to assess the impact of train-ing, the researchers have tried

to identify the difference be-

tween pre-training and post-

training income of the trained

farmers. If income/return is

higher in post-training period,

the impact of training is de-

meet their family require-

ments, but they also sell their

surplus produce to the local

market and earn substantial

profit. For example, one

trained farmer informs that he

has carned Tk 8000 against

investment of Tk 1000 exclu-

sively in "karola" production.

This is a typical case in this

power is a resource by itself.

Trained farmers do not culti-

vate haphazardly. On being ac-

quainted with modern tech-

nology through training, the

farmers have now developed

capability to systematize the

productivity at much higher

level. The specific positive re-

to detect unfriendly and

friendly insects are nourished

for their multiplication and

entific and indigenous meth-

ods to destroy harmful in-

sects/pests in a non-chemical

way. This minimises cost and

prevents environmental pollu-

oped the skill of growing

green manure in their cul-

the cost of fertilizers.

secticides.

tivable land and thus can save

appropriate and balanced

quantity of fertilizers and in-

to make optimal use of their

4) They are now able to use

5) The farmers are now able

3) The farmers have devel-

2) The farmers can use sci-

harmful ones are eliminated.

friendly insects/pests. The

1) The farmers are now able

sults of training are :

mode of cultivation and raise

Trained agricultural man-

After training they not only

cidedly positive.

## Higher Productivity Through Decentralized Training

tivity are linked to each other. The fact that effective training has a positive impact on productivity is also true of agriculture. In order to raise agricultural productivity. the Government of Bangladesh has been emphasising training to improve farmer's efficiency in augmenting agricultural productivity. With this end in view, training activities have been decentralised at the grass-roots level for transferring modern agricultural technology to the farmèrs.

Within the framework of decentralized training for higher agricultural productivity, the Ministry of Agriculture has created Bashaid Agricultural Demonstration and Training Project (BADTP) at Bashaid village under Savar upazila. The Upazila Agriculture Office (UAO) has been delivering extension facilities to the farmers of this village since October 25, 1988.

An empirical study was recently conducted to look at the structural and process dimensions of UAO and to assess the impact of decentralised training on local agricultural productivity. It was possible to elicit the client response to the extension facilities provided by UAO. The study addresses the questions — (a) What kinds of agricultural technology are being transferred or desseminated to the farmers of Bashaid? and (b) What is the impact of training on the productivity of the local farmers?

The members of BADTP are the direct beneficiary of decentralised agricultural extension and training provided by Upazila Agricultural Office. UAO is helping implementation of national goal of self-reliance in food by creating trained agricultural manpower. Self-sufficiency in food is directly linked to the augmentation of productivity which is in turn the result of advanced technology transferred to the stakeholders i.e. the farmers. The Ministry of Agriculture has a vision to convert this project into a model agricultural ex-

NATIVCIDAD, Philippines

Laid out abundantly on

makeshift wooden trays to dry,

Nana Julia's summer harvest of

green onion bulbs suggest a

promise of prosperity - of

rubber sandals and umbrellas

for the children when they go

to school at the onset of the

rainy season, of a new radio, of

full stomachs at lest until the

thought. Virtually all her

neighbours in this small

Philippine town have also

planted onions of the same

more perishable variety. The

bulk buyers will come,

shrewdly assess the farmers'

need to sell quickly, and get

"I'm through with onions,"

But she does not known

who to ask about alternative

crops and technology. She is

shy about going to the bank

and will probably finance her

next crop from meagre sav-

ings, or borrow from the

owner of the land she tills.

Like other farmers in the vil-

OFFICIAL SUPPORT

FURTHER STIMULATE

THE PRACTICE.

AND INNOVATIVE PUBLIC

**EDUCATION PROGRAMS** 

THUS, BET WEEN THE EARLY

CEPTIVE USE IN DEVELOPING

1960's AND 1983, CONTRA-

COUNTRIES ROSE SHARPLY

THOM 10% TO 45%.

5 5 (GU) E...

the lot for a pittance.

she decides.

Nana Julia dismisses the

next harvest.

## The Case of Bashaid Village

Syed Naquib Muslim and Dihidar Zafar Ahmed

tension agency so that it may be replicated to other rural areas of Bangladesh.

The goals of the project in operation are:

- to motivate and energise the farmers to use modern technology in response to local

- to produce improved variety of seeds appropriate to - to facilitate availability of all agricultural inputs including

agricultural credit, - to impart need-based training to the local farmers and agricultural workers, and - to increase farmers' productivity aimed at improve-

ment of their quality of life.

The project is funded by the Ministry of Agriculture and a nominal financial assistance is provided by UNDP on the head of training allowance and training aid. It has the command area of 80.92 acres of land to cover extension facilities to 69 farmers. The project is managing a power-driven deep tubewell. An amount of Tk. 2,20000 was allocated to the project to run itself for the initial year of its operation.

One of the functions of UAO is to provide training to the farmers who are the formal members of the project. The central objective of training is to transfer knowledge and skills to the member-farmers to enable them to raise agricultural productivity of the nonmember farmers of Bashaid. In this sense, the trained farmers themselves in turn act as informal trainers to the traditional non-member farmers of Bashaid and its adjoining areas. The officers of UAO however work as formal trainers of the member-farmers of the BADTP. They are specialized in the respective fields of agricultural technology. The titles of the core courses offered by the UAO include --

Multi-crop Demonstration Integrated Pest Manage ment, and

Crop Production Techno-

These courses which are highly intensive in nature span from 2 to 3 days and the size of the participants varies from 15 to 50 depending upon re-sponses, needs of the farmers and seasonal conditions. Additionally, the trainers provide on-the-spot coaching basing on the needs voluntarily expressed by the farmers contending with the practical problems in the field situation. High level experts of agriculture very often come from the Dhaka central office "Khamar Bart" to deliver lectures on important topics of agricultural technology.

From the survey it is evident that the target group of farmers is very eager to get acquainted with new technology. The farmers participate spontaneously in the training courses organized by the UAO, Savar. The officers do not have to worry about mobilizing the illiterate farmers as it reportedly happens in the case of family welfare workers because of socio-economic factors in this country.

Papers on cultivation procedures, insect-preserving bottles are distributed to the trainee-farmers. Pictorial posters with educative guidelines are used to illustrate pest control measures or ways of detecting harmful pests or insects. Sweeping nests are demonstrated to the farmers so that they can use them to identify harmful insects for their subsequent climination. They are taught through demonstration lectures the techniques of using a special category of lantern for killing enemy-insects.

The study indicates that training provided by the UAO has proved useful to the target group. Hundred per cent of the respondent-farmers report that they are being immensely benefited by training. Though initial cost is high, they ulti-

tion. Naturally they receive continual return from their land. By way of maximising their income, they also go for production of two different crops at a time and in the same land with little additional mately gain higher profit through application of modern techniques and tools. In order

6) The trained farmers now use improved variety of seeds i.e. high yielding variety withholding use of traditional ones.

7) Traditionally, they used to sow paddy scedlings in a haphazard way. Consequently, yield per acre was not optimal; but now after training farmers have replaced broadcasting cultivation pattern by linesowing which fetch them much higher return out of their investment.

Earlier the farmers used to produce only a few variety of crops e.g. aus, aman, IRRI, brinjal, karola, chillies etc. After training, they diversify their crop production and produce BRRI-3,4,11,20,22, potato, wheat, karola, cabbage, matze, papya, jhinga, and a wide variety of leafy vegetables.

Another positive aspect of training is that it has created high motivation among the farmers in increasing their productivity level. They are now aware of their importance as contributors to the national programme of self-reliance in food. They have developed a scientific mode of cultivation replacing the traditional approach. Training has also created in them propensity for profit-oriented investment, spirit of entrepreneurship and risk-taking. They now feel revived and are eager to make more contribution to the national income i.e. GDP.

"Small is beautiful" - says Schumacher. Small is not only beautiful but can often be more efficient. The UAO of Savar upazila organizes training for BADTP members through a small constituent at the upazila complex. Its efficiency and programme efficacy will depend on a number of factors. Building of permanent structure, regular organizing of season-based demonstration of technology, provision of at-



tractive incentives/gifts such as agricultural implements to

the trainee-farmers, and rou-

tine follow-up procedures are

some of the factors that can

help in making training useful.

On the whole, the UAO must continue its training operation if technology is to really reach the rural poor for the improvement of their quality of life and resultant increase of

our national income. Farmers of other villages of Bangladesh may follow the style and practices of farmers of Bashaid village in order to improve their quality of life.

lands by practising crop rota-Lack of access to land, credit and various facilities continues to prevent villagers from improving their lot, and women have an even tougher time of it. by Estrella M. Maniouis -

## A Tough Row to Hoe for Female Farmers

lage, she has not explored other marketing mechanisms and will probably just wait for the buyers to come round

Nana Julia typifies the countless women engaged in farming who are seldom noticed by policy planners and extension workers. When one hears the word "farmer" one seldom thinks of women even though, without them, many sectors of agricultural

economies would collapse. Lack of access told land, to credit and to various facilities continues to prevent rural workers in the developing

PEOPLE VOLUNTARILY LIMIT THE SIZE OF

QUALITY SERVICES ARE

AVAILABLE.

PERJOD,

THE PRACTICE OF FAMILY PLANNING SEEMS TO

SPREAD THE WORD AND ENCOURAGE

OTHER COUPLES TO COME IN. POI-7

ASSUME A LIFE OF ITS OWN ONCE A SUCCESSFUL

PROGRAM GETS UNDER WAY: EVEN WHEN THERE

IS LITTLE DEMAND AT THE START, SATISFIED USERS

THE AVERAGE

BIRTHS PER WO-

**DEPTHnews** 

NUMBER OF

THEIR FAMILIES IF 6000-

world from improving their lot, notes the Food and Agriculture Organisation (FAO) in a recent report to its agriculture committee.

Women, however, have a tougher time of it than men. \*For social and economic reasons, women's constraints are even more pronounced and, in general, development interventions that seek to remove constraints for poor farmers do not reach women," says the

Projects for women are more oriented toward "home economics" and frequently have a negative effect both on development objectives and women themselves, the FAO paper adds.

The problem of access to land, for example, is compounded in the case of women by inheritance laws and customs that restrict female ownership and tenancy.

Except in a few cases, agrarian reform programmes also put land beyond the reach of women, by stipulating that beneficiaries be heads of households or cooperative members. Customarily these are male, the paper notes.

Certain land privatisation and titling schemes are such that they not only fail to give land to the landless but can also erode women's rights to communal land. Without land, women may have difficulty getting credit and other facili-

Insecure tenancy further limits their ability to plan production, especially in longterm activities like planting trees, and to take part in sofl and water conservation strate-

Not having the required assets, women cannot borrow for rural banks even if they know about such services. Credit from alternative sources can be just as inaccessible, the FAO points out, since these sources normally channel funds through co-operatives, mostly composed of men.

T is going to take a long time to make the place they once called the Pearl of the Mediterranean glisten again. But in Beirut, a start is being made.

Now that warring militias have stopped inflicting new damage on the Lebanese capital, the monumental task of fixing a city pummelled by 16 years of civil war is underway in earnest.

In the short term the goal is to clean up the war debris while longer term plans are made for restoring the city's tattered electricity, water and telephone networks. The same massive reconstruction is planned for the country.

The flagship project, and one hoped to give a psychological boost to the country, could be a lavish redevelopment of Beirut's 1.5-square kilometre downtown district. Once home to the world's fifth-largest banking centre, it was virtually obliterated by the war.

A \$2 billion redevelopment plan that would turn the whole area over to a private company made up of property owners and investors is now before the Lebanese parliament.

Beirut residents still get only six hours of electricity daily (most have generators now), international phone calls are impossible from home and local ones tough, and virtually no water comes through the public system because 60 per cent of the supply leaks into the ground.

But the city is getting cleaner. An emergency operation has already carted away 10,000 square metres of sand from city streets and dredged 3,000 square metres of garbage out of its sewers. A fleet of 50 new garbage trucks is busy hauling 500 tonnes of refuse daily. For now the garbage is being landfilled in a site beside the downtown port district.

A senior official involved in the clean-up said: "In three or four months we will have a different Beirut - not the Beirut we want, but it will be more liveable."

The clean-up is co-ordinated by the Council for Development and Reconstruction (CDR), a government agency created in 1977 but straitjacketed over the years by recurring, increasingly violent clashes between factions in Lebanon's civil war.

After Syrian and Lebanese forces routed rebel Christian General Michel Aoun last

## Garbage Fleet Begins the Great Lebanon Cleanup

Rebel Christian militia leader General Michel Aoun was spirited away by submarine to take asylum in France — an act that could mark one of the last chapters in Lebanon's 16-year civil war. But the legacy of the fighting — the country's shattered infrastructure — will be around much longer. Gemini News Service reports on the emergency clean-up in Beirut and long-term plans to rebuild the country. by Allan Thompson

October, sectarian militias that had turned Betrut into a battleground over the years agreed to put down their weapons and pull out.

Their departure erased the fabled Green Line that divided the city into Muslim and Christian sectors and left Beirut in the hands of the Lebanese government and army for the first time since war began in 1974.

Under CDR supervision, most of the work is being done by construction company Oger Lebanon, owned by Rafic Hariri, a Lebanese-born Saudi millionaire. It is being paid for by a \$60 million donation from Saudi Arabia, but millions more will be needed for anything more than cosmetic work.

One problem has been assessing the damage and setting priorities for action. Said the official: "The government has been avoiding gathering any statistics because they don't want to show that the Christians aren't the majority anymore."

In 1987 the Hariri Foundation conducted the first comprehensive study of Lebanon's needs for development and rehabilitation. That study, which covered infrastructure in 2,037 centres, has since been updated and is now being used as the basis for a further study by construction firm Bechtel, also paid for by Hariri. The Bechtel study, expected in October, will lay the groundwork for a long-term reconstructing plan for the whole

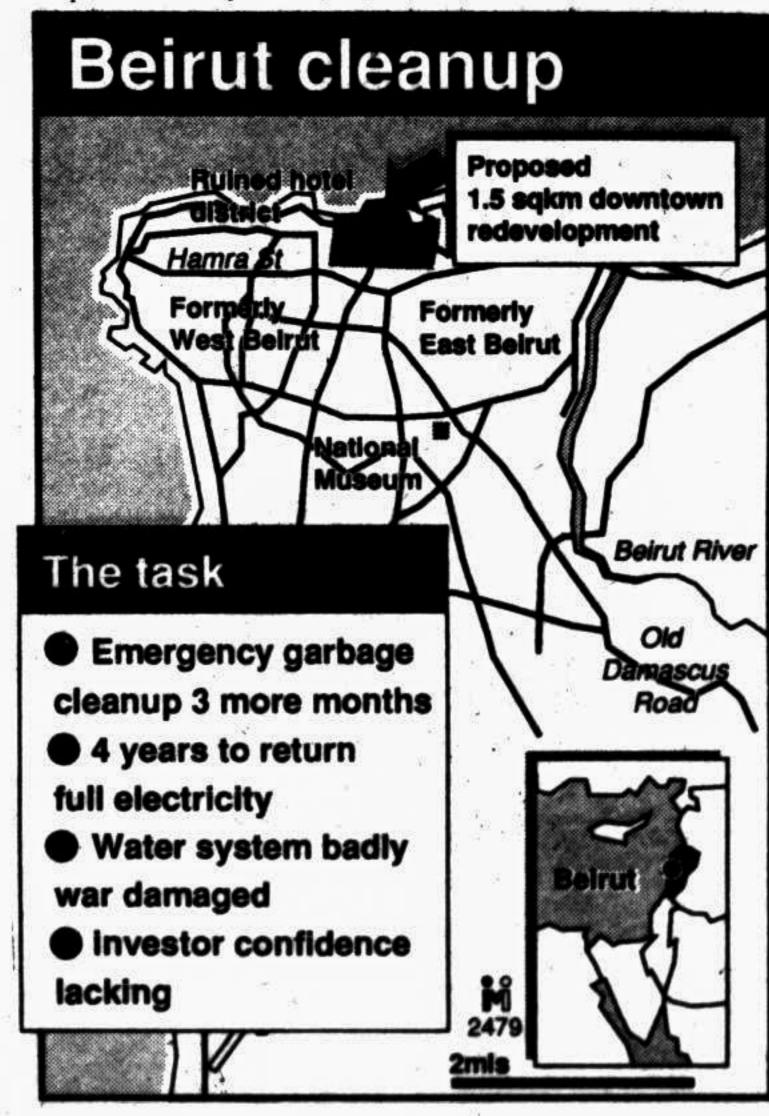
country. To promote the current clean-up effort, the CDR has begun a TV campaign with snappy jingles urging Beirutis to put their garbage out only between 2 and 4 pm. Trucks do pickup from 4 to 8 pm.

The CDR is hoping to offer Beirutis 12 hours of electricity a day within the next few months, but insiders are doubtful. They predict is will be four years before full power is

restored. Walk down any Beirut street and above you will see a spaghetti-like maze of wires running in every direction. With official power supplies lacking, the innovative Lebanese modified the system - in the process nearly destroying

it. And officials estimate it will take more than \$400 million and four years to install proper telecommunications

system. The greatest single problem will be money. Lebanon had deals worth \$100 million with Italy, France, Germany and the EC for redevelopment funds. Those were frozen by the war and the CDR hopes the money can now be released.



The CDR also expects the World Bank to reconsider its 1985 freeze on development

funds for Lebanon. The great hope, however, is that the Lebanese themselves, particularly the hundreds of thousands who fled during the

war, will return and invest. "We will rely mainly on Lebanese private money," said Ali Serhal, adviser to CDR President Fadl Chalak. "There are many Lebanese with enough funds to invest. If they can come here and say they are confident enough to invest in their own country again then others would follow."

The International Monetary Fund estimates that expatriate Lebanese hold \$15-\$20 billion abroad. Of the money returning, much seems to be going after property. Bombed out buildings sell for hundreds of thousands, even millions.

But the CDR is hoping that Lebanese will soon be chasing after one of the biggest urban developments in the Mediterranean - the \$2 billion reconstruction of downtown

The downtown, once home to Middle East offices of all the world's major banks, is still a ghost town. The opera stands in ruins around the corner from a bombed-out cathedral and 500-year-old mosque. Now curious tourists return to the Martyr's Square to pose for photos beneath a bullet-ridden statue shadowed by the ominous skeletons of buildings. Considerable restoration work done in the early Eighties was once again blasted into ruins.

The CDR sees the restoration of the downtown as the key to restoring confidence in the Lebanese economy.

"The downtown is the main ecopomic and financial centre for all Lebanon, so it must be considered as a whole. That would really mean the return of a national economy," Serhal said. "It could trigger the process of economic recovery for the country."

A modest recovery has already begun. More than 20 navigation companiés have returned to Beirut port, once one of the busiest in the Mediterranean, but volume is still only half pre-war levels. Some 14 foreign airlines, including Air France and KLM, have come back to Beirut International Airport.

But some analysts say The political climate must change before international confidence will be restored. "Would you give money to (President) Elias Hrawi and his gang?" asked a senior Lebanese. Added another observer: "Who is going to sink any money into a country controlled by Syria?" - GEMINI NEWS