

Energy security and sustainable development

KHONDAKER MUZAMMEL HUG

THE current global energy infrastructure is estimated to be worth \$15 trillion. However is can supply quality energy to only one billion people, mostly in the OECD countries. Around the world, more than one and a half billion people, mostly in Asia and sub-Saharan Africa, lack access to electricity or fossil fuels. This energy poverty in fact has emerged as the new killer in developing countries, being the root cause of a vast number of other problems, and perhaps the deepest divide between the rich and poor. Due to lack of energy security, survival itself for the poor has become much less certain. More than 2 billion people of the Third World not only lack access to the most basic energy services, but continue to lack any realistic hope of getting those services by 2030. The global divide between wealthy and poor nations has set the world stage for a new kind of conflict -- the energy war!

In rural China, South Asia, and in parts of Latin America, the Caribbean, and in of most of Africa about 2.5 billion people still rely in wood, dried animal manure or other bio-mass energy for cooking, heating, or lighting. Another 500 million use coal that produces poor quality energy for cooking. In all, some 3 billion people, almost half the population of the world, at present mostly rely on an energy system that has failed to meet even the most basic human needs.

As developing countries have the fastest population growth, energy poverty is sure to become one of the most severe problems of the next several decades. Energy poverty is simply a measure of the generally poor economic conditions the developing world faces. Like water and food, energy is a source that is in chronic short supply. But because energy is so interconnected with almost all other aspects of life, energy poverty tends to play a more significant and central role, one that creates a ripple effect through a developing economy, and has an inordinate impact on living standards, which could all but destroy a population's efforts to overcome poverty.

It has been proved beyond any doubt that even a tiny improvement in the level of energy services tends to raise living standards remarkably. Replacing wood-fired cooking stoves with kerosene stoves means that families that spent hours and days gathering wood or dung are

now able to devote that time to earning money, producing more food, and can even venture to get an education. As a result, a lot of

There are compelling arguments for decisive action to be taken to accelerate the process of energy development in poor countries.

poverty and human under-development in the world's poorest countries. The United Nation's Development Programme defines

Energy is a factor in procuring each of these needs, but it is not fully captured by measuring them. Energy poverty is not adequately indicated by non-energy indicators. This has important implications for policy-making. Since energy underlines all economic activity, human development is severely impeded by a lack of energy infrastructure. An index of energy development would introduce an important element in understanding the drivers of human development and identifying the policies that can achieve it.

stresses will disappear and for the poor, and the world will be fundamentally improved.

For the millions of poor we are talking about, accessing solar energy still remains a very distant dream. More benefits flow when communities are able to switch from bio-mass or liquid fuels to electricity. Electricity solves many indoor air problems and virtually eliminates the need to gather fuel. It provides adequate indoor lighting, extending the day for education and other social activities. If electricity is available, people can install basic appliances which would dramatically improve food preparation and safety. Water pumps, would make possible supply of pure and fresh drinking water, a huge benefit for communities now decimated by water-borne illness. Electricity powers irrigation pumps that improve irrigation and crop fields. Electricity powers radios and telephones, including cellular mobile phones, and this could raise living standards immensely.

With electricity, three billion poor people in Asia, Africa, and Latin America, who are now trapped in a poverty-ridden existence could begin to move forward towards a life with honour and dignity. If we are determined to solve the energy problem of the poor, then we can begin to solve other problems such as poverty and underdevelopment and employment.

Even more amazing is how little extra energy is required to produce improvement in living standards. By one estimate, the amount of electricity needed to bring the entire developing world up to minimum energy standards would be around one thousand tera watt-hours or roughly the amount of electricity used by the United States.

What can be done



A solar energy project: Sustainable system

Developing countries are unlikely to see their incomes and living standard increase without a concomitant increase in their use of modern energy services. If the vicious circle of energy poverty and human under-development has to be broken, governments must act to improve the availability and affordability of modern energy services, especially electricity.

Sustainable energy systems

Achieving a truly sustainable energy system will call for technological breakthroughs that would alter radically how we produce and use energy. Government must act decisively to accelerate process to break the vicious circle of energy

human development as the creation of an environment in which people can realise their full potential and lead productive, creative lives, in line with their needs and interests. Energy sustainability requires meeting human energy needs upon which economic development depends, while protecting the environment and improving social conditions. No matter how we define "sustainable" development, most current systems of energy supply and use are clearly not sustainable in economic, environmental or social terms. In practice sustainable development is about finding acceptable trade-offs between economic, environmental and social goals.

Achieving the MDGs

The United Nation's Millennium Development Goals include halving the proportion of the world's people living on less than \$1 a day by 2015. The number of people without electricity in 2015 will remain almost the same as today and it is highly unlikely that the UN poverty-reduction target will be achieved unless access to electricity can be provided to another half a billion people by 2015. This would require investments of about \$200 billion.

The achievement of the MDG would certainly require a substantial reduction in the use of traditional bio-mass for cooking and heating. The amount of bio-mass consumption is usually a function of how poor a country is and of relative availability of commercial and non-commercial fuels. The number of people relying almost entirely on traditional bio-mass for cooking and heating will increase from 2.4 billion in 2004 to about 2.55 billion in 2015. If the MDG targets of poverty reduction are to be met, the numbers would need to be reduced to below 1.85 billion. To accomplish this, governments, particularly those of South Asia and sub-Saharan Africa and to a large extent China and India, would need to take new measures to extend use of modern cooking and heating fuels to more than 700 million people from 2004 to 2015.

There is an implicit level of energy development that underlies each level of human development, yet energy development is never identical per se to the poverty indices, which focus on such basic human needs as food, water, health, and education. Energy is a factor in procuring each of these needs, but it is not fully captured by measuring them. Energy poverty is not adequately indicated by non-energy indicators. This has important implications for policy-making. Since energy underlines all economic activity, human development is severely impeded by a lack of energy infrastructure. An index of energy development would introduce an important element in understanding the drivers of human development and identifying the policies that can achieve it.

Khondaker Muzammel Hug is a former General Manager, Grameen Bank and a former senior research scholar at Oxford University.

How free is the US media?

Recall the malicious attacks on former Vice President Al Gore when he questioned the Iraq war argument in 2002. Or, the Washington Times' Tony Blankley suggesting that Seymour Hersh may have violated the Espionage Act 1917, a crime punishable by death or imprisonment, for his article in The New Yorker on the Bush administration's secret military operations.

SAFI KHAN

THE US Ambassador to Bangladesh, His Excellency Harry K. Thomas will soon be returning to the State Department. During his tenure he repeatedly touched upon the relationship between freedom of press and democracy. He encouraged our press to resist the "temptation of self-censorship" and highlighted the dangers that journalists in Bangladesh face. One must appreciate Ambassador Thomas' efforts in drawing attention to the perils our reporters face, particularly when the government chooses to disregard citizens' voices addressing the same. On the issue of press freedom, however, the US and her representatives have much to learn from others; this is ironic considering the one time "independent" and "free" US media brought down a Presidency.

Following the violent fallout of the Newsweek story describing the toilet flushing of a Koran in Guantanamo Bay and the magazine's subsequent retraction, I suspected a "conspiracy" of Newsweek coming under intense pressure from either the administration or its right-wing surrogates. I felt validated after the Pentagon's own admission of Koran desecration at Guantanamo, including the ludicrous one of a soldier relieving himself near an air vent through which wind unintentionally blew urine on an inmate's Koran.

What is particularly disconcerting is how the mainstream US media either ignores or relegates damaging news to the back pages. The recent "memo-gate" scandal detailing the false grounds on which the US and UK built the Iraq war is a good case in point. While the memo, written by a British national security official, received front page coverage in England, the US press was reportedly slow to pick it up. The seriousness of the memo is best described by Nixon's former Counsel John Dean, who wrote that if Bush took the nation into war based on "bogus" information, it could be "a high crime" under the impeachment clause of the US constitution.

It is more likely, however, that a President will be impeached for an extra-marital affair than for willfully misleading and sending people to their deaths in today's America. A similar bias attitude is related in an essay by Jonathan Mermin, describing how Pulitzer Prize-winning reporter Charles J. Hanley's story on Iraqis being tortured in American prisons, prior to the discovery of the photographs, was disregarded by major American newspapers.

Then there are the attacks on Bill Moyers, a previous reporter of the NOW show. According to Moyers, the show at one point was the only public affairs broadcast aired on Public Broadcasting Service (PBS) with an increasing audience. Why? Because they reported on the Justice Department's expanding power of surveillance, on the rising Pentagon budget, on ill-equipped US troops fighting abroad, on overpricing at Halliburton, on shredding of the Freedom of Information Act, and much more. As close to a quarter of PBS' budget comes from the Corporation for Public Broadcasting (CPB) and federal grants, the right wing charge decided to put pressure on these institutions. Influential Republican Senator Trent Lott protested that the CPB "has not seemed willing to deal with Bill Moyers," with a Bush appointed CPB Board member concurring. Moyers also mentioned hearing threats against PBS reauthorization unless he was dealt with.

Such attacks on public broadcasting are not new. Moyers describes how during President Nixon's era, a Woody Allen programme making fun of Henry Kissinger was cancelled and CPB funding for public affairs programming was cut. A White House memo even stated getting "the left-wing commentators who are cutting us up off public television at once."

The major difference between then and now, says Moyers, is that then there were Republicans who took principled stands against politicising public television. The then Republican chairman of the public station in Dallas led a nationwide effort against what he viewed

as an assault on press freedom. The chair of the CPB, a former Republican congressman, resigned on the grounds of interference.

In contrast, Moyer argues that the current CPB Chair, Kenneth Tomlinson, is toying the White House line. He builds his case, stating a number of events and reports including the hiring of someone for the CPB ombudsman's office who previously worked for Tomlinson, the New York Times report of Tomlinson's role in killing a proposal placing people with experience in local radio and television on the CPB board, and a book detailing how Tomlinson surrounded himself with right-wingers during his stint as Editor-in-Chief of Reader's Digest.

Even though Moyers retired over six months ago, the attacks have apparently not ceased. This is not surprising considering the level of antagonism towards any form of dissent in the US. Recall the malicious attacks on former Vice President Al Gore when he questioned the Iraq war argument in 2002. Or, the Washington Times' Tony Blankley suggesting that Seymour Hersh may have violated the Espionage Act 1917, a crime punishable by death or imprisonment, for his article in The New Yorker on the Bush administration's secret military operations.

This pathetic state of American journalism is sadly but aptly described by author Jason Leopold: "Unfortunately, neither the Washington Post nor any other mainstream newspaper or magazine in this country will ever be credited with exposing another Watergate. For one, mainstream reporters just don't have the guts to put their careers on the line to sniff around, ask tough questions, and, perhaps, find sources like W. Mark Felt. Not even Woodward has the muckraking qualities of what Woodward used to have. Worse, editors at large papers don't encourage reporters to practice that kind of reporting anymore because they don't want to rock the boat or risk losing their jobs or be seen as liberal and therefore become the ire of the blogosphere."

Safi Khan is a development activist.

Crop insurance experiences: Lessons for Bangladesh

NURUL HAQUE MIAH

CROP production is susceptible to numerous risks and uncertainties. The most potent and serious ones are those posed by the natural forces. Some of these risks could be partially mitigated through the physical means, but the major natural forces are beyond man's control and have to be addressed through collective social devices. Crop insurance is one such device for managing risks in crop production. It is not in exclusion of the physical means but in juxtaposition and as an integral part of the overall development strategy in agriculture.

The major benefits that flow from an effective crop insurance system are stability and security to farm investment and income and assurance of fresh fund for re-investment in the event of large scale production damages. In the developing countries, losses in production of small and marginal farmers lead to their increasing indebtedness and pauperisation.

There are evidences of increasing frequency and magnitude of damages to agricultural production due to deteriorating global warming situations. As per Munich Re, a leading re-insurer, the average annual loss to weather-related events increased ten folds during 1950-1999. Such challenges to agricultural production are pushing up demands for crop insurance.

Besides, as economy develops, urbanisation expands, agro-processing and exports of agricultural commodities pick up momentum, agricultural producers start making larger investment of capital per land unit to meet the growing demands. These burgeoning investments need insurance protection to provide economic security to the producers as well as to bring stability in the production system. Such a stability is also essential for the growth of international trade in agricultural commodities. It is precisely why subsidy to crop insurance premium has been permitted by World Trade Organization (WTO) under WTO Agreement on Agriculture, 1995.

Crop insurance practices have been evolving gradually in various forms and directions in the light of the compelling requirements of the practicing countries. Crop insurance was initially a domain of the developed world. During the last few decades, developing countries are increasingly stepping into this important field. New insurance products are also being developed

to meet emerging challenges.

Developed country experience

In the USA, the present crop insurance system is the product of nearly a century of experimentations, studies, and trials. The first "multi risk" crop insurance was offered by a private insurance company in Minneapolis in 1899. The first attempt was however a failure. It nevertheless set the stage for entry of the public and private sectors towards mitigating crop production risks.

Providing a national crop insurance programme became a major political issue between the Democratic presidential candidate Franklin Roosevelt and his Republican challenger Alfred Landers. While Roosevelt supported a federal programme, Landers pleaded for a private one. On being elected, Roosevelt took this issue seriously and commissioned several studies to probe into its feasibility. Subsequently, Federal Crop Insurance Act of 1938 was passed under which Federal Crop Insurance Corporation was set up in 1939. Besides, several other epoch making initiatives were taken up by him to rehabilitate the agricultural economy severely shattered by the Great Depressions and the Dust Bowls.

The crop insurance programme was started as an experimental one and was limited to a few major crops. Due to its poor performance, its operation was suspended after one year, 1943-44, while the Congress studied it carefully. It was restarted after one year with an expanded list of insurable risks and inclusion of an array of new crops. Besides, several innovations like 3-year contracts, country or area premium rates were also introduced. During the seventies, premium calculation was established on the basis of individual farm yields rather than on country yields. Even with these innovations, farmers' participation rate was rather low averaging at less than 10 per cent of eligible crop acreage.

The Crop Insurance Act of 1980 brought several fundamental changes, among which the most important ones were -- a) provision of subsidy to premium and b) induction of private insurance agencies for delivery of multi-peril crop policies and c) providing them with reinsurance support and reimbursement of their operational expenses. These new measures proved to be highly effective in expanding farmer participation with crop coverage reaching the level of 70 per cent.

One major impediment to the

There is nothing to despair from the initial failings in the first attempt in crop insurance. This exercise has unfolded various useful and hard lessons on which to build the next programme successfully. Crop insurance cannot thrive in a vacuum. It is an organic process. It needs congenial atmosphere to grow and develop. People for whom it is meant must understand it; government must provide necessary resources to run and sustain it; business approaches must be there to manage it efficiently to contain losses at sustainable level.

programme was the liberal and free availability of the federal disaster payments to the farmers suffering from severe crop damages. Despite repeated recommendations, it was not until 1994 that the basic legislation authorising crop disaster assistance to farmers was cancelled in favour of an expanded multi-peril crop insurance. Under this reform, participation to crop insurance was made mandatory for the farmers receiving payments under the federal assistance programme. And for this, a new catastrophic policy, "CAT", was introduced to take charge of the old disaster payments. Premium of CAT policy was fully subsidised. Risk Management Agency (RMA) was also established during that period to administer the FCIC and other non-insurance risk management and educational programmes.

Further innovations were effected under the Agricultural Risk Protection Act (ARPA) of 2000 under which RMA was authorised to regularly enter into contracts with the private entities, particularly the universities for research and development of innovative insurance products. Liberal amounts are now being spent annually for such R&D activities and for mounting aggressive educational and promotional drives. A variety of insurance products have been developed combining the major characteristics of individual and area approaches with varying levels of guarantee and price elections.

The federal crop insurance programme is a government-private sector collaborative effort with RMA administering and overseeing implementation of the programme and FCIC providing insurance and reinsurance expertise. The sale and servicing of crop insurance is being carried out by the private insurance companies, who are selected and re-insured by FCIC. Presently, 19 such companies are in operation; they market the policies; collect premiums and settle claims payments. Under re-insurance contracts, they receive a variety of payments as per agreements.

The distinguishing features of the US crop insurance experiences are: a) strong political commitments



from the Presidents and the Congress, b) crop insurance accepted as a state function, c) provision of liberal subsidy, d) collaboration of the private sector insurance in servicing crop insurance losses and e) priority to R&D efforts with liberal fund allocations.

Developing country experience

India gained substantial experiences in crop insurance through its following evolutionary stages of growth and development:

Experimental Project (1973-76): General Insurance Corporation (GIC), a public sector insurance agency under the Ministry of Finance, implemented one experimental crop insurance scheme during 1973-76. It was based on "individual approach" and provided coverage to some cash crops like cotton and groundnut. Its performances were quite poor with loss ratios exceeding ten folds and was thus discontinued in 1976.

Pilot Scheme (1979-1985): The Pilot Scheme on Crop Insurance (PSCI) was introduced in 1979. This

was based on "area approach" providing coverage to crop loanees only as recommended by Prof. Dandekar. Other major features of the scheme were a) its voluntary nature, b) 50 per cent premium subsidy to the small and marginal farmers shared by the central and state governments with the latter as co-insurers with GIC, c) premium based on 10 years average area yield collected through crop cuts and d) Master Policies issued in the names of loaning banks.

Comprehensive Scheme on Crop Insurance (1985-1999): Another new scheme: Comprehensive Crop Insurance Scheme (CCIS) was launched in 1985 after a thorough review of PSCI. Some of the major innovations effected were a) subsidy to the small and marginal farmers was increased from 50 per cent to 66 per cent, b) premium rates reduced from 5 per cent to 2 per cent for cereals and 1 per cent for pulses and oilseeds and c) crop strata classified into low, medium and high risk categories with corresponding variations in limits to payable indemnities. Crop insur-

ance was made obligatory for all institutional crop loanees in the scheme areas. Two funds were also established, one at the central and the other at the state level, for facilitating settlements of claims and to provide for basic infrastructure and administrative set ups.

Experimental Crop Insurance Scheme (1997-98): Besides CCIS, which continued to be modified from time to time, another Experimental Crop Insurance Scheme (ECIS) was introduced in 1997 specifically to cater to the non-loanee small and marginal farmers. 100 per cent subsidy to premium for such farmers was borne by the central and state governments in the ratio of 4:1. The scheme was operated through the commercial and regional rural and co-operative banks to whom 5 per cent service charge was paid. This scheme was however discontinued after one year.

National Agricultural Insurance Scheme (1999-to date): Both modified CCIS and ECIS were merged together into National Agricultural Insurance Scheme (NAIS) during 1999. Under this

scheme, share croppers and tenants were included with retention of compulsory coverage for crop loanees. Several improvements were brought in with regard to premium fixation. Flat rates were fixed for food and oilseed crops separately for rabi and kharif seasons with the provision to switch over to actuarial rates within a period of five years. In respect of horticultural and commercial crops, premium was to be charged on actuarial basis. Subsidy was to be phased out within five years. In case of food and oilseed crops, GIC would bear losses up to 150 per cent in the first five years and 200 per cent thereafter. All claims beyond these limits will be paid by the government through corpus fund. Payment of administrative and operating expenses will be phased out completely on sub-set basis gradually within five years.

Pilot Scheme on Seed Crops Insurance (1999-continuing): In addition to NAIS, another Pilot Scheme on Seed Crops Insurance (PSSCI) was launched in 1999. Foundation as well as certified seeds were covered under this scheme. This was an important initiative to provide financial security to the burgeoning seed industries.

Bangladesh experience

Bangladesh was among the first few countries in this region to enter the world of crop insurance and was least successful in reaping benefits out of it due to a variety of reasons including her failure to accord appropriate thrust and resources to it. Sadharan Bima Corporation (SBC), a public sector insurance agency under the Ministry of Commerce, was entrusted with the implementation of a pilot project on crop insurance since 1979 with its own resources. Govt did not come forward to provide any premium subsidy or reinsurance support, which were vitally needed for its sustenance and growth, particularly during its formative period.

Individual approach of reaching out to farmers with service delivery and claims settlements was followed with field supervision by its Head Office staff. This was time consuming and vexing. Research element, which was absolutely indispensable for evolving suitable low cost models, was missing. Little or no innovations in operational methodologies, specially in switching over to "area approach" and linking to institutional credit, were effected despite repeated expert level recommendations for the same due basically to bureaucratic bottlenecks. The Commerce Ministry gave precious little attention to it.

Besides, a minimal critical mass of trained and dedicated manpower is essential for running and sustaining any programme efficiently and successfully. There were no serious efforts to develop and provide such a critical mass of manpower through the institutions of higher education and training in the public and private sectors. There were no sustained initiatives to educate the farmers of the importance of suitable crop insurance as an important tool for managing risks in agriculture and to provide them the much needed economic security. There is no strong farm lobby to plead for it. Meanwhile, the financial liabilities for running this weak programme was getting increasingly costlier to SBC with claims exceeding premium incomes by more than five times. The programme was therefore suspended in 1995 as per recommendation of a high level government committee pending implementation of a reformed, research-oriented government supported project involving private sector insurance agencies. Several committees were subsequently formed and reports submitted for restarting a renewed and research-oriented pilot project with private sector participation. The proposed programme is yet to take any shape due to government's indecision and fumbling over this issue.

Conclusion

There is nothing to despair from the initial failings in the first attempt in crop insurance. This exercise has unfolded various useful and hard lessons on which to build the next programme successfully. Crop insurance cannot thrive in a vacuum. It is an organic process. It needs congenial atmosphere to grow and develop. People for whom it is meant must understand it; government must provide necessary resources to run and sustain it; business approaches must be there to manage it efficiently to contain losses at sustainable level. The ongoing poverty reduction strategies must encompass some basic guidelines and funding for initiating any next programme on agricultural insurance. Our future success in modernising agriculture and stabilising farm income will greatly hinge on how well we succeed in handling our agricultural insurance needs.

Nurul Haque Miah is retired Chief, Planning, Ministry of Agriculture, and a consultant in agricultural economic issues.