blue skies above

– *An Anthology of Consumer Co-operatives in Protecting Environment*

International Co-operative Alliance
Regional Office for Asia and the Pacific

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– an anthology of Consumer co-operatives in protecting environment based on the presentations from an International Symposium on Co-operative Environmental Initiatives held in Tokyo, October 1997.

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Preface

Public attention has focused on environmental issues, especially global warming, when the Third Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP3) was held in Kyoto in December 1997. The future of humanity essentially depends on the degree to which international measures for countering dangerous climatic changes can be strengthened. Therefore, 1997 has been dubbed, 'the year of the global environment.'

The Japanese co-ops, too, have shown concern for these issues by, for example, organizing an environment conservation campaign spanning all of 1997. The JCCU collected signatures for a petition urging the government, which chaired COP3, to assume a leadership role and produce meaningful results. During this short campaign, which lasted less than a month, the movement resulted in 570,000 signatures collected. It held the 'Co-op Global Environment Forum' in Kyoto during the COP3 Session, in which 550 co-op members participated from 75 co-ops all over the country. The JCCU also participated in a Japanese NGOs' networking organization called 'Climate Forum 97' and raised funds to invite NGO representatives from 32 developing countries to visit Japan.

As one part of this campaign, the JCCU hosted the International Symposium on Co-operative Environmental Initiatives on October 25, 1997 which provided the opportunity for more than 200 participants to learn how co-operatives in different countries are tackling environmental problems. The most advanced experiences were presented from the Federation of Migros Co-operatives (Switzerland), Co-op Tokyo(Japan), Co-op Italy and the ICA Regional Office for Asia and the Pacific. These reports provided both national and regional perspectives in co-operative environmental policies. The Sym-

posium ended with the conclusions that: (i) pursuing sustainable development is the most important challenge facing co-operatives throughout the world; (ii) as businesses, co-ops must proactively accept their role in preventing global warming; and (iii) co-ops must help their members adopt a lifestyle that does not add to global warming.

Since this Symposium was held in conjunction with the ICA Consumer Committee for Asia and the Pacific and the International Youth Symposium commemorating university co-ops' 50th anniversary, many Asian co-op leaders took part. I do hope these reports are widely read among Asian co-operators since this region will no doubt present the largest impact on global environment in the new millennium.

Akira Kurimoto
Manager, International Deptt.,
JCCU

PART ONE

THE END OF BLUE SKIES

Global Warming

The year 1997 was noted for the smog that devastated some of the South East Asian countries, which took many lives through air disasters as well as many living beings in affected areas. The smog was blamed on forest and ground clearance fires in Kalimantan, the Indonesian part of Borneo and Sumatra. The fire raged many countries- Indonesia, Malaysia, Brunei, Singapore and parts of Southern Philippines.

This ecological and human disaster is a clear example of corporations and land owners wanting to reap as much profit as they can in a short period of time at the expense of the environment. The smoke haze has contributed to global warming as ocean temperature near the fires has increased considerably.

Experts believe that if global warming continues at he current rate, most of the land in the Indonesian archipelago will be submerged. Coastal areas are very sensitive to climate change and will cause sea levels to rise. As a consequence, Indonesia will suffer more than any other country in the world because most of the Indonesian territory is surrounded by sea, making coastlines in Indonesia the longest in the world.

According to the United Nations' Intergovernmental panel on Climatic Change (IPCC), anthropogenic (human induced) green house gas emissions significantly alter the earth's climate. By the year 2100, average global temperatures are projected to rise by 2.0 - 2.5 degrees Celsius. This projected rise in temperature represents a five fold faster rate of warming than that observed in the past century.

'Climate Change' refers to any change in climate over time whether due to natural variability or as a result of human activity. Climate change historically has occurred as a result of natural forces,

but is now occurring in part because of human activities. Human activities over past 200 years, particularly fossil fuel combustion, has resulted in significant anthropogenic greenhouse gasses, primarily carbon dioxide. Emissions of these anthropogenic greenhouse gasses have already altered the chemical composition of the atmosphere. This creates an "enhanced greenhouse effect" skin to an atmospheric blanket trapping gasses beneath it.

"Global warming" refers to a long-term rise in the average temperature of the Earth. Observations show that the global average surface average temperature has increased by about 01 degree Fahrenheit over the past century. Analysis indicate that this is an unusually large, rapid, and prolonged warming trend, and suggest that the warming be largely due to human influences.

Climate has no market. We must therefore infer a value on climate by showing what impact global warming has on people, and then ask how much they are willing to "pay" to avoid certain negative impact of climatic change both at present as well as in the future. Another way of inferring value is to make the connection of global warming and human health. Malaria and dengue fever serve as a prime example of climatic sensitive diseases. The geographic range of malaria is generally limited to tropics and sub-tropics because the Plasmodium parasite requires an average temperature above 16 degrees Celsius to develop. However, malaria has been observed in non-endemic high elevations in Africa during unseasonably warm conditions. Climate related increases in sea surface temperature could lead to a higher incidence of water borne cholera and shellfish poisoning.

Human migration and damage to health infrastructures from the projected increase in climate variability and severity of storms could threaten human shelters and public health infrastructures and indirectly contribute to disease transmission. Human susceptibility to disease might be further compounded by malnutrition due to climatic impacts on agriculture.

It is therefore critical to recognise that climatic effects have a great impact on human health. Since most co-operative members in rural areas are farmers, it is also important to initiate a campaign on reducing greenhouse gasses.

Global warming could have serious consequences for agricultural production. Some effects may be beneficial but many would be adverse. Climatic changes not only affect the quality of agricultural production, but it may result in having farmers plant their crops in other locations depending on the changing climate conditions.

Studies in Vietnam, for instance, reveals the gloomy fact that the Northern region of that country, especially the Red River Delta, is the most sensitive to present day climatic variability. Rainfall fluctuations are strongest in this area and drought and flooding frequently limit crop yields. The vulnerability of Southern regions of Vietnam is likely to rise as global warming develops. Where climate used to be stable, and impacts on agriculture less frequent, climate change is now occurring at a higher rate. The increased incidence of drought in South Vietnam as rising temperatures increases evaporation water loss would be a major impact on global warming. The range of crops than can be grown may be reduced. Pest outbreaks may become more frequent as temperature and humidity increases in the winter months. And taking future trends into consideration, the Mekong Delta and the coastal areas in the North of Central region are considered to be the most vulnerable to the changes expected occur as a result of global warming

Global warming is a very crucial issue because unless we curb green house gas emissions the rate of warming will only accelerate. We must also be realistic that reduction of greenhouse gas emission to halt global warming will take a long time to achieve. The crucial consideration is for co-operatives to be given the means of adapting to the changing environment. Mechanism to do so can take different forms: introduction of new technology changes in policy and practice, institutional reform, new cropping patterns etc.

PART TWO

CREATING BLUE SKIES

01. Co-operatives And Environmental Concerns

As co-operatives around the world found themselves awed by the intensity of environmental destruction in the 1980s, many member organisations of ICA such as JCCU, SCC, CCA initiated action programmes to promote awareness and concern for environmental deterioration. It offers a substantial opportunity for fundamental national and regional commitments to sustainable human and economic development. In 1972, the United Nations convened the Stockholm Conference on the Human Environment, which led to the formation of the United Nations Environment Programme The 20th anniversary of the Conference was the Earth Summit in Rio de Janeiro in 1992. Prior to the Summit, the UN sponsored the World Commission on Environment and Development (WCED) which produced its report " Our Common Future" in 1987. Questions were raised about the costs of economic growth based on the newly predominant model of outward market oriented economy. Especially the cost to natural resource and environmental systems that are the basis of economic activity and human welfare. This emerging opportunity coupled with pressing global environmental threats presents a clear dilemma for co-operative movement- which way will co-operatives go to help preserve and protect the environment? To this end, ICAROAP undertook a series of workshops and published a number of publications, primary of which was a concise booklet entitled "" place to Live - Roles Co-operatives can play in protecting environment" published in the year 1990. In 1995 ICA's commitment to sustainable development was spelled out in its new principle of "Concern for Community".

There is a strategic imperative for co-operatives to practice the principle of "Concern for Community", because sustainable development must first meet the basic needs of the community through which members could be made to understand and accept consumption standards that are within the limits of ecological possibility. Sustainable development is best understood as a process of change in which the use of resources, the direction of investments, the orientation of technological development and institutional change, all enhance the potential to meet human needs both today and tomorrow.

Historically, co-operatives have fulfilled the socio- economic needs of communities, and have enjoyed success in many countries. Co-operatives are formed mostly by lower-middle income families in the community to promote their well being and eventually to become self-reliant. By their very presence, co-operatives become a countervailing force to mitigate the negative effects arising from growth strategies, which often neglect environmental accountability. A measurement of success among community initiated co-operatives is generally attributed to the fact that these co-operatives are capable of serving members needs through the provision of services such as credit, production, marketing, processing, farm supply, and savings mobilisation. While in the past these services were provided in a prompt and efficient manner, nowadays serving members' needs for the sake of efficiency alone is certainly not enough. Co-operatives must also take into cognisance the negative effects arising from production and consumer services on the environment. All too often co-operatives indulge in economic undertakings and inadvertently loose sight of the fact that sustainable development cannot be reached without taking environmental concerns and programmes of social advancement into consideration. In less than two decades ago governments in both industrialised as well as developing countries set policies which focus solely on economic development at the expense of the environment. The situation has changed considerably during this past decade- especially after the 1992 Earth Summit- as governments and multilateral agencies have begun to transform policies and patterns of activity by taking environmental concerns into consideration, as well as gradually focussing more on causes rather than on the harmful effects of environmental neglect.

Likewise, there has been increased awareness and understanding within the co-operative sector world-wide to shape their policies so as to pursue more integrated action oriented programmes based on both environmental and economic considerations. Admittedly, Japan, Europe, and North America have led the pack.

The momentum is right for us co-operators to bring co-operatives into centre stage when speaking about environmental issues in this Region. Because it is only pertinent that natural resource and environment management cannot be imposed by external forces, but

must be left to the local communities by emphasising the delegation of decision making and consensus building approaches to community development. Environmental issues are multidimensional in nature, and the multi-sectoral approach can effectively achieve a balance between resource use and economic growth so as to minimises their adverse effects on the environment. The fact of the matter is that governments can no longer deal with environmental issues themselves, nor can it be left to scientists and academics alone to solve this crucial issue. Both governments and scientists must be backed by popular participation at the grassroots in their efforts to promote public understanding and awareness of the environment.

Governments require proper institutional frameworks that involve communities in the resolution of environmental problems. It is in this context that co-operatives can play a crucial role in raising membership awareness programmes, with the support of expert groups who are more capable of sharing their technical and scientific know-how.

While economic growth in Asia and the pacific has been spectacular, such promising scenario does not hold for the environment in the Region. The current production mechanism, industrialisation for economic growth, may entail further depletion of natural resources and raise the fear of worsening the environment. There is also a continuing exhaustion of resources arising from population growth and the intensification of agricultural practices, urbanisation, the prevalence of poverty, and an increase in consumption level in some sectors of society. Rapid depletion of natural resources, and concomitant fallout seen in increasing air and water pollution, urban congestion, solid wastes, and global warming, raise the urgent need to promote sustainable development in the Region.

02. Envornmental Impact Assessment

Many lessons can be learned from the impact of global warming. Co-operative leaders must be made aware that a holistic approach to development must be adopted. Co-operatives must begin to understand that preventive, not just reactive, approaches must be undertaken.

Reacting to the rise of globalisation by making co-operatives more efficient and effective is good, but not necessarily the best, move. There always exist an inherent conflict between the path of economic development and the need for environmental protection based on the principle of sustainability. Co-operatives must evolve a mechanism to integrate environmental concerns into their economic growth policies, so much so that the integration will change inherent conflicts into complementarities.

With reference to principle No. 17 of the Rio Declaration, environmental impact assessment needs to be built into the project cycle when co-operatives undertake their planning exercise. It must also be coupled with Environmental Risk Assessment to abate unnecessary risks as a result of co-operative activities, which take place within natural ecosystems.

Environmental impact assessment is an examination; analysis and assessment of planned activities with a view to ensuing environmentally sound and sustainable development. Effective economic evaluation of the environmental impacts of projects requires substantial information on the environment. It is strongly recommended that co-operatives take EIA into their project development cycle if they aim at reaching sustainability. Although many policies have been biased in favour of promoting economic growth and competitive strength, it must be recognised that EIA could instil a long-term view towards sustainability without jeopardising economic growth.

In doing so, EIA methodology should be developed to give appropriate monitory values to changes in physical impact resulting from global warming and other environment; concerns. China, India, Indonesia, Malaysia, Pakistan, the Philippines, Sri Lanka and

Thailand have established legal provisions for government agencies to require EIA approval of specific types of projects. The EIA procedure used at present is more or less standardised and consists of the basic steps of screening, initial environmental examination, scoping, impact statement preparation, review of financial decision, monitoring and auditing. Many countries review projects on the basis of their potential environment impact, employing formalised outlines, questionnaires, checklists and matrices for screening, initial environmental examination and scoping.

Co-operatives have the advantage of being closely linked to their members, and hence to their communities. Education and training must therefore address environmental issues, in the same way they address gender and development, so that membership needs are not compromised but enlarged into a long-term goal of sustainability. In other words, EIA combines the co-operative principles of ' concern for community' with 'member economic participation'.

There is a widely accepted view on the need for risk assessment as a useful method for integrating environmental concerns into projects. Project decisions are increasingly required to ensure those social costs, risks and benefits are based on sound valuation of environment impacts employing reliable data and empirical evidence. Risk assessment and full economic evaluation of environmental impacts provide a more complete picture of the true worth of a project by: a) eliminating investment bias towards projects that promote the overuse of natural resources; b) demonstrating key fundamentals for the formulation of environmental policies; c) allowing comparisons of different projects competing for scarce resources.

Co-operatives must be at the forefront of implementing environmental risk assessment because it augurs well with the co-operative value of self-responsibility, ensuring that services to members must be safe and sound. Unlike risk assessment needed for mega projects undertaken by the Asian Development bank or World Bank, co-operatives can provide complementarity by way of sharing their powerful 'software' instrument as they deal dierectly with members and can educate members to avoid future risks to the environment. This can be done by assessing co-operative policies and practices to

ensure that the economic undertakings of the co-operative will not be separated from environmental issues. Based on the value of equity and equality, co-operatives must also assess physical impacts on people by giving preferential options for the poor in an effort to improve their well being. Poverty is both a cause and effect of global environmental problems. Bringing the poor to a level of understanding where they will no longer be subjected to destruction of natural resources is considered a good risk abatement strategy.

Environment risk assessment has been practised by the Asia Development Bank for notable projects such as the power plant in Pagbilao, Philippines, the forest project in Yunan province, China, and the Indonesia mangrove project sites.

03. Co-operatives In Environmental Action

- I. Migros Co-operative

- **Profile of Migros**

Migros Community is the largest consumer co-operative group in Switzerland, which has 1.56 million members and a turnover of 12.9 billion Swiss Francs. It has 15% share of domestic retail market and 23% share of food market.

Migros in Switzerland is primarily a retail trading enterprise. The retail business in Switzerland is in the hands of 12 autonomous regional co-operatives, which altogether run about 570 stores and 90 mobile shops. They sell an assortment of food and non-food items, which becomes more and more complete as the store grows in size. Some 200 stores also run restaurants.

The Federation of Migros Co-operatives (FMC) is in the possession of 12 co-operatives. So it is not the headquarters of a group, but a service enterprise for co-operatives. Its main function is central responsibility for the assortment and procurement of the products, securing of own production facilities as well as comprehensive financial, logistic and cultural services fort the Migros community.

Migros is also an important producer. The 13 Migros owned industrial plants mainly function in the food sector (dairy products, canned foods, meat products, chocolate, baked commodities and beverages), while the non-food sector and cleaning agents as well as tables and chairs. These plants, altogether, produce about a third of the goods sold by Migros.

Migros community also has various service enterprises. A bank, an insurance company, a travel business, an oil company, a printing press (packages and other printing matter) are some examples. There are also logistics service enterprises that are connected with the Migros goods business.

Having a workforce of 75000 employees, the Migros community achieved a turnover of 16 billion Swiss Francs in 1996. Out of this, the retail business accounts for 12.9 billion SFr.

Environment protection has a long tradition in Migros. Comprehensive environment policies have been compiled in 1991 and 1995, which have goals in each field to be achieved every five years. Considerable success has been achieved in the reduction of energy consumption and waste from business operations along with recycling. Good results can be seen in energy saving at stores: in spite of 80% increase in sales between 1981 and 1994, the total energy consumption has risen only by 10% in 14 years.

- **Environment Policy of Migros**

Environment protection has a long tradition in Migros. Many individual schemes and plans for the management of energy had already been carried out. In 1985, Migros decided to formulate an environmental model integrating all these efforts. A working group was set up for the purpose in such a way that the Migros community was represented on a wider scale. The first Migros environment policy was adopted by the Board of Directors of the Federation of Migros Co-operatives in 1985. It is characterised by the fact that apart from general principles, more explicit goals and strategic measures have been established, such as for the product range, packaging, energy, emissions, transport, training and communication sectors. The Migros environment policy has since been revised every five years and adapted to the latest developments.

The underlying tone of this environment policy can be summarised as follows:

> *"We want to set an example in the promotion of public health and in the saving of natural resources".*
>
> *"We support effective measures for reducing environmental pollution".*

- The environment policy forms an integral part of our corporate strategy.
- Concrete measures are taken with due regard to competitiveness and profitability.

- We seek partnership with consumers, authorities, business research and politics.
- We are in favour of progressive legislation.
- We actively communicate with employees and the public.

> *It is the aim of the Migros Environment Policy to ecologically oriented production, trade and services in a consistent manner and to further develop them as a competitive advantage.*

- Procedure of reducing environmental burden

In order to reduce the environmental burden caused by the Migros Community, we have chosen a pragmatic, gradual procedure in four stages:

1. Saving
2. Substituting
3. Reducing
4. Disposal

- Explicit environmental activities in different systems

Environment management system:

In the past, Migros practised environmental potation in a rather selective manner. Energy saving, waste control, packaging and reduction.

The compiling of environment-relevant data from the Migros community is relatively costly. The question repeatedly arises as to how efficiently we actually practice environmental protection. Are the right measures taken which are ecologically relevant at the same time? Are all-important aspects closely scrutinised?

To be more sure on these matters, Migros decided to introduce an environment management system for individual enterprises and also for the Migros community. The aim was to ensure systematic, comprehensive and efficient environmental protection.

There also exist various standards for environment management systems, e.g. ISO 14001, EMAS of the European Union etc. A system can also be certified under these systems. Migros decided to undertake a pilot experiment in a plant with a system in accordance with ISO 14001. The necessary experience was to gather using following:

- How heavy is the cost?
- What is the concrete benefit of such a system?

The Migros was to extend the system to other Migros enterprises if the experience gained was positive.

Product assortment:

For Migros as a retail trading enterprise, further development of the ecological quality of its products is a key factor. This development has so far resulted in four ecological product lines: "M-Sano", "M-Bio", "Mioplant Natura" and "Eco" (textiles).

The "M-Sano" line, which started way back in 1970, has a long tradition. Even at that time, the aim was to achieve agricultural production with as little chemical artificial substances as possible. Apart from fruit and vegetables, this programme today also includes cereal milk and meat products. "M-Bio" products have the highest ecological standard and originate from organic farming. Chemical-synthetic plant protectives and mineral fertilisers are not allowed at all.

With the exception of the "M-Bio" sector, the ecological product lines are aimed at the mass market. Ecologically friendly products are to be offered in adequate quantities and at normal prices, so that they are within the means of a broad section of the population.

As fare as the remaining product range is concerned, a number of concrete measures are defined in the environment policy, which should ecologically improve the products.

Packaging:

Migros stipulates that its packages must yield maximum efficiency with minimum economic outlay and minimum ecological burden. In the last few years, it has made tremendous efforts to reduce the packaging material.

Since the Seventies, Migros has been using plastic returnable containers for internal logistics. They are repeatedly filled, stored, washed and filled again. The Migros community can save about 60000 tonnes of packaging material (cardboard) annually.

However, savings are only one possibility of reducing environmental pollution. For each package, one can look for an ecologically better variant. Migros uses eco-balance instrument for this purpose.

The eco-balance is set up in two stages. A material and energy balance is first elaborated which quantifies all environmental burden that arises in the whole life cycle of a package. These data are summarised and evaluated in the second stage. In order to make complex calculations simpler in practice, a computer programme- "the eco-base software" has been developed. This enables different variants of a package to be compared relatively quickly in regard to their ecological quality.

In order to obtain an overview of the package as a whole, packaging material statistics are compiled each year.

Energy:

Cheap energy in unlimited supply has become the main source of the present day environment problems. Energy consumption undoubtedly plays a key role in the discussion on the reduction of environmental problems people create. The main measures for reducing the greenhouse effect must be taken within the range of energy consumption of companies. After the oil crisis of 1973, Migros started developing and translating saving concepts. It was able to fall back on the positive experience it had with energy management. Energy, being the key dimension has a bigger advantage of having relatively easy measurability and the ability to set quantitative goals, which can be controlled by reliable energy consumption statistics.

Individual targets for energy and also water consumption have been agreed with the Migros co-operatives (distribution centres and shops), the production companies as well as logistics firms. These targets must be reached within five years, and in this case, by the year 2000. Reliable energy consumption statistics that are compiled each year form an essential basis for successful energy management. They

enable a check to be kept on the target, which is presented to the responsible people at various technical conferences. Comments are made on the development and the results are discussed. In depth evaluations for the network of stores are individually examined with the co-operatives.

It is the general experiences that considerable success has been achieved in the area of thermal energy and water, whereas in the area of electricity consumption, the results show a degree of stagnation.

After twenty years of energy management one could see results: In spite of substantial increases in sales and production, the total energy consumption rose insignificantly. The good results as a whole are based on savings in the thermal energy which do not fully compensate the extra consumption in thermal energy which do not fully compensate the extra consumption of electricity.

Renewable Energies:

Thermal solar energy has to compete in the buildings in Switzerland against waste heat from cooling plants, which is excessively available. Therefore, it has been mainly applied in pilot schemes. A successful example in terms of energy and cost is the thermal solar plant on the roof of the head office of Hotelplan, the travel business enterprise of Migros. Measures by the government to promote such schemes were an important factor in its realisation.

Migros has constructed two photovoltaic plants as demonstration units. One example is the St. Gall Migros Co-operative, which has an output of 60 kW.

The systematic use of solar energy plants, which are uneconomical today, is not feasible for a business enterprise competing on the market. The breakthrough of renewable energy carriers will come as soon as energy prices shows "the ecological truth", which means the external costs are also included.

Waste:

Waste is not simply just disposed. As in the case of energy sphere, Migros community today talks of waste management. The right way to deal with waste is not only of ecological but also of economic

interest. Already in the stores is the internal waste, such as cardboard, glass, plastic sheeting, which are collected separately and brought back to the distribution centre. About 20 different types of waste fractions are collected in the centre separately and conveyed to suitable recycling channels. In this way, it is possible to recycle nearly 80% of the internal waste, while 20% is burnt in refuse incinerating plants.

Transport:

Transport logistics has the task of bringing the right goods at the right time to the right place. The environmental burden involved in this process greatly depends on the energy consumption and emissions of the means of transport used (railway, lorries).

In addition to the consistent optimisation of road transport, the Migros has aimed at further increasing the percentage of rail transport used in deliveries to our distribution centre. Today, the rail percentage - excluding deliveries to store - is a little over 60%.

CFC emissions:

A serious environmental problem is the progressive destruction of the ozone layer, our protective shield against high-energy ultraviolet radiation. We find the CFCs, known as the cause of this destruction, as foaming agents in foamed insulation material and refrigerating agents in cooling and air conditioning installations.

Quality has very high priority in Migros, especially in the case of refrigerated products whose proportion of the product range is still increasing. Therefore, Migros is concerned about the problems involved in refrigerating agents. The CFCs with their splendid technical properties must disappear from plants and be replaced as quickly as possible.

In 1993, Migros has worked out an exit strategy, which illustrate how this replacement should proceed. Migros is one of the pioneers in the use of secondary coolants. Many such plants are already in operation. Systems have also been installed with ammonium as the refrigerant, the handling of which is relatively demanding in its applications.

However, there is still a handling need in this area.

Training and Communication:

The high aims described here can only be achieved if all employees are informed and act correctly in their sphere of influence.

With few exceptions, specific courses on the environment are not held in the Migros Community. Environmental topics are systematically integrated into the existing range of training courses in various forms. Migros employees are repeatedly confronted with the subject. Special courses are held only for higher-ranking staff and for specialists, such as energy and refrigeration experts. Brochures, reports, standard lectures and videos are available for training purposes.

In order to train the store personnel, Migros uses an interactive leaning programme called "Videomit". The trainees are informed on the screen about the Migros environment policy and the most important activities of its enterprise and receive advice on the behaviour at the workplace in tune with the environment.

An information office for environmental questions has been set up within the Public Relations and Information Division. Its main tasks are to inform and motivate the staff and to communicate with the public.

With three weekly newspapers, "Bruckenbauer", "Construire", and "Azione", which are published in the main languages in the country, Migros has a splendid information medium. With regular articles on environmental topics, the co-operative members are informed about Migros activities and general matters in connection with the environmental questions.

- **Sustainable Development as a Goal**

Five years after the UN Environment Summit in Rio (1992), the term "sustainable development" is still very present. It is a term, which is very difficult to define and represents a very high demand.

Can Migros meet the demand for sustainability? To say "Yes", is surely unrealistic and impossible to measure, while a negative answer is too pessimistic. The answer lies somewhere in between: "Yes...but". The Migros Community does much to optimise its business activity

also in terms of ecology. On the other hand, there are many basic conditions such as laws, raw material prices, competition, profitability requirements, etc., which limit the possibilities. There is still much to be done. The integration of ecology into the economy is a permanent and exciting challenge.

03. Co-operatives In Environmental Action

- II. Coop Tokyo

- **Profile of Coop Tokyo**

Coop Tokyo started its operation in 1957 as the Kirigaoka Coop, with 300 members. It has 599426 members at present and 1273 employees. There are also 5710 part time employees working for the coop. 352851 members have joined joint purchase system of the coop, and 246575 are attached to coop store system.

The turnover of the coop for the year ending in March 1997 was 121.1 billion Yen out of which joint purchases by the members account for 67.3 billion Yen.

Tokyo Coop promotes the philosophy of creating an environment in which people can enjoy a decent and comfortable lifestyle. It believes that key ideas of nature, harmony, personal freedom, warmth, and community spirit characterise the new society towards 21st Century which values not only material wealth, but also the individuals desires and need for spiritual fulfilment. This philosophy reflects in all coop activities.

On the subject of environmental issues, the Coop Tokyo believes that in a global context, the problem of environmental destruction and resource depletion are becoming increasingly serious. Coop Tokyo places great value upon environmental preservation and upon harmony with the natural environment.

The governance structure of the Coop Tokyo consists of Han group system, general assembly management committee and several special committees and ad hoc committees. In the case of business strategies, Coop Brand products and joint purchasing system take predominant places. Mutual insurance scheme is benefited by the members. There are several auxiliary services for merchandising such as laboratories, food processing units and testing centres.

- **Coop Tokyo's Environmental Initiatives.**

Coop Tokyo. worked out its Environmentally Friendly Action

Plan in the year 1991. In June 1992, it declared the vision for the 21st century titled "Our path to the 21st Century".

The sum total of Coop Tokyo's goal is to become a coop that is open to, is trusted by, and contributes to the society by regarding itself as an ember of that society. To achieve this goal, it decided to actively express its own views and take action to solve the problems in the society including economic and environmental issues.

- **Coop Tokyo's Environmental Policy for the fiscal year 1997**
  - Review containers and packaging and promote products that are environmental friendly.
  - Together with the membership, help to build a society in which, as many resources as possible are recycled. To achieve this goal promote recycling and reclamation of post consumer containers and packaging materials.
  - Encourage the entire staff to decrease the waste discharged from Coop Tokyo's offices and stores and to promote the separation of waste products for recycling.
  - Make efforts to save resources and energy and to reduce air-polluting substances at all Coop Tokyo's offices and stores.
  - Encourage every single employee to think about environmental issues and take action for environmental protection.

- **Introduction and Evaluation of Environmental Management**

Coop Tokyo environmental management and auditing systems on experimental basis in 1993. The slogans used were:

"Let's summon up the courage to have our health checked."

"Let's start with the initial targets limited to business activities."

The Coop Tokyo held discussions as to determine whether auditing should be conducted only of the environment management system itself or the entire process including performance, results and achievements. A decision was taken to carry out an audit of Coop Tokyo's actual environmental activities by an environmental audit committee matching them with established ideals and visions. And

also a decision was taken to use the term "audit" as the appropriate term to describe this activity for the environmental management system.

The system was established in 1995, after which an audit is conducted twice a year. All audit results and measures are attached to the reports on business results and measures that are taken are also attached to the reports. They are submitted to the management of member organisations.

Findings of Environmental Audits of Coop Tokyo

In 1995:

"Environmental management and the audit have been steadily developed and have come to stay within Coop Tokyo during last three years since the establishment of the environment and audit systems. The systems at Coop Tokyo have now successfully passed through the introductory phase. The Coop has been steadily accumulating the data required to set objectives and evaluate attained levels".

In 1996 :

"Awareness of the need for environmental protection has been steadily increasing among staff in each department at Coop Tokyo. Four years have passed since the introduction of the environmental management and audit systems, and the systems have helped the entire organisation to deepen its understanding of environmental issues. Each of the departments has set objectives and plans for contributing to the environmental protection, and is achieving satisfactory results. The overall environmental management level has been raised, which is a remarkable achievement".

- **Coop Tokyo's Environmental Management and Audit Systems and Organisations**

The Environmental Audit Committee:

The purpose of the Committee is to promote environmental protection throughout the coop's activities, audit all environment; achievements ascertaining the degree of achieving environmental objectives

and plans and assess the actual situation in its offices and stores.

Based on these findings, the Committee is supposed to give advice and make proposals for improvement.

The audit is carried out internally, commissioned by the Director and the CEO. The results are reported to the Board of Directors, General Assembly and other organisations as an when required. The auditing is conducted twice a year, once in the first half and once in the latter half of the year.

The Environmental Audit Committee is comprised of six members i.e. three experts, two coop members and one auditor.

- **The Environmental Promotion Committee**

The purpose of the Committee is to promote environmental activities in response to an environmental audit. It has been organised under the Director and the CEO.

The Environmental Promotion committees functions:

a) considers environmental projects and makes proposals to the executive committee;

b) submits reports to the executive committee on the progress, problems and measures to be taken in relation to environmental projects;

c) Issues annual reports on environmental projects and submits them to the executive committee as well as to the environmental audit committee.

The Director serves as the chairperson of the Committee. Each of the departments and related companies nominate one member each to the Committee. The director in charge of the environment and welfare convenes the committee. The Committee holds meetings every two months.

Each department is required to set annual targets and evaluate its attained levels.

The expenditure for promoting environment projects consists of the costs related to waste management, reducing air pollution, collecting post-consumer containers and packaging, reclaiming recycled

materials, saving resources, public relations and advertising activities and personnel expenditure. The expenditure during the year 1995 has been 316.61 million and the year 1996 had 307.33 million-Yen.

Estimated working time per person for aluminium cans in joint purchase system has been 2.5 minutes per day. The non-personnel expenditure for collecting PET bottles has greatly increased due to the cost of purchasing boxes used for collection.

The cost reduction for shopping bags, electricity charges, water charges and recycling of materials charged in the business process in 1996 has been 239.91 million-Yen. In the case of electricity charges there has not been any reduction even after the installation of electricity saving equipment.

There is also a reduction in social costs. The total reduction for recycling at stores, shopping bags and refilling products in 1996 was 41.49 million-Yen.

- **Initiatives for the reduction of Environmental Burdens from Business Activities**

Coop Tokyo places much importance on reducing and recycling for the use of waste as resources from its offices and stores. In the year 1996, the Coop focused its efforts on the reduction of the largest waste product - refuse from the stores.

The coop also conducted a survey on the actual loss related to waste from the stores. He loss has been substantial in side dish products in 1998 (8.8)

The Coop has made a decision to sort the wastes discharged from stores into five categories and start reclamation.

1) Recycling and use of waste from offices and stores as resources:

Year 1996	Route	No. of stores participating in recycling activities
Garbage	Composting examined. Almost all garbage collected by administration	One store

Foamed polystyrene trays	Placed into flash boxes (utilising vegetable centre delivery)	27 stores (which conduct in-store processing)
Milk cartons	Collected by Yamada & Co. and sent to Marutomi Paper Mill	All stores
Other paper waste	Sent to Recycling Centre in Okegawa & then to Shinei Paper Mill	65 stores (available with delivery from the Distribution Centre)
Waste that cannot be recycled	Disposed of as industrial waste	

An experiment is underway to convert recycled garbage into resources. Other paper waste too is collected at other offices and stores including the head office. The coop has also reduced the waste discharged from the offices and stores and raised the recycling ratio for the waste.

The amount of waste discharged was almost the same as in the previous year, but the recycling ratio increased by 4 points.

The consumption of photocopy paper and printing paper increased partly because of the shift from external printing to internal printing. Coop Tokyo has been promoting the use of "R 100, 70% white" photocopy paper (photocopy paper made of recycled paper with whiteness of 70%). The coop has also been mindful of counting the number of sheets in addition to the total weight. The use of virgin pulp for electronic computer slips has been reduced to 93.4% compared with the previous year.

2) Energy saving and reduction of air polluting substances:

Energy saving and reduced fuel consumption by limiting the distances used by the vehicles would result in the reduction in emission of carbon dioxide (CO^2) and nitrogen oxides (NOx). Coop Tokyo will pursue the goal of energy saving.

Electricity consumption has increased because of refurbishment, longer business hours, increased days, and an increase in the number of open refrigerated showcases. The inverter systems were installed for lighting in open refrigerated showcases when stores were refur-

bished and also in the stores more than eight years old for lighting on the ceilings.

Water consumption has been reduced to 97.2% compared with1995 which 96.1% per 1 million items. The water faucets installed at the fresh food processing centres have had a great effect (water consumption at rear service facilities decreased to 89.8% of the previous year). Water saving faucets have already been installed at all stores, and the consumption increased in 1996. Water consumption in joint purchasing system has decreased due to the fact that some centres have been closed and others amalgamated.

3) Fuel consumption:

Fuel consumption was reduced to 98.6% compared with the year 1995. Gasoline consumption has increased, but the consumption of gas oil used in the delivery vehicles for joint purchase decreased to 96.2%. LPG vehicles were introduced in February 1996, but the effect is not reflected in the results for 1996. Low benzene gasoline has been introduced to 31 vehicles by September 1996 that has accounted for 20% of the gasoline consumption for the latter half of 1996.

4) Reduction in the emission of nitrogen oxides (Nox):

Installing wireless phones in all vehicles used for joint purchase system has increased business efficiency. Thanks to the improved efficiency, the total distances that the vehicles had to travel were reduced. The keys were chained to the drivers of all delivery vehicles, so that they could not leave vehicles with motors running idle. Diesel vehicles that meet the exhaust criteria and LPG vehicles too were introduced.

The use of CFC substitutes has also reached 75%.

- **Promotion of Simplified and Better Practices of Packaging and Products with Environmental Labels**

Coop Tokyo introduced a "Concept of good packaging" and "Policy on good packing practice" in 1992. Since then, the coop has been making efforts to reduce foamed polystyrene trays and to replace polyvinyl chloride and polyvivinylidene chloride films with non-chlorine containing counterparts.

Currently, the coop is preparing "Guidelines on Containers and Packaging to Reduce the Environmental Burdens".

The international standard for environmental labelling has been worked out in ISO 14000 series, and in Japan, the Environment Agency's "ecomark" system is under review. Coop Tokyo will review the necessity of and criteria for environmental labels within 1997 in co-operation with JCCU.

- **Promoting Recycling in Collaboration with Members**

The number of stores that collect containers and packaging has been increasing.

Item	1995	1996
Paper cartons for drinks	75 stores	82 stores
Aluminium cans	45 stores	57 stores
Foamed polystyrene trays	62 stores	67 stores
PET bottles	37 stores	78 stores

In the joint purchase system, all centres collect paper for drinks and aluminium cans. The experimental collection of PET boxes for egg has also started in September 1997.

The quantity of paper cartons for drinks, aluminium cans, foamed polystyrene trays and PET bottles has increased substantially due to the increase in the number of stores that collected containers and packages. Among these stores, five are currently participating in "Tokyo Rule III" (one method of sorted collection). In the case of joint purchase, the collection ratio for paper cartons used for drinks seem to have reached the upper limit of 80%. The collection ration for PET bottles was 11%.

The Coop promoted collection of "Kurashino Stage (life stage) brochures and OCR order forms.

Coop Tokyo has also supplied cloth shopping bags at Yen 100 each to encourage members to bring their own bags to the stores instead of using free carrier bags. The cloth bags were also made available to members of joint purchase system. The total number of

cloth bags sold (from April 1996 to January 1997) was 129000.

Cloth shopping bags were first provided in 1992. Since then, the reduction ratio for free carrier bags had been declining. In 1996, however, the reduction ratio has increased by 1.0 over the previous year due to the campaign to reduce the use of free carrier bags and promote the use of cloth bags.

At new stores, the period during which cloth bags are given away free of charge was shortened from six months to three months, after successful advanced advertising. These cloth shopping bags were given free to people when they joined Coop Tokyo.

Rolls of polyethylene bags are used at an average rate of 1.7 bags per member. Coop Tokyo will analyse the trend in consumption in due course.

03. Co-operatives In Environmental Action

- III. Coop Italia

Coop. Environmental Programme of Coop Italia

Coop Italia's initiatives with regard to Coop Brand products and Products with Care are aimed at fulfilling the following programme objectives:

01. Develop environmentally acceptable techniques and promote environment friendly products;
02. Encourage the use of reduced environmental impact growing methods and breeding and slaughtering techniques so as to increase the range of Coop-Products with Care;
03. Use suitable scientific tools to assess the environmental impact of the complete life cycle of Coop Products (eco balance);
04. Define ecological labelling standards to be gradually applied to all Coop Brand products (information of an ecological nature);
05. Use and encourage the use of reduced weight and reduced bulk packaging made of recycled or easily recyclable material;
06. Forbid the testing of Coop brand products on animals. Eliminate the use in Coop brand products of substances produced through violence to living beings or derived from species in extinction;
07. Improve the viability of eco- compatible products by creating more easily recognisable sales areas and systems;
08. Improve customer services and consumer information services so as to highlight the environment-friendly nature of own brand products as fully as possible;
09. Promote integrated production system products by increasing their availability at sales outlets through agreements with individual suppliers and supplier associations;
10. Launch a pilot scheme for the sale of biological products with full commitment both in the dressing of sales areas (maximum visibility) and communications (promotions and customer information).

- **Purchasing and Production at Coop Italia**

01. Consideration of the use of natural resources in purchased products and production

Coop Italia pays considerable attention to environmental issues due to the fact that both respect for the environment and a wish to allow future generations to enjoy equal or better standard of living and level of consumption than at present are among the co-operatives' fundamental principles. The reduction in the environmental impact of production processes will lead to a general saving in resources and, therefore, greater protection of consumer rights and consumer purchasing power.

01.1. Coop Products with care

After two years of pilot schemes and production process analysis, Coop Products with Care-Fruit and Vegetables were marketed in 1988: a range of products designed to protect consumers through the careful choice and selection of producers, with the definition and respect of detailed regulation on production procedures and carefully tested results.

The sale of veal, tender young beef, heifer and lean pork under the Coop Product with Care-Meat brand name began between 1989 and 1991. This range of products was introduced in order to protect consumer health and to reduce the environmental impact of agricultural production and stock breeding by limiting the use of pollutants.

Even though these products are not directly produced by the Coop, suppliers are selected according to their ability to respect the environment during production processes, e.g. through the use of eco-compatible defence techniques such as integrated and Biological Battle technique, the care they take to avoid wasting natural resources and the absence of environmentally damaging substances in production.

01.2. Coop brand products

Coop brand products are produced and packaged by carefully selected external suppliers. Supplier relations are regulated by contracts establishing product and production process specifications. The contract supply specifications establish the type of packaging, the com-

position and the nature of all raw materials and technologies used and of the end product.

Just as it is difficult to determine the quantity of natural resources necessary to produce a unit of finished Product with Care, the amount of resources necessary in the production of Coop brand products is equally difficult to establish.

Therefore, even though the protection of the environment remains a fundamental point in the selection of suppliers, it is currently difficult to establish whether any savings are made in the consumption of raw materials from one year to the other.

01.3. Other on-shelf products

At present, Coop Italia does not intervene directly in its suppliers' environmental policies.

However, markets have become increasingly sensitive to environmental issues as shown both by improvements in product environment impact and consumer-targeted initiatives and campaigns.

02. Consideration of environmental impact of production processes

02.1. Products

02.1.1. Coop Products with CareFruit and Vegetables

In 1996, Coop Italia had 95 products with Care suppliers producing a range of 103 products and special agreements with approximately 4500 farming businesses.

Products with Care turnover in 1996 stood at 177 billion lire generated through the sale of more than 930000tons of product.

Coop Italia has adopted a number of requirements and controls to ensure and check to ensure that product quality and environmental impact standards are respected.

Coop Italia suppliers are selected on the basis of their technical know how and ability to guarantee high quality standards. Supplier relations are regulated by supply contract specifications, which establish detailed requirements regarding production methods, controls and product specifications.

At agricultural level, the fundamental principle of Coop Products with Care is integrated production, which is internationally recognised as follows:

"An economic production of high quality fruit which has been obtained through ecologically safe methods, by reducing undesirable side effects and the use of synthetic chemical products in order to increase environmental safety and protect human health".

In other words, processes allowed by this type of production system are only implemented:

* If strictly necessary (i.e. when disease could lead to widespread damage to crops)
* At the right moment (i.e. at the stage in which a parasite is most vulnerable)
* Using the most environment-friendly products and products that better respect useful insects (i.e. using biological battle systems instead of synthetic chemical crop treatments)

Furthermore, in addition to integrated production specifications, Coop has already adopted:

- Stricter limits than those required by law regarding tolerable residues in crops;
- Limits in the contemporary presence of several residues(summation); Limits in the use of chemical crop treatments which, even though legally approved, are considered "suspect" by research institutions and expert bodies;
- Maximum limits in the allowed quantity of nitrates/nitrites.

Post harvest chemical treatments have been completely eliminated and substituted by cold air conservation. Furthermore, cosmetic intervention, waxing and "degreening" (a technique implemented during autumn months using heat to ripen fruit picked at a premature stage) have been banned.

As far as production areas are concerned, market logic often leads farmers into concentrating their production on products for which there is high market demand without considering land capacity and local farming traditions. This causes land impoverishment, lower prod-

uct quality and over-production of some products with respect to market demand.

Coop Italia has therefore decided to consider climatic conditions (soil type, climate, water and their interaction) in choosing its production areas with the aim to guarantee quality, environmental protection and long term economic viability.

Products are only sold when naturally ripened, thus avoiding the use of artificial ripening and conservation techniques to lengthen the product shelf life.

02.1.2. "Coop Products with Care" - Meat

In 1996, Products with Care-Meat were supplied by 25 slaughterhouses and 514 breeders. Turnover stood at 870 billion lire generated by the sale of 86000 heads of veal, 169000 heads of young beef and 60000 heads of lean pork.

100% of veal sold in Coop, 95% of young beef and 25% of lean pork are sold under the Products with Care-Meat label.

General supply specifications, similar to those drawn up for fruit and vegetable suppliers were established for breeders, encompassing all products and production process technical specifications. Should these requirements not be met, negotiations for supply contracts are not even begun.

Products with Care respond to consumer demand for quality. In order to ensure that quality standards are respected, Coop Italia performs a series of careful checks on its producers to control production processes as well as the products themselves.

With regard to veterinary drugs used in breeding, Coop Italia has continued to request total absence of residues on meat despite the fact that the European Union nullified the zero residue requirements in 1993.

Producers and slaughterhouses are subjected to numerous autonomous and spot check tests in order to guarantee the absence of steroids in meat.

Although forbidden by law, steroids may be illegally used to in-

crease livestock growth rates. In order to discourage the use of these substances, Coop Italia has established natural growth times for each of the species bred. Furthermore, to avoid microbial contamination, slaughter areas and work procedures must respect the highest standards of hygiene and cleanliness.

02.1.3. Coop brand products

In 1996, 89 companies with a turnover of 915 billion lire supplied a range of 656 Coop brand products. Coop brand products packaging observed following general principles:

- Non use of phosphates
- Elimination of PVC
- Elimination of over packaging
- Preference for low environmental impact packaging materials
- Use of lighter and less bulky containers
- Maximum use of recycled materials
- Widespread use of refills.

In some cases, these general principles have led to the need of identifying new technologies. As an example, the use of recycled materials in primary packaging of food products is prohibited by law due to their poor hygienic and sanitary properties. In order to overcome this difficulty, Coop Italia is carrying out research projects to identify new low environmental impact materials and solutions in which recycled material may be used. Nevertheless, wherever possible, Coop Italia applies the general principles of its brand policy to individual contracts and promotes research to resolve existing problems and difficulties.

Detergent bottles are made in a multi-layered plastic material- the layers, which do not come into contact with the products, which are made of recycled plastic.

The ratio between the weight of recycled plastic used and the total weight of the bottle is more than 25% (this ratio varies according to the chemical composition of the recycled plastic and may reach 50% of total weight).

As a guarantee to the customer, the percentage of each substance used in the product is indicated on the package (even if the effective percentage is often less than that shown). This means that consumers have the possibility to choose lower environmental impact products. Procedures aimed at increasing the use of recycled plastic in the production of bottles are currently at the study stage, together with solutions to allow the introduction of multi- layered containers with a recycled plastic content in food packaging.

Coop Italia's activity in the field of technological innovation and research into new more eco- compatible production processes often precedes government regulations regarding the environmental impact of products.

A reduction in the use of phosphates- considered one of the compounds responsible for the eutrophication of the Adriatic sea- began in 1984 and by 1988, they had been totally eliminated from Coop brand products. The Italian legislation has limited the use of these substances to 1% in washing powders and liquids up to 6% in washing up liquids and dishwasher detergents.

Wherever possible, PVC has been eliminated from product packaging.

Coop brand spray products have not contained CFCs - considered one of the compounds responsible for the thinning of the ozone layer - since 1986. In 1992, the first EU legislation and then Italian law called for the gradual elimination of this substance.

Wherever possible, Coop has tried to eliminate secondary packaging, although this, of course, depends on hygienic, sanitary and production requirements; Coop sells its own brand toothpaste in a mono-material polythene tube without any further cardboard packaging. Toothbrushes are produced with replaceable heads so as to increase their life span and reduce their environmental impact as waste.

Refills are available for some products, which allow reuse of the basic container, and therefore leads to a reduction in the volume of waste produced. A range of re-saleable refills is available for personal hygiene products.

Suppliers are encouraged to get involved in Coop Italia's environmental protection activities.

Item	Definition	Environmental Impact
Packaging	The product is used to contain and protect certain goods allowing their distribution from the producer to the consumer and ensuring suitable presentation.	The environmental impact of packaging is measured by considering all phases of production from the extraction of raw materials to final disposal.
Primary packaging	Packing that forms an individual sale unit for the final user or consumer.	The problems lie in the selection of materials used used for packaging and their differentiated waste collection
Secondary packaging	Packing is used to group a certain number of individual units. It can be removed without altering the product characteristics.	As for primary packaging
Tertiary packaging	Packing is used to ease the handling and transporting a certain number of individual units.	Tertiary packaging uses a more limited range of materials; therefore, differentiation of material components is easier.

02.1.4. Other on-shelf products

Consideration of environmental issues is also an important factor in the choice of other on-shelf products-i.e. products which are only distributed by the company. In the future, the Coop Quality Project, which deals with other on-shelf product suppliers, may also include environmental issues in order to make suppliers aware of environmental respect.

Following objectives are applied in regard to various on-shelf products:

1. Consider environmental respect and the protection of natural resources (environment quality – when assessing product quality;
2. Make producers and suppliers aware of environmental issues and the production of ecologically acceptable products;

3. Use suitable scientific tools to measure a product's environmental impact;
4. Widen the range of products which respect the environment, both with regard to production systems and direct environmental impact; 5. Gradually substitute on-shelf products with a high environmental impact with eco-compatible products;
6. Set coop eco-labelling standards and expect all other on-shelf product suppliers to conform;
7. Select ecologically acceptable products and promote activities to inform and educate consumers about these.

There has been a large increase in general, supplier awareness of the need to reduce environmental impact. One example of this may be seen in the increase in the production of natural biological products.

In line with the commitments approved at the Grado Assembly, Coop started to sell from November 1996, and products conforming to EC regulation under a new Coop brand name-Natural Biological. Natural biological products should not only comply to the minimum legal requirements necessary in order to be considered biological products, but also respect a number of additional requisites controlled by Coop technical staff through product and production process inspections and analysis. The project involved 35 sales outlets (including hypermarkets and supermarkets) and a total of 68000 tons of products.

In regard to production, Coop Italia has acted inline with the ECR Project (International Consumer Response Project of collaboration between producers and distributors aimed at rationalising logistic processes and improving services offered to consumers) to develop producer and supplier awareness of environmental issues and inform them of Coop's various commitments.

Coop has also begun specific scientific experimentation to analyse and assess the life cycle of a variety of packaging materials

02.2. Product controls

Coop's supply chain control over it's on-shelf products (branded products or not) is carried out through product analysis and targeted inspection by Coop technicians.

In order to adequately manage all activities, Coop Italia employs 34 members of staff in the Quality Department. The investment in 1996 for this activity was 8.7 billion liras.

- **Emissions from Production Processes**

The production process involves the modification and transformation of resources to obtain a finished product. During this process, various substances are dispersed into the environment. These emissions must be monitored, first of all to keep them under control and secondly, to allow objectives to be drawn up with regard to their reduction. Considering the sector within which Coop Italia operates, both emissions into the natural environment and emissions into the human environment are of great interest. The former category includes substances emitted into the sea, the soil and the air during production and distribution processes. The latter consists of the substances remaining in the product and assimilated by the end consumer.

03.1. Product with Care- Fruits and Vegetables

The greatest impact resulting from changes in farming methods considers the reduction of pollutants emitted into the environment and products.

03.1.1.Pesticides

According to the supplier contract specifications, the quantity of pesticide residues allowed in Coop products must be 30% less than the limit provided by the Italian law. More than 50% tests showed no pesticide residues (less than 0.01 PPM) while the remainder showed levels well below the required standards. Furthermore, the use of integrated production systems allows the number of field pesticide treatments to be reduced to 40% less than that necessary in conventional production.

03.1.2.Nitrates

In 1993, Coop established a guideline value for the quantity of nitrates admissible in Products with Care. This limit (2000 PPM) is still significantly lower than the maximum limit allowed by law.

03.1.3.Summation of substances

Since 1994, Coop applied a limit to the number of residues, which

can be simultaneously present in Products with Care. This limit establishes a percentage quantity which cannot be exceeded unless the number of active ingredients is lowered accordingly (e.g. three residues at 30% of their maximum limit, four residues at 25%), therefore, leading to a real reduction in the quantity of substances emitted into the environment.

03.1.4.Post-harvest treatments

The elimination of all post harvest treatments means that the emissions from this type of products are no longer disbursed into the environment.

Integrated Production

A good example of integrated production can be seen in the activity of Apofruit- one of the Coop Products with Care's main suppliers. For several years, currently eco compatible and sustainable production has been a real alternative to conventional farming leading to a significant reduction in he use of chemical and energy resources.

Coop Italia's supplier, Apofruit Group of Cesena converted its production of more environment friendly techniques several years ago.

Since 1976, Apofruit has reduced the number of anti parasite interventions by 20-25% and the quantity of synthetic chemical crop treatments (excluding low toxicity organic based products) by 30-35%. This group of 3500 associated farms with a 140 billion lire turnover has multiplied its integrated production surface area ten fold in a span of a decade, increasing the land used from 450 hectares to the current 4500 hectares. Peach and strawberry farming cover 80% of the surface area. Crop treatment has been reduced between 30% and 80% (80% reduction was scored by protected strawberry crops grown in tunnels). A significant reduction in the use of chemical crop treatment is also obtained by the use of sexual confusion or disorientation of Cidia M. and Anarsia L., the principal phytophagouses in peach cultivation. This technique- which Implies an 80-90% reduction of synthetic chemical insecticides- is used on 800 hectares or 17% of the integrated production total surface area. Together with the introduction of mandatory limits and the agreement with distribution companies to lower such limits even further, these initiatives have an extremely positive effect regarding the emission of nitrates into the water table.

In addition, associated farmers trained by an 18 member technical team provide them with information and support necessary for the correct management for an integrated production farm including advice regarding distribution techniques and the control of spraying machinery if used to its best extent allows a reduction of 30-40% in chemical crop treatment dispersal.

03.2. Product with Care - Meat

Coop Italia has paid great deal of attention to the environmental impact of pig farming. Together with Centro Ricerche Produzione Animale di Reggio Emilia (Reggio Emilia animal production research centre) it has checked the suitability of breeding structures with regard to the emission of pollutants, assessed the application and efficiency of feeding plans, experimented low environmental impact technologies for the reduction of liquid sewage and introduced straw beds during the fattening stage.

In the process, the supply contract specification has set the minimum surface area necessary for each animal taken for breeding.

In the case of lightweight pork, each breeder has been involved in an in-depth survey of the ways and means of effluence usage.

Finally, the results showed that legal requirements were duly adhered to regarding the availability of a sufficient area of land for correct disposal. Furthermore, Coop has set up a project to encourage the use of innovative effluence reuse methods. Breeders have agreed to test new methods of farm effluence distribution according to rigorous manuring plans, which take land use and characteristics into account, as well as the properties of liquid sewage and the times and means of dispersal.

Low impact on the environment that caused by manuring will have positive effects on he quality of surface and underlying water as well as on the quality of air notably improving conditions in areas surrounding pig farms.

A controlled and rational use of veterinary drugs contributes to the reduced dissemination of substances, which may lead, among other things, to the creation of resistant bacterial strains. Coop's rigorous control activity, together with public authority initiatives regarding the prevention of fraudulent use of steroids, contributes to reducing the risk from these substances being emitted into the environment.

03.2.1. Coop brand products

Coop Italia controls emissions into the environment by stipulating in the supplier contract specifications, the materials they should use in production, packaging and storage.

The maximum percentages stipulated for the various substances take account of their impact on both the natural environment and the human environment.

The most environmentally polluting substances are excluded from production or their use is severely limited, while maximum quantities to be utilised are established for their substances. The supplier contract specifications give details of the percentages permitted for various substances-the uses of any substances and treatment not given is prohibited.

Coop brand food products do not contain colourings. The use of colourings in non-food products is restricted and only food or cosmetic quality colourings are used.

Additives are used with discrimination and their use is only permitted when they are technically indispensable.

Polyphosphates have been eliminated from cheese slices, nitrites and nitrates have been eliminated from tinned meats, ascorbic acid has been eliminated from panettone and colomba cakes.

Certain fruit juices, vegetable conserves and fruit jam require suppliers to use only Coop Products with Care Products with Care raw materials, i.e. products which have been grown using integrated product technologies- thus ensuring further consumer protection and a continued lowering of residues in the environment.

- **Communication and Organisation**

01. Communication

01.1. Information campaigns on environmental issues

Coop Italia's training, education and communication activities are aimed at:

1. schools
2. members
3. public authorities

as target groups.

Coop's communication activities in the schools are mainly con-

cerned with educational issues associated with consumer behaviour. Meetings are generalised and may discuss environmental assessment tools, the problems of different collection schemes and waste disposal and alternative clean production systems.

From the fourth year of high school onwards, when students have a basic knowledge of physics and chemistry, more complex arguments are faced and analysis of material and product life cycles can be made and put into context.

With regard to university education, Coop Italia has collaborated with a student at Universaita degli Studi di Modena (University of Modena) - Faculty of Economics and Business, to prepare her first degree thesis on Analysis of all Aspects of Life Cycle involving research using the most up to date international publications.

Following this first initiative, and with growing interest in environmental issues, the Coop increasingly receives more frequent requests for information and help from final year students presenting Coop as a case study with regard to national environmental issues. Coop's distribution system was the subject of a research project implemented by Universita Bocconi (University of Bocconi) as a part of its SPACE project which was published in 1996.

Social activity is aimed at spreading Coop's environmental philosophy and developing an awareness of the connections between production of goods and marketing methods and environmental protection.

As far as the local authorities are concerned, Coop collaborates and interacts with municipalities, provinces and regions on projects regarding park management, the creation of ecological zones within sales outlets and car parking etc.

01.2. Packaging Campaign

Information activities in relation to the problem of packaging have been based on a number of teaching and informative tools:

- *Scientific Dossier* - describing the functions and aims of packaging, the size of national and international markets, environmental problems, the legislative framework, eco-compatible packaging,

technological innovation and the consumer co-operative movement's proposals.

- *Teaching Worksheets* - a set of 20 worksheets for children between 6 and 13 years of age illustrating activities to encourage a reduction in packaging waste, reuse and recycling and environmental protection.
- *Teachers' books* - a guide for teacher regarding the various activities proposed in the pupil's worksheets.
- *Video* - a lesson on packaging in which a fictitious character (Barattolomeo- the box man) faces various packaging problems.
- *Exhibition* - Vita de Scatola (Box Life) presented in Coop sales outlets.
- *Interactive and Multimedia CD* - Dentro la scatola con quattro ante da esplorare: unmondo da scatole (Inside a box with four ways to explore: a world of boxes) and Ecobilancio (Eco-balance).

A training meeting for co-operative entertainment staff has been organised to rehearse two shows- the good and the bad and the mystery of the red packages.

01.3. Exhibitions, conventions and other initiatives

Spring Map Project

Coop Liguria, on behalf of the co-operative movement and in collaboration with Legambiente, implemented the Spring Map Project as an experiment aimed at stirring Coop consumer/members into action.

The project aimed at drawing up a Map of spring, divided not only by the number of calendar days, but also by natural events that may be caused by a change in climate.

By observing the period of flowering of one or more species, they were able to follow the progress of spring and discover how the seasons do not follow the periods of time established by the calendar but rather affected by the climate. In this initiative, Coop Liguria has been helped by students from various classes and has produced mate-

rials, which were positively accepted and generated great interest.

Fair consumption

The Fair Consumption Project was established in 1996, with the funding by European Commission. The Project aims at developing a national awareness campaign and promoting fair trade and ethical production throughout the country.

The campaign's objective is to promote Transfair brand named products sold in Coop outlets and Third World workshops as well as setting up educational, development and information activities in relation to all forms of fair trade.

Biotechnology

A research project has been commissioned and implemented to determine Coop's position and ability to raise consumer awareness.

The main activities in the project are:

- Research into new consumer products (state of the art of food farming, non-food production, diagnosis and quality control)
- Ethical, social and legal implications (public perception of biotechnology, biotechnology and consumers, ethical aspects, risks and the legal framework)
- European and Italian positions (the position of consumers, environmentalists, distributors, farmers and industrial associations)

Coop has collaborated with a research project partially financed by the European Commission carried out in Italy by Milan based CERISS (Centro per l'Educazione, la Ricerca, l'Informazione su Scienza e Societa (Centre for Education, Research and Information on Science and Society) on the future of biotechnology in food farming.

The aim of research project is to analyse the various factors, which influence the development of food farming biotechnology, therefore, not only the technical and scientific aspects, but also the ethical, environmental, legal and social implications of biotechnology.

The Project is organised in collaboration with authorities and universities from four different countries (researchers, food indus-

tries, farming industries, consumers, public administrators, experts on social aspects, and environmentalists) and includes that participation of 200 Coop members. The questionnaires have been returned and are currently being examined.

Coop has also participated in a research project developed by the Instituto Nazionale della Nutrizione (National Institute of Nutrition) concerned with public opinion regarding innovative biotechnology. The first research phase has been completed in 1996; it included a number of interviews aimed at understanding consumers' attitudes towards biotechnology by exploring the psychological reasons determining consumers' acceptance of a given product.

The consumers' attitudes have been studied in two different contexts:

1. consumer worries regarding general use in which the tangible benefits of the technique are not explicit
2. consumer worries regarding specific applications in which the tangible benefits of the technique are explicit.

The results of this project, which involved a large number of cooperative members show that consumers' attitudes towards biotechnology change substantially in relation to the aims and needs to use this technique. The results also confirm that consumers are more likely to accept biotechnology when tangible benefits linked to a specific application are more evident.

Moral issues, health risks, and the question of unnaturalness must be assessed together with the real benefits, needs and progress that can be obtained.

In line with its institutional commitment towards transparency and its role of providing information to the consumer, Coop has long been aware of the extreme complexity of biotechnology issues. It is still at the assessment stage and is progressing without any preconception of possible implications.

Coop has confirmed its position, which had been expressed also within Eurocoop, on the segregation and traceability of products and food ingredients made up or derived from genetically modified organisms.

Co-operative newspaper has been one of the most informative tools for members.

02. Organisation

02.1. Environment committee

There are environmental committees functioning at the co-operative level as well as the national level.

The national environmental committee is made up of representatives from ANCC (members, communicators, and training, economic and legal sectors), Coop Italia, INRES, co-operative newspapers and the co-operative environmental committee.

Its objectives are:

- To apply the co-operative environmental agenda
- Co-ordinate system initiatives
- Implement projects

The national committee meets twice a year to discuss the following issues: packaging campaign, environmental impact of sales outlets, ecological zones, environmental training for Coop employees.

Coop became a part of the Club delle imprese oer l'ecoefficienza (Club of companies in favour of eco-efficiency) founded by Politecnico di Milano (Milan Polytechnic) whose members include the most innovative companies in the national environmental scene. The Coop has also adhered to the Ecosportello project, promoted by Legambiente, ANCI (Associazione Nazionale dei Comuni - National Association of Italian Boroughs) and Federambiente consisting of data and information collection and dissemination centre for waste issues, information of legislation, experiences in Italy and abroad, technologies used, and citizen awareness activities.

02.2. Training

An internal communication and training project dealing with environmental issues is currently in operation. Its objective is to raise coop management awareness, train staff, and create the conditions for the development of general and widespread environmental awareness among the managerial staff and sales staff.

That project, targeted at all organisational levels and particularly environmental committee and sales outlet management, is divided into three stages.

The first stage includes six seminar days dealing with the following issues:

- **The importance of the environment factor in retailing (legislative overview)**

1. International experience on environmental management
2. Possible environmental strategies- the planning and definition of environmental programmes
3. Assessment of environmental investments

- **Assessment of services and analysis of environment investment**

1. Planning of environmental factor control system
2. Sales outlet indicators
3. Assessment of environmental investment

- **Relevant operative variables in the management of environmental factors**

1. Assessment of environmental impact of sales outlets and products
2. Management of packaging waste and purchases

- **Environmental certification and external communication**

1. Analysis of environmental certification schemes
2. Competitive implications
3. The situation in various countries of the European Union

- **Planning of the awareness process for sales staff**

1. Basic logic for the planning of suitable awareness tools
2. Definition of macro-content of documentary support material

The second stage deals with the management of sales outlets and will include as in depth study of the approaches to management of

environmental issues adopted by Coop and the co-operatives, environmental impact of in sales outlets and management logic.

The third stage deals with sales staff awareness of environmental issues.

04. Coop. Strategic Planning for Environmental Protection

- The Case of JCCU

Japanese Consumers' Co-operative Union (JCCU) is one of the pioneers in consolidated environmental action in the Asian Region. Starting from late Eighties, the JCCU was able to promote a national action plan through its affiliates taking a holistic approach to environmental issues. Combined with business strategies for a value based consumer industry, the influence of JCCU has spread not only to consumer co-operatives, but also to the manufacturers and suppliers. The model created for long term strategic planning process as explained here would provide a learning experience to co-operatives in other countries in the Asian Region as how to embark on such a planning exercise and how to perceive and overcome the obstacles on the way.

I. Environmental Protection Movement of the Coops in the Early Half of the 1990s.

In 1990, the Japanese Consumers Co-operative Union (JCCU) embarked upon building a "Coops' Plan for the 1990s with Focus on the 21st Century" and "health and welfare" as the key terms to define the co-operative movement in the decade. Later, in 1991, JCCU announced its "Approach and Guideline on the Coop Environmental Protection Movement" and defined the environmental task as fundamental. In 1992, JCCU worked out the "Medium Range Plan of the Consumer Co-operative Environmental Protection Movement (1993-1995)" and presented to its member coops nation-wide an initiative for environmental protection.

As a result, many coops now have recognised environmental activities as one of the main tasks that are being promoted among them.

In the member activities, the environment has been recognised as the basic issue for members. A survey conducted by JCCU in 1996 (receiving responses from 67 of 100 coops with top coops' sales volume) showed that environmental studies and regional environmental monitoring activities conducted by coop members are organised at approximately 80% of the coops. Voluntary groups such as environ-

mental action groups and circles have been formed in more than 70% of the coops; various activities are conducted for environmental protection.

Recycling has also spread nationally among co-operatives, Items collected have grown in number from milk cartons, which account for more than one third of the volume collected in Japan to include food trays, aluminium and steel cans, and PET bottles. Coops have become the largest voluntary organisations that collect containers and packaging in the country. In addition, activities focussed on protecting water in the community, represented by promoted use of more environmentally friendly detergents are continuing.

The range of activities and environmental concerns are spreading in local communities as well, including lobbying local governments to enact environmental legislation, promotion of the Law for Sorting Collection and Recycling of Containers and Packaging, participation in various government councils, research for community building that aims environmental protection, and partnerships and network building with various organisations and businesses.

On the other hand, environmental activities are far from adequate, because a limited number of members participate in such activities, and it does not draw wider participation. Moreover, such activities are not voluntary enough, with members functioning only within roles, such as environment committee memberships assigned to them. In view of the growth of numerous civic groups and organisations rooted in local communities taking voluntary action, promoting environmental activities as self initiated actions rooted in the community, while giving attention to the problem awareness of each coop member has become a task that must be addressed in the future.

In the area of merchandise business, development and promotion of "environment friendly products", collection of containers and packaging and labelling, elimination of hazardous substances, action to support environmental protection oriented agriculture, research and introduction of environmental management and audit systems, action on energy conservation and reduction of waste at plants, stores and offices, and taking measures against CFCs emission, and development and introduction of environment friendly vehicles have started in major coops.

"Environment friendly products" have been developed and promoted mainly by JCCU and had reached 134 in number of product types and 202 in number of items (annual sale of roughly 11.8 billion yen) as at the end of 1996. Environmental products have been developed independently by some 20 coops. Promotion of such products has led to reduced environmental burden and at the same time, it created opportunities for coop members to review their life styles, as well as affected products sold by retailers other than coops.

As far as containers and packaging are concerned, many coops have worked avoiding chlorothylene uses as well as correct labelling of plastics and the materials used, reducing trays and simplifying packaging.

Many coops are engaged in direct transactions between producers and consumers (it is called Sanchoku system) through activity coordination and Cupertino with producers. There are also activities in various parts of the country for protecting food safety and supporting production systems based on environmental protection, while sharing local food resources.

In the area of waste disposal by plants and stores, most cardboard and foamed polystyrene fish boxes are being recycled and reclaimed by many coops through recycling business route, since reclamation and reduction of garbage involve technical problems such as foul odours and inadequate degradation, efforts are still in the infancy stage. Still, introduction of garbage processing equipment and experiments with reclamation systems has begun in some pioneering coops.

With rising collection volumes of recyclable items, many coops have begun to include recycling into their business operations. In order to support the coops dealing with cost cutting efforts while collecting a wide variety of items, JCCU opened a recycling experiment centre in 1993 on the premises of its distribution centre at Okegawa, Saitama Prefecture. At present each year, 234 tons of used containers and packaging such as food trays and PET bottles are being processed to intermediate stage with the participation of about 150 stores of 7 coops in the metropolitan area. These activities have had a significant impact on society in promoting a large variety of collections

of recyclable items at retail stores. The recycling centre itself suffers from large losses; each coop still has to deal with development of a rational system, including reducing cost.

Efforts at minimising vehicle exhaust emissions have promoted actions such as methanol fuel experiments, development and experimental introduction of electric vehicles, and a switch from the direct injection diesel engine to an indirect injection system as a provisional pollution control measure. A highly practical solution to pollution reduction is the development and promotion of the LPG fuelled vehicle that is currently underway under the initiative of Coop Low Pollution Vehicle Development Inc.. By the end of 1996, roughly 800 such cars are being operated by coops, accounting for some 6% of total vehicle ownership by coops nation-wide.

Against this backdrop, JCCU and innovative coops are conducting research into environmental management and audit systems as means to assess the environmental burden of their own operations and reduce it systematically, continually, and throughout the entire organisation. This approach has been introduced in a number of coops, ahead of commercial distributors. By the end of the 1996, it had been introduced in 8 coops and is expected to be applied to some 30 more, which are currently either reviewing the approach or making preparation for application.

The drive to convert the coops' operational structure into an environmentally friendly one in reality ranges widely among coops in terms of enthusiasm. The impending problem is how to introduce and establish environmental management and audit systems in the coops and develop them into an all-encompassing drive for environmental control over the entire operation.

II. Ideal of the Co-operative Environmental Protection Movement

The coop ideal for the 21st century is to create a more human lifestyle and sustainable society through concerted efforts of individual citizens.

The coop is citizens' organisation that realises the economic, social and cultural needs of people through its operations, proposes

new values in life and living, and contributes to community building through co-operative solidarity. It is from this standpoint that it organises and develops various activities and operations, including the pursuit of "safety and reliability" and promotion of peace and social welfare. Today, the environmental problem has become an issue threatening the very existence of mankind, and a solution to the problem has become an earnest desire underlying all citizens needs. The role of the co-operative movement is to respond to such wishes and to draw from the diverse energies of citizens. Protection of the environment must be a fundamental concern of the movement and must be regarded as closely linked to all tasks that coops deal with. It must fulfil its social function through efforts and application to redirect lifestyles, as well as the direction in business activities and social system development . By addressing this global task from the citizens' perspective, the co-operative movement must play a major role in building a national consensus on new social values to achieve reformation of the existing socio-economic structure.

The same environmental concern was addressed by the International Co-operative Alliance (ICA) in the " Declaration on the Environment and Sustainable Development" in its 1992 Congress and in the "Agenda 21 for Co-operatives" unveiled at its centennial congress held in 1995.

In view of such developments, the ideals of the co-operative environmental protection movement in the second half of the 1990s are defined below.

The coop regards the environmental problem as a fundamental task on which all of its activities are based.

The coop shall take the initiative in bearing vendor responsibility and become a pioneer in environmentally oriented operations and work to establish and promote a business precedent based on new values.

- The coop shall promote transitions in lifestyle among its members, become a pioneering organisation formed by citizens, and contribute to the formation of a wide citizen base, which places value on environment.
- The coop shall promote environmentally friendly community

building through co-operation and co-ordination with various organisation and individuals and work for the development of a new social system incorporating values of environmental protection while co-operating positively with environmental authorities and making policy proposals.

- The coop shall promote co-ordination of activity with co-operatives around the world and with other non-governmental organisations to foster concern of global environment and co-operatives in addressing problems.

The "value of co-operative solidarity" should be evaluated highly, particularly in an age in which global environment is in crisis and individuals and people must help each other both at the regional and global level. The coop plans to continue its efforts from this standpoint.

III. Tasks in the Co-operative Environmental Protection Movement in the Second half of the 1990's.

1. Objectives

The coop environmental protection movement in the first half of the 1990s focussed on environmental action as a coop member activity in phase with the upsurge of civic interest in environmental issues. In addition, it worked on defining a direction for new activities by proposing pioneering solutions to society through a review of its products and operations and by pushing for responsive operational changes wherever possible.

While placing importance on the movement's innovative actions, it is necessary in the second half of the decade to fulfil its expected role in the 21st century and to build activities capable of contributing to society long into the future and worthy of its position as Japan's largest civic organisation. Co-operative plans call for implementing a wide range of environmental activities and operations in the local community with global environmental tasks in mind, as well as promotion of greater co-operation and co-ordination with administrative authorities, businesses, various organisations and individuals and aggressively promoting social performance in activities. Actions will be set before society while making maximum use of the coops bringing together

producers and consumers and through policy proposals from the standpoint of private citizens. It is important that a contribution be made to the development of environmentally focussed society through such activities.

There are three key points that concern the co-operative environmental protection movement in the late 1990's:

1) Exhaustive application of environmental concern in products, which is fundamental of the co-operative movement, so that all products supplied by coops earn the highest respect and trust of local communities and establish social standards in food safety, security, and environmental friendliness. By building an environmentally focussed, innovative system, environmental management and audit systems will be established in all coops in Japan. Through continuing efforts to reduce the environmental burden of operations, coops will become capable of establishing in society environmental performance locally and nationally.

2) By adjusting the lifestyles of every coop member through voluntary and creative environmental activities in diverse areas, the coops will become organisations of innovative citizens placing emphasis on the environment through everyday living(i.e. "green consumers").

3) The movement is to become a nucleus for environmental community building by promoting network growth among various organisations and individuals in the community. By utilising its role as an opinion leader in society, it is to become a major contributor to building national consensus on developing legal and social systems that adopt environmentally focussed values.

In order to realise these objectives and to play an active part in the development of an environmentally oriented society, coops nation-wide should undertake the following tasks:

2. Medium range tasks

1) Tasks in the area of products and business operations

" The five year plan of the JCCU for the second half of the 1990's" is a project to promote development of coops that contributes to ev-

eryday living, particularly in the area of food, supported by a large number of members, and establishes leadership in the food market in the year 2000, aiming for a business organisation with total sales of 5 trillion yen and a 10% share of the food market (4 trillion yen in food sales) and with a strong voice in the community.

The focal point for these efforts for the latter part of the decade is overall environmental concern for its products and the establishment of environmental management and audit systems inside the coop.

Building an organisation with minimal environmental burden means that the coops business operation must be changed. It is important to have an environmental focus as one of the foundations of the management philosophy. It is essential that all coops make renewed effort to build consensus on this task and promote the following with all their energy.

a) Greater environmental concern towards products:

- Review and improve Coop products by establishing criteria for environmental concern and indices for products.
- Review existing criteria on selection of environmentally friendly products and labelling taking the entire life cycle of the products into consideration.

b) Environmental concern for food and support of food production oriented to environmental protection.

- Promote research, development, and application of environmental protection oriented agriculture and farming methods with reduced energy consumption.
- Further research into a comprehensive food system covering from production to distribution and sales.
- Encourage more coops to have direct transaction between food producers and consumers (Sanchoku system) and promote active contribution to the global environmental and landscape preservation.
- Promote "green tourism" and "green life" business in Cupertino with local governments and agricultural, fishery, and forestry cooperatives.

- Promote direct transaction with food producers in developing countries and support environmentally friendly food production from an international perspective.

c) Establishment of environmental management and audit systems:

- Promote greater application of the environmental management and audit systems and push for systematic, continuing, and organised improvements in the environmental burden of business activities.
- Promote development of expertise related to environmental management and audit.
- Investigate ISO 14001 certificate for coops.
- Promote "green purchasing" actively as part of environmental management.
- Pursue wider option of the environmental management and audit systems by business partners and affiliates.

d) Action on waste reduction and recycling:

- Establish guidelines on simplification, reuse, and recycling of containers and packing.
- Develop a management system for waste discharged from plants, stores, and offices.
- Promote reduction, sorting and recycling of waste discharged from the organisation and research into zero-emission society.
- Promote the recycling and minimising of food waste discharged from plants, stores, and offices.
- Promote reusable containers, sale of vegetables, and fruits by weight and by item and reduce packaging.
- Promote charging for carrier bags to reduce their use.
- Promote development of a rationalised recycling system, including cost reduction, and define uses for recycled items.

e) Control over CFCs:

- Continue with the switch over from designated chloroflurocarbons (CFCs) used in refrigeration and air condi-

tioning equipment to alternative CFCs.

- Recover refrigerants dispose from the equipment in the switch over.
- Lobby the administrative authorities and industry to develop a system for refrigerant collection, recycling and disposal.
- At the introduction, review uses of equipment that is ozone layer friendly and free from other environmental hazards.
- Promote recovery of refrigerant from home refrigerators and air conditioners marketed by coops.

f) Research and development on energy:

- In the effort to deal with environment management, volume of resources and energy consumed is to be assessed and reduced systematically.
- The key task in the plant, office or store is to reduce electricity consumption; promote the active use of balanced, controlled, and energy saving devices in lighting circuits and energy conservation systems.
- Research the use of solar batteries, fuel cells, and new energy alternatives, including their use by coop member families.

g) Environmental concern for delivery trucks:

- Use of low pollution vehicles such as the LGP vehicle will be actively promoted.
- Control carbon gas and other exhaust emissions through development of a rationalised delivery network, thus reducing distances logged and cutting back on engine idling.

(2) Tasks in Coop Member Activities

- Towards a civic organisation involving green consumers -

a) Voluntary and creative environmental activities in a wide range of areas

- Implement voluntary and creative environmental activities in a wide range of areas and rooted in living and the community.
- Promote changes in lifestyle among many coop members and

improvement of the environment in the local community in order to build a community based on environmental concern.

- Create diverse forms and opportunities for voluntary activities, including circles and groups.
- Provide a plan of diverse activities and tools related to reviewing lifestyles, study of the surrounding environment, research of products, and waste reduction and recycling.
- "Children's Eco Club" an environmental programme for children sponsored by the environment agency, is to be included in that plan for voluntary activities and organisation of such clubs and their activities are to be promoted.

b) Actions to promote environmentally conscious consumer behaviour:

- Promote wider use of environmentally friendly products and product learning activities by coop members.
- Widen the circle of environmentally conscious consumer behaviour into the community through collaboration and co-operation with private citizens, local governments, schools, local businesses etc.
- Promote participation in the "green purchase network" and build co-operation and collaboration with private citizens, administrative authorities, businesses etc. , on a national scale.

c) Action on the waste problem in the local community and care for water environment:

- Waste reduction campaigns and " green purchasing" is to be promoted actively to encourage a review of lifestyle and reduction of household wastes.
- Activities for store waste collection and expansion of the programme will be promoted in view of legislation of the Law for Promotion of the Sorted Collection and Recycling of Containers and Packaging.
- Obersint the nature, reduction in use of detergent, and water consumption will be promoted to control household wastewater.

d) Greater support for activities and manpower development.

- Support programme will be developed to encourage volunteer groups to implement their schemes systematically and constructively.
- These voluntary activities will be followed up and opportunities for information and interpersonal exchange will be offered in the drive to develop people networks.
- Each coop is to re-examine and establish policy on developing manpower for environmental activities, including people to lead and support voluntary activities.
- An appreciation of participatory and hands-on learning in environmental education and training will be fostered and utilised actively in each coop.

3) Tasks related society at large.

a) Recommendations to society and nation-wide activities

Opinions of coops will be presented as views and recommendations to society in regard to reformation of legal and other social systems for environment-oriented social development. At the same time, the coops will wage nation-wide activities in co-operation and co-ordination with the national government, private businesses, co-operatives etc.

- "Environment tax" aimed at assuring financial resources for environmental protection will be studied for coops to define and announce their opinions on the issue.
- Recommendations on collection of charges for waste disposal, deposit system, and other social systems aimed at waste reduction and coverage of the financial burden will be established.
- Environmental tasks will be studied from an international perspective, and concern will be promoted. In addition, exchanges and co-ordinated activities with Asia and other parts of the world will be fostered.
- Activities on environmental protection will be promoted to as many consumers as possible in Japan through exchange and co-operation with chain stores and other retailers.

- Cupertino and ties with agriculture, fisheries and forestry co-operatives will be strengthened.

b) Community building based on environmental protection

Action for community-building founded on environmental concern will be promoted through emphasising co-operation and co-ordination with local governments, businesses, and other organisations promoting environmental activities.

- Activities to strengthen and expand environmental policy of local governments, such as through legislation of basic environmental ordinances and environmental plans will be promoted.
- In response to the legislation of the Environmental Assessment Law, coops will play an active part in the community to promote effective application of the system based on civic participation and information disclosure.
- Community building founded on environmental protection will be promoted through co-ordination and co-operation with the greatest possible private citizens, businesses, local governments etc.

IV. Supportive Measures

As mentioned earlier, existing environmental movement of coops could be left behind by social standards amid rapid changes in the surroundings unless the movement changes its criteria.

In order to continue contributing to society in a way worthy of Japan's largest citizens' organisation in the future, it is necessary to take action on the tasks proposed in Chapter III as concerns for the second half of the 1990's. each coop must act on these tasks by analysing them further in view of the progress each of them has made and defining concrete action plans. JCCU energetically support such activities of coops and at the same time promote environment related publicity to a wider audience.

1) Formulating action oriented environmental policy.

In view of the tasks for the second half of the 1990's, each coop is to restructure its environmental policies (that comprised of environmental plan, medium range plan, and annual plan) vis-à-vis the

progress achieved, and develop its own concrete action plans.

2) Development of Organisational structure

An executive officer in charge of environmental tasks should be appointed, along with the employees in charge of practical activities on environmental tasks.

The employees in charge of environmental tasks should be organised not only to cover coop member activities, but products and business operations as well.

Looking at the organisational structure within each coop once again, restructuring should be conducted immediately if the practical system does not work.

3) Reinforcement of environmental education among employees

Reinforcement of environmental education has become a nation-wide task. In promoting environmental management, it is necessary to engage in systematic education on environmental tasks and to promote concern on a daily basis. In addition, it is important to provide opportunities to stimulate interest and incentives for environmental tasks among employees, as well as to provide chances to boost concern and self-enrichment. It is also necessary to create mechanisms that support assignment of employees who are in charge of environmental tasks in the work place, execution of environmental protection activities around the workplace, and environmental activities for employees in the local community.

4) Securing financial resources

It is necessary to secure the financial resources necessary for environmental activities while promoting greater power and soundness of coops business operations. The condition at each coop is to be reviewed to encourage aggressive environmental investment, such as establishment of numerical targets as a ratio of sales and creation of an environmental protection fund. Furthermore, JCCU will promote research into accounting standards for environmental investment and expenses.

5) Role of JCCU

JCCU plans to continue organising and holding environment-related committees based on the Board of Directors Regulations (Environment 21 Plan Promotion Committee) and work actively to encourage coops to define policy in the environmental task.

In addition, JCCU will support activities of member coops through information exchange and sharing, network development, joint projects, model projects, and various research activities. Alongside these roles, social activities will be addressed aggressively, in which JCCU will take the initiative in co-ordination and co-operating with administrative authorities, the industrial community, other civic organisations and international organisations.

05. Visions

Global summit on environment held in Rio set a new phase of consciousness on the critical stage of the human kind- alarming degradation of the earth climate and its effects in the future. The Summit has pledged to save the environment through conservation and use of resources in a sustainable manner, with consciousness on future generations.

The conservation itself has been defined in a new way, explaining it as *"the management of the human use of biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet its needs and aspirations of future generations". (International Union for the Conservation of Nature)*

The aspects of physical and genetic bio-diversity has also become a focus, in order to save the complex heritage of humankind spread in different climatic zones. The strategies and practices based on the different levels of environmental degradation are to be adopted keeping in view the Agenda 21 recommended cross-sectoral clusters for implementation:

- Critical elements of sustainability
- Financial resources and mechanisms
- Transfer of environmentally sound technologies, co-operation and capacity building.

A proper balance of production and consumption in the context of accelerated open market systems has demanded attention not only from the production forces, but also from the consumer groups. The responses came with pioneering efforts from consumer co-operatives such as Migros, Italian consumer co-operatives and Japanese consumer co-operatives. Although the consumption of ozone depleting substances in developing countries is less than one sixth of developed countries, the critical status of the earth remains the same, which, the producers and consumers have to deal with. Even after the ratification of Montreal Protocol by many countries the responses have been not that satisfactory.

Pioneering efforts explained in the case studies lead the consumers towards green consumerism in the future. Consumers are the key for stopping environment unfriendly acts on the part of producers in an open market system. Efforts are needed to spread these actions to consumer markets in developing countries, as they have become vulnerable to receive toxic consumer commodities produced by manufacturers in developed countries. It is in this context that the experiences of consumer co-operative in the developed countries are important learning experiences for co-operatives in developing countries. Sustainable consumption has to be achieved through awareness on the part of the average consumer.

Environmental education and awareness has been a heritage that has been passed from generation to generation of the human history. This process has incorporated cultural and religious traditions in order to make it deep in the communities, the traditions preserved by tribal communities and mountainous communities as in the case of Himalayan Range and American Indian groups are giving way to modern rational teachings. The vacuum created by the loss has to be filled by new form of learning traditions.

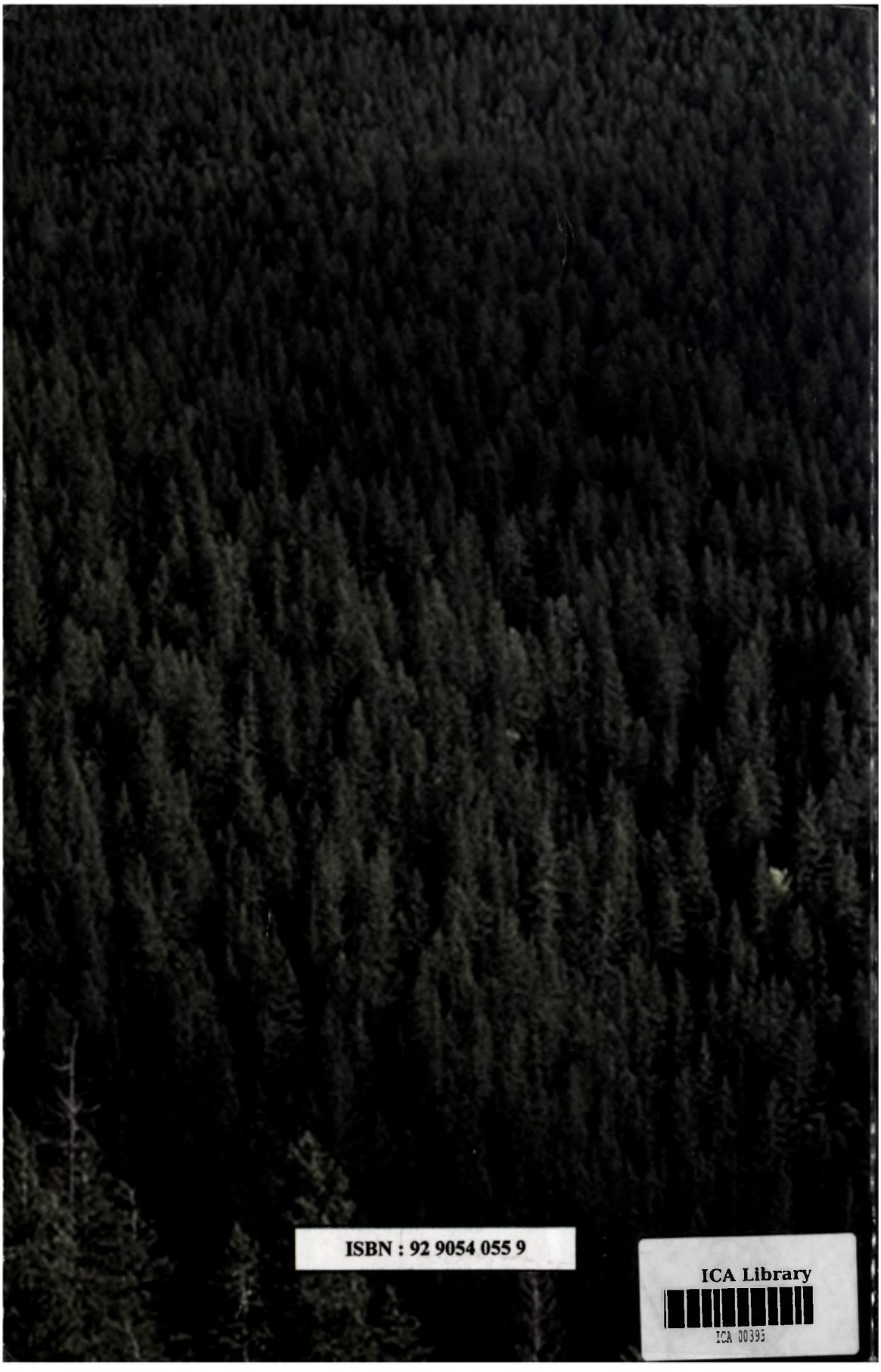
Consumer co-operatives have combined education with practices that have been integrated into business management systems. Therefore, these models create unique examples as how to respond to environmental conservation by practice.

The discussions at the Tokyo Symposium on Environmental Protection in Consumer Co-operatives has concluded with a firm belief in the daily practice of the ideals that have been pledged by every consumer who is a member of a consumer co-operative. The business practices based on environmental conservation should also lead to supply of healthy commodities at a fair price.

In order to adhere to the environmental practices, the consumer co-operatives should not only integrate ecologically friendly supply and delivery systems, but also set indices for daily practices in order to check the environmental impact in the operations.

Setting global indicators for CO^2 emissions and other aspects of consumer logistics and operations is another agenda for consumer co-operatives to cooperate. The process has to go a long way with

sharing information, practical experiences and collaboration with each consumer co-operative movement across the boundaries. Technical and management co-operation is an underlying factor that would lead to such an achievement.



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