

Chapter 1

Background and Scope of the Study

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CHAPTER 1

Background and Scope of the Study

1. Background and Objectives

At the World Summit on Sustainable Development (WSSD), which was held in Johannesburg in 2002, participating countries committed “to achieve, by 2020, that chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment, using transparent science-based risk assessment procedures and science-based risk management procedures” (WSSD 2020 goal). All countries in the world need to take the necessary measures to achieve this goal.

Following the commitment, Japan amended its major regulation for industrial chemicals, the “Chemical Substances Control Law (CSCL)” in May 2009. The European Commission has already introduced the REACH system, which places greater responsibility on industry to manage the risks that chemicals may pose to human health and the environment. The United States also announced in September 2009 that they would revise the US chemical regulation, TSCA (Toxic Substances Control Act). Many Asian countries also started considering the revision of their chemical management systems. For example, the revised regulation on new chemicals registration came into force on October 15, 2010, in China.

Several different approaches have been taken to reach the same WSSD 2020 goal, as exemplified by the abovementioned stances taken by Japan, the EU, and the US. The economic and social impacts differ according to each country’s industrial structure and the nature of the chemical supply chains shared among each region, especially East Asia. Therefore, in the research in the 2010 Fiscal Year, we analyzed the economic impact in cases where two types of risk-based chemicals management systems, the “No-data, No-market” Approach (covering all substances for risk assessment, eg., EU-REACH) and “Prioritization-Led” Approach (covering only limited types of chemicals selected on a

priority basis, eg., amended CSCL of Japan), where introduced in each country in ASEAN or the surrounding region. As a result of the trial calculation for the total cost, the introduction of a “Prioritization-Led” Approach in each county individually was lower and the introduction of “No-data, No-market” Approach in each county individually was higher.

It was discussed that, in the future, for the efficient collection of chemical hazard data, which is costly and time consuming, the location of chemicals management systems and chemicals risk assessments will be critical. In other words, if a country that did not have a chemicals management system at present could share hazard data with other countries, it could easily establish such a system and more easily achieve WSSD 2020 goal.

The supply chains of the manufacturing industries of Japan cover mainly Asian countries, and the amount of trade in chemicals between Japan and East Asian countries in 2009 was 4,400 billion yen, which accounts for around 43% of the chemical trade in the world. Clearly, it is very important for Japan and other Asian countries to cooperate closely in order to carry out appropriate quality controls throughout the chemicals life cycle. The development of the chemical industry in the Asian region will be encouraged if all/many Asian countries have a harmonized chemical management system by using the same data.

From the abovementioned point of view, we would propose the research “Study on the feasibility of an information infrastructure for the future chemicals management scheme in the Asian region.” This research will seek to answer how this information infrastructure, including a data center, should be established, on the basis of other examples, including existing chemicals databases and multilateral databases in other areas. It will take into account its economic impact and how an effective and efficient chemical management system in the region can be developed.

2. Methodologies and Expected Policy Recommendation of the Study

2.1. Methodologies

The aim of the study is to analyze the feasibility of the establishment of an information infrastructure, including a data center in Asian countries or region.

This study first surveys the status of data on chemical hazard in each country (types and numbers, etc.), the situation of existing databases on chemicals, and the multilateral databases in other areas. The study also summarizes some conditions (language, operator, and data collection method, etc.) for operating the data center efficiently and estimates its operation cost. Based on this information, the study analyzes the effects, including economic impact, for both government and industry, in cases where the data center is established and where the chemical management system,¹ in which the risk assessment using the database is carried out, is established.

At the end of the study, a recommendation will be developed regarding the establishment of the data center and a chemical management system using the data center, which could be most effective and efficient in the Asian supply chain, and which could also help to achieve the WSSD 2020 goal.

2.2. Expected Policy Recommendation

- Identifying the most appropriate data center

What should the most appropriate data center, which contributes to establishing a chemical management system in each Asian country and developing the supply chain in the Asian region, consist of.

- Identifying an effective, efficient chemical management system for a data center

How can each country establish an effective, efficient chemical management system by analyzing ways of risk assessment using data in the data center and the development and learning technique of risk assessment.

¹The study assumes that each country will introduce the “Prioritization-Led” Approach based on the result of trial calculation, which was the lowest on the total cost in the study in the 2010 Fiscal Year.