by Stephen F Minkin

through canals to beels and the

floodplain every year. This

resource, however, is rapidly

declining and higher fish pri-

ces, and increased fish scarcity

have become a major national

flood control projects on fish

in Bangladesh has been well

documented while the agricul-

tural and other benefits of

many of the most costly pro-

jects are doubtful. Embank-

ments block or seriously delay

In the 1980's, the Master

Plan Organization estimated

that 2 million hectares will be

fully flood free another 1.4

million hectares will be greatly

changed by delayed flooding or

reduced surface water area. If

these estimates are accurate

one third of the floodplain fish

habitant will vanish by the year

2005. In additional, the river

training project designed in

connection with the Jamuna

bridge and new controversial

projects such as the Brahma-

putra right embankment in

Jamalpur (FAP 3.1.) the Tan-

gail CPP project (FAP 20), will

result in substantial losses in

will be an increased incidence

of nutritional disorders in

children. The fish species con-

sumed in Bangladesh differ

One inevitable consequence

natural fish availability

The negative impact of

concern.

flooding.

especially mola and dhela con-

tribute significant levels of vid tamin A to the diet. Puff

which are commonly con-

sumed are rich in protein,

and calcium while also provid-

ing both fat and vitamin A to

the diet. Rui and silver carp

while good sources of protein

are low in fat, vitamin A and

benefit from having a variety

of fish species in the diet. A

Consequences of Biodiversity

of Fish Species, found that

poor rural families consumed

between 50-75 fish species

during the course of the year

Landless, marginal and small

farmers depend on wild non-

tured and sold as mixed

species. Such mixed species

are rich in vitamin A. calcium.

fats, calories and protein

Other species relatively high in

fat such as shingi, taki, and

magur add to the diversity and

abundance in another wise

monotonous and nutritionally

deficient diet. These predator

fish provide about 30 per cent

by weigh of the fish consumed.

damage to children resulting

from the destruction of fish

habitats by embankments will

occur to nursing infants and

children under the age of 2

years. A well balanced diet is

especially critical for nursing

mothers, pregnant women and

young children. The nutrition

and fish study found thats

years consumed 52 species.

Fish was second only to

mother's milk as a source of

protein and vitamin A for chil-

dren under two years. Nur-

sing mothers consumed fish an

Most of the nutritional

Small fish are usually cap-

cultured species.

FAP study on the Nutritional

The greatest nutritional

calcium, hilsa is rich in fat,

=Feature ____ Development Monitoring Adjustment and Poverty in Bangladesh Embankments, Fish and Blindness

N Bangladesh, a low level of income and pervasive poverty make it imperative for the government to focus on poverty reduction as a major concern in development policy. While it is generally argued that rapid economic growth is the ultimate solution to poverty, it is widely recognized that the nature of the growth process has important implications for povertv Improved macroeconomic policy and rapid growth alone cannot enhance the prospects of the poor as their lack of human and other resources precludes them to benefit from the growth process. Therefore, poverty reduction focus must be integrated into the development strategy in Bangladesh for ensuring rapid improvements, in the conditions of the

Despite government efforts and implementation of various programmes targeted to the poor since independence in 1971, the success in poverty reduction has not been signifi-According to the Household 1988/89 Expenditure Survey (BBS) nearly 41 million (48 per cent) of the rural population and 11 million (44 per cent) of the urban population in Bangladesh live below the poverty line. During recent years, two major factors have been emphasized for limited success in targeting polices to the poor. The first refers to the inadequacy of available data on poverty. The principal data source for poverty analysis in Bangladesh is the periodic Household Expenditure Surveys (HES) of the BBS. The HES data provide a uni-dimensional measure of poverty which overlooks many important factors of the complex process of poverty. Designing effective strategies and programmes for poverty reduction requires reliable and timely data on multi-dimensional aspects of both the state and the process dimensions of poverty. Such information assists in understanding poverty in its manifold dimensions along with identification of the causalities. In particular, comprehensive information is necessary to view poverty in its totality, recognizing that it is both a cause as well as an effect, that it is dynamic, generating micro impacts and affected by changes in the macroeconomic scenario. The available information of HES is helpful in partial analysis of poverty as a state while the process dimensions of poverty remain beyond its scope. In other words analysis of the dynamism and inter-related nature of poverty and its causeeffect relationships cannot be adequately undertaken with existing HES data to provide critical inputs to the policy makers. The effective approach should be able to analyze poverty so as to identify the causal factors that bring

about poverty and those that perpetuate it. The second aspect of inadequacy in the analysis of poverty relates to the impact of macroeconomic policies on poverty. Bangladesh, in common with many other developing countries, is particularly vulnerable to external shocks and changes in the global economy. In order to remove domestic distortions and enhance the capacity to cope with exogenous shocks, the government has been implementing macro-economic reforms and structural adjustment (SA) policies since the 1980s. Such policies primarily emphasize macro-economic stabilization and economic efficiency rather than equality. This makes it imperative to examine their distributional consequences. In particular, it becomes necessary to examine as to how SA polices imping upon different household groups eg the poor. For Bangladesh, with the majority of the people living in poverty. it is important to examine whether the burden of adjust ment falls mainly on the poor or are they largely protected This is a critical policy issue in the country since if the efforts to use macro-policies to adjust the economy to changing international conditions and domestic macro-imbalances cause further deterioration in the plight of the poor, it would be necessary to implement complementary programmes targeted to the poor along with endeavours to devise 'povertysensitive' SA policies. The relevant policy in Bangladesh is to protect and assist the poor without distorting the economy. The correction of distortions are important since, if they persist, not only will economic recovery and growth be undermined but also the attainment of social goals.

In order to facilitate monitoring the poverty process and the impact of macroeconomic reforms in Bangladesh, the Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) has initiated a project. Monitoring Adjustment and Poverty (MAP) in 1992 with financial assistance

by Mustafa K. Mujeri

For policy analysis, such a General Equilibrium model can serve two useful purposes. First, it can serve as the basis for counter factual analysis on effects of SA policies. Secondly, the model can be used for policy purposes since it can serve as a laboratory to analyse the impact of alternative policy options and packages.

from International Development Research Centre (IDRC) and Canadian International Development Agency (CIDA). The project is being implemented in close collaboration with relevant national institutions eg BBS, the Planning Commission, and BIDS. CIRDAP is a regional, inter-government and autonomous institution established by the countries of the Asia Pacific region in 1979 with its headquarters in Dhaka. The main objectives of CIRDAP are to assist national action and promote regional cooperation with the aim of improving the socio-economic and living conditions of the poor and encouraging their participation in development.

Poverty Monitoring

System

The proposed Poverty Monitoring System (PMS) has been designed to establish and institutionalize a regular data monitoring system relating to multi-dimensional indicators of poverty and provide feedback to the policy makers. The particular dimensions to be used for such monitoring have been based on the Monitoring Adjustment and Poverty (MAP) framework. Within the framework the state of poverty reflects the levels of deprivation in basic human needs which prevent people from achieving acceptable levels of well-being eg physiologically-determined levels of survival, satisfaction of culturally-defined levels of basic physical needs, and social/qualitative forms of deprivation. The process of poverty within the framework is described in terms of changes in the value of two basic parameters - endowments and exchange entitlement - which determine the household's (individual's) capacity to attain acceptable levels of well-being and achievement.

The PMS, while combining the above two aspects, consists of a set of qualitative and quantitative indicators including core indicators in twelve areas of concern; income, nutrition, health, education. housing, access to community services, access to land, people's participation, crisis coping capacity, economic diversification, employment and public expenditures. Some of the notable fea

tures of the proposed PMS vis-

a-vis the existing methodology

in Bangladesh include the following: (i) It extends the existing largely uni-dimensional measure of poverty, provided by the Household Expenditure Survey (HES) to cover other indicators; (ii) It is built upon. and further elaborates and extends the work on monitoring rural poverty by the Bangladesh Institute of Development Studies (BIDS) and supported by the Like-Minded Group (LMG). This involves, among others, (a) addition of indicators for urban area and on nutritional aspects including regional variation; (b) addition of certain qualitative indicators e g access to state resources and services by the poor, their vulnerability and knowledge/awareness, and (c) gender dimension and intra-household and age-specific variations; (iii) It goes beyond simple 'status' monitoring to developing information and relates to both causal factors and policies/programmes. In particular, the system includes indicators most directly associated with SA policies and with the transmission channels through which these policies reach the poor; and (iv) It includes methodology for parallel monitoring and assessment of the impact of natural disasters as well as those of poverty alleviation projects/programmes. The PMS looks at the poverty syndrome from both the 'state' and the 'process' dimensions involving indicators at individual, household and community

It is expected that the PMS would substantially improve the coverage as well as overall design of the poverty survey in Bangladesh. In particular, improvements are expected through the following specific

i) attempts to eliminate delays between the time to data collection and their availability to policy makers, planners and researchers. This will largely be achieved through a combination of decentralizing, networking and use of computerized data management system.

ii) ensuring coverage of both urban and rural population representing the different geographical regions of Bangladesh.

iii) covering indicators for individual, household and community characteristics.

iv) conducting a single nation-wide survey on an annual basis to collect data pertaining to both rural as well as urban areas. This annual survey would be supplemented by another survey covering a large-number of households every five years.

Monitoring Impact of Economic Reforms

Monitoring the impact of economic reforms involves the investigation of the effectiveness of SA and other polices in achieving allocative efficiency as well as growth with emphasis on distributional impacts To facilitate the analysis of the impact of SA polices at the micro-level, the recent innovations in general equilibrium (GE) modeling have been proposed. The choice of such a framework is necessary since the major focus is to analyze the distributional consequences at the household level. The model framework can be made sufficiently detailed to study the effects of SA polices such as tariff rationalization. trade liberalization, privatization of public enterprises, in-

the villages has been affected by drought.

OR the poor of northern Bangladesh, disaster is

is the usual cause, in normal

years, flood and river ero-

sion can destroy livelihoods

and sometimes lives in an

instant. This year, lack of

water is posing a steadily

emerging threat as the im-

pact of drought intensifies.

Kurigram District, at the

mercy of the major rivers

which intersects its terri-

tory - Jamuna, Teesta,

Dharla and Dudkumar - is

normally recovering from

flood at this time. Instead,

low and seriously delayed

monsoon rains have af-

fected an estimated 25-30

per cent of the amon paddy

crop, both in the area

which could be trans-

planted and the likely final

yield. Landless labourers.

already struggling to make

ends meet during this tra-

ditional season, find that

wage rates have fallen as

never faraway and water

troduction of specific market oriented reforms, removal of subsidies ete and the impact of stabilization policies like cut ting public expenditures, devaluation of exchange rate. monetary contraction, reduction of domestic resource gap

The GE model thus provides a convenient means of identifying the channels through which SA or stabiliza tion policies affect the poor and the vulnerable groups in the society. In particular, the model could capture both direct and indirect effects on the poor via the labour market. goods market, financial markets and through taxes and transfers.

For policy analysis, such the General Equilibrium model can serve two useful purposes First, it can serve as the basis for counter factual analysis on effects of SA policies Secondly, the model can be used for policy purposes since it can serve as a laboratory to analyse the impact of alternative policy options and pack-

A class of 35 women receive instruction in 'survival education' to accompany relief payments of

Tk 200/- to women in Kurigram Sardar thana as part of the RDRS/ODA Drought Response

Project in northern Bangladesh. The older women are in poor condition, since even begging in

Dealing with Drought in Kurigram

by A M Ahmed

Taka 14/- per kilo.

low as Tk 10 per day and

still find work difficult to

find. In local markets, the

price of rice has risen to

Sardar, one young woman

Phakjon is attending a cash

for-survival education class

organised by the RDRS/

ODA Drought Response

Project. She is one of 35

worst affected families

attending the class to

obtain some immediate

support and to learn some

useful facts which may help

her over the difficult days

ahead. Her eyes show sig-

nificant anaemia. She and

her husband are landless.

living in a better-off neigh-

bour's house, and he could

find work only 2 days last

week. Next to her Fatima's

5 year old son looks badly

malnourished. Her husband

headed south to find work

near Bogra a month ago and

she has not heard from him

At Golabari, in Kurigram

However, the GE model framework can concentrate on the market aspects of income distribution so that several social and economic infrastruc tures may not feature explicitly in the model. The model results also preclude many intragroup and intra-household distributional issues. Within the MAP framework, these and related issues have been proposed to be addressed in terms of 'focus studies' to supplement modeling efforts. The studies are considered as composite and integral part of the development of the MPS as well as the analytical framework for monitoring economic

The final component of the MAP project relates to the development of a computerized information system for processing and retrieval of the above data and information and dissemination of the results keeping the policy makers as the ultimate end-user in mind. The focus is on ensuring flexibility and interface with other packages (e g GIS, spreadsheet, statistical softwares) so that complex messages are conveyed in simple ways to the policy makers, often a critical factor in transforming analysis into policy.

reform issues.

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ISH, especially small fish, play a major role in prevention of blindness and other nutritional disorders in Bangladesh. They are the principal source of animal food in the diet of the poor and are rich in vitamins, minerals, protein and fatty acids. The greatest nutritional benefits come from consuming a variety of fish species which are available from the rivers and floodplain. Vitamin - A deficiency remains a serious health prob-

lem in Bangladesh. Nutritional blindness suffered by thousands of children every year is the most visible evidence of the problem. The Helen Keller Foundation reports that "children with vitamin A deficiency have a risk of mortality 4-12 times higher than non deficient children." Other studies have shown that children with vitamin A deficiency have a higher risk of anemia diarrhoea and respiratory diseases than other children. Bangladesh, still has the most productive inland fish-

> eries in the world and one of the biologically richest. The country has more inland fish species than all of Europe. Estimates range from 260 to over 500 species when the close off shore river dependent species of the Bay of Bengal are considered. Most species consumed in Bangladesh depend on flooding. These fish, move from rivers

In another class held at Ulipur,

Salmal, a 30 year-old father

of 7 describes his problems

"my land was taken by the

river so now I work for

others as a day labourer. At

present the labour wage in

this area is Tk 10-12 but

there is no work now and

there has been little for the

last month. My family does

not eat much nowadays". He

hopes to find work again in

December when the rice

harvest will be ready. He

plans to spend the Tk

200/- he will receive on

food and some vegetable

in Hokadanga Primary School

nearby, another class seems

to comprise mainly old

women whose life is hard

in normal times and be-

comes almost impossible

when drought strikes.

Jabeda (65 years) was from

a big family but is now very

poor. She remembers when

rice was Taka 1 per maund.

intensifying hardship of vival education scheme.

Funded by the British High Commission and implemented by leading NGO Rangpur Dinajpur Rural Service (RDRS), these and related measures will provide some relief to the most vulnerable. Other measures, including intensified homegardening, fishpond excavation and survival credit will not only create short-term work but will promote longer-term opportunities for the poor.

Another, Bulbuli, does not know her age. Normally she begs food from the villagers, or eats arum from the field borders, or can find some paddy in fields once harvested. With her Tk 200, she plans to buy 2 chickens (Tk 25-30 each)

and to save the rest for

The advent of the winter har-

value. Many small fish species.

Young and old, male and female, what unites these people is the relentless and drought. Over 25,000 of the worst hit in 6 northern districts have been taking part in this cash-for-sur-

vesting and planting season at the end of November will bring some temporary improvement but reduced harvests combined with the lack of any reserves could create a even more serious situation from late January onwards.

widely in their nutritional

nursing women consumed a total of 71 different species of fish and children under two

> average of three days a week The destruction of Bangladesh's natural fisheries can not be mitigated by pond culture or the stocking of carp fry in the floodplain. Ponds and floodplain stocking profit ponds owners 75 per cent of rural families in Bangladesh who engage in subsistence fishing. This is their resource. and not that of the funders. and planners who carelessly build economically irrational and environmentally damaging

> > projects. In the countryside one often hears requests to reopen canals blocked by sand and siltation. People commonly complain that the routes for fish migration and transportation of rice and other goods are blocked by embankments.

There was a time in the not too distant past that a dearth of fish was unthinkable in Bangladesh. Now the scarcity of this important source of food and nutritional wealth is felt across the country. Further dramatic losses are inevitable. Fish are already coming from India into Bangladesh along with beef cattle. In the past surplus fish moved from Bangladesh to India. The embankment lobby is trading away a sector where the nation enjoyed a large comparable advantage, for a nominal floodfree and hence fish poor soci-

Until the people impacted by projects have a real voice, we will witness more embankments, less fish and more blindness. It is time to stop squandering the nation's aquatic wealth and restore the national slogan "mache bhate Bangali" (Bengali live on fish and rice).

The author currently works for Centre for Resource Studies, Bangladesh. He is writing a book on human ecology and fish in Bangladesh. He has been visiting Bangladesh since independence and has undertaken several research on our natural resources.

Phakjon is one of 35 drought affected families attending a survival education class at Golabari in Kurigram Sardar thana to obtain some immediate support and to learn some useful facts which may help her over the difficult days ahead. - Photo: RDRS

Lessons-for-all Put Classrooms at Bursting Point

T is 7.55 in the morning and the sun is already high. Young children are running up and down the crowded school yard. In the background, a bell rings Suddenly the children start running in a different direction under the trees where their

teachers wait to start classes. Since the introduction of free primary education in Malawi in September, the size of the country's classes - many of them sitting outdoors - has almost doubled. There are now three million pupils where, six months ago, there were 1.8 mil-

In a country where more than 90 per cent of the people live on subsistence farming and can barely afford basic necessities, education has been an unattainable luxury. Until now. Parents are cheering the free schooling policy and it has received the blessings of organisations both in and outside the country.

"Imagine, I get less than 100 kwacha a month. The family needs to eat, to be clothed ... How can I get the money to send my four children to school? ... Let them go up to

Angels Mtukulo writes from Malawi

The introduction of free primary schooling in Malawi has boosted the new government's popularity. But now, reports Gemini News Service, the authorities have to deal with the problem of overcrowded classes.

Classroom casualties Primary school drop-out rates Grade? Grade? South Asia 30° Sub-Saharan Africa 27% 1600 Latin America Caribbean 25° East Asia Oceania 11% Arab states 4%

standard eight and beyond that, God will help us," a house ser-

vant in the capital Lilongwe told The Nation newspaper.

President Bakili Muluzi has said the main priority of his United Democratic Front administration -- elected in May - is to alleviate poverty. Malawi is among the 15 poorest countries in the world, with a per capita income of \$230. Illiteracy, estimated at more than 90 per cent, has been cited as a major contributory factor in the country's destitution.

However, free schooling has created severely over-crowded classrooms and some observers are critical about the quality of the education the children may be getting.

There is a shortage of exercise books and the country needs to build an additional 48,000 classrooms to hold the students. The idea of using tents was rejected by the public as uncomfortable for the children.

"While free education sounds beautiful to the ear, Malawi's

educational infrastructure and financial resources seem inadequately prepared to meet the challenges," read a recent editorial in the Daily Times news-

Before free schooling was unveiled, education had cost 1.50 Malawian Kwacha (MK) for grades one and two, MK 3.50 for grades three to five and MK 5 for grades six to eight. At the time, the Ministry of Education spent the biggest proportion of the government's budget: MK 246 million, of which primary schools took up about MK146 million.

Critics have warned that the influx of students and the resulting need for new classrooms will severely stretch the budget.

The idea of free education is good but has been implemented a bit too early. They should have trained teachers first, increase our salaries ... How can the government just introduce a system without considering our welfare?" teachers were quoted as saying in the Daily Times.

In response, the Education Ministry has hired and begun training 19,000 teachers in addition to the 29,000 in already employed.

In August, Malawi Railways donated computer and scrap paper to be bound into exercise books. Sam Safuli, the Education Ministry's principal secretary, said the ministry had six million notebooks — enough to last for one-third of the first academic term.

Earlier this year, the previous government announced that young girls who had dropped out of school due to pregnancy would be allowed to return to classes. That policy, combined with free schooling, has created classrooms that include wide range of ages and may have affected discipline.

"The social implications of what will result in such a mixup of ages and sexes is something the government does not seem to have taken into conside eration," the Daily Times reported.

"Parents are reacting by either withholding their children from going to school until the 'case is clear' or those who can afford it are simply pulling their children out of public schools and putting them, into private

Gemini News

The writer is a freelance Malawian Journalist. He previously worked for The Monttor in Blantyre.