

Feature **Development****More ITU Services for Small Broadcasters**From A Correspondent
Special to The Star

A 1.2 million dollar ITU project has been initiated in the Asia-Pacific region to upgrade the engineering services in the broadcasting organisations in the developing countries. At present 14 countries, including Bangladesh, would be eligible to receive such assistance during 1991-92 through the International Telecommunication Union (ITU), which had recently set-up the project office in Kuala Lumpur, Malaysia. So far this is the largest ITU project on broadcasting in any region.

The Asia-Pacific Broadcasting Union (ABU) is the coordinating agency; with Malaysia as the host Administration in this UNDP-funded project. The ITU is a specialised organ of the UN dealing with telecommunications regulations on a world-wide basis. The ABU is one of the nine regional Broadcasting Unions in the world dealing with the development and co-ordination of broadcasting matters at international level. The National Broadcasting Authority of Bangladesh (which include Radio Bangladesh and Bangladesh Television) is a member of ABU.

The formulation of the ITU project came about after ABU carried out a survey in 1984, with UNESCO assistance, on the use of broadcast equipment in the region. The survey identified the areas of weaknesses and gaps which called

for balancing and modernization through planned development; and generated a number of recommendations for strengthening the engineering departments of the broadcasting set-ups in the developing countries.

Inadequacies were noted in human resources development; lack of standard engineering practices in planning, operation and maintenance; gaps in training; man-machine interface problems; and ineffective after-sale service of highly sophisticated imported equipment.

Under this project, a field survey would initially be carried out by three ITU experts on the engineering assistance needed by the broadcasting networks. This would be followed by despatch of consultants (hired, if necessary) for on-the-spot field assignments under actual working conditions.

Another big component of the project is the execution of more than half a dozen selected engineering training courses by the Asia-Pacific Institute for Broadcasting Development (AIBD), the regional broadcast training centre located in Kuala Lumpur. NCA Bangladesh is also a member of AIBD.

One additional assignment to be taken up under the project is the feasibility study on the setting up of a regional centre for the test and calibration of electronic test and measuring equipment, and evaluation of new equipment available in the market, suitable for the developing countries. There are two major reasons for the establishment of such a centre: the local maintenance and calibration of such test equipment is a problem; while choosing new equipment is risky due to short market exposure and change of the state-of-the-art design every second or third year. Maintenance of latest equipment need a high degree of maintenance skill. Today there is hardly any place for the generalist engineer.

This ITU project is apparently an extension of ABU's Technical Advisory Service initiated in the mid-80s. Due to financial and other con-

The International Telecommunication Union has launched a project to upgrade the engineering services in the broadcasting organisations in 14 developing countries including Bangladesh.

straints it is not possible for the ABU to cater to the multi-layered requirements of its smaller members. The ABU has been running this technical assistance programme more or less "free" of charge to the members, with the co-operation of the bigger members, who provide the expertise.

Some years ago, an expert was despatched to Radio Bangladesh, Dhaka, to train engineers on short-wave planning. Last year, a team from the Australian Broadcasting Corporation (ABC) assisted BPA Radio Kiribati (in the Pacific) with the reconditioning of the mast. Amongst the earlier beneficiaries were Papua New Guinea (PNG/BC), the Solomon Islands (SBC), Micronesia (FSMBS), Fiji (FBC), and Nepal (RNE). Members who volunteered expertise in this regional co-operation service were NHK-Japan, ABC-Australia, AIR-India, RTPRC-PR

China, and PBC-Pakistan.

The above-mentioned topics formed a part of other wide-spectrum discussions at the annual meeting of the ABU Standing Engineering Committee held in New Delhi late last year, during the ABU General Assembly, hosted by All India Radio, in association with Doronarshan India. There were about 50 engineering delegates from 27 ABU member organisations from 20 countries/areas; as also observers from the ITU, AIBD, Intelsat, FES Germany, and the European Broadcasting Union (EBU). Over 90 engineering papers were presented at the meeting. The use of teletext and slow-scan TV were mentioned for possible use for distant education.

During the 7-day meeting the engineers came up with 17 recommendations affecting the broadcasters in the Asia-Pacific region. Some of the issues were hi-tech: high-defini-

tion television (HDTV), satellite news gathering (SNG) and frequency-sharing; stereo sound (medium-wave and FM radio, and TV); computer software package for short-wave planning (developed by AIR); and mobile link applications. Eight specialist groups or engineering Working Parties assisted the Engineering Committee in its studies.

The Publication of a handbook on SW Antennas by the ABU Technical Centre was well received. A complementary manual on short-wave planning is also due for publication by the AIBD. Two more ABU handbooks would be ready this year: one on the use of satellite communication services by the broadcasters, and the other in Teletext systems.

On HDTV (high definition television), the delegates heard the latest status report on CCIR studies on the efforts to formulate a world-wide standard for HDTV transmis-

sion. Before the regular introduction of HDTV (recently introduced in Japan based on reception at home via satellite, using a new type of TV receiver), scientists have developed various enhanced TV systems-EDTV- better pictures on TV sets currently used in the homes. The long-term effects in the developing countries are being closely monitored, to advise the members on the formulation of policy options.

The ABU is also preparing the members for two World Administrative Radio Conferences (WARC), organized by the ITU, scheduled during 1992 and 1993; the first on frequency spectrum allocations (who would use which frequency bands for which purpose); and the second on short-wave broadcasting (called HFBC or high-frequency broadcast planning).

The last WARC on SW failed some years ago, so a second one has been called. The problem is over-congestion of the SW broadcasting frequency bands; or over-crowding a traffic problem- resulting in poor reception of the programmes, mainly due to interference. Now the broadcasters are demanding additional bands, vis-a-vis the other competing users, such as the tele-

coms, military, shipping, aviation, mobile, etc. Another problem is that the new users of short-wave broadcasts cannot get new frequencies because there are none available. This dilemma is faced usually by the newly emerging and developing countries- the late-comers.

The Astavision, which is the daily TV news exchange service in this region, is operated by the ABU via Kuala Lumpur. The New Delhi meeting resolved to improve the technical quality, in co-ordination with the ABU News Study Group, and the Programme Committee.

The ABU region is the largest of the broadcasting unions in area and population, and its 53 members stretch from Turkey and the Middle East in the west to the Pacific islands in the east; Japan in the north, to New Zealand in the south. In addition, there are 19 ABU Associate Members outside the region, including BBC and VOA. It publishes two bi-monthly magazines, the ABU News and the ABU Technical Review; and holds song and programme contests, and offers awards for outstanding engineering papers received from the developing countries. Its activities are rather invisible to the public at large, but it offers valuable assistance to the professional broadcasters in the region.

The writer, who is based in Dhaka, had been Advisor to several international agencies.

Jhumia Nomads are Settling Down

Saleem Samad

Ram Thawl, though in his thirties remembers his life as a Jhumia. His wife and two sons had once passed uncertain days, months and even years roaming with his parents from one hill to another engaged in slash and burn (Jhum), an ancient method of cultivation. His parents does not remember where, in which hill, he was born.

The nomadic Jhumia tribes of the hill districts in the south-eastern Bangladesh engaged in 'Jhum' caused wanton destruction of resource rich forest, causing erosion of hill tops during the monsoon rain. The erosion has caused the rising of the river bed of Sangu and Matamuhuri criss-crossing the picturesque hill forest. Many legends, songs and folk tales about Sangu and Matamuhuri rivers are still retold by the tribal elders during their leisure.

Like other 123 families of the Bawm tribe, Ram Thawl for the first time in their generation have been rehabilitated in settled farming. Ram Thawl rolling a home-made cigarette says, "a bird has a tree to rest." He smiled and said "if there is no banyan tree, the birds will keep hovering in the sky." What he meant was, as a Jhumia they kept roaming and after resettlement, they have a

place to rest and dream. Earlier, these Jhumia tribes had to pay a cost for shifting, taxes for Jhum, exploitation by traders, and not the least, never overcame poverty.

The rehabilitation of the tribals was initiated by the government development agencies in 1984. The government gave hill-lands in the southern hill-district Bandarban to selected Jhumia tribals of Bawm, Marma, Tripura, Murang, Kheyang, khumi and two other tribes in three upazilas (sub-district) of Bandarban who are mostly Buddhist and animist.

Bandarban comprises 1761 square miles in southern Chittagong Hill Tracts. Except for three upazilas Lama, Alekdong (Alkadam) and Naykangchari where the Muslim non-tribal population is significantly higher than by the 11 tribals. Of the 1761 square miles, nearly 73% is hill forest mostly owned by government forest department. There are not enough cultivable lands for tribals, says an government official.

The Christian Commission for Development, Bangladesh (CCDB) was literally drawn into the project by the government. The Chimbuk Rehabilitation project (CRP) has a beneficiary

of 578 families. An immense task had to be shouldered by CCDB alone. From shelter construction to water supply, literacy to health care, farming to marketing of the produce have to be accomplished in the integrated approach of the project. The programme has brought quite a stir among the tribals and also earned appreciation from the government.

Like Ram Thawl, hundred other Bawm's are now self-reliant, they do not have to worry about two square of meals, cash to buy seeds and saplings, money to buy clothes and even watches. Now a days it is difficult to witness tribal women sporting traditional dresses, woven in their homes. The men folks wear lungi and shirt or T-shirt, bought from the market. Perched on the 'thlam' (Jhum shed) on the top of the hill terraced with pineapple, Ram Thawl also mentioned that he sold 25,000 Taka worth of pineapple in the last season. This year he expects to sell more pineapple, but the price is competitive.

On the hill slopes grows banana, ginger, mango and ground coffee. How does Ram Thawl feel about the settled farming? He said one year of Jhum means giving three years of labour. Why mixed fruit

farm? Prompt came a witty answer from Ram Thawl. "It is like a big family with several brothers (fruit variety). Each brother supplementing income into the family," he grinned.

Could Ram Thawl change the quality of life of his family? During the Jhumia days, Ram Thawl's parents used to go to bazaar three times a year but today he goes to bazaar every week. Earlier, their parents used to ferry farm produce on headload and walked several miles over the hills to sell the products. Now the traders (mahajan) come with trucks twice a week to buy produce with cash money.

The intervention by CCDB has made them produce fruits as well as timber tree for round the year and live a decent life. "The programme not only supports the tribal beneficiaries to change their quality of life, it directly helps the environment of the territory. The programme refrains the tribals to Jhum in the hills and destroy forests, which is silting up the rivers, depletes fishes and obstructs navigation," said Edward S Ratna, the project manager of CRP housed at Bandarban town. Devegeture

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Winter is the season when most development works are undertaken for an unhindered progress of work not possible in the rainy season or during the days of long hot summer. Photo shows day labourers carrying sand and brick to a construction site. Photo : ILO.

FISH farming may never be the same as a result of research in the zoology department at the University of the West Indies (UWI) in Jamaica that showed freshwater fish can be raised in seawater.

The research has been centered around a new facility in the Marine Laboratory Department of the University. The building was constructed with funds provided by the European Community at a cost of about one million Jamaican dollars.

The simplicity of the building belies the breadth of the research taking place there. It has two large tanks and a number of smaller ones with the necessary plumbing for pumping of seawater. The facility is a significant expansion for the university, which has been short of funds for some years.

The marine laboratory is located at Port Royal, the famed pirate city of the 17th Century, situated at the tip of the spit of land known as the Palisades. It sits at the southern boundary of Kingston harbour, in a city once known as "the wickedest city on earth".

The university has been working on the project for three years with the aim of getting freshwater fish to adapt to seawater. The species of fish used in the project is the tilapia nilotica. For this research, the UWI has been using the red hybrid of the species, developed in Florida.

There are many advantages to getting freshwater fish to grow in seawater. It saves digging a pond, the water supply is free and the fish can be grown in cages constructed cheaply out of chicken wire. The density of the fish population per cubic metre is also greatly increased.

In addition, the fish do not swim around as much as they do in open pond water and thus save energy. The extra energy they reach market size

Jamaica Plunges into Seawater Fish Farming

Fish farming has traditionally depended on freshwater, but researchers at the University of the West Indies claim to have found a way of raising freshwater fish in seawater. This is cheap and efficient and could have a significant impact on increasing protein levels in the local diet, by Cedric Lindo

more quickly. It also seems that consumers prefer the taste of seawater fish.

Jamaica has engaged in commercial fish farming for many years, but the industry expanded after 1978 when the silver perch and the tilapia nilotica were introduced in artificial ponds.

Last year, fish farming earned around J\$120 million that came from 500 acres of ponds. For 1990 earnings are expected to top J\$170 million.

Artificial ponds cost about J\$18,000 each to construct. With fish grown in cages, there is little construction cost. Experiments are still un-

derway to determine the optimum density of the fish population in the one cubic metre cages. At present 100 fish are grown in a cage. They are given a feeding zone four inches deep with wire of a finer mesh than chicken wire so as to prevent predators from making off with the fish food. The cage is suspended in the sea from floating rafts.

In effect, the fish are grown like battery hens. The cost reductions using this method could bring fish farming within reach of smaller farmers, greatly increasing the supply of protein in the local diet.

This breakthrough in the farming of commercial fish seems to come at a time when the catch of marine fish by some 15,000 Jamaican fishermen using canoes or small boats, appears to be declining. The decline in the fish stocks is being blamed on the damage done to fish grounds by Hurricane Gilbert in 1988.

The decline has also been attributed to over-fishing and to the destruction of the coral reefs where the fish feed. With a great deal of the coastline now being used for housing developments, the fish have also lost many of their mangrove nesting grounds.

Dr Dunbar Steele, senior lecturer and head of the department of Zoology at UWI, predicts a surge of interest in fish culture because of the work of his department. First, oyster catches off the Jamaican coast were increased by growing young oysters on old rubber tyres cut into squares. Now the young red hybrid tilapia are now being grown in the same tidal net as the oysters.

Steele envisages several other developments in marine culture in Jamaica. The spiny lobster is now being grown in the marine lab at Port Royal.

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SHRIMPS are almost the perfect export. It uses basic local resources to bring in foreign exchange.

Shrimps are also one of the highlights in the recent history of aquaculture. Its growth in production, mainly the Penaeus species, is phenomenal. A marketable crop of 15-30 kilograms of shrimp can be reared in as little as three to four months. This, by using tropical coastal land, simple earth ponds, tidal or pumped water, local or hatchery-reared seed shrimps, and simple fertilisation or feeding.

So much so that production has been impressive. In 1981, cultured shrimp accounted for 2.1 per cent of total world shrimp harvest. In 1988, this share was about 22 per cent. Output in 1988 was some 450,000 tons, with a farmgate market value of about US\$2.5 billion.

Much of this originates in the developing world, particularly in Southeast Asia and Latin America. Cultured shrimp accounts for almost half the total shrimp harvest in Latin America. Ecuador supplied more than 80 per cent of the Western Hemisphere's production.

In Bangladesh, shrimp is the second most important export commodity, much of this from shrimp farming. In the Philippines, some 40,000 hectares of ponds are producing shrimp. China produced about 100,000 tons of shrimp in 1988, an increase of about 50 per cent over the previous year.

Today, rural coastal land of limited agricultural potential has acquired new value. Traditional brackishwater fishpond operators now have a new source of income. Fishing communities can supply seed shrimp and broodstock. Farms and hatcheries offer rural employment.

There are new service industries. In Southeast Asia, backyard shrimp hatcheries have given income for small, family-based businesses. Their earnings give stimulus to local economies.

However, according to the Food and Agriculture Organisation (FAO), much of the potential, not least the sustainability of the industry, is under question. "Shrimp farming faces the problems of its almost unconstrained expansion," says an FAO report.

Markets show increasing signs of saturation. In 1989 and 1990, high inventories and abundant supply pushed

In 1989, however, most of the North European countries recorded lower catches. Global catches of small pelagic fishes for processing to fish-meal and oil remained at about the same level as 1988. A further decline in the production of fish-meal in Southern Africa is being offset by an increase in Chile.

Looking further ahead in the 1990s, the report says that

Shrimp Harvests Top Aquaculture

Shrimp farming faces the problems of its almost unconstrained expansion, by Paul Icamina.

prices to levels at which many producers faced losses. In some cases, they had to suspend production.

There are many problems, including the widespread clearing of mangroves and destruction of shrimp habitats and the salinisation of coastal floodplain soils. Production has moved increasingly towards large-scale entrepreneurs or corporate groups. Traditional communities and their activities have been displaced.

In many areas, rising demands for shrimp feed put pressure on supplies, including low-value fish. "If shrimp farming is to bring real and continuing benefits to producer countries, means will have to be found to stabilise the industry, to increase its efficiency and to reduce its adverse impacts," says the FAO report.

The report, on the state of the world's fisheries, notes that one of the most important positive influences on production in 1989 was aquaculture. This is because it is expected that China's rapid growth in freshwater aquaculture will have continued into 1989 and 1990.

culture production of 1987. Larger landings of small pelagic species in the South-eastern Pacific and increased production by China were the principal contributors to the overall increase. Peru was the principal beneficiary of the fishery, its catches increasing by almost 45 per cent to over 6.6 million tons.

Fish production in China increased by a further one million tons. Elsewhere in Asia, Japan's catches of 11.9 million tons were only slightly higher than in 1987. It maintained its position as the leading fishing nation of the region.

Aquaculture continues to make an important contribution to fish and shellfish supplies, especially for carp, tilapia, eel, trout, salmon, molluscs, shrimps and prawns. Aquaculture production grew particularly fast in Asia.

Supplies of fish for direct human consumption continued to grow in 1988. But the rate of increase (4.5 per cent) was less than the overall expansion in the total world production.

This is because the greater part of the overall increase in fish production in 1988 was used for processing to fish-meal. This is also partly due to the higher catches, and thus availability, of small pelagic species.

Low stock levels and the very favourable price ratio of fish-meal to soya-meal encouraged a marked growth in fish-meal production which rose by 400,000 tons. Still, a major constraint in aquaculture may be the availability of feed.

Aquaculture is becoming an increasingly significant consumer of fish-meal. It is estimated that some 650,000 tons of high-quality fish-meal were used in aquaculture operations in 1988. This involved the processing of over 3 million tons (live weight) of fish. In particular, there appear to be opportunities for further significant increases in the aquaculture output of China which already accounts for over a half of total world aquaculture production.