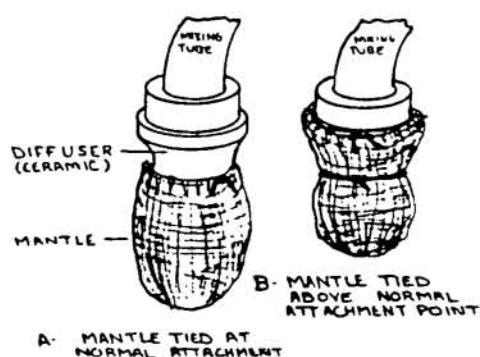


fig 8
MANTLE ATTACHMENT

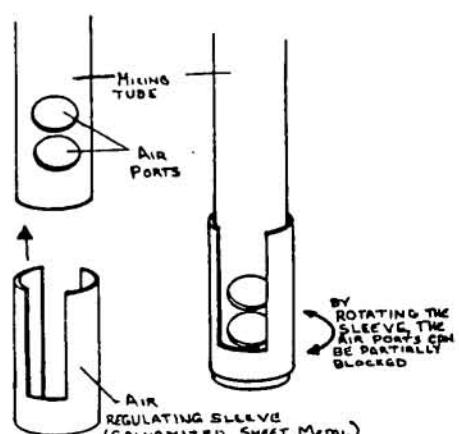
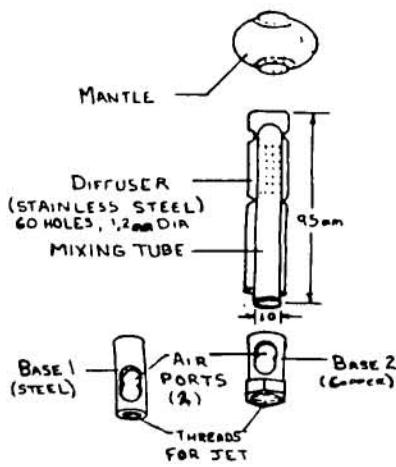


fig 9 METHOD FOR REGULATING PRIMARY AIR



**fig 10 LAMP 4
(DISASSEMBLED)**

Step 3—Wait for lamp to heat itself for several minutes, then fully open the primary air ports. A lamp with insufficient primary air will not enter the second stage of light output. If the flame is blue and visible outside and above the mantle, the lamp has insufficient primary air. Look in the trouble-shooting chart under "Flame Outside Mantle" for causes and solutions.

(Continued on page 24)

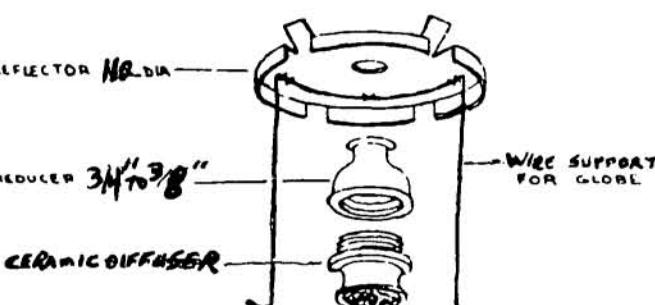
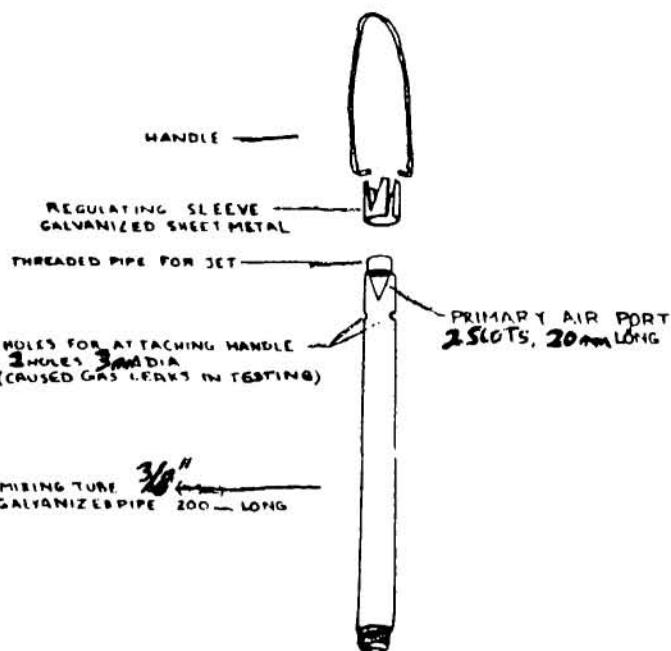


fig 11 LAMP 5 (DISASSEMBLED)

Feature

Fisheries: Protein and Profit

Fish consumption has increased worldwide in recent years. However, the species and the volume consumed vary dramatically between developed and developing countries.

Although developed countries have recently increased their fish consumption, with exotic species becoming particularly popular, in developing countries fish account for a far greater portion of the animal protein consumed. According to a report, "Nutrition and Fisheries," in the journal, *Food and Nutrition*, (Vol. 12, No. 2, 1986) published by the Food and Agriculture Organization of the United Nations (FAO), in 1984 fish accounted for 67 percent of the animal protein consumed in Sierra Leone,

40 percent in Chad, and 30 percent in Zambia. By contrast, the fish portion of animal protein consumption was only 5 percent in the United States and 8 percent in the United Kingdom. The difference demonstrates the variation in protein supplies between developed and developing countries and the important role that fish protein plays in developing countries.

Currently, 74 percent of the world's population lives in developing countries. FAO projects that, by the year 2000, 80 percent of the world's population will live in developing countries. FAO also projects an increasing demand for fish in areas already relying, to some extent, on fish as a source of animal protein. In contrast, worldwide

production of fish from natural waters has been decreasing.

Developing countries are realizing the important contribution that programs designed to increase fish production can make toward multi-year goals of self-sufficiency, improved nutrition, education, employment, and a generally higher standard of living.

Peace Corps Contribution

To support developing countries' efforts to increase fish production, Peace Corps has assigned Volunteers to fisheries pro-

(Continued on page 18)

(Fisheries from page 17)

jects since the early 1960's. The Peace Corps program now includes freshwater fish culture, mariculture, inland capture, and marine fisheries projects. Today some 350 Volunteers in 32 countries are involved. All fisheries projects are characterized by the goals of protein production and income generation.

The early Peace Corps fish culture projects focused primarily on protein production. Peace Corps, with host country governments and some private voluntary organizations, designed projects to provide a steady protein supply, thus improving the diets of rural families.

In the mid 1970's, the program focus was expanded, giving equal or greater importance to income generation. Although protein production remained an important goal, a demonstrated income from fish culture attracted both local farmers and their governments. "Promoting the profit incentive turned the tide for many fish culture projects. The rewards of an additional income made farmers more willing to devote the time, energy, and resources the ponds required," says Harry Rea, Fisheries Specialist in the Peace Corps Office of Training and Program Support (OTAPS).

Volunteers serving on freshwater fish culture projects work with selected fish farmers to choose pond sites, advise on stock selection and breeding of various freshwater species (usually tilapia or carp) demonstrate pond management, teach techniques of induced spawning, adapt storage and preservation methods, utilize marketing and distribution channels, and train host country counterparts as extension agents. Volunteers also may be assigned to regional government-sponsored fish stations.

Volunteers assigned to mariculture projects advise on stocking, breeding, and harvesting of saltwater species, tasks similar to those of Volunteers assigned to freshwater fish culture projects. Mariculture Volunteers also teach and assist with the design and construction of specially developed fish cages, tanks, and frames.

Volunteers assigned to inland capture projects test fishing gear; train fishermen in the construction, maintenance, and use of fishing gear and equipment; sample and analyze fish populations; assess harvest and seasonal fishing patterns; record catch volume and size; and adapt fishing techniques and preservation methods.

Marine fisheries Volunteers work with fishermen to adapt fishing practices to local areas; update and modify gear; construct boats, nets, and traps; maintain and repair diesel engines; teach navigational and seamanship skills; teach fish processing techniques; and help access marketing and distribution channels.

OTAPS

Volunteers assigned to fisheries projects receive technical support from their overseas Peace Corps office and OTAPS. Fisheries Sector Specialist Rea responds to inquiries from both overseas staff and Volunteers. He provides technical information and reference materials through the Information Collection and Exchange (ICE) Division. The Sector provides, on an "as-needed" basis, in-the-field expertise on project design, management, and evaluation. As Fisheries Sector Specialist, Rea also acts as the contract manager for technical consultants as well as stateside training contractors.

Rea estimates that 80 percent of his time is spent on freshwater fish culture projects. The remaining 20 percent is divided among mariculture, inland capture, and marine projects. These proportions reflect the relative ratio of Volunteers working on these projects. Nearly 80 percent of the 350 fisheries Volunteers are involved in freshwater fish culture projects.

According to Rea, the collaborative nature of fisheries, especially fish culture, projects makes them a perfect "fit" within the agency. He says, "We can best serve the Volunteers by working with the Health Sector on nutrition, the Small Enterprise Development Sector on marketing and small business development, and the Agriculture Sector on crop and livestock production."

Rea notes that the aspect of integrating different program areas has been a part of fisheries programs from their inception. He says, "The early fish culture programs were successful largely because of their village-based extension activities. In some countries, agriculture projects used the same approach, promoting food production with local extensionists."

Sector Specialist Rea would like to see fisheries programs move through what he terms, "a maturation phase." An important aspect of this transition involves long term planning. Rea's primary goal as Sector Specialist is to promote long term planning as programs are evaluated and new ones designed.

He explains, "Development is a long term process and planning for it also must be long term. Development doesn't take 2 years, it takes 5 to 10 to 50 years. It is unrealistic to try to achieve program goals and objectives in 2 years, the term of a Volunteer.

"Freshwater fish culture programs, which are our most successful, are based on a history of lessons from model projects in various countries" Rea states. "They have become fairly sophisticated development projects and often include other international aid agencies. However, the mariculture, inland capture, and marine

projects don't yet have this base of information and expertise. They don't have the benefit of lessons learned from other successful model projects."

Rea continues, "In order to be successful, to continue on their own after Peace Corps leaves, programs need to go through the steps of maturation. You can't short cut those stages and you can't start over every 2 years. Our integrated approach requires a series of stages that come together in the long run."

Increasingly Rea is trying to include sequential Volunteer cycles, similar to those in the Zaire program (see Box "Zaire"), in freshwater fish culture projects and, it is hoped, similar planning can be incorporated into mariculture, inland capture, and marine fisheries programs.

Freshwater Fish Culture

Although the Belgian government had tried 40 years ago to launch a fish culture program in what is now Zaire, many ponds were abandoned shortly after independence in 1960. Research and fingerling supply stations were constructed throughout the country, but no extension program was established in spite of the fact that farmers were mandated to construct fish ponds. As a result, Zairian farmers lacked the skills needed to increase production and became discouraged after unprofitable harvests. Peace Corps Volunteers were in-

GIVE!

The ICE staff works hard to provide you with the most relevant, up-to-date technical information for your projects. Not surprisingly, the most useful materials we distribute are those which have been developed over the years by Volunteers like you working in agriculture, education, forestry and a host of other areas.

We depend on contributions from PCVs and staff in the field to build our collection of appropriate technical materials. Volunteers contributions are frequently published as how-to manuals. They often appear as articles in the ICE Almanac. And they make up the bulk of the reports, designs, lesson plans and other documents in the ICE Resource Center.

We are vitally interested in the results of your work. Take time to write up your fisheries project or your design for a better appropriate technology mousetrap and send it to ICE. Your fellow PCVs around the world will thank you for it!

vited to reinvigorate the program and teach pond management, breeding, and marketing practices. Fish projects in Zaire today are characterized by long-term planning with three sequential Volunteer cycles and village-based extension activities.

Similarly, Volunteers in Honduras serve as extensionists working with local fish farmers or are assigned to fish stations. At the largest station, in Comayagua, and in several smaller regional stations, Volunteers have established a consistent supply of fingerlings, used to stock ponds. Volunteers also have helped organize an annual national fish culture conference and have published four instruction manuals providing technical information on all aspects of fish culture in Honduras.

Volunteers are credited with much of the success of fish culture programs in Honduras. "Volunteers are where the action is, in areas where government manpower is limited, working with the people, digging and caring for the ponds," says Mario Berrios, Professor of Biology and Fish Culture at the University of Honduras. Berrios has worked with Peace Corps Volunteers in his country. Currently, he is completing field work for a specialized aquaculture program at Auburn University, in Alabama.

Berrios is a member of the National Aquaculture Committee in Honduras. The Committee was created to increase protein production through fish farming and to unite development efforts by government, national, and private agencies which are attempting to improve current, and develop new, fish culture projects. Peace Corps representatives also belong to the committee which is consistent with Rea's interest in long-term planning.

Speaking of the contribution of fish Volunteers in Honduras, Berrios say, "We (Hondurans) are not really fish eaters, and it (has) taken time to realize the land and water can be useful for more than corn, bean, and livestock production. Peace Corps Volunteers have come into our programs and really helped toward our nation's goals (of) protein (production), agriculture, health, and business development." He concludes, "Fish culture is not the only answer to hunger, but fish do provide an additional source of protein. Fish culture fits with our farm production systems. It can be integrated with various crops, poultry, swine, and duck husbandry, and water management (for irrigation)."

Fish projects commonly include corollary activities such as small animal husbandry (manure, added to the ponds), provides a nutrient for plankton, which the tilapia eat) rice culture, and crop production. Peace Corps activities in Nepal are an example of this integrated farm systems approach. Ponds there are used simultaneously for fish and rice production and to irrigate vegetable gardens.

Zaire

Evaluations of early aquaculture projects indicated that ponds were abandoned after a Volunteer's term of service ended. Experience has shown that farmers need 5 to 7 years (not just 2) to become established fish culturists.

As a result, Peace Corps has experimented with longer project cycles. In Zaire, for example, aquaculture projects are planned on a 6-year sequence involving three sequential Volunteers.

During the first 2-year cycle, Volunteers work with a small selected group of farmers, usually six or less, selecting pond sites, constructing ponds, stocking fingerlings of Tilapia or Carp species, and teaching basic fish culturing.

Volunteers assigned to the second cycle followup with the farmers and continue teaching management practices related to stocking, breeding, and harvesting. Volunteers also begin corollary activities such as promoting animal husbandry and small gardening projects.

During the third and final cycle, Volunteers prepare farmers to continue independently, developing problem-solving skills, and refining technical pond management and business practices. Construction begins on a new set of ponds. The teachers for the new group of farmers are local fish farmers, rather than Volunteers.

This approach has proven so successful in Zaire that many other countries are now implementing it. They include Burundi, Central African Republic, Gabon, Liberia, Sierra Leone and Tanzania.

Inland Capture Fisheries

Volunteers assigned to inland capture projects work with local fishermen to increase yields from rivers, reservoirs, and lakes. Two projects in Cameroon illustrate typical assignments. Volunteers were asked to analyze the fish population in seven storage reservoirs in the Mandara Mountains of northern Cameroon. Following the study, Volunteers advised on stocking marketable species for the reservoirs and appropriate management practices.

In Lake Lagdo, an impoundment in the northern part of the country, local fishermen formed a cooperative because they were concerned about the potential of depleting the fishery resources of the lake. The cooperative wanted to restrict the number of fishing permits issued, the type of gear used, and the harvesting of juvenile fish. Volunteers were asked to monitor and analyze the growth patterns of selected species and to advise on gear and seasonal fishing practices.

Marine Fisheries

Volunteers assigned to marine fisheries work with local fishermen to maximize their catch, both by using updated and modified gear and by adapting fishing practices. In Sierra Leone, Volunteers worked with fishermen to create "standing lug sail rigs." With funds and technical support from the German Agency for Technical Cooperation (GTZ), Volunteers helped construct the sails, outfit the boats, and train the crews. The sails reduced fuel use and operating costs.

Training

Although the Associate Peace Corps Directors (APCDs) in each of the countries take the lead in developing and planning fisheries projects, the OTAPS Fisheries Sector assists in planning, developing, implementing, supporting, and evaluating programs. Rea and the overseas staff realize strong technical training is one of the keys to effective programs.

This year Peace Corps expects to train 180 new Volunteers for fisheries projects. Approximately 140 of those Volunteers will serve in freshwater fish culture projects. The remaining 40 Volunteers will be assigned to mariculture, inland capture, and marine projects.

Peace Corps recruits both trained fish culturists and fisheries biologists as well as generalists with 10-12 hours of biology credits. Although host countries have begun requesting Volunteers with advanced degrees, generalist biology majors have set a high standard for their work. "The suc-

(Continued on page 20)

(Fish from page 19)

cess of the skill-trained biology generalist has been a major factor in the expansion of the Peace Corps aquaculture programs," says Rea.

Volunteers enter one of several types of technical training programs, depending on their host country and their assignments. Some Volunteers are trained for 6 to 8 weeks in their host country. For example, in 1987, Volunteers for the Cameroon inland capture project, and Volunteers assigned to the marine fisheries and freshwater fish culture programs in the Philippines will be trained in country.

This year, the majority of trainees (120) will attend a fish culture training program at the University of South Carolina (USC). The experiential training program is under the direction of Roger Palm, Research Assistant Professor at USC, and Director of the South Carolina Aquaculture/Mariculture Programs International (SCAMPI) of the Baruch Institute of Marine Biology and Coastal Research. Palm, a former fish culture Volunteer in Zaire and Rwanda, is also a former OTAPS Fisheries Specialist.

According to Palm, "We are presently trying to build on the success of the program which originated at the University of Oklahoma, under the direction of Dr. Howard Clemens. We have learned that the experiential approach produces Volunteers who are capable, competitive, and committed. The USC program will fine-tune this approach."

The experiential skill development approach stresses the following four characteristics:

- Trainees take responsibility for their skill development;
- Trainees utilize and build on their experiences to develop expertise;
- Trainees develop problem-solving skills; and
- Trainees integrate written and oral communication skills, interpersonal skills, analytical ability, cross-cultural sensitivity, and observation skills.

The rigorous training program is credited with preparing Volunteers for the challenges of their assignments. Moreover, the experiences gained while a Volunteer often become skills useful in later career positions. In fact, many Volunteers who serve on fisheries projects tend to stay in fisheries after completing their Peace Corps assignments. Returned fisheries Volunteers have taken jobs with development agencies, international companies, private voluntary organizations, universities, as well as with government agencies, both U.S. and foreign..

Just as the experience of serving on a Peace Corps fisheries project has a strong impact on the lives of individual Volunteers, it also has an impact on the lives of

Collaboration

Fisheries programs, in which Peace Corps Volunteers are or have been working, have received technical and financial support from a variety of sources, including host country governments. The largest contributor has been the U.S. Agency for International Development (USAID).

USAID has provided funding for transportation, materials, training, facilities, and technical support to fisheries programs in many nations. These include the Central African Republic, Senegal, Cameroon, Zaire, Honduras, Jamaica, Guatemala, Philippines, Morocco, and Thailand.

The Food and Agriculture Organization of the United Nations (FAO) has also provided a considerable amount of financial and technical support. In the Central African Republic FAO provided the majority of support for a fish culture extension service. Volunteers were an integral part of this service. FAO also trained many Central African extension agents and developed an inland capture fisheries project in Niger and a marine fisheries program in Sierra Leone. In addition, technical materials developed by FAO have been valuable resources for Volunteers working on fisheries projects.

The Inter-American Development Bank (IADB) and the Asian Development Bank (ADB) have also supported fisheries activities. The IADB provided funding for an aquaculture project in the Dominican Republic. The ADB has supported aquaculture and marine fisheries in the Philippines and Thailand.

Private voluntary organizations (PVOs) have played a vital role in providing support to Peace Corps Fisheries Volunteers. In many cases, Volunteers have been requested to assist with programs which are implemented by these organizations. In other cases, these PVOs have provided support to host country government agencies which were implementing programs with Peace Corps assistance. Some of these PVOs are CARE, Catholic Relief Services, OXFAM, Church World Services, World Neighbors, and Partners of the Americas. In many cases, these collaborative efforts have included host country governments, PVOs, USAID, and Peace Corps.

Peace Corps Volunteers have worked on a variety of programs which are implemented and supported by the Smithsonian Institution. These include a crab production program in the Dominican Republic, a marine fisheries survey in Tunisia, and a survey of native fish species in Paraguay.

There have also been several cases where development agencies similar to USAID from other countries have requested Peace Corps assistance, or provided support to on-going Peace Corps activities. An example is the support provided by the German Technical Assistance Agency (GTZ). GTZ supports a fish culture program in Liberia and a marine fisheries program in Sierra Leone. GTZ is also actively pursuing other collaborative efforts with Peace Corps.

Moreover, support has been received from private sources in the United States. For example, IBM has provided funds for training and equipment to Zaire. The Food Industry Crusade Against Hunger provides financial support for the fish culture project in Burundi.

In addition to the organizations and agencies already mentioned, technical support has been received from several American universities. The University of Rhode Island has provided support for marine fisheries programs. Auburn University, Louisiana State University, University of Arkansas at Pine Bluff, and the University of Oklahoma have all provided both technical materials and consultants to assist with the design and evaluation of fisheries programs.

Over the years, Peace Corps and other organizations and agencies have come to realize that development can better be achieved through collaborative efforts. As a result of this realization, and because of the reputation that many Peace Corps fisheries programs have as being excellent examples of small-scale development programs, these collaborative efforts are expanding. It is hoped that such efforts will continue in the future.

the fishermen and farmers with whom the Volunteers work. The combination of protein and income has improved the standard of living of these individuals and their families as well as other members of their communities.

In Rea's perspective, "In the short term,

fisheries projects provide protein and income. In the long term they lead to improved health, self-reliance, and employment. They offer a future. That's why Peace Corps fisheries programs, and the Volunteers who serve in those programs, have such a vital role in development."

Networking

Periodicals From ICE

Peace Corps Volunteers and staff often find it difficult to keep informed of current happenings and developments in their fields of expertise. The ICE staff hopes to help alleviate that problem by distributing a number of the most relevant periodicals in various sector areas. Periodicals contain very timely information on a topic and often include book reviews, lists of up-coming conferences and events, and checklists of sources for additional information and products.

The following list summarizes those periodicals which ICE currently distributes. These periodicals have a wide appeal and represent some of the best development material published. During the recent materials review sessions, the Sector Specialists and ICE identified other periodicals for future distribution. Many other excellent periodicals exist and some publishers have offered their publications at a free or reduced rate. Please see the ICE pamphlet *Free and Reduced Rate Periodical List* for full details. ICE welcomes suggestions for other technical periodicals that may also be of interest to Volunteers worldwide to be included in our regular distribution or in the pamphlet.

Unless otherwise stated, ICE distributes copies of all periodicals in English to all countries.

AGRICULTURE

ECHO Development Notes

Educational Concerns and Health Organization (Published irregularly).

News from those farmers working with the "underutilized" crops from the ECHO seeds.

APPROPRIATE TECHNOLOGY/ MULTI-DISCIPLINARY

Appropriate Technology

IT Publications (Published quarterly).

Contains articles on a variety of AT subjects and includes conference listings and book reviews.

BOSTID Developments

National Academy of Sciences. Board on Science and Technology for International Development. (Published irregularly).

Discussions of new research and current trends. Includes news on conferences and publications.

FORESTRY

American Forests

American Forestry Association (Published monthly).

Development International

Development International, Inc.

(Published bimonthly)

Premier issue published November/December 1986 describes this periodical as a magazine written for development professionals. Includes articles on various sector topics, a resources section that lists organizations and materials of interest, book reviews, and other information.

TechNews/SCF Exchange; Mothers Too

Save the Children Federation (Published three times a year).

Issues of TechNews/SCF and Mothers Too alternate. TechNews highlights different projects and technologies and includes sections on training. Includes lengthy book reviews and a calendar of conferences and other events.

EDUCATION

Development Communications Report

Clearinghouse on Development Communication (Published quarterly).

Outlines important application of development communications and includes tips on using technologies. Issues contain a communicator's checklist which summarizes the latest publications in the field which are available from Educational Resources Information Clearinghouse (ERIC).

English Teaching Forum

United States Information Agency (Published quarterly).

Contains numerous articles by Teaching English as a Foreign Language (TEFL) practitioners throughout the world (most recent issue included an article by a Peace Corps Volunteer).

Teaching Exceptional Children

The Council for Exceptional Children (Published quarterly).

In-depth articles on working with disabled or retarded children. Includes book reviews and a calendar.

FORESTRY

American Forests

American Forestry Association (Published monthly).

Articles on all types of forestry issues. This periodical will help to keep foresters in touch with worldwide trends in their field. (Note: Members of the American Forestry Association have donated subscriptions for PCVs.)

HEALTH

Dialogue on Diarrhea.

Appropriate Health Resources & Technologies Action Group Ltd. (Published quarterly). [also distributed in French and Spanish]

Numerous articles highlighting techniques for diarrheal control. Also reviews publications, products, and technologies of interest.



Logo from Dialogue on Diarrhoea

Health Technology Directions

Program for Appropriate Technologies in Health (Published bimonthly).

Articles on various technologies. Reviews books and materials.

L.I.F.E. Newsletter

League for International Food Education (Published bimonthly).

Provides an update of projects and research findings in areas relating to food and nutrition in the developing world. Reviews new publications related to health and food issues.

Mothers and Children: Bulletin on Infant Feeding and Maternal Nutrition

American Public Health Association (Published three times a year) [also distributed in Spanish and French].

Written for health professionals, nutritionists, and others working in developing countries. Addresses issues of nutrition and infant feeding, and contains excellent suggestions for preparing educational materials and curricula on this subject.

Population Reports

Johns Hopkins University
(Published bimonthly).

Contains detailed information on population issues for the health profession. Issues focus on different topics related to population, such as involving men in family planning programs. Includes a bibliography of the topic.

Salubritas

American Public Health Association
(Published bimonthly)

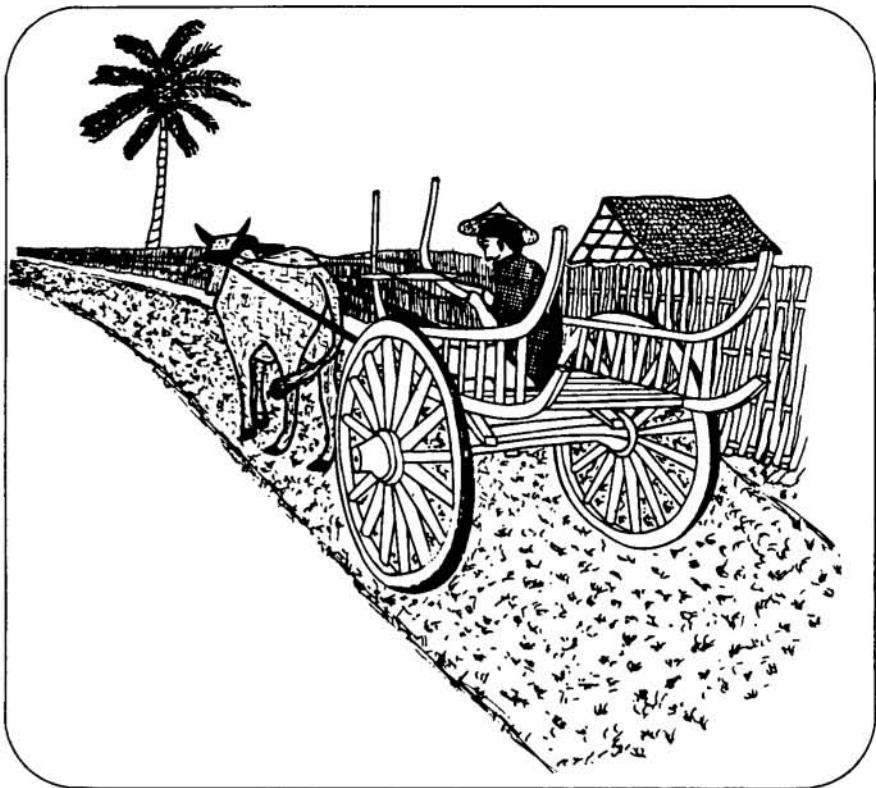
Covers general public health issues.

WATER/SANITATION

Waterlines

IT Publications (Published quarterly)

Addresses the problems of technology as they relate to water and sanitation in developing countries. Offers insights into ongoing projects, and suggestions for tools and equipment. Also includes a section on useful technical publications.



From: *Fear and Loathing on the Agricultural Trail*

WOMEN IN DEVELOPMENT

The Tribune

International Women's Tribune Center
(Published quarterly). [also distributed in French and Spanish]

Highlights projects and ideas of interest to those working with women in development projects.

FEAR AND LOATHING ON THE AGRICULTURE TRAIL: A GUIDE TO AGRICULTURE AND NUTRITION RESOURCES IN THAILAND

This 154-page guide compiled by Peace Corps/Thailand is extremely useful to anyone seeking information sources and materials in Thailand. The first part explains

the resources and services of various Thai information providers, such as research stations, booksellers, libraries, and embassies. Books, periodicals, films, and other materials on specific topics are also reviewed in this section. The second part provides factual information on nutrition, construction, and agriculture concerns in Thailand. Peace Corps/Thailand will be happy to provide a copy to other countries interested in using it as a model to develop a resource manual of their own.

Sector Updates

AGRICULTURE

Complete Guide to Pest Control, by George W. Ware. 1980 (Thompson Publications, P.O. Box 9335, Fresno, CA 93791) 290 pp. \$18.50.

Do it yourself guide to controlling pests both in the home and in the garden. Focuses mainly on pests that frequently appear in suburban and urban areas of North America, though it can be adapted to other countries. Includes information on the use of pesticides. Emphasizes both chemical and non-chemical controls. Covers garden pests and plant diseases, human and house

plant pests, and rodents. Chapters include information on equipment and specific measures to use for particular pests.

Available free through ICE to all PCVs and staff working in related projects.

A Golden's Guide to Insect Pests, by George S. Fichter. 1966 (Western Publishing Company, Inc., 1220 Mound Avenue, Racine, Wisconsin 53404) 160pp. \$2.95.

Well-illustrated guide lists over 350 common insect pests of plants, animals, and households. Summary essays include

pests' physical appearance, reproduction cycle, dietary and environmental preferences, and methods and effects of attacks. Lists common enemies of poultry, livestock, fruits, and field and forage crops. Suggests best times and methods for control. Broad enough to be useful in many regions where insect infestations are a problem.

Available free through ICE to all PCVs and staff working in related projects.

Pest Control in Rice, Centre for Overseas Pest Research. 1982 (Tropical Development

and Research Institute, College House, Wrights Lane, London W8 5SJ, England) 295pp. \$3.50.

Comprehensive, detailed handbook of information on all aspects of pest control in rice production. Covers the symptoms, development and spread, and control of the following pests: weeds, diseases, nematodes, molluscs, crustacea, insects and mites, birds, and rodents. Includes photographs, charts, and drawings.

Available free through ICE to PC offices/resource centers in country only.

Pest Control in Tropical Root Crops, Centre for Overseas Pest Research (Tropical Development and Research Institute, College House, Wrights Lane, London W8 5SJ, England) 236pp. \$3.75.

Pest control methods for cassava, sweet potatoes, yams, taro, and other aroids. Examines rodent control and crop storage, as well as disease, nematode, and insect restraints. Numerous photos and diagrams. Complete with section bibliographies and index.

Available free through ICE to all PCVs and staff working in related projects.

Pest Control in Bananas, edited by Susan D. Feakin. 1977 (Tropical Development and Research Institute, College House, Wrights Lane, London W8 5SJ, England) 127pp. \$1.50.

Written in light of changes in varieties of bananas grown and in chemical pest control. Discusses problems of disease, nematode, weed, and insect control. Replete with illustrative photos and diagrams. Includes appendices, index, and glossary.

Available free through ICE to all PCVs and staff working in related projects.

Pest Control in Groundnuts, edited by Susan D. Feakin. 1973 (Tropical Development and Research Institute, College House, Wrights Lane, London W8 5SJ, England) 197pp. \$2.25.

Comprehensive, detailed handbook of information on all aspects of pest control in groundnut production. Covers the symptoms, development, spread, and control of the following pests: weeds, diseases, nematodes, insects, and mites. Pest controls are both chemical and non-chemical. Includes photographs, charts, and drawings.

Available free through ICE to PC offices/resource centers in country only.

EDUCATION

Creative Curriculum for Early Childhood, from Creative Associates. 1979 (Creative Associates, Inc., 3201 New Mexico Ave., NW, Washington, DC 20016) ordered as a set, \$59.95.

Curriculum manuals provide guidance in using materials and play/work spaces. Presents practical approaches to foster intellectual, socio/emotional, and physical development of children. Trainer's Guides for each booklet follow workshop approach. Illustrated. Step-by-step reference guides. Order as a set. The following booklets are included:

- **Blocks.** Maximizing learning from blocks: teacher's role in listening, observing, facilitating, and extending block play.
- **Table Toys.** Teacher's role in structuring, extending use of toys. Describes inexpensive toys to make.
- **Art.** Philosophy and approach to setting up creative art program. Suggestions for printing, painting, collage, weaving, and puppetry.
- **House Corner.** Criteria for observing and assessing children's ability in socio-dramatic play. Suggestions for play area and materials.
- **Resource Materials.** Thorough annotated reviews on books for teachers, parents, and children on subjects of sand, water, clay, toys, books, blocks, art, and house corner. Criteria for evaluating children's books focused on Black and Hispanic Americans.

Available free through ICE to all PCVs and staff working in related projects.

The New Mathematics and an Old Culture, by John Gay and Michael Cole. 1967 (ICE Reprint, 1986) 100pp. Free.

A case study investigation aimed at improving the teaching of mathematics in Africa. Aims to apply the teaching of mathematics to other areas of learning by evaluating the cultural aspects of a tribe. Describes the student's chances of success and of what teachers can do to make success possible.

Available free through ICE to all PCVs and staff working in related projects.

Handbook for Volunteer ESL Literacy, by Kathy Kuy and Bob Thomas. 1985 (International Institute of Boston, 287 Commonwealth Avenue, Boston, MA 02115) 123pp. \$15.00.

A handbook for teaching literacy skills to adult students in ESL. Assumes a knowl-

edge of basic principles and lesson planning strategies. Provides approaches, ideas, resources, and information. Short and concise procedures. Good for all levels of literacy instruction.

Available free through ICE to all PCVs and staff working in related projects.

ENERGY

Peace Corps/Mali Woodstove Notes, by Peace Corps Woodstove Volunteers in Mali. 1983 (Corps de la Paix, B.P. 85, Bamako, Republique du Mali) 22pp. Free.

Based upon experiences and efforts to build woodstoves in Mali, Volunteers give techniques on improved woodstoves. Provides building instructions and illustrations for a chimneyless woodstove. Can be adapted to woodstove projects worldwide.

Available free through ICE to all PCVs and staff working in related projects.

Small Project Assistance Program (S.P.A.)

The S.P.A. Program is a unique program which joins the human resource capabilities of the Peace Corps and the financial resources of the Agency for International Development. The program, established in 1983, currently supports small self-help efforts through direct grants to community organizations in 35 countries.

There are two components to the S.P.A. program: the S.P.A. fund which directly supports community projects; and the Technical Assistance (T.A.) Agreement which provides training and technical advice to PCVs, staff and Host Country Nationals who are working on field projects.

S.P.A. grants are made by PC/Country Offices to community groups working with PCVs in the areas of food production, small enterprise development, renewable energies and health.

Funds are available through PC/Washington to provide in-service training for PCVs and HCNs, and to provide program consultants for countries. The T.A. activities stimulate and/or directly support S.P.A. projects.

If you have an idea for a project in your community in one of the above areas, more information is available from PC country offices or by writing the S.P.A. Coordinator, OTAPS, PC/Washington.

(Fisheries from page 17)

Step 4—After the mantle glows brightly or has passed the second stage, slowly begin covering the primary air ports to see the effect upon the light level. Adjust the primary air ports until the mantle produces the most light.

Step 5—Allow the lamp to operate at least 20 minutes. Adjust the lamp a second time. Often a lamp will require more primary air after it has become hot. Some lamps which perform well when cold do not perform well when hot. It is therefore necessary to perform the second adjustment. Some lamps require either a smaller jet, a modified diffuser, or a different size mantle to operate properly for long periods of time.

Fuel-Saving Cookstoves, GATE. 1980 (GATE, Dag Hammarskjold, WEG1 D6236 Eschborn, Germany) 128pp. \$15.00.

Guidelines for a development worker on how to introduce and develop a cookstove appropriate for the local population. Emphasizes the cultural, ecological and economic considerations that affect selection of a stove design. Also includes building instructions with diagrams for several types of cookstoves.

Available free through ICE to all PCVs and staff working in related projects.

FISHERIES

Preliminary Bibliography of Rice-Fish Culture, by Rosalinda M. Temprosa and Ziad H. Shehadeb. 1980 (International Center for Living Aquatic Resources Management, MCC P.O. Box 1501, Makati Metro Manila, Philippines) 20pp. \$4.50.

Prepared as a supplement to an integrated agriculture-aquaculture farming systems conference. References center on the farming of fish together with rice. Articles and reports mostly available from the ICLARM Library.

Available free through ICE to PC offices/resource centers in country only.

The Fishing Cadet's Handbook, by A. Hodson. 1970 (Fishing News Books Ltd., 1 Long Garden Walk, Farnham, Surrey, England) 108pp. \$3.75.

A guide to commercial fishing written primarily for the beginner. Introduces basic facts needed before going to sea. Details the rigging and equipment of the most commonly used items on a fishing vessel. Describes the layout and structure of common types of trawlers. Also discusses how to care for the catch and includes important safety rules for the sea. For PCVs in marine fisheries projects.

Available free through ICE to all PCVs and staff working in related projects.

Theory and Management of Tropical Multispecies Stock, by D. Pauly and G.I. Murphy. 1982 (International Center for Living Aquatic Resources Management, MCC P.O. Box 1501, Makati Metro Manila, Philippines) 360pp. \$6.50.

Proceedings of an international workshop held in 1981. Theme of the workshop is on the need for a coherent body of rules to govern fisheries management and to lead to a rational use of fisheries resources. Emphasizes need to build understanding of multispecies relationships. Includes several models for multispecies stock assessment. Concludes with recommendations for action which are targeted at Southeast Asia, but which have world-wide applicability.

Available free through ICE to PC offices/resource centers in country only.

SMALL ENTERPRISE DEVELOPMENT

Expanding The External Market for Third World Crafts: The Role of Alternative Marketing Organizations, by Jacqui Starkey and Maryanne Dulansey. 1976 (ICE Reprint, 1983) 21pp. Free.

Discusses the role of alternative marketing organizations, those groups which provide an external market outlet for Third World goods as a means to promote self-help development. Argues that the involvement of AMOs actually impedes development because they limit the ability of Third World producers from gaining a larger share of the market, create a dependent relationship, and curtail development of organizational, managerial, and productive skills on the part of the producer. Recommends action that should be taken to give Third World producers greater control in the process of marketing and exporting.

Available free through ICE to all PCVs and staff.

Promotion of Crafts and Small-Scale Industries in Rural Areas. 1981 (Mount Carmel International Training Centre for Community Development, 12 David Pinsky Street, 34351 Haifa, Israel) 49pp. \$2.00.

Report on a workshop held in 1981, on small-scale industries. Participants were those who held a leadership role in the community: managers, teachers, community development workers. Included lectures and the simulated implementation of income generating projects. Discusses the steps to take for the successful promotion of crafts and the introduction of small-scale industries.

Available free through ICE to all PCVs and staff working in related projects.

Creating a Market, 1968 (International Labor Organization, CH-1211, Geneva 7Z2, Switzerland) 178pp. \$7.50.

Introduction to the main principles of marketing. Directed at those beginning the study of marketing or those needing a refresher course. Discusses how to create a market for a service or a product by actively seeking customers. Chapters include principles of market research, printing, advertising, and sales promotion. Can be used as a training tool, a framework for a marketing course, or as a self-instructional book. Includes chapter reviews and self-testing.

Available free through ICE to all PCVs and staff working in related projects.

Publications listed as "available through ICE" are free to PCVs and staff according to the distribution policy indicated for each title. For the benefit of our non-Peace Corps readers, complete ordering information has been provided for all titles.

PCVs and staff may order ICE publications by letter or cable from: Peace Corps Information Collection and Exchange, Rm M-701, 806 Connecticut Avenue N.W., Washington, D.C. 20526 USA.

Please note: additional copies of limited-distribution titles and materials which are listed as "not currently available from ICE" must be purchased directly from the publisher using in-country funds. PCVs should contact their in-country staff regarding assistance in making these work-related purchases.