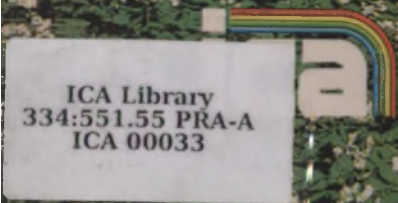


A Place to Live

*Roles Cooperatives can play
in Protecting the Environment*

Daman Prakash



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*— an environment-related
awareness material*

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Contents

Foreword					
Blessings of Nature	01
The Pollution Factors	02
Environment in Danger	04
Factors Leading to Pollution of Environment	...	...	...	...	05
Meaning of Environment Protection	...	...	...	...	08
The Coop Initiative - An Indicator of a Positive Development				...	11
Participation of Cooperatives	18

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Foreword

It is a beautiful world that we live in. Mother nature has provided us with everything in abundance that we need to live. It gives us food, clothing and shelter. Unfortunately, we have, due to obvious reasons, disturbed the ecological balance to satisfy some of our modern technological and personal needs. The results are dangerous - there is more disease, pollution, natural disasters. Because of the Greenhouse Effect the earth's atmosphere is overheating. Due to the emission of gases, the climatic temperatures and cycles are changing. Much more difficulties are predicted by environmentalists if proper corrective measures are not undertaken soon by one and all. It is in our own hands to make our life pleasant and comfortable and leave something more pleasant and comfortable for our future generations. Our ability to cope with environment depends largely upon two principal factors - technology and knowledge. These are closely inter-related - each amplifies and supports the other. We have now to make an objective assessment of the technology that we propose to apply and the application of knowledge that we possess.

Although we, as individuals, can play our roles independently, yet we being the members of a cooperative world, can also play a role in correcting the situation collectively - in a cooperative way. While national governments and international organisations are collaborating with each other, there is a strong need for cooperatives also to develop ways and means which could help protect the environment. Cooperatives in many parts of this world have shown the way. They have responded to the needs of the community. It is for all the cooperative organisations and cooperators to follow the way and listen to the new demands and needs of the society of today.

This small brochure - *A Place to Live* - is a modest attempt of the International Cooperative Alliance Regional Office for Asia and the Pacific in generating awareness among the cooperative populace to participate in this most important activity of our

lifetime - protecting the environment. In its message issued in conjunction with the 68th International Cooperative Day (1990), the International Cooperative Alliance, a world confederation of Cooperative Movement, called on its 600 million individual members "to continue the battle to protect the environment, by supporting their societies' environmental campaigns and sustainable development programmes, lobbying local governments to adopt environmentally-friendly policies, boycotting products which are harmful to the environment, recycling reusable items and informing themselves and educating their children about nutrition and the environment".

I would be extremely happy if widest possible publicity is given to this brochure - by reprinting it, translating it into local and national languages, and distributing it freely and as widely as possible - and follow-up actions initiated everywhere and at all levels in this part of our world. I am grateful to my colleague, Mr. Daman Prakash, ICA Regional Advisor (Development Planning & Coordination) for having taken the initiative in developing this modest awareness material.

It would be our greatest pleasure to supplement the efforts of our member-organisations and other cooperative institutions in this Region in this particular area of interest. Please keep us informed of the latest developments and trends taking place and initiatives taken by you and your organisation in this particular area of activity.

G.K. Sharma
Regional Director

November 01, 1990

*International Cooperative Alliance
Regional office for Asia and the Pacific
Bonow House, 43 Friends Colony, New Delhi-110065. India*

A Place To Live

**Roles Cooperatives can play
in Protecting the Environment**

Blessings of Nature

Nature has given us everything that a human being needs to live and survive. All living beings are nourished, developed and protected by nature. Nature is pure, powerful and life-giving. Nature is a blessing that has been bestowed on us to live “naturally” and love the life that has been given. Nature produces food for all of us. Nature gives us energy, shelter, water, clean air, pleasures, and colours and hues of all descriptions. We enjoy the soft music that becomes alive when the gentle breeze flows across the lush green leaves. We have a variety of fruits, flowers and all fragrant feelings. Man has been worshipping the elements and singing praises to the sun, moon, stars, water, earth and the wind. Thick clouds, snow-capped peaks, and gushing clear springs fill our heart with ecstasy. Man loved trees and plants. Man tried to preserve all the blessings (environments) of nature, and today, we are faced with a dilemma - to

protect nature or to destroy nature. Protection of environment gives food, clothing, shelter and employment. Destruction of environment produces pollution, invites death and extinction of mankind from the face of the earth. Man is innovative by nature and these innovations besides providing comforts and artificial pleasures, also lead him to extinction. Some of the interesting innovations have been: motor cars, refrigerators, airconditioners, aerosols, beautiful furniture, plastics, use of a variety of fuels, weapons of various descriptions, and above all, our ignorance and indifference.

The Pollution Factors

With the growth of man and our developed civilization we have somehow succeeded in choking ourselves with smog, fumes, heat, pollution, insecurity, etc. Instead of having fresh drops falling from the heavens we have 'created' acid rains. The marine life has been endangered because we fill the rivers and lakes with polluted waters. In the third world many precious lives are lost due to the use of polluted water alone. Between three and four out of every five children die before they reach the end of childhood - all due to unsafe drinking water. The little narrow streets in the villages are filled with dirty water. The sewage systems in towns are collapsing. Garbage is piling up thus creating stink, filth and pollution and sickness. We are facing serious floods due to indiscriminate felling of trees on our hills. Soil erosion is taking place because the forest covers are being destroyed to build houses, get timber, to graze sheep and cattles, and to take out minerals and clays from our upcountry areas. People are looking for more space for their houses and cultivation. They are clearing away beautiful thick jungles just to manufacture packing cases and to grow ganja and other such herbs. The population is increasing while the land area remains the same. The resources to feed the ever-increasing population are limited. In order to increase food production man is making an excessive use of fertilizers and chemicals. Of course, the

production goes up but the land productivity goes down. Golden land gets degraded and rendered barren. The chemicals sprayed on fruits and vegetables find their way into human bodies thus leading to various serious ailments e.g., cancer, skin diseases, asthma, etc. Water resources due to deforestation are going down. Deforestation not only destroys natural habitats, but increases run off and accelerates soil erosion and siltation of rivers and lakes. The water tables have dropped considerably - the result: no natural springs, insufficient water supply to trees, plants and crops. The man has been caught in this vicious circle just because the natural values and ethics have been disregarded. Values have been ignored because everyone wanted to survive irrespective of the consequences. The 'natural' ethics have been discarded and now it is the turn of the nature to play its cards - this time, unfortunately, the negative cards.

This is the environment under which we are living today. We have all the comforts at our command but the costs are extremely high and dangerous. Rivers are drying up. Green hilltops are bare. Deserts are expanding. Springs have disappeared. Unfortunate 'holes' have appeared in the ozone layer. Village streets are stinking and the village ponds no longer hold water for the cattle and for other community use. Deforestation is taking place unabated. Changes have taken place in the climate cycles. Earth atmosphere is getting warmer and there is lesser rain than it used to be before. Man is suffering. Agricultural lands are fast disappearing under the pressure of growing population. New roads are being constructed thus reducing the cultivation areas. In order to meet the growing requirements of electricity more thermal and nuclear power plants are being set up thus creating another cycle of pollution and hazards.

Crops are failing because there has not been enough water or rain, or because there has been a high incidence of acid rains. City life is becoming more unbearable because there is insufficient supply of water, electricity, and milk. There is inadequacy of transportation and there is no fresh air because the parks - the community air lungs - are being converted into

high-rise buildings. Schools have smaller playing grounds. The drainage system has clogged and the stink of sewage invites breathing and other problems. The industry needs a lot of water so they sink deep tubewells thereby lowering the water table. The water, after being used in industrial processing, is released untreated in nearby streams or lakes thus increasing pollution.

Even within our own close surroundings we encounter numerous pollution problems. We only have to look around our living and work areas and we find the level of our ignorance or indifference. Poor air quality indoors can also cause various diseases and disorders of the eye, nose, throat irritation, dry cough, headache, poor concentration, dizziness and nausea.

Environment in Danger

With this as background we can easily appreciate the significant role that individuals and groups of individuals can play in protecting the environment around us if we and our decedents have to continue to live a better life in the years to come.

Ecologist and environmentalists have been giving warnings to the mankind to look around and to participate in efforts to keep our environment clean, fresh and healthy. Newspapers and journals around the world have been screaming: "Global Warming a Serious Threat to Agriculture", "Earth under Siege", "Coastal Areas Highly Polluted", "The Town Stinks", "Heavy Doses of Farm Chemicals Pose Danger to Mankind", "Acid Rain and its Dangers", "Smog Engulfs the City", "Water Table Going Down", "Save the Tree, Save the Man", etc. etc. A number of audio-visual programmes are being shown around the world in order to create an awareness among the people to protect the environment. Initiatives are being provided by governments for the people to participate in this important programme. We, poor people, are paying a high

price in protecting the environment and greening our barren hills. It is an expensive exercise and if proper steps are not taken in time to correct the situation, the costs are going to be still higher. If progressive individuals, governments and non-governmental institutions have involved themselves in this movement, why should the cooperative institutions remain out? Cooperative institutions are the institutions of poor people, farmers, workers, artisans, they have every reason to participate in safeguarding their interests. It is a movement to save mankind and to make this earth of ours liveable.

Self-help organisations, the non-governmental organisations all over the world have a very important role to play in the education of the public and in putting pressures on governments. People cannot push for action unless they know what the problems are. Cooperative institutions which operate at the grassroot levels are the best institutions to create awareness among their members and general public.

Factors Leading to Pollution of Environment

Essentially it is the man himself who contributes the most in polluting the environment. It is his ignorance and indifference which adds to the misery. The key factors of pollution of environment are discussed as follows:

Growth in Population

It is evident that population is increasing in the developing world more rapidly. It is a phenomenon of the developing world. The increase is also partly due to better health conditions and a higher child survival rate. Even then the growth rate is around 2 per cent. It is not wholly true that economic development is not taking place in these countries. There are examples of very successful industrial developments, advancements in economic sectors, expansion of industrial infra-structure, higher agri-

cultural production, higher recovery from natural resources and increase in per capita incomes. All these achievements get virtually negated in the context of increase in population. Agricultural land is shrinking because more land is being used for housing complexes, roads, community facilities, industries, etc. The economic condition of the developing countries is already disappointing, the increase in population makes it still worse. More schools are needed, more hospitals are needed, large number of buses are needed, more electricity and water is needed, but the resources at the command of the poor countries are precious little.

The pace in increase of population is also getting faster. During the period 8000 BC to 1650 AD when the total expanded from about 5 million to 500 million, the doubling time averaged 1500 years. But the next doubling, from 500 million to one billion, required only 200 years; and the next doubling from one to 2 billion, a mere 80 years. The latest doubling, to 4 billion by 1975, took only 45 years. But by the year 2000 AD developed countries are not going to add much to their population growth, while developing countries are projected to increase to 4.8 billion.

One direct consequence of such a growth in the developing world would be “poor will become poorer” and the world in which people live would become a little bit more unpleasant.

Technology

Ironically, technological advancements which the man worked hard to achieve, have begun to work to the disadvantage of the man. Fuels, oils, detergents, chemicals, fertilizers, perfumes, foods, etc. have begun contribution to pollution thus accelerating the process of destruction of environment. Preservatives added to foodstuffs, grains, etc. have proved to be injurious to health. Agricultural lands are getting destroyed due to heavy applications of chemical fertilizers. Food, fruits and flowers are contaminated due to pesticides and insecticides. Dangerous chemicals are circulating in various channels to find their way ultimately to human bodies e.g.,

through milk, water, air, etc. Due to construction of roads, super highways, canals, bridges, forests are being destroyed, thus eliminating valuable agricultural lands. Due to increased activity in house construction timber is obtained by cutting down rich and thick forests thus denuding the hilltops, and upsetting the ecological balances. Wild life is disappearing.

Forests, also called the green cover of the mother earth, are renewable resources. They contribute to the process of economic development and enhance the quality of environment. These are the lungs of the earth because they provide fresh air and plenty of water for the people besides providing shelter and employment opportunities. Indiscriminate felling of trees, thereby destroying this green cover, heavy erosion of top soil takes place. There is erratic rainfall, recurrence of floods, acute shortage of firewood, which result into a great loss of productivity due to eroded and degraded lands.

Only 13 per cent of the land in India is now covered with forests. Indonesia is losing 1.3 million hectare of forest a year. Wild life is in danger. All over Asia a large number of species are threatened due to deforestation.

Due to increasing industrial activity, large areas are being exploited for mining of metals, coal, oil and setting up processing unit thus shrinking the agricultural land and thinning of forests. A large variety of toxic compounds are getting released to inland waters and consequently to the sea, thus creating a multiple of pollution.

In the search of more metals for industrial use a large-scale exploitation of earth is taking place. Mining results in degradation of land, pollution of surface and ground water resources, pollution of air, deforestation including the loss of flora and fauna, and the problems of rehabilitation of the affected population. After the excavations are done, and minerals secured, no efforts are made to regreen the area, thereby initiating the process of soil erosion and upsetting the ecological balance.

Burning of industrial waste, release of industrial gases and waters, stink from the garbage and sewage, fumes from automobiles, radiation from nuclear plants and equipments are adding to the pollution. This cycle warms up the earth atmosphere thus creating a "Greenhouse Effect".

The most common air pollutants are particles with diameters in the range of 0.001 to 100 micron and effluent gases containing sulphur dioxide, nitrogen dioxide, hydrogen sulphide, carbon monoxide, lead released from automobile exhausts, mercury, arsenic, cadmium and selenium. These and many other toxic compounds in the biosphere are rapidly rising to a level where animal, bird, and human life is no longer safe in many areas of the world. The seriousness of the problem can be realized from the fact that in Japan traffic policemen and pedestrians often inhale pure oxygen from oxygen tanks almost every two hours to avoid monoxide poisoning. A number of metropolitan cities in the Asian region, particularly cities like Bangkok, Manila, Karachi, Shanghai, Beijing, Calcutta, Bombay, Delhi, and Jakarta are becoming virtual "gas chambers". During rush hours people suffer from irritation of eyes. People have developed breathing problems. Due to the pollution even the shrubs and plants along the busy roads do not grow well and become pale and lifeless.

From the foregoing discussion we see everybody - rich or poor, literate or illiterate, small or big - seems to contribute to the process of self-destruction.

Meaning of Environment Protection

In simple terms it means a healthy life for everyone, a better way to life and prosper. We can discuss it further as follows:

1. Better Standards and Quality of Life

Fresh air, clear atmosphere, proper facilities, good housing, better working conditions, clean drinking water and pollution-free environment bring pleasure for all. The result is healthy growth, employment for all and a pleasant world to live in. In some of the Western countries people are getting extremely worried about the junk food that is sold in the super markets. People are now looking for vegetarian food, fresh milk, and chemical-free fruits and flowers. They are moving away from chlorine-bleached products to oxygen-bleached or to non-bleached products. Instead of using PVC packaging cooperative stores are making an excessive use of recyclable materials. In the United Kingdom, for instance, consumer cooperative stores are putting "Consumer Care" labels on their products because the customers are not willing to pick up stuff which is dangerous to health. Cooperative stores are giving publicity to this label as a guarantee of "pollution-free" material. Products, mostly beauty aids, are now not pretested on animals. Use of plastic shopping bags, for instance, is being gradually decreased and replaced with disposable paper bags.

In the Swedish consumer cooperative sector similar efforts are being made and a number of customers prefer to pick up healthy and natural products rather than those which are processed with the use of chemicals, synthetics and preservatives.

2. Life Support System

There is a need to ensure that the natural life support system is preserved and its natural cycle is not disturbed. Forest cover is not disturbed. Trees are a good means of holding the soil particles together. The roots hold the water and top soil thus preventing land-slides, blocking of rivers, and flash-flooding. Mining on hills is being halted. More trees are being planted on slopes. If the hill tops are bare, there are more floods in the plains. The rivers get dried up during summer when water is needed

the most for irrigation and drinking. If there is continuous supply of water in the rivers, people can develop various activities e.g., inland fisheries, small irrigation, etc. Water is the essence of life, and this supports all the activities that sustain life. The hydro-electric dams will not get filled up with silt easily if the flow of water downstream is clean and clear. This results in better irrigation potentials and higher generation of electricity for the industry. Healthy rivers also halt the progress of deserts.

In order to get the best out of treasures of nature, it is best to preserve the ecological balance and to help the life support systems to exist and develop further.

3. Conservation and Regeneration

The earth is being exploited extensively for minerals, metals, fuels, diamonds, gases and other natural resources. The oil reserves are currently under heavy pressure and one cannot expect them to live for ever. Alternative means of energy have to be identified and developed further in order to conserve natural resources for future generations. Water resources have also to be judiciously exploited and tapped. Excessive pulling water out also means depleting the water table thus producing another chain of environmental problems e.g., sinking of land, shortage of drinking water, etc. Everyone should, therefore, try to conserve the natural resources and regenerate the resources for future and to protect environment around us.

4. Pollution-Free Environment

In our rural areas we need water for various purposes. Government and other agencies provide water taps, but no one really thinks of the resulting problems e.g., disposal of waste water, drainage system in the village, paving and lining village drains, spread of water-borne diseases. A facility of providing water in the village also produces a variety of pollution problems. The cow-dung in India, for instance, is another factor. A

majority of it is burnt as cooking fuel, while it could have been an excellent manure for the village lands. Only recently there is an emergence of bio-gas plants, but still the effort is too small to be noticed. Use of solar energy is still to emerge as a strong alternative.

Village school is provided by the government. But the wastes from the school are not properly disposed of. There is stink and consequently the sickness. Village garbage disposal is another issue. Sanitation in the rural areas is usually the last issue which merits any attention from the authorities. Rural local bodies are too poor to set up own development programmes. Fumes, gases, smoke, untreated water, garbage, coming out of the rural industries, or industries located close to the villages, also pose serious problems for the residents. Sugar mills are a good example in point. A nearby spinning mill or a tannery is another source of pollution for the people.

The Coop Initiative **- An Indicator of a Positive Involvement**

Some of the recent documents list the involvement of cooperatives in protecting the environment. The involvement is voluntary, positive and most welcome. It is a demand of the society. It is a question of a positive awareness among people and people's organisations. It is, however, significant to note that consumer cooperatives in the developed countries have provided the lead since the health-conscious people have realized that fatty-foods, preservative-oriented junk food, animal pre-tested beauty aids and other goods, chemically-treated or bleached vegetables and foods add not only to environmental pollution but also are high health-risks. Cooperatives have also realized, thanks to the environment-related publicity and information generated all around the world, that wood cases destroy forests; plastic containers and packing bags are dangerous for health; sanitary towels, napkins, shopping bags can also be produced out

of recycled materials; glass and all other metals can be retrieved from waste materials by processing and recycling the garbage; harmful elements and components can be substituted with environment-friendly alternatives e.g., CFC (CFC = Chlorofluorocarbons. Special gases used in refrigeration equipment, aerosols and foam packaging. These gases damage the ozone layer, and are now being replaced with other safer gases) in refrigeration and safer aerosols; and greater savings can be secured by making an efficient use of electricity and fuels etc. Since consumer cooperatives encounter a major chunk of community almost directly, they have happily responded to the need of the hour. This was the need of the community and the cooperatives have honoured the community by introducing innovations. They have the credit. Other forms of cooperatives e.g., agricultural cooperatives, have also made significant contributions to protection of environment by keeping the supply-line pollution-free and healthy by incorporating corrective steps at the source of production. Some of the steps relate to balanced fertiliser application; improved seeds; scientific use of insecticides and pesticides; proper disposal of agricultural waste etc. etc. In a number of countries we also notice a proper relationship developing between the agricultural cooperatives and consumers cooperatives - a closer and healthy cooperation between producers and consumers.

A brief survey of the cooperative horizon would provide to sister-cooperatives elsewhere some motivation to act, to make this earth a place to live.

Cooperatives in Canada make use of collapsible reusable plastic containers; collect office papers and old tyres for recycling; contribute to 'city environment funds'; have instituted environmental audit of purchasing and operative policies; national awareness workshops and conferences are held; closer linkage is sought to be developed between environmentalism and the principles of cooperation; realise that conservation is an affordable option and that the costs of pollution are extremely high.

In *Czechoslovakia* cooperatives are involved in protection of forests; preservation of parks in urban areas; improving methods of sewage disposal and promotion of air filters. Agricultural cooperatives employ ecological specialists to advise them on environmental issues.

The *Danish* cooperatives have launched awareness programmes relating to acid rains, ozone layer and the greenhouse effect. FDB - the national consumer cooperative - now uses less PVC and chlorine-bleached paper and cardboard. Its own brand aerosols are CFC-free. Recycled and other safe materials are used in packaging. Special awareness programmes are launched on safe products, safe packaging. It has introduced its own systems of symbols to indicate environmentally-friendly packs and products.

In *Germany* recycled toilet papers and pro-nature kitchen rolls are being produced. Special publicity programmes are being undertaken on environment-related issues.

Finland cooperatives are doing informative advertising; holding dialogues with manufacturers and provide information about environment-friendly operations and recycling activities. Most efficient use of energy in refrigeration, lighting and airconditioning is resorted to. In construction of buildings most environmentally-friendly material and those which are least harmful to health are used. Special efforts are made to use the most minimum of CFC in its refrigeration equipment. In vehicles catalytic converters are used to save fuel. Idling time of vehicles is reduced. Lead-free fuel is used. Greater use is made of recycled paper for envelopes, forms, towels, etc.

In *Japan* the JCCU (Japanese Consumers' Cooperative Union) produces and markets tissue paper from 100% recycled paper. The development of environment-friendly products was launched as a part of the environmental action policy recently adopted by the JCCU. To be deemed environment-friendly, a product must meet at least one of the

three conditions: (1) it does not impose undue strain on the environment; (2) recycling of the product is possible; and (3) it saves energy and natural resources. Special symbols have been introduced to indicate environmentally-friendly products put on sale in sales outlets. Responding to the needs of the society and in realization of its own responsibility towards mankind, the consumer cooperative movement in Japan has developed own brand safer and more environment-friendly detergents; participates in protection of water resources programmes; and evolved a genuine linkage of agricultural producers and consumers directly in an attempt to secure a stable supply of "safe, reasonably-priced" food. This linkage is considered important inasmuch as it prevents unnecessary exposure of humans to detrimental chemicals and contributes to the maintenance of uncontaminated soil and water systems.

Picking up the ideas from the Alternative Food Programme of Sweden's Stockholm Coop, the Nadakobe Consumer Cooperative (membership = 940,000) has developed its own "Food Plan". The following three objectives summarize the basic idea of the Food Plan: (i) Introducing safe and reliable products to the consumer and producer, (ii) Recycling the materials and energy use for production as much as possible and saving resources; and (iii) Giving full consideration to preserving the environment and ecosystem during production.

The consumer cooperatives in Japan have also developed their own "Stay-on-Tab" cans instead of the traditional "pull-type tab" which have been found to be environmentally harmful. Another example is the introduction of reusable bamboo chopsticks instead of the traditional wooden ones. It may be noted that disposable chopsticks are made from lumber discarded by the building and furniture industries. Annually 20.5 billion pairs of chopsticks are produced of which 12.4 billion are manufactured in Japan and 8.1 billion are imported. This requires approximately 400 thousand cubic meters of material wood.

The *Polish* cooperatives carefully monitor any pollution to the envi-

ronment which might result from the cooperative production units and their activities. Cooperatives therefore undertake testing of waste water. A system of compacting waste products is produced and marketed by the cooperatives. Special training programmes on environment-related topics are given to board members of cooperatives.

In *Sweden* in the consumer sector, the KF (the national Consumer Cooperative Union) has decided to make all its operations more environment-friendly. There are many and large-sized production and distribution units within the consumer sector in Sweden. Some of the examples are: Panda batteries produced by KF's Lumalampan do not contain mercury; another factory recovers mercury from waste material; unnecessary additives and preservatives are removed from Coop bakeries' products; non-chlorine-bleached toilet tissues, kitchen rolls, coffee filters, nappies and sanitary towels are produced and marketed; CFC-expanded plastic butchery trays are no longer used by KF; special environment education scheme for KF staff was introduced already in 1989; KF uses its own symbol to mark environment-friendly products and consults environmental organisations and researchers when determining the criteria for its use. Special steps have been introduced to save energy. The Federation of Swedish Farmers (LRF), since 1985, has adopted an environmental programme for the production of food. This programme includes not only the production and manufacture of the most nutritional but most pollution-free food. It also provides support for research and development to improve quality of food and the environment. The LRF also seeks to put pressure on the Swedish Government to act rationally and internationally on acid rain.

KF's commitment on the environment programme makes an interesting reading. It says "The Consumer Cooperative Movement in Sweden is a powerful movement. A very large share of Swedish households are owners of an extensive wholesale and industrial operation. This environment programme is the Swedish Consumer Cooperative Movement's

first comprehensive programme for a better environment...this programme will be further developed in the light of new ideas both from KF and from the societies after discussion and by democratic decision in accordance with the traditions of the popular movements in Sweden. We shall make changes in our own operations. We shall demand improvements in legislation by means of consultatory measures and by lobbying. We shall speed up the process by influencing opinion with the help of publicity and educational activities, through our newspapers and our marketing. In short - we shall live up to our role as an instigative and responsible popular movement"... "At the same time, we shall demand that the competent authorities act locally, nationally and internationally and that they take decisions that are beneficial for the environment and hence for our members".

In the *United Kingdom* a plenty of goodwill has been generated by cooperative institutions in favour of keeping the environment pollution-free. Cooperatives have undertaken special programmes to provide the most wholesome, clean and contamination-free food through cooperative retail outlets. The commitment of the Cooperative Retail Services Limited (CRS) reads "to do everything in its power to protect the environment and ensure the efficient use of protection of natural resources". CRS has cut down on the sale of products considered to be harmful to the environment. Own brand aerosols are all CFC-free; Coop label toilet deodorizers do not contain paradichloro-benzine; do not sell products made with tropical hard woods; none of their own brand products are tested on animals; Coop brand detergents are 80% biodegradable within 19 days; products from recycled paper are being sold; CRS vehicles use unleaded petrol; and the stores are made as energy-efficient as possible. Several campaigns relating to environment-care have been launched as, for instance, "Keep Britain Tidy", community activities and a variety of public awareness programmes. The Cooperative Insurance Society (CIS) is proposing to invest funds in companies which are involved in environmental protection. The Cooperative Whole-

sale Society (CWS) has employed an environment specialist to advise on environmentally-sound retailing. The CWS has published and distributed literature on environmental issues. Own brand products carry recycling symbols, first aid instructions and list the harmful substances usually used in such products which have been omitted e.g., non-CFC, phosphate-free etc. For the information of retail staff "Coop Staff Guide to the Environment" has been published. This guide helps the staff to answer questions from the customers and tells them what the Coop is doing to preserve it.

In the *United States* the Davis Food Coop publishes a newspaper (on recycled paper) dealing with various ecological issues. It discusses matters such as nutrition, waste disposal, gardening, vegetarian cooking and the effectiveness of cleaning products. Special awareness programmes are carried out for students at various levels.

In *India* too small steps have reportedly been taken. Several cooperative organisations, notably among them the fertiliser, dairy and sugar industrial units have responded to the call. One such project is in the Sultanpur district of Uttar Pradesh where a group of forestry cooperative organised by poor farmers has, within the short span of three years, afforested large tracts of salt-encrusted wasteland and where not a blade of grass grew until recently, and have brought even ravines under tree cover. The project began as an effort for some greenery on 15 hectare of saline soil, but has already afforested over 2,000 hectares of degraded and salt-affected land. Although conceived initially by the Indian Farmers Fertiliser Cooperative (IFFCO), it is today an entirely people's programme with local people banded together into cooperatives taking all decisions as well as the responsibility for implementing them. The benefits seem to have been manifold: the developing forests yield timber, fuel and fodder, the soil quality has changed to the point of supporting the cultivation of cash crops like turmeric; the once-unskilled villagers have acquired enviable expertise in afforestation and perhaps most important of all, the greening of the soil has lifted the people out of despondency and

stimulated them into attempting other ventures like aquaculture to increase their income.

With the lead provided by organisations like IFFCO several social forestry programmes have been undertaken in desert-dominated areas like Rajasthan where several forestry cooperatives have been organised. Some of the sugar cooperatives in the state of Maharashtra have also introduced environment-related programmes.

Fishery cooperatives in India have introduced a number of innovative programmes. Some of the measures taken are, among others, proper maintenance of fishing crafts, keeping the engines in good order, strict hygienic conditions at landing platforms, systematic salting and drying of fish procedures, packaging and marketing. Training programmes in fishing craft management, handling and marketing of fish and health programmes at fishermen's settlements are given to fishery cooperative members, board members and staff.

In *China* cooperative organisations are involved in garbage processing to recover precious metals, and produce goods of day-to-day use out of recycled materials. The Chinese cooperatives have also offered to transfer this technology to other cooperatives in the Region.

Participation of Cooperatives

Cooperative institutions as people's organisations can perhaps play a significant role in creating awareness among the people. These roles could be:

- Creating awareness among cooperatives and cooperative members through extension programmes;
- Developing educational and training programmes for board members and staff members;

- Cooperating with government agencies in suggesting new measures and implementing environment-related programmes;
- Giving publicity to environment-related successful measures taken by cooperatives; and
- Collaborating with cooperatives abroad in exchanging information and techniques.

Cooperatives can undertake the following principal activities:

- Creating awareness among the people on the consequences of increase in population;
- Creating awareness among the people on the consequences of cutting down trees indiscriminately;
- Creating awareness among the people on the consequences of flow of waste water in village streets;
- Creating awareness among the people on indiscriminate mining and digging up soil for brick-kilns etc.;
- Educating farmers on the use and handling of chemical fertilizers, insecticides and pesticides, e.g., DDT;
- Educating people on the importance of washing vegetables and fruits before using them;
- Informing people on the use of alternative sources of energy for cooking, heating and lighting;
- Encouraging people to develop social forestry programmes; and
- Encouraging people to participate in community development programmes e.g., rural sanitation, cleaning of school premises, cleaning of village streets, repairing the leaking water taps, discussions with the nearby factories or mills, developing modest rural health programmes, better management and greening of wasteland etc.

While a national awareness planning and action plan is necessary, a real work could be done at the basic level. Cooperative institutions can interact strongly with the rural local self-government agencies in order to develop an integrated environment development strategy. This would involve awareness, extension, training development activities. A strong, well-informed and properly trained cadre of environment-conscious workers has to be developed who could provide, on a regular basis, education and information on various aspects e.g., rural/general sanitation, farm guidance, hygienic warehousing and handling of products, automobile/farm machinery maintenance and management, afforestation, water testing, soil testing, systematic handling of chemicals and fertilisers, disposal of garbage, recycling of waste material, setting up of bio-gas plants, family welfare and child care, etc. The national and provincial cooperative organisations can formulate strategies, develop and provide back-up services e.g., curricula, trainers' training and extension of field material, training packages, handbooks, linkages with appropriate agencies including government departments, and also identify, secure and provide proper funding for implementation of programmes.

In some cases, national cooperative organisations with the support of and collaboration with government and other agencies may also consider setting up pilot programmes, the results and activities of which are given wide publicity. A programme of inviting suggestions on environment protection could also be launched in order to involve people.

It is also appropriate if special environment monitoring sections are created at the national and provincial levels. There is a great need of producing a variety of films, pictures, posters, handouts and charts with bold messages and strong colours.

Cooperative institutions at all levels should reorient their educational, training and public contact programmes so that elements of environment protection are included in them and that all functionaries connected with cooperatives are informed of the dangers of pollution and

importance of conservation and regeneration of natural resources. The national cooperative unions and the cooperative training institutions at various levels including the sectoral business cooperative federations could launch intensive programmes of workshops and seminars for the education and training of their staff in environment-related activities. A strong inter-action with governments needs to be developed to formulate appropriate strategies, policies and joint action programmes. Special manuals and handbooks may be published for the use of cooperative staff. There is a clear need for attitude change and environmental education. There is an urgent need to develop and implement specialised and intensive programmes of management of natural resources. Special training packages, handouts, pamphlets and posters could be developed for various levels and for various business operations within the cooperative sectors:

- Environment protection and the dairy cooperatives.
- Environment protection and the industrial cooperatives.
- Environment protection and leather cooperatives.
- Environment protection and sugar cooperatives.
- Environment protection and textile cooperatives.
- Environment protection and fertiliser cooperatives.
- Environment protection and warehousing.
- Environment protection and consumer cooperatives.
- Environment protection and your cooperative.
- Environment protection and you.

Senior level government and cooperative officials should also be given information, orientation and training in environment-related activities. Special drives e.g., grow more trees, save fuel, save water, etc. could be launched by the cooperative institutions.

These are some of the issues which are of prime importance for cooperatives today. Everyone should participate in this programme, and cooperatives are the best and most appropriate institutions to generate a favourable climate in favour of this movement - a movement to save the earth and to make it a place to live.

“The life support systems of our planet are collapsing. You and I may not be alive to experience the dreadful results, but your grandchildren will. We owe it to the newly-born generation to do all in our power to hand over a living earth”.

Mostafa K. Tolba
Director

United Nations Environment Programme

Glossary

Acid Rain: Rain or snow which contains a higher level of acid than normal. The burning of fossil fuels (wood, coal, gas, oil) and the incineration of waste produces sulphur dioxide and nitric oxides. When dissolved in water they form acid which falls back to earth as acid rain.

Aerosol: Can of liquid with a propellant gas under pressure, which is used to spray the liquid in the form of tiny drops. Commercial aerosols may use CFC as propellants, but these are believed to be responsible for the destruction of ozone in the upper atmosphere.

Biodegradable: Substance which can be easily decomposed by organisms, for instance, when buried in the soil within a short span of time (e.g., within 3 months).

Biogas: Gas, partly methane and partly carbon dioxide, which is produced from fermenting waste, such as, animal refuse. Biogas is an alternative energy resource.

CFC/CFM: Chlorofluorocarbon/Chlorofluoromethane, compound of fluorine and chlorine, used as a propellant in aerosol cans, in the manufacture of plastic foam boxes for takeaway food, as a refrigerant in refrigerators and air-conditioners and as cleaners of circuit boards for computers. Since scientists linked CFCs with damage to the ozone layer, they have increasingly been replaced by other safer gases.

Deforest: To cut down trees for commercial purposes or to make arable land; timber companies have helped to deforest the tropical regions; about 40,000 square miles are deforested each year.

DDT: Dichlorodiphenyltrichloroethane. Highly toxic insecticide, no longer recommended for use. DDT remains for a long time as a deposit in animal organisms.

Disaster: Terrible event which kills and causes massive destruction. Ecological disaster: disaster which disturbs the ecological balance of the environment.

Ecology: Study of the relationship among organisms and the relationship between them and their physical environment.

Greenhouse Effect: The process by which excess Carbon Dioxide is absorbing and trapping heat within the earth's atmosphere. Eventually this could melt polar ice caps, raise sea levels and affect climates throughout the world.

Ozone: Poisonous form of oxygen found naturally in the atmosphere, which is toxic to humans at concentrations above 0.1 parts per million. Ozone layer is situated in the atmosphere between 20 and 50 km above the surface of the earth. The layer of the gas protects the earth from ultra violet rays, which cause skin cancers. Scientists believe that this layer is being broken down (appearance of holes in the layer) by CFCs which have found their way to the upper atmosphere after being released from aerosols, packaging and refrigerators.

Pollution: Presence of abnormally high concentration of concentrations of harmful substances in the environment, often put there by people; in terms of pollution, gas is by far the cleanest fuel; pollution of the atmosphere has increased over the last 50 years; soil pollution around mines poses a problem for land reclamation.

Recycling: To make waste material and process it so that it can be used again. The glass industry recycles tonnes of waste glass each year. Switching to using recycled paper can be cost-effective. Recycled paper: Paper made from old waste paper. Precious metals e.g., lead, copper, silver, gold etc. can be recovered from old batteries or computer parts.

Regeneration: Growing again of vegetation on land which has been cleared.

The Chiangmai Declaration on Environment and Sustainable Cooperative Development-1990

We, Cooperators of the Earth, who have gathered for a common cause, at the CCA Asia Regional Conference on Environment and Sustainable Cooperative Development, who believe the time for concern and action is now, do hereby declare:

- That every person is entitled to live in a clean and ecologically balanced environment;
- That future generations of humankind should not be deprived of their share of Earth's bounties;
- That it is every person's duty to conserve, protect and enhance his/her environment.

To these ends, we pledge ourselves and our cooperatives to implement the recommendations of the Conference.

Declaration adopted at the Regional Conference on "Environment and Sustainable Cooperative Development" held by the Canadian Cooperative Association at Chiangmai, Thailand, May 1990.

The International Cooperative Alliance is one of the oldest non-governmental international organisations. It is a worldwide confederation of cooperative organisations of all types. Founded in London on 18th August, 1895, the ICA has affiliates in 70 countries with more than 200 national and eight international level cooperative organisations as members serving over 700 million individual members at the primary level. The ICA is the only international organisation entirely and exclusively dedicated to the promotion of Cooperation in all parts of the world. It enjoys Consultative Status of Category 'A' with the UN/ECOSOC.

Besides the head office in Geneva, Switzerland, there are five regional offices, viz. the Regional Office for Asia and the Pacific in New Delhi, India (established in 1960); the Regional Office for East, Central and Southern Africa at Moshi, Tanzania (established in 1968); Regional Office for West Africa at Abidjan, Ivory Coast (established in 1979); the Regional Office for Central America and the Caribbean at San Jose, Costa Rica (established in 1989) and the Regional Office for South America (established in 1993).

The ICA Regional Office for Asia and the Pacific serves 63 national level organisations from 25 countries, and one international organisation, representing nearly 450 million individual cooperators. These countries are: Afghanistan, Australia, Bangladesh, China, Fiji, India, Indonesia, Iran, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Democratic Republic of Korea, Republic of Korea, Malaysia, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand, Turkmenistan, Vietnam, Uzbekistan and ACCU.

Main activities of the Regional Office include coordination of cooperative development efforts within the region and promotion of exchanges and experiences; project identification, formulation, preparation and evaluation; promotion of establishment and development of national cooperative apex organisations; and organisation of seminars, conferences on specific subjects including support for programmes aiming at the involvement of women and youth in cooperative activities.

Finances are derived from member subscriptions, own funds and assistance from donors for various activities carried out by the ICA.





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