

## **Final Workshop of the Research Project on**

### **Promotion of Sustainable Development in the Context of Regional Economic Integration - Strategies for Environmental Sustainability and Poverty Reduction -**

26-28 March 2008, Pan Pacific Yokohama Bay Hotel, Yokohama JAPAN

#### **Chair's Summary**

##### **Introduction**

1. The Final Workshop of the Research Project on Promotion of Sustainable Development in the Context of Regional Economic Integration - Strategies for Environmental Sustainability and Poverty Reduction – was held on 26-28 March 2008, Yokohama, Japan. The meeting was organized as a part of the activities planned in the Research on Innovative and Strategic Policy Options Second Phase (RISPO-II) with the purpose of presenting the final results of the research conducted by the participating members of the research between FY2005 and FY2007. Agenda and the list of participants are attached in the annexes.

##### **Summary of sessions on Day 1**

2. Welcome and opening remarks were made by Professor Hironori Hamanaka (Keio University and the Chair of Board of Directors of IGES), followed by the opening remarks by Mr. Sheng Fulai (Economics and Trade Branch, the United Nations Environment Programme). In Mr. Sheng's remarks, the importance of maintaining the research network, feeding the results into the economic integration policy processes, taking into account major global developments such as climate change that may affect scenarios of economic integration, and linking environmental impact assessment and the design of environmental policy options to established standards, criteria, and indicators was emphasized. Prior to the sector study and modeling analysis sessions, the overall objectives of the workshop were presented by Dr. Mark Elder (IGES).
3. In session 1, the results of four national studies and one regional study on the renewable energy studies were presented and discussed. The introduction to the studies on the renewable energy sector and the results of the Japan case study were given by Mr. Anindya Bhattacharya (IGES). The most important discussion point was lack of progress of renewable energy generation in the country in spite of its many advantages. In his presentation, he discussed various policy options to promote renewable energy (RE) under the expected influence of economic integration in near future. The major policy recommendations include increasing the target of renewable energy power supply under the existing Renewable Portfolio Standard (RPS) system up to 10% by 2020 using a technology portfolio that comprises wind, solar PV, biomass, mini/small hydro, and waste to energy. He mentioned 6 different potential RE technology portfolios in this discussion and conducted cost-benefit analysis (CBA) of each of them to show the least cost option of RE generation. His analysis outlined the RE technology portfolios with their respective net benefits. Mr. Bhattacharya also mentioned the option of physical connection of Japan with other countries like Korea and China for power exchange

(Grid interconnection) which he recommended as one of the possible complementary policies to promote RE in Japan.

4. A question was raised to identify and highlight the primary objective of RE development for each country along with the region. One more scenario was asked to be added in the analysis i.e. scenario with no renewable energy supply to the system. Political feasibility of the policy recommendations is also very important. In response to these questions, IGES explained that each national study already identified the respective primary reasons to promote RE in each country and the scenario with no RE in future can also be incorporated. IGES responded to the question on political feasibility, mentioning that this was addressed in the study.
5. The results of case study of Indonesia were given by Ms. Inne Dwiastuti (LIPI). She mentioned the existing problems of the Indonesian energy sector, especially the increasing demand of fossil fuel compared to their production. Given this condition, Indonesia is becoming net oil importer. In addition, the Indonesian electricity sector is highly subsidized, especially fossil fuels. These subsidies have exerted huge fiscal pressure on the Indonesian government in recent years. She further mentioned that Indonesia would like to enhance self reliance in energy and hence, RE can play an important role in this regard. Indonesia is already pursuing biofuels seriously, hence, so the possibility of using biofuel as a renewable fuel for electricity generation for PLN (Indonesian Government owned Power Company) was considered. She mentioned two sets of policy packages: a) a progressive approach to substitute fossil fuel with RE in electric power generation, and b) a Village Self Sufficiency Energy Program with an RE cluster approach. Finally, the Indonesian study recommended setting a higher target of bio oil utilization in electricity generation, reducing coal consumption, proactive participation of the local government to promote rural electrification, and a systematic RE subsidy program supported by the national budget.
6. The results of national study on the Republic of Korea were presented by Ms. LeeJin Kim (KEI). She started her discussion by giving the over view of Korean energy sector and linked her analysis to the effects of economic integration (EI). It is expected that due to EI, Korea would experience a higher level of energy demand and subsequent emissions growth. Three sets of policy packages were recommended: a) full cost accounting, b) incorporation of RPS, and c) promoting Renewable Energy Service Companies (RESCO). After conducting the cost benefit analysis for four RPS scenarios, she finally recommended that Korea could possibly implement RPS with 10% target by 2020. She also pointed out the importance of improvement of policy implementation by consolidating the current regulatory and institutional structure of Korea, and by using a combination of policy measures including government intervention as well as market-driven instruments.
7. The results of Viet Nam study was presented by Dr. Nguyen Thi Anh Tuyet from INEST, Hanoi University of Technology. She started her presentation by providing a macro view of the energy sector in Viet Nam, the existing status of renewable energy generation, and its technological generation potential. After analyzing the existing RE policies, she also discussed the current difficulties of energy policies as well as regulatory and institutional barriers in Viet Nam to promote renewable

energy generation. In her presentation, she discussed three sets of policy recommendations: 1) off-grid policies to increase rural electrification; 2) on-grid policies to replace imported power and to avoid environmental damage and global externalities; and 3) the standard RE promotion/regulatory policies. In order to assess those policy packages, she conducted cost benefit analysis using avoided costs and focused on small and mini hydro power development. Her analysis concluded that Viet Nam can reach up to 5% of RE supply by 2020 if strategic policies for grid connected RE are implemented. She also mentioned that in order to achieve 100% rural electrification, Viet Nam should seriously focus on renewable energy development as a cost effective means.

8. The regional study was presented by Dr. Jane Romero, IGES. She presented a synthesis linking the national studies and the regional effects of economic integration on the energy sector, specifically on renewable energy. The region has vast untapped potential of renewable energy. However high cost is the main cause of RE's current under utilization. One of the main points of the presentation was the discussion of the implications of economic integration on the promotion of RE which could be negative in the short run (like the prisoner's dilemma in which having higher RE targets may threaten industry competitiveness) but economic integration also has a dual effect that can be a mechanism to promote RE policy (like promoting trade in RE equipment and technology as an environmental good/service). The overall strategies for promoting RE were identified as, first, to strengthen the national policies and capacity, and then to enhance regional coordination. The regional policy responses suggested were coordinated RE targets, physical integration measures, and some complementary policy measures to support national capabilities like financial assistance, technology transfer, and exploring the potential for carbon trading potential. The presentation emphasized that regional policies may face difficulties without strong national policies, along with more technical and financial capacity development in developing countries.
9. A comment was made that to achieve a successful regional policy, national policies must be strengthened first. It was also suggested to incorporate the aspect of the "human dimension" in formulating RE policy, for example considering the question of equity and political motivations (what will be the incentives for countries to promote RE) since different countries have different economic status and development agenda, and within each country, different sectors of the population may have different reasons for using RE. In addition, it was suggested that the study further examine the political and economic feasibility of grid interconnection among Japan, Korea and China. The suggestions were greatly appreciated and will be incorporated and discussed in detail in the written final report. A question was asked if technology effects were taken into consideration as an effect of economic integration. IGES explained that the technology effect was already embedded in the results since the environmental coefficients were updated in the GTAP analysis of future scenarios to reflect the reductions coming from using clean energy technology.

## **Summary of session on Day 2**

10. In session 2, the results of four national studies and one regional study on agriculture were presented and discussed. Dr. Daisuke Sano (IGES) introduced the sector by presenting background, rationale, overall structure of national and regional studies, and brief introduction to the national studies conducted by the partner institutes.
11. China's national study was presented by Dr. Mao Xianqiang (Beijing Normal University). China's challenges and opportunities after accession to WTO and its possible impacts on the agriculture sector were presented. The focus was on rice production, not only because it is a staple food and important for trade, but also because it causes significant environmental impacts, such as water pollution, due to fertilizer use and weak environmental management capacity in rural areas. Under such circumstances, promotion of organic rice production is considered to be an effective option to respond to the potential impacts of economic integration on agriculture, and link agriculture and environmental issues in China. The study addressed one of the challenges of organic rice production, how to improve the credibility of organic products, and recommendations were made on the improvement of agricultural governance in China.
12. In Indonesia's national study, presented by Mr. Agus Hidayat (LIPI), the promotion of organic agriculture was discussed in conjunction with the government's priority objectives of food security and poverty reduction. Rice as a staple food was selected as a focus commodity. As organic rice production is often considered as a threat to food security, especially in the short-run, due to lower yields and unstable production, currently the promotion of organic agriculture in Indonesia is still at nascent stage. The study proposed policy options that promote organic production on a small scale first with a possibility to scale-up in the future. Under such circumstances, recommendations were made to promote policies that have broader scope such as resource conservation technologies in addition to organic agriculture promotion policy. It was illustrated that the reduction of synthetic fertilizer use is expected to bring about positive environmental impacts as well as saving of government expenditure from reduced subsidies on such agricultural inputs.
13. In the Republic of Korea's national study, presented by Mr. Kim Jae-Joon (KEI), the situation of the organic agriculture sector in Korea as an example of a food importing developed country was presented, contrasting with other case study countries. The Republic of Korea already has highly comprehensive policies to promote organic and low-chemical input agriculture and to reduce excessive use of chemical fertilizers and pesticides and animal wastes from livestock production that are affecting the rural environment. Since 2004, the government has been successfully reducing the use of chemical fertilizers, and is on track to meet the government's goal of 40 percent reduction by 2013. Under such circumstances, the study made recommendations to integrate environmental issues into general agriculture policies to contribute not only to increasing organic and low-chemical input agricultural products but also to improving the products from conventional agriculture in order to strengthen the competitiveness of agricultural products in liberalized markets.
14. In Thailand's national study, presented by Mr. Natapol Thongplew (TEI), water

pollution and degradation of agricultural soils were identified as major environmental problems caused by economic integration in the agricultural sector. However, the study also presented the opportunities from economic integration by promoting the commercialization of organic and low-chemical input agriculture (OLIA) that can tackle these pressing environmental problems and potential benefits to the sector, such as export of organic products. To do so, the study proposed two policy packages: (i) policies for promoting OLIA production for commercialization by establishing a knowledge sharing hub and strengthening agricultural chemicals management and (ii) developing an OLIA market mechanism and agro-industry in coordination with the existing food certification system. Possible benefits were illustrated in terms of improving health status, generating income, alleviating poverty, and reducing environmental degradation.

15. In the regional study, presented by Dr. Daisuke Sano (IGES), a policy package that consists of a core policy (eco-labeling system for organic products) and supporting policies at the national, regional and global levels were proposed as an overall policy package for the agriculture sector, followed by the general recommendations at the regional level, paying attention to the issues related to the harmonization of the eco-labeling system. Estimation of possible environmental benefits as a result of the promotion of organic agriculture was presented and associated costs and social capacity to implement organic promotion policies was discussed. Also, the conceptual regional recommendations were compared with concrete ones developed from the case studies. Main conclusions include (i) there is no one-size-fits-all policy to promote organic agriculture, and therefore each country needs to formulate its own appropriate policy options and develop institutional capacity for their implementation, while considering the its priority issues and market conditions, and (ii) continuous efforts are needed to create a level playing field in organic markets at the regional/ global level.
16. Main comments and suggestions following the above presentations were:
  - (1) To modify the national study reports to reflect the issues highlighted by the regional study to improve consistency between national and regional studies and sort out commonalities and differences. The latter can be studied in depth at the national level to illustrate the need for addressing national priorities.
  - (2) To study the lessons from the UNEP-UNCTAD initiative in East Africa harmonizing organic standards at a regional level.
  - (3) To look into other important environmental benefits such as biodiversity and carbon sequestration related ecological services.
  - (4) To consider possibility of linking global mechanisms such as CDM and carbon futures as incentives for promoting organic agriculture in the region. This will also help the region to prepare for the ongoing REDD (reduced emissions from deforestation and degradation) discussions.
  - (5) To consider the impacts of agricultural trade both on the food exporting and importing countries and to see how organic agriculture fits in the world of liberalized trade. There was also a suggestion to consider the demographic impacts of promoting organic agriculture as it is expected organic agriculture could differentially benefit different stakeholders.

17. In session 3, the results of four national studies and one regional study on the waste sector were presented and discussed. The introduction to the waste sector studies and the results of case study of Japan were given by Dr. Yasuhiko Hotta (IGES). In the introduction, he presented the rationale of the policy studies, outlined the environmental issues caused by wastes from consumer durable goods, summarized the overall policy package proposed, discussed the relations between national and regional studies, summarized the focus of the national studies', and explained the possible contribution to existing policy processes and current debates. Then, in the presentation on national study, he presented Japan's experience regarding "eco-town type recycling industrial park/facilities," "EPR-based obligatory recycling mechanism," and "certification scheme for recyclers and traders." This presentation of the national study intended to draw lessons for case-studies and the feasibility of the proposed regional policy package. Also, for Japan's policy, the study recommended the development of the regional policy framework for proper management and recycling of durable consumer goods.
18. China's case study (presented by Dr. Mao Xianqiang, Beijing Normal University) illustrated the status-quo of production and consumption of electric and electronic products in China, estimated the influence of East Asia regional economic integration on e-waste management, discussed the problems and obstacles relating to e-waste management, and presented policy recommendations. China's recommendations included a wide range of policies for e-waste management, especially related to overall governance of e-waste management, since China will face a significant increase in e-waste generation in the future. Policy priorities suggested were: 1) as a domestic policy, developing environmentally friendly e-waste management systems, 2) as a response to the regional economic integration, regional joint management mechanisms against illegal trading of e-waste, 3) the promotion of more open environmental services markets for e-waste recycling.
19. Thailand's case study (presented by Ms Patranda Sangmahamad, TEI) proposed 1) the promotion of production and commercialization of an "ecology-car" (energy efficient car which is highly recyclable and uses recyclable components), and 2) development of ecological recycling industry since Thailand expects further development of automobile sector due to additional regional economic integration. The study demonstrated how the promotion of an ecology car would be more desirable than promoting the current economic/energy-efficient car by conducting multi-criteria assessment. Also, it was proposed to develop the industrial recycling capacity of the automobile industry. These proposals were considered reasonable because expected increases in the export of automobiles present opportunities for Thailand to expand the eco-product market. At the same time, expected increases in industrial waste generation in Thailand require the introduction of a production system which generates less waste.
20. Viet Nam's case study (presented by Dr. Huynh Trung Hai, Hanoi University of Technology) presented the current status of solid and e-waste management in Viet Nam, the effects of economic integration on e-waste generation, and current policies, targets, and measures relevant to e-waste. The Viet Nam case study recommended developing the recycling industry, improving legal capacity, international

cooperation for preventing illegal waste trade, and development of an inventory for e-waste. For each recommended policy, the study showed the necessary concrete policy measures and stakeholders involved. Then, the study conducted cost-benefit analysis and feasibility analysis of developing the recycling industry with concrete estimated data.

21. The regional study (presented by Dr. Yasuhiko Hotta, IGES) concluded the waste and recycling sector study. Firstly, it interpreted the impact of regional economic integration shown in modeling analysis. Although modeling analysis could not show the direct environmental impacts using data on e-waste and ELV, the analysis supported both anticipated environmental effects of regional economic integration expressed in the FY 2006 study as well as the choices of the proposed policy packages by case studies. The analysis predicted increases in household consumption, export, and demand of ferrous and non-ferrous metal materials in electronics industry and automobile industry. Then, the study compared the different policy options and concluded a “regional recycling mechanism” would be most feasible and implementable option. Next, an analysis of social capacity and needs assessment of “regional recycling mechanism” in developing Asia was discussed. Finally, the study made several recommendations towards 2020.
22. Main comments and suggestions following the above presentations were:
  - (1) On the introduction and Japan national study, a question was raised whether the study reflects current situation and needs in developing Asia. IGES answered that case study and needs assessment shown in the regional study presentation would respond to such concerns. There was a question about the most feasible way to share costs of the recycling fee among producers and consumers in order to facilitate design for the product. Then, Viet Nam and IGES exchanged opinions on how eco-town policy was related to recycling policy.
  - (2) On China’s presentation, similarities between Japan’s eco-town policy and China’s existing policy to promote the eco-industrial park policy were discussed.
  - (3) Regarding Thailand’s case study, it was suggested to make use of more quantitative data to show the relevance of the policy recommendation. Also, a suggestion was made to consider the life cycle perspective when formulating policy recommendations, for example in order to extend the life of automobiles to reduce waste.
  - (4) On Viet Nam’s case study, some clarifications and comments were made on the assumptions used in the cost-benefit analysis of policy recommendations to develop recycling industry in Viet Nam.
  - (5) On the cost-benefit analysis presented in the regional study, a question was raised about the meaning of cost-benefit analysis for a rather macro-environmental policy assessment. There was a general consensus that cost-effectiveness assessment/least cost assessment may be more desirable than cost-benefit analysis for environmental policy assessment. Also, information on a planned cost-benefit analysis of implementing the Basel Convention was shared.
  - (6) The importance of policy measures that focus on how to change the situation in

waste management in the source country was stressed.

- (7) IGES concluded that the proposed regional recycling mechanism is to respond expected increasing future resource demand. The recommendation of the regional recycling framework is realistic, will not be likely to undermine small businesses, and can help to respond to increasing resource demands and possibly higher primary resource prices.

### **Summary of session on Day 3**

23. In session 4, first, Prof. Paul J. Thomassin (McGill University) presented the economic and environmental impacts of regional economic integration using the GTAP modeling framework. Second, the results of economy-wide policy analysis were presented by Dr. Satoshi Kojima (IGES).

24. Main comments and suggestions made on the first presentation were as follows:

- (1) Capital accumulation was augmented with investment changes due to economic integration to better reflect foreign direct investment. A comment was made on the reliability and robustness of the environment indicators. Prof. Thomassin responded that one major problem was the lack of data on some parameters such as BOD in countries like China where only COD is being measured. It was also noted that the up-dated environmental coefficients were based on historical changes which is partly responsible for the robustness of the results.
- (2) The ASEAN+3 trade agreement has the most favorable economic results and the overall environmental impact was lower than other trade agreements.
- (3) Similarly, a question was raised about the confidence level of the modeling results. Prof. Thomassin responded that four main issues must be considered when assessing the confidence level of the modeling results. These are: the assumptions of the general equilibrium model, limitations of the GTAP database, the trade scenarios, and the environmental coefficients and their up-dating.
- (4) It was suggested to go beyond the tax related policy regimes and to introduce other policy measures such as subsidies, enforcement of standards, etc., since taxes are considered to be 'blunt' instrument.
- (5) Overall, many of the problems with the current modeling approach could be overcome by employing a dynamic model. This is a clear limitation of the existing modeling tools employed for quantitative policy analysis.

25. Main comments and suggestions made to the second presentation were:

- (1) A suggestion was made to look into the effects on both price and demand of introducing abatement technologies. Dr. Kojima explained that the effects on demand were implicitly imbedded by the employed specification which induces substitution between factor inputs (capita and labor) and intermediate products that include abatement equipment.
- (2) Judging from the recent announcement by Japanese government, the level of Japanese government's expenditure for international financial assistance needs to be drastically increased.
- (3) The poverty line definition should be adjusted considering the level of per capita GDP in each country. It would be more beneficial to analyze the income

distribution to illustrate the dynamic impacts of the changes on poverty.

- (4) A question was raised whether the model accommodated Japan's planned purchasing of carbon credits from East European countries. This may lower the necessary carbon tax level proposed for Japan, for example. Dr. Kojima responded that the current analysis focuses on East Asia region, and the hypothetical emission trading scheme is assumed only among ASEAN+3 countries. However, as the REPA model is based on the global trade model, such elaboration can be made in future to improve empirical relevance of the analysis.
  - (5) Further elaboration was suggested to look into the overall impacts of the proposed policy packages. For example, the positive economic impacts of environmental policy packages, including very high rate of carbon tax may be controversial, as IPCC and other macroeconomic reviews generally assume negative economic impacts. Dr. Kojima responded that this is partially due to potential underestimation of the employed estimate of marginal carbon abatement costs, as well as other parameter settings. To address such uncertainty, it is desirable to conduct sensitivity analysis in future.
26. In session 5, the overall conclusion of the whole study was presented by Dr. Mark Elder (IGES). Main comments and suggestions made by resource persons include:
- (1) Implementability should be taken into account when policy recommendations are made. In addition, screening out policies that have poor implementability, the consideration of who is going to implement (implementers), and paying attention to political opposition to deliver more feasible policy options are important. Dr. Elder responded that the studies did consider feasibility, and already screened out policies that had very low feasibility. At the same time, he emphasized that it is important for research institutes like IGES to be "ahead of the curve" to recommend policies that have good future potential even if they are not immediately feasible.
  - (2) Choices of sector-specific studies seem appropriate as far as Asia is concerned. As these topics are of importance outside the region, the lessons learned can be shared. Sectoral analysis is vital. For the future, a study on the food processing sector/ industry, for example, may be useful.
  - (3) Modeling analysis was very useful. The improvement of data quality utilized in the model is essential in this regard. Taking into account current events and new trends of on-going discussions is important in modeling analysis.
  - (4) It is important to consider Foreign Direct Investment, which may have equal or larger impacts compared to trade, regarding the issues in question.
  - (5) Consideration of policy coordination along the spectrum of geographical coverage (global, regional, national, and local) is desirable.
  - (6) It is beneficial to consider a wider range of methodologies for further development of the study, such as a target-oriented approach, which is often applied to EIA.
  - (7) Efforts to communicate with stakeholders and disseminate the results of the study will be important. To do so, it is important to show evidence based on the robust data analysis.

- (8) The importance of providing hard evidence of impacts was reemphasized in order for the results to be persuasive to policy makers and other stakeholders. In communication with them, terms like ‘opportunities’ and ‘risks’ may be more suitable to articulate the impacts rather than ‘positive’ and ‘negative.’
  - (9) In addition, to follow up the research, engaging with stakeholders beyond research period is encouraged. Continuous communication and collaboration with partner research institutes will be valuable.
  - (10) Biodiversity and its interrelationship to climate change issues are important to be considered. Considering the resource scarcity in near future is also important, particularly in the area of waste and material recycling.
27. The Chair’s summary (draft) was presented and the meeting was closed

[End]

Annex 1: Agenda

**Final Workshop of the Research Project on  
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**Agenda**

*1<sup>st</sup> Day Wednesday, March 26*

9:30 - 10:00 Registration

**OPENING SESSION**

- 10:00 - 10:15 **Welcome and Opening remarks**  
Prof. Hironori Hamanaka, Chair of Board of Directors of IGES
- Opening Remarks**  
Mr. Sheng Fulai, UNEP
- 10:15 – 10:55 **Introduction and objectives of the final workshop (incl. Q&A)**  
Mark Elder, IGES

**SESSION 1 RENEWABLE ENERGY SECTOR**

- 10:55 – 11:10 **Introduction to the renewable energy sector study (incl. Q&A)**  
Anindya Bhattacharya, IGES
- 11:10 – 11:25 Coffee break*
- 11:25 - 11:55 **Presentation by Japan (incl. Q&A)**  
Anindya Bhattacharya, IGES
- 11:55 – 12:25 **Presentation by Indonesia (incl. Q&A)**  
Inne Dwiastuti, LIPI
- 12:25 – 13:40 Lunch*
- 13:40 – 14:10 **Presentation by Republic of Korea (incl. Q&A)**  
LeeJin Kim, KEI
- 14:10 – 14:40 **Presentation by Viet Nam (incl. Q&A)**  
Nguyen Thi Anh Tuyet, INEST
- 14:40 – 14:55 Coffee Break*
- 14:55 - 15:25 **Presentation on the regional study (incl. Q&A)**  
Jane Romero, IGES
- 15:25 – 16:10 Discussion
- 18:00 – 20:00 Reception (TBA)

## *2<sup>nd</sup> Day Thursday, March 27*

### **SESSION 2 AGRICULTURE SECTOR**

9:00 – 9:15      **Introduction to the agriculture sector study (incl. Q&A)**  
Daisuke Sano, IGES

9:15 - 9:45      **Presentation by China (incl. Q&A)**  
MAO Xianqiang (Beijing Normal University)

9:45 – 10:15      **Presentation by Indonesia (incl. Q&A)**  
Agus Hidayat, LIPI

*10:15 – 10:30      Coffee Break*

10:30 – 11:00      **Presentation by Republic of Korea (incl. Q&A)**  
Jae-Joon KIM, KEI

11:00 – 11:30      **Presentation by Thailand (incl. Q&A)**  
Natapol Thongplew, TEI

11:30 - 12:00      **Presentation on the regional study (incl. Q&A)**  
Daisuke Sano, IGES

*12:00 – 13:00      Lunch*

13:00 – 13:45      Discussion

### **SESSION 3 WASTE SECTOR**

13:45 – 14:00      **Introduction to the waste sector study (incl. Q&A)**  
Yasuhiko Hotta, IGES

14:00 - 14:30      **Presentation by Japan (incl. Q&A)**  
Yasuhiko Hotta, IGES

14:30 – 15:00      **Presentation by China (incl. Q&A)**  
MAO Xianqiang, Beijing Normal University

*15:00 – 15:15      Coffee Break*

15:15 – 15:45      **Presentation by Thailand (incl. Q&A)**  
Ms. Patranda Sangmahamad, TEI

15:45 – 16:15      **Presentation by Viet Nam (incl. Q&A)**  
Huynh Trung Hai, INEST

16:15 - 16:45      **Presentation on the regional study (incl. Q&A)**  
Yasuhiko Hotta, IGES

16:45 – 17:30      Discussion

18:30 – 20:30      Reception (TBA)

*3<sup>rd</sup> Day Friday, March 28*

**SESSION 4 MODELING ANALYSIS**

- 9:30 – 10:00    **Presentation on modeling (incl. Q&A)**  
Paul Thomassin, McGill University
- 10:00 – 10:30    **Presentation on economy-wide analysis (incl. Q&A)**  
Satoshi Kojima, IGES
- 10:30 – 10:45      *Coffee Break***
- 10:45 – 11:30    Discussion

**SESSION 5 SYNTHESIS AND WAY FORWARD**

- 11:30 – 12:15    **Overall conclusions of the RISPO-II study**  
Mark Elder, IGES
- 12:15 – 13:30      *Lunch***
- 13:30 – 14:15    **Comments from Resource Persons**
- 14:15 – 14:50    **Presentation of Chair's summary and wrap-up**  
Mark Elder, IGES

**CLOSING SESSION**

- 14:50 – 15:00    **Closing remarks**  
Prof. Hironori Hamanaka, Chair of Board of Directors of IGES

Annex 2: List of participants

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**List of Participants**

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