



CITIZENS FOR
A BETTER
ENVIRONMENT

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has.

—Margaret Mead

SHEHRI

JULY-SEPTEMBER 1994

Vol. 1 No. 10

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KARACHI MASS TRANSIT PROGRAM

To be or not to be?

The Karachi Mass Transit Program (KMTP) is currently a hot subject of debate between the NGO's and the government development authorities.

Already designed by foreign consultants and 'aid-funded' this elevated light rail system proposed for Karachi may create more problems than it is likely to resolve and comes with a massive dollar price tag. Informed members of the public and many NGO's are aware of KMTP's prospective negative environmental impact and have simpler, economical and more sensible solutions to Karachi's transportation problem.

But will the powers that be listen?

Whilst examining the KMTP, it is important to see the project within the context of the city, its institutions and physical infrastructure. The city's population has increased from 300,000 at the time of partition to its present 12 million (i.e. a forty

fold growth in nearly 50 years) and is expected to reach 16 million by the year 2000.

Thus we are confronted with a population explosion that has placed tremendous strain on the nation's meagre resources and infrastructure. It is essential, therefore, that limited resources be spent on rehabilitating and updating the existing institutions and infrastructure, rather than spreading ourselves out too thin by embarking on new grandiose ventures whilst allowing existing facilities to become rundown and fall into a state of disrepair thus losing billions in the process.

Karachi is a city with more than 18 different planning agencies with little or no co-ordination between them. The KDA and KMC are the two largest agencies followed by five cantonment boards along with a host of others. In principle the Mayor is supposed to be responsible to the 12 million inhabitants of the

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Citizens Mass Transit Forum meeting in progress



WATER, WATER, WATER

by Sajid Aziz



Experts say Karachi ground water not fit for human consumption.

Water is considered as the elixir of life, yet many people die because of polluted water. According to World Health Organisation (WHO) more than 10 million people die each year of water borne diseases.

Seventy five percent of all diseases in developing countries is the result of improper sanitation and the use of contaminated ground and/or brackish water. So, in view of the impurities associated with drinking water, we cannot afford to take the purity of drinking water for granted.

Experts do not recommend the use of ground water for drinking purposes in Karachi for two reasons, i.e. the water reserves in Karachi are not fit for human consumption due to its salinity and the heavy amount of total dissolved solids which do not meet the standards set by the WHO.

A number of times, during the past years, the KDA and some organisations undertook research on the availability of potable ground water within the city limits. Each time it was realised that sweet water is not available in Karachi due to its geographical conditions no matter how deep the wells are dug.

Ignoring associated dangers, the Karachi Water and Sewerage Board has undertaken a multi-million rupee project of spudding

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WATER

Continued from page 1
as many as 100 tube wells in almost every part of the city to enhance its water supply and to overcome its deficiencies in its water distribution network. The tube wells are being sunk by the KWSB with the assistance of Public Health and Engineering Department.

The tube wells will be dug out in High Service Reservoir and Low Service Reservoirs. Out of these 100, approximately 19 will be in the eastern part of Karachi, 24 in the west, 16 in the northern part, 3 in the south, and 11 in the central part of Karachi. According to the plan all the tube-wells would be connected with the water trunk mains at their respective pumping stations and the heavy motors would suck the well-water and mix it directly with the water supplied by the KWSB through its two resources viz. Indus and Hub Dam.

The Chief Engineer (Distribution), KWSB, Mr M.Mehdi who has initiated the idea, has submitted to the government that the ground water from each tube well would be checked in the laboratory and the less saline water would be mixed with the KWSB water directly while brackish water would be filtered. But, he did not indicate how many filter plants he will be managing for such tube wells and at what cost, and who will bear the cost of filtration. Regardless of whether filtration is resorted to or not it is a known fact that Karachi has no reservoir of sweet water which could be declared fit for human consumption. Any such water being suctioned anywhere in Karachi

Ground Water: what's the source?



Illustrations courtesy WWF

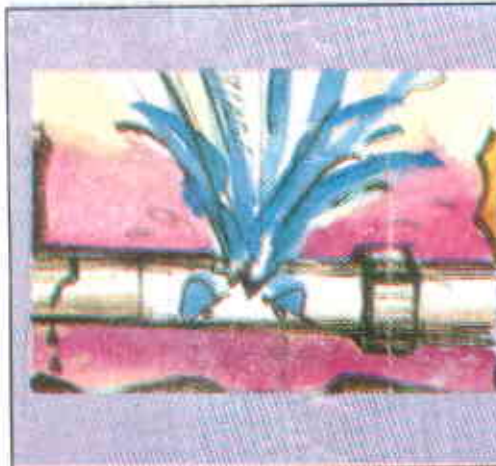
is either sewage or seepage water accumulating there due to the leakage of pipelines.

This plan of the KWSB is enough to horrify those who have even a slight awareness of the mixing of ground water into mains. The plan could simply create havoc with the lives of citizens as no one in the city could escape the extreme hazards that would ensue with the implementation of the plan. The ground water in Karachi has, besides salinity, untreated sewage and industrial effluents containing heavy metals. Industrial water is a major source of lead and other pollutants like cyanide, arsenic, chromium, selenium and other toxic chemicals which are extremely harmful to human health.

Ironically, chlorination which is the KWSB's only major source of filtration and which is widely used for disinfection, leaves an unpleasant smell in the

water; it also does not kill some bacteria and viruses. Researchers have recently discovered that adding chlorine to drinking water has some very negative effects as in the process of chlorination, microscopic bits of organic matter are chemically altered to produce trihalomethanes, a family of chemicals believed to cause cancer and birth defects.

Government of Pakistan has sanctioned Rs. 150 million under Karachi Package for this project of enhancement of water supply to Karachi - but it would be more appropriate if KWSB utilises this amount to repair its massive leakages all over the city which is causing more than 45% distribution losses. The amount is enough to arrest leakages of all the major locations which save upto 50 million gallons water daily, while tube wells would not be able to enhance more than 30 MGD water to the KWSB network. ■



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KMTP

Continued from page 1
city for their civic amenities, but in reality since elected local government does not exist, an Administrator is at the helm of affairs. However, even the Administrator has no control over most of the agencies in Karachi.

The city like all others in Pakistan, exists and grows without a legally approved master plan and where planning and building bye-laws are more often than not breached with utter contempt for the law. The urban environment has been thoroughly devastated in the lust for money by officials, politicians and the various mafias based within ethnic groupings.

Land grabbing, illegal commercialisation, rezoning and sudden changes in land use not only create environmental problems but also create distributional problems in the infrastructure which cannot be remedied easily.

Given this backdrop, the import and installation of an imported rapid transit system will unleash its own forces that will further 'shape' the city. Not beneficially, for the convenience, health and comfort of its inhabitants, but for the already wealthy and powerful.

Under the present systems, all such projects will suffer the same fate as the previous ones. Kickbacks, faulty designs, ill conceived parameters and paradigms resulting in cost over runs are the hallmarks of many such previous ventures.

Until we achieve open and enlightened policy making, a professional bureaucracy, accountable government, and a strong civic society participating in public affairs with all behaving under the laws, such large and odious debts must not be contracted in the names of oblivious and helpless citizens and babies not yet born. Already \$20 billion in loans have drawn the nation into a severe debt trap. The result is that at present the entire development budget is run on international loans, with some of these loans being used for debt servicing. In a short span of time loans will be required for debt servicing itself with nothing left for development. Therefore, foreign loans for projects such as the KMTP need to be rejected and self reliance promoted.

Until we have thought the problems through and have reached a wide consensus on

the adoption of a rapid transit system, we must endeavour to improve and rejuvenate the existing infrastructure. Public and private bus, mini-bus and van companies, black and yellow taxis, rickshaws and the circular railway must be looked at as parts of a whole and made to operate as such. And if at a future date we do opt for a rapid transit system we must uphold a principle: We must reject the imposition of foreign technology and instead standardise our design projects which should be executed or manufactured in Pakistan (with foreign collaboration only if necessary). Indigenous technology may even turn the nation into a regional exporter of light rails as production costs could be reduced with continuous research and development. Our Central Asian neighbours and others could be attracted by our accomplishments.

However, if we continue to rely on injections of foreign loans and technology, Pakistan will always be an exporter of basic commodities rather than an exporter of technology and value added products. And of course, the problems of transportation will always remain. ■

Salient Features of the KMTP

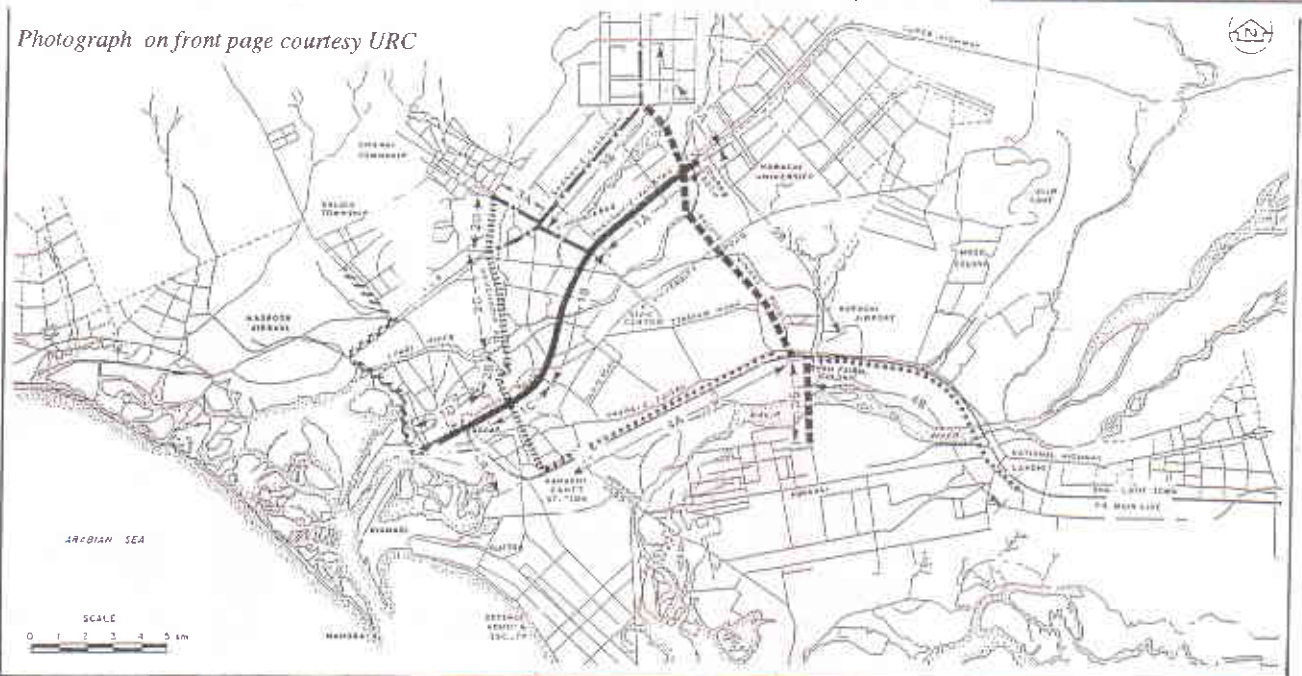
The Government's proposal:

The proposed Mass Transit scheme envisages elevated transitways, one of which will commence from Mereweather Tower, past the Quid's Mazar and at grade (ground-level) from thereon to Sohrah Goth.

Disadvantages of KMTP:

- * The transit way passing through the heart of city will badly mar the city's heritage buildings and sites.
- * Elevated structures and heavy vehicles will run past buildings blocking their light, breeze, intruding on privacy and causing noise and air pollution.
- * Congested roads will suffer from concrete structures and attract encroachers.
- * Businesses and residential blocks will have to be relocated which will be an expensive and long drawn out affair.
- * Escalation of building costs, heavy loan repayments and slim chances of recovering costs will lead country into a debt trap and further add to the country's crippling international debt.

Photograph on front page courtesy URC



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FOOD FOR THOUGHT

by Rana Rizvi



Adulteration of food items and drugs is a common practice in Pakistan, and continues with the connivance of vested interests, to the detriment of the health of consumers.

It is surprising that most food items which are available in the market today have not been mentioned in the Sindh Pure Food Law (1965). Thus there is no law which controls the standardisation of food items for daily consumption. The agencies responsible for checking their quality cannot do so because of their omission from the list and no attempt has been made to revise this since 1965.

The food items include all edibles and ghee, mineral water, yoghurt, tea, ice candies, full cream milk powder, 'paan', supari, garlic powder, kheer mix powder, masalas, jelly crystals, bread, biscuits, baby milk, cereal, and various sweetmeats, etc.

It is pure lethargy on the part of the government that the matter of quality control has been overlooked.

Hence, adulteration of food items continues unchecked and it is people who suffer as a result. What is even more frightening is the adulteration of drugs that very often is the cause of the loss of life of a patient. Adulteration of food items could be considered a reason for the high mortality rate at a comparatively young age. Dr Panwar, ex-director general of the Health department of K.M.C. has stated that they cannot check adulteration in these food items because they are bound by the Sindh Pure Food Law Rule.

When palm oil was introduced in the market, it had no standard specification and after two years it was finally included in the Sindh Pure Food Law Rule. Dr. Panwar said that it is

imperative that the government takes steps to check and maintain purity of contents before any item is introduced in the market. The item should first be given legal cover by including it in the Sindh Pure Food Law Rule. Dr. Panwar said that in 1993, the K.M.C. checked 7,010 food samples, out of which 499 were found to be adulterated and 6,511 were pure — i.e. a total of 7%. Aerated water, juice, syrup, supari, and vinegar were found to be mostly adulterated.

The responsibility of checking adulteration lies with the K.M.C. which sends inspectors to collect samples of different parts of the city. A food inspector goes to the shopkeeper as a customer and buys an edible item. Then he divides the sample in two parts, seals both bottles and signs them. One is given to the shopkeeper, and the other bottle is retained by the inspector who gives it to the laboratory. If adulteration in

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Stalemate on Jheel Park case—see page 17 for details of legal proceedings.



the food samples is found then the case is sent to the court. But the K.M.C. has limited access. Some areas come under the control of the District Council. Many food items are manufactured outside city limits where the K.M.C. has no control. Dr. Panwar says that the law makers are also involved in adulteration. Adulteration depends on demand and supply. If demand for a food item is great then chances for adulteration are high. Examples of adulteration include water mixed with milk, roots in tea, brick powder in chillies, spices, etc. The purpose of adulteration is primarily to gain more profit. A litre of milk containing the same amount of water would mean double the price. Many wealthy parties are involved in the business of adulteration. Where risk to human life is taken into account, Dr. Panwar claims that milk sellers do not mix borate powder or boric acid in milk to thicken it. However, Dr. R.B. Qadri of the PCSIR, contradicts the view, saying that certain samples of milk and other commodities when analysed, were found to contain sodium borate. Food colourings are largely made up of semi-purified textile colours which should be purified to the extent that they lose their toxicity. The colours imported by big companies like 'Hamdard' and 'Naurus' are prepared strictly according to standard but the colour used in gola ganda' is simply poison. High levels of toxicity have been found in betel nuts, small pebbles and dirt in wheat flour, and stale broken rice and brown maize are ground into besan. A physician in a local hospital said that throat sores, ulcer, cancer, stones in the gall bladder and kidney and gastrointestinal diseases can be caused by adulterated food.

Pollution is a factor which makes many food items injurious to human health. Industries emitting toxic waste into water are the main culprits. That water is drunk by cattle which are later consumed. Dr. Qadri says that

A GLOSSARY OF ENVIRONMENTAL TERMS

Published by Shehri, IUCN & Muqtadra Urdu Quami Zaban

The work on developing environmental terminology in Urdu began about two years ago.

The commencement of this work coincided with the adoption of the National Conservation Strategy (NCS). The need for a glossary of environmental terms in Urdu had begun to be felt when work on the NCS first began. Since the majority of the population has some degree of familiarity with Urdu and the regional languages could readily adopt or absorb terms from the Urdu lexicon as opposed to English, the idea gained acceptance immediately.

Since SHEHRI had mooted the idea, we had to take it forward. The IUCN Pakistan was excited by the idea too since the NCS could rely on vocabulary support for wider dissemination in the national languages.

The NCS had already been circulated among various related government departments and organisations. For the further publicity of the NCS the Journalists Resource Center of the IUCN had published sectoral papers. However it soon became obvious that since the medium of the Strategy was English its impact and support would be limited.

small fish found in shallow water are usually unfit for consumption. Only the big catches from the deep sea can be relied upon to be relatively toxin-free.

The pitiful state of affairs can best be explained by the following example:

In 1992, an anti-adulteration drive was started in January but it failed because wholesalers went on strike and business was paralysed!

The only people who can wipe out the menace of adulteration are the masses themselves who must be properly educated to do so, and to stand up for their rights as consumers. ■

It was then decided that the NCS would be translated and published in Urdu. But many scientific terms had been used in this document which were not commonly used, so again the translation would have been read and understood by only few from the environmental/literary world.

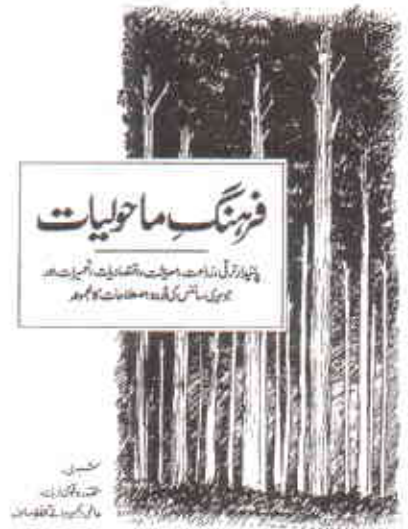
The informal translation of any document would have meant that the same term would be translated in many different ways. This problem was overcome by developing the synonyms of these terms, so that these could be debated and discussed before final acceptance as standard terminologies.

Since Shehri had originally suggested the idea it was decided that the work of translating the terminologies from the NCS report should be coordinated by Shehri. For this purpose a committee was put together by the then Coordinator of Shehri, Ms Fahmida Riaz (a well known literary figure in her own right). The committee consisted of Ms. Fahmida Riaz, Dr. Aslam Farrukhi, Mr. Asad Mohd Khan, and Mr. Ahsan Sabzwari, who after months of hard work translated these terms into Urdu. Later when the Urdu dept of IUCN-JRC was founded, the draft was sent back to IUCN. This glossary was to be published jointly by Shehri and IUCN, but could not be recognised or used officially until the Muqtadra Quami Zaban gave its approval.

It was therefore decided to include Muqtadra in this project. (Muqtadra has published 500 glossaries but none on the environment).

A meeting was thus convened at the IUCN offices, where an editorial board was consti-

tuted, which comprised of Dr. Jameel Jalibi, Chairman, Muqtadra Urdu Quami Zaban, Dr. Shan-ul-Haq-Haqi, and Dr. Mehmood-ur-Rehman. The technical support was provided by Ms. Sanyeea Husain, Mr. Nasir Dogar, Mr. Obaidullah Baig, Ms. Tahira Husain and Mr. Wahajuddin Kirmani who is an expert in Agriculture, Forestry and Zoology. Based on the interpretations that the committee



members formed for the translation of these terminologies, the editorial board approved or disapproved the translations.

After the final approval of the Muqtadra Quami Zaban, the glossary was considered developed enough for the publication of its first edition.

The formal launching of the glossary was held on June 30, at Hotel Pearl Continental. The chief guest for the occasion was the Governor of Sindh, Mr Mahmood A. Haroon. The introduction was given by Mr Obaidullah Baig of JRC-IUCN, who spoke about the concept of the glossary, why and how the need for a book on environmental terminologies was felt. He highlighted the work done by various people associated with

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PARTICIPATORY RESEARCH FOR COMMUNITY BASED SOLID WASTE MANAGEMENT

Safe drinking water, adequate sanitation and clean air are essential ingredients for a healthy and productive society. The discharge of municipal wastes in large quantities has created serious pollution problems. A comparison of the characteristics of data on solid waste for several cities of the world show that the density of solid waste in Karachi is almost double to that found in other industrialised countries. Centuries old practices are prevalent among the urban areas which are inadequate, inefficient and insanitary as well as economically unsound.

To safeguard against this, collection and disposal methods suited to Karachi's conditions need to be developed. Collection systems need to be organised, keeping in view community development patterns. In this connection IUCN organised a Participatory Research Appraisal training program to find out the attitudes of the groups responsible for waste management in different areas i.e. government, industry, municipal authorities, communities and households and to facilitate their working together to manage urban waste.

The project team members consisted of representatives of IUCN, APE, SCOPE, AKCHS, NKCHS and Mr Khatib Ahmed, Wajeeda Yasmeen and Amira Qaiser from SHEHRI-CBE (Citizens for a better environment). Ms Rashida Dohad was the facilitator.

This was a small demonstration project on urban solid waste management initiated by IUCN to work on the responses and cooperation of the people of the locality, their practices and perceptions about solid waste management. A 3-day training session was held at the Metropole Hotel from June 3rd to June 5th, 1994 during which participants were introduced to the philosophy, evolution and PRA techniques.

The discharge of municipal wastes in large quantities has created serious pollution problems. Centuries old practices are prevalent among the urban areas which are inadequate, inefficient and insanitary as well as economically unsound. A Participatory Research Appraisal training program was organised to study and analyse the attitudes of the groups responsible for waste management in different areas.

PRA (Participatory Rural Appraisal) is based on a family of approaches and methods to enable people to present, share, analyse their knowledge of life and conditions, to plan and to act. The approaches and methods used in participatory research appraisal are participatory, lightly structured, flexible, adaptable, exploratory, interactive, inventive and empowering.

After 3 days of indoor training, field work started. The project team members had been divided into 3 groups.

They had to find answers to the following questions.

1. Who is involved in the collecting system?
2. What are the constraints in the movements of waste?
3. What is the existing system?



What are the gaps in it?

4. Are there waste problems in the area?
5. What kind of domestic waste is generated and how much is the quantity?
6. What happens to the waste once it is collected?

The area chosen for field work was NKCHS New Karachi Cooperative Housing Society and Maniya Society which is situated off Tariq Road. A local community group helped the team members in their research.

During field work these groups met key target groups i.e. householders, maasis (female servant), sweepers, kabariwalas, ragpickers and municipal workers. Different techniques were used for gathering information.

Every day after the field trip, the groups gathered for an hour in the evening at the Shehri office for evaluation. On the 4th day of the field trip evaluation was done at IUCN office. Each team shared their findings and experiences.

It was found that housewives, maasis, sweepers, scavengers, KMC sanitary workers, kabadiwalas (street going), kabadiwalas (shopkeeper), kabadiwalas (specialised dealer), factories, breeders, middlemen (one who buys from scavengers and sweepers or from kabadiwalas), Afghan mafia, are directly or indirectly involved in waste collection.

In KMC the following staff is involved in waste collection.

Lowest rank is of the sanitary workers, then there is a supervisor (or driver), then mukadam, above the mukadam is a munshi. Motor coolies are monitored by a motor vehicle inspector who in turn is supervised by a sub-inspector. There is a chief sanitary inspector, then Director Health ZMC, then additional Health Officer, Administrator, Municipal Commissioner, Magistrate.

The constraints which were found in the movement of waste are as follows:

1. Trucks (KMC) do not come often enough (probably once a month).
2. Unauthorised dumps.
3. Katchra Kundi or Containers are not conveniently designed. It has merits and demerits.
4. Rag pickers/cattle scatter waste while sorting/eating it.
5. There is little responsibility for problems which are perceived to be "public issue" and not private issues.
6. Mismanagement (poor planning by KMC Sub-Inspector).
7. Non-cooperation of residents.
8. No proper use of existing imperfect system.

Most of the domestic waste generated is kitchen waste.

In the second phase of the field trip groups searched for impact (which solid waste had on the life of target groups and community) and solution in the perceptions of the people involved in it. As a result following suggestions and solutions came from the community.

Based on the findings of the participatory research and round table discussions, a plan was devised to resolve the problem. Different tasks have been assigned to the related organisation or personnel.

Shehri-CBE, along with local community groups, will try to organise community action for waste collection and will introduce new recycling methods to cut down on the production of waste at the household level. ■

Glossary
Continued from page 5

Shehri, Muqtadra and other eminent scholars. Mr Jamil Jalibi, Chairman, Muqtadra Urdu Quami Zaban delivered the welcome address. Later, Ms Aban Marker Kabraji, Country Representative of IUCN, presented a copy of the glossary to the Governor, Mr Mahmood A. Haroon.

The Governor in his address said that the glossary would help in spreading the message of environmental protection to the common man more easily. He also said that most of the programs and talks regarding the environment were conducted in the English language. But to reach and make a larger audience understand, one needs to address the issue in the language which is understood by the majority of the people and this book on environmental terminologies would go a long way towards dissemination of ideas on conservation and protection of the environment.

The program was attended by journalists, academicians, and representatives of other NGOs. ■

PAKISTAN: THE POLITICS OF THE ENVIRONMENT

by: Navaid Husain (courtesy: Liberal Times)

Shrinking forest cover, large scale silting of rivers, untreated waste disposal erode Pakistan's environment. The root cause is however the lack of political will to fight illiteracy, bonded labour and unrestrained population growth.

Pakistan, in its quest to catch up with development has always given a low priority to social sectors. The end sufferer of this neglect has been the environment. There is now an opportunity to overcome past mistakes through sustainable development. Therefore it is important that forthcoming support through the Global Environment Facility should not be squandered as in the past.

STATE OF THE ENVIRONMENT IN PAKISTAN

In general, Pakistan being a part of South Asia, suffers from some of the common regional problems such as high population growth, rapid urbanisation and poverty as factors leading to environmental degradation. This, in addition to weak environmental laws and controls resulting from institutional breakdown has added to the syndrome.

Pakistan suffers from its

own particular set of problems as its forested land cover is the lowest in South Asia amounting to a mere 5.2% of its land area, causing lower rainfalls in southern Pakistan. With limited arable land, the country must maximise agricultural production. Although Punjab and Sindh provinces have one of the most elaborate irrigation systems in the world, 40,000 miles of unlined water canals and bad land management has caused salinity and extensive water logging resulting in the loss of vast tracts of cultivable land.

Uncontrolled logging in the water catchments of the northern areas has played havoc with the environment. Hills have been denuded causing mud slides and silting of the rivers. Wildlife has suffered as migrations from high to lowland has been disrupted due to population pressures. Large hydroelectric dams such as Mangla and Tarbela in the north have provided the country with power and a controlled water supply for around-the-year irrigation. On the other hand, large scale silting due to soil erosion as a result of deforestation in

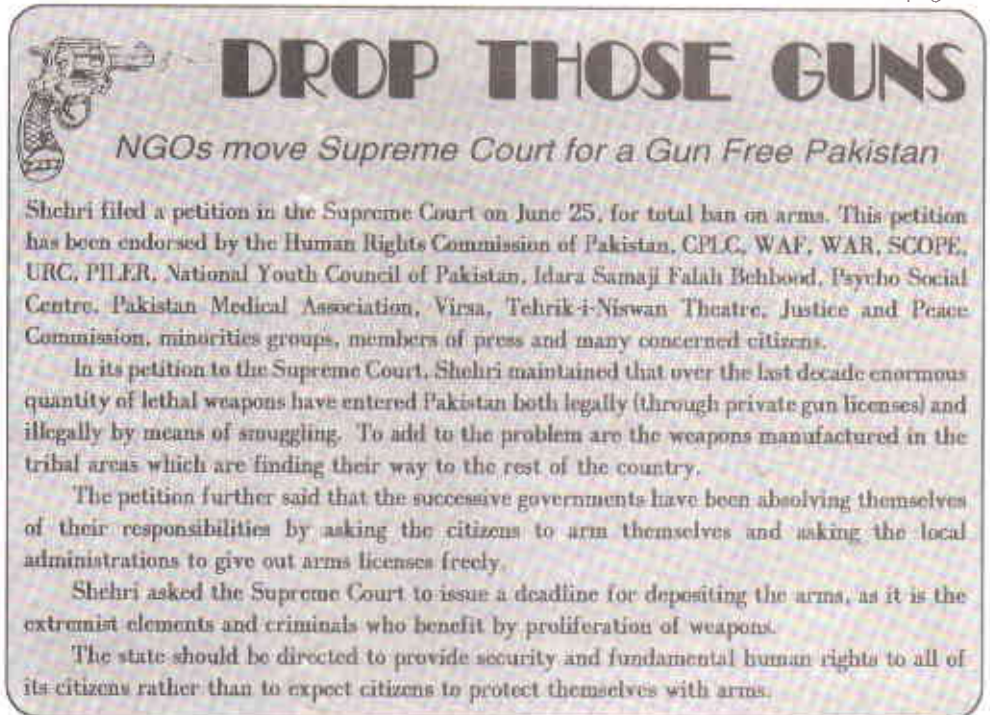
the water catchment areas has sharply reduced the holding capacities of these dams.

Towards the coastal areas of Sindh, reduced water in the rivers as a result of the Tarbela and Mangla dams has drawn in sea water destroying large tracts of agricultural land. Therefore, construction of the proposed Kalabagh and Barotha dams will surely add to environmental problems in the long run.

Untreated industrial waste, indiscriminate usage of herbicides and pesticides are finding their way into the food chains through agricultural produce, fruits and vegetables. Towards the coastal region of Karachi, industrial and untreated sewerage of about 1800 tons daily is being dumped into the sea causing damages to the ecosystem besides polluting the beaches.

The urban areas are facing enormous social and environmental pressures as a result of natural population growth officially accepted at 3.1% but unofficially estimated at 3.5%. This growth erodes incomes and causes migration from the rural areas. The

Continued on page 8



DROP THOSE GUNS

NGOs move Supreme Court for a Gun Free Pakistan

Shehri filed a petition in the Supreme Court on June 25, for total ban on arms. This petition has been endorsed by the Human Rights Commission of Pakistan, CPLC, WAF, WAR, SCOPE, URC, PILER, National Youth Council of Pakistan, Idara Samaji Falah Behbood, Psycho Social Centre, Pakistan Medical Association, Virsa, Tehrik-i-Niswan Theatre, Justice and Peace Commission, minorities groups, members of press and many concerned citizens.

In its petition to the Supreme Court, Shehri maintained that over the last decade enormous quantity of lethal weapons have entered Pakistan both legally (through private gun licenses) and illegally by means of smuggling. To add to the problem are the weapons manufactured in the tribal areas which are finding their way to the rest of the country.

The petition further said that the successive governments have been absolving themselves of their responsibilities by asking the citizens to arm themselves and asking the local administrations to give out arms licenses freely.

Shehri asked the Supreme Court to issue a deadline for depositing the arms, as it is the extremist elements and criminals who benefit by proliferation of weapons.

The state should be directed to provide security and fundamental human rights to all of its citizens rather than to expect citizens to protect themselves with arms.

emergence of ghettos, traffic problems, pollution, shortage of services and recreational spaces have rendered life in cities unbearable especially for the poor. For the dispossessed it is a struggle for survival in which there is little room for environmental issues unless it threatens their very existence. This assault by mankind on the environment will take decades and unimaginable resources to rectify.

Political Roots of the Problem

A large section of the society still lives in semi feudal and tribal conditions along with an estimated 1.2 million male members working in bonded labour. Human rights groups therefore estimate that 10 million people are caught up in bonded labour as not only the male members but entire families are involved in this captivity. A stagnant literacy rate of a mere 31% has left people a prey of religious, sectarian and ethnic prejudices. Drug and guns cartels, whose earnings are estimated at \$25 billion have eroded institutions.

Pakistani society is in a transitory stage where traditional centers of power have been replaced with new ones and where monetary gain regardless of how it is made, is seen to be the only motivating factor.

Political corruption, bureaucratic tyranny and oppression have weakened institutions. The citizens have been alienated from the state and this has provided room for forces that are oblivious of accountability, rationality and issue-based politics. Thus, Pakistan like many Third World countries is hostage to a system of corruption and patronage in which honesty and merit is not considered to be an asset.

Over Population

In the accounts Herodotus, the father of history, described the region in the north west around Peshawar as being so densely forested that the sunlight barely penetrated the foliage. But already in 500 BC Herodotus recorded the region as being well populated. Over the last two and a half millennia those forests have been further cut down. And whilst

BOOKS BOOKS BOOKS

THE LAW OF THE MOTHER: *Protecting indigenous peoples in protected areas.* Editor: Elizabeth Kempf. (Publishers: Sierra Club Books, San Francisco)

The Law of the Mother is a valuable contribution to the 1993 International Year for the World's Indigenous people. It provides an alternative vision of the future, offering sustainable development models based on traditional knowledge and respect for nature. It is an illustrative anthology offering potent details and it serves as a guide to the consecration of our fragile ecosystems as well as their inhabitants.

THE RISE OF LIFE: *The First 3.5 Billion Years* by John Reader (Publishers: Crescent Books, New York)

John Reader presents a detailed account of the history of life from the first cell to the emergence of man. Information has been contributed by people who have dedicated their lives to the search of knowledge, both out in the field hunting for fossil evidence, and back in the studies and laboratories developing theories. The conflicts between religious belief and scientific theory elevate this piece of work and the brilliant illustrations bring it vividly to life.

the population explosion in South Asia is a matter of record, Pakistan in spite of its modest land area and resources is the third fastest growing country in the world. Economic gains made through increased production have been eroded by Pakistan's burgeoning population.

The addition of 11,500 babies a day is turning Pakistan into a virtual human time bomb. The annual population increase of 4.25 million is becoming a crucial factor in the nation's ability to prosper. The entire family planning programme has long been a victim of lack of political will and vision and of bigoted mullahs and social backwardness. Pakistan has for too long lived on borrowed time and money and will now have to face the necessity of a one child family.

Towards Sustainable Development in Pakistan

The solution to developmental problems has to be seen as being both local and international. Due to limited resources, it is Pakistan's vast human resource base that will have to be its major asset. With its sizeable pool of trained manpower, it is a question of organising the skills and talents of the people regardless of sex, sub-nationality or religion. The right institutional support for motivators, be they in the form of organisations, small entrepreneurs of NGOs will equip the nation to meet the challenges of development. Communities must be equipped with the mini-

mum prerequisites such as education, basic health care and vocational skills in order to turn them into working partners in the nation building process. Pakistan's most successful NGO, the Sattar Edhi Trust is an example whereby dedication has turned the organisation into a nationwide health support system for the poor. In the international context, especially with the changed political situation, aid will hopefully have less political strings attached making it more acceptable and meaningful. Although the recent shut down of a US aided family planning programme as a result of the Pressler Amendment negates this logic.

In the coming years countries such as Pakistan will have a great opportunity to break out of the poverty trap. The twenty-first century will see trillions of dollars being invested in restructuring industries and agriculture by making them more compatible with nature. Vast amounts of resources (\$130 billion annually as of the year 2000 have been pledged by industrial countries) will be transferred to the Third World as a result of the Global Environmental Facility (GEF) which is to be dispensed by the UN and the World Bank.

The transfer of financial support to Pakistan along with

the rest of the Third World should also give non partisan countries and agencies such as the UN an opportunity to bypass powerful vested interests that have a stake in maintaining the status quo.

The need for principles of good government could be brought to bear upon the state by donor countries thereby giving people a greater say in the development of the country.

There is tremendous opportunity for industry and agriculture alike in Pakistan to play a leading role in being receptive to technology transfers and techniques to be made available to them by industrial countries. Therefore between now and the year 2000 there is some time in which to lay the ground for institutional reforms in order to be receptive to forthcoming inputs and support.

Pakistan, in its quest for prosperity is at a stage in time where it can avoid the wrong models of growth by learning from the experience of the NICs (Newly Industrialised Countries) where, both, society and nature have paid a heavy price for prosperity. All sections of Pakistani society must learn the benefits of and the need of maintaining a balance with nature. Like all forms of life, the earth cannot be taken for granted. ■

Recycling one glass jar saves enough energy to light a 100-watt bulb for four hours!



INTERNATIONAL ENVIRONMENTAL AGREEMENTS AND THEIR APPLICABILITY TO PAKISTAN

By : Zahid Hamid, Member IUCN, Legal Panel

Pakistan is a signatory of an international environment agreement that seeks to make it mandatory for member nations to observe international rules on the protection of the environment. In Pakistan, appropriate legislation is far from satisfactory, but the fundamental problem regarding environmental legislation is its non implementation.

Sustainable Development programme in 1987. The Stockholm Action Plan culminated in the establishment of U.N.E.P. in 1972.

The global problems were climate change, depletion of the ozone layer, acid rain, contamination of the ocean and the seas, degradation of land resources by drought, deforestation and desertification.

The basic rule, which predates international law and applies to all agreements made within the framework of the international legal system is "*pacta sunt servanda*" i.e. agreements are to be observed.

UNEP issued a list in May, 1991 of International Treaties and Other Agreements issued in the field of Environment of 152 legal instruments. Pakistan is a party to 19 out of these 152 instruments. There are 4 other agreements with special significance to environment to which Pakistan is a party. To these 23 agreements are also added the 3 very important conventions which have been signed and are in process of being ratified, namely convention on Biological Diversity signed at the U.N. Conference on Environment and Development (UNCED), "the Earth Summit" at Rio de Janeiro

in 1992, the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal, and Copenhagen Amendment to the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer. Hence the International Environment Agreement to which Pakistan is, or is about to be, a party, comprises 26 agreements:

The 26 Legal Instruments

- A. Nature conservation and terrestrial living resources. (9 Agreements).
- B. Atmosphere and Outer Space (7 Agreements)
- C. Marine Environment (3

- Agreements)
- D. Weapons (3 Agreements)
- E. Nuclear Safety (3 Agreements).
- F. Hazardous Substances (1 Agreement).

Some of the important agreements to which Pakistan is not yet a party include:

1. Antarctica.
2. Marine Pollution.
3. Desertification.

The overall legal framework for environmental legislation in the country :-

a. Constitution, 1973

Article 142 read with clause 24 of the Concurrent Legislative list confers concurrent legislative power on the Majlis-e-Shoora (Parliament) and the Provincial Assemblies to make laws with respect to "environmental pollution and ecology".

b. Provincial Local Government Laws.

Under Provincial Local Government Laws the Zila Council and urban local councils are also empowered to prepare and implement schemes for prevention of air, water and soil pollution.

c. Pakistan Environmental Protection Ordinance, 1983.

Basic Federal environment legislation is Pakistan Environmental Protection Ordinance, 1983. *Continued on page 10*



In Memorium.....

Zulekha Ali

very active student throughout her years in school and college. She was an allrounder in her school, took part in various games, debate competitions, etc. In college as well, she took part in many extracurricular activities, was president of the college union, captain of the throw ball, volley ball, and hockey teams of her college, represented her college in inter-varsity competitions, was a member of the athletics team and acted in many annual plays of her college.

She joined *The News* in 1990, initially working at the foreign desk. Later she shifted to the "WE" magazine. In May 1992 she joined reporting and did a

series of investigative environmental stories for *The News*. In July last year, Zulekha and Owais Tohid covered the story extensively, of the dumping of Polish ship drums at Clifton. In June last year she did a story on the toxic drums kept at a customs warehouse in SITE area. She was a very keen environmentalist, and campaigned relentlessly for changing laws on the hunting of the houbara bustard.

Zulekha's keen interest towards the protection of the environment was one of the reasons which aroused her interest in Shehri activities. She became a Shehri member in mid-1992. She was mainly interested in the issues of marine pollution, heritage and archaeology. She was an active member of Shehri, did a lot of work on the cases of illegal land

conversion and the encroachments at Jheel Park.

Earlier this year Zulekha was posthumously awarded the Tamgha-e-Shujaat, for her bravery and courage. This award was received by her parents on March 23, 1994.

She was also nominated for the prestigious award, The Global 500, which is sponsored by UNEP, and is granted to individuals or organizations for outstanding achievements in the protection and improvement of the environment. The award is a tribute to successes on the front lines of global environmental action. This award was also received by Zulekha's parents.

Zulekha will always be missed by all who came into contact with this brave and talented young woman.

The most important provision of the ordinance was section 8 which requires projects to file a detailed environment impact statement (EIS).

d. Proposed Pakistan Environmental Protection Act, 1994.

The draft new Act now covers air, water, soil, marine and noise pollution, waste management and handling of hazardous substances and hazardous waste.

The National Conservation Strategy (NCS) the "grundnorm" of all future environmental legislation, has been given legal sanction and clarified that comprehensive national environmental policies are to be established by the Pakistan Environmental Protection Council within the framework of the NCS approved by the Federal Government.

The two important tenets of the new Act provide that one, all designated projects be required to obtain an "approval" from Pakistan Environmental Protection Agency, after assessment of Environmental Impact Statements (EISs) and, two, pollution control licensing system, based on the "polluter pays" principle, should be adopted. A proposal was put forward to formulate Environmental Tribunals, empowered to recover monetary benefits from the offender and to award compensation for losses/damages.

NWFP Environmental Protection Act to meet particular requirements of the province. Forests Act.

NCS objectives are :

- 1) Conservation of natural resources;
- 2) Sustainable development;
- 3) 14 Programme Areas with 68 specific programmes have been recommended for priority implementation, envisaging total investment of Rs.150.7 billion during the period 1992 to 2001. 6 of these Programme Areas relate to urban/industrial pollution, namely:-

- (i) increasing energy efficiency - obtaining more and better services from existing facilities by insulation, tuning etc.
- (ii) developing and deploying

renewables, such as solar and wind energy.

(iii) preventing/abating pollution through utilisation of environmentally friendly and more efficient processes.

(iv) managing urban wastes, involving provision of safe, low cost water supply, improved housing and service facilities, and municipal effluent and solid waste disposal in an economically useful and environmentally safe manner.

(v) integrating population and environment programmes by emphasising grass roots motivation for small families.

(vi) preserving the cultural heritage, including protection of historical sites, buildings and streets, and preservation of various cultural facets of traditional communities.

2. Sectoral Laws relating to urban/industrial pollution are as follows :-

- a. Air pollution.
- b. Water pollution.
- c. Noise pollution
- d. Toxic or hazardous substances.
- e. Solid waste and effluents.
- f. Cultural heritage.
- g. Judicial activism.

The high courts under Article 199 and the Supreme Court of Pakistan under Article 184(3) have interfered on application of "Public interest" groups or even *suo moto*.

The Supreme Court in particular has given some landmark decisions regarding environmental matters, including vehicular air pollution in Karachi, dumping of waste in coastal waters, and installation of a grid station in the green belt of a residential locality.

The court in exercise of its jurisdiction under Article 184(3) of the constitution may grant relief to the extent of stopping the functioning of factories which create pollution and environmental degradation.

Conclusion:

The fundamental problem in Pakistan regarding the environmental legislation is its non-implementation. ■

Note: This statement was first published in a section of the press on 1-6-94

SIX WEEKS LATER ...

Now that the dust has settled, we would like to give to the public the following additional information:

Ciba is committed to three vital responsibilities: long-term economic success rather than short-term profits, responsibility towards society and for the environment.

As a part of our social commitment, we, at Ciba, have always given high priority to personal safety. From personal protective gear for workers and monitoring them for chemical exposure to training programmes and workshops on safety and fire fighting, we have been continuously engaged in improving safety in our operations.

Respect for the environment is part of everything we do. We constantly improve our processes and are coming up with new ways to minimize impact on the environment. In the past two years we have invested in Pakistan Rs. 65 million for safety and environmental protection.

We have set up a modern waste treatment facility at our Agricultural Division Factory in SITE, Karachi comprising a liquid effluent treatment plant and a high temperature incinerator. Our Multan warehouse is equipped with an in-rack sprinkler system which works automatically in case of fire. Our Factory's new warehouses are equipped with a modern high expansion foam fire fighting system which is capable of filling the warehouse with foam and smothering a fire rapidly. All warehouses have specially constructed areas for containment of contaminated fire water.

It is ironic that a fire broke out on April 12, 1994 in one section of our old warehouse, a day before the products were to be moved to the new warehouse equipped with the above mentioned fire fighting system. These products were not moved earlier from the old warehouse as a section of this new warehouse was used the previous day for a presentation to Government officials, members of the press and NGO's.

When the fire broke out, our emergency response plan went into action. The extent and nature of the incident was immediately communicated to all within and outside the organisation, including police, civil administration, fire brigade and neighbouring industries.

As planned, the drains outside the factory were blocked to prevent escape of contaminated fire water to the sewerage system and all of it was collected in especially designed containment pits, tanks and drums.

Protective equipment was provided to the Fire Brigade and all staff involved in fire fighting. The presence of the Company doctor and knowledge of the pesticides involved meant that antidotes were readily available for the affected people who were treated on-site and in hospitals; in all, seven firemen and one Ciba employee were hospitalised. They received the best possible medical attention and were given clean bill of health on discharge from the hospital.

All 84 tons of products destroyed in the fire - Nuvacron® 40 SCW (62 tons) Ridomil® MZ 72 WP (18 tons), Polytrin® C 440 EC (3.8 tons) and Logran® Extra 64 WG (340 Kg) have no negative long-term health effects.

The day following the fire, all the neighbouring factories were visited by Ciba officials to check for possible complaints. The few cases of headaches and eye irritation reported were examined by the Company medical officer and no serious effects were found. All Ciba workers were also medically checked and nothing abnormal was detected.

We invited government agencies and other organisations the following day to see for themselves the measures taken by us.

On the day of the fire, a public announcement was made asking persons affected by the smoke to get free medical treatment at Faiz-e-Aam Hospital, Murshid Hospital and Naveed Clinic.

As part of the clean-up process, the drain outside the Factory was completely cleaned after the fire. In this process six employees were affected and received medical care. The contaminated water was collected in drums and stored in a containment pit for treatment and purification. The treated water will only be released after Government approval.

Samples of water from the sewerage system downstream of our containment bunds were collected and analysed. These were found to be free of contamination from our chemicals or their degradation products.

Throughout this incident Ciba management was open to the Press and the public, continuously providing facts and information.

We are indebted to the fire fighting teams of both the municipality and the Pakistan Air Force for their excellent efforts and whole-hearted cooperation. We also wish to thank the civil administration, voluntary organisations and our neighbours who showed great concern, but refused to panic in the heat of the moment.

There is no question that we have learnt from the fire and that a number of improvements are being made.

We pledge to stand by our Vision of social responsibility now and in the future.

ciba

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saves one acre of trees!

