Improving the Environment of Urban Poverty

NOT surprisingly many poor citizens in developing countries find it difficult to share Western concerns regarding global warming —questions of survival 20 or more years into the future are not a priority for those concerned with survival today.

More than a billion people in today's urbanizing world live and work among the world's most degraded environments where the smells and pollution are unbearable. They lack clean drinking water and sanitation facilities, even rudimentary toilets. Garbage lies rotting outside their makeshift shelters, often reducing access along narrow, unpaved pathways still further, and turning surface drains into open sewers. Diarrhoea, dysentery, typhoid and food-poisoning are facts of life.

Ironically, at the same time that cities are making significant, and growing, contributions to the economies of developing countries, they are facing the apparently contradictory situation that their physical and living environment is deteriorating. More and more urban residents lack even the resources to allow them to meet their basic needs of food, water, clothing and shelter. Slums and squatter settlements grow. Untreated sewage, uncontrolled industrial effluents and rapidly growing numbers of vehicles pollute air, water, coastlines and croplands. There is little or no protection for workers from unsafe workplaces, overlong working hours and excessive travel to and from home. Urban expansion is, all too often, haphazard and unplanned.

Most of these problems are linked to the failure, or inability, of governments to provide an effective regulatory and planning framework to address the problems of poorer citizens and protect the urban (and national) environment from contamination. All of the difficulties outlined above not only reduce productivity but also undermine social stability, and all imply costs which detract from an optimum development role for cities and from a sustainable urban development path. Removing these impediments clearly calls for changes in policy direction, and some of them might involve radical departures from existing practice.

Such changes in direction must acknowledge that the solution does not lie in the direction of increased public spending or expanded direct government involvement. Rather they imply that governments should concentrate on supportive and facilitative actions to stimulate the desired development, rather than trying to curb activities still perceived as undesirable, such as self-help urban settlement.

This also involves the recognition that problems are often more clearly identified and remedied at the local, rather than national level. The first step is the granting of decision-making and revenue-collection powers to cities and towns of all size. This will enable them to identify and spend new sources of revenue and to pursue development opportunities without undue constraints from central and regional authorities. This would also be a necessary, if not sufficient, condition for allowing the growth of intermediate and small settlements to exercise their crucial productive and service functions in regard to their rural constituency and specific local conditions.

Such a step must, however, go hand in hand with concerted attempts to improve existing urban-management procedures and practices, particularly in such key areas as financial and land management, infrastructure operations and maintenance and service delivery. This implies training in all skill categories as well as a reorganization of administrative structures in order to achieve maximum efficiency and coordination. Together with increased freedom on the part of local authorities to raise and spend revenues as part of a decentralization policy, increased efficiency can improve the level of infrastructure and service delivery in urban areas to support economic growth and enhance the quality of urban life.

Among other things urbanization means an escalating demand for shelter. Clearly, the public sector cannot be the sole provider of this basic human need — the scale of demand is simply too vast. Rather governments should concentrate on shaping a facilitating environment which will enable the poor to construct and upgrade their own shelter. This "enabling" approach is one of the key concepts of the "Global Strategy for Shelter" promoted by UNCHS (Habitat), and allows the vast human resources of the "informal sector" to be more fully utilized. In turn this would generate urban employment, and promote not only social but economic development.

At the same time, if urban growth is to be truly sustainable over the coming decades, environmental considerations will have to be taken into account. Urban management and planning practices will have to minimize resource depletion in the urban-expansion process and ensure that environmental resources are used wisely.

Promoting healthy, sustainable cities is about making the provision of basic health care and a safe living environment more responsive to consumer needs and demands. It is about local government giving city residents more power in decision making, a bigger role in service provision and more rights in determining priorities. These people need to be able to satisfy their basic needs — including the right to a healthy living and working environment.

However, this community approach to improve the living and working conditions of the poor can only be effective if women — one half of the population — participate in strategy formulation and implementation both as contributors and beneficiaries. It means acknowledging the role of the urban poor as important actors in the construction and maintenance of cities.

Government's success in curtailing ill-health, disablement and premature death in cities will largely depend on the extent to which they cooperate with the community sector — transforming the current atmosphere of indifference, or indeed repression, into one of partnership.

What Do We Do With Industry?

The world, in the throes of unprecedented ecological crisis, is trying to get to grips with its schizophrenia about industry. Do we like it? — Not really. Do we want it? Well, sort of ... Do we need it? — Absolutely!

THOSE who remember the days of heady environmental activism of the sixties and seventies today, probably remember them as a time of clear issues with clear solutions. Profit-hungry industries were billed as ruining our environment, in a world that would be happier without them.

Of course industry has a tremendous disaster potential; in fact, it is a major contributor to all the top-priority global environmental problems — but it cannot be dispensed with without also dispensing with many of the essentials of civilized living as we know it, from digital watches to rural health care!

Greening the Balance Sheets

Times have changed. Environmentalists and industrialists both realize that the slogans of yesteryear have lost their currency and are trying to find a way to live with industry — since it is becoming clear that we cannot live without it. In both camps there have been developments. Diehard activist groups have been joined by pin-striped economists, while industry is waking up to the effect public outcry over spilt waste could have on their balance sheets.

The dialogue has been going on for a while, and results are there to see. Large corporations, in particular, spend vast sums on environment-related R&D and undergo rigorous audits and impact assessments. Perhaps the most most interesting aspect, in negotiations leading up to some of the landmark international environmental conventions, industry has participated very actively. The reasons are both the enormous influence in international affairs of the global transnational companies coupled with the fact that both preparation and enforcement of such legal milestones as the Montreal Protocol stand a much better chance with the assistance of industry. Conversely, industry has been quick to realize the commercial impact of environmental reputations as well as the potential *quid pro quo* in visibly taking part in saving the world.

Today there is fairly broad agreement on what the issues are and to some extent what the solutions should be, although there is not complete concurrence regarding the way to get there.

Trends prevail in industrial environmentalism like everywhere else. One of the significant changes in perception during the last decade is the move away from "end-of-pipe" solutions where pollution is picked up and dealt with where it occurs towards "cleaner production" (CP). CP aims at changing basic production methods to those that do not cause pollution or other problems in the first place.

Perhaps the most rewarding aspect of cleaner production methods is that they so often show a profit in themselves — quite apart from the environmental benefits.

But in spite of many cases like these, even in developed countries industrialists are often unaware of the savings to be made. The slogan "Pollution prevention pays" is only half believed. Therefore it is a common observation from many likeading environmentalists that managers as well as engineers need to be much better educated in the environmental aspects of their work.

Magatrends

The technological developments that have earned practically every industrial sector the epithet 'revolutionary' — biotechnology, new materials, microelectronics, agrochemicals — have also enabled us to affect global physical mechanisms, previously out of reach. Weather, climate, atmospheric composition and sea level have all been affected. The same technological capacity must now be harnessed to solve the problems.

In a nutshell continued economic expansion is essential to stave off the disastrous consequences of population growth. But the cost of growing production, judging from the past, will be large-scale ecological devastation — a cost we can no longer afford. Only unprecedented technological advances can help us increase global wealth and at the same time reduce today's unacceptable pollution levels. If not, we have the choice between a global poverty and hunger crisis and the likely ecological collapse of the planet!

Priorities

Priorities, rather than choices are the order of the day. For the vast majority of the world's population, immediate material worries are more immediate than global concerns. To some extent this has to do with perception. It is much easier to experience the daily problems of feeding a family than an impending ecological disaster. Global warming has not yet reached a level where one has begun to sweat.

Myths

That pollution is something occurring only in highly industrialized developed countries is a dated myth. As industrialization becomes the top priority of developing countries, ample evidence bears out the devastating truth. Sulfur dioxide pollution — one of the significant elements of urban air pollution — may have increased ten per cent annually in some Asian cities between 1973 and 1984. Several developing countries show extremely high levels of heavy metals in blood samples.

Another myth is the ideal of the small-scale, low-tech, locally-based enterprise. In the real world, however, technological breakthroughs occur in the R&D divisions of major enterprises, after investments often beyond the reach of even medium-sized companies.

In reality, low investment capacity combined with limited enforcement of environmental regulations could make small-scale industry in developing countries a real bottleneck unless ways are found to make the best environmental technology not just available, but attractive to them. So far this is not happening, but one promising strategy is to use transnational corporations and industrial trade associations with world wide networks to disseminate technological know-how.

Dry Times in the Oldest City in the World

A serious water shortage threatens to undermine life in the historic city of Damascus. The shortage, hitherto unknown, has affected agriculture and industry and made life miserable for many residents. As Gemini News Service reports, the growing increase in population of the Syrian capital has made matters worse. by Barbara Nimri Aziz

DAMASCUS housewife Um Ziad, fruit farmer Mohammed Subhi and city engineer Abd Fattah Miski are all worried about the same thing — water.

For each of her six family members, Um Ziad has but 200 liters of water a day. That is one-fourth of what every American uses, and 40 per cent of per capita consumption in Europe. This includes domestic and commercial needs, with enough for household plants.

Farmer Subhi, at his orchard south of the Syrian capital, had 15,000 hungry trees to irrigate. He points to dry roadside ditches and the abandoned pit that once was a shallow well.

Agricultural and home needs are weighty. But municipal engineer Abd Fattah has also to address the increasing contamination of the city's wells from industrial toxins and bacteria. As Damascus grows, so does its industry. Moreover, with higher fertiliser use, the area's water crisis is multifold.

To Damascus residents like Um Ziad, the city's present water shortage seems absurd. Damascus has been inhabited for 5000 years without this problem.

Up to recent decades water was abundant. Um Ziad recalls how in her youth, free-running water washed neighbourhood streets and spouted fountains in sunlit courtyards.

Damascus was a lush basin, its people enjoyed the purest water found anywhere. All this despite its being surrounded by desert. But today this same ecosystem is causing problems because the balance that once was maintained, is gone. And water system cannot cope with the volume of chemicals penetrating it.

Nadia Khost, an environmentalist and a member of Damascus Municipal Council explains: "Damascus Basin is an aquifier. This was a closed system fed by free-flowing springs from the nearby mountains (East Lebanon hills) and ample underground sources just below our feet.

"It was a balanced, ecological system. Whereas 30 years ago, we had surplus water, now it's rationed and what we have is impure."

Damascus is uniquely located on the rim of a mountain and over an aquifer. Until recently and for thousands of years before, the Barada and Fijch springs flowed directly into the city, like a private tap. Then they passed downwards to the open expanse of the basin to irrigate 5,000 sq. km. of vegetable fields and orchards.

This is the dense farmland of Ghouta, where Subhi, one of an old community of horticulturalists, lives.

So plentiful were the nearby mountain waters that until 1960, underground water reservoirs remained undisturbed. That year low rainfall forced farmers to seek alternatives to the surface runoff. They dug shallow wells on their own lands.

At first these wells were a temporary measure. But farmers found them convenient and continued digging deeper each year as the water table dropped. They treated underground sources as inexhaustible.

Only now are they realising the limit. Subhi, his shallow well long dry, notes the pipe from his 80-metre deep well carries only two-an-half-inches of water today. A year ago it brought up four inches.

The question is: How much deeper can Subhi dig? He and other farmers cannot return to using surface streams that served crops for centuries before. Because as they drew on well sources, the surface water found other customers.

In these 30 years, population of Damascus has tripled, and tripled again. The 300,000 of 1960 is more than three million today.

Hydrologist Nizar Elmir's calculates that the 180 million cubic metres of water available from the springs, divided among this rapidly growing population results in their 200-litre per capita daily ration.

Besides its expanding population, Damascus has a growing industrial centre, the nation's largest. Textile, canning and tanning industries here are high water users. So every drop that flows into the city from the mountain is consumed. The city government has dropped 300 of its own wells to meet commercial and residential needs.

Nadia Khost, an outspoken critic of government policies, says it is too late to reverse the situation in the Damascus Basin.

She blames bad planning and lack of government control of construction. Water quality may never be restored, but to increase volume, she advocates tapping outside sources.

Piping water into the Basin from other parts of the country, say planners, is just not feasible. The Euphrates is many hundreds of kilometres away, and so are the hills of the northwest of Syria — too far for government to built a pipeline.

What are the alternatives? Conservation is one. Already the nearby hills from which the mountain springs flow have been declared a protected zone. Industry and construction in this zone are banned.

The city engineers are proceeding with upkeep of city mains to minimise seepage. In addition, during the hot summer months, rationing is imposed.

Most effort and hope are being put into a massive new scheme, a purification plant and recycling project with Abd Fattah Miski as its new director. Says Miski: The Kingpin of this is a sewage plant."

He points out that Damascus has never had such a facility. In the past waste water was allowed to flow freely into the soil. This was fine, indeed highly efficient in earlier times when it carried human waste from the city to fertilise the fields below.

"Today that does not work. Waste water from the city never reaches the fields. Even if it did." Miski says, "it is loaded with the industrial and household toxins of the modern city that would harm crops."

Miski explains how, with a sewage plant located at the lower end of the city, this waster water can be cleaned, then sent on its way to the farmlands further on. "The former balance of the Basin would to some degree be restored."

And the dangerous drainage of underground sources by farmers would be for stalled. Farms and city, with a sewage plant between them, could again share the mountain waters.

The new project, called Damascus Water Supply and Sewage Authority (DAWSAA), is to begin soon. Plans are approved, but the government is awaiting major investments — amounting to some billion plus dollars — to begin construction.

With each month's delay, meanwhile, more water is leaving the aquifer, more toxins are entering the soil and Damascus city grows still larger.

Some planners argue that even with the new purification plant, some regulations of population and industrial growth will have to be imposed.

Again Nizar Elmir does some simple arithmetic: at its present rate of growth, Damascus will soon have four million residents. A decade later, they will number more than five million people.

"Even if water consumption does not rise," Elmir maintains, "the city will need 542 million cubic metres of water a year. From all available sources, 240 million cubic metres would be available.

No one can tell him from where, in 2010, the shortfall of 302 million cubic metres, more than 100 per cent of present supplies, will be met.

— GEMINI NEWS

Battle for Green Space in Nairobi

NAIROBI : Renowned environmentalist Professor Wangari Maathai is on another campaign to save Kenya's urban environment.

Two years ago she singlehandedly stopped the ruling party from putting a $US197 million office complex on top of Nairobi's Uhuru Gardens. That campaign won her no friends in parliament.

Now she is sending out warning signals about a new proposal to put an underground parking lot beneath another city park. She is skeptical about the pledge from the Nairobi City Commission that the parking lot will not damage the Jeevanjee Garden.

The professor is national co-ordinator of the non-profit Green Belt Movement, an organisation committed to saving Kenya's environment.

Apart from Jeevanjee Garden, the city commission wants to sell two more spaces to developers who plan parking buildings and possibly shopping malls and office blocks. — GEMINI NEWS

Garbage littered on the main streets nowadays poses a common scene all over the city. — Star photo

Cleaning Up the Himalayas

Nepal now has to combat a Himalayan pollution problem — the garbage left by climbers and trekkers. by Jan Sharma

WORRIED by the Himalayan Shangri-La's growing reputation as the world's highest garbage dump, pioneers of tourism in Nepal are seeking support for the fight against pollution in the Himalayas.

The Nepal Mountaineering Association (NMA) has called for help in setting up a Himalayan Environment Fund to keep the mountains clean and develop alternative energy to protect hill forests overharvested for firewood.

The Association said a Clean Himalayan Campaign will be launched in January 1992 to rid the snowy peaks of tons of garbage left behind by visiting trekkers and mountaineers from all over the world.

Nepal attracts about 270,000 visitors annually from all over the world. A third come from trekking and mountain climbing. They bring significant economic benefits to the fund-starved kingdom. The gross foreign exchange earnings from tourism jumped from US $78,000 in 1961-62 to US $64 million in 1987-88. Tourism became the primary source of foreign exchange, surpassing traditional sources like remittances from Gurkhas serving in the British and Indian armies.

Helping to offset a huge trade deficit, low productivity and non-existent industry, from tourism now provides incomes and employment opportunities for about 72,000 Nepalis. But the country is paying a price.

There has been growing concern over pollution, deforestation, and damage done to the fragile Himalayan environment. Critics say tourism is being encouraged beyond Nepal's ability to manage it. One basic problem is the garbage that tourists leave behind : cans, bottles, boxes, toilet paper, packing materials and old tents.

Tek Chandra Pokhrel, president of the NMA, believes an average climbing expedition leaves behind over 500 kg of garbage. "There must be more than 50 tons of garbage piled up at the Base Camp, and above, on Mount Everest," he said. The track between Lamosangu and Namchhe Bazaar on the mountain has been labelled the "world's highest garbage trail."

Every year about 95 expeditions visit Nepal to attempt Himalayan peaks which include eight of the world's 12 peaks above 8,000 meters.

Sir Edmund Hillary — the first man, along with Tenzing Norgay, to climb Everest in 1953 — said recently that there were "places where tourism has been gravely abused." Everest, he said, had "become a junk heap overloaded with multitudes of expeditions and their refuse. Some of us believe that Everest should be closed down for five years and left alone to regenerate."

A rejoinder comes from Partemba Sherpa, the three-time Everest hero. "The oxygen cylinders left behind by Hillary in 1953 are still there, intact," he quips.

Seven mountaineering teams are attempting to conquer Everest during this year's busiest spring climbing season which began on March 1. Altogether 41 expeditions are attempting to climb Himalayan peaks.

The encouraging news in that alternative energy sources, although limited, are being exploited more widely. The use of solar and wind power is being tried out experimentally, and small hydropower plants have been installed in various locations.

In Ghandrung near Mount Annapurna, the use of back boilers for simultaneous cooking and water heating in lodges is already saving an estimated 2,000 kg of firewood every week.

Although the tourist demand for firewood has been described as "minuscule" compared with the aggregate demand of the local population, one body, Environmental Resources Limited, has estimated that the average firewood consumption per tourist trip is 138 kg depending on the type of activity : a river-rafting practitioner, 9 kg, 55 kg for an individual trekker, 186 kg for an agency trekker, and 1,116 kg for a mountaineer.

A government regulation requires trekkers and mountaineers to carry kerosene to avoid using firewood. This regulation, however, does not cover individual trekkers who make up 60 per cent of the trekkers. And even among the organised groups, the enforcement of the regulation is hampered by weak administration and an inability to monitor visitors' activities.

More worrisome than deforestation is littering, solid waste and bad hygiene. The efforts to clean up the garbage left by visiting tourists have been sporadic.

A sample survey in the Sagarmatha (Nepali name for Everest) National Park showed half the lodge owners do not separate disposable from recyclable garbage. The dispose of their garbage and faecal waste in rivers and streams.

Polluted water and lack of toilet facilities pose health hazards. Most trekkers suffer from stomach disorders. And Nepalis themselves are vulnerable to water-borne diseases.

The NMA has been calling for a reduction of the volume of trekkers, with permits restricted to the optimal number manageable. It has also been suggested that some areas should be popularised during the "off season" summertime.

Tourism industry leaders have been pressing for new areas to be opened for mountain tourism. A third of west Nepal remains closed for tourism for fear of Chinese sensitivities connected with neighbouring parts of Tibet.

Nepal's Tourism Ministry in 1989 increased the climbing royalties on peaks. The royalty on Everest was increased by 20 per cent to US $3,000 for a climb. Peaks between 7,500 and 8,000 metres will cost US$1,400 and peaks less than 7,500 meters will cost US $1,000.

These measures are not considered enough. The NMA has been asking the authorities to impose an environmental tax.

"Halfhearted measures will not do", says Pokhrel. "We must ask the climbing teams to deposit amounts equivalent to the goods they carry up in the mountains, to be refunded only when they bring them back."

Partemba Sherpa argues that only two climbing expeditions should be allowed in any one season. "This is the only practical way to minimise the adverse impact," he says.

— Depthnews