The Basic Environment Plan - Table of CONTENTS

(Cabinet Decision)
GOVERNMENT OF JAPAN

FOREWORD

Humankind can enjoy healthy and cultured living, depending on the abundant blessings of the Earth's environment. Recently, however, it is becoming a common recognition that the global environment, the very basis of humankind's continued existence, is at risk of being damaged. There is a growing need to reconsider our values placing too much emphasis on the pursuit of material wealth, and the prevailing socioeconomic activities and lifestyles marked by mass-production, mass-consumption, and mass-disposal. It is the present generation's obligation to pass on to the future generations a well conserved and healthy environment, both globally and domestically. This obligation applies to all humankind. As for Japan, we must change our society to a sustainable one that generates little burden on the environment, while at the same time promoting international activities for conserving the global environment.

Based on these considerations, the Government hereby establishes the Basic Environment Plan, in accordance with the provision of Article 15 of the Basic Environmental Law (Law No. 91, 1993).

The Basic Environment Plan prescribes four long-term objectives. These are 1) to build a socioeconomic system fostering environmentally sound material cycle, where environmental load by human activities are minimized, 2) to secure a harmonious coexistence between humankind and diverse wildlife and natural environment, 3) to enhance participation of all the members of society in environmental conservation activities, and 4) to enhance their international activities. The Plan also provides for the outline of policies, roles of each sector of society, and the direction for implementing various policy instruments, toward the achievement of these objectives.1

The Basic Environment Plan - Part I

PART I. BACKGROUND AND SIGNIFICANCE OF THE PLAN

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Section 1. Trends in Environmental Problems

1. Changing Environmental Problems

People live and run various types of businesses extracting resources in the form of food and raw materials from the surrounding environment, and discharging domestic waste, manufacturing refuse, gas emissions, sewage and other unusable substances into the environment. In other words, we have enjoyed many blessings of the environment and placing impacts on it at the same time. The environment, however, has the ability to restore itself, and therefore as long as people's impacts stay within this ability, the ecosystem remains in balance, enabling our socioeconomic activity in a sustainable manner. However, as the world's population increases and socioeconomic activities expand, these activities exact a heavier toll on the environment and begin to threaten it. Exploitation of resources in excess of nature's ability to restore itself has led to a decline in natural resource reserves. Habitat losses threaten the survival of various species of wildlife. Output levels of waste and other discharges beyond nature's ability to purify itself is causing actual or potential pollution.

1.1. The Nation's Environment

In Japan, during the period of rapid economic expansion after World War II, the environmental contamination and nature destruction became major social problems. In retrospect, these problems arose from the insufficient consideration on the environment. In an effort to resolve these problems, the Basic Law for Environmental Pollution Control and the Law for the Conservation of the Natural Environment were enacted, and pollution control and nature conservation policies were implemented based upon these laws. These policies, combined with efforts of both citizens and local governments, corporate investment in pollution prevention and technological developments showed remarkable results by the mid-1980s. Likewise, an effort to conserve the natural environment revealed considerable results.

Since then, Japan has continued steady economic growth. With the world's second largest economy, Japanese production now accounts for as much as 15% of total world production. During these years of economic growth, mass-production, mass-consumption and mass-disposal have become an even more an integral part of both Japan's socioeconomic activities and its way

of life. We also experienced further concentration of population and socioeconomic activities in urban areas. In these circumstances, we have not observed sufficient improvement in urban and domestic-type pollution such as urban air pollution by nitrogen oxides, water contamination by domestic sewage. Economic expansion has brought about increase of solid waste. The quality of underground water and sources of drinking water has deteriorated. Increase in the use of chemicals calls for our precautionary efforts to prevent environmental pollution by chemicals. Possibilities of new environmental pollution resulting from newly developed technologies are also pointed out. Furthermore, in urban areas, the nearby environment has been disappearing and nature is becoming further removed from people's everyday lives. On the other hand, in rural areas where population is decreasing and getting older, maintenance of environmental conservation capacity of forests and farmlands is becoming more and more difficult. Now people are becoming increasingly desirous of comfortable and peaceful lifestyles in a rich and pleasant environment.

1.2. Global Environment

Since the end of World War II, the Earth's population and the activities of that population have both shown geometrical growth. The world population grew from 1.65 billion in 1900 to 2.52 billion in 1950, and further to 5.3 billion by 1990. Between 1950 and 1990, the world's economy increased five times, the world's primary energy supply increased more than four times, and fertilizer use increased more than nine times. Developed nations have been consuming large quantities of natural resources and have likewise, been disposing quantities of waste. On the other hand, developing countries have undergone rapid population growth, increasing demand for food to combat poverty, and numbers of projects for economic development. Against this backdrop, deterioration of the global environment has become a priority issue.

Ozone layer depletion and global warming are examples of environmental issues affecting the entire planet. Likewise, effects of acid rain show absolute disregard for national boundaries. Decrease of tropical forests and extinction of various species of wildlife are going on around the world. Some developing countries are experiencing environmental pollution, caused in part by rapid population growth, concentrated populations in urban areas and industrialization.

2. Future Trends in Environmental Problems

2.1. Global Economy, Society and the Environment

2.1.a. Socioeconomic Trends

According to the United Nations, the world's population will continue to increase, particularly in developing countries, and will reach 10 billion by the year 2050. The percentage of the world's urban population will increase, and, particularly in the developing world, huge mega-cities are predicted to emerge. Regarding economic activities, the United Nations estimates that the speed of economic growth in developed countries will slow. Regardless, the size of their economies is already extremely large. Although it appears that developing countries in South and East Asia will experience robust economic growth, it is feared that some developing countries will experience rapid population growth without alleviation of poverty. According to the International

Energy Agency ("IEA"), using 1990 as a standard, demand for primary energy will increase 1.48 times worldwide by the year 2010. The United Nations Food and Agricultural Organization ("FAO") estimates that the population in developing countries will grow faster than that of food production and, as a result, by the year 2010, their total net imports will have increased. It also estimates that if the fishing industry maintains its current production level, no significant growth can be expected. The demand for forestry products is predicted to continue high growth.

2.1.b. Trends in Environmental Problems

It is feared that these rapid population growth and expansion of socioeconomic activities are threatening the Earth's environment, which supports the survival of humankind. For example, the Intergovernmental Panel on Climate Change ("IPCC") predicts that if no measures are taken, the concentration of greenhouse gases in the atmosphere in 2050 will be twice as large as that which existed before the Industrial Revolution, while the average global temperature will increase by roughly 0.3 degrees Celsius every decade. This implies a full 3 degrees increase by the end of the 21st century, using present temperatures for comparison. Regarding ozone depletion, the Scientific Assessment Panel established under the Montreal Protocol on Substances that Deplete the Ozone Layer predicted that, based on assumed compliance with the amended Montreal Protocol (Copenhagen, 1992) by all nations, global ozone losses which were first discernible in the late 1970s will recover in about the year 2045, other things being equal. Other problems include marine pollution caused by human activities on land and sea; desertification partly caused by over-grazing; deforestation of tropical and other forests due to untraditional slash-burn-farming techniques, excess gathering of wood for fuel and improper commercial cutting; wildlife extinction due to over-hunting and habitat losses; acid rain resulting from large quantity of fossil fuel use; transboundary movements of toxic waste; and environmental pollution in developing countries, such as urban air pollution resulting from rapid expansion of economic activities and fuel use without appropriate countermeasures.

2.1.c. Necessity for International Activities

These problems occur in a world where countries are increasingly becoming interdependent upon one another as cross-border trade and investment expand. The activities of one country may potentially burden the environment of another country. It is therefore essential to tackle these environmental problems on a global scale. As such, it is necessary to promote international efforts, including strengthening international ties when formulating and implementing environmental policies, promoting foreign assistance to the efforts of developing countries themselves to achieve the goals of environmental conservation and economic development at the same time.

2.2. The Nation's Economy, Society and the Environment

2.2.a. Socioeconomic Trends

It is expected that the rate of population growth in Japan will decline, while the percentage of elderly people, as a portion of the total population, will rise. In fact, Japan's total population will actually begin to shrink after the year 2010. Looking at population levels by region, the populations of large cities will continue to rise, while those in rural areas will continue to shrink through the beginning of the 21st century.

Long-run economic growth is expected to slow due to fewer working hours and a diminishing work force, whose numbers are expected to peak around the year 2000. Savings rates will also decrease due to the high proportion of elderly who must be cared for during this time.

Given these trends, the period between now and the early 21st century is a crucial one in terms of providing public projects for environmental conservation. It is predicted that the industrial structure will become more service and information oriented. Demand for transportation will grow moderately. The growth rate in total passenger number and cargo freight is predicted to be smaller than the same equation with an added variable to incorporate a distance figure. Consequently, people and cargo will travel greater distances. Household consumption per capita is predicted to increase, people are expected to work fewer hours, leaving individuals with more leisure time.

2.2.b.Trends in Environmental Problems

Japanese society and its economy are beginning to mature after decades of tremendous growth. In the process, Japan consumed large amounts of natural resources and discharged great amounts of pollutants into the environment. Japan is expected to continue its present trend toward urbanization, but while doing so, it needs to control the burden inflicted on the environment from such activities. The dilemma does not stop with problems related to conserving the environment from the mere discharge of regional pollution. There is still a concern about ever expanding socioeconomic activities which harbor potentially detrimental effects for the environment. Likewise, it is feared that the sustainability of society itself is becoming increasingly uncertain.

Developed countries are imposing tremendous burdens on the global environment. As a member of this group, Japan must take considerable, affirmative strides to create a society able to sustain development, while decreasing the burdens it inflicts on the global environment.

For example, if all measures relating to energy conservation were perfectly enforced, it is predicted that per-capita levels of CO_2 emissions recorded in 1990, would stabilize by the year 2000. This is the goal of Article 1 of the Action Program to Arrest Global Warming. If this can be achieved, the total increase in global warming is predicted to be nominal.

To further prevent global warming, controls on CO_2 emissions are likewise necessary. This is the goal of Article 2 of the Action Program to Halt Global Warming. Of considerable concern is the relatively high rate in growth of emissions in the transportation and commercial/residential sectors. This rise correlates with the increase in energy consumption in each respective sectors. Measures to halt this trend are needed. Also, if current production and consumption patterns persist, waste generation is predicted to increase. Consequently, it is becoming increasingly critical to pioneer new methods for controlling waste generation at each stage of the socioeconomic process (e.g. the production, use and consumption stages).

In large metropolitan areas, measures to ease various forms of urban and domestic pollution, such as air pollution caused by nitrogen oxides, emitted via automobile exhaust and water pollution, generated by domestic water use in the form of raw sewage, should be implemented. It is also necessary to design measures able to deal with potential environmental contamination due to the use of chemical substances and the development and utilization of new technologies. It is also feared that if acid rain is not prevented, the ecosystem will begin to be detrimentally affected in various permanent ways.

Conserving vegetation ("green spaces") and bodies of water in urban areas, as well as forests and farmlands in rural areas are pressing matters. Wildlife numbers are decreasing and some species are threatened with extinction. The effort to battle these problems must comply with the Japanese people's growing demand for a comfortable living environment ("environmental amenities") and meet ever increasing need to come in contact with nature.

3. Characteristics of Future Environmental Problems

The environmental issues to be tackled in future have the following characteristics, in view of their trends and prospects explained above. First, environmental issues cannot be divided into categories, like human health, mankind's living environment or the natural environment. It is necessary to adopt a comprehensive approach that takes into consideration causes and effects of the entire system. For example, the complex role forests play in CO_2 absorption and the ecological impact of acid rain caused by nitrogen and sulfurous oxides cannot be separated.

Second, many current environmental problems, such as global warming, urban and domestic pollution, are generated during routine daily activities of companies and individual citizens. It is, therefore, necessary for all members of society, to actively and voluntarily take part in conserving the environment. It is also necessary for each member to take another look at the socioeconomic system and his/her own personal lifestyle.

Third, environmental issues have become problems of global proportion affecting wide geographical areas and the lives of future generations. These problems must be resolved through a joint effort by both developed and developing countries. It is necessary to strengthen international cooperation for this purpose, consolidate scientific information and implement environmental conservation measures with long-term perspective.

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Section 2. Growing Awareness and Activities

The national and local governments, companies and individual citizens are becoming increasingly aware of the seriousness of those environmental problems that threaten the basic life support system of humankind. In addition, there is a growing consensus regarding the urgent need to change both our current lifestyles and the prevailing economic system to construct a sustainable society with minimized environmental loads, each member of society sharing fair burden. These beliefs are expressed as a principle of environmental ethics for human beings living in a finite environment. This rising of awareness is driving forward people's various actions and cooperation to conserve the environment.

1. International Community

In 1992, the United Nations Conference on Environment and Development ("UNCED") was held, in response to increasing awareness of the significance of global environmental issues. The countries in attendance reached an international consensus to design and implement measures

to achieve sustainable development, globally. As a result, the Rio Declaration and Agenda 21 were adopted. A majority of the participants also agreed to sign the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity. Japan, as well as many other nations, contributed to the success of the UNCED. For the purposes of implementing the agreements adopted at the UNCED, the United Nations set up the Committee for Sustainable Development.

Additionally, the Organization for Economic Cooperation and Development ("OECD") and other international bodies, are working together to integrate environmental and economic policies.

2. Activities in the Nation

2.1. The State

In recent years, a wide range of measures and activities have been promoted by the government in an effort to conserve the environment, such as measures concerning nitrogen oxides emitted by automobiles, measures household waste water and protection of wildlife, and programs for environmental education and others. Measures to conserve the global environmental problems have also been strengthened, such as establishing the Council of Ministers on Global Environmental Conservation in 1989, and adopting the Action Program to Arrest Global Warming in 1990.

Furthermore, the Basic Environment Law was enacted in 1993 which aims at coping with a broadened range of environmental problems of today, as well as implementing the achievements reached at the UNCED. The Law provides for new basic principles for environmental conservation and various policy measures. The government also adopted the National Action Plan for Agenda 21 in the end of 1993 and submitted it to the United Nations, which specifies the measures of Japan to implement those tasks of Agenda 21.

2.2. Local Governments

Local governments have always played an important role in pollution reduction and nature conservation. Recently, an increasing number of local governments are formulation environmental management plans to address broad, current environmental issues. Many are advancing new efforts to promote international cooperation and many are actually crossing their own borders to creating alliances between local authorities for environmental conservation.

2.3. Corporations

Corporations are becoming more aware of the inherent problems of current socioeconomic system where mass-production, mass-consumption and mass-disposal pattern prevails. They also recognize the need to reduce the environmental load generated by their business activities. There are voluntary actions taken by corporations to tackle these problems. For example, some companies and economic organizations have established their own charters for global environmental conservation or have formulated independent environmental action plans. Some

are maintaining systems that conserve the environment, while some are implementing voluntary environmental audit systems. Likewise, progress is being made through independent efforts to transfer technology.

2.4. People

People are becoming increasingly aware of the burden they are imposing on the environment and realize the need to change their lifestyles. They are participating increasingly in such activities as recycling, national trust, greening/tree-planting, and protecting nearby bodies of water. International activities are also increasing.

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Section 3. The Significance of the Plan

To appropriately respond to the aforementioned trends and characteristics of current environmental problems, and taking account of the growing awareness and increasing activities, it is essential to promote a comprehensive and systematic measures to conserve the environment, encompassing not only the Government's environmental measures but also actions to be undertaken by local governments, corporations and people.

The Basic Environment Plan sets the basic concepts and long-term objectives of environmental policy which are based on the Basic Environment Law, upon foreseeing through the mid-21st century, and specifies the direction of environmental policies in the period toward the early 21st century. It thus aims to ensure that all groups and sectors of society share common understanding and cooperate with each other for conservation of the environment.

The Basic Environment Plan - Part II

PART II. PRINCIPLES OF ENVIRONMENTAL POLICY

- Section 1.Basic Concepts
  - 1. Desired relationship between people and the environment
  - 2.Long-term objectives
    - 2.1. Environmentally sound material cycle
    - 2.2. Harmonious coexistence
    - 2.3. Participation
    - 2.4. International activities
- Section 2. Long-Term Objectives
- Section 3. Developing Comprehensive Indicators

Section 1. Basic Concepts

Humankind has been receiving benefits from the environment and in doing so has been imposing a great burden upon it. The environment is limited and is made up of various ecosystems which exist only through the maintenance of delicate balances. Moreover, it is the common birthright of both present and future generations.

Recent population increases and expansions in human activities, however, have led to over-exploitation of natural resources and a substantial increase in the amount of waste generated. The scope of these activities has exceeded the environment's capacity to absorb them and has resulted in pollution and the burdens of nature. A substantial expansion of human activities, which transformed traditional agricultural civilizations into the industrial civilizations of the post-Industrial Revolution era and then to the modern industrial societies of today, is largely to blame. It is feared that the accumulation of environmental burdens inflicted by present human activities is threatening the global environment and consequently, human life. It is likewise feared that the impact of these activities will become irreversible and be passed on to future generations.

There are still many unknown elements regarding the characteristics and value of the environment. However, anxiety over its degradation and awareness that preventative measures are necessary to for its conserve has become common. One point upon which all countries agree is the necessity of attaining a state of sustainable development. To achieve this goal, it is necessary for developed countries, including Japan, which have been imposing great burdens upon the Earth's environment, to review their behavioral patterns.

Furthermore, developed countries, must work out their plans together and, under a global partnership, must take affirmative steps to structure foreign aid so as to meet actual needs in developing countries. These mutual efforts should be promoted internationally. In Japan, people are realizing that their materialistic attitudes are resulting in an environmental crisis and there is an popular movement demanding modifications. It is not easy to change the norms of socioeconomic systems or current lifestyles. It is, nonetheless, necessary. All sectors of society must carry their fair share of the burden to incorporate the needs of the environment into the economic system.

It must be remembered, that humankind's ability to lead healthy and cultured lifestyles is entirely due to the abundant blessings of the Earth's environment. These blessings are meant to be enjoyed by both present and future generations. Likewise, as joint owners of this limited environment, people have an obligation to maintain it so that it might last far into the distant future. Inheriting the wisdom of our ancestors, who lived within the means of their environment, it is essential to question the present civilization and change production and consumption patterns to sustainable ones.

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Section 2. Long-Term Objectives

The aforementioned section covers the basic ideas of environmental policy. The following discussion will introduce the long-term goals of this policy. Briefly, they are: (1) closed material circulation, (2) harmonious coexistence, (3) participation, and (4) international effort. To build the

desired relationship between people and the environment, comprehensive measures shall be promoted.

1. Desired Relationship Between People and the Environment

The environment is finite and is the life support system of humankind. In the environment, materials circulate between air, water, soil and living creatures. They break down and reassemble in a constant process that is characteristic of nature's circulation of materials. The ecosystem is formed by many delicate balances. In order to conserve a rich, sound environment, it is necessary to maintain both the entire system and each individual, component, system in healthy condition. To achieve this, precautionary measures employing scientific knowledge should be applied to avoid serious, irreversible negative impacts on the environment. To harmoniously coexist with nature, nature's own material circulation should be utilized. In this way, a system incorporating closed material circulation will emerge from everyday socioeconomic activities.

2. Long-Term Objectives

The ultimate goal of this Plan is to attain a state of sustainable development while continuing to conserve a healthy and rich environment. The following four iv. objectives must be secured to reach this ultimate goal.

2.1. Environmentally Sound Material Cycle

Burdens on the atmosphere, water and soil are caused by interference with nature's circulation of materials. To reduce these burdens, our socioeconomic system must be based upon nature's circulation of materials. Thus, things removed from the Earth, such as raw materials and energy, must pass cleanly through our socioeconomic system at every stage, from production, through the stream of commerce, to consumption and finally to disposal. Plans to limit the occurrence of waste and to properly dispose of it are essential. This Plan aims to create such a system.

2.2. Harmonious Coexistence

The atmosphere, water, soil, wildlife, people and their behavior, mutually effect one another. It is necessary to work on appropriate methods to conserve the environment depending on the special way that it was formed. Such methods include conserving invaluable nature, maintaining and conserving secondary nature, environmental restoration and wildlife conservation management. Planning the wise use of nature, while simultaneously providing places and opportunities to come in contact with it, will ensure a rich exchange between human beings and nature. This Plan shall ensure the maintenance and restoration of a healthy ecosystem and a harmonious coexistence between nature and human beings.

2.3. Participation

To create a socioeconomic system with closed material circulation and state of harmonious coexistence between humans and nature, comprehensive policies must be developed with long range views. This means that the environment must be considered at every step. Wasteful, 'disposable' lifestyles must be reviewed and people's values and conduct must be reformed. Every sector of society needs to fully understand the relationship that exists between humankind and the environment. It is essential that each sector also voluntarily and actively participate in efforts to utilize the environment wisely and to reduce burden to it. It is further necessary that the cost be fairly spread throughout society. This can be accomplished by employing the Polluter Pays Principle ("PPP"). Under this principle, contributions are made depending on the amount of burden imposed on, or benefits received from the environment, by each individual or group.

2.4. International Activities

Current global environmental problems are a concern of everyone. No one country can solve these problems alone. Therefore, it is necessary for all nations to join together in the effort. Japan's economy is closely interdependent with the rest of the world. With one of the larger economies, Japan benefits a great deal from the global environment and at the same time influences it greatly. All sectors of society, including the government, shall promote international cooperation with a view to maintaining a healthy global environment. By fully utilizing the experiences and technologies that overcame severe domestic pollution in the past, Japan shall strive to make significant contributions, appropriate to its position in the global society.

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Section 3. Developing Comprehensive Indicators

The Basic Environment Plan sets long-term objectives for building a sustainable society, to attain a socioeconomic system of "sound material cycle", "harmonious coexistence" with nature, "participation" and "international activities", and provides future direction of measures to achieve these objectives. It is desirable to specify comprehensive indicator/indicators which show the progress of these objectives and the relation between the objectives and measures, in order to ensure effective implementation of the measures. Whereas studies and research have been carried out extensively both domestically and abroad, at this point, there are not enough results to incorporate the indicators in this Plan. Therefore, the Government will immediately begin working on development of the comprehensive indicators and utilize the results in implementing and reviewing the Plan.

The Basic Environment Plan - Part III

PART III. FUTURE POLICY ON ENVIRONMENTAL CONSERVATION

The government shall develop comprehensive and systematic policies, utilizing a combination of methods appropriate for each problem, closely coordinating the different policies. To realize this Plan's long-term objectives: i. a socioeconomic system incorporating closed material circulation must be built to reduce the negative effects of environmentally burdensome activities, ii.

harmonious coexistence must be established, which demands the maintenance and restoration of a healthy ecosystem and a harmonious coexistence between nature and human beings, iii. participation by each sector of society must be ensured, where each sector voluntarily and actively participates to conserve the environment, fairly spreading the cost throughout society , and iv. a international effort must be promoted.

Environmental problems have become problems of global proportion affecting wide geographical areas and implicating the lives of many generations. They must therefore be dealt with an a comprehensive manner. Many problems are caused through routine daily activities. It is important to combine various methods, such as the Environmental Impact Assessment (EIA), regulatory measures, economic measures, program funding, environmental education, environmental learning, support for both corporate and individual efforts and promotion of scientific technology.

Furthermore, it is necessary to design a comprehensive policy for individual problems. It should examine the circumstances of each problem and evaluate the effectiveness of each measure. It should take into consideration the relationship between similar problems and similar measures. It should establish objectives and indicators as necessary. As quantifiable objectives which relate to individual problems, the state of the environment, the burden on the environment, the number of businesses affected by each individual measure and the efforts of each sector of society are each described in this Plan.

These objectives are based upon individual laws and decided within an established framework. They shall be examined to ensure that they are in accordance with this Plan's fundamental goal. As necessary, comprehensive reviews shall be initiated, establishing specific goals for the necessary fields, designed with effective measures for implementation, and effecting individual plans.

NOTE:

> The purpose of providing the following references is to indicate this Plan's objective's basis in law and to present the procedures discussed during the Cabinet Minister's Conference. The Plan has its formal basis in law as a result of the deliberations of the Cabinet Minister's Conference. The Conference that enacted it is referenced because it was thought important to strengthen this Plan. Also, the objectives for this Plan are as of the day of the Cabinet Minister's Conference decision.

- Chapter 1. Building a Socioeconomic System Fostering Environmentally Sound Material Cycle
- Chapter 2. Harmonious Coexistence Between Nature and Humankind
- Chapter 3. Participation by All Sectors of Society Sharing Fair Burden
- Chapter 4. Measures Forming the Basis of Environmental Policy
- Chapter 5. Promoting International Activities

The Basic Environment Plan - Part III-Chapter 1

PART III. FUTURE POLICY ON ENVIRONMENTAL CONSERVATION
Chapter 1. Building a Socioeconomic System Fostering Environmentally Sound Material Cycle

- 1. Basic Direction
- 2. Comprehensive measures and systematic implementation
- Section 1.Conserving the Atmosphere
- Reference 1. Environmental quality standards for air pollution and noise pollution
- 1.Conserving the global atmosphere
- 1.1Global warming
- Reference 2. Targets under the Action Program to Arrest Global Warming
- Reference 3. Japan's Greenhouse Gas Emissions in 1990
- 1.2Protecting the ozone layer
- Reference 4. Ozone depleting substances production/consumption control schedule
- 2.Preventing broadly spreading air pollution
- 2.1 Acid rain
- 2.2 Photochemical oxidants
- 3.Preventing urban air pollution
- 3.1Nitrogen oxides
- Reference 5. The target for achieving environmental quality standards for nitrogen dioxide
- Reference 6. The targets concerning the curtailment of the aggregate nitrogen oxides burden
- Reference 7. The target of increasing low-emission vehicles
- 3.2 Airborne Particles
- 4. Measures on toxic substances
- 5.Improving living environment
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- 5.3 Other
- 6. Establishing a system for monitoring the atmosphere
- Section 2.Conserving the Water Environment
- 1.Environmentally sound water circulation
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- Reference 8. Environmental quality standards on water quality
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- 1.3 Measures in accordance with specific regional characteristics
- 1.4 Fair burden sharing
- 2.Reducing environmental load at each stage of water use
- 2.1 Types of Environmental burdens and their reduction
- 2.2 Developing and disseminating technology for water conservation
- 2.3 Ensuring the safety of water environment
- 3.Conserving the environment in closed water system

- Reference 9. Water quality targets for lakes
- Reference 10. Water pollutant reduction targets for inland seas
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  - 5. Establishing a system for monitoring the water environment
- Section 3.Conserving the Soil and Ground Environment
  - 1.Safety of the soil environment
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  - Reference 11. Environmental quality standards for soil pollution
  - 2.Conserving the ground environment
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  - Reference 12. Targets for Ground Subsidence Prevention
- Section 4.Policies on Waste and Recycling
  - 1. Reducing waste generation
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  - 2.3 Packaging
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  - 2.5 Environmental consideration in recycling
  - 3.Promoting proper waste disposal
  - 3.1 Disposal facilities
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  - 3.3 Environmental consideration in waste disposal
- Section 5.Policies on Environmental Risks of Chemicals
  - 1. Evaluating environmental risks
  - 2. Reducing environmental risks
- Section 6. Environmental Consideration in Technological Development etc.

OTHER CHAPTER

- Chapter 2. Harmonious Coexistence Between Nature and Humankind
- Chapter 3. Participation by All Sectors of Society Sharing Fair Burden
- Chapter 4. Measures Forming the Basis of Environmental Policy
- Chapter 5. Promoting International Activities

1. Basic Direction

Burdens on the atmosphere, water and soil are caused by interference with nature's normal circulation of materials. To prevent this burden from occurring, newly developed technology

should be implemented and investments should be made. In this manner it will become possible to increase the speed of natural breakdown of waste materials or increase the efficient use of resources and energy. Improvements should be made in the production process. The flow of people and products should be made more efficient. The use of environmentally friendly products should be increased. Proper recycling methods and waste disposal practices should be employed. New energy sources and the development of reusable energy should be promoted.

There is a fear that immense and/or irreparable burdens may be imposed since scientific certainty on the environment is lacking. Therefore, measures, designed with ample scientific knowledge that utilize strict cost/benefit tests should not be delayed. Burdens on the atmosphere, water and soil, as impartially as possible, should be reduced. Measures for waste disposal, recycling and measures to reduce the environmental risk of toxic chemicals should be implemented, as should far reaching measures that take into account new problems, arising from advances in technology.

2. Comprehensive Measures and Systematic Implementation

Goals and guidelines necessarily shall be established, setting standards, based on the Basic Environmental Law, to maintain a healthy environment. The following measures, with the mutual cooperation of each sector of society, shall be systematically implemented. In particular, comprehensive examinations shall be performed on as yet unachieved environmental quality standard provisions and measures to hasten their attainment.

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Section 1. Conserving the Atmosphere

The atmosphere is borderless. For this reason, burdens on the atmosphere could lead to a wide range of problems, at both the atmospheric and surface levels. Changes in atmospheric composition can lead to problems of global proportions. Advection and reaction can create problems for large areas, while accumulation of harmful substances in the atmosphere creates a dilemma for metropolitan areas. Various toxic substances pose health hazards and atmospheric changes affect human environments at the regional level.

To solve these problems, measures in accordance with each of the following basic aims shall be implemented. Achieving the Environmental Quality Standards and Other Targets

Objectives, designed with an ample scientific knowledge, shall be established setting environmental quality standard goals, according to the special characteristics of each problem and environmental burdens reduction goals. Appropriate measures for the attainment and maintenance of these goals shall be promoted.

Reducing Environmental Load from Various Socioeconomic Activities

Comprehensive environmental burden reduction measures shall be promoted to reduce burdens resulting from socioeconomic activities like industrial production, transportation and routine activities of individuals.

Consideration of the Relationship with Water, Soil and Ecosystem

Measures directing attention to the ecological impact of burdens on the atmosphere, the atmosphere's relationship with water and soil, the cleansing and climatic moderating properties of green spaces shall be promoted.

REFERENCE 1

Environmental quality standards for air pollution and noise pollution

(based on the Basic Environment Law)

Nitrogen Dioxide: Daily average to be within or below 0.04ppm-0.06ppm

Sulfur Dioxide: Daily average to be below 0.04ppm, and hourly average below 0.1ppm

Carbon Monoxide: Daily average to be below 10ppm, and 8-hour-average below 20ppm

Suspended Particulate Matter: Daily average to be below 0.10mg/m^3, and hourly average below 0.20mg/m^3

Photochemical Oxidants: Hourly average to be below 0.06ppm

Noise: Decided by area type and time classifications. Areas beside roads are given different values, as are areas near Shinkansen ('bullet-train') tracks or airports.

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1. Conserving the Global Atmosphere

Global warming and the depletion of the ozone layer are environmental problems of a long-term nature and may harbor seriously threatening consequences. Measures, designed with ample scientific knowledge, preventative in nature, must be promoted.

1.1. Global Warming

The problem of global warming cannot be solved by a single country. It must be solved with international cooperation. Our ultimate objective is the same with that of the United Nations Framework Convention on Climate Change , i.e. "stabilization of greenhouse gas concentrations in the atmosphere to a level that would prevent dangerous anthropogenic interference with the climate system." Consideration shall be paid to the provisions of the Convention that "such a level should be achieved within the time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."

Among developed countries, there is a consensus that further consideration is needed to promote commitments by all the contracting parties, and to clarify the measures beyond the year 2000 for which the Convention have no provisions. In this context, in the medium term, Japan will make further efforts to promote various measures in cooperation with other countries as well as to the formulation of the new international framework to arrest global warming.

For the time being, we will aim at attaining the goal of our Action Program to Arrest Global Warming that we committed to promote at the UNCED, in cooperation with the international community. We will continue to promote various measures in the Program, monitoring the status of implementation annually, and fully taking into account new scientific knowledge.

REFERENCE 2

Targets under the Action Program to Arrest Global Warming

(October 1990, Cabinet Ministers' Conference on Global Environmental Problems)

(Targets)

The targets for the limitation of greenhouse gas emissions shall be set as follows.

(1)

The Government, based on the common efforts of major industrialized countries to limit CO_2 emissions, establishes the following target for the stabilization of Japan's CO_2 emissions.

A.

The emission of CO_2 should be stabilized on a per capita basis in the year 2000 and beyond at about the same level as in 1990, by steadily implementing a wide range of measures under this Action Program, as they become feasible, through the utmost efforts by both the government and private sectors.

B.

Efforts should also be made, along with the measures above, to stabilize the total amount of CO_2 emission in the year 2000 and beyond at about the same level as in 1990, through progress in the development of innovative technologies, etc.., including those related to solar, hydrogen and other new energies as well as fixation of CO_2 at the pace and in the scale greater than currently predicted.

(2)

The emission of methane should not exceed the present level. To the extent possible, nitrous oxide and other greenhouse gases should not be increased.

With respect to sinks of CO_2, efforts should be made to work for the conservation and expansion of forests, greenery in urban areas and so forth in Japan and also take steps to conserve and expand forests on a global scale, among others.

(Duration of the Action Program)

The Action Program covers the period from 1991 to 2010, with 2000 set as the intermediate target year. During this period, the Action Program should be reviewed, as necessary, for its flexible response to international trends, accumulated scientific findings and so on.

REFERENCE 3

Japan's Greenhouse Gas Emissions in 1990

(September 1990, Japan's Action Report on Climate Change based on the Framework Convention)

Carbon Dioxide Emissions Per Capita

2.59 tons of carbon/capita

Total Carbon Dioxide Emissions

320 million tons of carbon

Total Methane Emissions

1380 Gg (1Gg(Gigagram)=1000tons)

Total Nitrous Oxide Emissions

48 Gg

1.1.a. Limiting CO_2 Emissions

A. Formation of urban and regional structures with low CO2 emissions

The measures to be promoted include:

- increase of greenery in cities to alleviate the heat-island phenomena,
- propagation of energy-saving buildings,
- introduction of co-generation systems,
- utilization of unused heat from urban activities such as subway through usage of heat pumps,
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diffusion of district heating systems,

- supply of heat from waste incineration and

- utilization of energy from sewage sludge.

B. Formation of transport systems with low CO_2 emissions

The measures to be promoted include:

- reduction of CO_2 emissions from individual motor vehicles,

- increase of energy efficiency of trains, ships and airplanes,

- introduction of automobiles with low CO_2 emissions, including electric cars,

- modal shift to mass transit systems such as railways and ships in areas of medium or long transport between major terminals,

- improvement of transport efficiency to trucks,

- maintenance and usage of public means for passenger transport,

- construction of bypasses, ring roads and other facilities to mitigate traffic jams, and

- facilitation of sophisticated traffic control systems.

C. Formation of production structures with low CO_2 emissions

The measures to be promoted include:

- improvement of combustion efficiency,

- introduction of energy-saving manufacturing facilities and production processes,

- improvement of energy efficiency of farming machinery and fishing ships, among others, and the use of natural energy in agriculture, forestry and fisheries, and

- improvement of energy efficiency in construction machinery in the construction sector.

D. Formation of energy supply structure with low CO_2 emissions

The measures to be promoted include:

- increase of energy efficiency in conversion process including improvement of power generation efficiency,
- development and use of nuclear power, based on the assurance of safety,
- use of hydraulic and geothermal energy, photovoltaic and wind power system, and natural gas,
- introduction of dispersed power generations, such as fuel cells and photovoltaic cells,
- development of the infrastructure for the use of LNG as urban gas, and
- to smooth out electric demand differences between day and night.

E. Realization of lifestyles with low CO_2 emissions

The measures to be promoted include:

- recycling,
- a review of excessive packaging,
- use of products with low CO_2 emissions,
- introduction of the "daylight saving system",
- reduction of working hours,
- appropriate temperature adjustment in air condition and heating, and
- introduction of high energy efficiency equipments.

1.1.b Reducing Emissions of Methane and Other Greenhouse Gases

Measures shall be promoted to reduce methane emissions in waste disposals, agriculture and energy production and utilization. The Development of technologies and new measures shall simultaneously be promoted. Nitrous oxide emissions shall be monitored and control measures shall be considered. The contribution on global warming caused by other substances shall be assessed.

1.1.c. Enhancing CO_2 Sinks

The conservation of forests shall be ensured and sustainable forest management be promoted. Furthermore, the greens in and around cities shall be adequately conserved and increased through increasing vegetation in parks and other public facilities. Efforts shall also be made to promote appropriate trade of tropical timber and the efficient use of timber resources.

1.1.d. Promotion of Research and Observation/Monitoring

Comprehensive research such as the understanding of the mechanism of global warming and future prediction, assessment of impacts on Japan, policy planning and its evaluation, and studies on global warming focusing on the Asian-Pacific region shall be promoted. Observation and monitoring by satellites and the dissemination of data shall also be promoted.

1.1.e. Development and Dissemination of Technology

The development of technologies to limit greenhouse gas emissions, technologies for absorption, fixation, etc. of greenhouse gases and technologies for adaptation to global warming shall be promoted.

1.1.f Promotion of Public Awareness

The dissemination of the outline of the Action Program and precise information and environmental education shall be promoted. Furthermore, voluntary actions shall be supported.

1.2. Protecting the Ozone Layer

Based on the Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures, the production of the ozone depleting substances (specified CFCs etc.) shall be regulated in accordance with the schedule provided by the Montreal Protocol, and measures shall be taken for emission control and rational use of these substances. Furthermore, the Government shall promote recovery, recycling and destruction of these substances through development of related technologies, establishment of the social system to enhance their recovery, recycling and destruction under fair share of burden, diffusion of knowledge, etc. Other measures include development of alternative substances and technologies taking other environmental impacts into consideration, research on the mechanisms of ozone layer depletion, monitoring of ozone layer, etc.

REFERENCE 4

Ozone depleting substances production/consumption control schedule

(based on the Montreal Protocol on Substances that Deplete the Ozone Layer, revised November 1992)

- CFC 1996 phased out

- Halon 1994 phased out
- Carbon tetrachloride 1996 phased out
- 1,1,1-Trichloroethane 1996 phased out
- HCFC 2030 phased out
- HBFC 1996 phased out
- Methyl Bromide 1995 stabilized at 1991 level

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2. Preventing Broadly Spreading Air pollution

The problems of acid rain and photochemical oxidants result from transportation and reaction of pollutants in the atmosphere. If acid rain continues at its present rate, it is feared that the ecosystem will be detrimental affected. There is also anxiety that the effects of acid rain in East Asia and particularly in Japan will worsen. Presently, there has been no progress in preventing pollution from photochemical oxidants. To correct these problems, the following measures shall be promoted.

2.1. Acid Rain

It is feared that acid rain is inflicting burdens upon the ecosystem and the long-term effects of acid rain the ecosystem are unclear. Measures, designed with ample scientific knowledge, must be promoted to prevent it. These measures take into consideration the possible impact of advection from continents and large cities. While conducting surveys, observations and investigative research on pollution, its mechanisms and effects on the ecosystem should also be determined.

2.2. Photochemical Oxidants

Contamination by photochemical oxidants has been spreading over vast areas. The government, in cooperation with local governments, shall promote regional and comprehensive measures such as regional observations, investigations on the contaminating mechanisms of these chemicals, and emission control of pollutants. These measures shall be coordinated in conjunction with those of acid rain.

3. Preventing Urban Air Pollution

The problem of nitrogen oxides and suspended particulate matter (SPM) still remains in large urban areas. Environmental quality standards have not been satisfactorily attained. Of the various problems arising from SPM, health hazards caused by particles released in diesel

exhaust are of particular concern. In order to deal with such concerns, the following measures shall be promoted.

3.1. Nitrogen Oxides

Comprehensive measures shall be implemented to reduce emissions from mobile sources, such as automobiles, and from stationary sources, such as factories and the work-place.

3.1.a. Automobiles

Regarding automobiles, the Government shall implement exhaust emission control measures, aiming at achieving as promptly as possible the long-term targets of exhaust emission control, recommended by the Central Council for Environmental Pollution Control in 1989. Together with local governments and businesses, the Government shall take the lead in introducing and promoting the use of low-emission vehicles as well as supporting fuel supply maintenance facilities, as technology makes them feasible.

In areas designated by the Law Concerning Specific Measures for Total Emission Reduction of Nitrogen Oxides from Automobiles in Specific Areas, to achieve to objectives of the Basic Policy to for Nitrogen Oxides Reduction and the Nitrogen Oxide Reduction Plans, the following measures, in addition to the preceding ones, shall be promoted.

REFERENCE 5

The target for achieving environmental quality standards for nitrogen dioxide

The Basic Policy for Nitrogen Oxides Reduction (January 1993) and the Nitrogen Oxide Reduction Plans (November 1993) set the target of nearly achieving the environmental quality standard for nitrogen dioxide by the year 2000. in the designated areas.

REFERENCE 6

The targets concerning the curtailment of the aggregate nitrogen oxides burden

The Nitrogen Oxide Reduction Plans set the target value of total amount reduction of automobile emitted nitrogen oxides in each designated area.

A.

Regulations shall be placed on certain automobile types and their influx prevented.

B.

The increased use of cars that produce less pollution will be promoted to reach the goal set in the Nitrogen Oxides Reduction Plans.

C.

Joint and bulk cargo transport and a shift to mass transit systems, such as railways and ships, shall be actively promoted in medium to long distance transport between major ports. Also, the development and improvement of port facilities shall be promoted.

D.

The maintenance of public transportation and facilities for pedestrians and cyclists shall be promoted.

E.

To relieve congestion, bypass and loop maintenance, intersection and crossing improvements, effective enforcement of traffic regulations, parking measures, traffic control system improvements and traffic information systems shall be promoted.

F.

Soil, plants and other biological pollution filters shall be promoted as first stage decontamination systems.

G.

Guidance on appropriate and practical automobile use shall be promoted.

H.

With appropriate enforcement of the Nitrogen Oxides Reduction Plan, in an effort to continue reducing nitrogen oxides, surveys and examinations shall be promoted.

REFERENCE 7

The target of increasing low-emission vehicles

The Nitrogen Oxides Reduction Plans set the target that 300,000 low-emission vehicles should be introduced in the designated areas by the year 2000.

3.1.b. Stationary Sources

Emission control measures for stationary sources shall be appropriately enforced.

3.1.c. Others

Appropriate measures for minor sources, such as construction equipment, shall be enforced. Methods to reduce gas emissions from ships shall be examined. Moreover, the maintenance of green buffer zones, shall be promoted.

3.2. Airborne Particles

3.2.a. Suspended Particulate Matter (SPM)

Regarding SPM, restrictions on automobile exhaust and emissions from factories and other business facilities shall continue to be implemented. Since pollution continues to spread over vast areas, investigations shall be promoted on pollution mechanisms, including those on secondary particle formation processes. As necessary, comprehensive measures designed for distinct metropolitan areas shall be implemented.

3.2.b. Diesel Exhaust Particles (DEP)

Regarding DEP, one of the components of SPM, the Government shall implement exhaust emission control measures, aiming at achieving as promptly as possible the long-term targets of exhaust emission control, recommended by the Central Council for Environmental Pollution Control in 1989. Simultaneous research into related health effects shall be promoted.

The previously mentioned measures aimed at nitrogen oxides also contribute to reduce DEP through regulation to diesel cars and reduction of automobile traffic.

3.2.c. Measures for Dust From Studded Tires

In snowy or frozen places, dust from spiked tires is a problem. To prevent this problem, regulations shall be implemented. Also, measures for winter road maintenance and the development of spike substitutes shall be actively promoted.

3.2.d. Sulfur Oxides

Measures to reduce atmospheric contaminants, like sulfurous oxides, shall continue to be implemented.

4. Measures on Toxic Substances

According to general data regarding the monitoring of atmospheric, concentrations of toxic substances in the environment, such as organic chlorine compounds, have yet to reach dangerous levels. Some fear, however, that these toxic substances could eventually create health hazards. The Government shall promote systematic measures such as increased monitoring and the cultivation of information on the effects and sources of such potentially hazardous substances.

5. Improving the Living Environment

Nuisances like noise, vibrations and offensive odors, things that affect human senses, need to be reduced to ensure a comfortable and healthy living environment. Although the number of complaints regarding these problems has been decreasing, they still make up a relatively large portion of total complaints. Their sources are many and increasing.

The government has so far been unable to gain satisfactory results in its effort to attain certain noise standards in the transportation sector and new problems, like that of ultra-violet rays, are arising. The government will promote the following measures to fight these problems.

5.1. Noise and Vibration Control

The government shall promote the following measures to prevent noise and vibration pollution.

5.1.a. Automobile Traffic

The Government shall promote comprehensive measures to decrease noise pollution from traffic and other sources. These include regulation of noise from individual automobiles and measures to ease the flow of traffic, such as, the development of bypasses and loops. Likewise, noise proof walls and the establishment green buffers shall be promoted. It will examine measures on appropriate roadside zoning laws and will implement measures to decrease automobile vibrations.

5.1.b. Shinkansen and Airplanes

The government shall promote measures to prevent noise and vibration pollution from shinkansens and noise pollution from airplanes. These include measures to stop noise at the source, measures to implement zoning laws and to employ sound-proofing techniques.

5.1.c. Railways

The government shall promote measures to prevent conventional railway noise and vibration pollution. These include examining the possible use of sound indicators.

5.1.d. Factories and Construction Site

The government shall promote measures to prevent noise and vibrations from factories, the work-place and construction sites. Regulations to control noise and vibration pollution at the source, technology developments and zoning laws supporting relocation shall be promoted.

5.1.e. Residential

The government shall promote measures to prevent residential noise pollution, such as the disbursement of educational materials.

5.2. Offensive Odor

The government shall promote zoning laws supporting relocation, emission regulations and the disbursement of educational materials.

5.3. Other

The government shall promote the continued implementation of anti-dust measures. It shall simultaneously promote investigations into the burdening effects of a thinning atmosphere and ultra-violet rays.

6. Establishing a System for Monitoring the Atmosphere

The establishment of an effective atmospheric monitoring system is necessary to implement adequate measures for atmospheric conservation. It shall be implemented in cooperation with local governments and shall be employed to monitor both regional and global problems, their character and their expansion. Ocean based and space based monitoring systems shall be utilized and ultimately, a systematic monitoring procedures shall be established.

Additionally, employing the help of local residents in this effort shall be considered.

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Section 2. Conserving the Water Environment

Water circulates in the nature in the form of evaporation, precipitation, seepage, standing, downstream flowing and flushing into the sea. In such process, water purifies itself of pollutants. On the other hand, water is utilized and recycled in many ways through various socioeconomic activities, which impose burdens on the water environment at each stage of utilization.

Therefore, it is important to limit burdens on the water environment within the nature's capacity of purification in the process of water circulation. Considerations must also be made on the burdens on the water environment through atmosphere and soil, and on the effects on the atmospheric environment or ecosystem through the deterioration of the water environment. To address these problems, we must take an integrated view of conserving the quality and quantity of water, aquatic creatures and waterside areas. In these regards, policies shall be promoted to reduce burdens on the water environment at every stage of water utilization, to protect aquatic ecosystems, and to secure environmental safety.

1. Environmentally Sound Water Circulation

Natural circulation of water has changed for a number of reasons. The depopulation and progressive aging of rural communities has created difficulties in maintaining rural forests and farmlands while urbanization has prevented seeping, causing springs to run dry. Water is, likewise, being burdened at each stage of utilization. The following measures shall be promoted to address these problems.

1.1. Achieving the Environmental Quality Standards and Other Targets

In order to reduce burdens on water resources at each stage of water utilization, bearing in mind that water utilization and circulation must go hand in hand, scientific knowledge shall be cultivated and aggressively applied. Environmental target standards to ensure human health and mankind's living environment shall be formulated and measures shall be promoted to achieve and maintain these targets. Regular revisions of environmental quality standards to protect mankind's living environment shall be promoted since changes in certain aquatic regions' utilization targets and circumstances may occur after having their classifications set. More extensive investigations shall be promoted for environmental target standards which focus on their impact on aquatic life.

REFERENCE 8

Environmental quality standards on water quality

(based on the Basic Environmental Law):

Environmental quality standards have been set for the following water contaminants in order to protect human health:

Cadmium, total cyanide, lead, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCBs, dichloromethane, tetrachloromethane, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, tetrachloroethylene, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene and selenium. Environmental quality standards have been set for the following water contaminants to conserve mankind's living environment:

Rivers and Streams:

hydrogen-ion density, the amount of biochemical oxygen demand, floating substances, dissolved oxygen and coliforum bacillus groups.

Lakes and Marshes:

hydrogen-ion density, the amount of chemical oxygen demand, floating substances, dissolved oxygen, coliforum bacillus groups, nitrogen and phosphorus.

Oceans:

hydrogen-ion density, the amount of chemical oxygen demand, dissolved oxygen, coliforum bacillus groups, extracted substances in normal hexane, nitrogen and phosphorus.

1.2. Restoring and Maintaining Sound Water Circulation

It is necessary to restore and maintain soundly functioning water circulation. Therefore, proper maintenance management activities shall be promoted, like tending and cultivating forests which play an important role in water purification or managing agricultural lands, like rice fields which act as water reserves and recharge ground water.

The conservation of water quality, quantity, aquatic life and the aquatic environment shall be promoted to restore and maintain the natural purification ability of lakes, rivers, streams and marshes. To ensure sound water circulation in metropolitan areas, utilization of sewer refuse, vegetation, permeable pavement and the establishment of seeping measures for rainwater shall be promoted. Conservation shall be promoted in coastal waters, natural coastlines, tidal flats, seaweed beds and shallow water areas. Moreover, the development of artificial tidal flats and beaches, which also aid in water purification, shall be promoted.

1.3. Measures in Accordance with Specific Regional Characteristics

To ensure the sound circulation of water, measures shall be promoted which are adapted for the particular characteristics of the region. With the cooperation of local communities and businesses, universal methods for evaluating water quality, quantity, aquatic life and other aquatic environments shall be studied.

1.4. Fair Burden Sharing

Measures shall be examined to ensure fair burden sharing between the different sectors of society. The voluntary and active participation of all citizens shall be encouraged and the cooperation between riparian local governments shall be promoted.

2. Reducing Environmental Load at Each Stage of Water Use

Environmental burdens are generated at each stage of water utilization. The government shall promote measures to reduce this burden along with measures to stop pollution before it starts.

2.1. Types of Environmental Burdens and Their Reduction

The following measures shall be promoted to reduce environmental burdens, depending on the type of environmental burdens generated.

A.

Regulations on proper waste water disposal shall be promoted for factories and other business enterprises. They shall be encouraged to incorporate water recirculation systems into their production processes. Buildings, in general, will also be encouraged to employ water recirculation systems and to utilize rain water.

B.

As for domestic waste water, improved sewage systems shall be promoted and depending on the location, agricultural community sewage treatment facilities and/or combined treatment septic tanks shall be encouraged. Special plans shall be formulated for areas of particular domestic waste water concern. At the same time, information about ways to reduce domestically produced pollution (e.g. from the kitchen) will be disseminated.

C.

Measures to clarify the actual burden caused by indiscreet pollution sources in urban and agricultural areas shall be researched. The development and dissemination of technology to handle urban and agricultural waste water shall be promoted.

2.2. Developing and Disseminating Technology for Water Conservation

Advanced sewage treatment system technology shall be developed and disseminated. Waste water treatment technology for small scale factories shall be simultaneously developed, as will advanced technology for combined treatment septic tanks. These shall be promoted to reduce the environmental burden caused domestically and by small scale factories which are not currently the target of any waste water control policies.

2.3. Ensuring the Safety of Water Environment

The following measures shall be promoted to ensure safe water.

A.

To reduce the burdens on water resources, chemical substances that may have adverse effects on human or aquatic organisms shall be properly managed by introducing production processes that reduce discharges of those substances and by improving utilization methods of such chemicals. At the same time, regulations on toxic substance discharges, underground infiltration and agricultural chemicals shall be more properly implemented. Proper waste disposal shall be ensured and anti-accident measures formulated.

B.

Trihalomethanes can be formed, for example, when chlorine empties into water purification plants. Discharging trihalomethane forming substances by industrial or domestic sources, shall be regulated. Similarly, measures shall be introduced at water purification plants and for rivers and streams.

C.

Concerning underground water contamination by toxic substances, measures to increase methods of clarifying the contaminating mechanism and purification technologies shall be implemented.

D.

Research shall be promoted to clarify the cause and effect of underground water contamination by nitrate nitrogen. Potential measures compatible with the special characteristics of the region and/or source shall be studied.

E.

Measures shall be implemented to remove toxic substances from the ocean floor.

3. Conserving the Environment in Closed Water System

Levels of organic pollution in lakes, marshes, inland seas, inner bays, rivers and streams in urban areas and other closed bodies of water have stabilized and, in some areas, have shown improvement. However, compared to other bodies of water, the improvements have been rather unsuccessful. Therefore, the following measures shall be promoted.

A. Accumulation problems

Closed water and urban river and stream areas, areas where pollution and contaminants tend to accumulate, shall be comprehensively investigated and appropriate measures shall be promoted.

B. Improving sources of tap water and river quality

To improve the quality of tap water sources and seriously polluted urban rivers and streams, discharge regulations and sewage improvements shall be promoted. Facilities shall be established to treat domestic waste water and measures shall be implemented to ensure water quality and quantity in rivers and streams.

C. Specific measures

Measures shall be promoted for places of particular concern, such as lake Biwa, Tokyo Bay, Ise Bay and the Seto Inland Sea. These measures shall be based on the Lake and Marsh Water Quality Conservation Plan and the Total Pollution Reduction Plan. These measures shall be promoted in coordination with domestic discharge measures.

REFERENCE 9

Water quality targets for lakes

For designated lakes under the Law Concerning Special Measures for Lake Water Quality Conservation, the Lake Water Quality Conservation Plans set water quality targets to be achieved in five year period, foreseeing the achievement of environmental quality standard.

REFERENCE 10

Water pollutant reduction targets for inland seas

Basic Plan for Total Water Pollutant Reduction (January 1991) and the Total Pollution Reduction Plans (March 1991) set targets of reduction of water pollutants in terms of chemical oxygen demand to be achieved by 1994 for Tokyo Bay, Ise Bay and Seto Inland Sea.

D. Eutrophication

Environmental water standards for nitrogen and phosphorous shall be promoted for lakes, marshes and ocean region to prevent eutrophication. The establishment of domestic waste water treatment facilities for sewers and sewage in targeted water areas shall also be promoted. Regulations shall be implemented for waste water and water quality shall be improved.

E. Organic sludge

Organic sludge accumulation cleanup measures, such as dredging, shall be implemented in rivers, streams, lakes, marshes, ports and other water areas.

4. Conserving the Marine Environment

Although the number of reported oil spills has been decreasing, waste being dumped into the ocean has continued unabatedly. In an attempt to stop such pollution, the following measures shall be promoted.

A. From land

Investigative surveys shall be performed to better understand the total burden being imposed on the ocean from land (e.g. discharged by rivers). Appropriate measures shall be introduced.

B. From ships

Appropriate measures shall be introduced to restrict oil, toxic liquids and other waste dumping from ships.

C. From tankers

Preventative measures shall be promoted to protect against oil spills. Preparations shall be made to handle them if they do occur and measures for an oil compensation security system shall be promoted.

D. Investigations

Ways to decrease the amount of gas discharged by ships shall be investigated.

E. Studies

Measures to prevent pollution caused by activities on the ocean floor shall be studied.

F. Other

The development of new technologies and research shall be promoted to combat floating waste, massive oil spills and the use of inorganic tin coatings on the bottom of ships' hulls.

5. Establishing a System for Monitoring the Water Environment

An effective monitoring system must be established to implement proper conservation measures and to fully understand the state of the water environment. The following measures shall be promoted.

A.

Systems shall be established by the government to effectively carry out environmental quality standards monitoring for designated items. The results of these monitoring activities, which will require the cooperation of related ministries, agencies and local governments, shall be used to formulate and implement a water quality evaluation plan.

B.

Comprehensive measures for evaluating the water environment using biological indicators shall be established and surveys shall be conducted with the cooperation of local residents.

C.

Comprehensive surveys and monitoring shall be conducted to check the regional expansion of ground water pollution.

D.

Comprehensive evaluations and surveys shall be conducted to conserve the ocean environment.

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Section 3. Conserving the Soil and Ground Environment

The soil environment is crucial for water purification, food and timber production, etc. It plays a key role in ecosystem maintenance and nature's restoration process. It must, therefore, be conserved.

In addition, the Government shall promote measures to conserve the ground environment, through preventing ground subsidence and maintaining environmentally sound underground water circulation.

1. The Safety of the Soil Environment

Although pollution prevention measures have seen steady progress in agricultural areas, there have been an increasing number of pollution cases identified by underground water surveys and factory site redevelopment projects.

To solve these problems, scientific knowledge on the impact of contaminated soil on human health and the ecosystem shall be accumulated and environmental quality standards shall be set taking into consideration the relationship between different environmental media. To maintain sound soil and to restore contaminated soil, the following measures shall be implemented, with special attention to the movement of pollutants between it, water and air.

A.

Regulations shall be properly implemented on the discharge of toxic substances, smoke and on agricultural chemicals.

B.

Measures to prevent pollution from mining activities shall be promoted.

C.

Investigations and surveys on the contamination of urban and agricultural areas shall be instituted.

D.

Considering the extent and range of contamination and its impact on surrounding nature, efforts shall be made to improve soil that does not meet the environmental quality standards so that these standards are attained. For this, the Government shall promote measures for soil contamination in agricultural areas. Regarding contamination in urban areas, the Government shall promote development of technologies for environmental remediation and other measures.

REFERENCE 11

Environmental quality standards for soil pollution

(based on the Basic Environment Law)

The Government has set environmental quality standards for the following soil contaminants:

Cadmium, total cyanide, organic phosphorus, lead, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCBs, copper, dichloromethane, tetrachloromethane, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, tetrachloroethylene, 1.3-dichloropropene, thiuram, simazine, thiobencarb, benzene and selenium.

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2. Conserving the Ground Environment

The state of ground subsidence, once a grave problem in various parts of the country, have been decreasing in general. Nevertheless, severe ground subsidence still remains to be observed in some districts. Therefore, to conserve the ground environment, the following measures shall be promoted.

A.

Environmentally sound underground water circulation shall be maintained through promoting measures for conserving groundwater, such as the control of groundwater pumping-up which brings about ground subsidence, the securing supply of substitute water in order to reduce the pumping-up of groundwater, the encouragement of rainwater seepage into ground by planting trees, constructing permeable pavements, and installing permeable "cubes".

B.

Research into the cause of falling groundwater levels accompanying underground space utilization shall be promoted. Technology developments shall be encouraged for the prevention of going down of groundwater level among others. Furthermore, measures shall be considered to prevent environmental damage caused by utilization of underground space.

C.

As for areas where severe ground subsidence is observed and areas suffering severely from the effects of ground subsidence, appropriate measures shall be taken to achieve targets such as those established in the Outline of Measures for Preventing Ground Subsidence.

D.

Monitoring surveys shall be implemented to collect precise information, such as the volumes of groundwater pumping-up and the present state of ground subsidence nationwide.

REFERENCE 12

Targets for Ground Subsidence Prevention

The Outline of Measures for Preventing Ground Subsidence (April 1985 for the Nobi Plain and the Chikugo-Saga Plain, November 1991 for the Northern Kanto Plain) establish the target for volumes of groundwater puming-up to be achieved by fiscal year 1994 (2000 for the Northern Kanto Plain)

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Section 4. Policies on Waste and Recycling

As socioeconomic activities have developed and become characterized by mass-production, mass-consumption and mass-disposal, the total volume and variety of waste have increased. Land-fill capacity is becoming strained. At each stage of activities from resource extraction to waste disposal, more and more burden on the environment is generated. Therefore, a socioeconomic system which can attain a state of sustainable development must be developed, by enhancing cycling of material within the socioeconomic system.

Policies on waste and recycling shall be promoted along the following direction. First, generation of waste should be reduced. Second, reuse of used products should be promoted. Third, waste should be recycled into raw materials. Where the technological level makes such recycling difficult or not economically feasible, heat recovered from incineration should be used as energy source, taking sufficient measures to prevent adverse environmental effects. Waste that was generated finally should be disposed of in an appropriate manner.

Furthermore, a new socioeconomic system needs to be created where responsibilities and costs on waste and recycling are shared among business, consumers, local governments and the national government as necessary. In such a new system, there should be incentives to reduce waste generation and recycling at each stage of product development, manufacturing, import, distribution, consumption, collection and regeneration.

The government, aiming ultimately at achieving a zero-waste society, shall take appropriate measures to reduce waste and promote recycling. At the same time, studies shall be made on the way to share burden fairly. The government shall also promptly promote studies on targets for waste and recycling policy. These targets shall be established and revised as necessary.

1. Reducing Waste Generation

Apart from promotion of recycling, measures shall be taken to discourage the production and sales of disposable goods and excessive packaging practices, and to encourage consideration in design, manufacturing and distribution of products such as making them more durable. Likewise, people shall be encouraged to reconsider their lifestyle and to refrain from using disposable goods. Economic measures, such as collection of fees in accordance with the volume of household waste, shall be utilized to encourage waste reduction. Other measures include promotion of national campaigns to reduce waste, and the dissemination of information on waste disposal.

As for controlling the generation of toxic waste, consideration in product design and manufacturing shall be promoted.

2. Promoting Recycling

2.1. Reuse

Measures shall be promoted for standardization of containers for easy reuse, facilitation of exchanging and/or selling of used products, etc.

2.2. Collection and Regeneration

To reduce environmental burden, it is necessary to promote the regeneration of resources from waste and the collection and reuse of recyclable resources.

For this purpose, the government shall take measures to encourage producers to make their products easier to recycle, to improve the resource recovery system through separate collection by municipalities an utilization of product distribution network, and to maintain of proper collection system of used paper. To encourage recycling, the government shall consider the introduction of economic measures such as a deposit refund system, and of a system for reclaiming of used product by producers etc. Measures shall be promoted to encourage corporations to achieve the targets on the use of recycled materials and to improve the regeneration capacity taking into account the specific conditions such as development of new usage of recycled materials. The use of recycled products shall be promoted and their markets shall be broadened through promotion and encouragement of increased use of recycled products by the central and local governments, corporations and people, taking into account the fact that recycled products are more expensive compared to products manufactured from virgin materials. Studies on standardization of recycled products shall be promoted. As a foundation to these measures, the government shall promote development and dissemination of recycling technologies along with cooperation and communication between different sectors of industry, as well as promoting public relation activities, national campaigns for recycling, and provision of information.

As for recycling of construction by-product such as gravel, dirt, sludge and scraps, measures such as information exchange shall be promoted, taking a broader geographical view.

REFERENCE 13

Targets on recycling of paper and glass

(The Order of Ministry of International Trade and Industry, October 1991, base on the Utilization of Reclaimed Resources Promotion Act)

Recycled paper utilization

55%(in 1994)

Glass cullet utilization

55%(in 1995)

REFERENCE 14

Targets on recycling of metal cans

(Council for Industrial Structure, Waste Disposal and Resource Reclamation Subcommittee Report, November 1990)

Steel can reclamation

over 60% (in 1995)

Aluminum can reclamation

60% (by the end of 1994)

2.3. Packaging

In order to reduce waste and environmental burdens related to packaging, the government shall consider the introduction of a new system where municipalities undertake separate waste collection and the industry undertakes reclamation and resource regeneration, and take necessary measures. Studies from a broad perspective shall be made about a system including the utilization of economic instruments such as reflecting on the product price the costs needed for reclamation and regeneration.

2.4. Recycling Facilities

Aiming at creating a "zero-waste society" where waste circulates in the socioeconomic system, almost all of the waste disposal shall be changed from the one which only incinerate and bury the waste to the one which promotes recycling as much as possible and utilizes the heat from incineration, in about the beginning of the 21st century.

Technology development shall be promoted for recovering fuel oil from plastics, fusing and solidifying of incinerator ashes, heat utilization and power generation, and production of solid fuel from waste.

2.5. Environmental Consideration in Recycling

The government shall study the effects of recycling on the environment, collect information on toxic substances possibly contained in recycled products, and consider necessary measures.

3. Promoting Proper Waste Disposal

3.1. Disposal Facilities

Landfill sites and intermediate processing facilities shall be developed to promote proper waste disposal including sufficient environmental consideration. For landfill sites, cooperation between local authorities shall be promoted, and especially in large urban areas, measures shall be taken with a broad view across the prefectural borders.

Development of disposal facilities for industrial waste disposal, which is the responsibility of corporations who generate it, shall be promoted involving public sector as necessary.

3.2. Cooperation Between Local Governments and Corporations

Difficulties arising in the disposal of product which have been use must first be evaluated by companies. Then, products which can be easily disposed of must be developed. The availability of information, in this regard, to local governments shall be promoted.

In principle, municipalities are responsible for disposal of household waste. However, several types of products are designated as being difficult to dispose of, such as large refrigerators. In such matters, cooperation of industry to municipalities shall be promoted, such as encouraging the collection of used appliances by retailers and their disposal outside the municipal waste disposal system.

3.3. Environmental Consideration in Waste Disposal

To conserve the environment around landfills, strict monitoring and dumping controls shall be strengthened. Likewise, there shall be strict long-term management after the landfill is closed. Investigative surveys shall be performed as well to enhance their construction and thereby increase their trustworthiness.

To promote proper disposal of toxic waste, the government shall additionally designate types of industrial waste needing special control, strengthen the the governments for landfill, and promote development of appropriate technology for waste disposal. The body of knowledge about environmental impacts of waste disposal shall be increased, including evaluation of toxicity of waste. Management systems, set up to study appropriate methods for waste transport and disposal shall be employed and illegal dumping and disposal shall be prevented (a "manifest system").

When illegal disposal occurs, immediate measures to return the environment to its former state shall be ensured. Maintenance of a framework of measures to prevent litter shall likewise be promoted and necessary education provided.

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Section 5. Policies on Environmental Risks of Chemicals

There is no denying the usefulness of chemical substances. However, their production, use and disposal can have harmful effects on both the ecosystem and on human health. There is little known about the harmful effects of many of these chemical substances. The environmental impact of the substances which are generated through reaction in the environment and combustion of Chemical substances must also be considered.

Potentially harmful effects on human health and the ecosystem from the production, utilization and/or disposal of chemical substances must be prevented before they occur. To prevent these harmful effects and to ensure a safer environment, various measures shall be taken such as evaluating the environmental risks and comprehensively reducing those risks.

1. Evaluating Environmental Risks

Environmental risks on human health and the ecosystem resulting from the production, use and/or disposal of potentially toxic chemicals must be evaluated in cooperation with international environmental risk evaluation and risk management programs. The Government shall take measures for proper risk assessment, to improve our knowledge on environmental risks of chemical substances, such as characteristics of the substance (e.g. health impact, ecological impact, decomposition, accumulation), fate and behavior (e.g. emissions, movement between environmental media, reactions, biological metabolism), environmental concentrations, extent of human exposure, etc. The measures also include appropriate provision of information on the environmental risks, and studies on more effective and comprehensive risk estimations and administration procedures. Studies shall also be made for understanding environmental risks through different environmental media such as air and water, and on compound effect of different chemicals. The result of these studies shall be used for policy implementation.

2. Reducing Environmental Risks

To reduce the environmental risks in producing, using and disposing of these types of chemicals, the government shall implement measures to restrict their discharge into the atmosphere, water or land. In accordance with the level of toxicity, their manufacture and use shall be controlled. Substitute technologies and products shall be developed and disseminated. Measures for their appropriate collection and disposal shall also be implemented.

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Section 6. Environmental Consideration in Technological Development etc.

As new technologies are developed and utilized, there is a possibility of new impacts on the environment. When it is foreseeable that the use of certain technologies may be burdening to the environment, environmental aspects of this new technology shall be thoroughly examined from the phase of technology development. Appropriate measures must be implemented, with the

ultimate goal of preventing these problems before they occur. The fruits of high technologies shall be affirmatively applied to environmental conservation.

When its is feared that environmental problems other than those mentioned above will occur as a result of environmental loadings of human activities, the government shall make efforts to take precautionary action to prevent such problems, together with the continuous efforts to improve our scientific knowledge.

The Basic Environment Plan - Part III-Chapter 2

PART III. FUTURE POLICY ON ENVIRONMENTAL CONSERVATION Chapter 2.Harmonious Coexistence Between Nature and Humankind

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1. Basic Direction

The soundness of the ecosystem, in all of the various regions, must be restored and maintained through a wise use of the environment. Everyday life, business activities and leisure activities, wherever they may be, must be an enriching experience for both nature and humankind. Thus harmonious coexistence between nature and people will be attained.

Taking into consideration the land's natural and social properties, the government shall implement various measures along the following directions. Consideration shall be made to maintain coordination with measures, to conserve the atmosphere, the water and the soil.

1.1. Preserving Primitive Nature

Primitive nature of international, domestic and regional importance shall be carefully conserved through public acquisitions and strict regulations of human activities in such regions, as priceless and dwindling treasures which form the core of Japan's ecosystems. They can also be utilized as symbols to obtain spiritual inspiration, as places to perform ecological research and, with appropriate administration for preservation, can be used as a place to study and experience nature.

1.2. Conserving Superior Nature

With wildlife's habitats, reproduction, landscape and scarcity in mind, places of important natural value shall be conserved by regulatory measures and conservation activities to keep ecosystems found in such places healthy. Necessary basic facilities shall, likewise, be established to ensure that these places, where radiant landscapes and wildlife come together, can be used as a type of natural laboratory.

1.3. Forests, Farmlands and Waterside Areas

The appropriate use of wood, agriculture and marine products from our forests, farmlands and waterside areas shall be maintained. By constructing public facilities and promoting civil conservation activities the natural environment shall be maintained. The entire natural environment, as a habitat and breeding ground for wildlife, must be ensured as well as possible. It is the place where life's resources, plants, water and fresh air can be experienced.

1.4. Expanding the Natural Environment

Natural environments have been decreasing in places. By promoting the enterprise of public facility maintenance and civil conservation activities natural and semi-natural environments like small animal habitats, parks, green spaces and shorelines shall be maintained. The natural characteristics of the region shall be considered when the environment is being restored and maintained. The natural environment can be used as a place where people can come into contact with nature such as plants, water and small animals in everyday life.

1.5. Management of Fauna and Flora

The plant and animal kingdom, their species, each individual, their habitats and breeding grounds are a fundamental elements of the ecosystem's structure. Their conservation shall be appropriately managed.

2. Comprehensive and Systematic Policy Implementation

Measures must be designed with scientific clarity as to the workings of each ecosystem, whether regional, national or global in scale. They must be designed so that they take into account

people's need to come in contact with nature. The ecosystem must be restored and maintained in a sound and healthy manner. It must ensure that people and nature can coexist with one another harmoniously everywhere. The measures given below shall be systematically implemented and targets shall be set up as needed.

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Section 1. Coexistence Compatible with the Region's Natural/Social Characteristics

Places where people can interact with nature should be secured so that people can learn, experience and feel the fullness of nature. Of course, this can only take place if the nature in these regions is conserved according to its natural characteristics. The natural environment is the basis for sustaining food and wood production and its riches must be ensured.

To accomplish this objective, the following measures shall be comprehensively and systematically promoted, keeping in mind the particular characteristics of each region, such as mountainous areas, countryside areas, areas with high human impacts, or coastal seas.2 It is important to carefully consider that first, Japan's climate ranges from the subtropics in the South to the sub-Arctic in the North. Second, the mountains, forests, grasslands, farmlands, roadsides, residential areas, lakes, marshes, rivers, streams, swamps, tidelands, coasts and coral reefs found in nature each have their own special characteristics. Third, it is necessary to consider natural areas in wide areas such as river basins.

In implementing these measures, attention must also be paid to the forest's function as a carbon dioxide sink.

1. Mountainous Areas

The mountainous areas, where population density is low and covered by vast forests, contain much of Japan's natural forests and are home to many large wild animals including deer, bears and monkeys. The mountains are characterized by a low degree of human interference, as compared to other areas. They form the skeletal framework for the entire ecosystem of Japan. It is necessary to conserve primitive nature as well as places of important natural beauty which are found in mountainous areas. These areas must be available for people to interact with nature and for people to perform research in them. As communities within these areas experience population decreases and increases in the percentage of elderly persons, the environmental conservation capacity of these areas becomes more problematic. For the aforementioned reasons, the following measures shall be promoted.

1.1. Primitive and Outstanding Nature

1.2. Forests, Farmlands and Waterside Areas

A.

Closely interrelated primitive nature with their ecosystems, combined with splendid landscapes is typically representative of Japan. These areas shall be conserved by designating special areas, such as nature conservation areas , forest ecosystem conservation areas and national parks. They shall further be protected by strictly regulating activities within their borders and by promoting public acquisition.

B.

The habitats and breeding grounds found in places of important natural beauty, places blessed with beautiful landscapes, which are delicate, rare and unique shall be conserved. These areas shall be conserved by designating special areas, such as wildlife conservation areas, national parks, nature conservation areas or by designating certain areas as national treasures or conservation forests and by regulating activities within their borders. Areas which should have been conserved, but for some reason, artificial or natural, have not, shall be reforested and/or have their landscapes restored.

C.

Ways to ensure close cooperation between the conservation areas mentioned in A and B shall be closely examined.

D.

In these conserved areas, facilities should be systematically promoted to ensure experience and interaction with nature. Such activities should include nature explorations, wildlife observations and nature interpretation activities. In particularly important areas, land acquisition and the establishment and/or maintenance of facilities shall be promoted. These activities shall all be performed in a comprehensive and systematic manner, with the appropriate administrative systems provided.

A.

According to the region's particular characteristics, forest maintenance projects, to create, nurture and manage forests shall be promoted. These will ensure that appropriate forestry methods are employed like indigenous wood and multiple layered forestry.

B.

Environmentally friendly farming techniques shall be promoted. This includes consideration on wildlife habitats and breeding grounds, and reduced use of agricultural chemicals. This shall be suited to each region's own special characteristics and in cooperation with consumers.

C.

Comprehensive measures to ensure job opportunities and to maintain the environment in agricultural villages located in the mountains must be introduced. Human resources, responsible for maintaining and creating forest and farmland environments, shall be secured.

D.

Proper maintenance of agricultural land shall be promoted through community activities with the participation of local residents. Public assistance shall be considered if necessary.

1.3. Environmental Considerations in Public Works

When implementing public projects for such things as roads, rivers or farming communities, proper consideration shall be given to wildlife habitats, breeding grounds and landscape conservation.

2. Countryside Areas

Countryside areas are marked by relatively low population concentrations, a moderate amount of forest land, a great deal of secondary nature and many medium to large animals. Countryside areas have been shaped by human activities such as agriculture, forestry and fishing. These areas are witness to many different relationships between wildlife and humans and form what has become known as the archetypal Japanese 'hometown.'

It is necessary to attempt to conserve natural areas and to utilize them as places for human interaction with nature. It is also important to attempt to maintain forests and farmlands, particularly in regions with shrinking populations and a high proportion of elderly people. Likewise, secondary nature, such as wooded areas, should be appropriately managed. To achieve the aforementioned goals, the following measures shall be promoted.

2.1. Superior Nature

A.

Places of important natural beauty, such as wildlife habitats and breeding grounds, land blessed with tremendous landscapes and nature which is delicate, rare and unique shall be conserved. By designating special areas, such as wildlife conservation areas, nature parks, nature conservation areas, national treasures, green spaces or conservation forests and by regulating activities within their borders, these areas shall be conserved. Projects shall be promoted in areas, which should have conserved, but which, for some reason, natural or artificial, have not. These projects shall include reforestation and landscape restoration activities.

B.

In Countryside areas, substantive interaction between people and nature takes place in many ways. Field trips, camping, fishing and other outdoor activities in nature bring people in closer contact with nature. To ensure these types of interaction, facilities shall be promoted and their utilization encouraged. In areas of special importance, public land acquisition and the establishment or improvement of facilities, shall be promoted and administration systems provided.

2.2. Forests, Farmlands and Waterside Areas

A.

According to each region's particular characteristics, forest maintenance projects shall be systematically promoted in order to create, cultivate and maintain forests, as well as

ensure proper forestry techniques such as indigenous wood and multiple layered forestry.

B.

Environmentally friendly farming techniques shall be promoted. This includes consideration on wildlife habitats and breeding grounds, and reduced use of agricultural chemicals. This shall be suited to each region's own special characteristics and in cooperation with consumers.

C.

Comprehensive measures to ensure job opportunities and to maintain the environment in agricultural villages located in the mountains must be introduced. Human resources, responsible for maintaining and creating forest and farmland environments shall be secured.

D.

Proper maintenance of agricultural land shall be promoted through community activities with the participation of local residents. Public assistance shall be considered if necessary.

E.

Nature determined to be in need of maintenance such as wooded areas, rice fields in valleys and aquatic areas shall be maintained and expanded. These shall be accomplished by tax measures, local and State participation and the cooperation of private sector conservation activities. To further promote interaction between people and secondary nature, the establishment of "nature paths" shall be promoted.

2.3. Parks and Green Spaces

According to the characteristics of the region, provisions of public facilities, like parks and green spaces, shall be promoted.

2.4. Environmental Considerations in Public Works

When pursuing public projects for roads, rivers, farming communities and the like, proper consideration shall be given to wildlife habitats, breeding grounds and landscape conservation. Likewise, the establishment and improvement of accessible green spaces and water areas shall be promoted.

2.5. Wildlife Habitats

With coordination between all of the conserved areas, the forests, farmlands and waterside areas, systematic wildlife conservation shall be promoted.

3. Areas with High Human Impacts

The "areas with high human impacts" have relatively high population densities, considerable areas of agricultural land and contain the majority of Japan's residential land. These areas are characterized by high concentrations of human activity within their borders. It is necessary to conserve the remaining natural forests and wetlands with their rich biological diversity. Likewise, forest and agricultural lands need to be created and maintained where they have disappeared. Secondary nature, such as woods and wooded residential areas need to be maintained to encourage human interaction with nature. Natural air purifiers and weather regulators, such as green spaces and aquatic areas are also needed. To secure these objectives, the following measures shall be promoted.

3.1. Superior Nature

A.

Superior nature, such as wildlife habitats and breeding grounds, land blessed with tremendous landscapes and nature which is delicate, rare and unique, as well as wooded areas in cities shall be conserved. By designating special areas, such as wildlife conservation areas, nature parks, nature conservation areas, national treasures, conserved green spaces, scenic areas or conservation forests and by regulating activities within their borders, these areas shall be conserved.

B.

In the areas mentioned above, to ensure interaction in everyday life, necessary facilities shall be systematically maintained and used in an environmentally friendly manner.

3.2. Forests, Farmlands and Waterside Areas

A.

Forest maintenance projects, tailored to each region's particular characteristics, shall be systematically promoted in order to create, cultivate and maintain forests, as well as ensure proper forestry techniques such as indigenous wood and multiple layered forestry.

B.

Environmentally friendly farming techniques shall be promoted. This includes consideration on wildlife habitats and breeding grounds, and reduced use of agricultural chemicals. This shall be suited to each region's own special characteristics and in cooperation with consumers. Farms located within cities shall be used as green spaces.

C.

The woods, wooded areas and waters remaining in cities, which have for the most part been recognized as necessarily deserving maintenance, shall be maintained in the same way as in countryside areas.

3.3. Urban Areas

A.

Comprehensive plans shall be made to encourage a natural environment in urban areas so that people can interact with nature everyday. These plans shall include conserving the remaining greenery, building parks and promoting tree planting.

B.

Tree planting and other activities which increase vegetation in cities shall be promoted in residential areas, factories and governmental facilities.

3.4. Environmental Consideration in Public Works

When pursuing public projects for such things as roads, rivers, airports and farming communities, due consideration shall be given to wildlife habitats, breeding grounds and landscape conservation. Likewise, the establishment and improvement of accessible green spaces and aquatic areas shall be promoted.

3.5. Coordination

There shall be coordination between all of the conserved environmental areas, the forests, farmlands, waterside areas and green spaces. Systematic and comprehensive efforts shall be promoted to ensure such integration.

4. Coastal Seas

"Coastal seas" refers to sea surfaces, underwater space and shorelines that fall within Japanese territorial waters. These areas, with diversified ecosystems, are characterized by tidelands, coral reefs and beds of seaweed. They are also especially rich in marine products. Superior nature must be conserved, while simultaneously ensuring that tidelands, coral reefs and seaweed beds be conserved. Moreover, it is essential that people be able to enjoy the sea, to interact with and experience it. The following measures, in coordination with marine pollution control measures, shall be promoted to ensure these objectives.

4.1. Superior Nature

A.

Places of important natural beauty, such as marine habitats and breeding grounds, underwater formations and seashores shall be conserved. This shall be accomplished by designating special areas, such as underwater marine parks, marine life conservation areas and special underwater conservation areas and by regulating activities within these areas. Restoration projects shall be promoted in areas which should have been conserved, but for some reason, artificial or natural, have not.

B.

Measure to coordinate conservation activities between the areas mentioned above shall be examined.

C.

To ensure that people are able to enjoy the sea, necessary facilities shall be created or maintained and their environmentally friendly utilization encouraged.

4.2. Tidelands and Seaweed Beds

Maintenance and administration of marine resources shall be ensured through fishery regulations. Tidelands and seaweed beds shall be conserved by designating certain areas as conserved waters for example. Consequently, the ocean's purification capacity shall be enhanced and the habitats and breeding grounds of numerous marine species shall be safeguarded.

4.3. Environmental Consideration in Public Works

A.

When pursuing projects to improve or establish harbors, fishing ports or coastal areas, careful consideration shall be given to conserving marine life habitats, breeding grounds and underwater formations. The establishment of green spaces and marine areas accessible to the general public shall be promoted.

B.

When reclaiming coastal lands, the location and scale of the project shall be considered from a conservation perspective. Tidelands must be given particularly careful attention. Tidelands and beaches shall be established and maintained as circumstances dictate.

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Section 2. Conserving Biodiversity

Biodiversity, as the foundation of humanity's existence and a necessity for a sound ecosystem must be conserved. It is a basic element which ensures sustainable utilization of biological resources. Every group of each individual species found in every region shall be conserved and the conservation of the entire ecosystem shall be ensured.

To conserve biodiversity at each of the ecosystem level, interspecific level and intraspecific level, a national strategy based on the United Nations Convention on Biological Diversity shall be promoted. Wildlife habitats and breeding grounds shall be conserved. Simultaneously, proper plant and animal management shall be planned. Measures provided the Section 1 to conserve wildlife habitats and breeding grounds, shall be coordinated with the following comprehensive and systematic measures.

1. Hunting and Trading

The hunting, collecting and/or trading of scarce plants, animals, birds or other wildlife shall be regulated. Projects for increasing conservation of their habitats and breeding grounds shall be promoted.

2. Managing Designated Species

Regarding wildlife, hunting shall be properly managed and healthy populations maintained. For certain designated species such as bears and monkeys the formulation and implementation of management conservation plans shall be promoted.

3. Introducing New Species

Measures shall be examined to control the impact of introducing new species into environments on isolated islands and places of important scientific interest.

4. Environmental Consideration in Projects

So that human activity does not impose irreversible burdens on wild animal and plant life, research and surveys shall be performed when implementing certain projects, tailored to the type and content of the project. Habitats and breeding grounds, which could be adversely affected, shall be given due consideration.

5. Investigative Research

Scientific research on wildlife species and ecosystems shall be promoted in the following manners.

A.

To establish a research system, human resources shall be trained, museums and specialists shall be networked and private participation shall be encouraged.

B.

To encourage research on primitive nature extensive basic facilities, open to all researchers, shall be systematically established.

C.

The establishment of a system to collect, analyze, store and disperse information about biodiversity shall be promoted.

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Section 3. Securing and Utilizing the Blessings of a Sound Environment

1. Various Efforts in Regional Planning

1.1. Ensuring Environmental Amenities

To ensure an abundant natural environment and its amenities the following efforts shall be promoted in response to the various characteristics of regions.

1.1.a. Atmosphere

To ensure a clear, tranquil and refreshing atmosphere ways to maintain excellent air, visibility and light quality shall be studied with the participation of local residents. Voluntary efforts such as increasing the amount of vegetation in regions shall be promoted.

1.1.b. Water

In order to secure high quality water resources with their ecosystems diverse in wildlife, measures shall be examined for the purpose of managing and maintaining rivers, streams, lakes, marshes, coastal waters, tidelands and other water areas. These measures, with the participation of local residents, should take an integrated view of the entire aquatic environment, including water quality, quantity, aquatic life and surrounding vegetation.

1.1.c. Conserving Scenic Integrity

When establishing facilities, efforts should be made to conserve the scenic integrity of the region concerned. Emphasis should be placed on maintaining harmony with the environment.

1.1.d. Conserving Historically Important Areas

Various systems to conserve cultural environmental heritages are being employed and, as another part of the natural environment, historically important environmental areas shall also be conserved.

1.2. Environmental Conservation by Private Organizations

In order to promote private environmental conservation activities, such as National Trusts, volunteer tree planting and cleanup campaigns, measures like tax incentives and tree planting agreements shall be employed. The managing and restoration of nature by commercial enterprises shall be promoted presenting awards.

1.3. Rural and Urban Interaction

To ensure human enjoyment of nature, leisure activities such as spending time in farming, mountain and fishing villages ("green tourism") shall be promoted as part of a cultural exchange between urban and rural areas. Also, forest maintenance by public organizations shall be

promoted by means of agreements. Additionally, the cooperation of forest owners and citizens to raise and cultivate new forests shall be promoted.

2. Responsible Utilization of Nature

2.1. Promotion of Responsible Recreational Use of Nature

To promote the responsible recreational use of nature, the following measures shall be promoted.

A.

Information about places where nature can be enjoyed and about how it should be used shall be promoted.

B.

The examination of different ways to experience nature shall be promoted. Likewise, the training and securing of nature guides, the providing of opportunities to observe nature and to gather in nature and the providing of outdoor education shall be promoted.

C.

Appropriate management systems for natural areas, in cooperation with the region concerned and those who use it, including remuneration for especially substantial service shall be developed.

2.2. Natural Hot Springs

For the enjoyment of nature's resources, the appropriate conservation and responsible use of natural hot springs shall be ensured.

The Basic Environment Plan - Part III-Chapter 3

PART III. FUTURE POLICY ON ENVIRONMENTAL CONSERVATION Chapter 3. Participation by All Sectors of Society Sharing Fair Burden

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Basic Direction

A society should be built where all sectors take part in activities for conservation of the environment. In achieving this goal, it is essential to ensure that each sector and group, in various socioeconomic activities, understand the expected roles for environmental conservation and significance of their actions, share the fair burden, and act voluntarily.

Therefore, the roles of the national and local governments, corporations, people and private organizations, together with their roles expected in each socioeconomic area will be clarified. Measures shall be implemented such as environmental education/learning, dissemination of relevant information, and other measures to promote actions on the part of corporations, people and private organizations, so as to encourage voluntary and mutually cooperative activities.

In addition, the government shall take the lead in making its operations environmentally sound, which is expected as both consumer and corporation.

Each sector of society, each party, must assume its fair share of burden, according to the environmental load they generate, the benefits they enjoy and the capability they have to contribute to environmental conservation. In so doing, it is indispensable that all parties recognize they generate environmental load, either directly or indirectly, through daily business activities or everyday living. It is also important that each party takes responsible action, such as the polluter pays the implementing cost of various measures for environmental conservation, in line with the Polluter Pays Principle advocated by the OECD etc. which requires that the cost of environmental use must be reflected in the price of goods and services. This is the basic concept of environmental policy, upon which various measures shall be implemented accordingly. It is also necessary that social fairness is ensured in both benefit and burden regarding the enjoyment and conservation of blessings of nature.

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Section 1. The Role of Each Sector

The government shall promote efforts in accordance with the roles outlined below, with a view to coordinating voluntary affirmative efforts by other parties. Local governments, companies, citizens and private organizations are expected to act voluntarily and actively according to their roles outlined below.

1. The State

The national government shall comprehensively promote efforts by society as a whole. It shall present goals, courses of action and roles which must be played for environmental conservation and shall implement measures. In addition, it shall establish the facilities necessary to assist each actor's efforts. It shall promote active and voluntary participation by each party. It shall also cooperate, join in other actors efforts and promote comprehensive environmental conservation measures.

In addition to this Basic Environmental Plan, the government shall set goals for environmental conservation tailored to each problem, including the establishment of standards. Whenever required, it shall present policies and guidelines, based on law, setting appropriate ways to share roles and shaping the entire image of Japanese environmental policy.

A.

The national government shall provide the means necessary for each actor to carry out their duties. For example, it shall implement environmental impact assessments, regulatory measures, economic measures. It shall, also, provide funding and promote scientific technology.

B.

To encourage active and voluntary efforts on the part of companies, citizens and private organizations, the government shall promote environmental education and learning. It shall likewise promote the support of private sector activities and the provision of access to information.

C.

The national government shall attempt to provide the necessary financing and/or technology for local governments which are independently adopting their own environmental conservation measures.

D.

International efforts for global environmental conservation shall be encouraged.

E.

The national government shall consider the environment when formulating and implementing policies which have the potential to cause environmental burden.

F.

As both an consumer and enterprise, the government shall take the lead in conservation activities.

2. Local Governments

The attainment of sustainable development depends greatly on regional environmental conservation. Therefore, the role of local governments is crucial. Local governments are expected, according to the region's social and natural characteristics, to set up and present goals

and courses of action. They should establish various systems, provide public facilities and promote voluntary activities. Their environmental policies should including those following the directions of national policies and those meeting the characteristics of the areas. They are expected to work in conjunction with the government, private citizens, companies and private organizations, to develop comprehensive regional policies.

A.

To promote pollution prevention and recycling in regional planning as a matter of necessity to decrease environmental burdens tailored to the regions special characteristics. A rich and plentiful environment should be ensured by conserving a natural environment and all of its amenities.

B.

To promote environmental conservation with the close cooperation of the business community and local citizens. This means providing educational centers, information, environmental education in school. It also means promoting the establishment of environmental training programs to ensure human resources and the introduction of environmental conservation measures aimed at companies.

C.

To promote integrated environmental policies in cooperation with the national government and neighboring local governments. For example, water resource management shall be conducted giving consideration to an entire river basin.

D.

To promote measures for international cooperation, drawing on past experiences of other local governments in environmental conservation.

F.

To promote policies integratedly and systematically, for example, by formulating basic plans concerning regional environment conservation.

G.

To take the lead in implementing environmental conservation efforts expected to corporations and consumers.

H.

Municipalities should implement environmental conservation efforts through regional planning as rudimentary local bodies. Prefectural governments shall promote wide ranging measures and coordination of measures implemented by municipalities.

3. Corporations

Corporations are responsible for a significant proportion of economy. Recently, the burden that normal business activities are causing on the environment is greatly increasing. Therefore, it is necessary for corporations, actively and voluntarily, to reduce burdens generated by their activities. This means taking measures to prevent pollution and actively engaging in conservation activities. It also means taking affirmative efforts to develop environmental conservation business

("eco-business,") as an essential ingredient for reaching a state of sustainable development with little environmental burden.

The central and local governments also take part in production and consumption, and as such, have the same role as other corporations have.

A.

To use materials and services with reduced environmental burden, such as recycled materials and streamlined physical distribution services.

B.

To reduce environmental burden resulting from business activities, by reducing the emission of polluting materials, minimization and appropriate disposal of waste, improved energy efficiency, environmental consideration in development projects, and so on.

C.

To contribute to the reduction of environmental burden generated during the whole life-cycle of products, by taking the environmental burden at all the stages into consideration in product design, providing information to consumers, reconsidering excessive packaging practices, and so on. (Life-cycle of a products means all the stages from material extraction, through production, distribution and consumption, to disposal.) In addition, to contribute to appropriate waste disposal and other activities to reduce the environmental burden after they are used.

D.

To participate in community conservation activities by tree-planting on corporate property, taking part in regional cleanup campaigns, and so on.

E.

To promote international cooperation, such as technology transfer, and to consider environmental factors in business activities overseas.

F.

To promote investments and technological developments for environmental conservation and to develop business activities related to the environment.

G.

To facilitate the employees' participation to environmental activities.

H.

To promote environmental management, which consists of establishment of corporate policies on environmental conservation, target-setting, plan-making, organizational arrangement such as appointment of managers, and audit of the system. In doing this, discussion at the International Standardizing Organization (ISO) should be taken into account.

I.

In addition to these, to contribute to national and local environmental policies.

4. People

Burdens inflicted on the environment through everyday activities are increasing. Unless these activities are altered the situation will become more problematic. Citizens shall be expected to voluntarily further their understanding of their relationship to the environment, to work to decrease the amount of burden that they are individually causing and to voluntarily work to improve their immediate surroundings.

In promoting environmental policy, it is important to make best use of the knowledge and experience of women. Cooperation between men and women shall be encouraged, in conjunction with other measures to improve the position of women in society. Likewise, it is necessary to further our children's understanding of the environment, so that environmental conservation shall be ensured through the next generation.

A.

To increase the chances to experience nature and learn about it. Such activities will further understanding about the relationship between people and the environment.

B.

To reduce environmental burden caused by daily activities. For example, people should choose environmentally friendly services and products, like recycled paper. They should refrain from using their private automobiles when such use is neither necessary nor urgent. They should also save electricity, reduce the amount of pollutants, such as detergent, they release, decrease total waste and cooperate in sorting waste for recycling purposes.

C.

To participate in regional environmental conservation including regional recycling activities, environmental cleanup activities and activities to increase the amount of vegetation. Additionally, citizens can participate in global environmental conservation by supporting the activities of private organizations.

D.

To cooperate with the national and local governments in the implementation of their measures.

5. Private Organizations

Private non-profit organizations play an important role in environmental conservation. They enable organized, publicly beneficial actions between the citizens and companies which create them. Their efforts include activities like recycling, education, research and tree planting. These private organizations have the ability to engage in activities that range from domestic, grassroots activities to international, global activities. The continued cooperation of these organizations is expected in various fields.

A.

To promote grassroots activities of private organizations, directed at conserving the regional environment, like recycling, tree planting and the National Trust. The cooperation of residents, companies and local governments should be promoted.

B.

To promote international activities such as reforestation, wildlife conservation projects, pollution control and international friendship programs.

C.

To promote environmental research into the state of the environment, the influence of pollution and the effectiveness of environmental measures, and so on.

D.

To promote environmental education and learning and other activities to raise environmental awareness and encourage voluntary activities on the part of corporations and people.

E.

To cooperate with the other sectors of society.

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Section 2. Promoting Voluntary Actions by Each Participant

To encourage voluntary actions by each and every member or group in society, the government shall promote environmental education and learning. It shall likewise devise measures to encourage concrete environmental conservation efforts. It shall promote the availability of information.

1. Promoting Environmental Education and Learning

Each member of society must understand the role that they play and the responsibility that they share for environmental burdens, otherwise sustainable development will never be realized. It is necessary that each be able to contribute in solving environmental problems and actively participate in environmental conservation. Regardless of age, each member must cooperate in the effort to maintain a healthy and sound environment in the community, whether in school, at home, at work or outdoors. Comprehensive education and voluntary learning shall be integratedly promoted.

In this effort, people's history of burdening the environment and the aspects of culture which helped to create this burden, must be more deeply understood. This cannot be accomplished by the mere transmission of knowledge and cold hard facts. To gain a real understanding of and to truly realize the importance of nature, people must experience it firsthand. In particular, the next generation, the youth in society, must be given the opportunity to experience the relationship between life and nature. In this way, they will grow to appreciate, understand and show concern for this relationship. Measures shall be improved to secure this understanding.

1.1. Environmental Education in School

Environmental education in school, as a fundamental part of learning which lasts our entire life, is essential. In elementary and high schools, the integration of environmental education in the curriculum in ethics classes and in special projects, shall be comprehensively promoted. Young people, in particular, should be given the opportunity to develop a sense of value for nature through firsthand experience.. Since this educational process is held to be so important, the opportunity to participate in activities where there is actual interaction with nature shall be affirmatively promoted. The government shall promote the training of teachers to improve their own understanding and perception of the environment, in order to increase their effectiveness in environmental education. Education shall depend upon the pupils' level of development. The government shall also take measures to improve and popularize teaching methods.

Textbooks made of recycled paper shall be promoted to give school children a concrete example of the advantages of recycling. Companies are expected to voluntarily cooperate in efforts to increase the utilization of these books. Likewise, the use of recycled paper in textbooks shall be promoted for those prepared by the government.

Furthermore, the government shall promote provisions for environmental education in higher education, in an attempt to cultivate well-rounded and able leaders.

1.2. Environmental Education Outside of the Classroom

1.2.a. Improving Learning Facilities

The government shall take measures to maintain environmental education and learning centers, where people can interact with nature. Coordination between these facilities shall also be promoted.

1.2.b. Offering Learning Opportunities

In an continuing effort to offer a wide-range of learning opportunities, guidance lectures on the environment, nature observation outings and lessons on such wide ranging topics as star watching shall be sponsored.

1.2.c. Securing Human Resources

In order to train, secure and apply human resources for leadership roles in environmental education, learning and conservation, measures shall be promoted to improve training and upgrade the registration system.

1.2.d. Offering Educational Materials and Methods

According to age and where the activity is held, whether it is a field trip, sightseeing or leisure, systematic programs, educational materials and procedures shall be developed and offered.

1.3. Public Relations Activities

Placing Environment Day (June 5) at the core, various events shall be developed with cooperation from local governments and private organizations. Similarly, applying various information mediums, public relations activities shall be improved.

2. Promotion of Specific Activities to Conserve the Environment

2.1. Voluntary Environmental Management

The government shall take measures to encourage corporations to implement voluntary environmental management, which consists of establishment of corporate policies on environmental conservation, target-setting, plan-making, organizational arrangement such as appointment of managers, and audit of the system. These measures shall include studies on the ways to encourage and support the establishment and certification of environmental management systems.

2.2. Rewarding Desirable Actions

The government shall promote research into the methods of "Life-cycle assessment", which is a method to evaluate the environmental impacts along the continuum of a product life from raw material extraction to production, consumption and disposal ("cradle-to-grave). The government shall also appropriately supervise environmental labeling schemes to enhance the use of environmentally friendly products. Similarly, citizens or private organization displaying exemplary behavior toward the environment, shall be officially rewarded.

2.3. Supporting Private Organizations

By making use of tax measures and other related systems, like the Global Environmental Fund, the government shall support the private organizations' activities like international environmental cooperation, education, learning, the National Trust, international partnership formation between organizations. To support private organizations who are greatly beneficial to the public in their environmental conservation activities, measures will be examined on ways to bestow the status of legal entity on them.

3. Providing Information

Information on the state of the environment, burdens on it, measures for its conservation and on environmental education and learning opportunities shall be provided. Databases shall be established and improved. They shall network local governments and private organizations and provide information on locations where activities are taking place.

Additionally, the measures provided in Chapter 4 Section 6 shall be promoted.

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Section 3. Setting an Example by Government Action

The government occupies very large proportion of the Japan's total economic activities. Considerable environmental burdens could be eradicated by the Government's efforts to make its own normal activities environmentally friendly. Moreover, the Government should lead the

way in implementing these activities, if local governments, companies and private citizens are to be expected to do the same. For this purpose, the Government as a whole shall establish an Action Program on its efforts in the following fields.

A.

Environmental consideration in procurement and/or utilization of goods and/or services

For example, the use of recycled products such as paper, the introduction of low-emission vehicles, and efficient use of automobiles.

B. Environmental consideration in construction and/or management of buildings

For example, utilization of solar and other clean energy sources, efficiency in energy and water use, CFCs reduction and retraction, increasing the amount of vegetation around and on top of buildings, reusing and recycling of construction waste and by-products, and efficient use of tropical timber for molding.

C. Environmental consideration in office work

For example, the reduction of energy use, separated waste collection for easy recycling and/or disposal, and waste reduction. D. Giving training and information to the employees For example, revision of training programs on the environment, provision of information, and encouragement of conservation activities during vacations.

Section 4. Efforts in Major Socioeconomic Sectors

A coordinated and cooperative environmental conservation activities shall be promoted in various socioeconomic sectors. These sectors include (1) the production, marketing, consumption and disposal of goods, (2) the supply and consumption of energy, and (3) traffic and transportation. The role of each participant, with respect to these sectors, shall be outlined below. Each participant, whether a private citizen, company or local government shall be expected to actively and voluntarily pursue actions accordingly.

1. Production, Marketing, Consumption and Disposal of Goods

Goods come from many different sources: from the forestry, agriculture, fishery, manufacturing, construction, mining etc. In all these industries, the process of resource extraction and production can cause environmental burdens in the form of land alteration and discharges to the environment. Similarly, waste and other forms of environmental burden are generated in the processes of marketing, consuming and disposing of goods. On the other hand, forestry, agriculture and fishery have another aspect of industries making sound use of material cycle in nature, and if they are conducted appropriately they contribute to the maintenance of environmental conservation capacity of the land.

To reduce the environmental burdens caused by these industries, environmentally friendly resource utilization and product manufacturing must be implemented. Burdens resulting from the extraction and production of raw materials must be reduced. Products which are derived from environmentally safe marketing and consumption process' must be encouraged. Recycling and the appropriate disposal of waste must be promoted. Natural resources must be conserved,

while the resources of the forestry, agriculture and fishery industries must be properly managed. Finally, the civil engineering and construction industry must embark upon projects which have taken the environment into consideration.

1.1. Producers

Pollution control measures at production stage, taking into account other stages from resource extraction to disposal, should be promoted. These include (1) ensuring closed material circulation in resource utilization and manufacturing processes, (2) controlling generation and/or properly disposing of waste and (3) encouraging products which are derived from environmentally safe marketing and consumption processes.

1.1.a. Agriculture, Forestry and Fishery

Unlike other industries, the agriculture, forestry and fishery industries production capacity is based upon natural material circulation. These industries have important roles to play in conserving the environment. Careful forest maintenance positively affects how the overall environment is maintained.

In the agricultural sector, regulations shall be set for pesticide and other chemical utilization. For example, standards for these chemicals shall be revised, as will the criteria used to decide whether their utilization is necessary. The recycling of domesticated animal manure should be promoted, as well as the conservation of ecosystems located on the periphery of agricultural land.

In the forestry sector, sustainable forest management should be promoted. Measures to ensure proper cutting in natural forests, the maintenance of conservation forest areas and the employment of appropriate forestry techniques such as indigenous wood and multiple layered forestry should be promoted.

In the fishery sector, sustainable aquatic resource management should be promoted. Aquaculture should be promoted and the conservation of good fishing waters, like those around tidelands and seaweed beds, shall be encouraged.

1.1.b. Mining

When extracting resources, the environment should be given due consideration. Beyond mere proper management, the reforestation of mining sites should be promoted.

1.1.c. Manufacturing

The use of recycled materials should be promoted over their as yet unextracted natural counterparts. The adoption of closed material circulation production methods should be promoted. Waste generation should be controlled and its proper disposal promoted. Longer lasting products should be developed and the environmental burden they inflict from consumption to disposal should be reduced. Model changes in products or product lines should be implemented correctly. The manufacturing industry should cooperate to ensure that products are appropriately handled and/or recycled after they have been discarded.

1.1.d. Construction

With client cooperation, consideration should be given to the ecosystem when constructing buildings. For example, buildings should utilize energy more efficiently by utilizing solar power, improving ventilation and by employing better insulating materials. They should utilize water more conservatively. Likewise, increasing the amount of vegetation in building landscapes and on building rooftops should be promoted as will the installation of consolidated purification handling tanks. The construction industry shall be encouraged to strive to use environmentally friendly materials, to take on projects only after first considering the environment, to ensure that by-products created during construction are recycled and to practice proper disposal methods.

1.2. Sellers (Wholesale and Retail)

The marketing of environmentally friendly products, not excluding real estate, should be promoted as will the reduction of excess packaging. Sellers should be encouraged to collect discarded and/or recyclable goods directly from consumers for proper handling.

1.3. Consumers

When deciding what to buy, consumers should choose products that have either a neutral or a reduced impact on the environment. They should refuse excessive packaging. When ordering the construction of a building, consumers should demand an environmentally friendly building. Once built, consumers should ensure that it is being utilized in a manner which has little negative impact on the environment. They should control waste generation and cooperate with collection systems by separating their garbage into that which is burnable and that which is recyclable.

1.4. Sanitation and Recycling Industries

The sanitation and recycling industries have an important role to play in environmental conservation. They should demand cooperation from their customers and should promote recycling and proper waste disposal.

1.5. The National and Local Governments

Regulative measures concerning the emission of pollutants, disposal of waste and the use of agricultural chemicals shall be implemented by the national and local governments. Likewise, guidance shall be provided to promote recycling and economic measures to encourage the control of waste generation and to promote recycling shall be employed as needed. Public facilities, such as waste disposal facilities, shall be established.

The national and local governments shall pursue methods of "life-cycle assessment." They shall make information available and see that environmentally friendly products are recommended. They shall provide guidance to the recycling and sanitation industries. They shall, likewise, promote the reduced utilization of chemical fertilizers and pesticides.

Local governments shall implement measures to ensure appropriate waste disposal.

Environmental impact assessments should be employed for public projects. The national and local governments should take the ecosystem into account and utilize clean energy, like solar power, when maintaining rivers, streams, farms, farming villages, fishing ports, harbors, roads, shorelines and airports. They should also promote recycling and environmentally friendly resource utilization.

2. Energy Supply and Consumption

The supply and consumption of energy are essential elements found at every level of economic activity. Much environmental burdens is generated in the process of both supplying and consuming it. Energy use paradigms must be adopted to promote energy conservation and decrease such environmental burden. Traffic and transportation shall be collectively discussed in the next subsection .

2.1. The Energy Supply Industry

Environmental burden resulting from the activities of the energy supply industry should be reduced. The efficiency of energy transformation should be upgraded (e.g. the generation of electricity should require less energy). Natural gas utilization should be promoted. The development and introduction of solar and wind power should, likewise, be promoted. Moreover, the development and utilization of sources of energy which emit nominal amounts of carbon dioxide such as nuclear energy shall be encouraged. Measures for radioactive waste handling and disposal, based on the Basic Nuclear Power Law, shall be carefully designed and implemented.

In cooperation with the demand side, dispersed power sources, such as cogenerators, should be introduced. Until now untapped energy sources, such as heat discharged from sewage, should be utilized, as will heat resulting from waste incineration.

2.2. Industrial Energy Consumers

The introduction of energy conserving facilities, the development of energy management systems and the efficient use of surplus energy outside of factories should be promoted in manufacturing industries. Likewise, the development and introduction of energy conserving products shall be encouraged.

In the agricultural sector, natural energy utilization should be promoted.

Furthermore, appropriate planning, construction and management must be employed to prevent heat loss from buildings. The introduction of solar power generators, fuel cells, cogenerators, energy conserving facilities and equipment should be promoted in offices.

2.3. Common Consumers

The introduction of energy conserving devices, the prevention of energy waste and the utilization of energy efficient home appliances should be promoted. Houses should receive better insulation to save heat. Likewise, the utilization of solar power in homes, for both power generation and for water heating should be promoted.

2.4. The National and Local Governments

Regulative measures regarding pollution emission shall be carried out. Likewise, measures for improving energy use at the workplace and in the daily lives of citizens shall be promoted. The national and local governments must invest in facilities that contribute to energy conservation. They must also support technological development. Furthermore, they must examine the possibility of introducing daylight saving time.

Research and development into solar energy, fuel cells and other forms of clean energy shall be promoted and their introduction encouraged. Likewise, the introduction of dispersed power sources and utilization of until now untapped energy sources shall be promoted.

3. Transportation and Traffic

The process of moving people and goods is burdening the environment. It is necessary to decrease amount of environmental burdens generated by the various modes of transportation. Burden from individual modes of transportation must be reduced and cleaner ones must be selected. Cargo and passenger transport must be streamlined to improve traffic flow and conserve the environment.

3.1. The Transportation Industry

Efforts must be made to introduce automobiles with decreased emissions and to encourage the use of vehicles which meet the latest emissions regulations.

To streamline cargo transport, in conjunction with cargo owners, transportation should be joint and cargo on return trips should be secured. Cargo facilities should be upgraded and proper utilization of these facilities should be promoted. Rail and sea links located at points on major transportation routes should be utilized for hauling medium to long distance freight.

Also, by enhancing the convenience of public transportation, like railroad and bus routes, passenger movement should be made more efficient.

Anti-noise pollution measures for planes and trains should be promoted. Measures to prevent ocean pollution created in sea transport should also be promoted.

3.2. Cargo Owners

Efforts must be made to introduce vehicles with decreased emissions and to encourage the use of vehicles which meet the latest emissions regulations.

Transportation efficiency should be improved by promoting streamlined distribution patterns, improving information systems, promoting joint transportation and securing cargo for return trips. Likewise, consideration should be given to coordinating transport with the transportation industry, including the utilization of business trucks. Furthermore, the utilization of cargo facilities should be promoted. For example, rail and sea links located at points on major transportation routes should be utilized for hauling medium to long distance freight.

3.3. Consumers

Consumers should strive to select environmentally friendly means of transportation. This means walking or riding a bicycle, when possible, and when not, utilizing public transportation. Non-emergency and unnecessary use of private automobiles should be refrained from and, when used, they should be used appropriately.

3.4. The National and Local Governments

Regulatory measures such as automobile emission controls and traffic controls shall be implemented. Guidance shall also be provided to improve efficiency in automobile utilization. Support shall simultaneously be given for the development and utilization of cars with low emissions.

The national and local governments shall provide facilities for rail and sea transport. They shall improve the convenience and maintenance of public modes of transportation. They shall provide and improve facilities for pedestrians and bicycles. In order to conserve the environment beside roadsides, they shall attempt to break-up and smooth the flow of traffic by providing by-passes and loops. Finally, they shall encourage the improvement of the traffic control system and establishment of an information dissemination system.

In areas near roads, airports and other transportation facilities, anti-noise pollution measures shall be promoted. These measures should employ the use of natural sound barriers such as "green buffer belts" made of earth and vegetation.

4. Others

4.1. Tourism and Leisure Activities

Tourism and leisure activities offer a tremendous opportunity for people to experience and enjoy nature. However, such activities also have the potential to cause serious environmental burdens.

4.1.a. Resort Development, Travel and Related Industries

Considerations for the natural environment shall be encouraged in all stages of resort development This includes site selection, construction and administration. Additionally, specialists should be trained in eco-tourism, while the general population is simultaneously educated about it. Information about the natural environment of resorts should be provided and efforts to increase tourists' opportunities to experience nature on their vacation should be promoted.

4.1.b. Visitors

Measures to prevent littering and other environmentally burdening behavior should be promoted. Efforts to increase visitor awareness and understanding about nature should also be promoted.

4.1.c. The National and Local Governments

The national and local governments shall promote the proper administration of parks and other green spaces. They should maintain tourist areas which emphasize nature and encourage leisure activities in nature and provide fundamental guidance and advice to ensure respect for the environment.

4.2. Financial Institutions

Finance plays an important role in economic activities. Moreover, providing capital to various enterprises can impact the environment tremendously. Establishing accounts for donations and investments to fight environmental burdens should be promoted.

A financial system should be considered in which the environmental impact of projects are reviewed when determining whether to finance or invest in certain projects. Financial institutions shall be expected to provide environmental information to the generally information-poor small and medium size companies. They are also expected to provide advice and counseling.

4.3. Others

Other industries, not previously mentioned, are also expected to make voluntary efforts to conserve the environment. Their efforts will depend upon whichever field their activities fall under: 1) the production, marketing, consumption and disposal of goods, 2) the supply and consumption of energy, or 3) traffic and transportation.

The transmission of information should not only be used to enhance the flow of transportation, but to also reduce environmental burdens as a transportation substitute and a paper saving device. Therefore, information correspondence systems should be more widely utilized and expanded. The development of information systems and their relationship with the environment should be studied to determine if there are other ways the environment can be conserved.

The Basic Environment Plan - Part III-Chapter 4

PART III. FUTURE POLICY ON ENVIRONMENTAL CONSERVATION
Chapter 4. Measures Forming the Basis of Environmental Policy

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(preface)

Several policy instruments which have been mentioned in previous chapters can serve the long-term objectives at one time. These include environmental impact assessment (EIA), regulatory measures, economic measures, providing environmental infrastructure and promoting scientific research, monitoring, observation and environmental technology, and environmental information. These instruments shall be utilized in appropriate policy-mix approach, depending on the types

of problem. This chapter presents the basic ideas that guide the implementation of these measures.

Furthermore, this chapter also presents the basic ideas that direct such policy instruments as regional pollution abatement programs, environmental health measures and pollution dispute resolutions.

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Section 1. Environmental Impact Assessment (EIA)

In order to comprehensively conserve the environment, it is essential that precautionary environmental consideration is made in formulation and implementation of policy measures and projects. This concept is widely recognized and firmly established both domestically and internationally.

To further environmental considerations such as implementation of environmental impact assessment, the following measures shall be enhanced.

1. Environmental Consideration for Government Policies

With a view to prevent environmental problems, environmental conservation shall be taken into account when formulating and implementing government policies which may affect the environment, conducting studies on environmental implications as needed.

2. Environmental Consideration at Planning Stage of Public Works

Environmental consideration shall begin at the planning stage of public works for providing infrastructure undertaken by the Government. This includes survey and prediction of environmental impact of the project.

3. Promoting EIAs for Projects

The Government is already promoting adequate EIAs for several types of large scale construction projects having significant environmental impact. EIAs are carried out based on the Cabinet approved EIA Implementation Guidelines (1984) and several laws. The Government shall continue to make effort for implementing these EIA procedures. Local governments are also promoting EIAs based on their own ordinances and guidelines as regional realities dictate.

4 Promoting Systematic Research on EIA

In order to ensure proper environmental considerations, the Government shall enhance further research on schemes and methodology of such considerations. Particularly for future EIA systems, relevant ministries and agencies are jointly conducting a comprehensive research on various EIA systems and state of their implementation both in Japan and abroad, taking into account the accumulation of domestic EIA experiences and increasing recognition of the importance of EIA. Base on the result of this research, the Government shall make necessary reconsideration of the institutional framework of EIA, possibly including future legislation.

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Section 2. Regulatory Measures

Among environmental policy tools, various regulatory measures have long been effective in controlling pollution and other interference with environmental conservation. Regulatory measures can also appropriately ensure that the environmental costs are incorporated in the market mechanism. Thus, the current regulatory measures are to be implemented properly and those measures shall continue to be applied in the future, taking account of characteristics of a particular problem, effectiveness and impact of the measures, and so on.

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Section 3. Economic Measures

Japan has achieved much progress, compared to other developed countries, in conserving resources and energy particularly in industry since the oil crisis. However, prevailing patterns of mass-production, consumption and discharge in socioeconomic activities, together with continuing concentration of population and economic activities in urban areas, have led to such environmental problems as urban/household-generated pollution, increasing waste and global warming, which require further measures aimed at solving these problems.

These problems are caused by wide-ranging socioeconomic activities including daily business activities and lifestyles. It is pointed out the fundamental reason underlying is that the social cost of environmental load arising from these activities has not been well understood and the measures have been lagging behind, therefore the cost has not been incorporated in market mechanism. These activities have been continued externalizing these social costs. Regarding these problems, it is required to appropriately implement regulatory measures, economic measures and others so as to ensure that each member of society acts in an environmentally friendly manner.

Various economic measures, such as environmental taxes, surcharges, and deposit-refund systems which aim to properly reflect environmental costs in the price of goods and service transactions, are expected to efficiently reduce environmental load generated by numerous daily activities, and considered also to contribute to efficient distribution of resources. These measures have been recommended internationally by the OECD, the G-7 Summit and the UNCED, and are implemented in various examples in European countries and the U.S. Japan must also promote

studies and investigations into these measures and participate in the international discussion at the OECD and other fora, with a view to resolve aforementioned environmental problems.

Economic measures include economic burden and assistance, both of which aim to ensure each party in the economy to take actions for environmental conservation through using economic incentives.

1. Economic assistance

Economic assistance is a measure to effectively promote investments in facilities and other improvements to reduce environmental load by the party who is responsible for activities generating those load, such as pollution control investments to promptly attain improvement of the environment within a limited period. In providing economic assistance, necessary and appropriate measures shall be implemented in consideration of economic conditions of recipients and that the financial outlay is ultimately the burden of Japanese people, as well as based on Polluter Pays Principle of the OECD which urges not to create any major distortions in international trade and investment

2. Economic burden

Economic measures placing economic burden are, in effect, requiring those parties who are conducting activities generating environmental load to bear new burden which has not been paid before. In order to make decision on economic measures to be implemented, studies and investigations shall be appropriately promoted as to their effectiveness for environmental conservation, impacts on the national economy and so on, in consideration of the fields to be applied such as controlling carbon dioxide emissions to prevent global warming, measures for urban/household-generated pollution, or reducing waste. The understanding and cooperation of the people will be sought when introducing the economic measures. Where those measures are concerning protection of the global environment, considerations will be made to international cooperation so as to properly ensure the effectiveness.

Along with the investigation into measures of economic burden, further investigations shall be promoted concerning policy options such as utilizing regulatory and other policy measures, effectively incorporating those other measures together with measures of economic burden.

Regarding economic measures to reduce the generation of waste and promote recycling, waste reduction shall be ensured through requiring appropriate economic burden such as imposing collection charges on household waste in proportion to the amount of waste. As well, extensive investigations shall be carried out as to utilizing economic measures such as deposit-refund system, with a view to develop a scheme which will clarify the responsibilities of waste generators and ensure that cost of proper waste disposal and recycling is appropriately shared in society.

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Section 4. Environmental Infrastructure Improvement

To maintain healthy and productive environment and create a society ensuring sustainable development with reduced environmental load, it is necessary not only the efforts of corporations and people for reducing their environmental loads but also promotion of environmental infrastructure improvement. Of course, project plans should be examined to assess possible environmental impacts and conservation measures based upon the result must be implemented. Since Japanese population is predicted to continue aging, the capital reserves are expected to continue to fall. It is therefore essential that these infrastructure should be intensively improved in limited time frame.

The public works of facilities in the Plan that will reduce environmental loads based on various endowment programs will be implemented. Likewise, this Plan allows for projects to maintain and ensure the proper utilization of the natural environment. In financing these projects, the Guideline for Estimation of the Budget for Environmental Conservation should fully be considered. The projects should be undertaken comprehensively and intensively with measures for effective utilization of the facilities. In this case, the effectiveness of the projects will need to be evaluated.

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Section 5. Scientific Research, Monitoring/Observation and Environmental Technology

It is essential to carry out research, observations and monitoring to more clearly understand the state of the environment, to elucidate the mechanisms of environmental change and to make educated decisions about conservation policies. In particular, to solve complex global problems, an exorbitant amount of scientific knowledge will need to be gathered.

To achieve an environmentally healthy and friendly society, technology must be developed. This newly developed technology must then be increasingly employed and dispersed.

To contribute to the international society, Japan must strengthen research , observations and monitoring, develop appropriate technologies, and provide facilities necessary for these scientific and technological activities. and establish technological facilities. Efforts of local governments and private organizations in this endeavor shall be supported.

1. Monitoring, Observation and Research

1.1. Research

Research into the following issues which fall within broad fields of natural, social and cultural science, shall be promoted, from a global perspective. Interministerial cooperation shall be sought as necessary, considering that many of these issues are overlapping.

A.

comprehensive monitoring of environmental loadings such as greenhouse gases and waste generation, and of socioeconomic activities that cause such loadings

B.

understanding the mechanism of environmental changes and predicting their impacts

C.

ensuring biodiversity

D.

clarifying and evaluating long-term, compounding, environmental risks of human activities through different environmental media such as air and water

E.

establishing an integrated national environmental and economic accounting system and further understanding the interrelationship between the environment and economy

F.

international trends in environmental policy and their effectiveness

G.

decision making under the uncertainty of environmental change

H.

Issues related to each of the topics in Part III .

1.2. Observation and Monitoring

Observation and monitoring should be carefully employed, based on individual laws. The entire planning process for observation and monitoring (i.e. from formulation, implementation, structuring, analysis and evaluation, to publication of final results) must be worked out in detail. Likewise, an implementation system for observation and monitoring must be established to ensure correspondence between changes in environmental problems and implementation.

1.3. Global and Transboundary Problems

Regarding research, observation and monitoring of problems affecting wide areas, such as acid deposition and marine pollution, efforts should be made to better understand broad advection and diffusion of substances and their impacts on ecosystems. Furthermore, efforts should be made to expand scientific knowledge on material circulation between the atmosphere, hydrosphere, geosphere and biosphere. Such knowledge will lead to a better understanding of global problems and its impacts on the ecosystem.

1.4. Systematic Control and Organization

Research, observation and monitoring implemented by, or connected with, the government shall be systematically overseen and organized. The government shall likewise do its best to oversee research instituted by local governments and private sectors. Furthermore, cooperation between related research, observation and monitoring shall be promoted by establishing liaison meetings, as circumstances require.

1.5. Comprehensive Implementation Systems

In fields related to global environmental conservation, where systematic efforts are necessary, comprehensive programs shall be formulated to secure well-organized implementation of research, observation and monitoring.

2. Promoting Technology

2.1. Technology Supporting Environmental Conservation Efforts

Technologies related to environmental conservation targets should be widely promoted. Appropriate technologies shall be selected by considering both their effectiveness in curing particular problems and their adverse side-effects. Technological systems which support environmental conservation efforts shall be secured.

2.2. Developing and Dispersing Technology

Energy and resource conserving technology, closed material circulation production technology, pollution cleanup technology, waste disposal and recycling technology, environmental maintenance technology and technology to construct aesthetically pleasing facilities must be developed and dispersed. The technologies mentioned in section III, remote sensing technology employed by satellites and technology appropriate to developing regions must be developed. Not only must equipment and hardware technology be developed, but also, effective know-how, or 'soft' technology must be developed. After applying a certain technology, its effectiveness in improving the environment shall be evaluated and measures shall be implemented according to the results.

3. Laying the Foundation

3.1. Providing Facilities

Necessary equipment and facilities shall be provided to carry out research, observations and monitoring.

3.2. Improving Measuring Technology

Credibility and accuracy in survey and measuring shall be improved. In particular, telemetering (the transmitting of results produced by an electrical measuring apparatus to a distant station) and remote sensing technologies need to be advanced. Also, planes, ships and satellites shall be provided.

3.3. Academic Research, Human Resource Development etc.

Academic research of cultural, social and natural sciences shall be promoted at universities and other institutions in fields related to environmental conservation. In cooperation with these institutions, efforts shall be made to improve the quality and quantity of human resources engaged in enhancement of research, observation and monitoring, and development of appropriate technologies. Likewise, cooperation including human resource exchange shall be promoted, and information shall be shared among different institutions.

3.4. Cooperation with Private Sector

The utilization of civilian ingenuity shall be encouraged to promote advances in technology .

4. Local Governments and Private Organizations

4.1. Exchange and Participation

Assistance shall be provided to local governments, non-profit organizations, universities and private organizations, for the purpose of furthering research, observation, monitoring and technology development. This assistance will come in the form of information exchanges, human resource exchanges, and as necessary, in the form of joint research and joint utilization of equipment/supplies.

Scientific information provided by private organizations and the general public is extremely valuable. Their participation in research, observation and monitoring activities shall be promoted. The Government shall make efforts to develop and disperse surveying and measuring methodologies and procedures which facilitate such participation.

4.2. Technological Assistance

Technological support, concerning proper measurement implementation by companies, shall be promoted. Support shall also be given to improve the accuracy of investigations and measurements of private organization. To accomplish this, information shall be provided and official qualifications for environmental technicians shall be established.

5. Disseminating Results

The results of research, observation and monitoring activities shall be officially disseminated to the general public. Impediments in communication must be examined to construct a system which can easily disseminates major breakthroughs in environmental technology. Information transfer and communication systems shall be established, and with the government taking the lead, necessary measures to provide economic incentives for disseminating information shall be applied.

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Section 6. Providing and Maintaining Environmental Information

To promote environmental conservation measures, environmental information must be systematically maintained and utilized. It is essential that information be accurately provided to advance environmental education and learning and to encourage voluntary actions by companies, citizens and private organizations. Furthermore, the information must be offered fairly to each member and sector of society.

The rights of both individuals and legal entities shall be considered in regard to provisions and maintenance of information. Utmost efforts shall be made to ensure that information is efficiently provided and easily accessible.

1. Establishing an Information System

The state of the environment, burden levels, forecasts and conservation efforts are some of the types of information needed to secure the goal of this Plan. How to make this information available and easily accessible shall be studied. The institution of highly organized databases to aid in the complex task of gathering, sorting and processing new data shall be promoted. In this way, discovering where information is, and how to access it shall be simplified. The establishment of these databases shall be based upon the results of the information accessibility study.

The government shall promote the establishment of an environmental information broadcasting network. It will, likewise, study how to create a format in which information from a wide variety of sources, gathered by local governments and private individuals could be made easily available, culminating in a completely integrated environmental information database.

2. Provision of Information

2.1. Document and Other Forms of Information

The government shall provide information to the general public through publications like the White Paper in the Environment and the Environmental Information Handbook. In addition to publications, magnetic media and other news transmission systems shall be utilized.

2.2. Information Access System

A system shall be established to promptly respond to inquiries made by citizens. The possibility of establishing a comprehensive environmental information database and information supply system that networks local governments and non-profit organizations shall be examined.

2.3. Environmental Information Centers

In order to provide information covering various fields, the feasibility of establishing environmental information centers, biological diversity centers and national park visitor centers shall be examined.

3. Establishing an Environmental Analysis system

3.1. Analysis System

The establishment of a system to evaluate the effectiveness of measures, forecasts and analyses on the state of the environment shall be examined. An integrated environmental information database shall be employed in this endeavor.

3.2. Environmental Statistics

The establishment of environmental statistics, incorporating the results of research on an integrated environmental-economic tracking system shall be examined.

4. Laying the Foundation

4.1. Establishing Facilities

The necessary facilities and equipment for providing information shall be established. This includes establishing an information network.

4.2. Human Resource Training

Efforts shall be made to improve the quality and quantity of human resources for environmental information management. Strong ties with educational institutions shall also be maintained.

5. Supporting Local Governments and Private Organizations

5.1. Regional Bases

The establishment of regional information bases to promote the integration of information from local governments in an organized manner shall be promoted.

5.2. Information Networking

Support shall be lent to promote the integration of information obtained as a result of private organization's voluntary activities. Networking between the national and local governments and private organizations shall be supported.

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Section 7. Regional Pollution Abatement Programs

Regional pollution abatement programs shall be formulated for designated areas where the effects of pollution are currently severe in coordination with other policies.

1. Plan Formulation

Fundamental policy measures based on this Plan shall be formulated. The following factors shall be considered when formulating these measures.

A.

To achieve and maintain regional environmental quality standards, controls must be applied and broad measures designed. In this way, burdens generated in the course of business activities and the daily activities of citizens shall be reduced.

B.

Means shall be provided so that every sector of society can work together actively to conserve the environment and to ensure that the burden of this endeavor is fairly spread.

C.

Conservation of the natural and global environment shall be given utmost consideration.

D.

Priority actions shall be set up for air pollution caused by nitrogen oxides, water pollution and ground water contamination from domestic waste water.

F.

In metropolitan areas, trans-regional approaches shall be promoted. Neighboring districts shall formulate plans dealing with environmental problems in coordination with one another.

G.

Environmental conservation shall be integrated with other legal programs dealing with conservation.

2. Plan Implementation

Measures mentioned in the Basic Environment Plan shall be comprehensively and systematically promoted and they shall be carefully coordinated with one another.

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Section 8. Environmental Health, Pollution Disputes, etc.

The government shall enact measures to prevent pollution-related health damage and outbreaks of victims. Additionally, for victims it shall promote prompt and fair protection measures as well as ensuring their health based on Polluter Pays Principle.

Furthermore, the government shall promote prompt and reasonable settlement of disputes.

Likewise, complaints settlements shall be promoted to conserve living environment and to prevent further disputes in the future. Pollution control regulations shall be strictly enforced.

1. Relief and Prevention of Pollution-Related Health Damages

1.1. Relief

Based on the Law for the Compensation of Pollution-Related Health Damage persons verified pollution-related health damage receive compensation and should be relieved promptly and fairly. As for Minamata Disease, verification, comprehensive measures for Minamata Disease and comprehensive research at National Institute for Minamata Disease shall be promoted.

1.2. Prevention

To prevent health damage from air pollution, the health damage prevention program financed by the fund in Pollution Related Health Damage Compensation Association shall be undertaken. A pollution in the area can be observed regularly and continuously (Environmental Health Surveillance System) shall be established and various research programs shall be promoted.

2. Pollution-Related Dispute Resolution

2.1. Dispute Resolution

Based on the Pollution-Related Dispute Resolution Law, the government shall provide venues for mediation and arbitration.

2.2. Handling Complaints

Again, based on the Pollution-Related Dispute Resolution Law, the government shall provide information and guidance to local governments so that pollution complaints filed in their jurisdictions can be adequately settled. Furthermore, measures to ensure that pollution complaints to local police are properly received and handled shall be implemented.

2.3. Measures on Crimes Against the Environment

To prevent pollution offenses, related organizations and private individuals must cooperate and measures to make such violations criminal shall be promoted.

The Basic Environment Plan - Part III-Chapter 5

PART III. FUTURE POLICY ON ENVIRONMENTAL CONSERVATION Chapter 5. Promoting International Activities

-
  - Basic Direction
- Section 1.Promoting International Cooperation for Global Conservation
  - 1. Securing international coordination of policy
  - 2.Conserving the environment in developing regions
    - 2.1. Policy discussion
    - 2.2.Effective assistance
    - Reference 15. Japanese statement at the UNCED on official development assistance, June 1992:
    - 2.3. Technology transfer
    - 2.4. Research in developing regions
    - 2.5. Selecting and evaluating projects
  - 3. Conserving internationally valuable environments
  - 4.Strengthening the domestic foundation to promote cooperation
    - 4.1. Human resources
    - 4.2. Facilities
- Section 2. International Cooperation in Research, Observation and Monitoring
- Section 3. Encouraging Activities by Local Governments and Private Sector
- Section 4. Environmental Consideration in International Cooperation
- Section 5.Efforts Based on International Agreements
  - 1. Preventing global warming
  - 2. Protecting the ozone layer
  - 3. Preventing acid rain
  - 4. Preventing marine pollution
  - 5. Regulating transboundary movements of hazardous waste
  - 6. Conserving forests
  - 7. Conserving biodiversity
  - 8. Preventing desertification

OTHER CHAPTER

- Chapter 1. Building a Socioeconomic System Fostering Environmentally Sound Material Cycle
- Chapter 2. Harmonious Coexistence Between Nature and Humankind
- Chapter 3. Participation by All Sectors of Society Sharing Fair Burden

Basic Direction

Global conservation is a problem common to all of humanity and it cannot be resolved by one country acting alone. Japan must contribute to this international effort in a manner suitable to its position in the international community.

Accordingly, the government must ensure internationally cooperative measures. It must promote cooperation toward conserving the environments of developing regions and internationally valuable ones. To promote international cooperation, the Government must prepare the domestic basis. It must guarantee international cooperation in research, observation and monitoring and it must encourage activities by local governments and private organizations. Furthermore, even when enacting measures for international cooperation, the government must remember to show deference to the environment.

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Section 1. Promoting International Cooperation for Global Conservation

1. Securing International Coordination of Policy

To conserve the global environment, it is essential to coordinate international measures in addition to implementing them domestically.

A.

The government shall abide by environmental treaties and other bilateral and international agreements. It shall, likewise, play an active role in creating new policy frameworks.

B.

To implement the UNCED resolutions, the government shall support the environmental activities of the United Nations. It shall actively participate in discussions on matters of global importance for example, developmental assistance and the environment,

innovative technology development, monetary mechanisms, global change research, trade and the environment and evaluating economic measures.

C.

International organizations play an important role in providing financial support to promote world conservation. As such, these organizations should confirm that development projects are giving sufficient consideration to the environment. They should also verify that global environmental conservation projects are provided with adequate funding. The government shall promote active participation in ensuring that the Global Environment Facility ("GEF"), which is a major fund established to tackle global problems is managed effectively and efficiently.

D.

Japan shall work with other countries and international organizations to save the global environment. In particular, Japan shall play a leading role in promoting cohesive measures and their implementation in the Asian-Pacific since Japan has both historical and geographical ties to the region. This region is expected to experience phenomenal growth. Consequently, this implies that the area will inflict tremendous burdens on the environment. Japan shall strive to control these burdens by promoting conservation measures.

2. Conserving the Environment in Developing Regions

Conservation in developing countries is an international problem. Both developed and developing nations must get involved. It is necessary for developed countries to promote international assistance to developing countries in the areas of population, resources, development and environmental problems. Japan shall help developing countries help themselves in securing a safe balance between the environment and development. Likewise, Japan shall promote international cooperation in environmental conservation.

2.1. Policy Discussion

The international community uniformly believes that sustainable growth must be achieved and that developed countries must join the effort to conserve the environment. To ensure coordination in these endeavors, close policy discussions shall be promoted.

2.2. Effective Assistance

The government shall coordinate and regulate foreign assistance in a manner thought best suited to achieve designated results. Types shall range from loans and grants, to technical assistance. Likewise, official development assistance ("ODA") for environmental efforts shall be expanded in accordance with UNCED declarations and the Outline of Basic Principles and Ideas of Official Development Assistance. The government shall offer ODA in a flexible manner to encourage developing countries to establish a safe balance between the economy and environment. It shall strive to coordinate its efforts with those of other developed countries, the

United Nations, international financial organizations, local governments and private organizations.

REFERENCE 15

Japanese statement at the UNCED on official development assistance, June 1992:

Japan shall seek to expand bilateral and multilateral official development assistance from 900 billion to 1 trillion yen by for 5 fiscal years from 1992.

2.3. Technology Transfer

Japan developed many new technologies and know-how in the process of overcoming the severe pollution problems of the past. Japan must make the most of these experiences by using them to help developing countries facing similar problems to clean and conserve their environments. Experts shall be dispatched, foreign researchers shall be received and joint research shall be promoted to pass on the fruits of these experiences. The government shall strive to improve transfers of environmental technology and know-how. This transfer assistance shall be tailored to the particular country's stage of development in a manner that will allow them to utilize their own technologies and know-how. The technology of the public and private sectors shall be fully utilized as well. Furthermore, the government shall support voluntary technological cooperation between Japanese civic organizations and those of developing countries.

2.4. Research in Developing Regions

Research, policy studies and ODA effectiveness evaluations shall be promoted in developing countries. Environmentally oriented ODA shall be distributed to regions and countries in a manner suitable to the results of these studies.

2.5. Selecting and Evaluating Projects

Extensive investigations and full cooperation are needed to ensure that proper projects are selected. Likewise, project evaluations shall be promoted to ensure that they are contributing to the cooperative efforts.

3. Conserving Internationally Valuable Environments

Certain environments are extremely valuable internationally and are considered the common birth-right or heritage to all of humanity. For example, to conserve Antarctica, the Protocol on Conserving the Antarctic Environment Treaty shall be observed. International cooperation shall be promoted to assess environmental impact, conserve plants and wildlife, manage waste disposal, prevent ocean pollution and administer conserved areas. Moreover, through contributions to the World Heritage Fund, the government shall actively cooperate to conserve natural heritage areas designated in the Convention for the Protection of the World Cultural and Natural Heritage.

4. Strengthening the Domestic Foundations to Promote Cooperation

The government shall lay a domestic groundwork that will ensure the most effective application of its technology, know-how and experience to promote international cooperation.

4.1. Human Resources

Human resources are necessary to cooperate internationally. The government shall continue to promote the employment of people currently working in fields related to international cooperation. It shall establish systems for training and a registry system for specialists in international affairs. Likewise, efforts shall be made to employ international specialists on their return from duty abroad.

4.2. Facilities

Information on global conservation, technology and environmental experiences shall be collected domestically and sorted. Facilities shall be established to allow easy technological transfer and storage which will contribute in conserving the global environment.

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Section 2. International Cooperation in Research, Observation and Monitoring

International networks, joint international research and research exchanges shall be promoted to encourage cooperation in research, observation and monitoring for global environmental conservation.

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Section 3. Encouraging Activities of Local Governments and Private Sector

International cooperation in environmental conservation shall be improved by encouraging activities. by local governments and private organizations Local governments have much to offer similarly situated foreign cities in the form of environmental conservation information. Likewise, private organization cooperation can be very effective on the grassroots level. The government shall encourage the voluntary efforts of local governments to form sister-city relationships and self-governing international cooperation organizations. Also, information shall be provided to private organizations to encourage their active participation in international cooperation.

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Section 4. Environmental Considerations in International Cooperation

It is necessary for Japan to give the environment appropriate consideration in international cooperation. It is important for the business community with overseas operations to do the same. The government shall promote continued voluntary civil actions to ensure that these considerations are made.

The government shall continue to employ environmental guidelines when cooperating in international projects on the national level. It shall begin human resource training as a means of ensuring the environment is given due consideration. And, while cooperating with international organizations, appropriate concern shall be shown to the environment. Furthermore, the government shall strive to ensure that the same concern is shown in international assistance from other public sources and overseas activities of private enterprises.

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Section 5. Efforts Based on International Agreements

1. Preventing Global Warming

The Government shall implement the United Nations Framework Convention on Climate Change, including national communications on measures and procedures to arrest global warming and their predicted effects. To further promote measures with international cooperation, we will also explore specific measures for the evaluation of the adequacy of the commitment of the Convention in relation to its ultimate objectives, the ways to coordinate international efforts for reducing world total emissions of greenhouse gases and enhancing their absorption, including joint implementation of policies. The Government shall simultaneously support the scientific activities of the IPCC and other organizations. Furthermore, measures shall be implemented for international cooperation to alter current consumption patterns, to develop technologies to alleviate climate change, to assist developing countries to formulate national plans, and to assist technology transfer

2. Protecting the Ozone Layer

The Government shall steadily implement Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances That Deplete the Ozone Layer. We shall also support the measures implemented by developing countries. Moreover, Japan shall contribute to the implementation of the international measures through enrichment of scientific knowledge by observation, monitoring, etc.

3. Preventing Acid Rain

Both regional and international efforts are essential to combat acid rain. Observation and monitoring networks shall be established. As in North America and Europe, Japan will take the lead in promoting a framework for combating transboundary pollution problems in East Asia. We will also promote measures including technology transfer to control the emission of substances which cause acid rain.

4. Preventing Marine Pollution

The government shall progressively implement the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) and the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships (MARPOL '73/'78) to combat marine pollution. It shall take the initiative in new frameworks, such as, the United Nations Convention on the Law of the Sea and shall cooperate with other international organizations and related countries. Furthermore, it shall promote the regional efforts of the Action Plan for the Prevention, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region.

5. Regulating Transboundary Movements of Hazardous Waste

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal shall be implemented. Systems to prevent illegal transboundary movements of such waste shall be promoted as shall the transfer of toxic waste management technologies.

6. Conserving Forests

With regard to achieving the conservation and sustainable management of all types of forests, Japan shall base its efforts on the Statement of Forest Principles and Agenda 21, participating in the development of criteria and indicators for the sustainable forest management and other international efforts. Also, taking into account the developments in such organizations as the

United Nations Committee for Sustainable Development, the International Tropical Timber Organization ("ITTO") and the General Agreements on Tariffs and Trade ("GATT"), Japan shall make efforts to enhance appropriate timber trade. We shall take a positive stance on the possible formulation of a forest convention, taking into account the need for forming international consensus. We shall also promote international research activities on forest conservation.

7. Conserving Biodiversity

Biological diversity and wildlife conservation shall be achieved and maintained according to the Convention on Biological Diversity. Biological diversity research and the cooperative establishment of a conservation system shall be promoted. Further cooperation shall be elicited through international bilateral treaties and agreements, for example, aimed at bird conservation like the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington Convention) and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention).

8. Preventing Desertification

Regarding desertification, Japan shall contribute to the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, which is expected to be ratifies in the near future. It shall initiate research and investigations into mechanisms of desertification, interaction between desertification and human activities, and comprehensive countermeasures, taking into consideration complex socioeconomic factors. Japan shall also assist the measures by countries suffering from desertification.

The Basic Environment Plan - Part IV

PART IV. :EFFECTIVE IMPLEMENTATION OF THE PLAN

- Section 1. Implementation Scheme and Society-Wide Cooperation
- Section 2. Setting Specific Goals
- Section 3. Financial and Other Measures
- Section 4. Plan Coordination
- Section 5. Follow-up of Progress and Review of the Plan

Section 1. Implementation Scheme and Society-wide Cooperation

Upon decision of the Basic Environment Plan, it is essential that all members of society share common understanding, cooperate together and act for conservation of the environment. The Government ministries and agencies shall work closely together through the Cabinet meeting, related ministers' councils and conferences of ministries and agencies concerned, to comprehensively and systematically implement the environmental measures provided in the

Plan. Local governments are expected to promote policies and measures comparable to the State as well as their own in line with the direction of the Plan and according to the natural and social conditions of each area, through comprehensive systematic measures such as establishing a comprehensive environmental plan.

It is required that the State, local governments, corporations, people and private organizations cooperate in line with the Plan and in close partnership to promote various measures and activities voluntarily sharing fair burden each other. In particular, cooperation between the State and local governments will be strengthened so as to ensure that various measures in the Plan are implemented effectively.

The State shall promote systematic collection, accumulation and use of relevant environmental information in order to monitor, evaluate and utilize the progress of various measures and activities under the Plan as well as to disseminate them to the sectors concerned who are promoting those activities through various means such as publishing annual white paper on the environment. Measures shall be promoted for nationwide information exchanges to support the activities of regional organizations comprised of local governments, corporations and people aimed at fostering the measures and activities under the Plan.

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Section 2. Setting Specific Goals

In order to ensure the effective implementation of measures under the Plan, efforts will be made to promptly develop comprehensive indicators concerning the long-term objectives specified in the PART II. Whereas various specific goals have been set regarding certain measures, investigations required shall be undertaken from comprehensive viewpoint in light of the principal directions of the Plan and these goals shall be reconsidered where necessary so as to ensure the measures will be effectively implemented. Also, in the fields where necessary, specific goals shall be set and new programs shall be developed.

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Section 3. Financial and Other Measures

The State shall promote financial and other measures necessary to implement the measures under the Plan. In so doing, it shall take account of the progress of the Plan and the state of the environment as well as appropriately ensure the comprehensive promotion of various public works coherently with the Guideline for budget on the environmental expenditure, which is set by the Environment Agency every year.

The State shall, likewise, make efforts to provide necessary financial and other assistance for expenditures on environmental measures which are voluntarily implemented by local governments according to the situations of each locality.

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Section 4. Coordination among National Plans

The Basic Environment Plan is the nation's basic plan for environmental conservation. It is therefore essential that between the Plan and other national plans, harmony with the Basic Environment Plan should be ensued relating to environmental conservation.

Other national plans which are exclusively aiming at environmental conservation shall be formulated and promoted in accordance with the principal directions of the Basic Environment Plan.

As for other national plans which include provisions on environmental conservation, these are to be compatible with the principal directions of the Basic Environment Plan relating to environmental conservation, so harmonious coordination shall be ensured with the Plan.

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Section 5. Follow-up of Progress and Review of the Plan

To ensure steady implementation of the Basic Environment Plan, the Central Environment Council will follow-up the progress of measures under the plan every year, hearing the opinions of the public and each sector of society, and, where necessary, report to the Government on future policy directions.

The Plan shall be reviewed, responding flexibly and appropriately to the changes of economy and society in Japan and abroad. The review will be made in around five years after the Cabinet decision on the Plan.

The Basic Environment Plan - Appendices

APPENDICES

- 1 Consultation to the Council (January 14, 1994)
- 2 Report to the Council (December 9, 1994)
- 3 Statement by Prime Minister Tomiichi MURAYAMA (December 16, 1994)

1. Consultation to the Council (January 14, 1994)

To : Jiro KONDO, Chairman of the Central Environment Council

Morihiro HOSOKAWA, Prime Minister

Regarding the Basic Environment Plan (Consultation)

Based on the Paragraph 3 of Article 15 of the Basic Environment Law, I hereby consult with the Council as follows.

"How should be the basic plan with regard to environmental conservation for systematic and comprehensive promotion of the policies for environmental conservation (the Basic Environment Plan)"

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2. Report of the Council (December 9, 1994)

To : Tomiichi MURAYAMA, Prime Minister

Jiro KONDO, Chairman of the Central Environment Council

Regarding the Basic Environment Plan (Report)

This is a report as attached on the conclusions of the Central Environment Council to "Regarding the Basic Environment Plan (consultation)" dated January 14, 1994, Consultation Number 6.

In the course of deliberations, the Council directly heard the explanations by Ministries and Agencies concerned, local governments and private organizations on environmental measures and activities, published an interim report on deliberation, and held public hearings in nine places across the country. Through these processes, we heard opinions from broad sectors of society and made best efforts to incorporate them in the discussion and the conclusion.

The Council strongly expect the Government to quickly decide the Basic Environment Plan in accordance with this Report and to comprehensively and effectively implement the Plan by putting these measures into practice in cooperation of the whole Government.

As well, the Council hopes that, in consideration of particularly high public interests on : development and utilization of indicators which show the progress towards long-term objectives of the Plan aiming at building a sustainable society, measures concerning global warming, waste management and recycling program, measures concerning harmonious coexistence between humankind and nature, environmental education, environmental impact assessment scheme, economic measures to reduce environmental load and so on, the Government promotes studies and investigation in line with the principal direction of the Plan and implement necessary measures.

In order to build a sustainable society, not only the Government but also the cooperate efforts of local governments, corporations, people and private organizations are indispensable. The Council hopes that the Government pays special attention to the awareness programs, such as making information available to the public about the content of the Plan and its implementation progress.

Furthermore, specific proposals or examples of action shown in the public opinions should be taken into consideration in the policy implementation by the Government as appropriate.

To contribute to steady implementation of the Basic Environment Plan, the Council will follow-up the Plan's progress and, as necessary, report future policy directions to the Government.

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3. Statement by Prime Minister Tomiichi MURAYAMA (December 16, 1994)

Today, the Cabinet meeting decided the Basic Environment Plan.

Since the enactment of the Basic Environmental Law last November, Japan took its first step in the long journey of new environmental policies for this era of globalization.. The Basic Environment Plan decided today is another step forward. It solidifies the outline for realizing the

basic principles and measures provided by the Basic Environmental Law. The Plan is intended to enable the blessings of the environment to be enjoyed far into the future by setting forth four long-term objectives : which are to ensure that 1) human activities interfering with nature's cycle are minimized, 2) people and nature coexist in harmony, 3) everyone participates in environmental conservation, and 4) international activities are promoted. It also clarifies the direction of Japan's comprehensive environmental policy.

It is my firm conviction that one of the government's basic tasks is to ensure a safe environment to live in for both ourselves and future generations, thereby creating a nation that is friendly to people and the environment. I also believe that these are key roles that Japan must play internationally. This Plan solidifies these beliefs into governmental policy.

Hereafter, the government shall be in charge of effecting this Plan. Our first tasks include the establishment of an action program for making the government business more environmentally friendly. It is also essential that the government works together with local governments, companies, private citizens and civil organizations with each sector pulling their own weight in this effort. Every member of our society must take a closer look at and reorganize their routine activities and lifestyles. These commitments are what pushes us forward in creating a nation friendly to people and the environment.

I earnestly desire understanding and participation from each citizen to ensure that the aim of this Plan, which is to attain of sustainable development with little environmental interference, is achieved.

1 Translator's note :

The term "environmental conservation" is used hereinafter as a translation of Japanese term "kankyo no hozen", which includes both protection and improvement of the environment.

2 TRANSLATOR'S NOTE :

Here, "mountainous areas", "countryside areas", "areas with high human impacts" are translations of more concise Japanese words, "sanchi", "satochi" and "heichi".

The Basic Environment Plan - Reference

REFERENCE

Reference 1

Environmental quality standards for air pollution and noise pollution (based on the Basic Environment Law)

Reference 2

Targets under the Action Program to Arrest Global Warming (October 1990, Cabinet Ministers' Conference on Global Environmental Problems)

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Japan's Greenhouse Gas Emissions in 1990 (September 1990, Japan's Action Report on Climate Change based on the Framework Convention)

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Targets on recycling of metal cans (Council for Industrial Structure, Waste Disposal and Resource Reclamation Subcommittee Report, November 1990)

Reference 15

Japanese statement at the UNCED on official development assistance, June 1992:

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REFERENCE 1

Environmental quality standards for air pollution and noise pollution

(based on the Basic Environment Law)

Nitrogen Dioxide: Daily average to be within or below 0.04ppm-0.06ppm

Sulfur Dioxide: Daily average to be below 0.04ppm, and hourly average below 0.1ppm

Carbon Monoxide: Daily average to be below 10ppm, and 8-hour-average below 20ppm

Suspended Particulate Matter: Daily average to be below 0.10mg/m3, and hourly average below 0.20mg/m3

Photochemical Oxidants: Hourly average to be below 0.06ppm

Noise: Decided by area type and time classifications. Areas beside roads are given different values, as are areas near Shinkansen ('bullet-train') tracks or airports.

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REFERENCE 2

Targets under the Action Program to Arrest Global Warming

(October 1990, Cabinet Ministers' Conference on Global Environmental Problems)

(Targets)

The targets for the limitation of greenhouse gas emissions shall be set as follows.

(1)

The Government, based on the common efforts of major industrialized countries to limit CO_2 emissions, establishes the following target for the stabilization of Japan's CO_2 emissions.

1. The emission of CO_2 should be stabilized on a per capita basis in the year 2000 and beyond at about the same level as in 1990, by steadily implementing a wide range of measures under this Action Program, as they become feasible, through the utmost efforts by both the government and private sectors.
2. Efforts should also be made, along with the measures above, to stabilize the total amount of CO_2emission in the year 2000 and beyond at about the same level as in 1990, through progress in the development of innovative technologies, etc.., including those related to solar, hydrogen and other new energies as well as fixation of CO_2 at the pace and in the scale greater than currently predicted.

(2)

The emission of methane should not exceed the present level. To the extent possible, nitrous oxide and other greenhouse gases should not be increased.

With respect to sinks of CO_2, efforts should be made to work for the conservation and expansion of forests, greenery in urban areas and so forth in Japan and also take steps to conserve and expand forests on a global scale, among others.

(Duration of the Action Program)

The Action Program covers the period from 1991 to 2010, with 2000 set as the intermediate target year. During this period, the Action Program should be reviewed, as necessary, for its flexible response to international trends, accumulated scientific findings and so on.

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REFERENCE 3

Japan's Greenhouse Gas Emissions in 1990

(September 1990, Japan's Action Report on Climate Change based on the Framework Convention)

Carbon Dioxide Emissions Per Capita

2.59 tons of carbon/capita

Total Carbon Dioxide Emissions

320 million tons of carbon

Total Methane Emissions

1380 Gg (1Gg(Gigagram)=1000tons)

Total Nitrous Oxide Emissions

48 Gg

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REFERENCE 4

Ozone depleting substances production/consumption control schedule

(based on the Montreal Protocol on Substances that Deplete the Ozone Layer, revised November 1992)

- CFC 1996 phased out
- Halon 1994 phased out
- Carbon tetrachloride 1996 phased out
- 1,1,1-Trichloroethane 1996 phased out
- HCFC 2030 phased out
- HBFC 1996 phased out
- Methyl Bromide 1995 stabilized at 1991 level

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REFERENCE 5

The target for achieving environmental quality standards for nitrogen dioxide

The Basic Policy for Nitrogen Oxides Reduction (January 1993) and the Nitrogen Oxide Reduction Plans (November 1993) set the target of nearly achieving the environmental quality standard for nitrogen dioxide by the year 2000. in the designated areas.

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REFERENCE 6

The targets concerning the curtailment of the aggregate nitrogen oxides burden

The Nitrogen Oxide Reduction Plans set the target value of total amount reduction of automobile emitted nitrogen oxides in each designated area.

A.

Regulations shall be placed on certain automobile types and their influx prevented.

B.

The increased use of cars that produce less pollution will be promoted to reach the goal set in the Nitrogen Oxides Reduction Plans.

C.

Joint and bulk cargo transport and a shift to mass transit systems, such as railways and ships, shall be actively promoted in medium to long distance transport between major ports. Also, the development and improvement of port facilities shall be promoted.

D.

The maintenance of public transportation and facilities for pedestrians and cyclists shall be promoted.

E.

To relieve congestion, bypass and loop maintenance, intersection and crossing improvements, effective enforcement of traffic regulations, parking measures, traffic control system improvements and traffic information systems shall be promoted.

F.

Soil, plants and other biological pollution filters shall be promoted as first stage decontamination systems.

G.

Guidance on appropriate and practical automobile use shall be promoted.

H.

With appropriate enforcement of the Nitrogen Oxides Reduction Plan, in an effort to continue reducing nitrogen oxides, surveys and examinations shall be promoted.

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REFERENCE 7

The target of increasing low-emission vehicles The Nitrogen Oxides Reduction Plans set the target that 300,000 low-emission vehicles should be introduced in the designated areas by the year 2000.

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REFERENCE 8

Environmental quality standards on water quality

(based on the Basic Environmental Law):

Environmental quality standards have been set for the following water contaminants in order to protect human health:

Cadmium, total cyanide, lead, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCBs, dichloromethane, tetrachloromethane, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, tetrachloroethylene, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene and selenium.Environmental quality standards have been set for the following water contaminants to conserve mankind's living environment:

Rivers and Streams: hydrogen-ion density, the amount of biochemical oxygen demand, floating substances, dissolved oxygen and coliforum bacillus groups.

Lakes and Marshes: hydrogen-ion density, the amount of chemical oxygen demand, floating substances, dissolved oxygen, coliforum bacillus groups, nitrogen and phosphorus.

Oceans: hydrogen-ion density, the amount of chemical oxygen demand, dissolved oxygen, coliforum bacillus groups, extracted substances in normal hexane, nitrogen and phosphorus.

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REFERENCE 9

Water quality targets for lakes

For designated lakes under the Law Concerning Special Measures for Lake Water Quality Conservation, the Lake Water Quality Conservation Plans set water quality targets to be achieved in five year period, foreseeing the achievement of environmental quality standard.

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REFERENCE 10

Water pollutant reduction targets for inland seas

Basic Plan for Total Water Pollutant Reduction (January 1991) and the Total Pollution Reduction Plans (March 1991) set targets of reduction of water pollutants in terms of chemical oxygen demand to be achieved by 1994 for Tokyo Bay, Ise Bay and Seto Inland Sea.

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REFERENCE 11

Environmental quality standards for soil pollution

(based on the Basic Environment Law)

The Government has set environmental quality standards for the following soil contaminants:

Cadmium, total cyanide, organic phosphorus, lead, hexavalent chromium, arsenic, total mercury, alkyl mercury, PCBs, copper, dichloromethane, tetrachloromethane, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, tetrachloroethylene, 1.3-dichloropropene, thiuram, simazine, thiobencarb, benzene and selenium.

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REFERENCE 12

Targets for Ground Subsidence Prevention

The Outline of Measures for Preventing Ground Subsidence (April 1985 for the Nobi Plain and the Chikugo-Saga Plain, November 1991 for the Northern Kanto Plain) establish the target for volumes of groundwater puming-up to be achieved by fiscal year 1994 (2000 for the Northern Kanto Plain)

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REFERENCE 13

Targets on recycling of paper and glass

(The Order of Ministry of International Trade and Industry, October 1991, base on the Utilization of Reclaimed Resources Promotion Act)

Recycled paper utilization

55%(in 1994)

Glass cullet utilization

55%(in 1995)

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REFERENCE 14

Targets on recycling of metal cans

(Council for Industrial Structure, Waste Disposal and Resource Reclamation Subcommittee Report, November 1990)

Steel can reclamation

over 60%(in 1995)

Aluminum can reclamation

60%(by the end of 1994)

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REFERENCE 15

Japanese statement at the UNCED on official development assistance, June 1992: Japan shall seek to expand bilateral and multilateral official development assistance from 900 billion to 1 trillion yen by for 5 fiscal years from 1992.