The Challenge of Feeding Twice as Many in the Next Millennium

by Md. Asadullah Khan

Politics would mean an empty show if people are starving, going without employment, have no access to education, healthcare facilities, sanitation and safe drinking water. Government must realise that what subsistence farmers need most is higher prices for their crops and ready access to credit to enhance production.

THE prospect is horrifying. Barren fields, dried up wells and hunger on a scale never before known by humanity are now a reality. That is what Lester Brown, president of the World Watch Institute in Washington, predicts for 2050, when the earth's population will have doubled to nearly 10 billion and the capacity of science to devise methods for coaxing more food out of the soil will, in his view, be greatly diminished. The situation may be alarming, as Brown calculates, with specific mention of the dire economic situation in some countries in the Asian region: By 2030 India will need to import 44 million tonnes of grain annually to help feed its 1.5 billion people. By the same year an increasingly prosperous and industrialised China will need to purchase 200 million tonnes of grain from abroad for its 1.6 billion people — as much as is now exported by all the world's countries. The result will be a spike in food prices that will trigger wholesale social disintegration and chaos in Africa, Latin America and other poor countries in the Asian region. "China's scarcity will become the world's scarcity", Brown predicts. The world is now getting genuinely concerned at the prospect of declining food supply in consequence of rapid urbanisation, deforestation, loss of bio-diversity, pest attack coupled with drought like situation and excessive flooding at times. Unfortunately with farmers' race for the highest possible yields these days and all trying to use the same kind of seeds, the productivity has fallen.

Most 'disappointingly, strains of crops that seem to have magical qualities are becoming ever harder to find. But our past knowledge reveals that individual crops share more genetic material and most local varieties are vanishing. Moreover as the explosive growth of the world's population causes more farmers to turn more forest land into fields, wild species of plants are getting wiped out. Potentially valuable food sources are lost forever — before they are even discovered. In consequence, the world is losing a marvelous diversity of genetic material that has enabled the plant kingdom to overcome pests, blights, and droughts throughout the ages.

But it's a common knowledge that plant breeders have used genetic diversity to help fuel the green revolution and kept agricultural production ahead of population growth. But as the raw material of the revolution disappears, the food supply continues to become more vulnerable to catastrophe.

Despite Thomas Malthus' prediction in the last decade of 17th century that human fertility would outstrip the ability to produce enough food, human ingenuity has consistently belied such prediction. But in 1968, Paul Ehlrich in his study *The Limits to Growth* raised fears that unchecked population growth might lead to mass starvation. And the horrifying situation of famine, coupled with ethnic conflict in Rwanda, Somalia and Ethiopia in the past few years bears testimony to that assertion. In the early part of '70s, Lester Brown argued that the world's farmers were already pushing the practical limits of what good land, high-yield crops, irrigation and artificial fertilizers and pesticides could deliver.

Strikingly evident, beginning in the mid '80s, the momentum of green revolution slowed dramatically especially in Bangladesh, Pakistan, India and China. In most parts of Asia, rice researchers have failed to raise yields significantly for more then two decades. Hidden costs of green revolution have begun to surface all around the world: the amount of irrigated land which produces 35 per cent of the food supply has been declining steadily. The reasons : fields become poisoned with salts left behind when irrigation water evaporates. Looming ahead are the agricultural impacts of global changes such as ozone depletion in the upper atmosphere and greenhouse effect."

The combination of both immediate and long range threats to the food supply has brought back the old question: How much longer can the world deliver adequate food to human number relentlessly expanding at the rate of 91 million a year. Speaking for India, at the current rate of growth, population figure reached 1 billion mark in the last year and it might have 1.5 billion people by 2035 almost challenging China. So the prospect for Bangladesh for getting grain supply from the Asian countries like China or India on business deals would be harder still.

The situation in Bangladesh is somewhat paradoxical. Although government claims that population growth in the country stands at 2.1 per cent, that figure does not hold true for the vast areas of rural Bangladesh. True, economic reforms in the form of development efforts are under way in almost all places of the country and encouraged by that efforts planners and economists argue that people will have fewer children once they become prosperous. That "development is the best contraceptive thesis," as the experts call it, faces an uphill test in the dirt-poor countryside, where birth rates are among the highest and children are viewed as a source of family wealth.

Against the backdrop of such a dismaying situation, many agricultural experts are taking doomsayers more seriously. Even the optimists admit that putting an adequate amount of nutrition into 5 billion extra mouths 50 years from now poses a mammoth challenge. But at the same time, they recall the success of the green revolution which, in the short span of about 25 years starting in the early 1960s, quadrupled crop yields in parts of the developing world and greatly reduced the frequency of famines in Asia and Africa. The infrastructure, namely 17 food research institutes funded in part by the UN's Food and Agriculture Organisation and the World Bank, plus dozens of plant science operations run by governments, universities and private companies did achieve the miraculous result. But, unfortunately, the Mexico-based International Maize and Wheat Improvement Centre which developed the high-yielding, disease resistant wheat that launched the green revolution was forced to abandon years of work on a strain of nutritionally enhanced corn because it ran short of funds.

"I'm pretty confident that science and technology can produce enough to meet the needs of a doubled population", says Mark Cantley, head of biotechnology unit at the Organization for Economic Co-operation and Development in Paris. "But the question is whether utilization, distribution and politics will hold things back", he adds.

Despite all the constraints, plant breeders and molecular biologists around the world are at work on techniques for bolstering pest, disease and drought resistance in grains and improving the nutritional value of various foods. Only in the recent past a breakthrough was announced by the International Rice Research Institute in the Philippines where scientists have developed a new "superrice" with yield 25 per cent higher than current varieties. At the University of California at Riverside, plant physiologist Tony Hall has found shortcuts for breeding heat and drought tolerance into plants. Purdue University researchers have been concentrating on improving the nutritional profile of rice and developing techniques for enhancing the disease and pest resistance of sorghum, a staple in many developing countries.

Private enterprises have joined the race in preventing a future food crisis. Researchers at ICI Seeds in Slater, Iowa, for instance, have been working with Indonesian scientists to develop a variety of tropical corn that is resistant to the Asian stem borer, a major insect pest. The Monsanto Co. based in Louis, Missouri, is close to developing a sweet potato resistant to the feathery mottle virus, a blight that cuts yields in Kenya, for example, as much as by 50 per cent. So says Robert Horsch, a plant geneticist, "If we can boost the average sweet potato yield by 15 per cent, that would be worth half a billion dollars to the farmers who grow them".

The other field of research is to reduce reliance on pesticides and fertilizers that when overused poison the soil. Michael Griffon of the Centre for International Co-operation in Scientific Research in Paris, warns grimly that the regions where population will be doubling are also the areas now relying on classic fertilization and crop protection methods that are very polluting. Our goal is therefore to generate a double Green Revolution : green like the first in that it produces more food, but also green in that it is environmentally safe.

Most notably, despite all the bad name it has earned in stoking fires of ethnic conflict, Israel's research organisations have stolen the lime light. Israel can boast the world's most advanced irrigation systems, drought resistant crops and creative low - tech solutions to the problems of poor soil, and low rainfall.

Israel's special expertise lies in exploiting the desert — a subject of obvious interest to Africa where country after country is threatened by the expanding Sahara. Bangladesh these days, faces a similar situation because of long absence of monsoon rain and inadequate over all rainfall. The long spell of drought like situation has almost turned the whole country, especially the northern part of Bangladesh into barren lands. Israel, it is learnt, has turned thousands of hectares of its own desert, the Negev, into a Savanna like plain, using both modern irrigation techniques and ancient methods for tapping and holding rainfalls. The Negev today, as reports turn out, is a major centre for both livestock and crop production. The unprecedented fury of floods in the last year for almost two months with heavy onrush of water would have allowed us to trap this water, had we but such mechanisms to trap and utilise it. "Theoretically, the Sahara is just like the Negev", says David Nachmias, director of the Jewish Fund's Land Development Authority, "we could change the whole Sahara to green". Even India now takes pride in its successful effort to eliminate the food shortages of the 1950s and 60s and is now securely self-sufficient. Despite frequent twists and bursts in Indian politics and change of governments, Indian officials insist that the nation will feed itself without relying on foreign help for the foreseeable future. Says M. S. Swaminathan, India's leading agricultural scientist : "To be forewarned is to be forearmed". We can also prevent Brown's predictions from coming true in this part of the world, if we start taking serious action now.

The fact is, even to-day we have in the country more than 60 per cent of the people who are malnourished because they do not have either money to buy food or the wherewithal to grow enough on their own. Despite all the unrest and the muddle the country is passing through politicians must agree that the country be placed above politics. And politics would mean an empty show if people are starving, going without employment, have no access to education, healthcare facilities, sanitation and safe drinking water. Government must realise that what subsistence farmers need most is higher prices for their crops and ready access to credit to enhance production.

Technology is not the problem to cope with hunger. "There's a profusion of technology", says Yona Chen, dean of the faculty of agriculture at Jerusalem's Hebrew University. "But it has to be brought to the developing nations. The World Bank and other institutions, shockingly sink money into projects that do not directly help the poor nor it helps eliminate poverty when what they need to do is to educate people". Even if we are not agreeing with Malthus' dire prediction because of the advances we have made in science and technology, we cannot afford to forget that the highest priority remains population control. The ultimate solution has to come from stabilizing the country's population. Meanwhile, biotechnology and other agricultural technologies offer us the potential to buy time.

The Menace of Power Crisis

by AR Shamsul Islam

Power crisis has recoiled in heightening water scarcity to city dwellers by keeping water lifting machines inoperative. Power deficit and water scarcity have now walked hand in hand to stretch human miseries past all endurance.

THE power crisis is all the more acute now. In fact, it has come to such a pass over years of negligence, misreading of the situation and raw handling of the problems by the authority, precisely the government.

The core problems of electricity scarcity may be diagnosed like this:

First, our daily average need of electricity stands around 2700 MW. About 1800 MW power can be generated a day if all generating plants, now at our command, do have unhindered operation. Deficit comes to around 800/900 MW.

Second, most of the power plants like those in Ghorasal, Ashuganj, Haripur, Kaptai wear a dilapidated look. Many of the existing plants were commissioned around 1665-66. They have gone somewhat obsolete in these days of fast changing technology.

Third, the maintenance and repair of these installations have not been properly carried out. So they have suffered more than customary wear and tear. They have proved fragile to the fury of nature like storm so frequent in Bangladesh.

Fourth, the overhauling of the plants, as categorically advised in the schedule, that constitutes the life-saving treatment of the machine, has been criminally neglected. As for instance, four plants of Ashuganj were scheduled for overhauling after 50,000 hours of operation. Till now they are made to run 90,000 hours without any overhauling work at the risk of complete breakdown.

Fifth, every year power demand is rising by about 10-12 per cent to cope with which practically nothing is heard to have been done.

Sixth, transmission of electricity from generating plants to the consumers suffers from a lack of sound modus operandi. First it goes from the producing centres to the transmission establishments. The latter thereafter reach out energy to the consumers through distribution lines. PDB stands for generation of electricity; responsibility of distribution lies with different organisations as DESA in Dhaka. The different components of this network are not so well-coordinated and they hardly behave well-responsible. On occasions of the failure in the national power grid they have a tendency to pass on the 'baby' from one to another to save their own skin without any urge to mend the trouble.

Seventh, there is an increasing curse of 'system loss'. There are huge illegal connections, tampering with consumption reading metres, as are mostly done in collaboration with PDB/DESA men, who are, ironically enough, paid to guard against these illegalities. It is to be noted that unsatisfactory maintenance of electricity network, that eats up a considerable percentage of production capacity, contributes to "system loss" in no mean way. Official estimate of "system loss" is 21 per cent though in reality it is much more, nearly 40 per cent.

Eighth, above all there is problem of paucity of fund. World bodies, donors, loan giving agencies have now-a-days shown great reluctance to provide for fund except under stringent conditions solely dictated by them.

Awami League came to power in 1996. It kept on saying that the past governments did not care to add even a single watt of electricity. It assured that vigorous measures would be taken to increase generation of power. As a short-term remedy the present government negotiated with foreign companies for installing barge-mounted power plants in our country and reportedly contracts with five companies were signed up. But till now only one diesel-run bargemounted power plant in Khulna has gone into operation reportedly yielding 11 MW of power. Government claims that another company named "Rural Power Company" will commence generating 60 MW of electricity from June next. Nothing more about other companies which entered into contracts is heard.

In the first year of her rule PM Hasina told that power might be imported from any country selling it at the cheapest. Obviously it indicated India. The idea was nipped in the bud probably under attacks from BNP and Jamaat-e-Islami on bogy of 'selling out the country.' Meanwhile there was enough of preaching from top brass of AL that much of the power crisis was precipitated by widespread sabotage conducted by the opposition. However people did not accept the allegation as well-based. PM took the Energy Minister out of his ministry and placed it at her disposal. But the crisis continued to deepen as before.

When AL started wielding sceptre in 1996 people gesticulated high patience to wait for a reasonable time to let government pace up generation of electricity. Unfortunately government could not display any promptitude to actuate it. People felt terribly frustrated. Their faith in government was on the wane.

Power crisis has recoiled in heightening water scarcity to city dwellers by keeping water lifting machines inoperative. Power deficit and water scarcity have now walked hand in hand to stretch human miseries past all endurance. The sufferers have come down in heterogeneous hosts on the streets agitating against the government for its failure to provide two basic requirements of life — electricity and water. This is a familiar spectacle in many "muhallas" of the capital particularly in Jatrabari, Gopibag, Saidabad etc. In Jatrabari roads, rail tracks were blockaded and vehicles smashed by the angry victims. Further at some places WASA water tanks came under mob attacks.

Real solution of the crisis cannot be reached without making required amount of power available. This unavoidably calls for setting up new plants. It entails a long-timed process of minimum 7/8 years — 2/3 years for planning, constructing foreign companies, inviting quotations, approving bids etc and 5/6 years for constructing the plant itself. Huge fund needed for the purpose may be garnered by a joint tapping of internal and external resources. External assistance can be had only when the world bodies, donors and loan giving agencies can be convinced of our being able to stand credible to the utilization of their aids/loans. A nation that has built a wonder bridge — the Bangabandhu Jamuna Multipurpose Bridge — can also wake up another time to beat a hard challenge of power shortage.

Meanwhile, pending construction of new plants some short-term measures shall have to be adopted. Bargemounted power plants, as the government has already taken up, may turn out as a suitable choice provided their installation time schedules are strictly adhered to. The idea of purchase of power from India, once talked about, may not be ruled out without dispassionately assessing its viability.

Whatever be the circumstances, optimum maintenance and repair of the existing installations that we have had shall have to be ensured to avoid further pitfalls. This is of supreme importance.

In fact wake up calls to the present government were a lot. Unfortunately responses to it were feeble, few and far between. Relieving minister, transferring chairman of PDB, suspending and sacking engineers of DESA, PDB, declaring services of PDB, DESA as essential, etc can at best constitute cosmetic treatments. Curing the disease if far off. It demands to rigidly follow a prescription like that hinted above. Government should read the situation carefully and correctly. It is a fool's imagination that increasing power shortage the country will be used to and the people will learn to bear up. A joke is getting popular with the Dhakaites: "BNP fell in a crisis of fertiliser, AL will fall in a crisis of power"? Let us hope the joke never turns into a fact.

The writer is retired principal, Pabna Govt Mohila College

Can President Shahabuddin Change the Nature of Politics?

Khaled S Ahmed writes from Maryland, USA

We are in the information age. We do not need any one to bell the cat. We need one person with right kind of mind to lead us out of this political wilderness

IN the history of Bangladesh there is no shortage of people dispensing wise words but unfortunately they are always outnumbered and outmaneuvered by people who are not willing to heed those words. The recent commentary by Mr. Mahfuz Anam, editor of The Daily Star — 'Wise Words in Political Wilderness?' — is another spell of explication of such wise words for this unfortunate country from our respected President Justice Shahabuddin Ahmed. Such wise, valuable and straightforward words by the President certainly raises hopes and aspirations of the people installing him in a higher echelon of responsibility in the political arena of the country. But, tearing away the mask of hypocrisy from the face of political leaders is one thing and peacefully coexisting with them is another. Perhaps the President is equally frustrated as the majority of Bangladeshis at the failure of politicians in running the country efficiently and causing the nation to reach a situation where the world community publicly showed their concern about the law and order, corruption and governance problems of the country with the ordinary people bearing the full brunt of it. And these ordinary people continue to be contemptuous of the politicians. It is high time for Justice Shahabuddin to give justice to his own wise words. The Honourable President must also have known more than any other person in Bangladesh that those politicians who ever ruled this poorest country in the world and raked in millions at the spoils of office, can never deliver what he is expecting from them through his wise words.

Bangladesh needs a restart, may be a peaceful democratic revolution. From time to time, history had placed politicians (or dictators) in positions where they could have changed things for the better through the powers of their office. When events led Sheikh Mujib to call for the freedom movement, millions willingly put their lives in the line of fire. It is a history of extraordinary courage and mammoth determinations of the people of Bangladesh in general and the valiant freedom fighters in particular and a sacrifice through the stream of blood of millions that placed Bangabandhu Sheikh Mujibur Rahman in power. When Sheikh Mujib could not make any difference, events led one after another and finally his daughter Sheikh Hasina to power. If any one of them could have made any difference we might not have any predilection for President Shahabuddin's wise words. Perhaps Sheikh Hasina was the last hope for the politicians to prove their worth and for the people of Bangladesh to realize their expectations. One of the reasons of failure of Bangladesh leaders is the so called India factor — the Indian efforts to control politicians and administrators through greed and fear. With every change of government, India slowly expanded influence within the country, extending their market of industrial as well as agricultural products.

Perhaps India's worst fear lies in the industrial potential of Bangladesh, which could take over a major market share of their regions along the 1400 mile Bangladesh border containing over 100 million of their relatively poor citizens. With India's industrial base situated, say, 1000 miles away from these regions, Bangladesh industrial products will have natural price advantage in the competitive arena of globalization. To contain such reverse flow of border trade India need to maintain their influence to keep Bangladesh GDP trailing behind their's.

We are now in the fast changing democratically polarized world. We are also now in the age of information technology. And therefore with the increase of awareness of people, India developed a justifiable fear, that it will not be possible for them to continue to have such influence on Bangladesh, for indefinite period, and thereby keep the pace of progress of Bangladesh under their control. They also know that in the era of technological revolution courageous, honest, intelligent and knowledgeable nationalist leaders will eventually emerge in Bangladesh to lead the nation of 120 million in the right direction. Perhaps considering all these factors India has already taken preventive measures by installing Barbed Wire all along the Bangladesh border. Therefore, it is time for Bangladesh also to rethink and plan to restart in the new millennium.

Under these circumstances, contemporary events have been suggestive of President Shahabuddin being the person people could believe to be capable of making a difference — the kind of difference that could bring a renewed hope for the people who remained so shamefully poor, so tragically deprived and so humiliatingly oppressed. People also understand that there is little or no chance that President Shahabuddin's desperate cry for change will have any effect on the thinking of our current leaders and that he himself needs to initiate the change. Possibly President Shahabuddin needs to make a little sacrifice and have enough courage to practise what he is preaching. And in a practising democracy for a peaceful transition his only option is to form a new party to lead the country out of this political wilderness. The new party will need to participate in the next general election under a caretaker government with specific agenda to decide the fate and destiny of 120 million people of one of the poorest countries of the world. He should not have any shortage of people with commitment, courage, honest intent, required knowledge and the right kind of mind to join the new party and even finance the initiative. The only thing he would need to ensure is that he would exclude every one belonging to any of the existing political parties with no exceptions and look for Bangladeshi talents from all over the world.

The new party may also need to look at the early history of development of democracy, establishment of fundamental rights, creation of opportunity for an industrial revolution and the desire to establish a just society of the western world in general and the USA in particular. In the USA the average age of the people who laid out the foundation for establishing democracy was 42 and James Madison the architect of the US constitution was 36, Alexander Hamilton 32, George Washington 55 and Benjamin Franklin 81. They could assimilate ideas of great thinkers and teachings of great religions in their efforts to establish a just society and maintain transparency by making people the source of power. Introduction of innovative thinking and induction of younger generation into the Bangladesh politics will be essential for the revival of the country.

Such efforts will eventually enable Justice Shahabuddin to call for a change in the nature of politics in Bangladesh. In the world of computers and information technology it will not be difficult for any one with sincere and honest intent to peacefully mobilize the support of people to remove corruption, restore law and order, institute transparency and establish good governance in Bangladesh. It is obvious that the corruption clique is extremely widespread, desperately ruthless and intensely strong in Bangladesh and may often be violent. However these perpetrators of corruption also know that they are now dangerously alienated from the people who blame them for all their miseries. They are also under the ponderous scrutiny of the world community who are trying to help us out in our development initiatives. Especially recent events of power crisis and police brutality also alienated the police force along with the government from the people. People of Bangladesh already realize that the use of police for political purposes is part of the corruption process and in desperation, are trying to take law in their own hands.

Because only a very small percentage of the population are the direct beneficiaries of corruption, it will be possible to eliminate them without violence perhaps through some kind of limited amnesty. We may not ignore the fact that many of these corrupt persons are efficient in business and industries. This need to be an element of new thinking of the proposed political initiative. We are in the information age. We do not need any one to bell the cat. We need one person with right kind of mind to lead us out of this political wilderness and those wise words have given us enough reasons to hope, aspire and believe that there is that person.

Rescuing Lankan Wetlands

by Feizal Samath

RELIGIOUS groups, children and local people have come to the rescue of Sri Lanka's biggest wetlands under attack from urban developers and destructive fishing.

The 7,000 hectare coastal wetlands lying along the Indian Ocean northwest of the capital city, are being protected, trees planted and day tours organised to promote sustainable development and conservation particularly among children.

Negombo lagoon, the most famous port in colonial times, and Muthurajawella marsh had become industrial waste dumps and prime land for real estate developers and squatters as Colombo's burgeoning population spilled into the wetlands. A boat jetty at the mouth of the lagoon is still polluting the waters.

The government launched the Integrated Resources Management Programme in January 1998, supervised by the Central Environment Authority, in a determined bid to stop the destruction of wetlands, among the world's most productive environments.

"We are hoping that this unique model will serve as a replica for other wetlands in the country," said ecologist Jayampath Samarakoon of the programme whose uniqueness has been its success in combining conservation with development.

People are being involved in protecting the environment. Traditional fisherfolk living along Negombo have been persuaded to organise themselves into 10 groups which will be provided with boats to patrol the lagoon and stop dump trucks.

The groups called "societies" have no legal powers, but their members are expected to use persuasion, failing which they can inform the Fisheries Department who will take legal action by calling in the police.

The only industrial activity allowed in the wetlands will be over 160 hectares set aside for industrial development. Already the state-run Ceylon Petroleum Corporation has said it would set up a large storage complex in a third of the area.

Planners have made space between the two zones of economic development and nature conservation for the buffer zone which is reserved for recreation, sports, nature education and research.

A visitors centre, built over 2.5 hectares of land which opened in 1996, attracts dozens of schoolchildren and other visitors every day. The children who are encourage to plant trees at home are taken on boat rides across the lagoon and for walks through the marsh to teach them about the environment.

This is also where agricultural scientists are experimenting with fruits and vegetables that can grow in saline soil. "We are trying out various fruits and vegetables that could grow under these soil conditions," said Asoka Jayasuriya, a project assistant.

Jayasuriya said that a new variety of banana and papaya was being cultivated in home gardens by Muthurajawella and Negombo lagoon residents. Vegetables like tomatoes and capsicum had also shown good results.

"We are doing a cost-benefit analysis and promoting income generating activities that can be an alternate source of income to fishing," Jayasuriya said.

Roman Catholic priests in the area head small self employment opportunity projects that teach the locals animal husbandry, sewing, carpentry, woodwork, computers, and other skills.

Guide Sumedha Deshapriya takes visitors along a 1.2-km nature trail into the marsh which is alive with bird life. Some 125 varieties of birds have been spotted there, including migratory birds.

Crocodiles, porcupines, monitor lizards and a rang of snakes live in the marsh, which has been polluted also by the motorised fishing boats that ply.

Ecologist Samarakoon said there were more than 400 trawlers and 2,000 small fishing craft that are anchored at the mouth of the Negombo lagoon. The big boats are used for deep sea fishing and are able to stay at sea for up to three weeks.

Samarakoon said that anchorage in the lagoon was not properly managed with a lot of waste oil being dumped, and planners were now trying to find a solution.

Land clearing for construction and other purposes has made siltation a serious problem. Samarakoon said that the Asian Development Bank was preparing a comprehensive coastal zone management plan in which dredging of the Negombo lagoon is one aspect.

Pollutants in the lagoon and marsh have affected the plant and animal life, depleting fish stocks on which local fisherfolk in their small country boats are dependent for livelihoods. Also fish stocks have dwindled from destructive fishing practices like the use of "push" nets for shrimp fishing. The nets sweep the floor of the lagoon, netting all kinds of fish that are then thrown away.

Encouraged by the success of the programme, now in its second year, Samarakoon said it would be used as a model for the development and management of Sri Lanka's 26 other wetlands including tanks in Anuradhapura in the northcentral region.

— IPS/APB

Garfield ®

by Jim Davis

James Bond

BY IAN FLEMING
DRAWING BY HORAK