Sub-theme: Balancing Asia's Growth & Environmental Sustainability

Professor Katsuhiko Kokubu
Graduate School of Business Administration, Kobe University, Japan
Panel Speaker, Tuesday December 9, 2003

"I strongly believe that environment accounting is one of the promising tools for this integration."

Corporate Environmental Strategy and System: A Role of Environmental Management Accounting

Good morning, I am very pleased to have an opportunity to give a presentation here at the Hitachi Young Leaders Initiative.

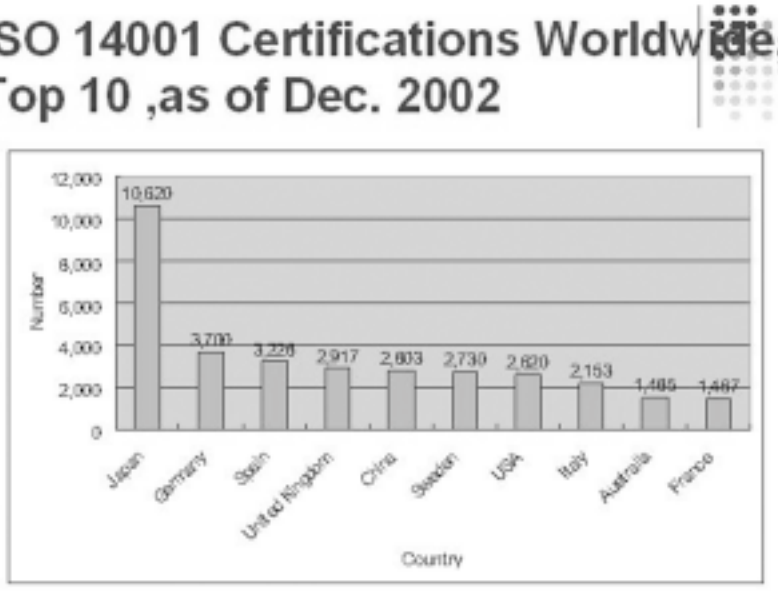
The topic of my speech is 'Corporate Environmental Strategy and System'. Everybody can understand the importance of environmental protection. But it is not easy for corporations to conduct environmental protection because the company is not an organisation which is formed in order to preserve the environment. So we need a system or tool to integrate economic activities and environmental protection. I strongly believe that environment accounting is one of the promising tools for this integration.

There are lots of environmental issues in the world. Some of them are global and some of them are local. The reason why environmental issues are emerging is that they are always located outside the economy.

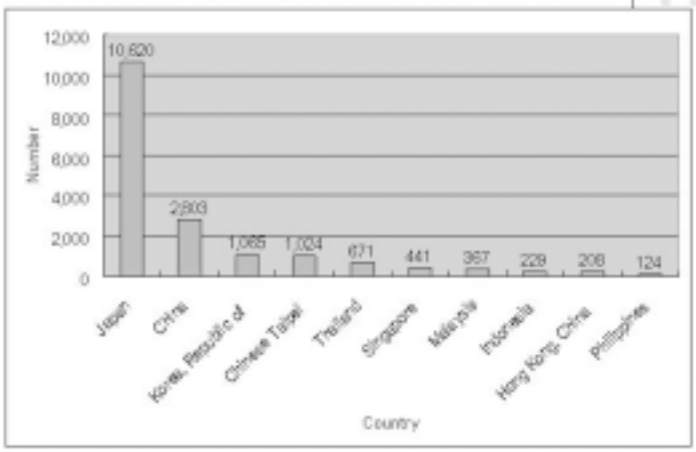
One important thing to do is to incorporate environmental issues into economic activities. But we need some mechanism, system or regulation for this purpose. There are two measures for environmental protection. The first is laws and regulations. However, this usually has a strong political agenda. The second is voluntary activities. For today, I would like to focus on voluntary activities for environmental protection. Although laws and regulations are critically important, they have some limitations because they are strict and there is no flexibility. Voluntary activities are more ppromising to environmental protection.

There are many management tools for environmental protection on a voluntary basis. An example is ISO14001 certification. At this time, I would like to discuss the efficiency of ISO14001 which is a standard for environmental management system.

The number of Japanese sites which received this certification is very high - more than 10,000. This next chart shows the top ten countries in Asia.



ISO 14001 Certifications in Asia, Top10, as of Dec. 2002



The number of certifications in Asia is not as high as compared to Europe, but the number is increasing.

To construct an environmental management system is very important for an organisation to ensure environmental protection. But there is one major limitation. Environmental management systems fail to integrate environmental purpose with financial purpose. In short, there is no tool to integrate environmental management systems and corporate economic activities. Even if you read the standards of ISO14001 certification very carefully, you will discover that this integration is missing. And in this aspect, I believe environmental management accounting (EMA) can integrate an environmental management system with corporate economic activities.

Environmental accounting has another function; it is a tool to disclose corporate information to the public at large. Many companies publish environmental reports. In these environmental reports, economic information on the environment is quite important. And there are several environmental accounting initiatives in the world.

In the United States, the Environmental Protection Agency started an environmental accounting project in 1992 and finished it in 2002, but the EPA formed EMARIC, which stands for Environmental Management Accounting Research Information Centre, in 2003.

"The new corporate strategy should be for a triple-bottom line: economy, society and environment."

The United Nations division for Sustainable Development has had an initiative for EMA since 1999 and has published two workbooks on EMA. In Asia Pacific, the EMA network was launched in 2001. This is named EMAN-AP (Environmental Management Accounting Network in Asia Pacific). Its first conference was held in Kobe Japan and the second conference was held in Seoul, Korea.

In Japan there are two big governmental initiatives on environmental accounting. The first is by the Ministry of Environment (MOE) and the second by Ministry of Economic Trade and Industry (METI). The Initiative by MOE focuses on external information disclosure while the initiative by METI puts much more importance on the internal management such as EMA. These functions of environmental accounting are useful for companies and also to disclose information to society. The framework of environment accounting is to integrate financial performance and environmental performance.

I would like to discuss this form of environmental accounting by using Hitachi as a case study. The figures are taken from Hitachi's environmental report.

The following chart shows the environmental cost which Hitachi spent to preserve the environment, and the economic and physical benefits. This environmental accounting is based on the Japanese MOE guidelines.

Next, I would like to discuss the tool developed by METI for EMA. It is a tool for internal management. There are lots of techniques in this

Environmental Costs of Hitachi

(Unit: billion yen)

	Item	Costs		
		FY2000	FY2001	FY2002
Expenses	1.Business area costs	35.96	38.21	35.00
	2.Upstream/downstream costs	3.58	3.27	2.400
	3.Management activity costs	8.35	11.09	10.41
	4.Research & development costs	30.03	34.36	38.21
	5.Social activity costs	3.23	0.53	0.52
	6.Environmental damage costs	0.93	0.82	0.86
	Total expenditure	82.08	88.28	87.40
Total investment		21.25	18.01	14.97

Environmental Effects of Hitachi

(Unit: billion yen)

	Item	Expenses		
		FY2000	FY2001	FY2002
Economic Effect	Net income effect	5.58	5.09	6.08
	Reduced expense effect	12.03	13.56	12.11
	Total	17.61	18.65	18.19

	Item	Expenses		
		FY2000	FY2001	FY2002
Physical Effect	1 Reduction in the amount of energy used during production	169 million kWh 49,000 households	331 million kWh 96,000 households	189 million kWh 55,000 households
	2 Reduction in the final amount of waste disposal	6,051t 20,000 households	7,369t 25,000 households	5,210t 18,000 households
	3 Reduction in the amount of energy consumed during product usage	844 million kWh 243,000 households	562 million kWh 159,000 households	742 million kWh 214,000 households

Environmental Efficiency of Hitachi

	FY2000	FY2001	FY2002
Reduction in energy used during production	41 million kWh/billions of yen	66 million kWh/billions of yen	41 million kWh/billions of yen
Reduction in amount of waste for final disposal	1170 t / billions of yen	1750 t / billions of yen	1200 t /billions of yen

area. The tool was developed in METI's EMA workbook. I would like to focus on a case study for cost accounting because this is one very important tool for management. We have several projects with companies to introduce and test this method. Our case study for today is a Japanese pharmaceutical company that produces medicines. The basic idea of material flow cost accounting is to calculate the cost of waste. The cost of waste are usually included into production cost. If the cost of waste is measured, it would help to improve the investment decision making for the production process. This is because the companies can measure waste as monetary value. Then they understand how much they can spend in order to reduce the waste. But under the usual management system, they do not know the exact cost of waste. Hence, material flow cost accounting can provide that kind of information to the companies. We have experience of about 10 companies introducing this method. I would like to recommend this method not only to Japanese companies like Hitachi but also to Asian companies.

Finally, I would like to put forward a trend of environmental management - Sustainability. Sustainability management pursues not only environmental protection but also social and economic values. The new corporate strategy should be for a triple-bottom line: economy, society and environment.

GRI, which stands for Global Reporting Initiative, is an organisation that publishes sustainability reporting guidelines. Many companies enlarge their environmental reports by including social and economic issues. For example, Hitachi Corporation publishes environmental sustainability reports and maybe APRIL, the pulp and paper company will also publish a sustainability report. So now environmental issues are enlarged to include society. The real meaning of the environment is not only in the natural environment but also includes the social environment.

Thank you very much.