

## **Executive Summary of ERIA Research Project on Sustainable Automobile Society in East Asia**

### **I. Background and Objective of the Research**

Asian region has been facing air pollution and energy problems due to the rapid economic growth, urbanization and motorization. The "Project of "Sustainable Automobile Society" in East Asia" aims at sustainable development seriously from a viewpoint of automobile sector in the growing economies of East Asia. First, it is required to investigate actual condition on environment and energy issues in order to achieve the object of our project. Second, emission regulations and fuel quality requirement corresponding to the emission level need to be integrated in the Asian region. Third, based on these actual conditions of each area, countermeasure should be introduced. This research will contribute to not only economic development, but also fundamental development for regional integration.

### **II. Result of Workshops**

ERIA Working Group (WG) on "Project toward the "Sustainable Automobile Society" in East Asia" had discussed the environment and energy situation in Asian countries in two ERIA workshops (WS). Our outstanding ERIA WG members lead the field of automotive and environment research. Country reports had been prepared for our report and supporting studies to share updated information by ERIA WG members at the 1st and the 2nd ERIA WS. In order to draw viable policy recommendations, the project coordinator had collected vehicle related information as a database from ERIA WG member countries.

Concerned with the increasing levels of air pollution caused by motor vehicles in Asia's major cities, Japan Automobile Research Institute (JARI) developed a methodology for the research in the supporting study. The results of the supporting study were reported at the 2nd ERIA WS.

In the supporting study, air pollution in Bangkok was estimated using the collected data by themselves and from ERIA WS. Based on vehicle type, traffic volume, average speed, and emission factor, air concentration were estimated in Bangkok. This analytical method recommended by JARI will be adopted for a collaborative research project. There is still room for improvement, but it is

considered to be applicable for research for next year.

The database result showed that vehicle related policies were diverse by country. More popular vehicle type are, more detail category exists. With respect to I&M (Inspection and Maintenance), commercial vehicle is inspected with top priority. In some countries, inspection for private vehicle is applied after certain vehicle age. ERIA WG member countries have FQM (Fuel Quality Management), but sometimes the problem is operation and implementation. However, there was still lack of information from several ERIA WG member countries. It is still necessary to improve the quality and quantity of database to establish a common database of vehicle related issues for policy recommendation.

### **III. Conclusion:**

Many policies have been proposed in each country, but they have not been implemented in a feasible and an effective ways. The proposal includes an integrated policy to establish environmentally sustainable development and to improve upon both air pollution and economies. The report concludes the improvements of I&M system, FQM system, emission regulation, AQM (Air Quality Management) system and PCE (Public Campaign and Education). In order to support these feasible and efficient policy recommendations for the wide variety of actual condition in Asia, it is very important to to establish a common database of vehicle related issues.

Taking into consideration the health costs and economic development, earlier implementation of air pollution reduction policies will gain better economic development in the future. In other words, early political implementation will prove to be a cost-effective method in the long run. As conclusion, initiatives of feasible and effective policy implementation in Asia should be the followings.

- Needs effective policies
- Needs consensus
- Needs public awareness.
- Needs better implementation/enforcement.

At the 2nd ERIA WS, it was agreed that a forum would be held on November or December 2009. The forum aims to share the future projection by automobile companies and ERIA.WG members.