5. 会 議 資 料

Keynote Speech

Keynote Speech, 12th NEAC

Progress and Prospect on Environmental Conservation in China

Xu Qinghua

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State Environmental Protection Administration, P.R. China

November 24-26, 2003, Toyama, Japan

Mr. Chair-person, ladies and gentlemen:

Good morning.

I am very pleased to be here at the 12th Northeast Asian Conference on Environmental Cooperation. Thank you for inviting me and my colleagues to this important conference。First of all, please allow me, on behalf of the State Environmental Protection Administration (SEPA) of the People's Republic of China, to extend our sincere congratulation to the opening of the Twelfth Northeast Asia Conference On Environmental Cooperation (NEAC) here in Toyama of Japan. I also would like to extend my sincere appreciation to the Government of Japan for hosting and organizing this conference. I wish to get to know more friends here so that we could coordinate for the betterment of environmental cooperation in Northeast Asia.

Northeast Asia is abundant with natural resources and has a great human resource potential. Together with the political will of all countries concerned, and the fact that it lies close to some of the world's fastest growing and biggest

economies, this region is likely to become one of the largest international development centers. As a result, there is a long-term potential to attract investments for infrastructure, natural resource development, industry, mining, oil exploration, and urban development. However, the industrial and economic development will also bring new dangers, and unless mitigation strategies are implemented, growth in this region will threaten the regional environmental resources.

The 11th NEAC, as hosted by China, was held in Hainan, China, in December last year. It was a fruitful meeting where representatives from Japan, Korea, Russian Federation, Mongolia and China had in-depth discussions on regional environmental issues. I wish that the meeting this year would further enhance the open discussions among the member countries and facilitate the environmental cooperation in the region.

Here, I would like to take this opportunity to give a brief overview of environmental protection and sustainable development in China in general and also the situation in the past year.

In the new century, China will continuously maintain a high economic growth rate: national economic output is expected to double in the next 10 years. Along the process of economic restructuring and economic development, China will face challenges from both domestic and global environmental concerns. With a huge population, below-average per capita share of natural resources, insufficient infrastructure and fast-paced urbanization, China's social and economic development in the 21st century, which includes such grand

projects like the great western development, water diversion from south to north, Beijing's 2008 Olympics, and China's entry the WTO, will be greatly hindered by the already-deteriorating ecological environment. In order to maintain a fast and healthy economic development and gradually improve the environmental quality, China has established compatible environmental protection goals in the next few years:

- At an economic growth rate of 7%, the total discharge volume of major pollutants will be reduced by 10% from 2000 to 2005;
- A 20% reduction of SO_2 emission within the acid rain control zone and SO_2 control zone from 2000 to 2005;
- A 60% water reuse rate in the industrial sector; an average domestic sewage treatment rate of 45% and 60% in cities with a population of greater than 500,000. This is equivalent to an increase of daily domestic sewage treatment capacity of 26 million tons.
- The comprehensive solid waste utilization rate will reach 50% and the urban waste disposal rate will reach 65%.
- Approximately 13% of national land will be protected by nature reserves.
- The program of forest/grassland reclamation from cultivated land will be continued;
- Environmental quality at key river basins, regions, coastal areas and cities will be improved.
- Water quality of the "Three Gorges" reservoir and water diversion project from south to north will meet their planned goals.

These goals can only be achieved through sustainable

development and its implementation in various sectors:

- Industry: along the process of industrial restructuring, clean production will be further promoted, together with industries of high efficiency and environmental friendly products. Eco-park demonstration projects will be established and new sustainable economic development models will be experimented.
- Agriculture: traditional farming practice will be improved toward ecological, organic and water-conservation farming, green and organic food products will be developed.
- Urban development: urban planning will focus on the creation of a clean and comfortable environment for citizens. More environmental infrastructures like wastewater and solid waste treatment plants will be constructed. Emission from mobile sources will be further controlled.
- Rural development: the priority will focus on raising the level of environmental awareness of farmers. More environmental-friendly towns and villages will be constructed.
- Ecological protection: more ecological special function zones and priority natural resources areas will be established and protected. Ecological demonstration projects will be established.
- Great western development program: Ecological management and protection will be enforced along the development

process. Forest/grassland reclamation will be further implemented.

In 2002, China has made remarkable achievements in pollution prevention and control. Discharge of major pollutant in 2002, namely sulfur dioxide, smoke, industrial dust, COD and industrial solid waste has reduced at 10.3%, 26.1%, 35.3%, 10.3% and 58.9% respectively, as in comparison with those of the year 1998. Pollution in main streams of Huaihe River has been markedly reduced and degradation of water quality in Taihu Lake and Chaohu Lake has been primarily under control. Eutrophication in Dianchi Lake has been primarily curbed. Remarkable achievements have also been made regarding pollution prevention and control in the "Dual Control Area". In 2002, cities graded as level two for sulfur dioxide concentration have reached 56.9% of the total in sulfur dioxide control area, a remarkable increase from the 32.8% in 1998. Precipitation acidity in acid rain control area has been in decrease. The project for pollution prevention and control in Bohai Sea has been initiated.

On the other hand, conservation of ecology and environment in China has been further strengthened. Protection and construction of ecology and environment have been identified as key component in developing the western areas. The project on protection of natural forest resources has been initiated and other initiatives include restoring farmland to lakes and forests, immigrations for ecological considerations, etc. Investigations on ecology and environment in western and middle part of China have been completed. By the end of 2002, 5,027,500 hectares of forest have been cultivated as a result of the project on protection of natural forest resources, and

5,831,000 hectares of forests have been restored from farmlands. New achievements have been made in construction and management of natural reserves and bio-diversity protection. By the end of 2002, 1757 natural reserves have been established, a total area of 132,950,000 hectares that accounts for 13.2% of the territory. Environmental protection in rural areas are attached great importance. Stubble burning is banned and comprehensive resource utilization is promoted.

As a country of profound environmental indications and liabilities, China has actively initiated the strategy for sustainable development. The legal system for sustainable development has been primarily shaped, with over 20 laws and 100 regulations issued regarding environment and resource protection. Further to the National Report on Sustainable Development published right before the World Summit on Sustainable Development last year, the Action Plan for Sustainable Development in the Beginning of 21st Century was published in July, 2003. As a result that the strategy for sustainable development is implemented, active progress has been made in the strategic reform of industrial structure, rapid population growth has been controlled, resource consumption and pollutant discharge per capita has been in decrease, which have all contributed to the continuous, rapid and healthy development of national economy. Despite of the great achievements China has made in society and economy, China is still in the extensive mode for economic growth, with pressures from population growth, shortage of resources and environmental degradation. Therefore, it still remains the long-term priority for China to eradicate poverty, achieve economic growth, improve the living standard and ease the burden from environmental pollution.

Experiences from the years have proved to us that cooperation

at international level, and regional level in particular, is essential in further facilitating sustainable development as supported by social progress, economic growth and environmental protection. NEAC has, since its establishment, been serving as a major mechanism for environmental cooperation within the region. Member countries have been in cooperation through the years and NEAC has further provided an effective and helpful communication channel, which enables research on regional environmental status and prioritizing key areas for regional cooperation. Environmental protection and sustainable development in the region have been actively enhanced as a result of discussions and policy cooperation on issues of regional population, human resource development, natural resources, resource development, environmental risks and international cooperation on environmental protection. China will participate, in a more active manner, in environmental cooperation within the region. We sincerely wish that our cooperation under NEAC would help to improve the environmental status within the region, bring changes to the present production mode and pave the way for sustainable development among all members.

At last, I would like to wish this meeting successful and fruitful.

Thank you!

“Environmental Policy Development in Japan”

Kazuhiko TAKEMOTO

Deputy Director-General
Global Environment Bureau
Ministry of the Environment

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1. Introduction

On behalf of the Government of Japan, I am pleased to welcome all the participants to the 12th Northeast Asian Conference on Environmental Cooperation (NEAC). Taking this opportunity, I would like to extend my sincere thanks to Toyama Prefecture Government and Toyama City Government as well as the Northwest Pacific Region Environmental Cooperation Center (NPEC) for their supports, which make this conference realize in a smooth manner.

As you have already noted, we started the NEAC in 1992 and we convene it every year since then. I would like to underline that this initiative has been developed by strong participation and enthusiastic commitments of each country in close collaboration of UNEP Regional Office for Asia and the Pacific. It is very important for us to exchange information on and experiences in environmental policy development and to discuss our common interests including regional cooperation through this regular meeting.

I am very pleased to share with you our initiatives in developing environmental policies in Japan.

2. Recent Policy Development in Japan

(1)Follow-up of WSSD

In September last year, the World Summit on Sustainable Development (WSSD) concluded with the following outcomes; (a) Johannesburg Plan of Implementation (JPOI), (b) Johannesburg Declaration on Sustainable Development, and (c) Type II Partnership Initiatives. We are now getting into the implementation phase to follow up these commitments.

I would like to highlight our initiative on sustainable consumption and production as one of outstanding examples. The Johannesburg Plan of Implementation encourages the government to develop a 10-year framework of programmes in support of accelerating shift towards sustainable consumption and production. In line with this, the government of Japan formulated the “Basic Plan for a Sound-Material Cycle Society” as a 10-year framework of program. I will touch on this later in more detail.

(2)Climate Change

Japan ratified the Kyoto Protocol in June last year. In order to meet our Kyoto targets, we have implemented policies and measures based on the Guidelines to Address Global Warming. The Guidelines were decided by a Cabinet-level Task Force, consisting of all relevant Ministers and chaired by the Prime Minister.

(3)Environmental Education

At the WSSD, Japan proposed the “Decade of Education for Sustainable Development”. The UN General Assembly adopted this proposal last December.

In Japan, a new Law on Promotion of Environmental Education was enacted last July to further support NGOs, citizen groups and private sectors in developing their activities in environmental education. The implementation of this Law will be able to contribute to the preparation for the Decade of Education for Sustainable Development, which will start in 2005.

(4)Sound Material-Cycle Society

As stated before, the government of Japan made a cabinet decision on the “Basic Plan for Sound Material-Cycle Society” last March. A “sound material-cycle society” is defined as a society in which the consumption of natural resources is minimized and environmental load is reduced as much as possible. In light of this, the Basic Plan decides quantative targets for the indicators on resource productivity, recycling rates and the amount of final waste disposals.

We are now getting into the implementation phase of this Basic Plan in collaboration with relevant stakeholders including local governments, citizens, NGOs and private sectors.

(5)Air Quality Management

To address air pollution in the urban areas, Japan decided to introduce the most stringent regulations in the world to control emissions from diesel-powered vehicles from 2005.

I am pleased to report that the “International Conference on Environmentally Sustainable Transport in Asia” was organized in Nagoya last March to discuss the desirable transport in Asia. Following up the outcome of this conference, “Policy Dialogue on Environment and Transport in Asia” is scheduled for next January in Manila.

(6)Water Quality Management

The government is working intensively to cope with organic pollution, which is addressed by the comprehensive measures to reduce total organic pollutant loads and the control of wastewater effluent into enclosed waters. Japan has to implement comprehensive measures for not only water quality, but also water quantity and the conservation of waterfront ecosystems. It is very important to realize sound water cycle.

The Third World Water Forum was held in Kyoto and neighbor Cities last March. Japan would like to work together with international community to implement the projects listed in the Portfolio of Water Actions, which is one of the outcomes of the Ministerial conference. Following up the outcome of this Forum, the Water Environmental Partnership in Asia (WEPA) has been proposed to assist the countries, for their planning and implementation of policy and measures to conserve water by developing a database on water environment. The inception workshop of WEPA will be

held in next year to discuss the project's framework and involvement of stakeholders.

(7)Chemicals

In order to avoid environmental risks caused by chemical substances, the Law on PRTR was enacted in 1999. This Law requires the enterprises to take further actions on their chemical management through reporting system.

In addition, the Law on Assessment of Chemical Substances was amended last May to incorporate the dimension of ecosystems into the chemical assessment process.

(8)Biodiversity

Biodiversity is one of the most important policy agenda in Japan. The "New National Strategy on Biodiversity" was decided at the Cabinet-level Task Force in 2002. The strategy sets forth three objectives; namely (a) strengthening of conservation, (b) restoration of nature, and (c) enhancement of sustainable use.

We are now preparing for legislation to cope with alien species. At the same time, the government is intensively working to mitigate the impacts of certain alien species in the hotspots.

3. International Cooperation

Now I would like to introduce the progress on the international cooperation in this region.

(1)Acid Deposition / Dust and Sandstorms (DSS)

The Acid Deposition Monitoring Network in East Asia (EANET) started in 2001 with the participation of relevant countries in this region. Japan would like to continue to commit itself to this Network. I am pleased to share with you that the Intergovernmental Meeting of EANET is scheduled for this week in Bangkok to discuss important issues including future financial arrangement. I wish this Meeting a successful outcome on these subjects.

In regard to dust and sandstorm (DSS), we are updated of this issue through the Symposium of this morning. I am grateful that the ADB-GEF project on DSS in Northeast Asia started last April with the participation of four countries such as China, Korea, Mongolia and Japan, along with four international organizations including UNEP. Japan would like to continue to support this project as much as possible.

(2)Marine Pollution Prevention

It is very important to implement the Northwest Pacific Action Plan (NOWPAP) for the conservation of marine environment in this region. For that reason, it is essential that a Regional Coordinating Unit (RCU) should be established as soon as possible. Korea and Japan have been working to co-host the RCU for host country agreements with

UNEP. I am pleased to share with you that Japan already signed an agreement on the RCU Toyama office last September.

In regard to the regulation of waste dumping, the 1996 Protocol under the London Convention is likely to enter into force in a couple of years. In light of this, Japan is preparing for necessary amendment of current regulations to ratify the Protocol.

(3)Stockholm Convention on Persistent Organic Pollutants (POPs)

Japan ratified this Convention in August 2002 and is now developing the national implementation plan required by the Convention. We organized the East Asia POPs Monitoring Workshop to discuss how to monitor POPs contamination in this region.

(4)Local Governments' Initiatives

It is noted that local governments play an important role in developing international cooperation.

The Association of Local Governments in North East Asia Region (NEAR) is a good example. The Association consists of 36 local governments from six (6) countries in this region. The Association organized the international symposium on organic waste management in Korea last year. Another symposium was recently held in Russia to discuss river water quality. We are pleased to welcome these initiatives taken by local governments, who have experienced in overcoming serious environmental pollution.

4. Conclusion

As I have stated, Japan has made remarkable progress in developing environmental policies as you have in your county. However, we still have many agenda in front of us to achieve sustainable development.

In this region, I believe that we have common ground to address environmental issues. Therefore, I would like to underline the importance of the regional-wide cooperation among countries gathering here for this Conference.

Finally, I would like to conclude my presentation by wishing the conference a fruitful outcome through our active interactions.

Thank you.

Key-note Speech

Mr. Ji-Tae Kim
Director General
Bureau of Water & Wastewater Works
Ministry of Environment, Korea

Distinguished delegates, ladies and gentlemen!

It is a great honor and pleasure for me to join you today to discuss environmental policies and initiatives for sustainability in our region. I extend my appreciation to the Ministry of the Environment of Japan, the Northwest Pacific Region Environmental Cooperation Center, and the Overseas Environmental Cooperation Center for their hard work in organizing this conference. I also thank the city of Toyoma for her gracious welcome and generosity.

The importance of regional cooperation in addressing global environmental problems has been highly stressed since the 1992 UN Conference on Environment and Development(UNCED) held in Rio De Janeiro. This recognition did not go unnoticed in Northeast Asia; it actually led to the establishment of NEAC for stronger regional environmental cooperation. Since first meeting in 1992, NEAC has convened 11 times so far and enabled our countries to exchange views and share experiences on practically all environmental issues. Through NEAC, we have built a strong human resources network and promoted the spirit of solidarity for belonging to the same environmental community.

This year, we discuss dust and sandstorm, preservation of marine environment, recycling society, and environmental cooperation of local authorities. By exchanging information and gaining new perspectives, we can expect to enhance mutual understanding and improve relevant policies. Particularly, I believe that this morning's Public Symposium on Deterioration of Land and DSS has greatly helped to raise public awareness and support for the prevention of DSS, which has grown into one of the most serious environmental challenges in Northeast Asia.

Mr. Chairman,

I would like to briefly introduce Koreas achievements and future plans for environmental policies.

Let me start by pointing out that in Korea, 46% of our entire population lives in the capital region, which takes up only 11.7% of the total land mass. Due to this concentration, the main focus of the Ministry of Environment is environmental improvement of the capital region. Starting in 2002, our Ministry has been implementing comprehensive measures to bring up air quality in the capital region to the level of environmentally advanced OECD countries by 2012.

These measures consist of total pollution load management, emissions trading, and mandatory manufacture and purchase of low-emission vehicles. They are now incorporated into a special air pollution control law and await passage by the National Assembly.

In terms of water quality management, Korea enacted special laws for the protection of the four major domestic rivers in 1999 and 2002. These laws provide for the establishment of riparian buffer zones, total pollution load management, application of the User Pays Principle, and non-point source management. However, enacting these laws was by no means easy. Although most stakeholders agreed that preventive and demand-side approach contained in the proposed measures would do much to safeguard the water resources, they remained unwilling to compromise their respective interests.

As a result, 420 meetings took place over five years among affected residents, experts, local authorities, environmental organizations, and the government. These meetings helped mediate stakeholder conflict and created the basis for developing practical and enforceable water protection measures. Through this experience, we realized that public participation and mutual concession is essential to successful policy-making.

Next, I would like to touch upon Korea's waste management. Our policies in this area were developed to reduce waste generation and facilitate recycling. One example would be the Volume-based Waste Fee System that requires each household to pay for the treatment cost of its own waste. The system, which went into force in 1995, has resulted in substantial reduction of domestic waste and also prompted people to become more conscious of their consumption activities.

Additionally, in order to promote recycling, Korea has been enforcing the Extended Producers Responsibility System since January 2003 on 15 products, including metal cans and electrical appliances. Details on EPR will be discussed at Session 2 tomorrow.

For sustainable land management, Korea will introduce the Strategic Environmental Assessment System that supplements Environmental Impact Assessment and Prior Environmental Review System. We have been performing environmental impact assessment on development projects above a certain scale; however, in some cases, assessment outcomes could not be adequately reflected in project development due to time difference. In light of this shortcoming, our Ministry makes efforts to establish a precautionary decision making procedure in which potential environmental impact is assessed at the drafting stage of major national policies and development plans.

Korea will also expand the Eco-labeling System to induce sustainable production and consumption. To encourage environmentally friendly business and consumption, we plan to enact the Green Consumption Promotion Act, stipulating the roles and responsibilities of each economic entity, from consumers to governments to enterprises.

Korea also strives to partake actively in the global and regional efforts to realize sustainable development. In addition to ratifying the Kyoto Protocol for global warming mitigation, we established intergovernmental committees to effectively implement the outcomes of the WSSD. We also collaborate with ESCAP, ADB, UNCCD, UNEP and our neighboring countries to prevent DSS in Northeast Asia. I believe that such action-oriented partnerships will help achieve sustainability in Northeast Asia, one of the most dynamic regions in the world.

Finally, I want to extend Korea's cordial invitation to the 8th Special Session of the UNEP Governing Council and Global Ministerial Environment Forum, which will be held in March 2004 in Jeju Island. This is the first time that the Governing Council is convening in Asia and we would like to ensure its success. This can be done only through your active participation and support.

Unlike other regions, Asia has so far been unable to pinpoint to a common environmental issue for discussion in the international context due to our different geographical, economic and social conditions. However, I believe that as a region with one of the most significant environmental and demographic problems, Asia owes it to our future generations and to the international community as a whole to bring our issues forward.

In this regard, next year's meeting can serve as a good starting point. I would like to let you know that Korea is currently talking with the UNEP secretariat to include desertification and DSS in Northeast Asia in the State of the Environment (SOE) report.

I hope that countries can individually and collectively make efforts to present our regional environmental agenda to the world for more effective resolution.

Thank you.

12 th NEAC
Keenote speech

Environmental Protection and International Cooperation in Russia

Mr.Sergey Tveritinov
Director, International Cooperation Department
Ministry of Natural Resources , Russian Federation

Mr.Chairman,
Ladies and gentlemen !

On behalf of the Ministry of the Natural Resources of Russian Federation I want to express out congratulations to the host country on the occasion of the opening of the 12th North East Asia Conference on Environmental Cooperation (NEAC) in Toyama, Japan. I also would like to thank the Ministry of Environmnet of Japan, Toyama prefecture and Toyama city as well as Northwest Pacific Regional Environmental Cooperation Center and the Overseas Environmental Cooperation Center for their contribution and work in organization of this Conference.

As it was pointed out before, the strong region cooperation give us not only an opportunity to exchange views and experience, but to resolve the global and regional environmental problems.

You remember the last Meeting of the North East Asia Conference on Environmental Cooperation. It was announced about arrangement of the Russian Federation to be a party of Convention on Desertification, and my colleague this morning informed you on this activity.

The morning symposium was really successful and showed us that only on the basis of the mutual cooperation it possible to solve transboundary ecological problems. And another important thing – it is so called “project approach”.

From this point of view and with your kind permission I shall briefly introduce the activity of the Russian Federation in environmental protection and nature conservation.

First of all, 65% of the territory of Russia in fact is not touched with the human activity, and this part of the territory is located predominantly in Asia. On the other hand, on the 15% of the territory the state of the environment does not meet the standards.

Russia plays a key role in maintaining the global environmental functions because the significant part of the biodiversity is represented on its territory with

various ecosystems, including 25% of the world forest resources that provide the sustainability of the global ecosystem.

The current environmental situation was discussed last week in Moscow in the course of the All-Russian Congress for Environmental Protection. The key issue of the Congress was a discussion of the Environmental Doctrine of the Russian Federation and elaboration on its base of the Action Plans of federal, regional and sectoral levels. It was also envisaged to elaborate and implement a set of the regulatory and support measures in the field of environmental protection and proper management of natural resources.

The main directions of the environmental policy are:

- sustainable use of natural resources
- reduction of environmental pollution
- protection and rehabilitation of natural ecosystems.

What are the ways and means of the implementation the national environmental policy?

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First. Further development of the state environmental and natural resources management;

Second. Regulative and legislative support and their enforcement;

Third. Economic and financial instruments;

Forth. Environmental monitoring and information;

Fifth. Scientific support. Environmental education and public awareness

Sixth. A civil society development;

Seventh. Regional environmental policy;

And the last, but from my point of view, not the least, - international cooperation.

In the framework of the international cooperation this year in Russia there have been held several important events which actually have contributed to the progress of the NEA cooperation.

1. World Conference on Climate Change. Round Table of Head of Delegations of Leading Countries. Moscow 29 Sept. -3 Oct.

2. International Conference in Khabarovsk “Environmental Protection in the NEA Region”. The participants - Russia (Khabarovskiy krai, Chitinskaya oblast, Amurskaya oblast, Khabarovskiy krai, Evreiskaya oblast), China (Heiluntsyan province), Mongolia (Central Aimak), Japan, Republic of Korea (Chunchonnam-do, Konkvondo provinces). The Conference addressed the most urgent problems of Amur River basin and response measures on its protection

needed on the part of NEA countries that was expressed in the Declaration approved by the participants.

3. 5th European Conference of Ministers "The Environment for Europe, 2003" in Kiev. May 22, 2003. National delegations of Western European and the Community of Independent States countries discussed and approved the Environmental Strategy of Countries of Eastern Europe, Caucuses and Central Asia. The output of the Regional environmental cooperation. Russian delegation rendered support to the European Union Water Initiative launched by the WSSD.
4. On March, 5-6 2003 Ministry of Natural Resources RF held the High-Level Meeting on Water Initiative for 12 countries. There was stressed the need in development of mechanisms of cooperartion and coordination for promotion of this partnership.
5. The bilateral relations with NEA countries has been marked with events - the visit of the Minister of Environment of China Xie Zhenhua to Moscow . The results of that visit have been reflected in the documents signed jointly by the Russian Prime Minister M.Kasyanov and the Prime Minister of Chinese People's Republic. The meetings of the joint commission on Environmental Protection (Russian-Japanese, Russian-Chinese) have been held this year in Moscow.

For the near future there are planned the following activities:

1) Next year – Russia will chair the Arctic Council for the period 2004-2006.
2) In 2005 UNESCAP will arrange the Regional Ministerial Meeting on Sustainable development. Its Secretariat has already started the compiling the Agenda
3) As you know, Mr.Chairman in this December 17-19th in Moscow Russia will host the Meeting of the Senior Officials of the NEA to discuss environmental issues. Through the diplomatic channels we have informed the UNESCAP Secretariat.

We think it will be a good opportunity to start our discussion about the joint contribution (possibly the joint document) to the Ministerial Meeting

Thank you for attention.

STATEMENT BY REPRESENTATIVE OF UNEP

12th NEAC Meeting

24-25 November 2003, Toyama

Distinguished Delegates, Ladies and Gentlemen:

It gives me great pleasure and honor to be amongst you and to make a statement to this important meeting on behalf of UNEP.

As you know, there are several environmental cooperation mechanisms in this sub-region such as NEASPEC (Northeast Asian Sub-regional Programme for Environmental Cooperation), NOWPAP (North West Pacific Action Plan) and TEMM (Tripartite Environment Ministers Meeting). Among others, NEAC provides the unique forum for participating governments, international organizations and other stakeholders.

The Northeast Asia is one of the most dynamic and diverse regions of the world. It contains one of the richest and most highly developed countries of the world as well as some of the poorer and underdeveloped countries and areas. It also contains the largest country in the world with one fourth of the world population and high economic growth.

Because of the dynamism and diversity, the Northeast Asia is the most difficult sub-region in Asia and the Pacific in terms of sub-regional environmental cooperation. There is no legal framework and no institutional body for environmental cooperation in this sub-region unlike other sub-regions such as Southeast Asia, South Asia and South Pacific. Therefore, NEAC provide us with the valuable platform for environmental cooperation in this sub-region.

Keeping the uniqueness of the Northeast Asian sub-region in mind, let me report to you some of our Office's important movements and activities in relation to this sub-region after the last NEAC Meeting in Hainan, China on this precious occasion.

First of all, I am pleased to inform the meeting that "Strategy for UNEP Asia and the Pacific 2003-2005" was developed in April this year by the leadership of the new Regional Director. The Strategy consists of four objectives: (1) Assist implementation of national, sub-regional and global priority environmental programmes, (2) Host a Regional Knowledge Centre, (3) Lead response to emerging environmental issues in the region, and (4) manage human, financial and physical resources to maximize effectiveness of delivery.

One of the important points of the Strategy is focusing on innovative mechanisms for collaboration with our partners to avoid duplication and maximize service. UNEP will advocate a segmentation of UN agency responsibilities to enhance collaboration and delivery. This acknowledges UNESCAP as the lead agency for leading the regional Ministerial Conference process; UNEP supporting sub-regional institutions and programming, and UNDP maintaining its national level coordination role.

There are lots of other important points in the Strategy, but in terms of time constraints, I have to omit to introduce them here. It would be appreciated if you could have a chance to visit our website to go through the Strategy paper, later.

Secondly, I would like to introduce to the Asia-Pacific Sib-regional Environment Policy Dialogue (SEPD) held on 19 September 2003 in Beijing. As you are aware, one of the major outcomes of WSSD is the emphasis on regional implementation through partnerships between governments and civil society. The political leadership has voiced the need for the region to reach a common position through policy dialogue. SEPD was established in response to this need, consisting of 5 Ministerial representatives and 5 eminent persons from the region, one each from one sub-region, respectively.

The establishment of SEPD is based on the Strategy's fourth objective. It was decided that the meeting should be held annually in order to provide consolidated Asia-Pacific views on global environment issues, regional inputs to global events and policy guidance for the effective implementation of UNEP's programmes in Asia and the Pacific.

Thirdly, UNEP China Office was newly established in Beijing last September. This office is a country office for China, coordinating various UNEP activities including GEF projects in China with the Government, in particular SEPA. However, in the future, this office is expected to upgrade into a sub-regional office for Northeast Asia. Again, please note that this also comes from the Strategy saying UNEP supporting sub-regional institutions and programming.

Fourthly, various projects are being promoted by the leadership of UNEP. One example is an epoch-making ADB-GEF project on Prevention and Control of Dust and Sandstorms in Northeast Asia. As introduced in the Public Symposium this morning, this is a collaborative project of 4 international agencies (UNEP, ADB, ESCAP and UNCCD) and 4 countries (China, Mongolia, Korea and Japan). In this Project, UNEP is the lead agency for regional monitoring and early warning network of DSS, one of two major components of the Project. DSS is shown as one of emerging environment issues in the region in the Strategy paper.

EANET (Acid Deposition Monitoring Network in East Asia) is also actively promoted by UNEP since the secretarial role was transferred from the Interim Secretariat at MOE of Japan to UNEP/RRC.AP at Bangkok early last year. The 5th Inter-governmental Meeting will be held this week in Bangkok just after this NEAC Meeting.

Ladies and Gentlemen,

Last but not least, let me remind you that the GC/GMEF (Governing Council/Global Ministerial Environment Forum) will be held late next March in Cheju, Korea. Although the GC/GMEF is a global event, some kind of regional focus, input or flavor is needed as this is for the first time in Asia region. I believe that all the above activities are related or linked to this milestone event to some extent.

UNEP would like to be actively involved in environmental cooperation in this sub-region in association with NEAC and hope to make as much contribution as possible to effectively addressing the urgent and important environmental problems in the sub-region. I thank you for your kind attention and for giving me this valuable opportunity to share with you the UNEP activities as a committed partner in managing the Northeast Asian region's environment.

Thank you Mr. Chairman.

Session1

Preservation of Marine Environment

Preservation of the marine Environment in China

CHINA NATIONAL ENVIRONMENTAL MONITORING CENTER (CNEMC)

Jing xin

Nov. 23. 2003

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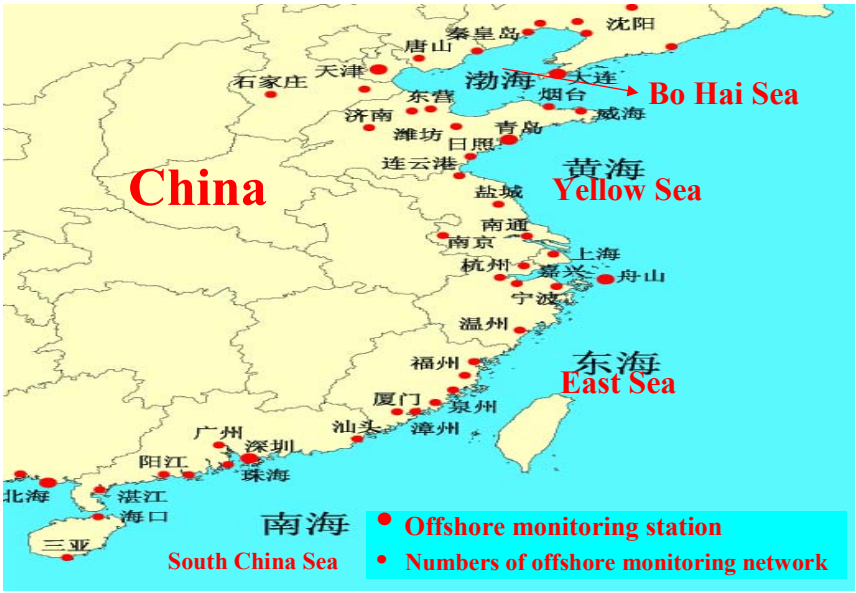
7. International cooperation

1.Offshore monitoring network



Sea Water quality overview in offshore area

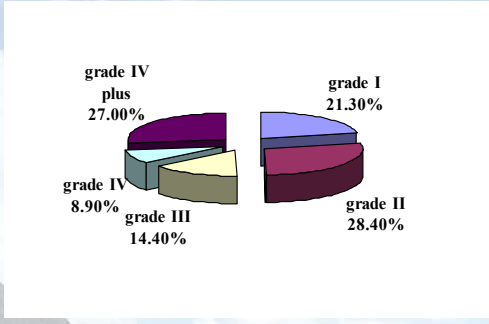


Fig. Water quality in offshore area in 2002

Grade	Percent%
grade I :	21.3%
grade II :	28.4%
grade III :	14.4%
grade IV :	8.9%
grade IV plus:	27.0%

Comparison of Sea water Quality from 1994 to 2002

There were 2896 sea water quality monitored sites for offshore, the results as: the sea water of Grade Ⅱ and grade Ⅳ in most monitored sites . More than 50% present of total is grade Ⅰ and Ⅱ in 2000and 2002, the sea water quality has been improved.

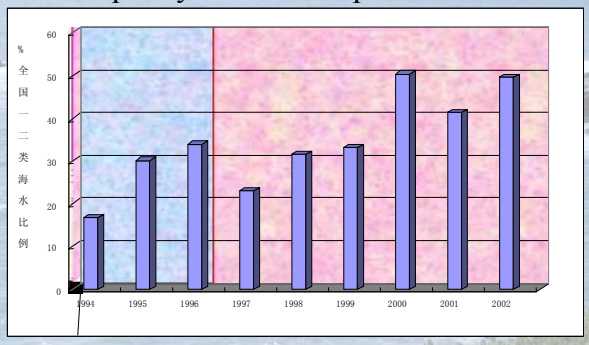


Fig. Comparison of Percentage of grade Ⅰ and Ⅱ in Chinese offshore

The main pollutants

Main affecting pollution indicators where more failure is detected are inorganic nitrogen and active phosphate. Failures in indicators as oil, COD and lead are detected in some parts of the sea area. Some individual cases also detected that are resulted from heavy metals like copper, mercury and cadmium.

During 1994 to 2002, comparison the different pollutants , the results as: the consistency of inorganic nitrogen ,COD, oil and active phosphate has been decreased.

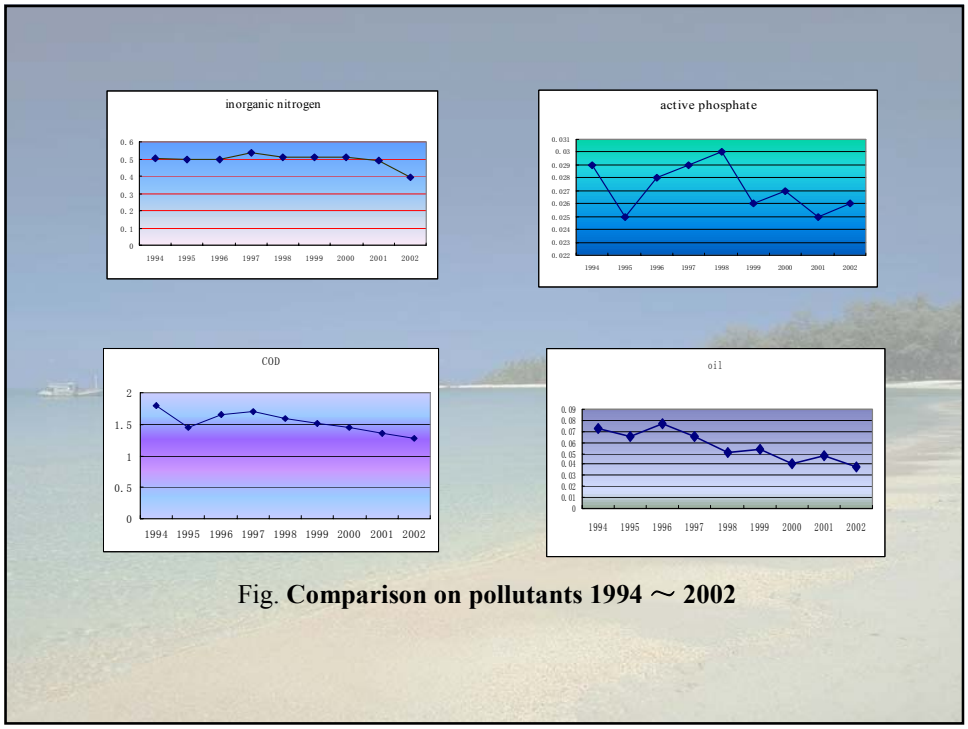


Fig. **Comparison on pollutants 1994 ～ 2002**

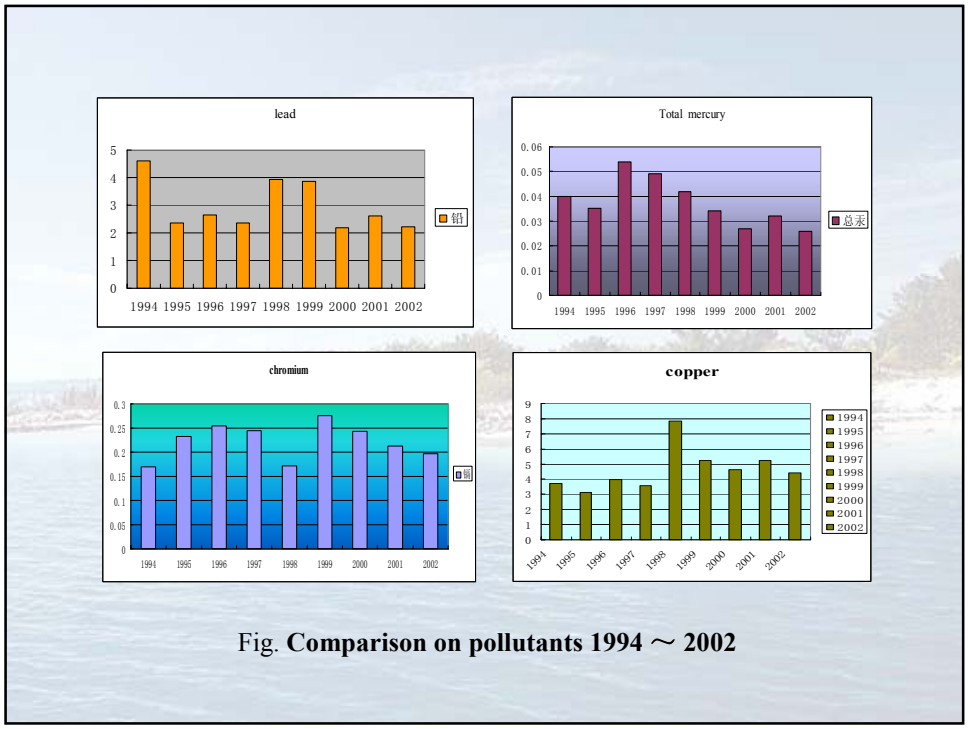


Fig. **Comparison on pollutants 1994 ～ 2002**

3. The bathing place water quality monitoring

From 29, June, 2002, 19 bathing place in ten cities has been monitored, the results shows: in 240 times monitoring, 50.8% of bathing places is grade Ⅰ, 37.1% of bathing places is grade Ⅱ,10.8% of bathing places is grade Ⅲ, 1.3% of bathing places is grade Ⅳ.

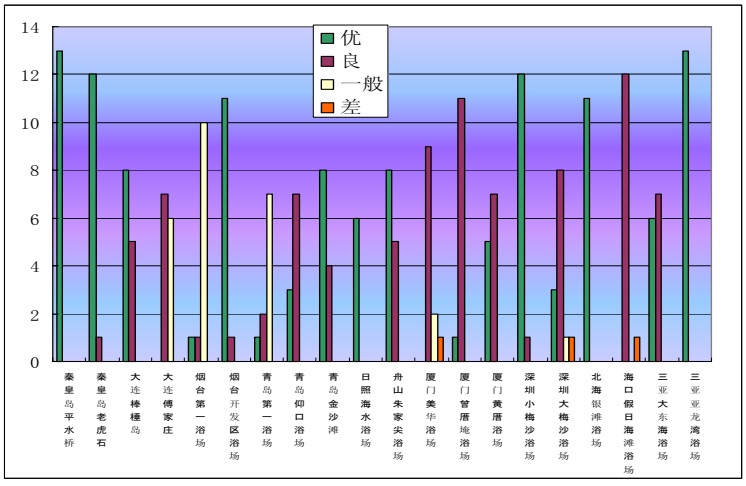


Fig. The bathing place water quality in coastal cities

4. Red Tide (HAB) monitoring

The results of monitoring shows:

In 2000, 28 times red tide was occurred in Chinese offshore, what an increase 13 time occurred in comparison with 1999.

In 2001, the red tide was occurred in Chinese sea is 77 times, economic lost 10 hundred million, area is 1.5 ten thousand Km^2, 49 times increased than 2000.

➢The frequency of red tide increased

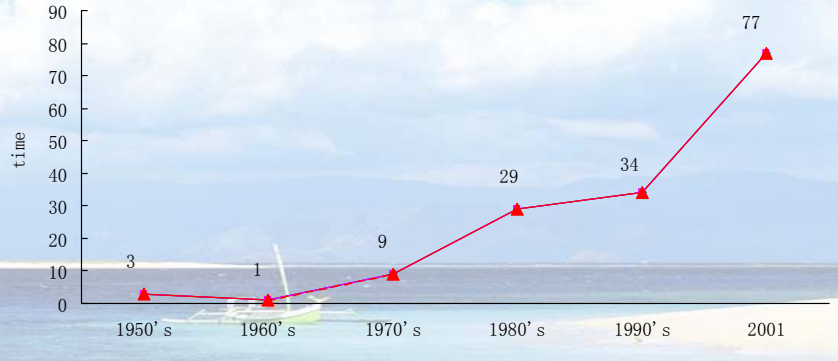
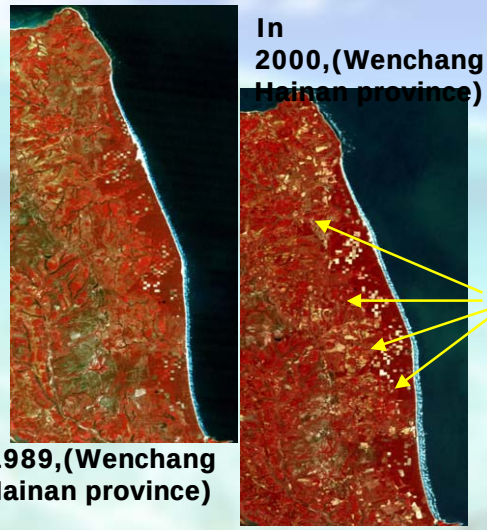


Fig. The red tide was occurred in Chinese sea water

4.1 The main reasons of red tide occurred

- **Sources of sea water pollution:**
  - Industrial waste water discharged into the sea
  - Municipal waste water discharged into the sea
  - Non-point sources
  - cultivation by sea water
- **Climate**

➢ The sea water quality increased and the ecological degradation of offshore



5. Preservation of the marine Environmental work

5.1 The study of preservation of the marine environment and the plan of action

- **The study of prevention and cure the pollution in Bohai Sea and yellow Sea**
- **The study on pollution forecast in 2000**
- **The study on the layout plan of waste water discharge into the sea**
- **The the study on management information systems**
- **The plan of action in Bohai Sea**

6. Preservation of the marine Environmental law and regulations

6.1 Law

- **The Law for Prevention of the marine Environment**
- **The managerial ordinance for depollution from land**
- **The managerial ordinance for depollution of coastal engineering**
- **The managerial ordinance for depollution of dismantle shipping**

6.2 Standard

- **The Standard of Sea water Quality**
- **The Standard of fish culture water Quality**
- **The Standard of Waste Water Discharge**
- **The Standard of pollutants discharged by shipping**
- **The Standard of Waste Water Discharge by petroleum industry**

7. International cooperation

State Environmental Protection Administration has cooperated with more than 20 countries. China EPA has cooperated with UNEP. We would like study the advanced technology with the other countries and change for information.

Project aimed at packaging Optimal environmental restoration technologies

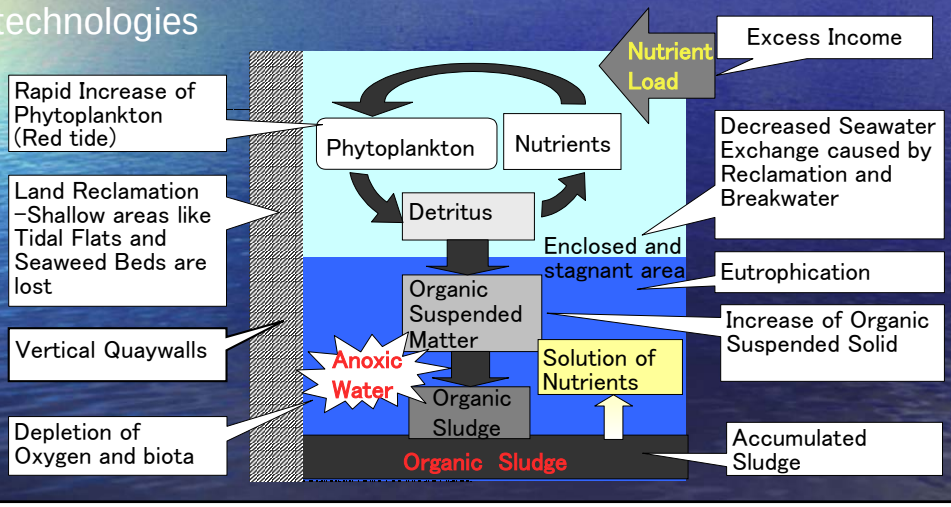
An overview

International EMECS Center

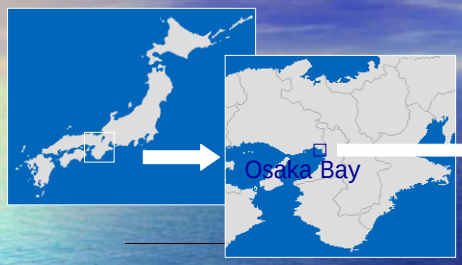
1. Background

•Conditions in enclosed coastal seas in urban industrialized area : poor biodiversity, simplified material cycle

•Environmental restoration : improved biodiversity, complex material cycle - combination of various technologies



2. Background (continued)



Surrounded by vertical quaywall and reclaimed land

Sea bottom in Port of Amagasaki
4-5 m underwater, September 2002
oxygen-poor condition

3. Background (continued)

- Port of Amagasaki : one of the worst in environmental condition – model case
- Amagasaki Nijuisseiki-no-mori (the Amagasaki century 21st Forest Project):

On-going project by the prefectural government for environmental restoration in the land area around Port of Amagasaki

4. Objectives

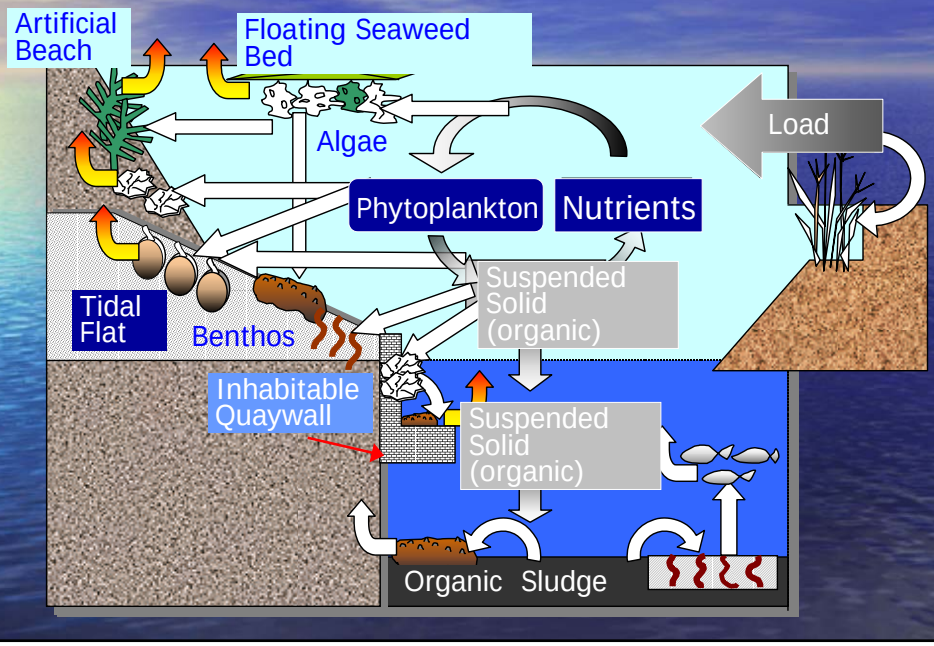
1. Optimal combination of environmental restoration technologies : ***the best mix***

2. Proposal for environmental restoration in sea area of Port of Amagasaki

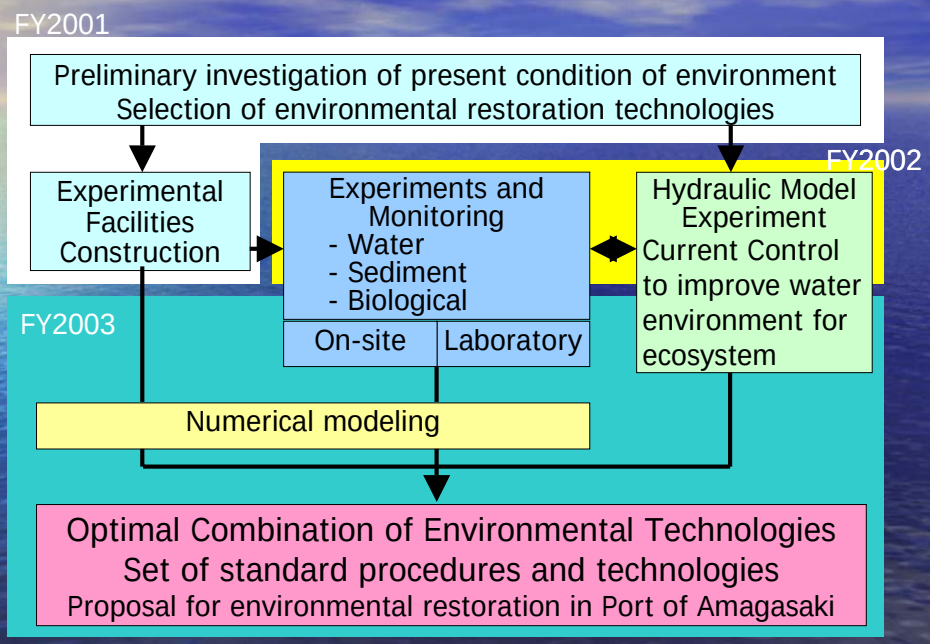
3. Set of standard procedure and technologies for planning of environmental restoration for future application in other sea areas : "***packaging***" environmental restoration technologies

5. Expected Effect

(Formation of Desirable Material Cycle)



6. Flow diagram of the project



7. Experiments -chosen technologies

1. ***Artificial tidal flat*** (***open-type***) : water purification by benthic ecosystem including bivalves (Short-neck clam), nutrients fixation by reed, maintenance of artificial tidal flat
2. ***Closed-type artificial tidal flat*** : water purification by pores bed contact and sessile organism, comparison in ecosystem and biomass of sessile algae, seaweed and benthos with those at open-type artificial tidal flat
3. ***Inhabitable quaywall*** : improvement of material cycle on vertical quaywall and elimination of organic suspended material to sea bottom by sessile organisms and benthos
4. ***Floating seaweed bed*** : fixation of nutrients by algae, formation of seaweed beds in area with poor transparency

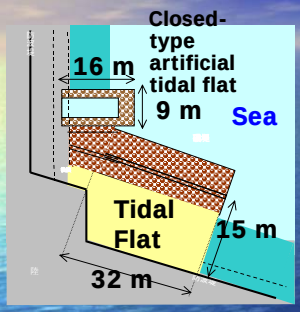
8. Experiments (continued)

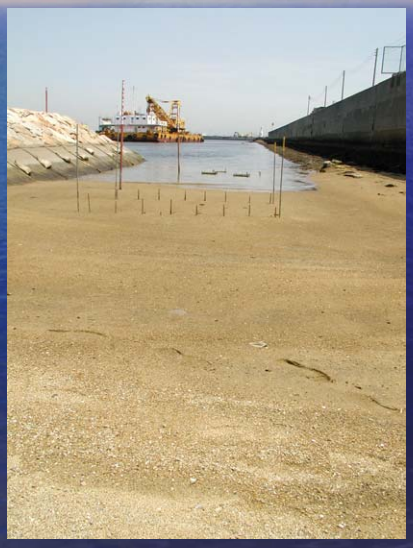
5. **Hydraulic control (hydraulic model experiment)** : design of current control in the Bay, improvement of sea water exchange

6. **Seaweed biomass utilization (gasification)** : effective utilization of seaweed produced by creating shallow water area

9. On-site Experiments in Amagasaki Port – Location

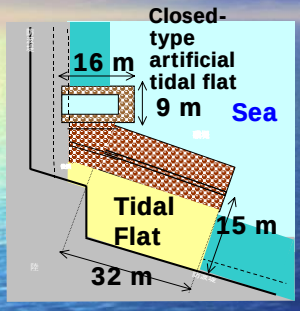
10. On-site Experiments in Amagasaki Port - Artificial tidal flat





Bivalves raising test (Short-neck clam)

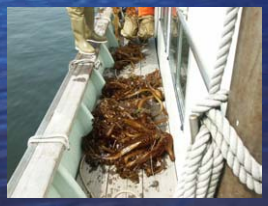
11. On-site Experiments in Amagasaki Port - Closed-type artificial tidal flat



Cobble cages

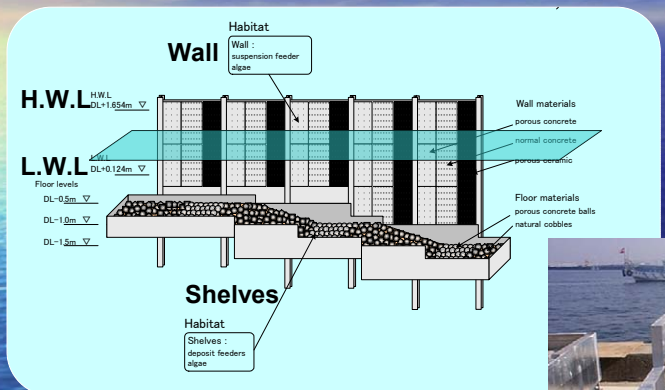
12. On-site Experiments in Amagasaki Port - Floating seaweed bed (rafts)

Planting Wakame seaweed (Undaria pinnatifida)



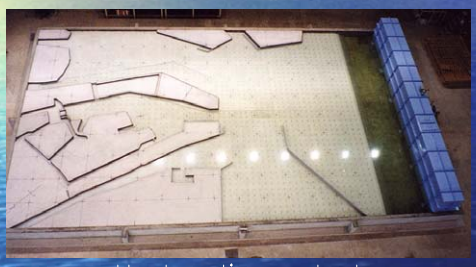
Grown-up Wakame seaweed

13. On-site Experiments in Amagasaki Port - Inhabitable quaywall



Shelf
Porous concrete balls
Natural cobbles

14. Hydraulic control and seaweed biomass utilization

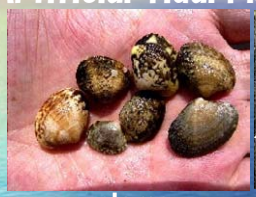


Hydraulic control
(hydraulic model experiment)
Size : 18m × 10m
Scale : 1/500 holizontal,
1/63 vertical

Seaweed biomass utilization
(anaerobic digestion to produce methane gas)

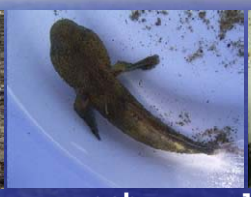
15. Examples of organisms found at experimental facilities

Artificial Tidal Flat



clams

lugworm



goby

Juvenile of flounder

Closed-type artificial tidal flat

Algae covering cobble

sea anemone

16. Examples of organisms found at experimental facilities (continued)

Floating Seaweed Bed

Sessile organisms on seaweed

Juvenile fish

Inhabitable Quaywall

Mussels

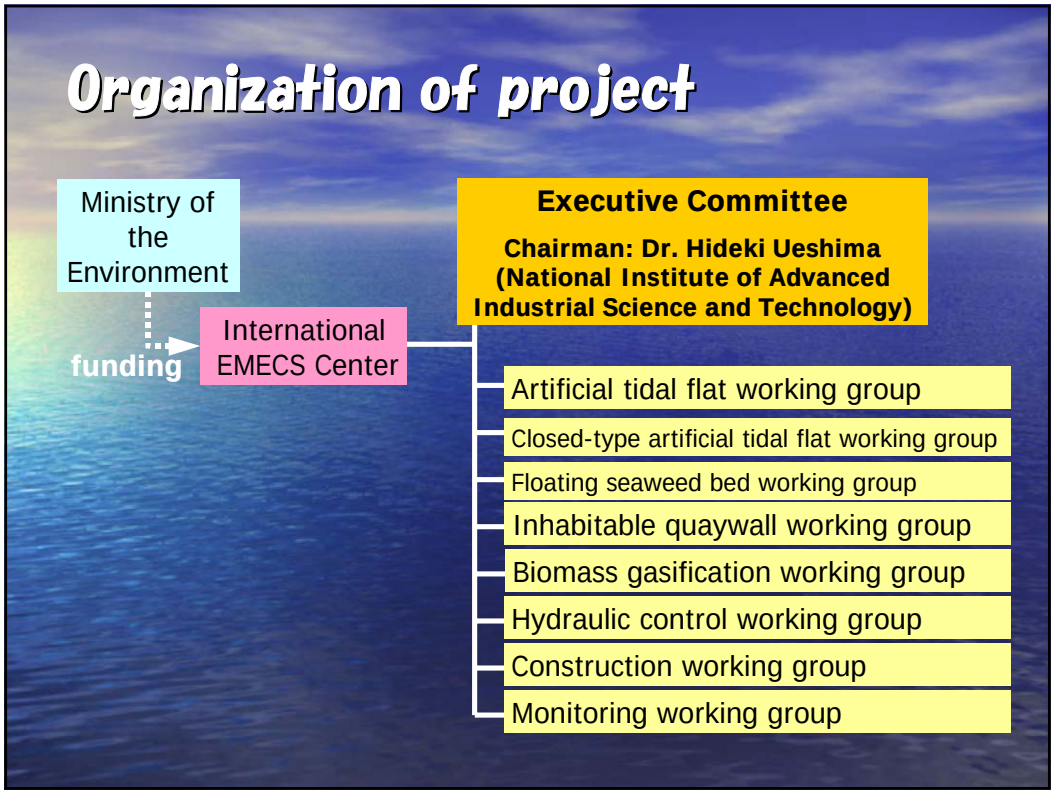
Crabs

Octopus

17. Summary

- Experiments of 4 technologies combined together within the same water area in port of Amagasaki is being conducted to achieve the goal (end of FY2003)
  - Accumulated data is being evaluated to achieve the best mix
  - Proposal for environmental restoration in Port of Amagasaki to the Amagasaki century 21st forest project
  - "packaging" environmental restoration technologies will be conducted by studying and examining the flow and the result of this research

Organization of project



Working groups

Artificial tidal flat	Dr. Yoshiyuki NAKAMURA	The Port and Airport Research Institute
	Dr. Kunio KOHATA	National Institute for Environmental Studies
	Takatoshi TANIMOTO	Hyogo Prefectural Institute of Public Health and Environmental Sciences
Closed-type artificial tidal flat	Dr. Koji OTSUKA	Associate Professor, Osaka Prefecture University
	Dr. Hirokazu TSUJI	Obayashi Corporation
Inhabitable quaywall	Dr. Yasunori KOZUKI	Associate Professor, The University of Tokushima
Floating seaweed bed	Dr. Hiroshi KAWAI	Professor, Kobe University Research Center for Inland Seas
Biomass gasification	Dr. Koji OTSUKA	Associate Professor, Osaka Prefecture University
	Dr. Toru IDA	Kobe Steel, Ltd
Hydraulic control	Dr. Munehiro Yamasaki	National Institute of Advanced Industrial Science and Technology
Construction/maintenance	Dr. Hirokazu TSUJI	Obayashi Corporation
Monitoring	Dr. Takashi NAKANISHI	Sohgoh Kagaku Inc

Environmental learning program for citizen at experimental site

Observing crabs, sea hares etc. found on artificial tidal flat

Watching demonstration of water purification by bivalves

Water quality test (COD) at experimental site

Visit to experimental site

Survey on Washed-up Driftage along the Coasts in Northwest Pacific Region

Northwest Pacific Region Environmental Cooperation Center
（NPEC）

Kuyoshihama Beach in Nagasaki, Japan

Outline of the Survey

1 Objective

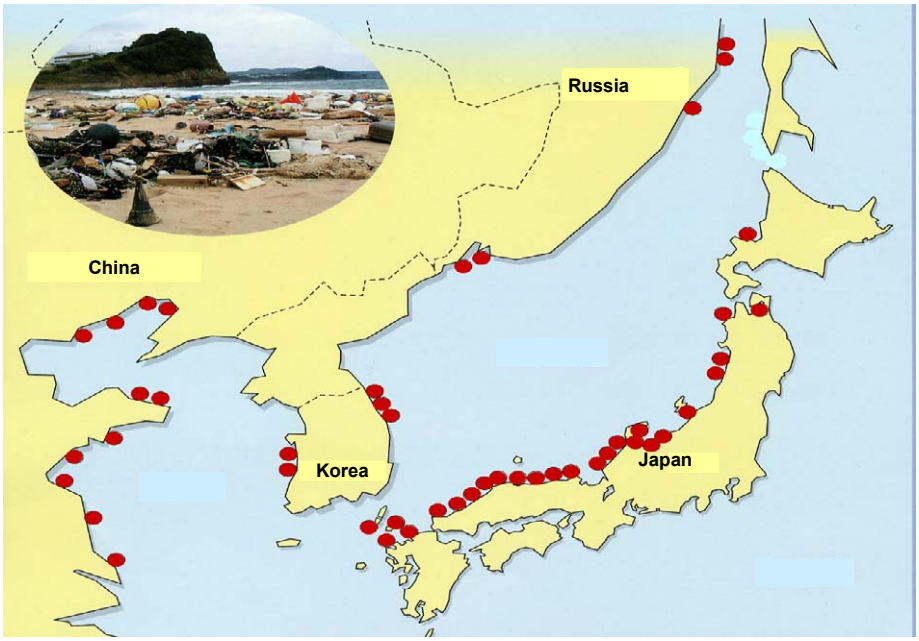
- Monitoring the distribution and abundance of marine litter.
- Raising public awareness toward the importance of protecting marine environment.

2 Area

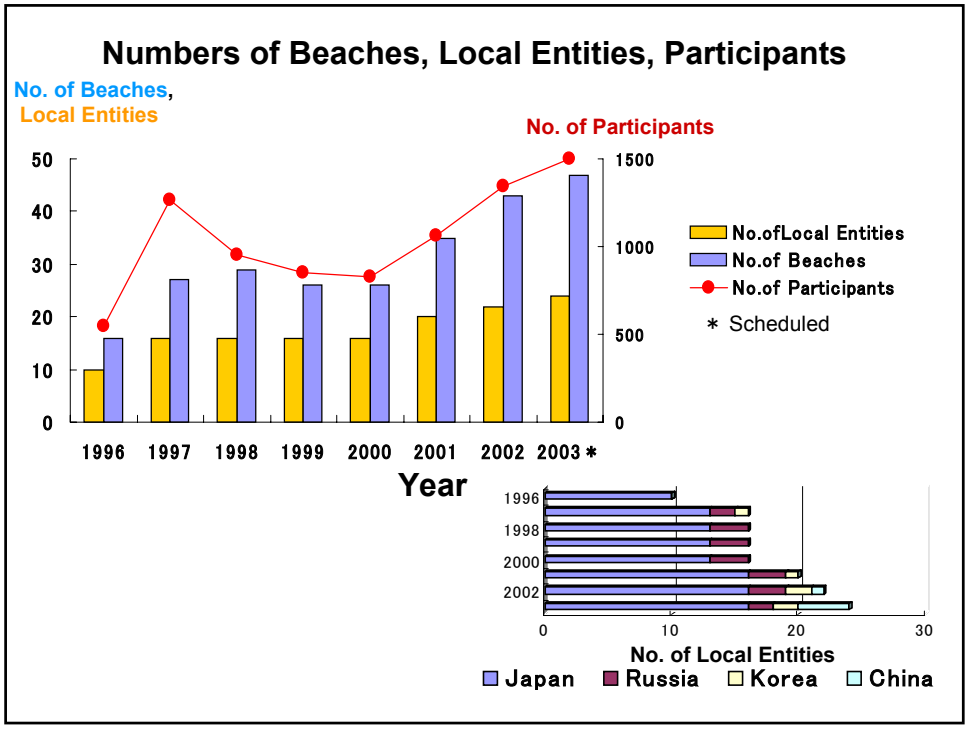
The beaches in the local entities of Japan, China, Korea and Russia along the coast lines of Northwest Pacific.

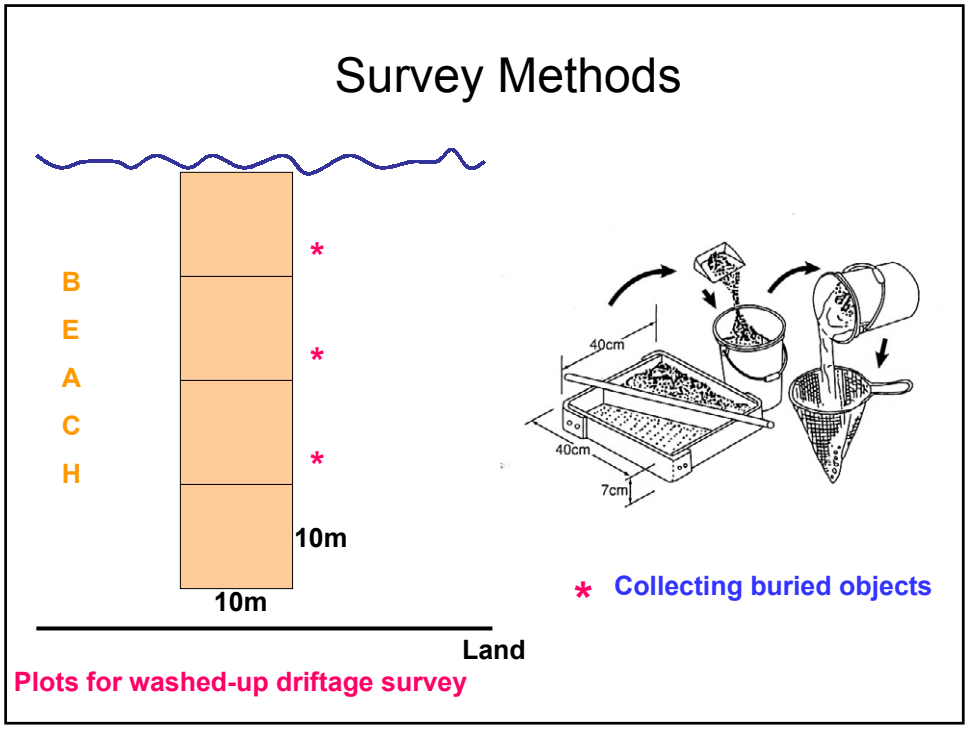
3 Participants

Municipalities, Students, NGO and so on.



Beaches Surveyed in 2003


Numbers of Beaches, Local Entities, Participants
No. of Beaches,
Local Entities
No. of Participants
50
40
30
20
10
0
1500
1000
500
0
1996 1997 1998 1999 2000 2001 2002 2003＊
Year
No.ofLocal Entities
No.of Beaches
No.of Participants
＊ Scheduled
1996
1998
2000
2002
0 10 20 30
No. of Local Entities
Japan Russia Korea China


Survey Methods
B
E
A
C
H
＊
＊
＊
10m
10m
Land
Plots for washed-up driftage survey
40cm
40cm
7cm
＊ Collecting buried objects

Survey Processes

Collecting

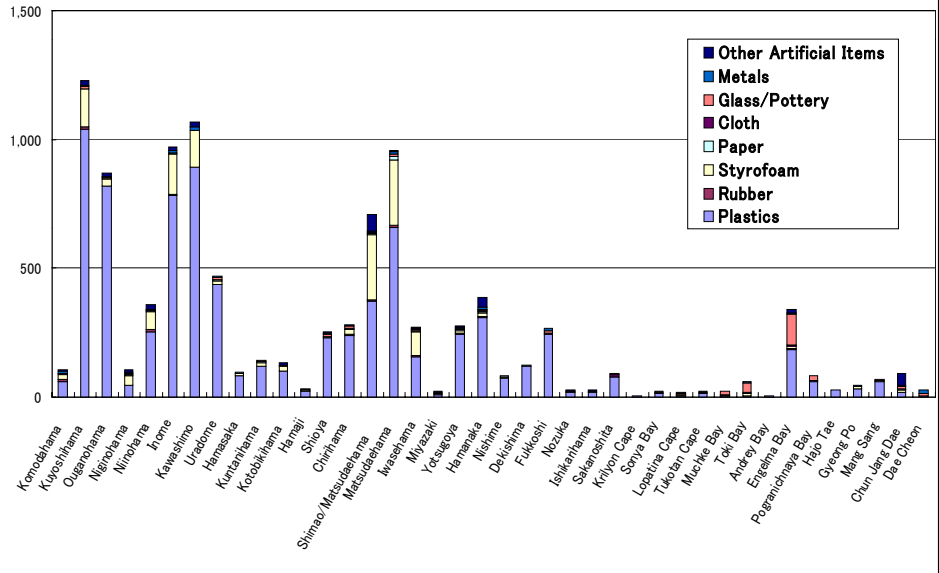
Classifying

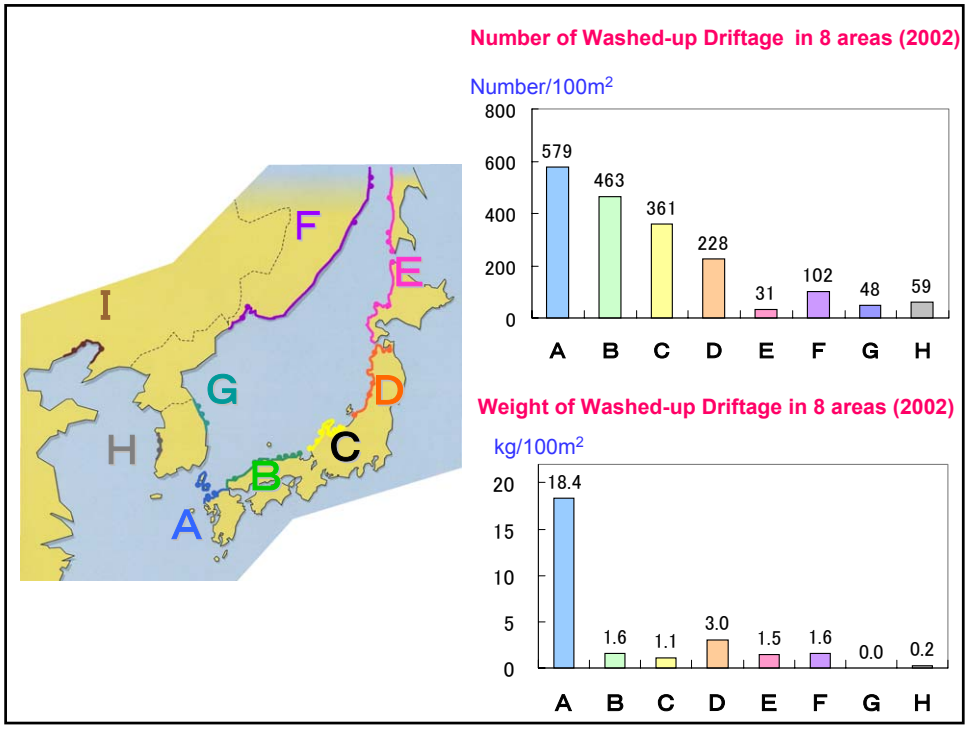
Measuring

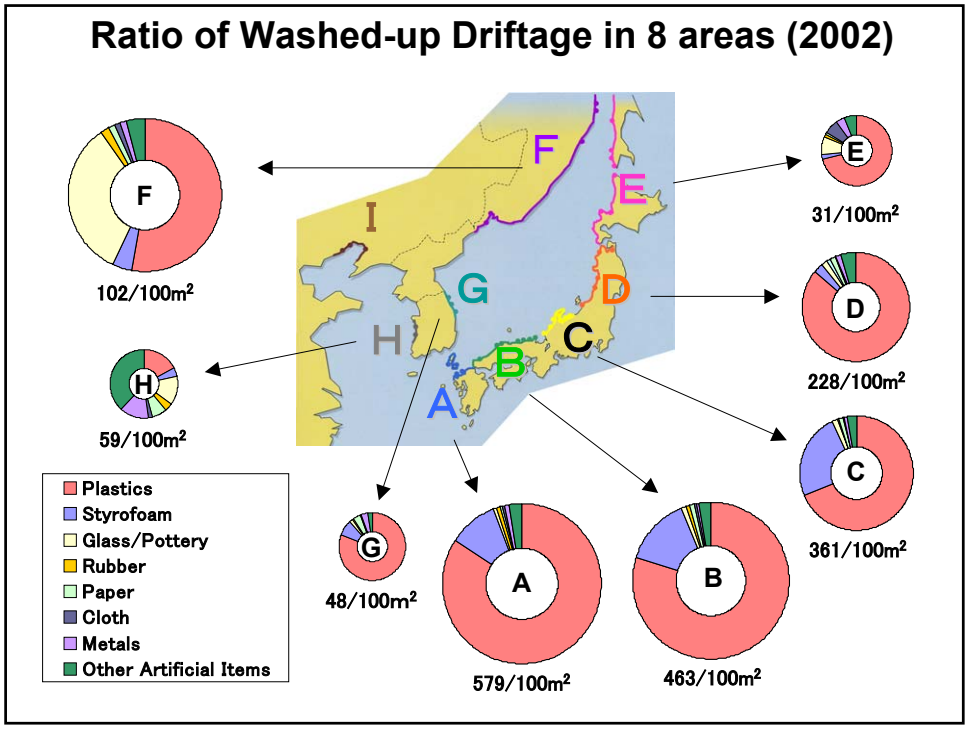
1 Plastic
2 Styrofoam
3 Glass/Pottery
4 Rubber
5 Paper
6 Cloth
7 Metal
8 Other artificial item

Number of Washed-up Driftage per Beach (2002)

Number/100m^2




Number of Washed-up Driftage in 8 areas (2002)
Number/100m2
800
600
400
200
0
579
463
361
228
31
102
48
59
A B C D E F G H
Weight of Washed-up Driftage in 8 areas (2002)
kg/100m2
20
15
10
5
0
18.4
1.6
1.1
3.0
1.5
1.6
0.0
0.2
A B C D E F G H
F
E
I
G
D
H
C
B
A


Ratio of Washed-up Driftage in 8 areas (2002)
F
102/100m2
E
31/100m2
H
59/100m2
D
228/100m2
C
361/100m2
G
48/100m2
A
579/100m2
B
463/100m2
Plastics
Styrofoam
Glass/Pottery
Rubber
Paper
Cloth
Metals
Other Artificial Items

Raising Public Awareness Towards Protection of Marine Environment

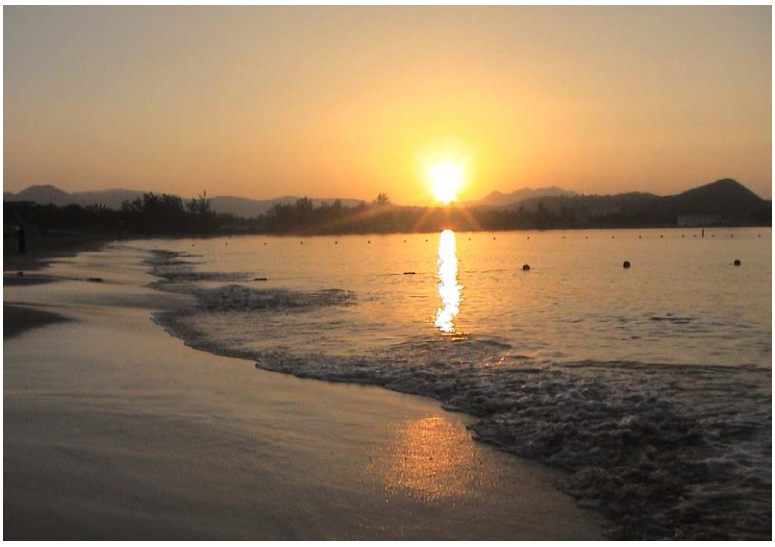
- **Publication of pamphlets in 4 languages**

Japanese

Pamphlets

Chinese, Korean, Russian

- Children forum on beach clean-up activities for the protection of the marine environment: Autumn 2004, Japan



THANK YOU

Ocean Korea 21 and Marine Environment

Deputy director Sokchang Kwon
Ministry of Maritime Affairs & Fisheries

Nov. 2003

MOMAF

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1. Challenge & Mission of MOMAF
2. Ocean Korea 21
3. Marine Env. Policies

Nov. 2003

MOMAF


1. Challenge & Mission of MOMAF
Nov. 2003
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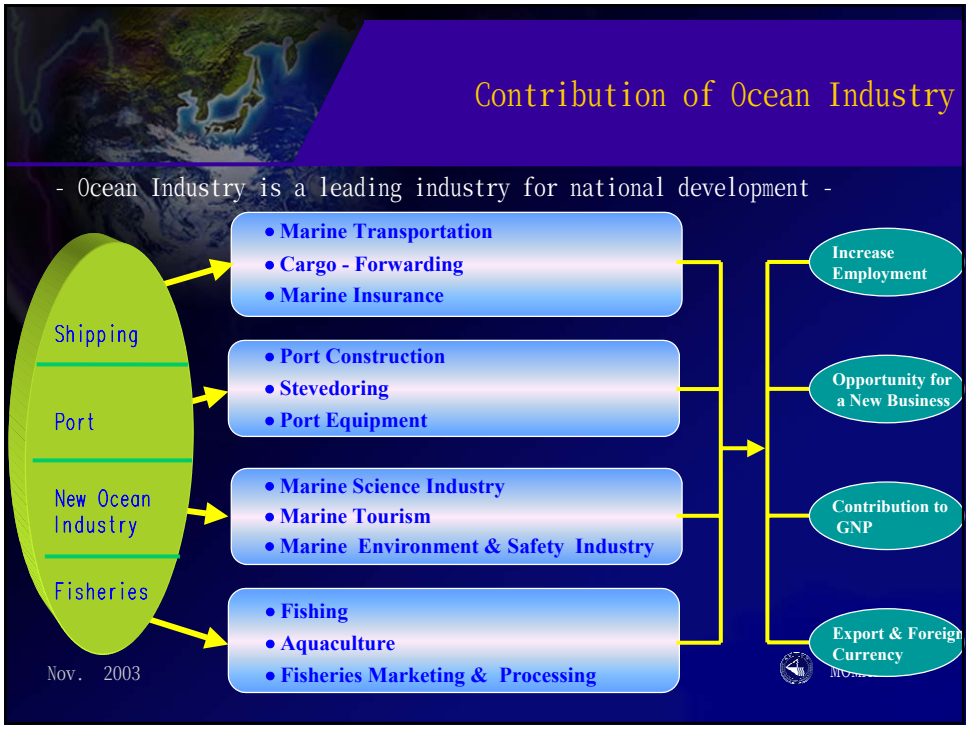
Contribution of Ocean Industry
- Ocean Industry is a leading industry for national development -
Shipping
Port
New Ocean Industry
Fisheries
• Marine Transportation
• Cargo - Forwarding
• Marine Insurance
• Port Construction
• Stevedoring
• Port Equipment
• Marine Science Industry
• Marine Tourism
• Marine Environment & Safety Industry
• Fishing
• Aquaculture
• Fisheries Marketing & Processing
Increase Employment
Opportunity for a New Business
Contribution to GNP
Export & Foreign Currency
Nov. 2003


Ocean Power of Korea
10th Ocean Power in the world
Value added : $ 33 billion
(7 % of GDP)
• Shipbuilding: 1st in the world(12.7 mn ton)
• Seaborne cargo: 6th (0.5 bn ton)
• Ships registered: 8th (25 mn ton)
• Distant Water Fishery: 3rd (791,000 ton)
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MOMAF's Mission
Development and integration of marine policy
Promotion and development of fisheries
Advancement of marine science and technology
Conservation of the marine environment
Coastal Zone Management
Development of shipping industries and safety of ships
Port development and operation
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2. OCEAN KOREA 21
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Vision of OK 21
Advanced Korea through BLUE REVOLUTION
Ocean Economic Space with
Productive & Affluent Living Conditions
Creation of Knowledge-based
Ocean Industries
Sustainable Marine
Resources Development
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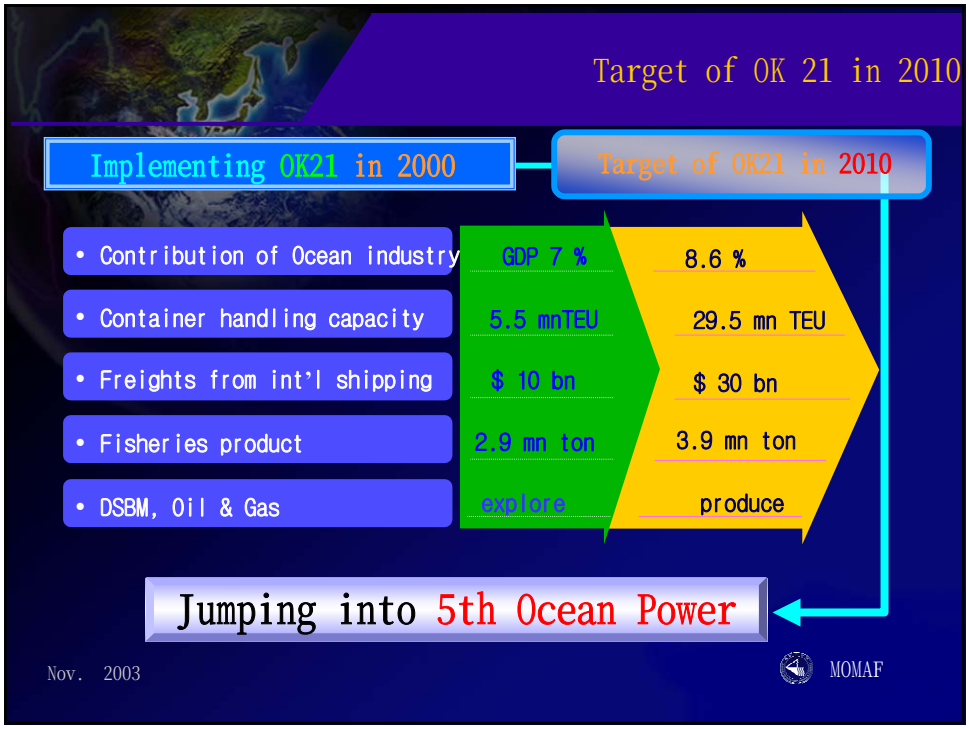
Strategies in OK 21
1. Paradigm shift of managing ocean economic space internationally and globally
2. Preservation of clean and safe ocean environment
3. Promotion of knowledge-based ocean industry → Sea Grant Program
4. Enhancement of international competitiveness in ocean service industries and infrastructure
5. Remodeling fishing structure and communities
6. Efficient utilization of marine resources (energy, mineral & space)
7. Strengthening international cooperation and North-South Korean collaboration
21 Fields and 100 Large-scale Projects
Nov. 2003
MOMAF


Target of OK 21 in 2010
Implementing OK21 in 2000
Target of OK21 in 2010
• Contribution of Ocean industry
GDP 7 %
8.6 %
• Container handling capacity
5.5 mnTEU
29.5 mn TEU
• Freights from int'l shipping
$ 10 bn
$ 30 bn
• Fisheries product
2.9 mn ton
3.9 mn ton
• DSBM, Oil & Gas
explore
produce
Jumping into 5th Ocean Power
Nov. 2003
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3. Marine Environment Conservation
Nov. 2003
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Structure of Marine Env. Policies
Goals of 5-year Master Plan
1. Protecting Sea-based pollution
2. Removing Marine Litter
3. Responding to oil spills
Major Policy Tools
1. Marine Waste Buy-Out
2. Marine Env. Improvement Levy
3. Act on the Management of Discharge of Land-Based Pollutants
4. Coastal Zone Management
5. Aquaculture Grounds Management Act
Sustainable Development of Korean seas
Nov. 2003
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Overview of the 5-year master plan

- 1. Establishing Management system of Marine litter
- 2. Protecting marine environment from sea-based activities
- 3. Enhancing marine pollution response and treatment capacities

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Establishing Management system of Marine litter

- Removing litter from the water and disposing of marine litter effectively.
- Korea is developing "Multi-functional marine litter collecting ship" and "On-ship marine litter disposal system".

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Protecting sea-based pollution

- Korea banned the use of TBT on ships step by step from '00, and by the end of this year.
- To protect the marine ecosystem from ship's ballast water, we are developing eco-friendly ballast water managing technology.

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Responding to Oil Spills

- Enhancing marine pollution response and treatment capacities
- Regional contingency plans have been worked out, including disposal skills, equipment mobilization procedures, and an emergency mobilization system.

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Major Policy Tools

1. Marine Waste Buy-Out

• Buying marine wastes collected during fishing operations. As of the end of September 2003, 90 metric tons of marine debris had been collected.

2. Marine Waste Disposal and Marine Environment Improvement Levy

• Imposing levies on the marine waste discharge companies. The fund will be used for marine environment improvement projects.

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Major Policy Tools

3. Act on the Management of Discharge of Land-based Pollutants unto the Coast

❑ Surveying status of sources of land-based pollutants and establishing suitable management plans.

4. Enacting "Aquaculture Grounds Management Act"

❑ Eliminating polluted sediments of the aquaculture grounds, and practicing "aquaculture grounds resting periods system".

Nov. 2003 MOMAF

Major Policy Tools

5. . Sustainable Coastal Zone Management and the Designation of Marine and Coastal Protected Areas

- Integrating the policies of different government ministries regarding the conservation and development of the coastal zone ranging from 500-1,000m land-ward from the coastline.
- Designating Wetland Protected Areas and Ecosystem Conservation Areas.

Nov. 2003

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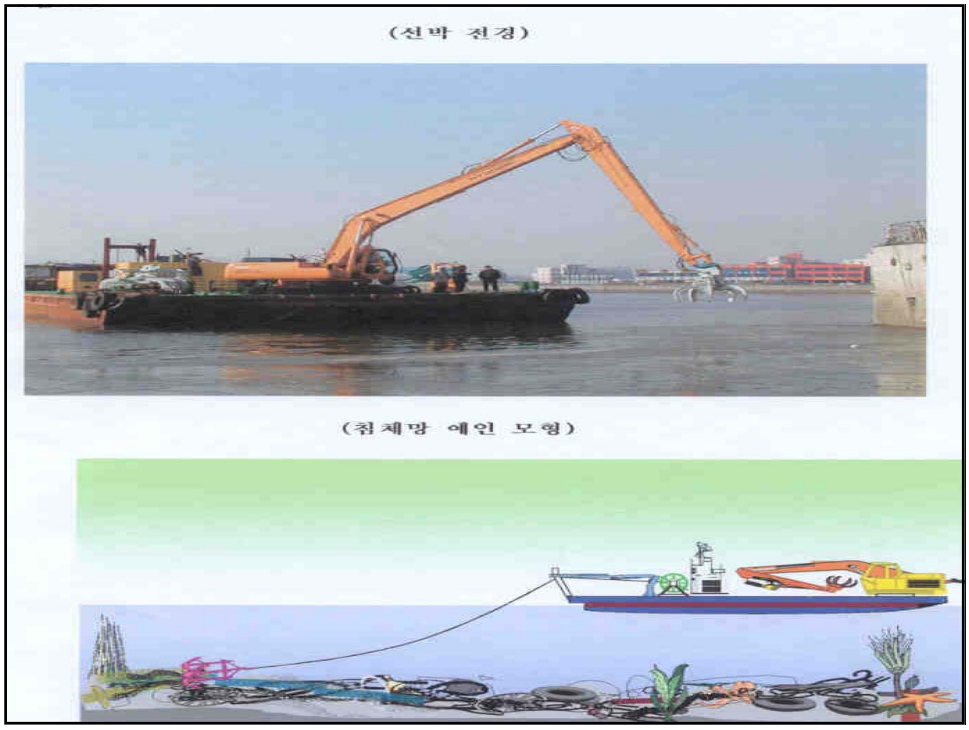


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소리면
Nov. 2003
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Dear Colleagues!

In my presentation I would like to mention the following.

According to the federal legislation of the Russian Federation one of the directions of action of the Ministry of Natural Resources of the Russian Federation, as you know, is protection of marine environment from pollution and state control in this sphere.

What are the main issues of serious concern in this area?

1) Taking into account the perspectives of the marine regions development, currently the major concern is certainly the development of carbohydrates at the continental sea shelves.

The extraction of forecasted volumes of carbohydrates under the insufficient environmental protection basis of many oilfields can lead to serious negative consequences. They are reflected in the continuous pollution of marine environment under the technological processes as well as pollution under emergency cases. In such conditions pollution of marine environment in the locations of the carbohydrates extraction can lead to catastrophic impacts, especially for biotic resources of seas.

Therefore, the issues related to prevention of pollution of marine environment under development of carbohydrates at the continental shelves are undoubtedly the number one problem in environmental protection in the marine areas nowadays.

Thus one of the main questions that must be resolved under development of the carbohydrates resources at the continental shelves is creation of the environmentally safe technical means of extraction and technologies of exploration, construction and exploitation of carbohydrates fields at different stages of development. The method of "0" discharges is already practiced by the Russian platforms in Caspian and Baltic Seas.

2) The exclusive economic zone of the Russian Federation is actively used by the water crafts of the transport, passenger and fishery fleets. The sea routes link the ports of Russia and other countries and reach the areas of traditional fishing.

Therefore, the marine navigation is a source of high danger to the marine ecosystems due to possible emergency situations in transportation of oil refinery products and liquid chemicals. We remember a loss of a 14-tons container with the chemically active plasticizer by Dupont company in August this year occurred in the Pacific Ocean and the consequences that this container caused to the seal-rookery in the "Komandorski" protected area.

The share of accidental oil outflows in total pollution of the environment of the great oceans is up to 13%. It is oil that causes the most environmental danger due to its high polluting capacity. The main sources of sea pollution nowadays continue to be the marine water crafts, first of all the oil tankers and petroleum production.

Clearly in the regions of carbohydrates extraction the complimentary industries are also actively developing, particularly transportation of hazardous cargo that leads to increasing pollution of the marine transportation means and marine environment, while the main potential danger is due to the forecasted emergency situations, particularly in the water crafts that transport highly dangerous categories of hazardous cargo.

3) However the most negative impact on the marine environment of sea shelves areas is caused by sea ports where the sea water is highly polluted due to high concentration of water crafts on the limited area of sea. Besides the high intensity of sea transportation especially at the entrances to sea ports increases the probability of emergency oil outflows.

The statistics shows that less than 10% of emergency situations occur in the open sea, while the major part of them occurs at the entrances to the ports and in the areas of higher navigation danger, such as narrowness and shoals.

Therefore the water crafts collisions and beaching are the main causes of accidents in the higher risk zones.

One of the most important directions of activity of the Ministry of Natural Resources of the Russian Federation is ***protection of water biological resources of the internal seas, territorial seas, continental shelves and exclusive economic zone of the Russian Federation.*** Such activity includes development of the corresponding legislative, regulatory and economic basis, implementation of the state ecological expertise, state ecological control and monitoring in protection of water bioresources and biodiversity conservation.

Reduction of population of the most massive and intensively exploited water bioresources is dealt with the massive overfishing above the allowed quotas as well as illegal (without permission) fishing. Outstanding scales of such illegal activity are related to some valuable marine bioresources such as crabs, salmon, etc.

Reduction of the quantity of quotas issued to the Russian fishermen is dealt with reduction of the population of the marine bioresources and, as a result, leads to social problems and reduction of wellbeing of the population of the sea coast regions.

Based on the experience of the control checking implemented by the special inspections of the Ministry of Natural Resources of the Russian Federation one can state that illegal fishing and export of water bioresources from the exclusive economic zone and continental shelves of the Russian Federation is a result of non-compliance with the requirements of bioresource protection and conservation of their biodiversity, and particularly overfishing above the existing quotas, violation of conditions of fishing (by regions, types of water bioresources, timing, means of catching, etc.), or fishing by the Russian and foreign water crafts without the corresponding permissions.

In result of that, the Russian state budget does not receive significant income from realization of marine bioresources, the quotas for the Russian fishermen are reduced, the social and economic situation in the subjects of the Russian Federation with the basements of fishing fleets and fishery enterprises is worsening.

In 9 months of 2003 the state inspectors of the special inspections of the Ministry of Natural Resources of the Russian Federation held 12455 inspections aimed at control of the compliance with the legislation on nature use and environmental protection under the economic and other activity in the sea and continental shelves.

In result of the control checking, 5436 cases of violation of the legislation of the Russian Federation on the nature use and environmental protection, 4159 of which were removed.

According to the acts of inspection and directives of the state inspectors the fines for violation of the legislation of the Russian Federation imposed directly or through courts amounted to some 10,0 mln roubles.

A number of administrative cases are under consideration now.

The requests for compensation of damage to the natural resources exceed 890 mln roubles, while about 66 mln roubles were already received.

The illegally caught objects and means of fishing were realized for 10,2 mln roubles.

91 requests to stop activity of the enterprises were issued.

Decline in the indicators of activities of the special marine inspections of the Ministry of Natural Resources of the Russian Federation in 2003 is dealt with the fact that according to the new Administrative Code of the Russian Federation from 1 July 2002 on the inspections lost their right to investigate and apply administrative responsibility for violation of the legislation of the Russian Federation on the marine bioresource use as according to the Articles 8.16, 8.17, 8.37 the responsibility for that is posed on the Federal Customs Service of Russia, that contradicts with the existing legislation of the Russian Federation (Federal Laws "On continental shelves of the Russian Federation", "On exclusive economic zone of the Russian Federation", etc.). The Ministry of Natural Resource of the Russian Federation submitted its proposals on the changes to the Administrative Code (to the government of the Russian Federation and the Ministry of Justice of Russia), however the proposals of the Ministry are not accepted by now.

The inspections held by the state marine inspectors of the Ministry of Natural Resources of the Russian Federation practically in all seas regularly discover the cases of violation of the legislation of the Russian Federation and international norms on prevention of pollution of marine environment.

The largest number of violations affecting sea pollution is dealt with violation of the accepted rules of prevention of sea pollution by oil containing and other sewage waters, solid and other waste from the water crafts (in ports and transportation) at bunkering, cargo loading and other works as well as at the emergency cases, etc.

The most often the violations are related to documentation on registration of the operations with the harmful substances, improper discharges of oil containing and other sewage waters and waste.

The violations related to protection of marine bioresources and biodiversity conservation that were discovered by the inspectors of the Ministry of Natural Resources of the Russian Federation are mainly dealt with non-compliance to the conditions of the permission documents by zones, regions, quotas, types of resources, timing of fishing, illegal fishing, use of illegal means of fishing, etc.

The most character is the violation dealt with overfishing and improper registry of fishing.

A large number of violations in the areas of protection and use of living resources is related to the absence of the permission documents on fishing, registration documents, use of improper conosaments with the stamps of nonexisting inspectors of the State Customs Committee of Russia.

The analysis of the information obtained in 2002-2003 about the character of collaboration of the special marine inspections of the Ministry of Natural Resources of the Russian Federation and the State Procuress of the Russian Federation, particularly with the transport and environmental procurers allows to mention that in general, practically in all subjects of the Federation and regions of Russia there is a positive character of interaction between these structures. Such interaction is directed to identification and prevention of violations of the legislation of the Russian Federation in the area of nature use and environmental protection in the coastal areas, internal seas, territorial seas, exclusive economic zone and continental shelves of the Russian Federation.

Session2

Create a Recycling Society

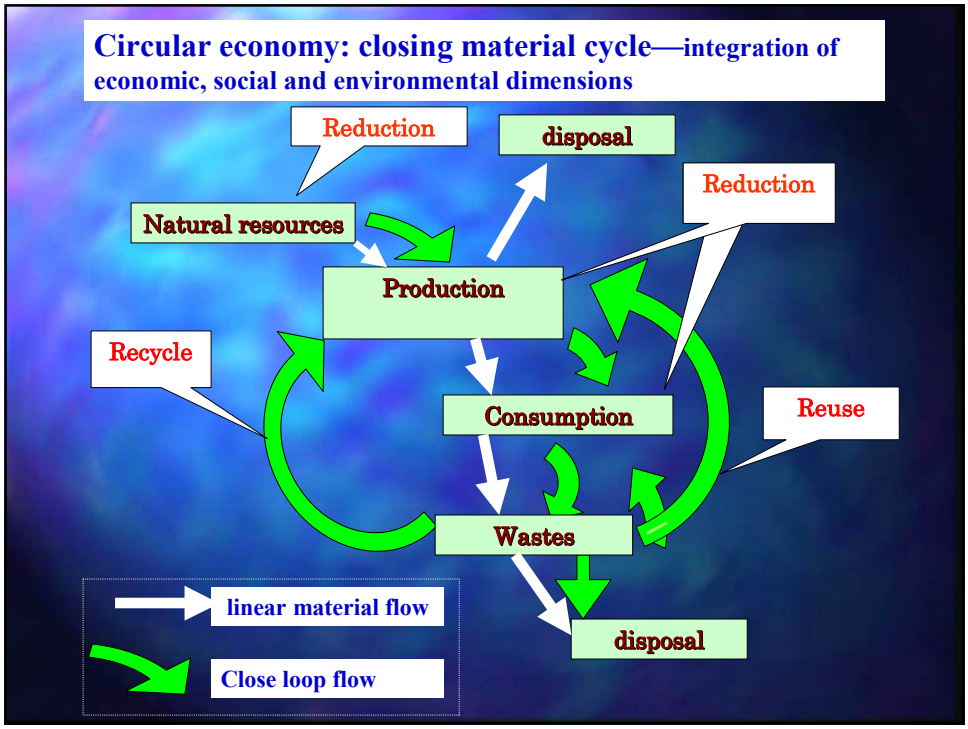
Circular Economy in China: *Current Practice and Prospect*

REN Yong

Policy Research Center, State Environmental Protection Administration

Outline

1. Circular economy: *international perspective*
2. Circular economy: *Chinese perspective*
3. Current practice and prospect
4. Challenges to development of circular economy


Circular economy: closing material cycle—integration of economic, social and environmental dimensions
Reduction
disposal
Reduction
Natural resources
Production
Recycle
Consumption
Reuse
Wastes
disposal
linear material flow
Close loop flow


1 international perspective: Germany
Circular economy essentially originated from "garbage economy" (Reduction, recycle, reuse and disposal), and then extended to 3R of materials in industrial sectors in the 1990s.
1. Before the 1970s: garbage dumped or land-filled
2. 1972: issuance of the Law of Waste management—shut down the dumpsites and started by incineration
3. After oil crisis: electricity and heat generation from the incineration.
4. 1986: revised the Law and made effort in reduction and reuse.
5. 1996: issued the Circular Economy and Waste Management Law (KrW/AbfG)
Rebuild German garbage disposal system and applied extended responsibility to producers

the percentage of reused garbage to the total generated raised to 50% in 2000, from 15% in 1990

Domestic garbage	Percentage collected（%）	Percentage reused (%)
Organic garbage	50	96
Waste paper and cardboard	87	100
Glass	78	100
Metal in wrappage	65	100
Plastic and paper wrappage	75	97
Cell	35	100
Automobile cell	95	100
Tire	94	98
Textile	70-80	70-80

1 international perspective: *Japan*

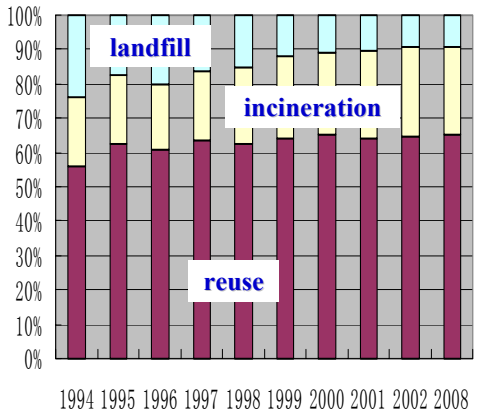
Likewise, building "circular/recycling society" in Japan also is also motivated by waste issue and aims at reforming the traditional patterns of social end economic development.

- **Domestic wastes: 50 million Tons; industrial wastes: 400 million Tons; 1 Kg domestic wastes per capital per day.**

1. **Incineration but lack of capacity of final landfill.**
   - **Industrial wastes: by 2000, the landfill capacity nationwide can sustain for 3.9 years, and Tokyo area, 1.2 years;**
   - **Domestic wastes: nationwide---12.2 years ; Tokyo area—11.2 years**
2. **Root-causes: massive production, massive consumption and massive disuse/disposal.**
3. **Since 2000, issued 1 basic law for promotion of building circular society, governmental green purchase, and 7 special laws related to different wastes reuse.**

1. international perspective: *others*

- No terminology of circular economy in other developed countries, but 3R of wastes have been a focus in their agendas of EP and SD activities
- Cleaner production and eco-industrial park are significant initiatives in promotion of sustainable industries.



Percentages of waste reuse, incineration and final landfill in Denmark

1. international perspective: general

In a word, initiatives of circular economy in developed countries focus on waste issue caused by post-industrialized society, after most of industrial pollution and urbanization-oriented pollution have been resolved. Then the initiatives extend to industrial sector and ultimately aim to changing traditional patterns of production and consumption.

Eco-footprint

Countries	Population	Eco-footprint (ha / per capita) (A)	Actual land useable (ha/per capita)(B)	Impacts to environment (ha/per capita) (A-B)
World total	5, 744, 872, 000	2. 85	2. 18	0. 67
Japan	125, 769, 000	5. 94	0. 86	5. 08
U.S.A	269, 439, 000	12. 22	5. 57	6. 66
Germany	81, 909, 000	6. 31	2. 48	3. 83
China	1, 232, 456, 000	1. 84	0. 89	0. 96
New Zealand	3, 720, 000	9. 54	15. 80	−6. 26
Ethiopia	56, 789, 000	0. 85	0. 68	0. 18
Bangladesh	120, 594, 000	0. 60	0. 08	0. 52
Brazil	161, 533, 000	2. 60	11. 56	−8. 96

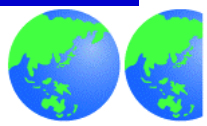
resource: WWF「Living Planet Report 2000」(2000年)

People in the world live as Japanese do:

$\frac{5.94}{2.18} \fallingdotseq 2.7$

As American do, we need 5.6 earth

We need another



earth

2. Chinese perspective

Three motivations/purposes for advocating circular economy:

- To resolve compound environmental problems needs integrated strategies to essentially reform the traditional patterns of economic growth and social development.
- As a result of Chinese strategic evolution in environmental protection.
- To achieve the goals of all-round well-off society strategy and promote new model of industrialization.

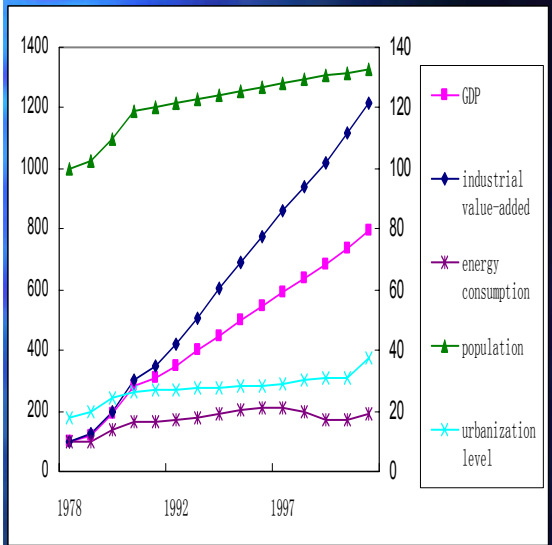
2 Chinese perspective

A. Compressed/shortened industrialization/urbanizations and compound environmental problems

1. **Industrialization:**
   - European and American developed countries—150-200 yeas;
   - Japan—around 100 years;
   - new industrializing economies—50 years around;
   - *China—will be less than 50 years*
2. **Urbanization:**
   - 20 years from 1978 to 1999, urbanization level raised by 12%;
   - European industrialized countries took 50 years in late 19th century, with same growth.
   - Urbanization level: 37% in 2003, 46% in 2010; 55% in 2020.

Social and economic achievements and their implications for environment :1978--2001

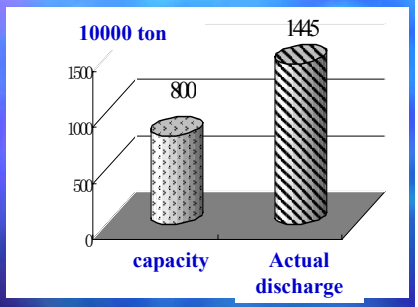
- GDP growth at 9.5% annually in last 23 years from 1978 to 2001;
- Per capital GDP—1000 US$ around at present.
- As compared to 1978, in 2001:
  - *GDP increased by 6.9 times;*
  - *Industrial value-added, by 11 times;*
  - *Energy consumption, by 1.3 times;*
  - *Urbanization level, by 20%;*
  - *Population, by 300 million.*



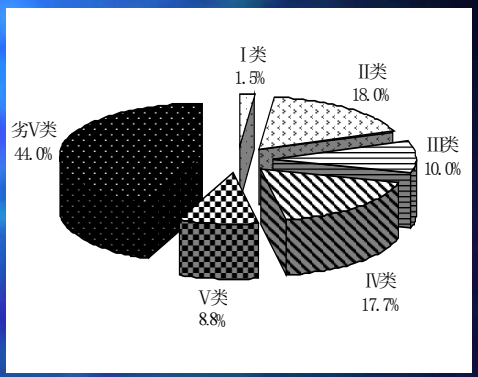
2. Chinese perspective

Compound environmental problems:

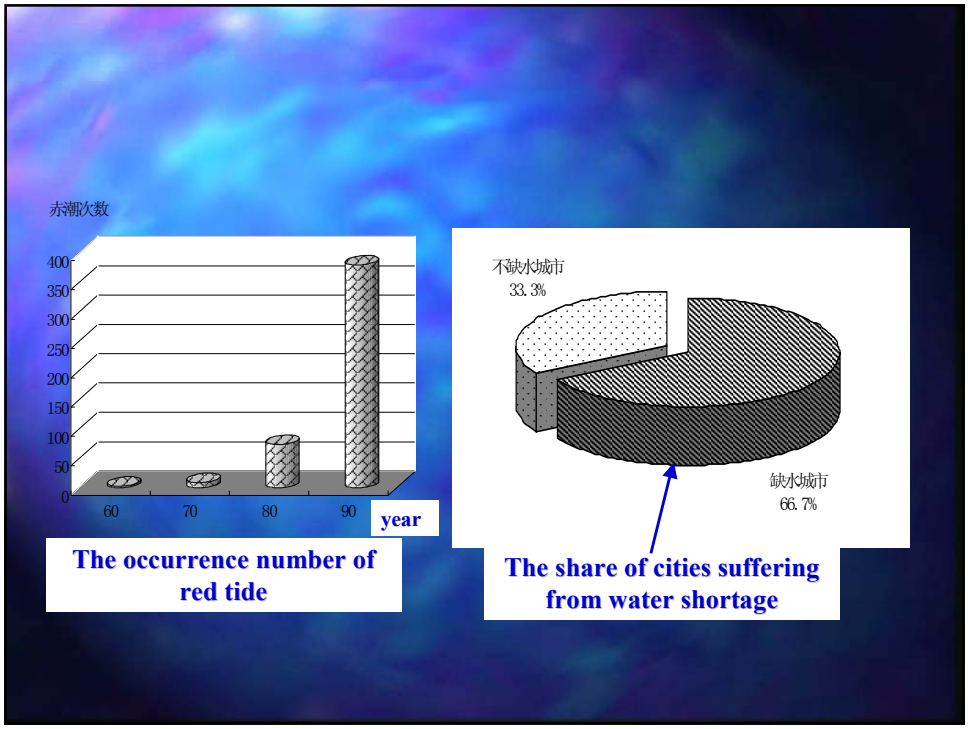
- industrial pollution,
- urban related pollution,
- ecological degradation,
- new environmental issues, and
- global environmental issues.

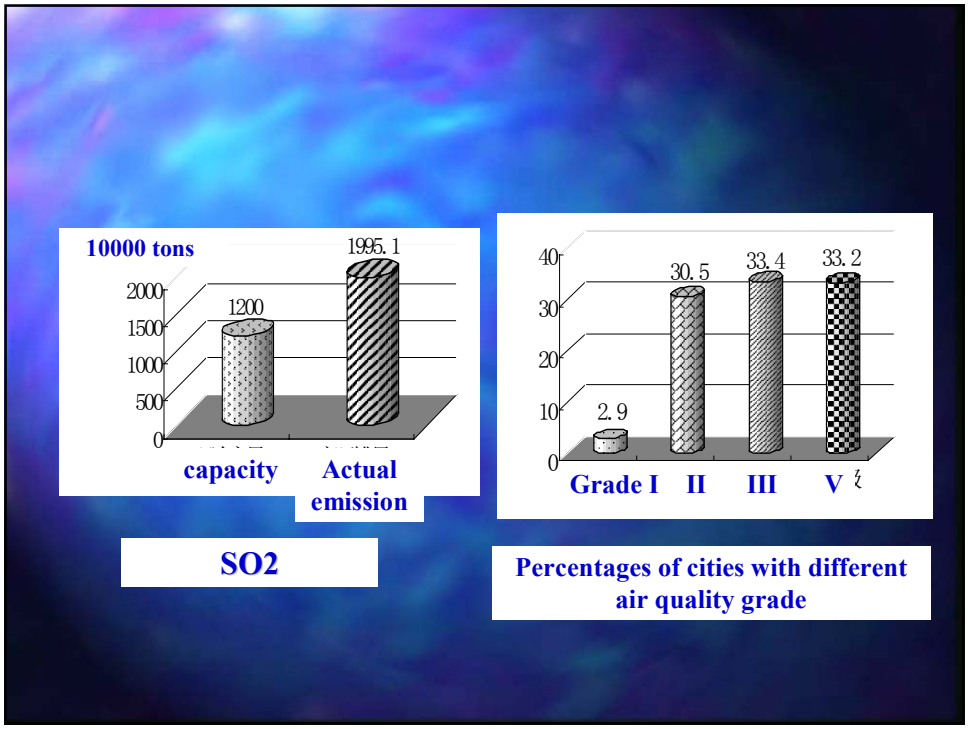


COD



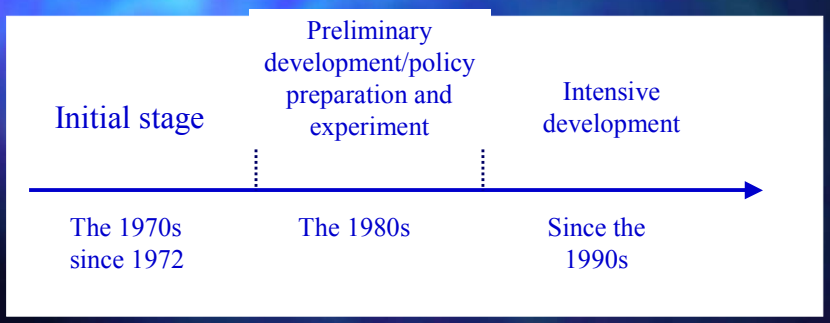
Water qualities in seven rivers


赤潮次数
400
350
300
250
200
150
100
50
0
60
70
80
90
year
The occurrence number of red tide
不缺水城市
33.3%
缺水城市
66.7%
The share of cities suffering from water shortage


10000 tons
2000
1500
1000
500
0
1200
1995.1
capacity
Actual emission
SO2
40
30
20
10
0
2.9
30.5
33.4
33.2
Grade I
II
III
V
Percentages of cities with different air quality grade

2. Chinese perspective

B. Evolution of Chinese environmental strategies:
from the isolated to the integrated in dealing with environmental protection and economic development



2. Chinese perspective

1. **1970s:**
   - **Industrial pollution control at the end-of-the-pipe;**
   - **Comprehensive utilization of industrial wastes, including waste water, gas and solid**
2. **1980s:**
   - **Began to reconsider the limitation of the end-of-the-pipe strategy;**
   - **Set environmental protection as a national basic policy;**
   - **General guidelines: among economy, urban/rural, and environment, synchronize their planning, implementation and development; and give same importance to economic benefits, social benefits and environmental benefits.**
   - **Basic principles in pollution control: prevention first, and integration of prevention and abatement.**

Yet, no essential changes in practices.

2 Chinese perspective

3. 1990s

(1) Take SD as a national strategy;

(2) Change the traditional patterns of economic growth;

(3) strategic restructure of economic development;

(4) Win-win principle of conserving environment while economic Booming

- *promote co-benefits between economic restructure and pollution control;*
- *set up successful cases in coordinated development between environment and economy;*

(5) Very positively political position on environmental protection

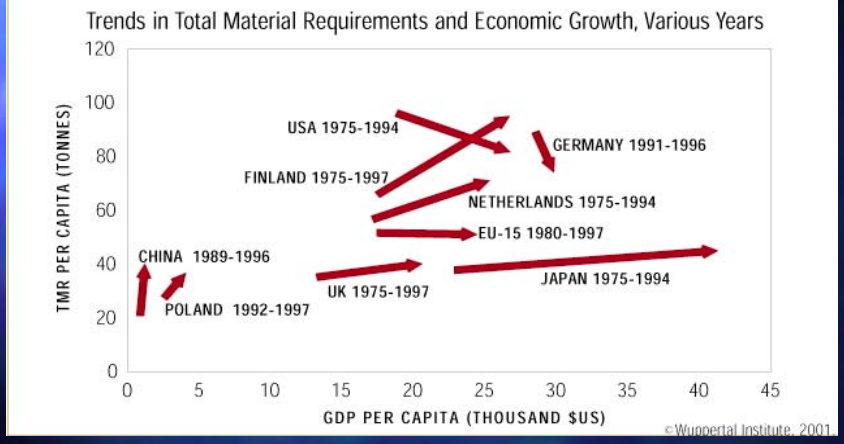
(6) Environmental protection as a core target in the strategy of building all-round well-off society in new century

2. Chinese perspective

C. All-round well-off society

1. Goal 1:
   - Fourfold GDP by 2020, against 2000;
2. Goal 4:
   - Increase in capacity of sustainable development;
   - Improvement in ecologic environment;
   - Significant raise in efficiency of resource use;
   - Promotion of harmonious relationship between human and nature;
   - In a word, the whole society should move towards such a civilized road as well-developed economy, rich life and sound ecologic environment.

Entire Economies Are Improving Efficiency



	Population	GDP/per
2000	1.2 billion	US$800
2020	1.6 billion	US$3000

- ***the building of well-off society will produce 4-5 times of impacts on environment, against the current situation.***

- ***the solution is to raise the eco-efficiency of economic activities by 4-5 times and much more, if the current situation of environment would be improved.***

2. Chinese perspective

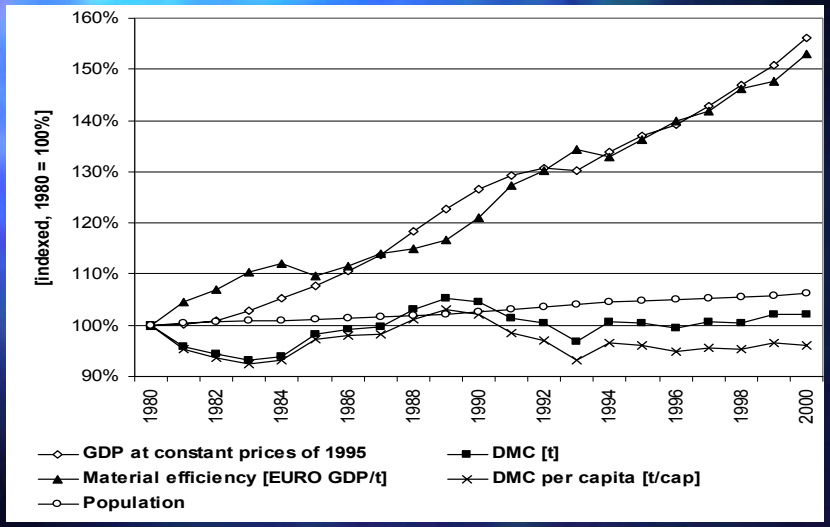
Criteria for new road of industrialization:

- Much more scientific-and-technologic-oriented;
- Good economic benefits;
- Low resources input/consumption;
- little pollution;
- Full use of human resources.

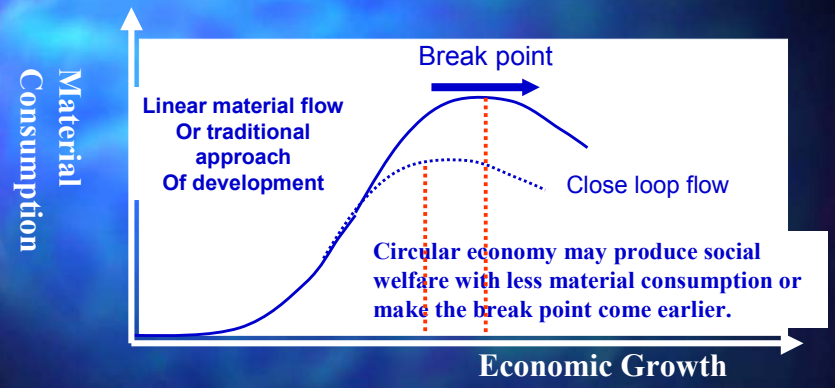
Therefore, in order to resolve compound environmental issues, achieve the goals of building the all-round well-off society, and meet the criteria of new road of industrialization, Chinese national government has strong interests in promoting development of circular economy.

Is it possible?

Population/GDP/Material Efficiency/ Domestic Material Consumption of 15 Nations in EU



Economic Growth and Environmental Impact
------ Kuznets Curve(1955) and its modification



3 Current practice and prospect

Therefore, circular economy concept and practice cover three levels: cleaner production—small cycle, eco-industrial park/industrial symbiosis—medium cycle, and regional cycle.

1. **Cleaner production**
   - **A decade experiences in promotion of cleaner production;**
   - **2002, Cleaner Production Promotion Law;**
   - **Cleaner production auditing in 400 enterprises of 20 industrial sectors in 20 provinces and cities;**
   - **20 cleaner production centers;**
   - **10,000 trainees;**
   - **50,000 enterprises with ISO 14000 series certification**
   - **Several hundreds products with environmental labels**

3 Current practice and prospect

2. Six eco-industrial park/industrial symbiosis

- **Guigang Sugar Manufacture Park;**
  - **Sugar cane land---sugar processing---gooey wastes---alcohol plant---wastes liquid---fertilizer plant---compound fertilizer---land**
  - **Sugar process---waste cane---paper plant---wastes----cement plant**
- **Nanhai Eco-industrial Park**
  - **environmental industry and waste reuse industry-oriented**
- **Baotou Eco-industrial park**
  - **Coal—power generation—electrolytic aluminum—aluminum product processing—reuse of aluminum reuse and recycle;**
  - **coal---power generation---waste---construction materials**
  - **Coal—power generation---heat supply;**

3 Current practice and prospect

2. Six eco-industrial park/industrial symbiosis

- **Shihezi Paper Manufacture Park;**
  - **Grass land---paper manufacture---waste water treatment---grass land;**
  - **Grass land---stockbreeding---livestock products---waste water treatment---grass land---eco-Tour**
- **Changsha Huanxin Eco-industrial Park**
  - **Agriculture—manufacture and process---environmental industry**
- **Lubei Chemical industry Park**
  - **Phosph-Ammonia----vitriol oil---cement;**
  - **Seawater---salt---alkali---heat and power supply**
  - **Seawater---water use**

3 Current practice and prospect

3. Regional levels

- **Liaoning Provincial Plan and initiatives in circular economy**
  - **Enterprise level:**
    - **by 2007, 600 enterprises meet the standards of cleaner production;**
    - **A number of enterprises achieve targets of zero emissions;**
    - **several big industrial groups build up inter close-material-flow**
  - **Building up several eco-industrial parks**
  - **Develop waste reuse industry---create a resource-recycling society**
    - **by 2010, reused water accounts for 30% of wastewater;**
    - **Collected garbage ratio by different categories---60%;**
    - **Collected ratio---80%---in waste battery, household electronic appliance, waste computers, paper, metal, plastic, etc.**

3 Current practice and prospect

3. Regional levels

- **Guiyang Municipal Plan and initiatives in circular economy for next 20 years**
  - **Close Material flow in production system**
    - **Eco-industry**
    - **Eco-farming**
    - **Tourism and eco-services**
  - **Close material flow in urban infrastructural system**
    - **Water-flow;**
    - **Energy—air pollution control**
    - **Solid waste reuse and recycle**
  - **Ecological construction system**
    - **Living environment improvement**
    - **Green buildings**
    - **Natural conservation**

4 Challenges

1. Low awareness and lack of relevant knowledge and know-how.
2. Not all local governments and ministries responsible for economic development pay much attention to promoting circular economy.
3. relevant legislation and policies are not in place.
4. Technology is always an obstacle hindering the development of cleaner production, eco-industry and waste reuse.

Thank you

Toyama City's Eco-Town Project

by Jun Nomura
Environment Policy Division, Toyama City

What Is the Eco-Town Project?

This project aims at making an environmentally-friendly town while promoting the local economy.

Based on the "zero emission" concept

How Toyama City Came to Engage in This Project

1889 The municipality of Toyama City

1960s Pollution became a big social problem

↓

Global environmental problems

↓

1998 Toyama City Environmental Basic Plan

Toyama City Environmental Basic Plan

（one of its major objectives）

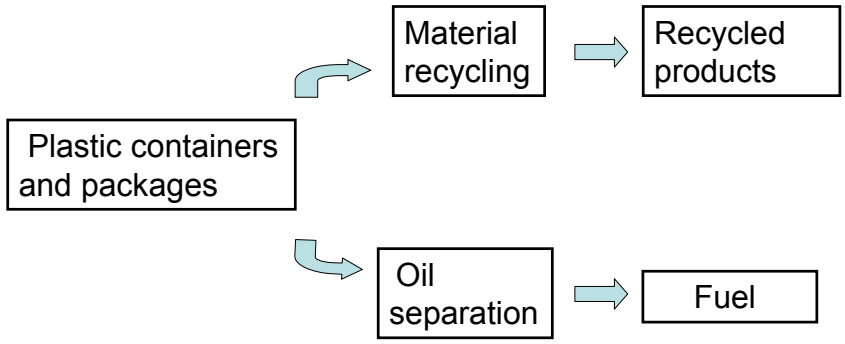
Making Toyama an environmentally-friendly and recycling-orientated city.

↓

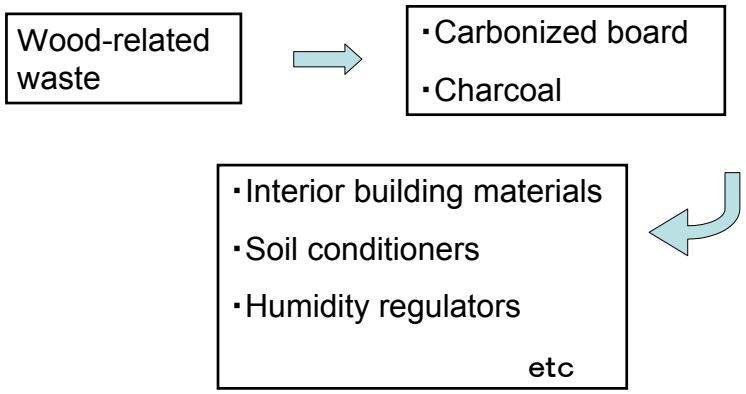
Eco-town Project

Four Recycling Plants Aiming at Recycling Within the Boundary of the Local Community

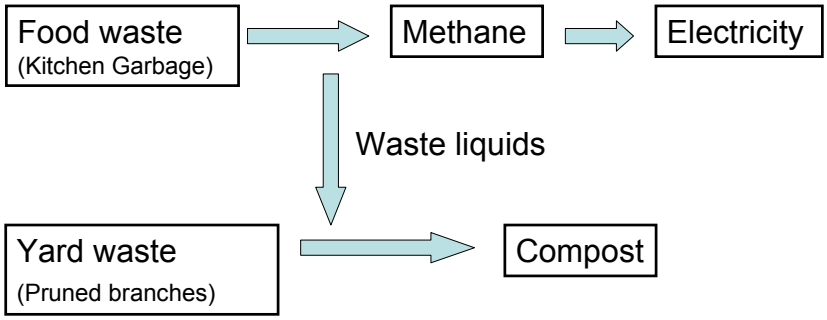
The *hybrid waste plastic recycling plant*



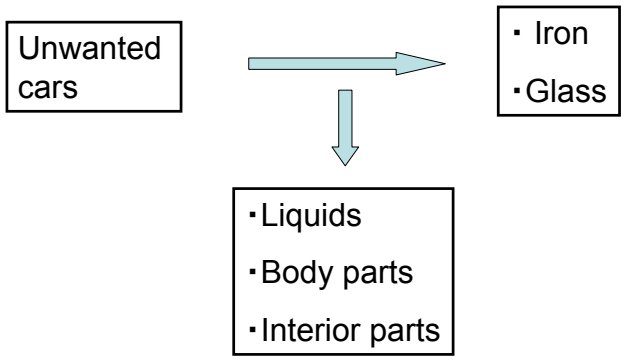
The *wood-related waste recycling plant*



The *Food and Yard Waste recycling plant*

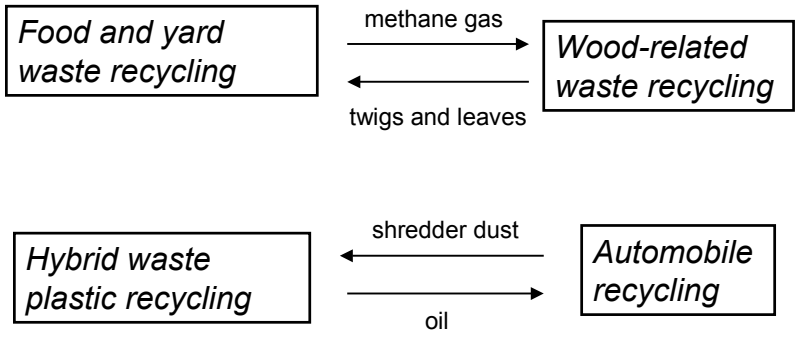


The *automobile recycling plant*



Resource recovery rates 90% or more

The four plants mentioned above provide mutual benefits within the Premises of the eco industrial sites



What Remains to Be Done and Future Prospects

① Waste supply which meets our requirements in terms of quality and quantity have to be secured

② Recycled products need to be returned and sold reliably on the market

What we plan to implement in the second term project

- Waste material energy center project
- Bio mass recycling project
- Foam Polystyrene recycling project
- Waste cooking oil recycling project
- Waste tire recycling project

Toyama City has every intention to develop and expand this project to realize a truly “environmentally-friendly and recycling-oriented city.”

PROFILE of West-Japan Auto Recycle Co. Ltd. (WARC)

1． Company Profile

LOCATION: Kitakyushu Ecotown、Fukuoka, JAPAN
CAPITAL: 100 Million Yen (0.8 Million US$)
SHAREHOLDERS: Yoshikawa, Mitui & Co., Nippon Steel Corp, etc.
AREA: Total 20,000 ㎡ Plant 4,500 ㎡
CAPCITY: 1,000 Cars/Month on the basis of 8 hours/day

2． Dismantling Process

2-1. Concept

"SHREDDER-LESS" dismantling process i.e. To complete dismantling without shredding operation by 4 parts-collecting sections and 1 car-body pressing section into the shape of 50x60x70cm set on a 62m long line

No1 Section: Suction of Fuel, LLC and Oils plus Removal of Bonnnet
(Main Equipments) Flaco's Liquid Suction Systems x 2
No2 Section: Removal of Tires, Battery, Fleon gas and Collection of Front/Doors Glass
(Main Equipment) Fleon Gas Collector x 2, Glass Collecting tools x 1 set
No3 Section: Removal of Engine/Mission, Suspensions,Exhaust pipe, and Catalyst plus Collection of Rear Glass
(Main Equipments) Turnover x 1, Hydraulic Cutter x 1, Electric Cutter x 1, Cantilever Crane x 1
No4 Section: Removal of Nonferrous Parts such as wiring harness, Various Motors, Heater Core, Evaporator, Radiator and Computer Board
(Main Equipment) Hydraulic Body Grips x 1 , Cantilever Crane x 2
No5 Section: Tri-axially pressing a body-shell into about 50x60x70cm
(Main Equipment) 600 ton Press Machine x 1

In addition, one Al- remelting furnace from engines and one Cu-reproducing machine from wire harness are being operated inside the company.

2－3. Main Features

(1) No ASR(Automobile Shredder Residues) because of "shredderless"
(2) Reproduction of High quality Fe scraps usable at LD converters
(3) Execution of High Recycling Ratio---90％ excluding thermal recycle
(4) Presentation of Technical Information regarding Dismantlability and Recylclability toward Car Manufactures

３． Present Performance

Since started operations in February 2001, the number of ELVs dismantled has steadily increased as follows. Note that the above-mentioned capacity of 1000 cars/month can be achieved by 6 operators in the dismantling line, that is 45 cars per 8 hours per day, and presently 1500 cars/month by the addition of 3 more operators for the extra 8 hours per day.

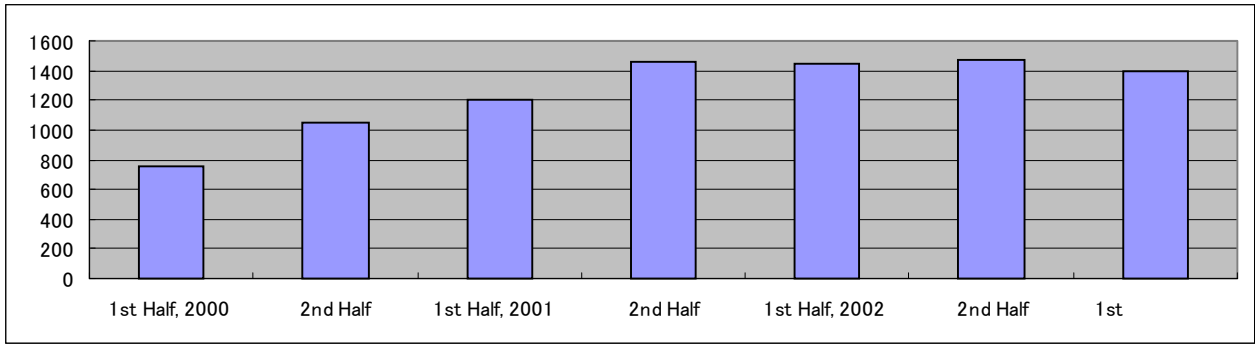


Fig.1 Change of Cars Dismantled by Time

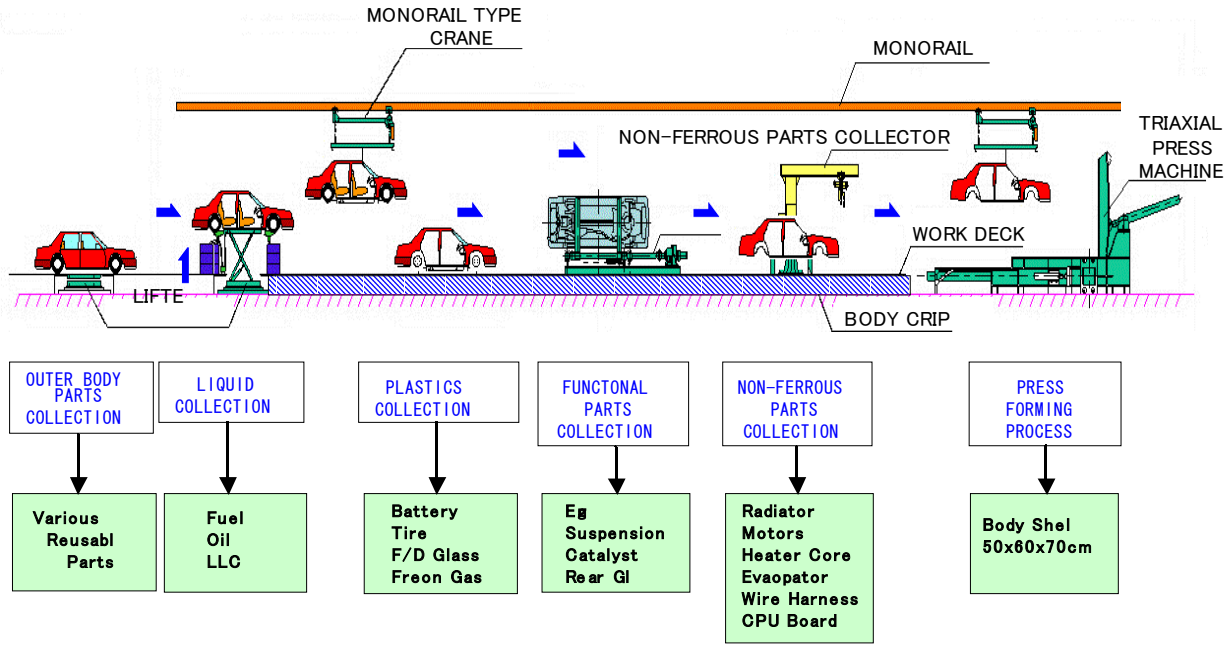


Fig.2 ELV Dismantling Flow at WARC

Features of WARC Process

1. On-line Part-by-Part Collecting System to Obtain High Recycle Ratio
2. High Efficient Dismantling Process at Speed of 8.5 Minutes／Car

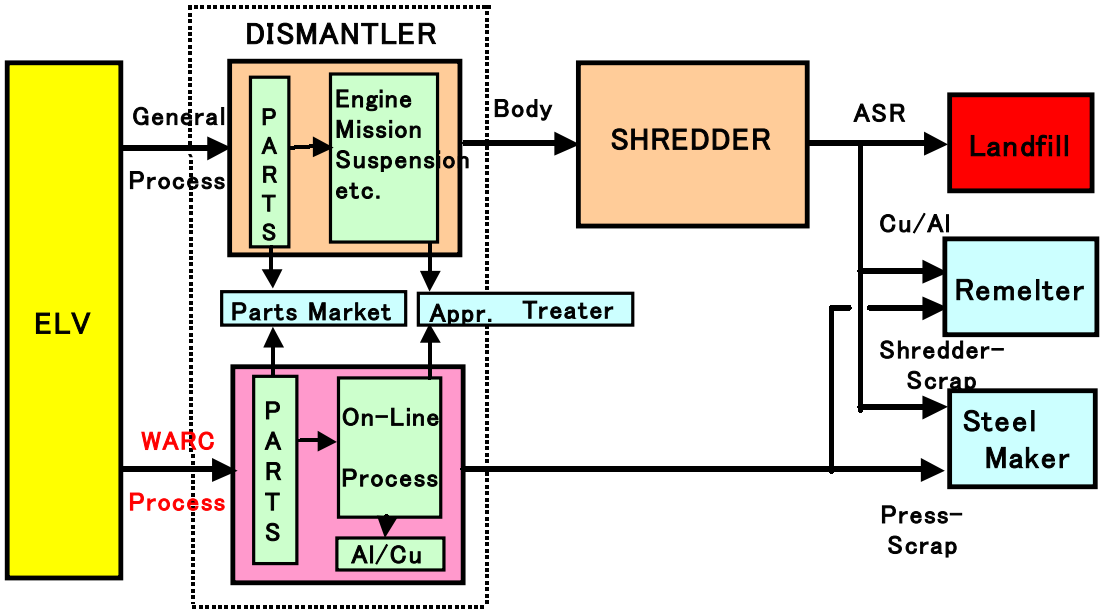


Fig.3 ELV Recycling Flow -General Process vs. WARC Process

Features of WARC Process

1. Shredder-less → ASR free → No Need to Landfill
2. Press-Scrap Return to BF Steel Maker → Horizontal Recycle

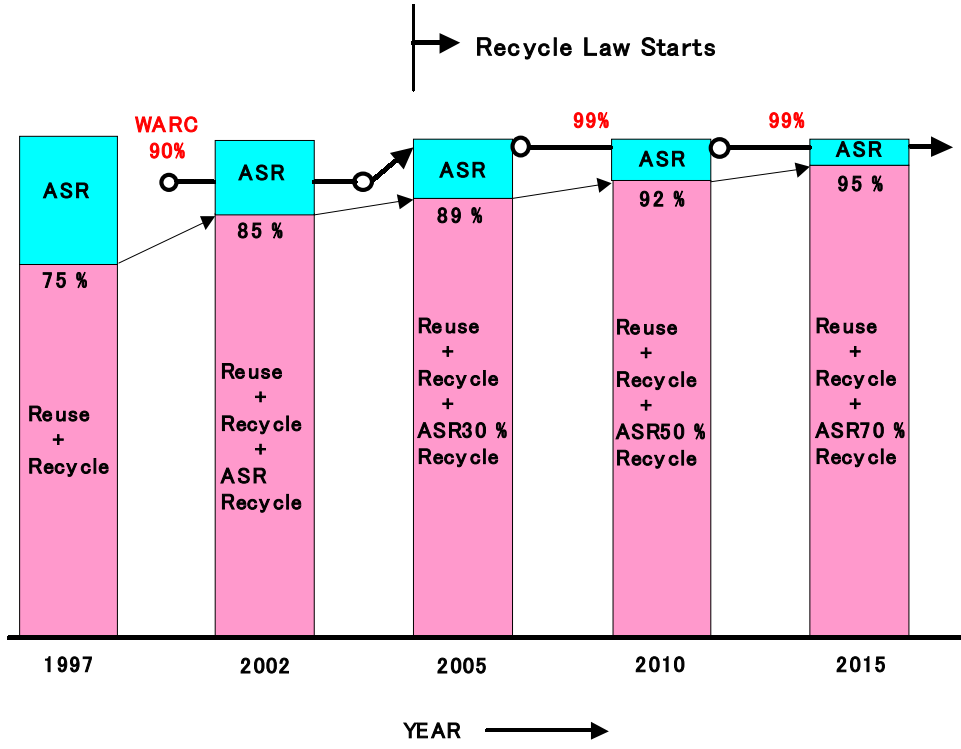


Fig.4 Recycle Rate of ELV - Country Target vs. WARC

Korea Report for
Korea & Japan Society of Waste Management

Key Factors & Future Tasks of the Extended Producer Responsibility System in Korea

November 2003

Prepared by Young-Seok Lee, Deputy Derector,
Resource Recycling Division,
Waste Management & Recycling Bureau,
Ministry of Environment, Republic of Korea

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Ⅰ. Direction for Resource-Recycling Waste Management Policy

1. Basic scheme

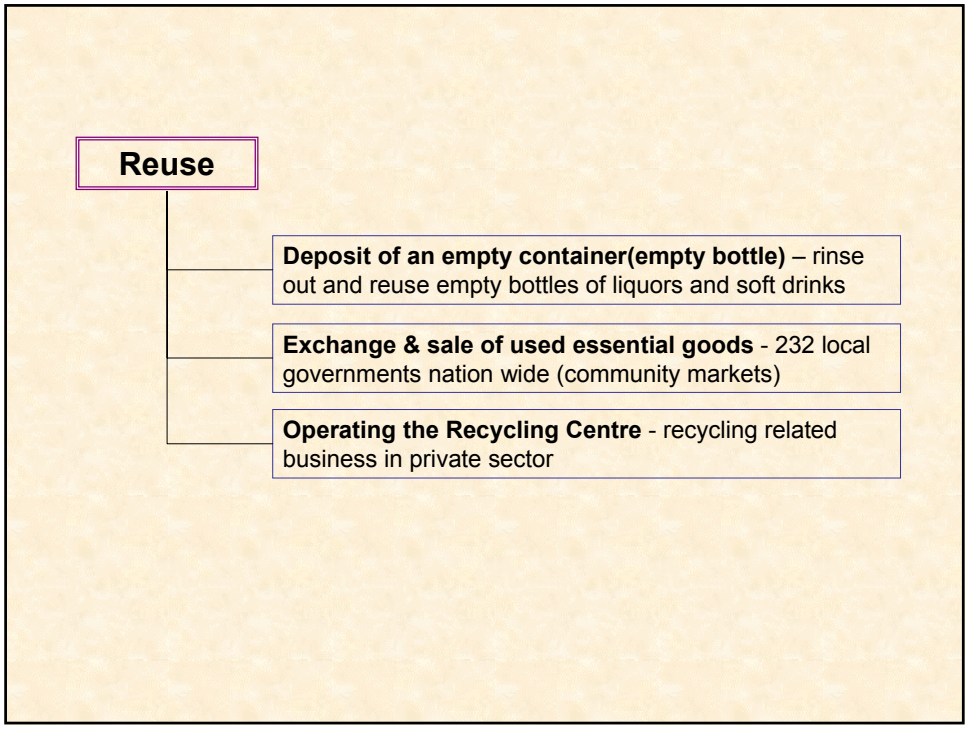
- **In order to establish the Resource-Recycling Society substantial reduction in waste generation is required, during the process of manufacture, distribution and consumption as much as possible, however,**

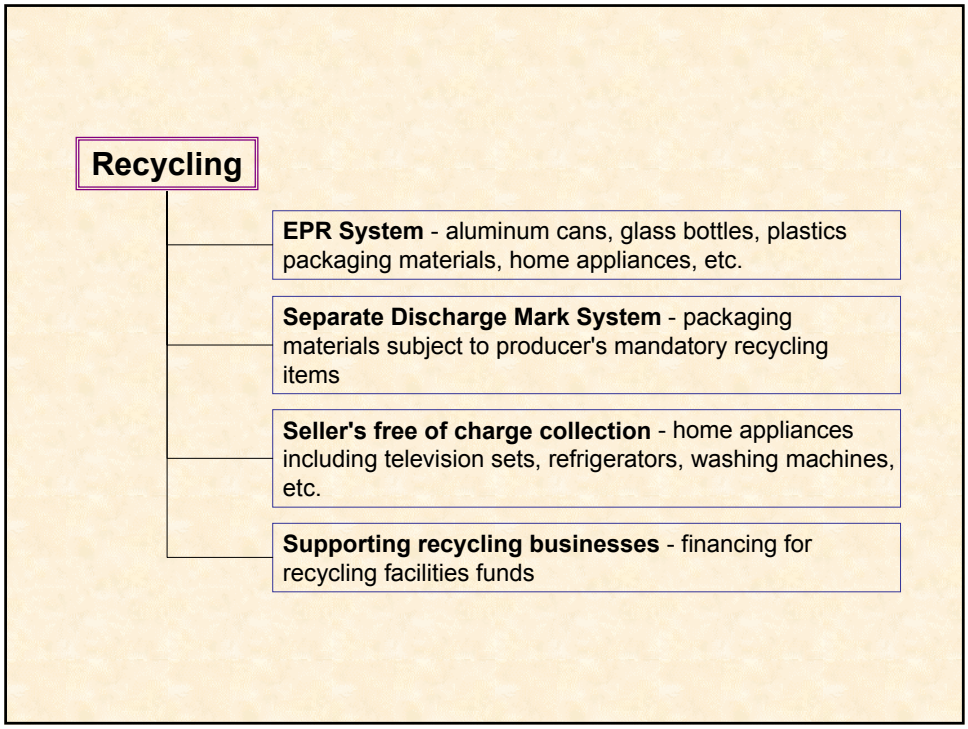
  - **inevitably generated waste should be reused by repairing and partially replacing components, and,**

  - **for unreusable waste the adoption of recycling system is encouraged to save resources and protect from environmental pollution.**

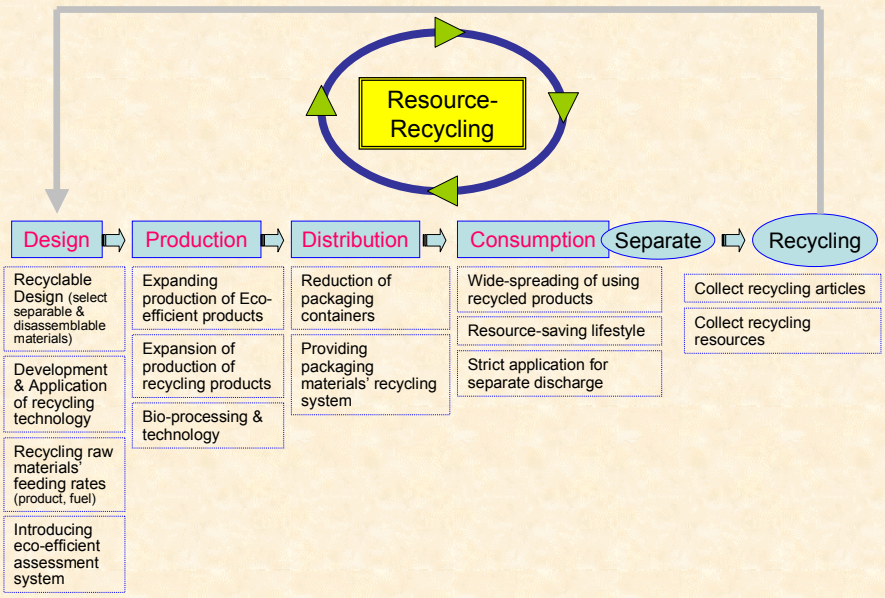
Reduction

- **Minimizing the use of disposable products -** Disposable Products·containers·plastic spoons, plastic bags, shopping bags, etc.
- **Restriction on over-packaging** - food/beverage, cosmetics, quasi drug, clothing, etc.
- **Waste Disposal Charges System** - plastic goods, insecticide, chewing gum, tobacco, antifreeze, etc.


Reuse
Deposit of an empty container(empty bottle) – rinse out and reuse empty bottles of liquors and soft drinks
Exchange & sale of used essential goods - 232 local governments nation wide (community markets)
Operating the Recycling Centre - recycling related business in private sector


Recycling
EPR System - aluminum cans, glass bottles, plastics packaging materials, home appliances, etc.
Separate Discharge Mark System - packaging materials subject to producer's mandatory recycling items
Seller's free of charge collection - home appliances including television sets, refrigerators, washing machines, etc.
Supporting recycling businesses - financing for recycling facilities funds

2. Resource-Recycling Mechanism



Ⅱ. Key Factors of Extended Producer Responsibility System

1. EPR System

a. Background

- Under the current mass production and consumption system, the government and consumers alone cannot identity the full responsibility for **realizing the Resource-Recycling Society** by reducing and recycling waste, thereby:
  - The **Extended Producer Responsibility (EPR)** has been introduced to expand the producer's responsibility, based on the guidelines for waste reduction. The system aims to improve recyclability by adopting a new structure to use reusable & recyclable materials all throughout the production process, from design to manutacture.
  - EPR System, with its ultimate goal to implement "Socio-Economic Structure based on Resource-Recycling System" motivated by the promotion of the waste reduction and recycling structure, had already been introduced by most of the OECD Member countries as specified below:
- ❖ 15 countries from Europe including Germany (DSD), U.K, France, Hungary; 4 countries from Asia including Japan, Taiwan, Australia; other countries from South America including Mexico and Brazil.

b. Preliminary Process

. **Enforcement of Deposit-Refund System**

- This system has been enforced **since 1992**, for the purpose of boosting the waste recycling, subject to **20 target items** including aluminium cans, glass bottles, paper packs, and home appliances. This system mandates producers **to deposit their recycling costs** in advance, based on their **total production quantity. T**hen, the deposit will be **reimbursed when producers present a fact sheet on their recycling rate**

. **Initiating the pilot program for EPR System before its enforcement in 2003**

- Pilot program for EPR System subject to 7 target items including home appliances, aluminium cans, glass bottles, and tires has been initiated since the year 2000, under the voluntary agreement signed between government and business providers.

. **Fostering the preliminary condition to enforce plastic EPR System efficiently**

- **Established the co-operation system to foster appropriate condition for recycling system** between government and concerned industries, **acquired financial resources to build infrastructure** for plastic recycling, and arranged a private sector's organization initiated by the relevant pilot program.

. **Reflecting diverse opinion of relevant industries and promotings amendment of related laws and regulations**

- Reflected various comments to the system with the collected opinion **from the expertise of relevant industries and private sector' corporations over 30 times** in respect of producer's recycling target items and detailed enforcement regulations, etc.
- Carried out the **amendment of recycling regulations** based on the **result of these collected comments**.

2. Key Factors

. **Items subjects to the producer's mandatory recycling**

Existing deposit-refund Items	**Products**	home appliances including TV sets, refrigerators, air-conditioner, washing machines, computers, tires, lubricants, fluorescent lamp, batteries, etc.
	Packaging materials	paper packs, aluminium cans, glass bottles, and PET bottles (foodstuffs, liquors, cosmetics, detergents, some portion of pharmaceutical products)
Newly introduced Items	**Products**	**mobile phone devices, mobile phones, and audio sets**
	Packaging materials	**plastic packaging materials** (foodstuffs, liquors, cosmetics, detergents, pharmaceutical products) **EPS buffer** (home appliances)

. For the **film type of packaging materials and fluorescent lamp** among the plastic packaging materials included in newly introduced items, will subjected to recycling liability from 2004, and for **mobile phone devices and audio sets** , from 2005.

. **Recycling Charges**

- Recycling cost is calculated based on the expected sum of waste collecting and recycling, as set forth in the relevant regulations.
- In the event a recycling-required producer failes to reach the mandatory quantity of recycling, the producer will be subjected to the recycling charges for a **reminding-portion** by **adding up additional dues of certain rate with recycling charges**.

. **Estimation of Mandatory Recycling Quantity**

- Calculated by assessing the recycling-required producer's given overall recycling conditions such as production quantity, recycling achievement, recycling technology applicable in targeting items, and capacity of recycling facilities.

. **Performance system for producer's Mandatory Recycling Quantity**

- Establishing the recycling plant by producer's own cost
- Outsourcing to recycling business provider
- Affiliating producer himself with the mutual aid association and paying a certain dues, and then outsourcing the recycling

. **Acknowledgement of outperformed achievement for Mandatory Recycling Quantity(Banking)**

- In case a producer outperforms his recycling quota, he can **reserve and use the credit for the excess performance during the next two years**. Hence, this system minimizes the producer's risk arising from economic fluctuations.

. **Obligation of Seller's free of charge collection for newly sold home appliances**

- In regards to selling home appliances including television sets, refrigerators, washing machines, computers, and mobile phones, as a new products, when a consumer requests the used products to be collected, the seller is obliged to collect them free of charge.

. **Enforcement of Separate Discharge Mark System for packaging materials**

- **Separate Discharge Mark System** subject to the mandatory target items of recycling-required producer has been introduced by unifying the conventional material classification mark system with recyclable mark system.

3. Reinforcing the plastic waste recycling system

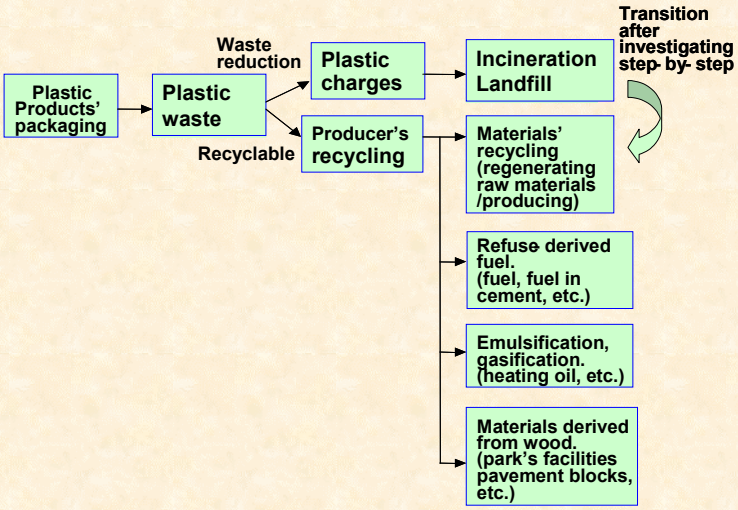
☐ **Background**

- While the annual plastics consumption tends to be increasing drastically, the current recycling rates (14.9%) are considerably low comparing to other materials, hence,
  - a comprehensive frameword shoud be promoted for plastic recycling, in order to implement **Socio-Economic Structure based on Resource-Recycling System**.

<Current status of recycling rates by principal materials, in 2000>

Items	Papers	Aluminium cans	Glass bottles	Plastics
Recycling Rates	59.8%	63.1%	67.4%	15%

. **Alternative Scheme**



4. Roles of Principal Parties

Consumer	o Strict compliance with Separate Discharge System for recyclable articles. - package materials with the Separate Discharge Mark, must be discharged separately. - Separate Discharge should be performed according to the each municipal, county, and district's Collection System.
Producer	o Assume the recycling liability strictly. o In case of a-fulfillment failure, the producer should pay the Recycling Charges. o Performs the Separate Discharge Mark. o Free of charge collection for the newly sold home appliances
Local Government (municipal, county, district)	o Manages Separate Discharge system strictly for EPR subjected packaging materials o Implements an appropriate system under each local governments in conformance with the Separate Collection guidelines.
Korea Resources Recovery & Reutilization Corporation	o Manages overall duties on institutional execution including accept and control, the production quantity record per producer, compliance action plan and fact sheet reports, as well as monitoring the recycling liability performance, and imposing charges.
Ministry of Environment	o Supports and manages overall institutional conduction such as enacting and amending the laws and ordinances, imposing Mandatory Recycling Quantity, inspection of mutual aid associations and public corporations.

Ⅲ. Future Tasks

- Endeavor to establish the autonomous and reasonable **cost-sharing system** (selection, transportation cost, etc.) among the **producer ↔ local government ↔ recycling business providers** subject to the new items including plastics.

  - support to implement the efficient hand-over system of recycling articles among the concerned parties.

- On-sight inspection and complement on the overall process from Separate Discharge by item, collection to recycling.

- **Furnish infra-structure facilities for plastic, fluorescent lamp, home appliances, etc.**

  - Motivate the private sector industries to follow the quality standard of plastic refuse-derived fuel and to expand recycling facilities.

- **Initiate the promotion campaign for plastic recycling products**

  (refuse-derived fuel, emulsified)

  - promote the plastic recycling products' purchasing campaign targeting the public institutions and private sector.

- **Monitoring the performance process of EPR System** and creating **system improvement plan** (research outsourcing)

  - provide alternative plan to solve the problem throughout the on-sight investigation from Separate Collection, selection, recycling, to sales process.

12th NEAC
Session 2. Create a Recycling Society

The governmental policy to enhance capacity of regional authorities to transfer to "Environmentally efficient society".

Case of Russia
T.Petrova, Ministry of Natural Resources RF

The Russian Federation similar to the other countries of the former USSR has inherited from the previous regime the environmentally unsound structure of economy characterised with the low efficiency of use of natural resources and high level of the environmental pollution.

Compared to the developed countries, the national indicator of energy consumption per unit of GDP is 2-3 timers greater and that of the greenhouse gases emission – 3-4 times. The consumption of the forest resources for production of 1 ton of paper is comparatively 6-7 times high. For the recent 10 years the non-efficiency of national economy has even grown by 30-60%.

The annual volume of wastes produced by all sectors of the economy is estimated as 2 bln tons, 60%of that is being disposed. For the period of 1995-2002 the volume of toxic wastes increased from 90 to 139 mln.t.

The GDP volume in the country has dropped by 50% since 90s but for the recent 4 years it has indicated the rising trend. This growth is mostly accounted for the sectors connected with use of natural resources. In case of retaining this pattern of the economic growth the fuel and energy sector, oil and gas, metal production and forestry might be the dominating sectors of the Russian economy by 2010. It might aggravate the existing environmental situation in the country.

However on the other side the gradual reconstruction and liquidation of unefficient enterprises is under way. And the situation might improve in our country. But it is a long-term process, the notable changes can be expected only by 2010.

There are good prerequisites created by the activity of the Ministry of Natural Resources RF to counterbalance the situation: the approval of the Ecological Doctrine of Russian Federation (2002), the development of the legislative base providing efficient use of natural resources (Federal Law on Environmental Protection, Federal Law on Industrial and Municipal Wastes, the Governmental Decree on the Routine of the State Cadaster of Wastes and Toxic Wastes Registration, etc.), the Federal target program "Ecology and Natural Resources of Russia" (2002-2010), the intensifying international cooperation in the environmental sphere and a growing participation in the international agreements connected with taking the national obligations in this sphere.

For the last years some regions of Russia have succeeded in the introduction of advanced and environmentally sound technologies basing on

international cooperation with neighbouring countries and accumulated a positive experience in this sphere.

It is the most rapidly developing regions – the Russian north-west territory– Leningradskaya, Murmanskaya, Arkhangelskaya, Kaliningradskaya oblasts, etc.

Cleaner Production Programme,

The case is the Cleaner Production Programme, implemented within the framework of the Russian - Norwegian co-operation based on the appropriate intergovernmental agreement of 1992. It has been supported since 1994 by the Ministry of Natural Resources of the RF and local authorities. The Russian-Norwegian Cleaner Production Centre (RNC) has been set up to arrange, carry out and disseminate the CP Programme.

Its objectives – the most efficient use of resources and prevention of climate change, mitigation of the negative impact of the process of production at all stages of the life-cycle (production, use and disposal).

The program consists of 3 components:

1. Capacity building in the Clean Production – training of the high managers and engineers, post- courses, project proposals and recommendations for modernization of the industrial process at their enterprise - inventory and assessment of proposals
2. Capacity building in the Financial Engineering - training in the business-plan development for the selected projects and in the concordance procedure with an investor.
3. Reforming the existing enterprises management system.

Over 1600 specialists from more than 500 enterprises have been trained since then, mainly representatives of Russia's north-west territory, that is the regions of Arkhangelsk, Vologda, Kaliningrad, Kirov, Leningrad, Lipetsk, Murmansk, Novgorod; the Republics of Karelia and Komi; and the City of Saint-Petersburg.

The programme is addressed to the major brunches of the industry. Now it has been extended to the Asian part of Russia. Under support of the Arctic Council now the program is being implemented at the Norilsk ore mining and processing enterprise (“Norilskiy Nikel”), the territory of Krasnoyarsk. There have been done highly efficient proposals on utilisation of sulfur dioxide extracted from the emissions for industrial production of sulfur as the main world producer.

As the practice shows, each dollar invested into the Programme yields 2 to 5 dollars of profit, due to substantial cut in consumption of electric power, raw material and water and increase in waste recovery.

A finance and credit line has been established in co-operation with the NEFCO (Nordic Environment Finance Corporation). Based on the Finance Engineering Programme, it will help choose the projects most attractive in respect of rational

us of resources and reduction of effluents, to be then implemented at concrete enterprises.

At present a number of such projects are being prepared, and credit agreements have been signed and executed with many companies.

"Policy of Clean Production"

As result of 10-years activity of the Cleaner Production Centre the Document "Policy of Clean Production" has been proposed in order to increase the priority of the clean technologies in the environmental cooperation activity of the major European countries and international organisations (European Union, etc.). This strategic document consists of the following activities to be implemented in the coming decade:

1. Capacity building (Rising awareness on the negative impact of production on health and environment, development of educational programs)
2. Integration of efforts on the "life-cycle principle" of the governmental, regional and local bodies basing on new instruments (environmental management, environmental marking, etc.)
3. Communication – wide participation and sharing of responsibilities mainly through the involvement into joint projects and partnership with western neighbouring countries
4. Implementation – development of economic instruments
5. Research - support of the innovative preventive technologies
6. Plan of Actions – and special sectoral plans
7. Financing

This year the document has been included into the major European strategies ("Northern Dimension" of the European Union, the Barents Euro-Arctic region program). The Russian territory has been selected as the focal area of the implementation of this Strategy

International "Round Table" – December 2004

The regional policy of the Clean Production based on Russian-Norwegian Center has proved its efficiency and vital significance to be extended over the entire country.

In connection with the 10th anniversary of the Cleaner Production Programme in Russia the Center in collaboration with the Russian Regional Environmental Centre makes a proposal, approved and supported by the Ministry of Natural Resources of the RF, aimed at holding in Moscow, probably in December 2004, the first Russian Cleaner Production Round Table, with the participation of many foreign specialists.

It is expected that the Round Table will contribute to the extension of the focal area of the Program "Clean Development" over the entire territory of Russia.

It will be discussed the feasibility to perform the environmental reconstruction of the economy and its sectors (industry, energy, transport, municipal services and agricultural production) for the period of 7 years – by 2010.

Session3

Environmental Cooperation Initiatives of Local Authorities

Local Initiatives of Environmental Cooperation in China

REN Yong

Policy Research Center, State Environmental Protection Administration

Outline

1. Local environmental cooperation between China and Japan
2. Kitakyushu Initiatives for A Clean Environment in China
3. Some implications

Local environmental cooperation between China and Japan

1. Chinese government has long paid importance to both multilateral and bilateral environmental cooperation. Up to now, China has ratified 32 international environmental conventions and protocol and reached 50 bilateral environmental cooperation agreements.

2. Among bilateral environmental cooperation, cooperation between China and Japan has been one of the most successful and fruitful cases in many respects such as the range covered, the actor involved and the amount of funds input.

Local environmental cooperation between China and Japan

3. Substantial cooperation between China and Japan started in the early 1980s. The cooperated areas cover pollution control, research and technology development, capacity building, and training and environmental education.

4. While national government oriented cooperation smoothly and successfully keeps going forward, local initiatives between two countries has increased their presence since the 1990s.

5. Up to now, 193 Chinese cities from 26 provinces has coupled with their Japanese partners as sister/friendship cities, such as Dalian vs. Kitakyushu, Chongqing vs. Hiroshima, Shanghai vs. Yokohama.

6. Cooperation initiatives between friendship cities are very diversified and flexible in many respects.

Kitakyushu Initiatives for a Clean Environment in China

1. The Kitakyushu Initiatives for a Clean Environment was adopted at the Fourth Ministerial Conference on Environment and Development in Asian and the Pacific held in Kitakyushu Japan 2000.
2. Beijing Seminar on Kitakyushu Initiatives for a Clean Environment, March 2001: 13 Chinese cities.
3. Surveys and studies on successful practice of urban environmental management in ten Chinese cities.
5. The First Meeting of the Kitakyushu Initiative Network, Nov. 2001, Kitakyushu Japan: 4 Chinese cities as the first members of the Network.

Kitakyushu Initiatives for a Clean Environment in China

6. 2 of 11 Pilot Activities/ demonstration projects in China:
   - Weihai city on public-and-private partnership in wastewater management;
   - Chongqing city on urban air quality management
7. Thematic Seminar on Public-Private Partnerships for Urban Water Supply and Wastewater Treatment, Nov. 2002, Beijing China.
8. The Second Meeting of the Kitakyushu Initiative Network, Sept. 2003, Weihai China: several other Chinese cities involved in the Network.

Kitakyushu Initiatives for a Clean Environment in China

Some implications

1. Local authority has always been a key actor in implementation of international environmental cooperation programs.
2. Environmental cooperation between local authorities is getting more and more active now and gradually getting into a mainstream of national bilateral cooperation.
3. Environmental cooperation between local authorities is a more direct-dialog-oriented, needs-targeted and flexible approach, yet,
4. National government always plays an important role in promoting local initiatives of environmental cooperation.
5. Local environmental cooperation could be very diversified, however, necessary financial and technological inputs need to promote substantial activities of cooperation. Therefore,

Kitakyushu Initiatives for a Clean Environment in China

Some implications

5. National government, international and regional organizations, and private donors are importantly invited to involve in local cooperation.

6. Experiences and lessons from developed countries are useful to late-comers learning, at the same time, the successful or failure stories which are going on in one developing countries are more relevant to other developing countries.

7. China would like to share its experiences and lessons of environmental protection with other developing partners.

Thank you

Twelfth Northeast Asian Conference on Environmental Cooperation

Hyogo-Type CDM Facilitation Program

November 2003

Hyogo Environmental Advancement Association

What is the Clean Development Mechanism (CDM)?

- CDM

  A system that uses financial and technological assistance from developed countries to implement projects in developing countries, such as projects to reduce greenhouse gas emissions. Developed countries get the equivalent of all or part of the GHG reductions achieved by those projects as their own assigned amounts, and can use them toward achieving their own reduction targets.

Environment Ministry Initiatives

The Start of Initiatives

In 1999 the ministry began studies to explore and assess the feasibility of projects that appear appropriate for the CDM.

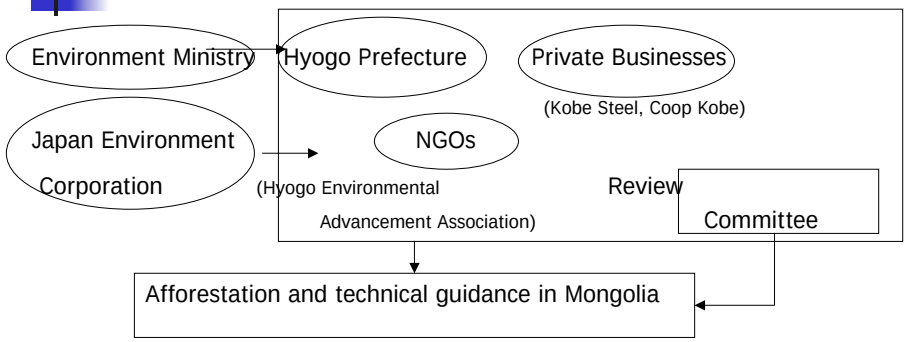
Overview of Initiatives

Local governments, NGOs, and other organizations chosen from among applicants play the leading role in performing field surveys (in developing countries and other locations), developing and supporting project implementation plans, and assessing the possibilities of project success.

Purposes of the Hyogo-Type CDM Facilitation Program

- Lend technological support to initiatives that are implemented by pacesetting private businesses and organizations, and that involve the use of international environmental cooperation and the CDM.
- Seek understanding for the possibilities of CDM projects by companies and other entities in Hyogo Prefecture, and encourage participation in international environmental cooperation sparked by such projects (consider ways to encourage participation).

How the Hyogo-Type CDM Facilitation Program Works



Preferred state of CDM

History and Background of the Hyogo-Type CDM Facilitation Program (1)

■ July 1998

A mission visited Mongolia to observe afforestation activities by the Coop Kobe "Coop Green Road Movement"

■ February 1999

- Vice-minister of the Mongolian Ministry of Nature and Environment, Basandoruje, visits Hyogo Prefecture.
- Request for cooperation in the recovery of 5 million ha of forest lost due to major fires in 1996 and 1997.

→Prefecture calls on businesses and other entities for help. Coop Kobe and Kobe Steel cooperate.

State of Forests after Fire

History and Background of the Hyogo-Type CDM Facilitation Program (2)

- September 1999
  - Hyogo Environmental Advancement Association receives commission for CDM Project Study from Global Environment Centre Foundation (GEC).
  - Conducts CDM feasibility study on "Mongolian Forest Regeneration Plan" (1999-2000).
  - Now conducting the "Project for an International Forum on Forest Regeneration and Facilitating the CDM" in Mongolia with a grant from the Japan Environment Corporation (2001-2003).

History and Background of the Hyogo-Type CDM Facilitation Program (3)

- June 2001
  - Hyogo Prefecture launches Hyogo-Type CDM Facilitation Program Project as an Environment Ministry "International Environmental Cooperation Model Project.
  - Links up with Hyogo Environmental Advancement Association's "Mongolian Forest Regeneration Plan Assistance Project" (2001-2003; in 2003 the Hyogo Environmental Advancement Association will implement the plan under a commission from the Overseas Environmental Cooperation Center).

Hyogo-Type CDM Facilitation Program Project Plan

	2001	2002	2003
Hyogo Prefecture	•Review Committee (twice a year) →		
	•On-site studies and guidance by experts →		•CDM Project Manual
Hyogo Environmental Advancement Association	•Preliminary survey •International forum (Mongolia)	•Monitoring of afforestation area •International forum (Mongolia)	•Invitations to engineers, training •International forum (Mongolia)
	•Asking businesses and others to get involved →		

Hyogo-Type CDM Facilitation Program Project Description

1. Studies to ascertain the state of initiatives by businesses and involved organizations in the prefecture
2. Meetings of Hyogo-type CDM Facilitation Review Committee
3. Visits to afforestation sites in Mongolia
4. Cooperation with International Forum on Mongolian Forest Regeneration

1. Creation of Review Committee

- Main items considered
  - Forest CO_2 sink effectiveness
  - The role of local governments in initiating CDM projects
  - Effective afforestation techniques abroad (Mongolia)
- Committee members (7)

・Prof. Yoshio Yamanaka (Osaka Gakuin University)
・Prof. Hisakazu Kato (Nagoya University)
・Assistant Prof. Makoto Kawamura (Kyoto University)
・Yutaka Miyakawa, Vice-President (Association of Environmental Conservation Administrators)
・Taiichiro Suda, Department Manager (Kansai Electric Power Co.)
・Masaaki Minamikawa, Department Manager (Coop Kobe)
・Etsuo Kobayashi, Vice Chair of the Board of Directors (Hyogo Environmental Advancement Association)

2. Determining the Situation: Conducting Field Surveys (1)

- First survey: July 1-7, 2001

Participants: Technical specialists from the Hyogo Environmental Advancement Association and the Forest and Verdure Public Corporation.

Activities: Establishing monitoring area, visits to afforestation area and to seedling nursery, asking for cooperation through participation in international forum, exchanging views with NGOs

- Second survey: August 9-15, 2001

Participants: Review Committee members, and officials from Hyogo Prefecture, the Hyogo Environmental Advancement Association, Coop Kobe, and Kobe Steel

Activities: Visits to afforestation area and to seedling nursery, international forum

2. Determining the Situation: Conducting Field Surveys (2)

- Third survey: August 20-26, 2002

Participants: Review Committee members, and technical specialists and others from Hyogo Prefecture, the Hyogo Environmental Advancement Association, and the Hyogo Public Corporation of Greenery

Activities: Confirmation of monitoring findings, visits to afforestation area and to seedling nursery, international forum

2. Determining the Situation: Conducting Field Surveys (3)

- Fourth survey: August 19-25, 2003

Participants: Review Committee members and technical specialists and others from Hyogo Prefecture, the Hyogo Environmental Advancement Association, and the Hyogo Greenery Public Corporation

Activities: Confirmation of monitoring findings, visits to afforestation area and to seedling nursery, afforestation work, international forum

Afforested Area Survey

Seedling Nursery

3. Mongolian Forest Regeneration Forum (1)

- August 12, 2001
- Genghis Khan Hotel, Ulan Bator
- Host organization: Hyogo Environmental Advancement Association
- Keynote addresses
  - "Mongolia's Afforestation Policy" Executive Director Dorjsuren
  - "Social Systems for Forest Conservation and Management" Prof. Hisakazu Kato
  - "The Environmental Conservation Effect of Forests" Prof. Yoshio Yamanaka, et al.
- Panel discussion
  - Theme: Future Outlook for Afforestation Activities in Mongolia

3. Mongolian Forest Regeneration Forum (2)

- August 22, 2002
- Mongolia-Japan Center, Ulan Bator
- Host organization: Hyogo Environmental Advancement Association
- Keynote addresses
  - "Afforestation Methods in Mongolia, and Results of Afforestation Research in Selenge Province" Executive Director Dorjsuren
  - "Japan's Measures to Arrest Global Warming as Required by Having Signed the Kyoto Protocol" Prof. Yoshio Yamanaka
  - "Sustainable Use of Mongolia's Northern Forests" Assistant Prof. Makoto Kawamura, et al.
- Panel discussion

3. Mongolian Forest Regeneration Forum (3)

- August 21,2003
- Mongolia-Japan Center, Ulan Bator
- Host organization: Hyogo Environmental Advancement Association
- Keynote addresses
  - "Summation of Afforestation Monitoring Study in the Selenge Area" Executive Director Dorjsuren
  - "International Cooperation for the Regeneration and Management of Mongolia's Forests: Achievements to Date and Future Outlook" Prof. Hisakazu Kato
  - "Forest Regeneration Projects and the CDM" Prof. Yoshio Yamanaka, et al.
- Panel discussion

Mongolian Forest Regeneration Forum in Session

Summary of the Hyogo-Type CDM Facilitation Program

- Preparation of Hyogo-Type CDM Project Manual

1. Guidance in Hyogo-type CDM Projects
   - An example from Mongolia
   - CDM project flow (with Mongolia as an example)
   - Example of a CDM project study
2. Results of Case Studies and Other Examples in Hyogo Prefecture
3. The Desirable Form of Hyogo-Type CDM Projects
   - Case studies

Future Developments

- Encourage Hyogo Prefecture businesses, organizations, and other entities to get involved in international environmental cooperation.
  - Promote the program by distributing copies of the Hyogo-type CDM Project Manual.
  - Hold forums

❑ Session 3

Environmental Cooperation Initiatives of Local Authority in North East Asia:

-Based on Seoul City's Experiences and Potential Lessons-

2003. 11. 25

WoonSoo Kim : woonkim@sdi.re.kr
Seoul Development Institute

Presentation Highlights

- Challenges for Sustainable City Initiatives
- Community-Based Environment Protection Through Citizen Participation
- Seoul City's Experiences and Potential Lessons
- Environmental Cooperation of Local Authority in pursuit of Sustainable City
- Concluding Remarks

Challenges for Sustainable City Initiatives

Issues on New Paradigm

- Introduction of ESSD to Urban Development
- Sustainability is the Key Idea
- Environment is the necessary Condition
- Transition of Role Definition

The role of the locality in environmental management is increasingly coming to the fore.

Sustainable development has become one of the touchstones of urban policy in recent years.

Building Good Governance

- Changes in the urban environment:
  - Globalization
  - Increased use of information
  - Localization
  - Increased power and awareness of rights of civil society
- Good Governance is the term that symbolizes the paradigm shift of the role of governments.
- How to pursue sustainable city?

The generic characteristics of good governance are such as participation, rule of law, transparency, responsiveness, consensus orientation, equity, effectiveness and efficiency, accountability, empowerment, and partnership.

Community-Based Environmental Protection through Citizen Participation

Mechanisms for Public Participation

- Voting
- Public Referendum
- Non-binding Direct Involvement
- Binding Direct Involvement

The theory of citizen participation has translated into numerous provisions, initiatives, and approaches. Often woven into the very fabric of policymaking, public participation falls into four broad categories.

Public participation is defined as the legal right and practical opportunities to affect decision-making, e.g. through statements to authorities making decisions on an activity, project, plan, process or programs.

Principle 10 of the Rio Declaration on Environment and Development, which states that: "Environmental issues are best handled with the participation of all concerned citizens, at the relevant level" `

Principle 10 of the Rio Declaration:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principles of Community-Based Environment Protection (CBEP) Initiative Program

- Focus on a definable area
- Work collaboratively with a full range of stakeholders
- Assess the local quality of the air, water, land, and living resources as parts of a whole
- Integrate environmental, economic, and social objectives and foster local stewardship of all community resources
- Use the appropriate regulatory and non-regulatory tools
- Monitor and direct efforts through adaptive management

Advantage of CBEP Initiative Program

- Comprehensive Identification of Local Environmental Concerns
- Priority and Goal Setting that reflect overall Community Concerns
- Development of Inclusive and Long-term Solutions

Public participation is directly related to working collaboratively with a full range of stakeholders, and monitoring and directing efforts through adaptive management.

Seoul City' Experiences and Potential Lessons

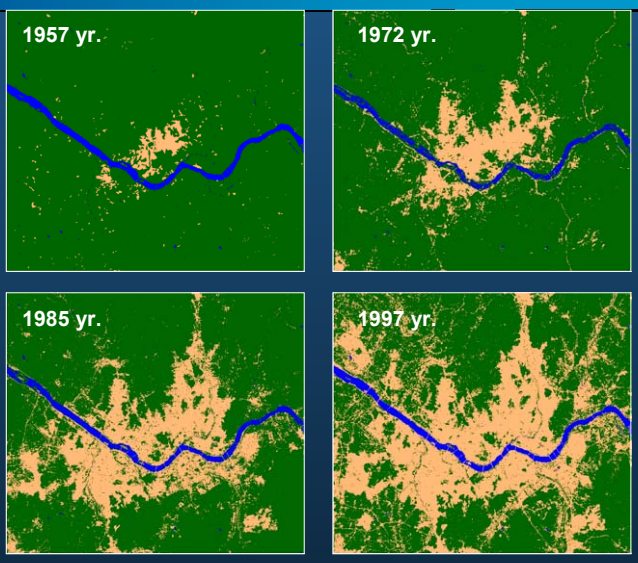
-Rethinking of Seoul City-

Urbanization

Past, Present, and Future

Air Pollution in Seoul

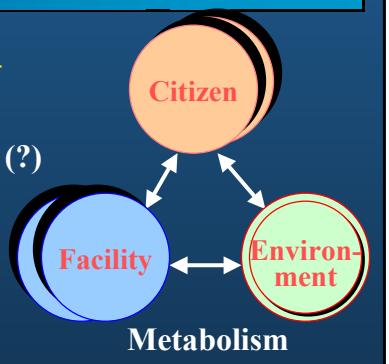
Seoul urban area using satellite Imagery



Source: SDI, Thematic Maps of Seoul, 2000

Urbanization

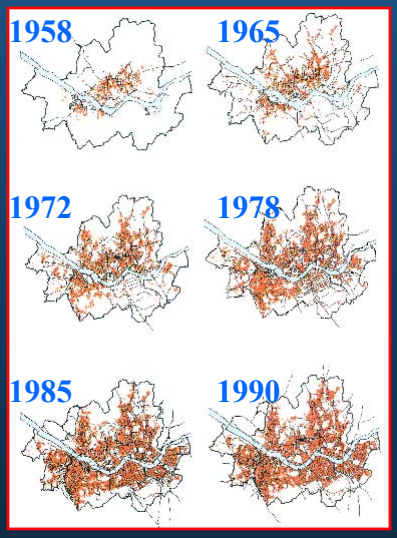
- Expansion Path of Urbanization
  - Beyond the Optimal City Size
  - Environmental Carrying Capacity (?)
- Indicators
  - Urban Air Pollution
  - Traffic Congestion



Traffic Speed (CBD)	Ozon Warning
1995: 18.3 km/h (auto) 1996: 16.4 km/h 1997: 16.9 km/h	1995: 5 days (Episode) 1996: 19 days 1997: 33 days

Past, Present, and Future

- Land Use Pattern
  - Residential Area: 49.8%
  - Open Space : 41.9%
  - Others : 8.3%
- Future Urban Development
  - Sustainable Development
  - Environment-friendliness
- Key Factors for Consideration
  - Transportation
  - Air Quality



Air Pollution in Seoul

Statement of the Problem

Visibility

Air Quality Trends

Area-wide Air Pollution

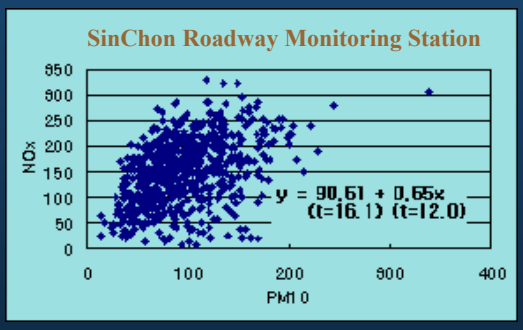
Paradigm Shift in Seoul

Statement of Problem: Air Pollution

- Natural Condition:
  - Pollutants from West, North-West by Inverse Urban Form
  - Basin Area Surrounded by Mountains
- Characteristics of Population/ Land-Use
  - High Density · Over-Crowded than Carrying Capacity
- Transport • Urban Planning
  - Increase of Total VMT
  - Excessive Travel Demand
  - Short-span of Transport and Land-use Plan
- Energy Consumption • Industries
  - High Dependency on Energy Consumption

Visibility

- Decreasing Factors
  - Complex Interaction of Meteorological Conditions
  - Distribution of PM sizes, Chemical Components, etc.
- Remarks
  - Noxious PM



Visibility Analysis

- Characteristics

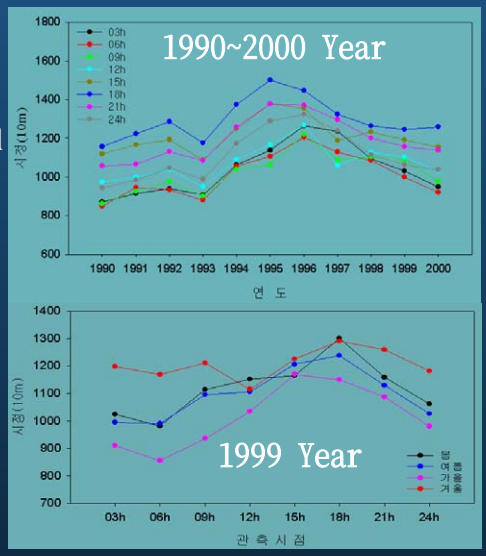
-After 1995 year: Not Good

-Summer . Autumn: Not Good

-Yearly Visibility: R. Normal

-Hourly Visibility: Not Good
(09:00 A.M.~18:00 P.M.)

Citizen's Sensible Air Quality Index

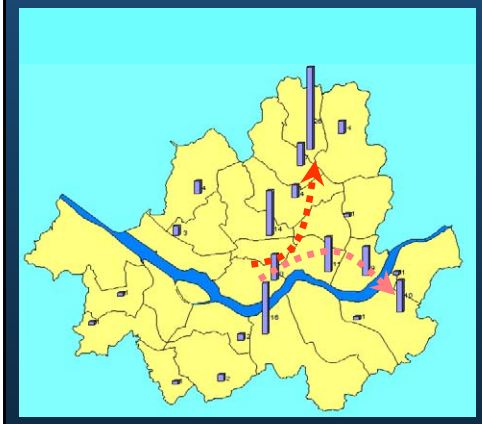
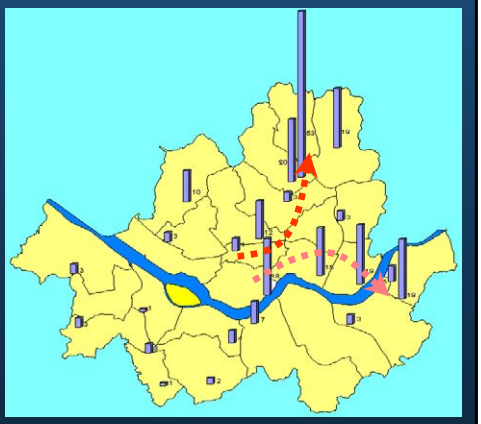


Air Quality Trends

- 1985~2000 Year
  - Decreasing Pattern: SO_2, PM10(within WHO Recommendation)
    - Supply of Clean Fuel, Road Pavement, etc.
  - Incremental Increase of Pollution Level: NO_2, O_3
    - Traffic Flows, VOC Emissions
  - Seasonal Properties : Summer(O_3), Spring(Dust, SO_2)
- Key Properties
  - Satisfaction of Long-term Ambient Air Quality Standards
  - Increasing Episode Days of Short-term Standards
    - PM10, NO_2, O_3(North-East, South-West Region)
  - Area-wide Smog Occurrence

Air Quality Monitoring Stations: O_3 Level

(Years: 1995~2000)

8-hr O_3 Standard Exceeding Days	1-hr O_3 Standard Exceeding Days
	

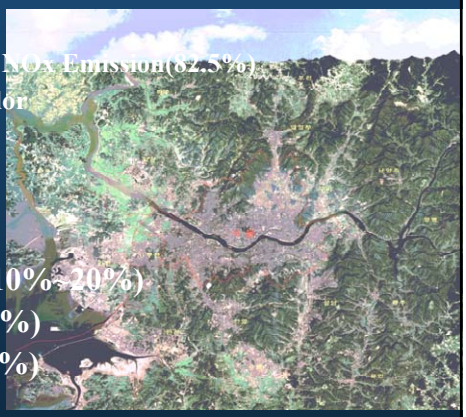
Area-wide Air Pollution Problems

- **KeyongGi Province**
  - Population Increase and Industry Location
  - High NOx Emission from Power Generation Facility
- **InChon City**
  - Transport and Power Plants: Hign NOx Emission(82.5%)
  - Industry · Complex : VOC and Odor
- **Implications**
  - Area-wide O_3 Episodes Days
  - Influence from Surrounding Cities

    NO_2 (KeyongGi → Seoul: 10%~20%)

    SO_2 (InChon → Seoul: 23%)

    PM (InChon → Seoul: 18%)



Paradigm Shifts to ESSD Principles with Building Good Governance in Seoul

- Since UNCED (Rio Conference in 1992) suggested the ESSD, Environmentally Sound & Sustainable Development, as the world project for the next generation, the Seoul city has tried to protect and reorganize the urban environment.
- Citizen participation as a way of building good governance is being implemented to deal with environmental problems efficiently.

Environmental Cooperation of L.A. in pursuit of Sustainable City

Building Good Governance in Seoul

Cheonggye Stream Restoration Project

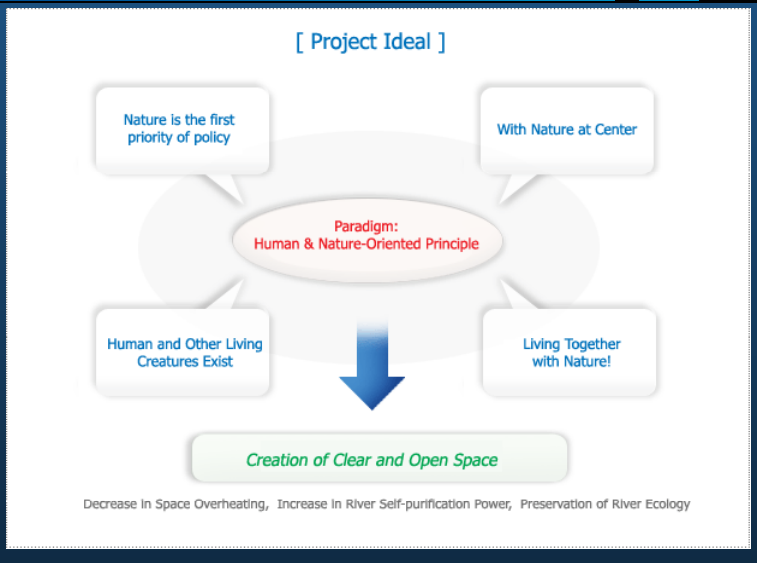
Seoul Local Agenda 21

Building Good Governance in Seoul

- Both citizen participation and partnership are designed and implemented in the form of good governance.
- Case 1: Partnership & Citizen Participation
  - Cheonggye Stream Restoration Project (CSRP)
- Case 2: Citizen Participation & Partnership
  - Local Agenda 21, as an action plan for a sustainable city

Cheonggye Stream Restoration Project

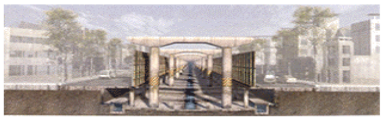
Basic Concept and Project Ideal



[Methods and process of the Cheonggyecheon Restoration Project]

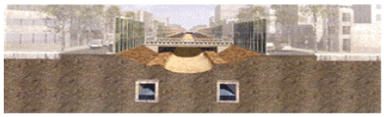
1. Setting up facilities for transportation, safety and construction
erection of scaffolding and demolition chutes under the overpass

2. Dismantling of decks, crossbeams, and the covering
dismantling of overpass decks by the segment cutting method – dismantling of metal beams by using crane – dismantling of the covering by the segment cutting method

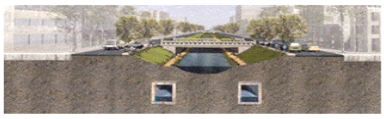


3. Dismantling of piers
cutting off piers and disposal – construction of road for temporary use

4. Construction of intercept sewers and a road for temporary use, and dismantling of the coverings in the commercial area
construction of intercept sewers – dismantling of the covering by sectors and road construction



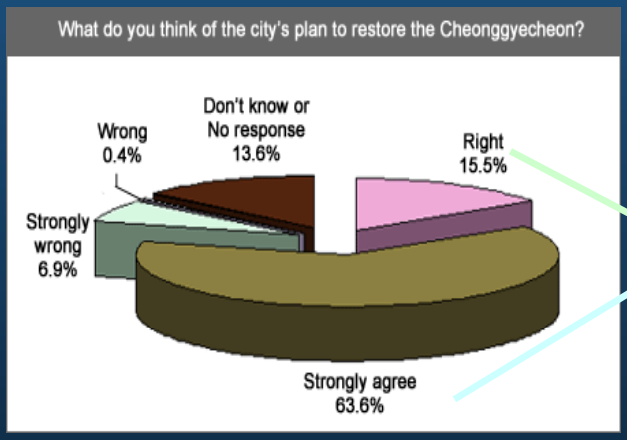
5. Landscaping for the recovered area including the river
restoration of the river – landscaping – lighting design



100 days after CSRP

It has passed 100 days as of Oct. 7, 2003 since the construction for the CSRP began on July 1. The work has been proceeding without any significant troubles in the face of some concerns of possible problems like heavy traffic congestion.

– Telephone survey of 1,000 citizens over 20 years old from Aug. 11 to 14 to find out how much people are aware of the project, and whether they are satisfied with the city affairs since the launch of the CSRP July 1 2003.



80% of citizens support stream restoration project

Citizen's Committee for CSRP

- ❑ Steering Committee: 29 Members
- ❑ Planning and Mediation Committee: 14 Members
- ❑ Subcommittees: 85 Members

- History and Culture Subcommittee : In charge of restoring cultural properties and establishing cultural spaces
- Natural Environment Subcommittee : In charge of preserving the ecosystem and the environment
- Public Works Subcommittee : structure dismantlement, road construction and stream restoration
- Transportation Committee : traffic reorganization affairs
- Urban Planning Committee : city planning related to the project
- Public Opinion Subcommittee : conducting and analyzing public opinion survey concerning the project

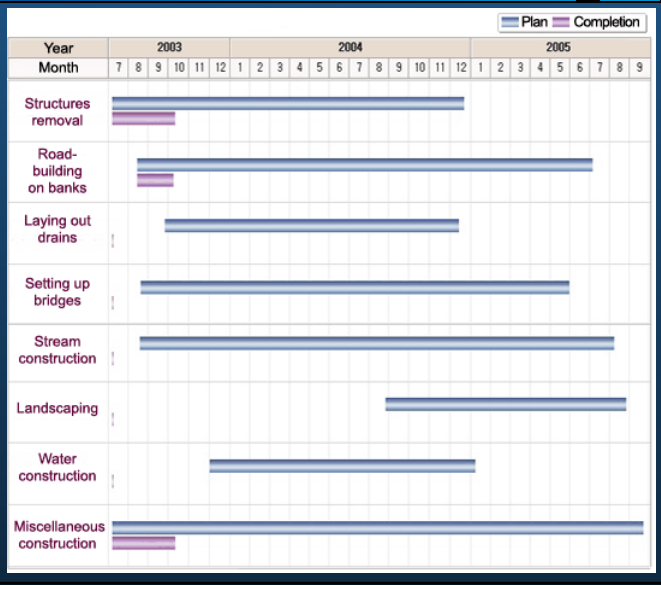
Brief view of Citizen's Committee for CSRP

The Citizen's Committee for CSRP is made up of citizens representing various social circles and experts in the environment, culture and traffic fields.

The Committee do research, review initiatives and make a decision on the project. It also implements the project closely with the executive organization, the CSRP Headquarters of the Seoul Metropolitan Government, and the research group of the Seoul Development Institute (SDI).

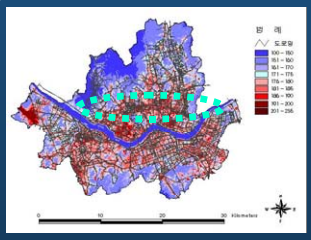
The Committee members are made up of as follows: 53% of experts in related fields, 17% of civilian groups, 16% of citizen representatives in the fields of religion, economy, law and the media, and 16% of the city councilmen and general directors from relevant offices or divisions.

Cheonggye Stream Restoration Schedule



Cheonggye Stream Restoration Project's Impacts Assessment on Micro-climate

- Identify the potential differences in urban microclimate that may exist between 'before' and 'after' restoring Cheonggye Stream.
- The ambient temperature will decrease to about 1.0°C.
- CSRP, with more open space and water body may lead to achievement of cooling effects on UHI in CBD area.



Microclimate Change Before/After Cheonggye Restoration Project

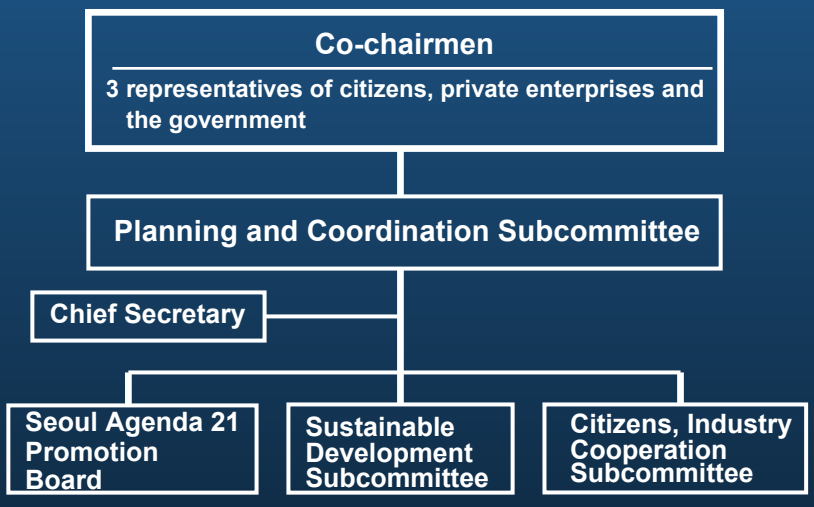
Seoul Local Agenda 21

Citizens' Committee for a Green Seoul

- The Citizens' Committee for a Green Seoul was organized in 1996 under the Special Ordinance of Seoul Metropolitan Government.

Functional Flowchart of the Citizens' Committee for a Green Seoul

- The Citizens' Committee for a Green Seoul is a civic organization established by the Seoul Metropolitan Government to develop Seoul into a more pleasant and environment-friendly city in the 21st century through a cooperative partnership with citizens and private enterprise.
- Under the auspices of the Committee, citizens, private enterprise and the Seoul Metropolitan Government jointly establish, execute and evaluate Seoul city's environmental policies as well as implementing the action plans of Seoul Agenda 21.



Organization of the Citizens' Committee for a Green Seoul

Institutionalization of Citizens' Committee for a Green Seoul

- Overview

The Citizens' Committee for a Green Seoul has been institutionalized over three stages, each of which introducing changes in the characteristics and the status of the Committee.

- 1st stage

A transformation from the stage of cooperation and settlement among different interest groups over the issue of participation in the environmental administration of the Seoul Metropolitan Government to the stage where various groups sought compromise and cooperation to facilitate sustainability took place.

- 2nd stage

A transformation from the stage where compromise and cooperation over the issue of establishing independent organizations (i.e. Sustainable Development Council) to realize sustainability to the stage where confrontation, compromise and cooperation among interest groups over the methods and strategies to promote sustainability (i.e. formulation, revision and implementation of Agenda 21) was achieved.

- 3rd stage

At first, confrontation and conflict among the three sectors of citizens, private enterprises and the government amounted to a serious crisis in partnership. However, the Committee was able to overcome the crisis through a compromise on the principle of collective governance, as reflected in the drafting of the Ordinance.

Measurement Method for Sustainability Index of Seoul Agenda 21

ITEM	INDEX(unit)	MEASUREMENT METHOD
Seoul, a city where the air is fresh and clean	Per capita oil consumption(unit/ℓ)	Per capita oil consumption (gasoline, diesel oil, kerosene, Bunker-C oil) - Annual statistics, Seoul city
	Number of ozone alerts(frequency)	Number of ozone alerts - Seoul city
	Emission from motor vehicles (10,000 tons)	Statistics on volume of air pollutants generated nationwide - Ministry of Environment
	Noise in residential areas along roadsides(dB)	Measurement of noise in residential areas along roadsides in Seoul - Seoul city
Seoul, a city where children can enjoy playing in water as much as they please	Water quality of Han River(BOD, mg/ℓ)	Measurement of water quality of Han River - Seoul city
	Per capita water consumption(ℓ)	Average volume of piped water production ÷ pollution x leakage ratio
	Number of streams being restored to their natural condition(number)	Survey by Seoul city and district governments
Seoul, a city where the citizens work hard to reduce waste and recycle it into useful resources	Per capita volume of waste generated (kg/person)	(Total volume of waste generated reduction and treatment at source of generation) ÷ population
	Recycling ratio(%)	(Recyclable goods collected ÷ total volume generated) x 100
	Food waste generation(kg/person/day)	Total waste generated ÷ population

Source: Seoul Metropolitan Government, 2002 Green World Cup, 2003.

ITEM	INDEX(unit)	MEASUREMENT METHOD
Seoul, a city where wildlife has returned	Ratio of urban green areas(%)	Statistics on current state of parks - Seoul city
	Number of wetlands to be created	Survey of implementation performance of Seoul city and district governments
	Number of freshwater fish species in the Han River	Survey of ecosystem of the Han River - Seoul city
Seoul, a city where the streets are pleasant, and where promenades and public transportation are favored.	Citizens' satisfaction with pedestrian environment(based on scale of 0 to 100)	Survey of citizens' satisfaction - Seoul city
	Ratio of cars stopping before the stop line at crosswalks	Survey of traffic volume - Green Consumers Network
	Citizen satisfaction with public transportation system	Survey of citizens' satisfaction - Seoul city
	Number of pedestrian fatalities in traffic accidents(person)	Statistics on traffic accidents - National Police Agency
	Number of bicycles per household	Survey - Seoul city
Seoul, a city where citizens work together to create a pleasant and friendly environment	Per capita park area in residential areas	[park area - (national parks + urban natural parks + other parks + areas of cemeteries)] ÷ population
	Citizens' environmental conservation programs supported by Seoul city	Survey by Seoul city and district governments
Seoul, a cultural center imbued with the richness of history and nature	Number of cultural facilities	Survey by Seoul city and district governments
	Number of experts in district culture	Survey by Seoul city and district governments
	Number of cultural programs per district	Survey by Seoul city and district governments
Seoul, a city of neighborly togetherness	Ratio of convenience facilities	Ratio of convenience facilities - Seoul city
	Number of youth halls	Number of youth halls - Seoul city
	Ratio of employment of the elderly	(Number of the elderly employed through the municipal employment service center ÷ population of the elderly aged 65 or older)x 100
	Ratio of economically active women	White paper on Women - Seoul city

Source: Seoul Metropolitan Government, 2002 Green World Cup, 2003.

Nanji Millennium Park using Landfill Site For a 2002 Green World Cup Games

Concluding Remarks

- The on-going citizen participation and partnership patterns in Seoul show a number of achievements and constraints in the process of implementing CSRP and Local Agenda 21.
  - ✓Citizens, businesses, and local authority share roles based on the spirit of participation and partnership.
  - ✓Collection of citizens' diverse views on Seoul's environment through participation.
  - ✓Remaining a declaration of environmental protection and action guidelines.

Partnership Public Participation | Integrated Management | Environment Information | Connectivity Institution | ●●●

- Some recommendations for involving citizens in the environmental cooperation initiatives of local authority are as follows:
  - ✓Preparation of guiding principles on public involvement in environmentally sustainable aspects in local authority.
  - ✓Support the development of and exchange of information on public participation and environmental awareness.

Clean Environment . . . . . .

For the Present, For the Future . . .

Session 3. Environmental Cooperation Initiatives of Local Authorities

The Integration of Efforts of the Regional Authorities and the Local Population and Their Governmental Support in Russia

T. Petrova, Ministry of Natural Resources RF

The rising importance of the local environmental initiatives for the national and global sustainable development and recognition of this fact by the governments and international organizations is a common feature of the modern society. The World Summit on Sustainable Development in 2002 in Johannesburg and its follow-up processes have been significantly influenced by the different stakeholders initiatives.

In Russia it has been facilitated by the following factors:

1. The enhanced capacity of the different social groups in identifying their environmental interests and building partnership with governmental bodies and international organizations and financial institutions that is in turn the result of their involvement into the environmental project implementation.

2. The decentralization of the governmental functions in the environmental sphere.

The involvement of different stakeholders into the environmental protection activity is an implication of ideas of the sustainable development when the environmental objectives are integrated with a poverty reduction, social progress, etc. In practice it can be achieved through the institutional support and capacity building projects.

The integration of local initiatives and governmental measures in Russia in most cases has being achieved through the following stages:

1. First the non-governmental organizations or local communities upon their initiative launch the pilot projects. Sometimes they are based on the financial support of the international organization responsible for implementation of the global environmental conventions and agreements.

2. Inspired by the good output of the projects the regional administrations formulate the Plan of Actions in the follow-up of those projects, adhere the local legislation in accordance with an innovative practice of environmental protection activities prior to the federal acts.

3. Further on the competent federal body accumulates and assesses this experience to incorporate it into the national environmental strategies (for example, the Ecological Doctrine of Russian Federation) or federal programs (the Federal program “Ecology and Natural Resources”).

Integration and coordination of local initiatives within the framework of the large-scale strategies under the governmental support provide their legislative and institutional base and facilitate the inflow of financial assistance.

Usually the “pilot projects” are of small scale in respect to territory size and number of involved participants and addressed to the objective of limited local significance.

“Model forests” project in the Komi Republic or Khabarovskiy krai is a good example. They proved their effectiveness at a pilot stage and further on have been developed into the administrative plan of actions.

There should be also mentioned the joint Russian-Japanese projects on forest management by local communities (participatory approach) in Siberia. They are supposed to be used by the Japanese part to offset the obligations of the Kyoto Protocol as joint implementation projects in future.

The most promising forms of the local population involvement are:

- participation in the forums, conferences and new institutional bodies (coordination committees) aimed at formulation and implementation of regional strategies of sustainable development (Local Agenda 21) or environmental challenges.
- participation in the environmental monitoring and nature management (eco-tourism,etc.).

The Ministry of Natural Resources of Russia renders support to the local environmental projects of international cooperation in the NEA region on bilateral and multilateral base.

The joint commissions of Russia on environmental protection with the NEA countries (Russian-Japanese Joint Commission on Environmental Protection, Russian-Chinese Working Group on Environmental Protection, Russian-Korean Joint Committee on Environmental Protection) have performed the inventory of bilateral local projects launched by regional administrations and local communities in the Russian Far East.

Those activities are:

Implementation of the bilateral conventions on Migratory Birds protection (Russia-Japan, Russia-Republic of Korea)

At the recent Russian-Japanese meeting on the Migratory Birds Convention (22-24 Oct., in Khabarovsk) there have been summarized the activities on joint project implementation, such as:

North East Asian Crane Site Network Workshop (1997), Amur Wetlands assessment (1998-1999), Census and banding of migratory songbirds (1997-2003), Ussury valley waterbird inventory (1999-2000), Amur down-stream waterbird survey (1999-2000), Fish owl study (2000-2002), Amur 2000: Oriental white stork and Amur wetland protection, etc.

As for these projects the federal and local administrative bodies provide major contribution through the management and support of existing nature protected areas and the wetland sites important as bird habitats, wintering sites and flyways and also the establishment of new protected territories. On the other side the involvement of citizens in this activity is also important mainly in the form of performing the census and banding of migratory birds along the flyways and monitoring the routs of their migration.

In this respect the arrangement of seminars and training courses with citizens, the publication and distribution of the project results, also atlases of bird species are the most efficient activities in respect of extension of participants contigent. The output of the projects is the Amur wetlands map, the inventory (cadaster) of wetlands, so on. The future output is the planed publication of the book - “Birds of the Amur”.

In this respect we also welcome the idea of the NEA to launch project on environmental education on wetlands.

Strategic Plan of Actions “TumenNET”

The severe environmental threats in the estuary of the Tumen River made it necessary to introduce advanced mechanisms of biodiversity and transboundary waters protection and involvement of inhabitants of this region. To start the implementation of the Strategic Plan the establishment of the biosphere natural reserve in the lower river by efforts of three countries – China, Russia and North Korea is now under way. The participation of the local population in nature reserve planning activities is a compulsory component of the project.

The Plan of Actions on the biodiversity Protection of the Baikal Region

The principal output of the Baikal Component of this GEF project (1997-2002)

– the Plan of Actions of Baikal Region Biodiversity Protection that had been developed on "bottom-up" approach. The program of small-scale grants "Local Initiatives" encompassed more than 1,5 th. project proposals.

The Subjects of Federation have been coordinated through the Supervising Committee. The enormous number of participants has been integrated within the Baikalskaya Declaration.

The outputs of the project are: 1) protection of plant and animals species, 2) establishment of new nature protected areas, 3) rehabilitation of natural landscapes, 4) the rising environmental awareness, 5) new base data on plant and animal diversity prepared by local communities.

Under the support of the Japanese Government there has been produced the General Plan of the eco-tourism development in the Baikal region (1993-1995). The objective of the Plan – to define the admissible environmental load on the Baikal ecosystems.

Strategic Plan of Actions on Amur Protection

At present the environmental situation at the Middle and Low Amur is recognized as the most critical in the NEA region. The decline of drinking water quality and contamination of river fish stock is aggravating the social problems. It is now recognized by the international community that situation should be radically changed in the nearest future. The approval of the comprehensive Plan of actions covering a huge territory and based on fixed deadlines is urgent.

This year the government of the Khabarovskiy krai initiated the establishment of the Interregional committee encompassing the 6 Subjects of Federation adjacent to the Amur River basin with co-ordinative functions under support of the territorial bodies of the Ministry of Natural Resources RF. A notable contribution was from the NGO (especially the WWF)

This idea has received a support from international organizations (UNEP-GEF) as a large-scale project "The Comprehensive Management of the Amur River Basin" aimed at mitigation of environmental threats to the Transboundary River Amur. The project has two objectives – to develop the general management pattern and mechanisms of its implementation followed with a number of pilot projects and development of international cooperation model in the Khanka lake basin. The participants of the project – Russia, China and Mongolia. They are expected to make the equal conceptual contribution to the development of the new water basin management mechanisms.

Some of them have been already considered at the International Conference on the Environmental Problems in the NEA Region in Khabarovsk on 3-7 th November.

The Russian part is actively developing the mechanisms of involvement of all stakeholders for implementation of Amur River Strategic Plan. A new concept of the Russian-Chinese cooperation - the "Green Belt" has been proposed upon the initiative of the NGO first of all the WWF and the local inhabitants. During a visit of the Chinese Minister on the Environment to Moscow on 11th August this year a presentation of this concept by the WWF was done in the Ministry of Natural Resources. The main idea of the concept – the establishment of network of the key nature protected areas equally by Russian and Chinese parts with different type of restriction on economic activity.

There has been established the Working Group of NGO and 8 subgroups. Just soon before the Conference in Khabarovsk there has been implemented the marathon campaign "Nature Reserve Wave", the seminars have been held that resulted in the creation of "initiative groups".

The projects of the Northern Forum

Some regional authorities in the Russian Far East have an experience of participation in the international organization "Northern Forum".

For example, Sakhalinskaya oblast (in cooperation with the territorial body of our Ministry) is an active participant and the initiator of a number of projects. The participation in the working groups on Environmental education and the Brown Bears protection has been appreciated highly. The future cooperation projects within this organization – "Eco-tourism in the North", "Joint training on response measures in the extraordinary situations", etc.

The climate change projects

The climate change projects represent good opportunities for involvement of different stakeholders into the international cooperation. This type of activities has been actively developed in the NEA countries. The capacity of Russian organizations is not used at full extent.

The reason is that the national strategy providing the implementation of the national obligations of the Kyoto Protocol in Russia has not yet been developed. The official and non-formal organizations responsible for the cooperation between governmental, public and private sectors of Russia with those of other countries are still being developed.

In the course of the World Conference on Climate Change in Moscow (29 Sept-3rd Oct) the documents were formulated the documents on the consolidation of the civil society to prevent and mitigate the negative effects of the climate change.

A notable contribution in this respect has been done by the Russian Regional Environmental Center. It renders support to the ideas of the Renewable Energy and Energy Efficiency Partnership – REEEP of the WSSD and took part in its presentation.

The development of the renewable energy projects is crucial for Russia and its Far East regions rich in this type of energy and by far suffering a great shortage of energy supply.

Prior to the ratification of the Kyoto Protocol the Ministry of Natural Resources renders support to all types of the climate change projects in the framework of the Russian-Japanese Joint Environmental Commission – educational, forest, inventory projects (greenhouse gases sources and sinks), etc. that to a great extent need a support of citizens and local communities. A good opportunity in this respect is provided my a number of pilot projects on greenhouse gases inventories in separate regions of Russia.

We also find very promising the idea of establishing the capacity building centers on climate change in Russia on cooperation base with the NEA countries including their municipal organizations within the "Kitakyushyu Initiative" framework.

Summarizing this presentation we want to propose the most important directions for cooperation of local authorities in the NEA region that are of mutual significance and boast good experience and institutional framework for cooperation activities:

- protection of the transboundary waters and their ecosystems;
- biodiversity protection (including all types of ecosystems);
- climate change projects;
- ecotourism;
- capacity building, etc.