SOUTH ASIA CO-OPERATIVE ENVIRONMENT PROGRAMME

NEWSLETTER

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EDITORIAL

In times of increasing pollution 'Waste Management' becomes an important area of concern. Minimising the production of waste in industries saves raw materials and, because it reduces the quantity of pollutants, lowers the cost of treating effluents. Industries are realising that 'Waste Minimisation' cannot only help them save money by saving raw material and fuel, but also improve their image. Waste minimisation is clearly preferable to end-of-the-pipe (EOP) treatment because it reduces the amount of pollutants produced. Small industries can minimise their wastes by simply monitoring what goes down the drain and using it.

Waste Minimisation does not involve any high technology - it has more to do with small investments and common sense. This, in fact, should become an integral part of manufacturing processes. For example, washing of ice cream vats at an ice cream factory producing a liquid that was rich in milk fats and sugar but had a high pollution potential required waste management. Distributing the 'milk shake' among school children and its workers took care of the problem and also earned goodwill for the Company. In yet another case, a simple waste minimisation technique at an electroplating plant improved the quality of its plating and saved the unit US $ 2,000 annually.

Not much attention has been paid by the countries of the South Asia Region on this special problem. It still remains the topic of discussions, seminars, workshops without getting into policy and implementation level. It is therefore, imperative for the Governments to take a conscious look at it and provide necessary guidance and incentives to people/institutions for a scientific waste management practice.

NEPAL RATIFIES SACEP'S ARTICLES OF ASSOCIATION

On 24th March 1994, the Parliament of Nepal ratified unanimously the Articles of Association of SACEP and thereby becoming the Eighth Member State of SACEP. The other Countries of South Asia who have ratified the Articles of Association of SACEP are Afghanistan, Bangladesh, Bhutan, India, Maldives, Pakistan and Sri Lanka.

INDEX

UNEP/ROAP Has New Director

Dr. Richard Meganck has been appointed Regional Director and Representative for UNEP/ROAP effective 3 January 1994.

Dr. Meganck, a national of the United States, has a BSc in Park Administration and Planning and a MSc in Resource Development Policy and Watershed Management. In 1975 he obtained a PhD in Natural Resource Management from Oregon State University.

Before coming to Bangkok with his wife and three daughters, Dr Meganck was Coordinator of the Regional Coordinating Unit for the Caribbean Environment Programme.

COUNTRY NEWS

BANGLADESH

NOVEL INCENTIVE

As part of its literacy campaign, Bangladesh has started a food for education programme, under which a poor family will get 15 kg cereal a month if one child goes to school, reports Panos. This would be an incentive for parents to send to school, children who are otherwise busy earning money for the family's dinner.

RATIFICATION

On 5th February 1994, The Bangladesh Government ratified the London Amendment to the Montreal Protocol on Substances that deplete the Ozone Layer.

POLYTHENE BAGS OUT

Bangladesh has banned the production of polythene shopping bags, to protect the environment and increase the use of jute bags, which are made of natural fibre.

According to Report in Panos Features, Industry Representatives are lobbying to get the ban lifted, pointing to the sector's employment potential and the huge investment of about US $ 75,000 in each unit manufacturing bags. Environmentalists, on the other hand, strongly support the ban.

PROMOTING CONTRACEPTION

Studies suggest that countries can reduce birth rates significantly, without waiting for development to make an impact, by promoting modern contraceptive methods.

Birth rates are falling in countries too poor for development to have stabilised population growth. Between 1970 and 1991, fertility rates declined from 7 to 5.5 children per woman in Bangladesh. In that period, contraceptive use among married women rose from 3 to 40 per cent.

GRAMEEN BANK

Bangladesh's Grameen Bank - a Co-operative Banking System with easy loan repayment conditions - has inspired US President Bill Clinton. When he was Governor of Arkansas, Clinton launched the Good Faith Fund, modelled after Grameen. Now, he has plans to launch a similar scheme on a National Level to extend lending to the poor in America's interior cities and rural areas.

Clinton has even recommended the founder of the Grameen Bank, Mohammed Yunus, for a Nobel Prize. Yunus, who met Clinton in November, called him the leading publicist for the concept and said Clinton would probably implement it in 1994.

BHUTAN

BOARS WORRY BUDDHISTS

Wild boars have sparked off a discussion on basic Buddhist values among Bhutan's planners and decision makers. The animal is a voracious eater and prolific breeder and is the most notorious of pests because it manages to dodge traps. However, Buddhism does not permit the killing of wildlife.

Wildlife analysts say that farmers are responsible for the depletion of the population of the phao, which is a natural predator of the boar. This has resulted in the uncontrolled rise in the boar population and upset the ecological balance.

INDIA

ROW OVER PESTICIDES

The Pesticides Association of India (PAI) have made representations to the Ministry of Environment and Forests (MEF) over a draft notification that includes pesticides in the list of products to be covered by the eco-mark scheme. The scheme labels products that are environment friendly.

Though the MEF claims this will discourage the production and use of pesticides that are harmful to the environment, PAI says it contravenes the Insecticides Act, 1986 which prohibits labelling on insecticides with any unwarranted claims of safety. PAI also argues pesticides need specific methods of administration, depending on crop, soil and climate and that labelling them as "eco-friendly" could be misleading and lead to its indiscriminate use.

PAI Officials are also not convinced about the eco-friendliness of biopesticides. They cite studies that show some pesticides derived from neem are harmful to aquatic life, while others are harmful to silkworms. MEF Officials admit a product considered harmless today may later prove to be toxic and, therefore think it appropriate to label products as "environmentally friendly". However, the matter is still under consideration.

MINISTERS MEET OVER ECOLOGICAL ISSUES

The Second Informal Meeting of the World's most important Environment Ministers took place in Agra in late February 1994 at the invitation of Hon Kamal Nath India's Environment Minister.

Ministers from Brazil, Canada, China, Germany, India, Malaysia, The Netherlands, Sweden, UK and the US and Representatives from UNEP, GEF, the World Bank and United Nations Conference on Trade and Development attended the two day Meeting chaired by India. The first meeting took place in Magog, Canada in April 1993.

The Forestry Convention, The Future Role of the Commission on Sustainable Development (CSD) and GEF figured prominently in the discussions. Also in focus was the emerging link between Trade and Environment, in the wake of the conclusion of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT).

Though this meeting was designed to iron out differences among them, many disagreements persisted.

ASSESSMENT GOES PUBLIC

Entrepreneurs will now have to submit to the Ministry for Environment and Forests detailed Project and Environmental Impact assessment Reports and Environmental Management Plans for any new Industrial Project, expansion or modification.

According to a notification presented in Parliament, the Reports will be evaluated and assessed by the Impact Assessment Agency (IAA) of the Ministry, in consultation with an Expert Committee, which will include representatives of NGOs and persons concerned with environmental issues. Significantly, the IAA's recommendations will be made available to the concerned parties or environmental groups on request and the comments of the public may also be solicited in public hearings.

MYANMAR

ESCAP/UNEP REGIONAL SEMINAR ON PEOPLE'S PARTICIPATION IN MANGROVE REHABILITATION AND MANAGEMENT

As a part of the activities of the Regional Network of Research and Training Centre on Desertification/Land Degradation Control in Asia and the Pacific (DESCONAP) to promote Technical Co-operation among Developing Countries by way of Exchange of Information, Experiences and Desertification/Land Degradation Technology among Member Countries of the Network, a Regional Seminar on People's Participation in Mangrove Rehabilitation and Management was held from 23 - 27 February 1994 in Yangon, Myanmar.

The overall objective of the Seminar was to provide the opportunity for Government Officials, Scientists and Technicians working in the field of Mangrove Ecosystem Management to come together in a forum with Representatives of Non-Governmental Organisations, Private Sector and International Organisations involved in Rehabilitation and Management of Mangrove Ecosystems to Exchange Experiences and Expertise focusing on the Promotion of People's Participation in Mangrove Rehabilitation and Management.

This Regional Seminar was held in collaboration with the National Commission for Environmental Affairs and the Ministry of Forestry of the Union Government of Myanmar.

This Seminar was attended by eleven countries in the Asia and Pacific Region and also Non-Governmental Organisations.

NEPAL

ENVIRONMENTALISTS FLAYED

Nepal's carpet manufacturers have alleged that some environmental groups are sabotaging the booming carpet industry in the name of a cleaner environment.

Bijay Bahadur Shrestha, former President of the Central Carpet Industry Association, accused the Government of not pursuing a clear-cut policy on the carpet industry, whose exports amount to US $ 205 million which is 60% of the kingdom's total exports.

The outburst came in the wake of Prime Minister Girija Prasad Koirala's recent announcement that he would have all carpet industries shifted from Kathmandu valley because they pollute the environment and overcrowd the city.

TOURISM THREATENED

Solid waste is piling up in the Nepalese capital, Kathmandu. Entrepreneurs whose businesses are based on tourism say that country will lose tourists, its major foreign exchange earner, if its situation does not improve soon. Garbage disposal has been a problem since erstwhile West Germany, which had earlier taken on the task, handed it back to Nepal in July 1993.

Under the Agreement signed more than a decade ago, the Germans had helped to establish a system to collect and dispose of garbage. In the past, most solid wastes were biodegradable. But of late, the waste is not biodegradable. To add to the problems, a compost plant on the banks of the Bishnumati River has been closed, after residents of the rapidly expanding colonies nearby protested against the foul smell.

SAVING EVEREST'S ECOLOGY

Nepal will use a US $ 3.3 Million grant from the Global Environment Facility to conserve the unique ecosystem of the Barun Valley on the southern slopes of Mount Everest.

The Valley lies in the Makalu-Barun National Park and Conservation Area and is believed to be one of the Himalayan Kingdom's richest and diverse pockets of natural life. Trekkers will not be allowed into the heart of the park, which will be made a prohibited zone the first in Nepal.

EPIDEMIC RESURFACES

Panos Features reports that more than 40 people have died of kalaazar and 120 odd people have been infected in Mahottari District of Nepal, close to the Indo-Nepal Border. A shortage of insecticides to kill sandflies that transmit the disease has made it difficult to keep the virus at bay. In fact, in 1992-93, supplies were only half the required amount.

The epidemic may have its roots in lingering infections from the previous summer, says doctors, because the disease is usually not transmitted in winter.

PAKISTAN

ECONOMIC DICTATES

Economic demands are nullifying the efforts of the World Wide Fund for Nature, which is trying to save the rich biological diversity of the Sulieman Mountain Range in Pakistan.

The Chilghoza pines growing here produce edible seeds, which bring in a lot of money to an otherwise not - so prosperous area. But now, despite a ban, social and economic demands have led to the cutting of these trees, evidence of which are markets flooded with Chilghoza timber.

BEEF LOSES FLAVOUR

Pakistanis are cutting down on eating beef and are moving towards chicken. Although chicken was previously considered a luxury dish, the growth of the poultry industry has led to a major slash in prices, making it affordable for the less wealthy.

Besides, there are fears that many animals are carved up after they have died of diseases like rinderpest. There is also suspicion that much of the meat sold as beef may actually be the flesh of aging donkeys and other animals.

BIO-FUELS DOMINATE

According to a Report of the Household Energy Strategy of Pakistan, quoted by the Panos Institute, 95% of the energy consumed in rural household and 56% in urban homes comes from bio-fuels.

An average family in Northern Pakistan uses approximately 60kg of fuelwood per week. Firewood use is highest in Baluchistan - where other fuels are scarce - and least in Punjab, which has abundant alternatives.

SRI LANKA

SPECIAL AREA MANAGEMENT TRAINING COURSE

The Coast Conservation Department (CCD) jointly with the Coastal Resources Management Project (CRMP) of the University of Rhode Island and USAID recently conducted a 5 Day Training on Coastal Zone Management with a focus on Special Area Management (SAM).

This course was attended by 24 participants from several National Government

Agencies, NGO's and the two SAM Project sites. The course provided a complete introduction to mechanisms of Coastal Management under the CCD in Sri Lanka.

The learning process was centered around a Case Study of Rekawa Lagoon in Tangalle for which the participants prepared a mini-management plan while working in three groups which focused on different management concerns for the Rekawa Area. Each plan was distinct and yet mindful of the overall management problems in the area and their solutions. The suggested management actions will be considered for the actual Draft Plan being developed in late 1993.

SPOILT MILK

A Sri Lankan subsidiary of multinational food firm, has had to send back a consignment of radioactive milk powder imported from Poland. In November 1993, Sri Lankan customs officials found the milk powder contained more radioactive particles than permissible.

Sri Lanka resumed checks on imported milk foods after Bangladesh recently rejected a consignment of milk that was found to be radioactive.

ATTACKING IN DEFENCE

A once peaceful herd of about 150 elephants in southern Sri Lanka has turned violent, destroying property and killing humans in a last ditch attempt to save its habitat.

The pachyderms feel threatened by a private Sugar Company, an ill–conceived project that encroached upon the habitat of the elephants and restricted their movement. Non-governmental organisations have suggested Handapangala, where the elephants are pocketed, to be declared a protected area so that the animals have greater freedom of movement.

ENVIRONMENT COMES FIFTH

A Market Research Firm has quoted that environmental issues ranked fifth among national problems in Sri Lanka. The survey has revealed that Cost of Living, Ethnic Issues, Unemployment and High Cost of Housing takes precedence over environment.

However, more than 50% of the 4000 respondents who identified environment as a serious issue felt that problems such as pollution had worsened over he last decade.

SACEP NEWS

WELCOME TO SACEP

SACEP warmly welcomes Mr. P. K. Kotta from UNEP who assumed office as GIS Expert, SENRIC Project of SACEP from 20th January 1994.

With a background in Civil Engineering and Computer Science, Mr Kotta has been working in the field of Computer Technology during the last ten years and particularly with the Natural Resources Management using Geographical Information Systems and Image Processing since 1990. Before joining SACEP, Mr Kotta was involved in the computerising the Administrative and Technical Units of International Centre for Integrated Mountain Development (ICIMOD) in Kathmandu. His major involvement with ICIMOD was in setting up the GIS lab, Mountain Environment Natural Resources Information System (MENRIS). His technical work involved towards the Systems and Application Aspects of GIS and Image Processing in Developing / Implementing Case Studies to demonstrate the use of GIS Technology and his recent work was in using NOAA Data for categorising the land cover changes over a period in Nepal, as a part of the project being carried out by the UNEP/GRID, Bangkok.

GEOGRAPHIC INFORMATION SYSTEMS / SACEP ENVIRONMENTAL NATURAL RESOURCES INFORMATION CENTRE (SENRIC)

South Asia Co-operative Environment Programme (SACEP) has been implementing Environment Information Programmes for the South Asia Region, as approved by its Governing Council at the Ministerial level. The Asian Development Bank (ADB) assisted SACEP through a initial TA grant in 1989 to establish an Environment and Natural Resources Centre. The initial activities for the establishment of this Centre are now complete, and towards the end of 1993, SACEP signed a Memorandum of Understanding (MOU) with the UNEP's Office at Asian Institute of Technology (AIT) in Bangkok, to strengthen the Centre's activities. As set forth in the MOU between SACEP and UNEP, the programme concentrates mainly on the Capacity Building and Developing an Environmental Information Directory for the Regional Countries.

ADB and UNEP have long since been supporting the activities stipulated under strengthening the capabilities for the regional countries through providing hardware and software for GIS applications under compatible platforms to ensure similar data formats and working environments for networking among different institutions. To meet its objectives UNEP, Bangkok (further to be referred as Regional Environmental Natural Resources Information Centre, RENRIC) had signed an agreement with its Regional Countries and the programme is presently being implemented. Under this, the Regional Country Nodes are expected to assess the Regional Country Capabilities, Identify Institutions to be trained on GIS Technology and further Strengthen the National Information Centres by providing GIS platforms through the ADB/UNEP grant as specified in the MOU. UNEP would constantly assist in providing the needed support in accessing the existing information and facilities (training materials, etc) from the already existing Regional Nodes.

UNEP has been formulating an Inventory Directory for the Regional Countries to assist in assessing status of the region in for assessing and accessing the existing information, and to avoid the duplication of efforts in these activities, for further use in its future activities.

As a part of this activity the GIS Unit at SACEP (further to be referred as SACEP Environmental Natural Resources Information Centre SENRIC), would develop an Inventory Directory for the Regional Countries.

Objectives of the Programme

As envisaged the MOU between SACEP and UNEP, SENRIC would implement its programme to meet the objectives stipulated as below:

1. Establishment of SENRIC

Initial activities are concentrated towards

setting up a GIS Unit at SACEP, through UNEP's assistance and agreement on the hardware compatibility. Activities include to propose, procure, install the machines at SACEP. Further activities concentrate on engaging staff in preparing SENRIC's activities in its activities for Capacity Building for the Regional Countries (initially concentrated towards Sri Lanka and Maldives)

2. Inventory Directory Proposals

SENRIC would prepare an Inventory Directory for its Region similar to the format suggested by RENRIC and already being used by the other Regional Nodes, and further make Proposals for the Regional Countries to aid the activities.

3. Training

As a main activity under Capacity Building, SENRIC would identify the National Information Centres for Sri Lanka and Maldives and Train the Staff at Three Levels in Two Cycles.

4. Database Building

SENRIC would constantly tap the existing information available at different projects, Combine and Develop where needed, a Databank, initially for Sri Lanka and Maldives, at 1:500000 scale.

ESCAP/UNEP/SACEP WORKSHOP ON COASTAL MANAGEMENT

Within the framework of the Project "Capacity Building in the Field of Planning and Management of the Coastal Areas in the South Asian Seas Region Phase 1" implemented by the Economic and Social Commission for Asia and the Pacific (ESCAP) in co-operation with the United Nations Environment Programme (UNEP), an ESCAP/UNEP/SACEP Workshop on Management Strategies for the Protection of the Coastal and Marine Environment in the South Asian Seas Region was held in Colombo from 20 - 23 December 1993.

This Workshop was formally inaugurated by Hon Dr Wimal Wickremasinghe, Minister of Environment & Parliamentary Affairs, Sri Lanka. The Workshop was attended by Experts from the five Maritime Member Countries of SACEP. In addition there was representation from the World Bank, Asian Development Bank, World Wide Fund for Nature & United Nations Development Programme. The Resource Personnel was drawn from ESCAP, SACEP and the Regional

L - R : Mr. V. P. Jauhari, Director SACEP, Hon. Dr. Wimal Wickremasinghe, Minister of Environment & Parliamentary Affairs, Sri Lanka, H.E. Mr. Shamsher, M. Chowdhury, High Commissioner of Bangladesh, Sri Lanka, Dr. R. Karim, Chief ECU, ESCAP, Mr. Robert England, Resident Representative, UNDP, Colombo.

Working Group on Marine Environment and Oceanographic Studies. The entire logistics of this Workshop was handled by the SACEP Secretariat.

The main objective of the Workshop was to Assess the Potential and Modalities of Promoting Co-operation for Capacity Building among the Maritime Member Countries of SACEP on the basis of Country Studies on Coastal Zone Management prepared by National Experts from Bangladesh, India Maldives, Pakistan and Sri Lanka.

The Workshop also reviewed Management Strategies for the Protection of the Coastal and Marine Environment, Assessed the Requirements for Capacity Building in the Management of Coastal and Marine Environment and Identified Priorities for Action and the Nature of Assistance that will be required to address the issues on the Protection of Coastal and Marine Environment.

At the workshop, a number of requirements for Capacity Building in Coastal Zone Management in the Region were identified and analysed. The following three areas were suggested for Priority Action: An Umbrella Project for Regional Co-operation and Pilot Projects in Integrated Coastal Zone Management; Development and Implementation of National and Regional Oil Spill Contingency Planning; and Human Resources Development through Strengthening Regional Centres of Excellence. The Workshop also discussed criteria for the Development and Implementation of such Initiatives and emphasised initially the Importance of Regional Co-operation as a suitable approach to meet identified requirements.

Based on the findings of the Studies and the Recommendations of the Workshop, ESCAP in collaboration with SACEP would develop a Set of Proposals as a Strategy to address the identified requirements for Capacity Building in Coastal Zone Management in the South Asian Seas Region. This Strategy will be presented to an Intergovernmental Meeting to be held May 1994 in New Delhi.

STATE OF THE ENVIRONMENT REPORT FOR SOUTH ASIA 1995

Environmentally Sound and Sustainable Development was the emphasis of the Rio Conference held in 1992. Agenda 21 discussed the priorities for change and made several recommendations. Among them, the monitoring of environmental trends was considered as an important step to better Environmental Management. These trends have to be periodically monitored Nationally, Regionally and Globally.

Various mechanisms have evolved over time to monitor these trends. One such mechanism is the "Preparation of the State of Environment Report" once in five years. In this context, SACEP will be bringing out the Report for the South Asia Region, to be published in 1995.

Initially National Consultants will be preparing Country Reports which will then be consolidated into a Regional Report

by a Consultant identified from the region. The outline that is being followed is the same adopted by ESCAP so that this Report would form a vital input into ESCAP's Report which is for the Asia and Pacific Region.

The Final Draft is expected to be ready by October 1994 and Printed Version would be available by December 1994. UNEP and ESCAP are expected to jointly fund this publication.

CHILDREN'S STORY BOOKS

SACEP's Strategy and Programme has identified five Priority Programme Areas for the period 1992- 1996. One of which pertains to the Enhancement of Environmental Awareness for the Public in the Region. In this context SACEP with financial assistance from UNEP Regional Office for Asia and Pacific will be publishing books on selected topics such as Pollution, Conservation of Natural Resources, Ozone Depletion, Hazardous Waste Management, Waste Reduction and Recycling, Forests and its Value and Climate Change.

These publications will take the form of Story Books catering to children in the age group 8 - 16 years. The final product will be simple to understand and in the resting enough to attract the attention of the youth. The books also would aim to build up on the skills and knowledge a student acquires through formal education in school so that he can interact with an inquire into the environment in greater depths. It is expected that these books will be ready by September 1994 for distribution to the SACEP Focal Points.

It is envisaged that finally these books which are in English, will be translated into the Regional Languages of the different Countries by the respective Focal Points.

RECYCLING / WASTE MANAGEMENT

"SEWAGE BURGERS"

Japanese scientists have turned raw sewage into a protein-rich creation that resembles beef in texture and hope to make it also taste and smell-like beef. A member of the team said "We wanted to show that what comes out of the body can be recycled to go back into the body".

Raw sewage is turned into rich mud to which soya bean, food additives and steak sauce are added to give it an appetising smell. He believes that one day, the refined burger might be used to feed livestock.

ALGAL CLEAN UP

The New Scientist, Vol 140, No 1893 reports that the World's full scale experiment to clean up municipal sewage with a reactor full of algae has recently started near Nottingham in the UK.

The reactor or "biocoil" system developed by Stephen Skill at the London-based Biotechna, contains chlorella algae packed into a 5 Meter high coil of polyvinyl chloride tubes. The algae absorb Nitrogen and Phosphate, which are its nutrients, from the effluent and turn them into protein. Nitrogen and phosphate pollution usually harm aquatic life by spurring the growth of algal blooms.

Working at full capacity, the bio-coil will detoxify 20 cum of sewage, the amount produced by a town of 2,500 people , in an hour. The clumps of algae can later be used as animal feeds.

SCAVENGING OFF TOXIC METALS

When citizens of Arcata, on Humboldt Bay in Northern California, were faced with the need to treat the industrial waste water and sewage that had been pouring into the bay for decades, they decided against building a US $ 30 million chemical treatment plant and chose instead to spend US $ 5 million on creating 38 ha of wetlands and marsh.

The Marshland was intended to act as a breeding ground for certain microbes that have the ability to breakdown toxic metals into harmless compounds. Today the Humboldt Bay is clean enough to render fish edible for the first time in decades. And, as a bonus, the wetland has turned into a bird sanctuary.

Bioremediation - cleaning the environment with the help of micro organisms - is a fast growing and attractive alternative, especially in the US, to conventional clean up technologies such as incinerators and chemical treatment plants. Scientists believe that because of low capital and running costs, bioremediation should be cheaper than conventional technologies. Incinerating hazardous wastes, for example can cost more than US $ 1,050 a cubic metre, as compared to about US $ 235 for bioremediation. Moreover, Bioremediation can be done on the site itself.

The list of bioremediation applications is impressive - Nuclear Waste Sites, Industrial Dumps, Contaminants such as greases and oils and toxic organic compounds such as DDT.

CONVERSION OF GARBAGE TO FUEL AND BIOFERTILISERS

Everyday, the 10 million Bombayites throw out more than 4,000 tonnes of garbage. Clearing refuse is a problem because though the Bombay Municipal Corporation (BMC) has about 700 trucks, nearly 50% are being repaired at any given time. The garbage is carried to four landfill sites, which are more than 100 years old and at the rate they are being filled presently, new sites will have to be located in 10 _ 15 years time. There is also fears that salts from the sites could pollute the groundwater and this is being investigated by the Nagpur-based National Environmental Engineering Research Institute (NEERI).

With the BMC becoming increasingly incapable of dealing with the metropolis' mounting garbage, three agencies are working to make its disposal a paying proposition.

The Department of Science and Technology has set up a plant to convert organic waste into fuel pellets for industries; BMC has teamed up with Prof H. Shankar of the Indian Institute of Technology, Bombay to produce vermicompost from Refuse and Excel Industries Ltd, a Bombay based agricultural chemicals manufacturer, has set up two plants to make compost out of garbage.

ECO-FRIENDLY TECHNOLOGIES

RECYCLING WATER

A Japanese Company has introduced a bathing system that helps to conserve water. Called Full Time Bath the system enables the same water to be used for a month. The computer controlled system, equipped with a double filtration and an anti-bacterial function, keeps the recycled water as clean as tap water.

In addition, the system is self cleaning and requires no maintenance, claims the Company. How ever, there aren't many takers for the new bath, priced around US $ 9,259 because there is some psychological resistance to the idea.

SWITCH THE WINDOW, PLEASE

Enter the **"Smart" Window**: an insulated, multi pane, electrically operated glazing that can be used to control the amount of light coming through and

rejecting excess heat, thereby obviating the need for air- conditioning. Though most components of such a window are still laboratory prototypes, a few semi-intelligent glazings have already hit the market.

For windows that can be changed from clear to dark by using a switch, most research is concentrated on electrochromic glazings colour coded, electrically controlled films. Besides windows, electrochromic technology is being used in a wide range of applications, including automobile mir rors and sunroofs.

THE GREENFREEZE REVOLUTION

FORON, a German firm was on the brink of bankruptcy last year after reunification when Greenpeace, an International Environment Group, gave it orders for 10 prototypes of refrig erators that used eco-friendly chemicals as coolants.

FORON turned out a prototype that uses a mixture of propane and butane as the refrigerant. A similar technology was used before CFCs edged it out some 40 years ago. Greenpeace Germany advertised the fridge as GREENFREEZE, and in a matter of weeks, orders for 65,000 fridges came in. From March to September 1993, FORON sold 100,000 fridges.

Greenfreeze has had a major impact and all German refrigerator companies are changing to eco-friendly chemicals after having initially dismissed the idea. It is estimated the "Green Fridges" now constitute around 20% of the total number of fridges sold in Germany Hydrocarbon fridges such as Greenfreeze are now on sale in the UK, the Netherlands and Austria. They are also spreading to the rest of Europe, Japan and Australia.

HEALTH

TURMERIC SHIELDS

Turmeric the age old panacea for headaches, pimples and fractured limbs, could also keep cancer away, says Scientists at the Hyderabad based National Institute of Nutrition.

Ms Kamala Krishnaswamy and her colleagues have recently reported that curcumin, the active ingredient of turmeric (Curcuma longa), which is known to have an anti cancer effect in animals, can also decrease the presence of cancer-inducing elements, or mutagens in humans.

The Scientists found if chronic smokers took 1.5 grams of turmeric each day, for 30 days, the level of smoke derived, cancer causing chemicals in their urine came down.

LESSONS ANIMALS TEACH

Elders of the Navajo tribe still recount the legend of how the bear instructed them to use a forest root for treating parasites, stomach problems and infections. There is now growing scientific evidence that this and other legends are based on reality.

The Navajo say that on a hot summer day, as insects hampered their search for food, the hunters saw a great bear extract a root from the ground, chew it and spread the juices on its body. They discovered that the juice of the root, known as osha or bear-root (Lingusticum), successfully warded off insects, allowing the bear to forage undisturbed.

Recent observations have confirmed the fact that bears do use this root, orally and externally. Pharmacological analysis has revealed it contains compounds active against fungi and insects.

Ethnobiologists believe that, apart from experimentation over generations, the tribes also learnt the medicinal value of many plants through observing animal behaviour. Scientists hope that studying the self medicating behaviour of animals could narrow their search for useful plants.

While studying animal behaviour, scientists have come across interesting leads. Pregnant elephant cows seek out a particular species of plant on which to browse a few days before giving birth. And they have also discovered that this plant is used by the local people to assist pregnant mothers during delivery.

Chimpanzees have been observed to consume Aspilla leaves first thing each morning. Scientists have since discovered that these leaves contain anti-fungal, anti -viral and anti-parasitic compounds.

A Researcher on chimpanzee behaviour observed a chimp who was ill and lost her appetite seek out a Vernonia amygdalina plant and eat several shoots, chewing the pith, consuming the bitter juices and throwing out the woody parts. On examination, Researcher realised it was traditionally prescribed for gastrointestinal problems of herbal healers of several African Tribes. Laboratory Analysis have revealed the plant having several anti-parasitic properties, including against common tropical afflictions such as amoebic dysentery, malaria, schistosomiasis and leishmaniasis.

ONIONS FOR BRONCHITIS MANGOES FOR SCURVY

Don't scoff the next time you have a severe cold and your grandmother gives you an onion to eat at bedtime, because by morning, you will find that your cold has disappeared. Onions not only contain flavonoids, but many other ingredients yet to be isolated by scientists.

Onions are used for many ailments, ranging from scurvy to sleeplessness. They are used to treat fever, dropsy and chronicbronchitis. When mixed with salt, they are an effective remedy for colic. Mixed with vinegar, they relieve sore throats and eaten with jaggery, they stimulate growth in children.

The Mango is known not only as a delicious fruit, but also for its medicinal properties. The ripe fruit is an effective laxative and diuretic. In its green form, it is rich in Vitamin C and can be used as an astringent and against scurvy. A decoction of dried mango flowers is useful for treating diarrhoea and chronic dysentery.

GENERAL NEWS

GEF: PHASE II TO BEGIN IN 1994

More than 70 participants in the Global Environment Facility (GEF), the only global funding mechanism with responsibility for financing mechanism with responsibility for financing Agenda 21- related projects, met in Cartagena, Colombia in December 1993, to open the door to GEF 'Phase II' in 1994.

The latest in a series of meetings of the 'Participants' took place in Paris from 3 - 6 November 1993. At that Meeting, the decision was taken to replenish the core fund of the GEF at US $ 2 Billion (two and a half times of the Pilot Phase). In Phase II it will be supplemented by voluntary contributions and co-financing.

Major difficulties in the negotiations all year have centered on the proposed restructuring of the Facility, and these problems were evident again in Paris. In simple terms, the developing countries, represented chiefly by the G -77 (Group of Developing Countries) are arguing that the Participants' Assembly should have wide ranging powers, whether the participants countries are donors or

recipients. In other word, 'One country, One Vote'. This is in line with the United Nations System - two of the three partners that administer the GEF are the UN Development Programme and the UN Environment Programme.

On the other hand, the OECD countries (Industrialised Countries that belong to the Organisation for Economic Co-operation and Development) prefer a system which leaves more responsibility in the hands of the donor countries, which will have a larger say in where the money is spent. In other words, 'One dollar, One vote' (Along the lines of the World Bank - which acts as the Third Implementing Body).

A compromise system - A Council of selected members from the Participants Assembly with equal distribution of seats for developed and developing countries (14 each and two seats for economies in transition was being discussed in Paris. This issue awaits clarification at the Cartagena Meeting in December, which will also act as a pledging session for donor governments.

So far US $ 727 million have been earmarked for some 40 projects that combat Climate Change, Ozone Depletion, Protection of Biological Diversity and International Waters.

GLOBAL WARMING - METHANE ON THE DECLINE

Scientists says the increase in the atmospheric concentration of Methane, a major greenhouse, is fast levelling off. (New Scientist, Vol 140, No 1991).

Evidence of a halt in methane rise come from measurements of atmospheric gases made at 26 stations, around the world. In the 1970s, the gas was increasing at a rate of about 1.1 per cent a year, it fell to 0.6 per cent a year in the 1980s, and has now come down almost to zero.

Noting that the greatest change in methane levels have been recorded in Northern hemispheres, researchers speculate the levelling off might be due to the decrease in wastage of natural gas in Russia and Eastern Europe.

CERTIFIED ECO-FRIENDLY

The World's first Certification System for "sustainably produced timber" has been set up. A Meeting in October in Toronto of Environmentalists, Business Persons and Human Rights groups launched the Forest Stewardship Council (FSC), which will verify claims that wood products and wood pulp come from sustainable forests.

Producer countries have treated the idea of certification with derision. Nevertheless, some of them have started creating government infrastructure for certifying their own forests, thus negating the need for independent certification.

The effectiveness of FSC is also in doubt because influential environmental groups such as the "Friends of the Earth" (FOE) have withdrawn their support from it, protesting against business being granted voting rights and seats on the FSC Board. Simon Counsell of FOE says that it is a dangerous and unnecessary compromise to involve industry in the process of determining the environmental standards by which industry is judged.

Francis Sullivan of the Worldwide Fund for Nature argues "We have got a compromise. Industry has a say, but it does not have control of FSC. The writing is on the wall for those who do not pay attention to the social and environmental issues affecting their business".

Business Groups, however, supported the launch of FSC. The establishment of the Council has also pleased human rights groups because extensive deforestation can adversely affect the lives of indigenous groups and other people living in and around forests.

EXPERTS DECLARE 1996 AS THE YEAR OF THE CORAL REEFS

After a three-day colloquium at the University of Miami's Rosensteil School of Marine and Atmospheric Sciences, more than 100 top coral reef scientists from 30 countries have concluded that though there is an inadequate database on many coral reefs around the world, the available information shows distressingly consistent worldwide pattern of reef degradation near centres of human population. The scientists were particularly concerned that although coral reefs are economically invaluable and are often the major source of food in tropical developing countries as well as providing recreational and social value, the cause of recent rapid declines in the health of Atlantic coral reefs were poorly understood.

The meeting resolved to promote a Coral Reef Initiative to begin immediately. The goals of the initiative will be to promote education about the value of coral reefs, to establish a permanent International Coral Reef Monitoring Network that would link Research Laboratories throughout the world and set up a Global Database on Coral Reef Health. The VIII International Coral Reef Symposium will mark the start of the International Coral Reef Year-1996.

The first step of the Coral Reef Initiative will be to expand the results of this meeting by carrying out a detailed review of the status of the world's reefs. The scientists face a daunting problem of obtaining information from a wide variety of sources such as Dive Groups, Marine Park Managers and Fisheries agencies around the world, in addition to collating information from the standard scientific publications in dozens of languages.

It was announced at the meeting that efforts are already underway by two International Agencies to set up Global databases on Coral reefs. The World Conservation Monitoring Centre in Great Britain and the International Centre for Living Aquatic Resources management in the Philippines, are co-ordinating efforts to make their databases available to scientists and the public through computer networks.

CLIMATE: 50TH RATIFICATION

On 21 December 1993, the fiftieth Instrument of Ratification of the United Nations Framework Convention on Climate Change was deposited with the Secretary-General of the United Nations. As a result, the Convention will enter into force on 21 March 1994.

In a statement to Press on 21 December 1993, UN Secretary-General Boutros Butros Ghali highlighted the problems that future generations may have to face. "Droughts, Floods, Storms and other Climate and Weather extremes may become more frequent" he said. "People living in risky or marginal areas would swell the ranks of refugees, and social and political tensions would worsen as competition for water and other scarce resources intensified. This extra pressure would make it even more difficult to solve the kinds of problems and crises that we already face today".

The forthcoming entry into force of the Convention set a firm timetable for the work of the Intergovernmental Negotiating Committee in its preparation for the First Session of the Conference of the Parties. This session is scheduled to be held in Berlin, Germany from 28 March to 7 April 1995. At its Ninth Session in Geneva from 7 to 18 February 1994, the Committee must take a number of important decisions if the Preparatory Process is to remain on track.

Courtesy "Climate Alert"
Climate
Institute,
Washington, D.C.

ENVIRONMENTAL MANAGEMENT FOR DEVELOPING COUNTRIES

The Fourth International Symposium on Environmental Management for Developing Countries will take place from 4- 6 May 1994 in Turkey. It follows a series of meetings beginning in 1982 which were initiated to establish closer co-operation between Environmental Scientists and Engineers of Developing Countries. Topics under discussion at the meeting will include: Air Pollution and Control; Environmental Exploitation of Developing Countries; River Basin Management; Appropriate Technologies and Water Treatment Technologies.

BIODIVERSITY - ENSURING HUMAN SURVIVAL

HIGHLIGHTS FROM RECENTLY PUBLISHED FAO DOCUMENT ON-THE CURRENT THREATS TO WORLD'S BIODIVERSITY

* Since the beginning of this century, about 75% of the genetic diversity among agricultural' crops has been lost.

* Deforestation of closed tropical rainforests, estimated to contain at least 50 per cent of all species in the world, could count for the loss of as many as 100 species daily.

* It is estimated that the cost of over exploitation of marine resources amounts to more than US $ 30 billion annually.

* Researchers at the University of California have filed a patent for thaumatin, an extract from a West African plant, Thaumatococcus daniellii which is 100,000 times sweeter than sugar cane.

* In India, Agronomists predict just ten rice varieties will soon cover three - quarters of the total rice-cultivating area in place of more than 30,000 varieties.

* Indigenous populations and their knowledge are threatened with destruction. In the Amazon region, more than 90 different groups of Indians are thought to have died out during this century.

* Apart from the Macadamia nut from Australia, all fruits and nuts used in Western Countries were first grown by indigenous people.

* Forest-dwelling indigenous people employ at least 1,300 plant species for medicinal purposes. More than 60 species of plants are used to treat skin infections in the Amazon region alone.

* Rice, Wheat and maize supply almost 60 % of the calories from plants. Humans use only.

150-200 plants for food whereas 10,000 -50,000 are known to be edible.

* Though the world market value of medicines derived from plants used in traditional medicine systems exceeds US $ 43 billion, less than 0.01% of the profits have gone to the indigenous people who led the researchers to them.

FORTHCOMING EVENTS

DATE	EVENT	VENUE
5 - 13 April	Fiftieth Session of ESCAP	New Delhi, India
6 - 9 April 1994	Society for International Development: World Conference on People's Rights and Sustainable Development	Mexico City, Mexico
11 - 12 April 1994	Third Substantive Session of the Preparatory Committee for the International Conference on Population and Development	New York, U.S.A.
11 - 15 April 1994	Intergovernmental Meeting of Scientific Experts on Biological Deversity	Mexico City, Mexico
25 April - 6 May 1994	First Global Conference on the Sustainable Development of Small Island Developing States	Bridgetown, Barbados
4 - 6 May 1994	Fourth International Symposium on Environmental Management for Developing Countries	Istanbul, Turkey

DATE	EVENT	VENUE
16 May - 3 June 1994	Second Meeting of the Commission on Sustainable Development	New York, U. S. A.
17 - 19 May 1994	ESCAP/UNEP/SACEP Intergovermental Meeting on Capacity Building for Coastal Environmental Management in the South Asian Seas Region	New Delhi, India
19 - 20 May 1994	First International Prevention Conference on Global Dimensions of Lead Poisoning	Washington D.C, U. S. A
6 - 10 June 1994	Meeting of Experts on Control of Land Based Sources Focussing on Possible Amendments to the 1985 Montreal Guidelines	Montreal, Canada
24 June - 3 July 1994	Global Forum on Cities and Sustainable Development	Manchester, United Kingdom
5 - 13 Sept. 1994	International Conference on Population and Development	Cairo, Egypt.

BOOKS RECEIVED

- Intelligent Buildings
  Edited by Stephen McClelland
  Publisher: IFS Publications, Springer-Verlag, UK

- Genes and Means
  D. Balasubramanium
  Publisher: Publications and Information Directorate,Council for Scientific and Industrial Research
  Price : Ind Rs 20

- State of the World Conflict Report
  Publisher: International Negotiation Network, USA

- Our Responsibility to The Seventh Generation: Indigenous Peoples and Sustainable Development
  Linda Clarkson, Vern Morrissette and Gabriel Regallet
  Publisher: International Institute for Sustainable Development

- Environmental Consciousness & Urban Planning
  M.N. Buch
  Publisher: Orient Longman, New Delhi
  Price: Ind Rs 25

- History of Planet Earth
  M.N. Sastri
  Publisher: Himalaya Publishing House, Bombay
  Price: Ind Rs 225

- Cracking the Codex: An Analysis of Who Sets World Food Standards
  Natalie Avery, Martin Drake and Tim Lang
  Publisher: National Food Alliance Publication, UK
  Price: Pounds Sterling 35 (7.50 for voluntary and Public Interest Group)

IMPORTANT VISITORS TO SACEP SECRETARIAT DECEMBER 1993- MARCH 1994.

- Hon. Dr Wimal Wickremasinghe,
  Chairman, SACEP Governing Council &
  Minister of Environment and Parliamentary Affairs,
  Sri Lanka

UNEP, Nairobi.

- Mr Lal Kurukulasuriya,
  Chief,
  Environmental Law Training, Education and Information,
  Environmental Law and Institutions Programme Activity Centre.

ESCAP, Bangkok

- Dr Rezaul Karim,
  Chief, Environmental Co-ordinating Unit

- Mr Brij Kishore,
  Regional Adviser, Environmental Management

ASIAN DEVELOPMENT BANK, Manila

- Mr Warren Evans,
  Senior Environment Specialist

INSTITUTE OF MARINE ENVIRONMENTAL PROTECTION, China

- Professor Jiayi Zhou

WORLD BANK, New York

- Mr P. Illangovan
  Environment Specialist

WORLD WIDE FUND FOR NATURE, Switzerland

- Mr Biksham Gujja,
  Policy Officer,
  Conservation Policy Division.

ICIMOD, Nepal

- Mr Suresh Raj Chalise,
  Climatologist.

SACEP NEWSLETTER is distributed free of charge to National Environmental Agencies, Non Governmental Organisations, Citizens' Groups and Mass Media. It welcomes news items, short articles, and viewpoints on environmental issues from readers in order to promote environmental awareness in the South Asian Region. The Editor reserves the right to edit and publish manuscripts in accordance with the editorial requirements of the publication.

All enquiries related to SACEP NEWSLETTER should be addressed to SACEP Secretariat, 84 Lorensz Road, Colombo 4, Sri Lanka.

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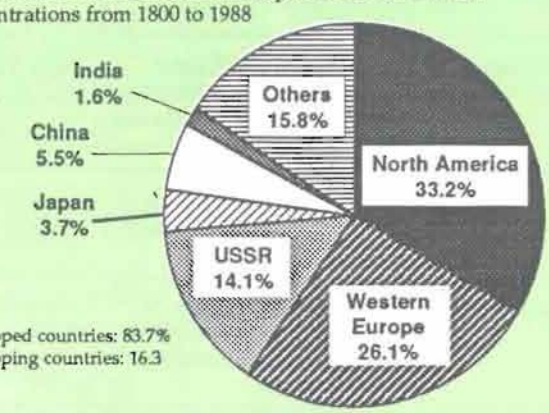
THE INCORRIGIBLE NORTH

Contributions to increases in atmospheric carbon dioxide concentrations from 1800 to 1988



Source: International Institute for Applied Systems Analysis, Laxenburg

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