Presentations
Aspects of Sustainable Management in the World

Presentation 2

"Business and Sustainable Management: Recent Trends"

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“Business and Sustainable Management: Recent Trends”

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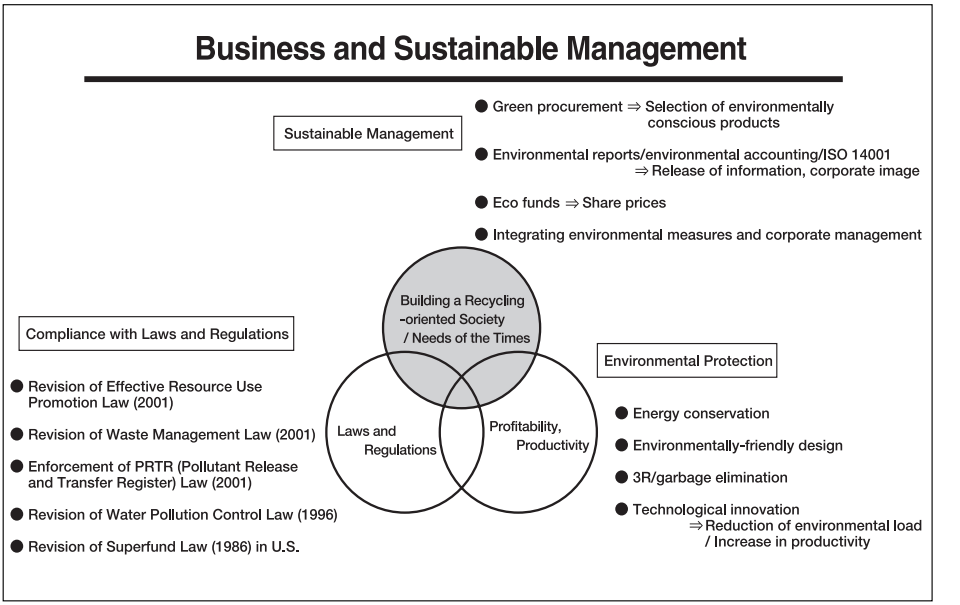
I am Yamamoto introduced just now.
I would like to talk about what our company thinks or regards as future challenge in everyday environmental activities under the theme “Business and Sustainable Management: Recent Trends”.

1. Business and Sustainable Management

Companies essentially make business activities for pursuing profits and address the development of profitable products or improvement in productivity. Furthermore, companies must deal with problems plaguing the global environment as good corporate citizen. However, as we promote business activities, the loads on environment increase. I think that it is actually a difficult problem for corporations how to manage this antithetical theme. [**Slide 1**] gives an outline about the recent trends of business and sustainable management we are seeing.



(Slide 1)

1.1. Working towards “Compliance with Laws and Regulations” - “Environmental Protection” - “Sustainable Management”

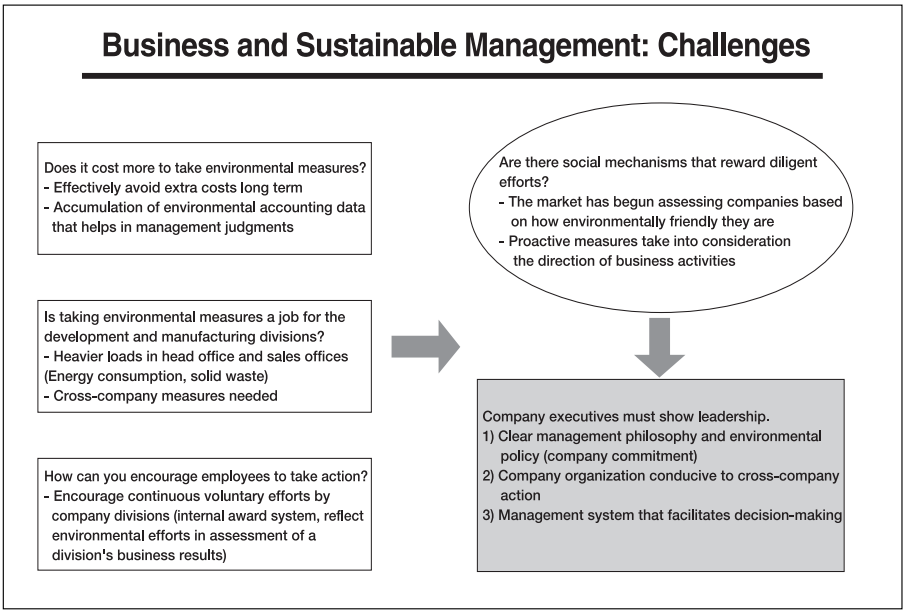
One approach is to at least comply with laws and regulations properly, and other approach is to work toward reduction in environment impact and improvement in productivity even further. I think these approaches are fundamentally indivisible, but if I daresay, the former can be referred to as a “regulatory compliance typed” management and latter “environmental protection typed” management. Whereas nowadays, especially in some industries such as office automation equipment, personal computer, and container/package, the following idea has been widespread; unless they incorporate environmental measures into business management and combine them, they will fall in business or fall behind in market competition. In other words, the idea of integrating environmental measures into basic business and corporate management, so-called philosophy of sustainable management has progressed.

Green procurement means that we select products which are provided while taking the environment into account, and adequate information disclosure by environmental report, environmental accounting, etc. has a substantial effect on corporate image. On the other hand, the incorporation of stock names into eco funds influences directly upon stock prices of the companies. Companies have to address actively such new trends toward the promotion of a recycling-oriented society and meet the needs of the times.

1.2. Integration of environmental measures and corporate management

As to integrating environmental measures into corporate management, we often hear such comment as “I agree with the plan in general, but when carrying out actual operations, it does not work. How can we solve various problems?” We also conduct such discussion and we are sometimes asked for advice from stakeholders. [**Slide 2**] shows about what are inhibiting factors for sustainable management and how corporations should consider and address major inhibiting factors. The most prominent inhibiting factor is that extra costs are required for sustainable management and companies can’t afford to pay the costs at present. Even if they invest environmental

measures, the investment won't contribute sales amount directly. Environmental staff is usually positioned staff in headquarters for managing divisions under division system or company system, so they can't go forward sustainable management without producing recognizable advantageous effect.



(Slide 2)

Seen from the figures published in the environmental report for last two years in worldwide IBM, investment amount of environmental costs was 10 billion yen a year while so-called saving amount was about 20 billion yen, that is, advantageous effect is 1 vs. 2.

Investment amount into capital assets for the future or in the short term was about between 5 to 10 billion yen a year, with some variation by year. The net total sum of these environmental costs and investment into capital assets ranges from about 15 billion yen to a little less than 20 billion yen per year, while saving amount is slightly over 20 billion yen. One of features of our measures is apparently incorporating avoidance effect into saving effect.

For example, at about 1980, we had a very serious problem of the penetration of toxic substance into soil and groundwater especially in the U.S. divisions.

In those days, all of the divisions in IBM transferred underground tanks to the ground with a heavy investment in order easily to detect possible accident or the like. In case of leakage, the tanks were provided with leakproof walls at their bottom, and the pipes on ceiling were formed as double container and provided with trays for receiving the leak below. Further, we added further investments to dig 10 to 40 wells for subsurface surveillance in order to monitor groundwater regularly.

Last year 58 environmental accidents occurred all over the world. 10 of these accidents can be prevented by said double container, and in 1999, 11 out of 71 accidents can be also avoided by double container. 20 years has passed since 1980, the above-mentioned measures now produce significant effects against accident. We identify such effects in environmental accounting from a long-term viewpoint.

Next, sales offices and head office tend to deny all responsibility by thinking that plants or manufacturing divisions should take charge of environmental measures. There was such tendency in IBM Japan itself six or seven years ago. In fact, however, it's very different. Considering, for example, the environment impact of electric power, solid waste products and so on, in the case of IBM Japan, environmental impact in head office, sales offices in Tokyo and Osaka accounts for 55% of the total environmental loads. Environmental loads in head office and sales offices are indeed heavier than that in development and manufacturing divisions such as Fujisawa Plant, Yasu Plant in Shiga prefecture, and Tokyo Research Laboratory in Yamato of Kanagawa prefecture. Since the finding, our head office and sales offices have also dealt with environmental measures in earnest and now we carry out company-wide environmental activities.

With regard to the voluntary corporate activities about environmental measures, it is usually hard to continue. Sometimes we are asked how can you encourage employees to take action. We adopt an award system and incorporate environmental activities and the results into performance evaluation of division chief. Some companies may be reluctant to carry out environmental activities because they think that there is no social mechanism that reward diligent efforts. As I said earlier referring to the first slide about sustainable management, nowadays the market and consumers have begun to

assess companies based on the attitude and action toward environment. We as a company need to address environmental measures positively while linking to ongoing business projects.

But, I believe the most important thing is that company executives themselves must show leadership, otherwise employees cannot take any action. So, I always think that company executives have to take the following three actions.

Firstly, as top management, they must show a strong commitment to environmental measures, that is, make management philosophy and environmental policy known to employees and the public. Secondly, they must build the secure organization for sustainable management in view of all operations of development divisions and sales offices at home and abroad. Finally, all employees have to join together to achieve the above-mentioned commitment and for that reason, it is necessary to provide a management system that facilities decision-making. These three are indispensable actions.

Environmental measures such as energy conservation and recycling can produce good results in a relatively short period, but investment from a long-term prospective can produce a substantial avoidance effect in the future. Therefore, strategic planning is very important for companies.

2. Case Example in IBM

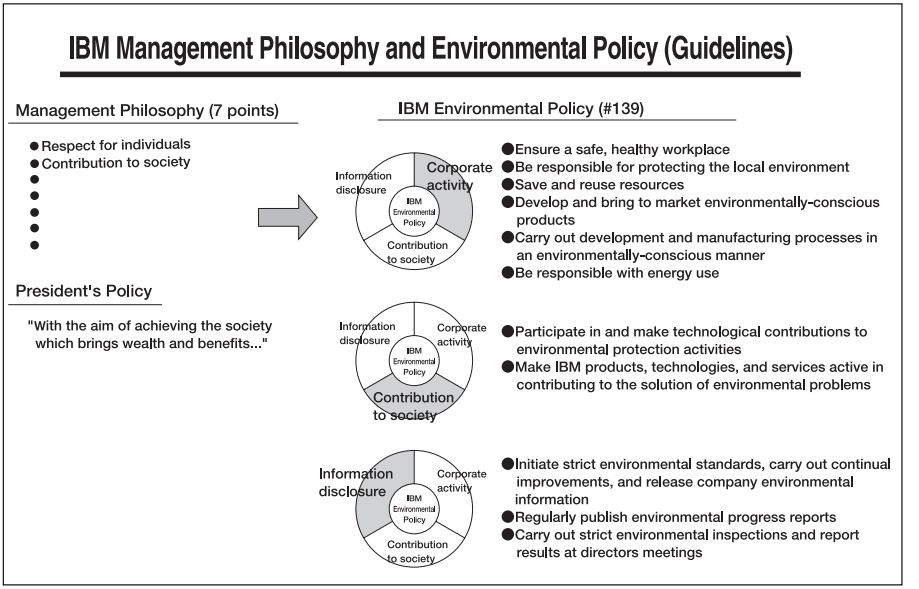
With respect to the above-mentioned three actions, I'd like to explain our approach briefly.

2.1. Management Philosophy and Environmental Policy

I would like to talk about the first action, or management philosophy and environmental policy. Our seven management philosophies include respect for individuals. The concept underlying this philosophy is consideration and respect for mankind. Contribution to society is one of the philosophies since establishment and incorporated into the environment policy. [**Slide 3**]

At inauguration of the Chairman of IBM Japan, the present President declared a vision for the 21st century. The vision is that as one of the leaders in

communication industry we develop “the network society - a group that works to bring prosperity and benefits to people and the world” through the creation of new value.”



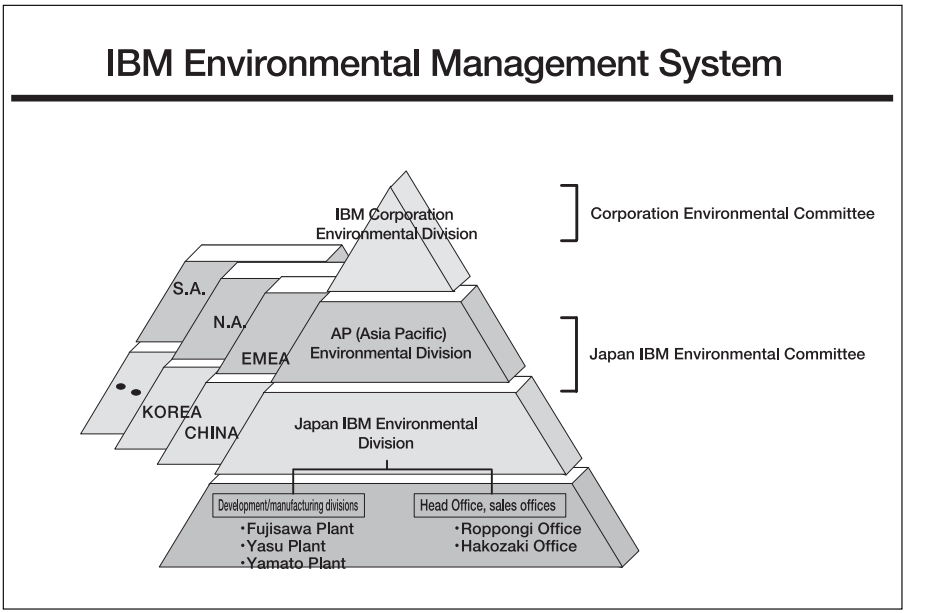
(Slide 3)

In 1967, chairman at the time declared the IBM’s future policy for the safety of product and safety and sanitation of workplace. That is, he announced it as a form of corporate policy as long ago as 1967. After that, the policy was revised with the change of the times, taking account of pollution, energy, recently information disclosure, and it is now referred as to corporate policy 139, which has 11 provisions or action agendas and these are generally classified into three categories.

The first category consists of 6 items including the reduction in environmental impact in everyday business activities, environmentally conscious product design, or build-up of environmentally conscious manufacturing/production process. The second category consists of social commitment to global environmental problems and the third category consists of 3 items relating to information disclosure.

Next, I would like to talk about company organization [**Slide 4**]. IBM head

office located in the suburbs of New York is not so big organization, but has Vice-President and task force in charge of environment. This corporate environmental division is at the top of all IBM organizations and responsible for worldwide environmental activities. There are subordinate organizations in four regions – Asia-Pacific, Europe/Middle East/Africa, North America and South America. Asia-Pacific region includes Japan, China, Korea, Singapore, and Southeast Asia countries and Japan IBM environmental division presides over environmental management of Asia-Pacific region and manages the other Asia countries. Each country has its own promoting organization at each development/manufacturing division or head office/sales office. These staff communicate with each other under the common environmental policy and environmental management system in order to address the problems in each area.

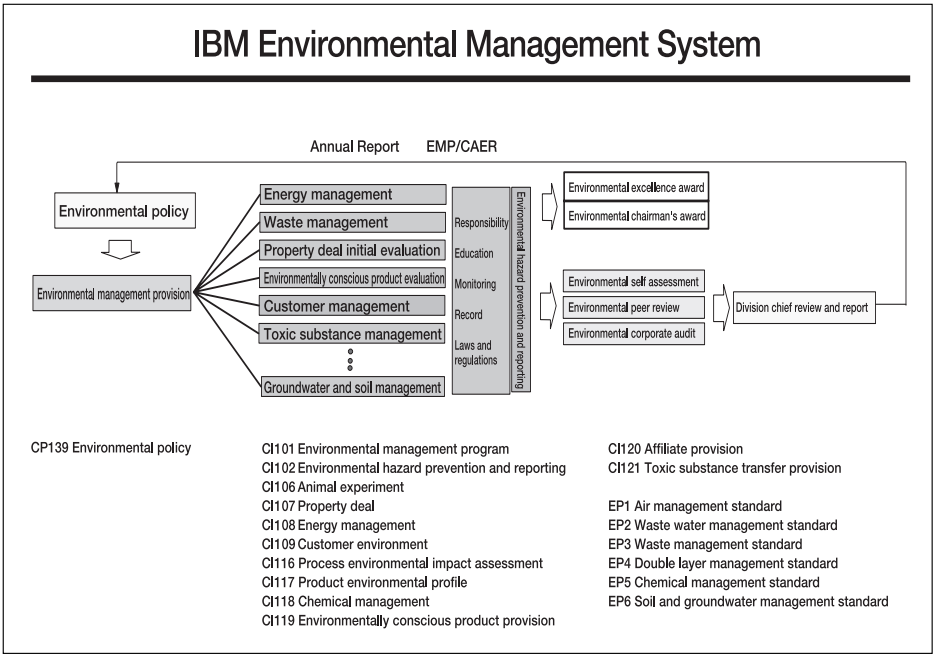


(Slide 4)

2.2. Environmental Management System

The environmental management system provides 12 provisions including environmental policy, energy management, waste management, property deal initial evaluation management, and 6 standards including air management

standard, waste water management standard on universal basis. Further, it comprises self-assessment and internal auditing system, which is divided into 3 steps [**Slide 5**].



(Slide 5)

In the first step, self-assessment, administrators of divisions check whether their divisions comply with the universal management provisions or standards twice a year in spring and autumn. The second step is peer review that means internal auditing performed between each division. For example, when our plant in Thailand is audited mutually, staff of Singapore plant, Yasu Plant in Shiga prefecture, Fujisawa Plant in Kanagawa prefecture, or headquarter at New York make a team with staff in Thailand plant to check compliance with the standards, thereby working hard together.

The third step is very strict corporate auditing, which means the internal auditing conducted by corporation without any notice. Environmental experts check whether divisions perform environmental management properly in the light of provisions and standards, or they comply with domestic laws for 4 weeks. This auditing is so strict that failure to conform can result in recall of the person in charge or executive officer.

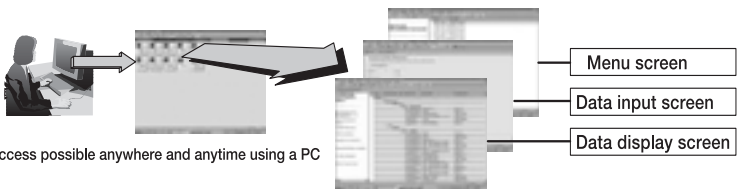
2.3. Internal Award System

On the other hand, there is an award system of environment excellence award that adopts carrot-and-stick approach. CEO himself gives the award to employees or teams that contribute so much to the implementation of environmental policy once a year. In the past, about 7 pieces of award were granted a year, and IBM Japan received this award many times. The cash prize is U.S.$35,000 to 50,000 and this very attractive incentive is provided for 11 consecutive years. In one word, I believe that it is exactly through carrot-and-stick management system.

2.4. Environmental Information Management System

As another support for management system, we, as is normal in computer company, make use of environmental information management system a part of computerization. [**Slide 6**] We compile environmental data of major

Environmental Information Management System (IT example)



No	Database name	Content	No	Database name	Content
1	Master Data	-Input of basic data (area name, country name, site name, etc.) -Guide for input method	6	Water	-Industrial waste water information -Groundwater quality monitoring situation -Purification situation -Consumed amount and reduction in water
2	General Site Information	-Site information (personnel, mission, etc.) -EMS information (environmental aspect, program, management review, etc.)	7	Secondary Containment	-Installation situation of chemical tank and secondary containment
3	Toxic Chemical Inventory	-Toxic chemical inventory information (emission, transfer, recycle, intermediate disposal, etc.)	8	Energy	-Amount and cost of electric usage -Power saving program and performance
4	Air	-Information on chemical emission into air -Consumed quantity and inventory information on ozone depleting and greenhouse substances -Usage information on refrigerant CFC and HCFC	9	Cost	-Environmental capital investment cost -Environmental cost -Environmental income and reduction or avoidance of environmental cost
5	Waste Management	-Waste information (emission quantity, recycling quantity, etc.) -PCB storage situation -Toxic and product waste agency	10	Regulatory Activity	-Environmental official survey and result -Environmental authorization and conformance situation

Environmental Master Plan (EMP) : by development/manufacturing division 28 places
CTRY Annual Env. Report (CAER) : by country (headquarter/sales division) 15 places

(Slide 6)

divisions in Japan in 10 common databases every year, and store toxic chemical data in the third database of toxic chemical inventory and environmental accounting data in the ninth database of costs. In Environmental Master Plan (EMP), which is referred as to in our company's term, each division has files of 28 development/manufacturing divisions in U.S., Europe, Asia, South America and Japan.

In addition, Country Annual Environmental Report (CAER) that we call is environmental data of sales offices and head office by country. For example in Japan, we store data of sales office and mainly headquarter of IBM Japan, as well as files of 15 major countries in the world. I think that such data storage serves so much for environmental report, environmental accounting, in-company investment decision, and business judgment.

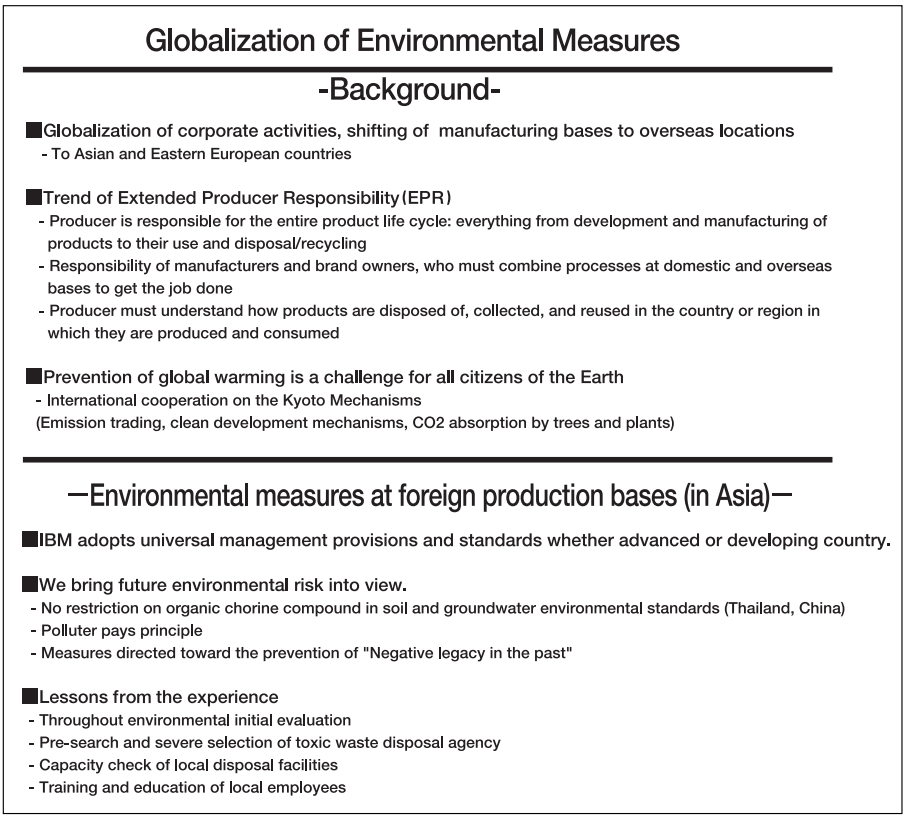
3. Future Problems

I have described briefly about our approach, and when we consider business and sustainable management, it will be increasingly important for us to address environmental measures from a global viewpoint. As stated thus far, globalization of company has progressed. Manufacturing bases have expanded to Southeast Asia, China and Eastern Europe countries. We have to recognize that the expansion of manufacturing base implies transfer of environmental impact. [**Table**]

There is another trend of extended producer responsibility. Producer tends to be responsible for the after-use stage in addition to the use stage (development, manufacturing and usage) of product. As you know, such movement has already become active in consumer electronics industry and recycling of packages, and when it expands to all industries, all trades according to the worldwide trend, we must direct our attention overseas. In the case that manufacturing bases and consumption places are transferred, producer must understand the actual situation on the scene and deal with it properly.

And, there is the Kyoto Mechanism. As a matter of course, emission trading or clean development mechanism cannot be carried out by only one country. It should be noted that such country as Japan need to corporate with neighbor

countries, U.S., Canada, Australia, or people in the world.



Table

I would like to discuss a few problems from our experiences in manufacturing activities in Asia. For example in Thailand and China, as to the pollution of soil and groundwater that is an important issue among advanced countries, heavy metal is regulated but volatile organic chlorine compound is not controlled. To cite instances, although PCB as very effective insurant, trichloetylene as very effective and convenient detergent, and asbestos as excellent heat insulating material were effective in earlier days, they must be now disposed with the utmost attention as environmental toxic substances, and in fact we don't know endocrine disrupter very well. For this reason, I think environment should be managed by the most strict regulation or standard at the present moment. In the absence of standards, if we take halfway measures, we probably will turn a blind eye for future trouble.

In addition, we are preparing the construction of new plant in Shanghai, China, but we have not found the disposal agency that can meet our disposal standards among the existing 25 agencies. We have not started operations yet, so the future challenge is to hold consultations on disposal standards and address their requirements. Moreover, there is only one government-authorized waste disposal agency in Thailand. From the standpoint of company, this presents a serious problem, because if the agency stops operations due to accident or the like, we have no alternative to rely on. We have no other choice than to store wastes and it is economically undesired situation. So, we wish to improve the present situation in some way and provide technical supports, if necessary.

As the process of globalization goes forward, what remains to be done is we take actions as a company while keeping a lookout on the situation in Japan as well as neighboring countries.
Then, let me finish my presentation.
Thank you very much.

Questions

○ Roger Burrit

Thank you very much. Roger Burritt from the Australian National University. I just wonder if I could ask two questions. You said that environmental evaluation is included in measures of divisional performance. Is that in all divisions in IBM, or just in environmental divisions? For example, could somebody loose their job because they haven't performed satisfactorily at the environmental level, or do they just loose their job sometimes because they don't perform well at the economic level? That's the first question. The second question relates to extended producer responsibility, and I just wonder, you have environmental divisions in IBM, but you also have production divisions - are there any problems in the interrelationship between the environmental divisions and the production divisions when it comes to extended producer responsibility. Thank you.

○ Yamamoto

For the first question about division performance, it is included in all product divisions. At the same time, it is also included in measures of Corporate Environmental affairs function. I talked about our self-assessment and

corporate audit. Corporate audit covers not only environmental affairs, but all other important management aspects. Currently we have 24 items as corporate audit items, like inventory control, account management and so forth. So, environmental affairs management by division is one of our corporate audit items. Since all the manufacturing sites directly report to the product division, once a factory fails to comply the environmental criteria or systems, in some cases we replace those plant managers to the better ones. This directly effects to the performance of division president or management level in between division president and plant manager. Does this answer your question?

○ Burrit

Yes, thank you. I am just trying to find out if whether the divisional manager could actually lose their job as well because of poor environmental performance in a division.

○ Yamamoto

The second question is whether there are any conflicts between the environmental management affairs organization and production organization. The answer is no, because all production divisions in environmental affairs management eventually receive a functional guidance from the corporate environmental organizations. So, it is a sort of matrix management, as long as the environmental management is concerned. Production divisions manage daily operation based on IBM environmental management system and control criteria commonly used worldwide.