

Government Communication 1997/98:13

Ecological sustainability

The Government submits this Communication to Parliament.

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(This translation covers the first two chapters of the Government Communication.)

Summary of the Communication

In this communication, the Government presents a situation report on the efforts being made to achieve ecological sustainability in Sweden.

Sweden should be a driving force and a model for ecological sustainability. It must therefore adopt an integrated approach to development that combines consideration of the ecological facts with the need of sound economic, social and cultural development. The general objectives of ecological sustainability are: protection of the environment and human health, efficient use of the earth's resources and an assured, sustainable supply. Achieving ecological sustainability in Sweden will require long-term efforts in all policy areas. Great importance is attached to measures that have positive effects on industry and employment. An energy policy bill has already been passed by Parliament. This year's Budget Bill presented an extensive programme of local investment. During the autumn of 1997 and the spring of 1998, bills will be presented, inter alia, on agriculture, a new transport policy and on the environment, including new environmental objectives for the 21st century.

Background

In the Statement of Government Policy of September 17, 1996, the Prime Minister emphasized that "Sweden should be a driving force and a model for ecological sustainability". In January, 1997, the Government presented a Communication to Parliament entitled "Towards an Ecologically Sustainable Society" (skr. 1996/97:50, report 1996/97:JoU11, rskr. 1996/97:187). It described the ongoing work of developing strategies for ecological sustainability in various sectors.

On January 21, 1997 the Government decided to appoint a delegation for ecologically sustainable development consisting of the following ministers: Anna Lindh, chair person, Ylva Johansson, Ulrika Messing, Annika Åhnberg and Thomas Östros. In its Spring Economic Bill (1996/97:150) the Government presented a proposal, based on the the proposals submitted by the delegation, for an investment programme for ecologically sustainable development and a common platform for future action. Parliament approved the main objectives of the local investment programmes and allocated 5.4 billion kronor for the period 1998-2000. On June 18, 1997 the delegation submitted a proposal on detailed arrangements for support for local investment programmes. The 1997 Budget Bill (Gov. Bill 1997/98:1) proposed an appropriation for 1998.

In June, 1997 Parliament adopted new energy policy guidelines (Gov. Bill 1996/97:84, report 1996/97:NU12, rskr.1996/97:272). According to these guidelines, the object of energy policy is to create conditions for efficient energy use and a cost-effective energy supply and to facilitate the changeover to an ecologically sustainable society while minimizing the impact on health, the environment and the climate.

In the Communication "Towards an Ecologically Sustainable Society" and its Spring Economic Bill for 1998 the Government announced its intention to present further measures in the Budget Bill that are designed to facilitate the achievement of ecological sustainability in Sweden.

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A policy for ecologically sustainable development

Introduction

Sustainable development means ensuring that humanity "meets the needs of the present without compromising the ability of future generations to meet their own needs". That is how the World Commission on Environment and Development defined the requirements of development in the future. As demonstrated by the major UN conferences, these requirements are linked to population growth and social, cultural and economic development worldwide.

The environment is exposed on a global scale to increasing pressures. Very rapid economic growth is taking place in some parts of the world, for example East Asia. At the same time, the poor countries, for example in Africa, are becoming ever poorer. The world's population continues to increase, although at a slower rate than before. Conflicts relating to freshwater resources, mass migration from environmental problems, climate change and depletion of the ozone layer are new global threats to security, and their solution depends on continued international cooperation. Far-reaching measures are necessary to address the global environmental and development problems.

The rich world has a special responsibility. Scarcely one-fifth of the world's population accounts for most of the pressure on the environment and consumption of the earth's natural resources. We must use these resources more efficiently if they are to suffice for everybody.

Sustainable development takes into account mankind's aggregate needs and therefore contains all the dimensions that are important to our lives. The Rio Declaration emphasizes an integrated approach and the necessary interaction between *social*, *cultural*, *economic* and *ecological* sustainability. This includes, for example, adequate health and care services, a good standard of public health, education, employment and worthwhile leisure time, as well as a sound economy, growth, industrial development, regional balance and good communications.

The Government sees sustainable development as a challenge. Sweden has ample resources in terms of its natural assets, cultural environment, good educational standards and industrial, commercial and research capacity, and its stable tradition of national democracy and local self-government. These assets should be sufficient to assure continued prosperity with sustainable utilization of natural resources and low environmental impact. Consequently, we should be in a position to leave our country to our children and grandchildren in a better state than it was when we inherited it. By doing so we would also set an example to others and could thus influence global development.

There are some similarities here with another great social change. Building the Swedish welfare state was a major, long-term political project born of unemployment, wretched social conditions and demands for justice; starting as a local response to this state of affairs, it was adopted as national policy with the support of new economic theories and experience. The result can be measured in terms of present-day life expectancy, housing standards, educational standards and provision of care for the elderly and other welfare services.

A single long-term programme of action is not enough to achieve a changeover to sustainable development in the course of one or two generations. But the general direction can be established and an assessment made of the scope of the necessary measures. Once this is done and the ambition to set an example is declared, the first steps can be taken. In the Government's view, priority should be given in this connection to integration of this objective with the struggle against acute unemployment. The long-term, broad-based local investment programmes for ecological modernization of fixed assets proposed by the Government in its Spring Economic Bill (1996/97:150) are an important aspect of this effort. Available resources in the form of skilled labour in the construction sector and large-scale public expenditure would thus be used to build the future while protecting existing assets. In the light of the acute situation in the labour market, every effort must be made to ensure that the investment programmes are launched without delay.

The economy is becoming increasingly global. World trade is increasing much faster than the gross domestic product in most countries. Raw materials and products are often sold on a global market. Sweden's economy is closely linked to the economies of the other EU Member States, which in turn are increasingly linked to the economies of the rest of the world. Pollution knows no boundaries. We in Sweden are affected, in particular, by emissions in northern Europe. Therefore, enlargement of the EU to include eastern Europe is of vital importance to Sweden's environment. These are all reasons

for Sweden to be among the pioneers of ecologically sustainable development. But we must first set an example at the national level to provide us with arguments when we seek to convince others, and we must learn from the experiences of others in areas where they have made greater progress.

International competitiveness is crucial to the economy, employment and prosperity. Swedish industry can enhance its competitiveness with a "green business profile". Establishing the principle of ecological sustainability in all areas of Swedish society would increase the credibility of such a profile at the same time as the changeover in itself would provide the stable domestic market that is needed to make new industrial ideas commercially viable. Thus, this changeover could initiate a long period of growth and stable employment. A thoroughgoing systematic shift could also help to create jobs in many different sectors and thus to improve the prospects of growth even in vulnerable regions.

Everyone is welcome to do their share. The Government will initiate a broad dialogue on ecologically sustainable development. This report is a step along this path, and it will be followed by a number of proposals in 1997/98.

Three initial objectives for ecologically sustainable development

In a world whose population is constantly growing, sustainable development is only possible if we increase our ecological efficiency.

This is made clear in the Government's objectives for sustainable development. In its Spring Economic Bill the Government stated that ecologically sustainable development is basically a question of environmental protection, a sustainable supply and efficient use of the earth's resources. The following general objectives in these three areas were formulated.

Environmental protection: emissions of pollutants must not harm human health or exceed nature's capacity for absorbing or breaking them down. Natural substances must be used in such a way as to ensure that ecocycles are maintained. The presence in the environment of man-made substances that are harmful to health and the environment should not be permitted in the long run. Biological diversity must be preserved and valuable cultural environments protected.

Efficient resource utilization: energy and other natural resources must be much more efficiently used than is the case today. This would make it possible to limit flows of energy and materials so as to be consistent with sustainable development. Community planning, advances in technology and investments should therefore concentrate on resource-efficient products and processes.

Sustainable supply: the long-term productive capacity of ecosystems must be assured. As far as possible, essential needs must be met by the sustainable use of renewable resources. This means that their use must not exceed the rate at which nature creates new resources and that materials must be recycled. We must be economical with non-renewable resources and constantly seek renewable substitutes.

Implications of the environmental protection objective

Thanks to our knowledge of the environmental characteristics of various substances and our experience of decades of environmental work we can formulate long-term environmental objectives quite accurately. We should strive to achieve the following scenario.

Stabilization of the concentration of greenhouse gases in *the atmosphere* at a level that will eliminate the risk of climatic disturbances. The ozone layer is sufficiently thick to protect human health and ecosystems from dangerous ultraviolet radiation from the sun.

The *quality of air* is such as not to involve any risks to human health. Emissions into the atmosphere do not harm the environment, for example by acidifying the soil and water or diffusing toxic substances.

Natural species can continue to reproduce in *marine and aquatic environments*. Fish can be eaten without risk to health.

The long-term productive capacity of *the soil* is maintained. It is not damaged by pollutants or degraded by overexploitation.

Groundwater is clean enough to be used as a drinking water resource.

Biological diversity has been maintained through the survival of natural species in viable - sufficient - numbers.

The *natural landscape* and the *farm landscape* represent an important part of our cultural heritage. They promote biological diversity and are a source of beauty and recreation at the same time as they strengthen our cultural identity. We can produce enough food and other necessities. Our built-up environment provides security, well-being and social cohesion. The changeover to ecological sustainability and the efficient use of resources also involves preserving and promoting the cultural values and architectural qualities of human settlements.

The environmental objectives will be dealt with in further detail in the environmental policy bill to be presented by the Government in the spring of 1998.

Implications of the objective of efficient resource utilization

The second objective involves making better use of natural resources. Energy is a key area. Now that the Energy Policy Bill has been passed, the work on more efficient use of energy has entered a new phase. The challenge is to reduce the need of energy and materials several times over. We will only be able to live sustainably in a global perspective if we learn to use energy much more efficiently. The use of metals should be geared to ecocycles that ensure the least possible loss.

A concept that is becoming increasingly common in the international debate is *Factor 10*, which means that we must use resources, not only fossil fuels but energy and materials, on average ten times more efficiently within the next generation or two. In the view of many scientists, industrialists and politicians this is essential if we are to be able to face the growing population and reduce pollution without lowering living standards. Factor 10 - or factor 4 in a shorter perspective - indicates the degree to which we must increase efficiency rather than representing an exact target. Factor 10 thinking can provide a compass and encourage the necessary reappraisal.

The formulation of clear and functional goals for more efficient utilization of resources, while protecting existing assets, must now be intensified. The Government will therefore initiate an open dialogue with industry and the scientific community.

Implications of sustainable supply

Basically, the third objective, a sustainable supply, involves converting our energy supply system and assuring a high quality food supply. Our energy systems must be based on sustainable, preferably domestically available and renewable, resources. The Energy Policy Resolution provides for an extensive programme for renewable sources of energy. The supplies of other natural resources such as water, materials, nutrients, etc. must also be sustainable. Insofar as this is consistent with an overall efficient utilization of resources, our supply needs must be met by recycling. The percentage of renewable raw materials and energy must therefore be increased.

Analysis and indicators for ecologically sustainable development

An ecologically sustainable society will only be possible if environmental requirements and resource efficiency are integrated into all societal processes. The various sectors and players must therefore assume greater responsibility. Appropriate development can, moreover, only be achieved by collaboration between the various players, i.e. industry, public authorities, local government and organizations.

To provide supporting data in the process of achieving the objectives of ecologically sustainable development in various sectors, long-term studies with various aims and perspectives will be necessary. Authorities and research institutions must recognize the higher level of ambition implicit in the objectives for ecologically sustainable development and meet these needs. All over the world,

development is under way and interesting studies are being made that are worth following and participating in.

Several significant sectoral analyses have been carried out in Sweden. Examples of these are 2021, a major futures study performed by the Swedish Environmental Protection Agency, and its work on an ecologically sustainable transport system. The Government intends to continue this work in a dialogue with representatives of various sectors, including public authorities, industry, local government and organizations.

The main purpose is to strengthen Sweden's international competitiveness in future markets where demand will be geared to the requirements of ecological sustainability. For example, the Asian Development Bank estimates that the need of investment for environmental improvements in Asia will rise from over 300 billion kronor in 1995 to almost 2000 billion kronor in 2025. Industrial development occupies a central position in these studies. Areas of special interest are the role of ecological factors in the major industrial sectors, the conversion of the energy sector and the effects on the labour market and employment. The Government will initiate an analysis of the measures that need to be taken to strengthen Sweden's competitiveness when it comes to services and products designed for greater ecological sustainability.

Statistics must also be adapted for the purposes of such analyses. Statistics are often designed for other purposes, and categories and variables that would be interesting from the point of view of ecological sustainability are not always included. This applies, in particular, to economic statistics, labour market statistics, regional statistics and prosperity statistics. The presentation of statistics should make it possible, for example, to take into account the environmental impact of factors such as emissions, waste and the use of materials in economic analyses.

In addition, indicators for ecologically sustainable development should be prepared as source data for the benefit of various players and for continuous monitoring and evaluation. The Spring Economic Bill announced that the Environmental Advisory Council would prepare proposals in this respect. The proposed indicators will be presented in the 1998 Environment Bill.

Guidelines for future work

Introduction

In our efforts to achieve ecologically sustainable development we can draw on the experience of the last 25 years. During this time emissions of pollutants have been reduced; several of the most dangerous chemicals have been banned or are being phased out. Lakes have recovered and endangered natural areas and animal populations have been saved. We have made great efforts to save energy and natural resources. Sweden's input in international cooperation has increased. Much still remains to be done, however, and new problems have appeared. Therefore, the pace must now be quickened.

The guidelines for the Government's future work are outlined below. Major long-term changes will be proposed in separate Government bills, for example those relating to the transport system and agriculture.

Central government must lead the way

The Government has repeatedly stated that the State must set a good example as regards ecologically sustainable development. It will basically be the responsibility of the various ministries and government agencies to integrate the goal of leading the way to ecological sustainability into decisions relating to various sectors. The ongoing establishment of environmental management systems in central government should be further developed.

Earlier this year a pilot project was launched to introduce environmental management systems in 25 selected government agencies. This means that the agencies' administration of matters relating to the environment, energy and resource management will be integrated and systematized in day-to-day activities. In particular, products, systems and services that are designed to meet environmental and resource management needs will be in demand in connection with public procurement. The experience gained so far has laid a good foundation for progress in developing environmental management systems in central government administration.

These measures will also be expanded in several stages. The Government has launched a systematic review of the budget in order to identify the items that are most important for ecologically sustainable development.

In the spring of 1998, the project will be expanded to include a larger number of government agencies.

Government-owned enterprises must also integrate environmental and resource management aspects into their activities and contribute actively to ecologically sustainable development.

The following are important features of this work:

* Further development of environmental management systems in government agencies. Appropriate environmental management systems will be introduced in the Government Office in the autumn of 1997. In the spring of 1998, the pilot project involving 25 selected government agencies will be extended to include several new agencies.

* Amendment of the Government Agencies and Institutes Ordinance (1995:1322) so as to include provisions laying down the requirement to take ecologically sustainable development into account. The need for such an amendment was announced in the Spring Economic Bill.

Public procurement

The public sector annually purchases goods and services worth about 280 billion kronor, of which central government accounts for about 100 billion kronor. The large volume of public procurement can be used as an effective instrument for influencing the market so that products are more rapidly adapted to the needs of ecological sustainability. This instrument should be used even more actively.

As far as possible, goods and services that promote the achievement of ecologically sustainable development should be given priority in connection with procurement. For example, goods and services that generate low emission levels and do not contain, or only contain minimal amounts of, substances that should be avoided for environmental and health reasons ensure greater efficiency in the use of energy and materials and favour renewable sources of raw materials and energy. Central government procurement should set an example. Knowledge and experience of ecologically sustainable procurement should be collected and disseminated so as to promote appropriate development in society as a whole.

The following are important features of this work:

* Preparation of supporting data for a Swedish position in the EU on behalf of ecologically sustainable public procurement. The position should be based on the basic environmental requirements that Sweden wishes to introduce for all procurement and on making it possible to establish environmental requirements within the framework of existing Community rules (procurement directives, etc.). Where necessary, amendments should also be proposed regarding Community procurement rules. The purpose of these proposals should be to make the rules more transparent and conducive to ecologically sustainable development. The Public Procurement Board should be instructed to prepare a proposal together with the Swedish Environmental Protection Agency and the National Chemicals Inspectorate.

* Appointment of a delegation to act as a catalyst for ecologically sustainable public procurement of goods and services. The delegation should prepare and develop specific guidelines for environmental requirements in all public procurement in various sectors. In particular, the delegation should prioritize areas where procurement has an impact on ecologically sustainable development. An example of such a requirement might be the condition, in connection with the procurement of construction services that a certain percentage of the materials should consist of reused materials. Another task of the delegation will be to disseminate information, experience and good examples, for example in connection with the work of the agencies involved in the pilot project, the county councils' database on procurement criteria and the environmental requirements laid down by some municipalities in connection with procurement. The delegation should also follow developments in other countries, both in and outside the EU.

Building increased sustainability

The struggle against unemployment will dominate domestic policy in the next few years. The Government's objective is to halve open unemployment by the year 2000, and to reduce it still further thereafter. As a result of unemployment, substantial personal and economic resources are wasted. Making forward-looking investments which simultaneously reduce unemployment and increase society's ecological sustainability will benefit the economy. The Government intends to launch a broad programme of investment in order to stimulate the modernization of buildings, infrastructure and energy systems. The main features of the programme were outlined in the Spring Economic Bill. Expenditure on the programme will amount to 12.5 billion kronor over a three-year period. In addition, further support will be given to the agri-environmental programme and other environmental measures. The Government presented more detailed plans for such measures in the Budget Bill.

The investments in the modernization of buildings and infrastructure will increase the demand for materials, components and equipment which in many cases are the same as those demanded in connection with public procurement. From the point of view of stimulating technical and industrial development, the possibility of harmonizing models and methods of formulating standards of ecological sustainability and analysing the results should therefore be examined. This would help enterprises to assess the markets for processes, products and systems without compromising the objective of investing at the local level. The Government therefore intends to take the necessary measures to initiate development work in the construction sector, which can be coordinated with the work of the delegation mentioned in the introduction to this Communication.

The following are important features of this work:

* In the next three years 5.4 billion kronor will be allocated to *local investment programmes*. The purpose of the local investment programmes for sustainable development is to facilitate the implementation of measures that will improve ecological efficiency at the local and regional levels. Funds will be granted to applicants for projects that help to achieve the objectives of ecological sustainability while at the same time providing providing jobs.

* The Spring Economic Bill also outlined *national investment* measures. It announced a programme for increased investment in infrastructure projects that will create new jobs. The programme was also discussed in the Budget Bill. Investments in the energy sector are dealt with below in section "International cooperation" below.

The environment

The proposed Environmental Code will strengthen environmental policy by providing new instruments, including environment quality standards and greater scope for taking legal action against environmental offences.

New and more transparent environmental objectives are needed to support and promote efforts to achieve sustainable development. These objectives must also be broken down into smaller components; they must focus on and meet the needs of players in various sectors.

Persistent, bioaccumulable substances must be phased out. Hazardous chemicals should be replaced by less dangerous products or processes (the substitution principle), a feature of Swedish chemicals policy that is increasingly gaining international recognition.

The ecocycling process must continue. Producer responsibility must be developed. One important aim of the producer responsibility system is to provide incentives for enterprises to produce new products that are ecologically sustainable. Products should be developed in such a way as to be risk-free, material- and energy-efficient, recyclable and reusable from the start.

The residues that are nevertheless produced, despite the greater ecological efficiency of products and processes, must be recycled as far as possible. The dumping of organic waste will not be permitted in the future. Nutrients in wastewater and waste should be restored to the ecocycle as fertilizer on farm land.

The following are important features of this work:

- * Proposals for new, revised environmental objectives for the 21st century in the 1998 Environment Bill and proposals for the continued process of breaking them down into sectoral and regional/local objectives. The cost-effectiveness of various alternatives must be analysed. The proposals will be based on the Swedish Environmental Protection Agency's report on new, improved environmental objectives that was recently presented to the Government, the work of the Ecocycle Commission and the Chemicals Committee's proposals, together with the comments submitted on these proposals. The drafting of environmental objectives for various sectors will continue.
- * Presentation of a draft Environmental Code in the autumn of 1997. The provisions of the Code will enhance integration of the different areas of environment policy and strengthen fiscal incentives.
- * Elaboration of a sustainable policy on chemicals. A coherent chemicals policy, based on the Chemicals Committee's report that was submitted in June this year, will be presented in the 1998 Environment Bill.
- * Developing producer responsibility for products. The Government has recently presented a bill on the treatment of end-of-life products in a sustainable society. The Environment Bill will deal with the implementation of the ecocycling process on the basis, inter alia, of the reports published by the Ecocycle Commission.

Energy

A changeover to sustainable energy systems would provide a unique opportunity to establish ecological sustainability in Sweden as a whole.

Energy policy must facilitate the efficient use of energy and a cost-effective supply of energy that makes a minimal impact on health, the environment and the climate while promoting the changeover to ecological sustainability.

Sweden's electricity supply must be assured by energy systems based on domestically available and renewable resources and efficient utilization of energy. The use of fossil fuels should be minimized.

The following are important features of this work:

- * The two nuclear power plants in Barsebäck will be decommissioned. Measures will be taken in the next few years to compensate for the shortfall in electricity by more efficient use of energy, conversion, economical utilization and supplies of electricity from other sources. This is explained in greater detail in the Budget Bill.
- * A new energy programme will be established at a cost of 9 billion kronor over a seven-year period. The programme represents a substantial, long-term investment in research, development and demonstration of new energy technologies. The object is, within the next 10-15 years, to substantially increase the production of electricity and heat from renewable sources and to develop commercially viable technology that will ensure more efficient utilization of energy. The programme is presented in the Budget Bill.
- * The use of fossil fuels should be minimized. The existing pipeline system for natural gas, which is the soundest fossil fuel, should be utilized more efficiently.

International cooperation

The great challenge in international cooperation today is to translate international commitments into specific measures. Particularly important in this context are the UN General Assembly Special Session (UNGASS), which monitored and evaluated the implementation of Agenda 21, and the commitments made in consequence of the Rio Declaration. The UN Habitat Conference added a social dimension to Agenda 21 through the Habitat Declaration. Sustainable development must make greater impact in all international institutions, including UN funds, programmes and specialized agencies, the multilateral development banks and the World Trade Organization (WTO). The results of UNGASS must also be processed and embodied in national measures.

In Europe, the success of the Inter-Governmental Conference (IGC) should be followed up by efforts to ensure that sustainable development becomes a feature of the work of the EU as a whole. Industrialism was born in Europe, and Europe can set an example to the rest of the world by introducing industrial production without hazardous emissions. The Government will therefore continue to use its influence to promote an EU environmental policy that is designed to solve Europe's transboundary problems, e.g. acidification. Sweden should urge the EU to prepare a common strategy for cleaner products that do not incorporate dangerous chemicals and to promote more efficient energy utilization and support the development of renewable sources of energy. But the aim should also be - in line with the Government's policy in Sweden - to ensure that ecologically sustainable development is integrated into EU policies in all areas. The Government should propose that the Fifth Community Environmental Action Programme be followed up by a programme for an ecologically sustainable Europe, with the focus on ways and means of achieving ecologically sustainable development. Such a programme should take account of the effects on employment. Existing EU aids and rules should be analysed on this basis. Factor 4 and Factor 10 should be analysed in the programme.

The enlargement of the EU provides an incentive for environmental renewal in Central and Eastern Europe. The countries bordering the Baltic Sea have a great deal in common and the work on a regional Agenda 21 for the Baltic Sea is crucial to ecologically sustainable development in our neighbouring region.

Sweden will assume the presidency of the Nordic Council and the Nordic Council of Ministers in 1998, and the Government intends to use this opportunity to make ecologically sustainable development a key feature of Nordic cooperation.

The following are important features of this work:

- * Initiatives in the EU for an ecologically sustainable Europe.
- * Highlighting ecological sustainability in analyses and reports.
- * Continuing promotion of environmental requirements and sustainable development in bilateral, multilateral and EU development cooperation, with special emphasis on the poverty aspects.
- * UNGASS follow-up.
- * Continuing active input within the framework of global conventions on sustainable development.
- * Advocating adequate replenishment of the Global Environmental Fund (GEF).
- * Working for increased regional cooperation on environment.
- * Advocating the integration of environmental and sustainable development aspects in the WTO, in particular in future negotiations on the liberalization of trade.
- * Supporting, for example through development cooperation, the production and export of environmentally sound products by developing countries.
- * Informing other countries of Sweden's efforts on behalf of ecologically sustainable development.
- * Incorporation of ecologically sustainable development into the Foreign Ministry's operational planning and enhancement of the personnel's competence in this field.

Industry

The efforts to achieve ecologically sustainable development will create new opportunities in industry. Environmental policy already exerts pressure to bring about changes in Swedish industry, while also providing an incentive for new production processes, new products and new markets. To achieve ecologically sustainable development it will be necessary to reduce emissions and use energy and resources more efficiently.

Emissions from industrial processes and techniques must be reduced to safe levels. More research must be done and more support given to the development of ecologically sustainable processes and products and resource efficiency. Swedish exports of environmental technology should increase.

The following are important features of this work:

- * Examination, in an open dialogue with Swedish industry, of ways and means of making the utilization of energy and materials more efficient over the next 25 years. The starting-points should be Factor 4 and Factor 10, the work that remains to be done to achieve safe levels of emissions of various substances and the environmental objectives for the 21st century proposed by the Swedish Environmental Protection Agency. Ways of expediting the process will be identified in a dialogue with representatives of industry.
- * Appointment of a commission to examine the opportunities for and obstacles to increased exports of ecologically sound technology and products.
- * Study of the progress made by industry in other countries towards ecologically sustainable solutions and continuous monitoring of developments.
- * Efforts to integrate industrial, trade and environmental policy.
- * Support for the establishment and viability of networks that collaborate with enterprises, both at the local level and in connection with exports; measures to ensure that experience of ecologically sustainable development is available, for example in Industrial Development Centres.
- * Continuing preparation of an Agenda 21 for sustainable development in the industrial sector within the framework of the Baltic 21 project.
- * Action on proposals by the delegation for promotion of ecologically sound technology.
- * Continued encouragement for the establishment of environmental management systems by small and medium-sized enterprises.

Education and research

Education and knowledge are crucial to the promotion of ecologically sustainable development and improvement of our ability to solve environmental and development problems. It is therefore important to create capacity for education and research on the environment, lifestyles and development issues.

The following are important features of this work:

- * The introduction of "ecolabels" for schools with a view to ensuring that the vast majority of schools in Sweden have an environmental profile.
- * Strengthening the teaching of environmental subjects in upper secondary schools, for example by a new technical programme and a more flexible subject structure.
- * Promoting skills enhancement for teachers of environmental subjects, natural sciences and technology.
- * Continuing the ongoing reform involving integration of teaching in pre-schools and schools, including a review of curricula and the development of a new policy document for pre-schools. Sustainable development issues should be a natural component of this work.
- * Preparing the introduction of environmental management systems at universities and colleges in 1998.
- * Inclusion of the environment, the work environment and resource issues in study programmes at universities and colleges, taking into account the profession for which the studies are a preparation.

The labour market and employment

The Government intends to design a labour market policy that combines environmental and employment objectives and at the same time speeds up the changeover to ecologically sustainable development.

Various government programmes, e.g. the Baltic Sea Billion, the Ecocycle Billion and the Small Business Billion, together with the local investment programmes, represent a step towards ecologically sustainable development, of which environment and employment aspects will be integral parts.

Environment-oriented programmes integrated into labour market programmes are now being implemented, in particular within the framework of youth work experience schemes.

Environment-oriented measures are also being implemented to some extent in connection with public relief work, e.g. in forest and nature conservation. There is still great potential in these areas. Labour market programmes can include practical environmental work for certain groups, for example unemployed young people.

The changeover to ecological sustainability in Sweden must be based on an integrated approach to development. Secure and stimulating job opportunities in a labour market characterized by good work organization based on employee participation, skills enhancement and a minimal risk of injury is crucial to such a development.

The following are important features of this work:

- * Designing labour market measures to ensure that they are consistent with the objectives of ecological sustainability. For example, the National Labour Market Administration has been instructed, together with the Swedish Environmental Protection Agency, to submit proposals on a long-term strategy for the contribution of labour market activities to an ecologically sustainable society.
- * Developing the possibility of more innovative and forward-looking environmental programmes within the framework of the EU structural funds. Several projects under Objectives 3 and 4 include environmental features.
- * Emphasizing the need of measures that will create secure and stimulating job opportunities as part of the integrated approach to development.
- * Following up the "green job programmes". The Government intends to follow up both government and other green job programmes. An evaluation will be presented in 1997.

Communications

The transport sector's contribution to ecological sustainability should be strengthened in several ways. The ecological efficiency of vehicles, both for road transport and sea and air transport, should be increased. Investments in infrastructure should focus on environmental requirements and safety. The advantages on information technology should be utilized and developed. Transport policy should be designed and implemented so as to minimize energy consumption, exhaust gases, noise, interference with natural and cultural environments and safety risks. A transport policy bill will be presented in the spring of 1998.

Long-term objectives will be formulated in order to point the way towards sustainable transport systems. Step-by-step goals will guide development in the right direction and at an appropriate speed. These goals should be monitored on a continuous basis.

The following are important features of this work:

- * Facilitating the development of sustainable transport systems.
- * Developing environmental objectives for the transport sector.
- * Investment in transport infrastructure with a view to minimizing noise, interference with natural and cultural environments and safety risks. In addition, 8.5 billion kronor will be allocated during a ten-year period for measures relating to environment and safety. The national investment programme will include extension of the Bothnia Line between Nyland and Umeå.
- * Pursuing issues relating to emission standards and cleaner fuels for motor vehicles in the EU.
- * Measures to increase fuel efficiency as a means of reducing carbon dioxide emissions.
- * Pursuing environmental issues relating to road, rail, sea and air transport in international fora. For example, Sweden should, in the EU and the International Maritime Organisation (IMO), press for a reduction of the sulphur content of bunker fuel and measures to reduce emissions of nitrogen oxides in the Baltic Sea region.
- * Establishing more stringent environmental standards for new aircraft models and increased scope for economic environmental control.
- * Further differentiation of landing fees in civil aviation with reference to noise and atmospheric emissions.
- * Measures to reduce noise in housing near airports.

- * Differentiation of sea transport charges in order to reduce emissions from shipping.
- * Encouraging measures that will increase the availability of public transport, e.g. for the disabled. An appropriation of 1.5 billion kronor is planned over five years.
- * Promoting the development and use of information technology and transport informatics.

Community planning

Community planning requires prudent implementation. Sensitive and important natural environments and ecosystems, and valuable cultural environments, must be protected. The use of land for buildings, installations and traffic routes etc. must take account of the need of environmental and resource management and cultural values. Spatial planning must be characterized by an integrated approach. This will help to preserve the fundamental conditions for production and prosperity for future generations.

A large percentage of housing is now approaching the stage when extensive renovation will be necessary. It is important that these measures should have an ecological focus and be carried out in such a way as to safeguard the architectural and historical values of buildings. Housing is crucial to our way of utilizing natural resources. For example, a substantial percentage of energy consumption is used to heat and maintain buildings. Various emissions must be reduced. Waste management must be made more efficient and the reuse of building materials must increase.

The following are important features of this work:

- * Commitment to an integrated approach to community planning, e.g. by improving coordination, housing democracy and women's rights and opportunities.
- * Supporting improvements in the indoor environment, ecocycling in construction and environmental health profiles for housing. The National Board of Housing, Building and Planning has a broad mandate on these issues.
- * Establishing fundamental environmental requirements and requirements for efficient resource utilization in connection with the construction of new buildings and conversions of existing buildings on the basis of the proposals to be submitted by the Building Quality Commission. The Commission is to present its proposals to the Government in December, 1997.
- * Promoting systems for environmental health assessments of building materials, construction and buildings, that can be used as source data for descriptions of the building's consequences for ecological sustainability and in connection with Government measures in the construction sector.
- * Focusing on ecocycling in construction within the framework of a new organization for national planning, construction and housing administration.
- * Proposing new legislation on water supply and sewerage systems.
- * Drafting regional programmes for ecologically sustainable development in certain regions, e.g. mountains and archipelagoes.
- * Ensuring the efficient production of geographical source data as an element in ensuring the availability of official information.

Economy and finance

Economic policy is crucial to ecologically sustainable development. Economic instruments are often the most cost-effective way of inducing households and enterprises to take account of ecological sustainability in their behaviour. Sweden has pioneered the use of economic instruments. The Government considers that such instruments are an important element of the work on behalf of ecologically sustainable development and that the use of the tax system to control environmental development should be gradually increased. In the Spring Economic Bill the Government stated that, in connection with proposed changes in the tax system, account will be taken of the role of taxes in contributing to ecologically sustainable development and their effect on the competitiveness of Swedish enterprises.

The following are important features of this work:

- * Gradually increasing the use of the tax system to induce environmentally sound behaviour. Areas now being analysed are road and energy taxes. A waste tax is planned for 1998.
- * Efforts to eliminate or change the structure of aids and other support systems that are not consistent with ecologically sustainable development.
- * A systematic review of the central government budget for the purpose of strengthening its ecologically sustainable profile. The review will be part of the development of environmental management systems in government agencies.
- * Continued development and use of environmental accounts, inter alia, in the 1999 report of the Long-Term Planning Commission. The work of the National Institute of Economic Research on developing environmental accounts provides the basic framework.
- * Consideration of environmental aspects in connection with investments in the National Pension Insurance Fund and the pre-funded national pension system, taking into account the need to assure a good rate of return for the participants. This issue should be considered in the review of the provisions on investment. A proposal will be presented in the autumn of 1997.

Agriculture, forestry and fisheries

Ecologically sustainable agriculture is resource-efficient, ecologically sound and ethically acceptable. The long-term productive capacity of agricultural land must be safeguarded and the fundamental ecological processes maintained. The use of inputs and the choice of production methods must not have an adverse impact on the environment. Fisheries must be operated in a sustainable manner to preserve the stocks of fish, which are a cheap and nutritional food for future generations. A Government Bill on Sustainable Fisheries and Agriculture (Gov. Bill 1997/98:2) will be presented in September, 1997.

Preservation of biological diversity must be an essential element of agriculture, forestry and fisheries.

The following are important features of this work:

- * Urging a redefinition of the EU's Common Agricultural Policy on sounder environmental principles.
- * Expanding the environmental compensation programme for agriculture. The appropriation for this programme will be increased to 700 million kronor per year. The programme will be described in greater detail in the Bill on Sustainable Fisheries and Agriculture.
- * Preparation of a programme of action for the use of pesticides in 1997-2001.
- * Promotion of ecological production.
- * Allocation of funds for research and development projects designed to reduce the leakage of nutrients and the risk of using pesticides and to promote ecological production. The funds will be allocated in the 1998 Budget Bill.
- * Developing the action plan for preservation of biological diversity in agriculture and reindeer husbandry.
- * Implementation of an education campaign for forest owners in addition to the measures proposed in the Budget Bill. The campaign, which is mainly directed at small forest owners, is designed to emphasize the landscape preservation aspect of forestry.
- * Implementation of an action plan for biological diversity in fisheries. The National Board of Fisheries has prepared an action plan on behalf of the Government.
- * Strengthening fisheries management.
- * More investment will be made in improved fisheries management, in particular in coastal areas and the largest lakes.
- * Following up the action plan for Baltic Sea salmon.
- * Developing North Sea cooperation on fisheries.

Consumer policy

Consumer policy is very important to ecologically sustainable development. The purpose of this work should be to reduce emissions from households, energy consumption and waste. Products, transport, housing and community planning are all affected. A programme of action specifying the environmental objectives of consumer policy will be presented later.

The following are important features of this work:

- * Increasing the level of knowledge concerning consumption and the environment, e.g. by improving consumers' access to relevant information.
- * Promoting continued presentation of information on the environmental impact of and energy requirements associated with products, etc.
- * Support for the development of new consumer behaviour patterns.

Cultural policy

An ecologically sustainable society must be based on prudent management of historical investments and of our common cultural heritage. People's individual scope for ecologically sustainable behaviour in their daily lives is crucial to the success of the changeover to such a society.

The following are important features of this work:

- * Developing and strengthening the cultural environment sector in connection with the work done to bring about an ecologically sustainable society.
- * Developing the ecological aspect of the preservation of our architectural heritage.
- * Promoting good architecture and design. A draft programme of action will be presented in the autumn of 1997.
- * Implementing special programmes based on environmental issues and ecology during 1998 when Stockholm will be the Culture Capital of Europe.
- * Improving coordination between management of the cultural environment and nature conservation.

Other areas

The Government will continue its wholehearted commitment to ecological sustainability in many other areas too.

The following are important features of this work:

- * Continued environmental protection efforts in the area of responsibility of the Ministry of Defence in accordance with the guidelines already presented to Parliament.
- * Measures to ensure that the authorities responsible to the Ministry of Defence commit themselves to pursuing the environmental protection approach adopted by the Government and Parliament.
- * Presentation of a draft national programme of action to reduce environment-related ill-health in the spring of 1998.
- * Urging the establishment of international cooperation on health protection and environmental medicine. Cooperation between the countries bordering the Baltic Sea is a key area, as is cooperation within the WHO and the EU.
- * Focusing on the need of measures in the health and medical services with respect to environmental management systems, continued measures to phase out the use of amalgam in dentistry, reduction of the quantities and hazardousness of medical waste and research in environmental medicine. For example, all county councils have now adopted environmental programmes.
- * Setting up a research centre for ecologically sustainable development in collaboration with a university in order to support the local investment programmes. This issue is dealt with in the Budget Bill.

* Establishment of an economic crime agency associated with the public prosecution authorities for the purpose of coordinating and intensifying the fight against economic crime, which includes environmental crime. The agency will be established at the beginning of 1998.