ERIA Working Group on “Sustainable Biomass Utilisation in East Asia”

- What is ERIA?
- Discussion Concept
- History in 2007
- Progress in 2008/9
- Plan for 2009

SAGI SAKA Masayuki D.Eng., Deputy Director
Inst. of Sci. for Safety & Sustainability,
National Institute of Advanced Industrial Science & Technology
(AIST), Japan

ERIA is a new international organization that supports the ASEAN Secretariat by making policy recommendations at regional governmental meetings, such as the East Asia Summit (EAS), aimed at furthering East Asia’s economic integration.

Progress toward Establishment of ERIA
The idea of ERIA was first proposed by Japan at the 2nd EAS in Cebu in January 2007. ERIA’s establishment was agreed by leaders of all 16 countries at the EAS in Singapore in November 2007. The institute was officially established on June 3rd 2008, when it began full-scale activities. ERIA is temporarily accommodated in the ASEAN Secretariat.

ERIA will intellectually contribute to the regional efforts for East Asian Economic Integration in wide-ranging policy areas from Trade/Investment to SMEs, Human Resource development, Infrastructure, Energy, etc. ERIA’s main task will be to provide the policy analyses and recommendations to Leaders/Ministers in strong partnership with the ASEAN Secretariat and existing research institutes.

Capacity Building aimed at strengthening policy research capacities especially in the less developed countries is another important issue for ERIA.
WG Members in 2007 & 2008

- Masayuki SAGISAKA, Deputy Director and Group Leader, Material & Energy Sustainability Assessment Research Group, Inst. of Safety & Sustainability, National Institute of Advanced Industrial Science & Technology (AIST), Japan
- Jessie C. Elauria, Professor, College Eng. & Agro-Indust. Tech., Univ. Philippines Los Banos, The Philippines
- Shabbir H. Gheewala, Associate Professor, The Joint Graduate School of Energy & Environment (JGSEE), King Mongkut’s Univ. of Technology, Thailand
- Udin Hasanudin, Head, Department of Agroindustrial Technology, Faculty of Agriculture, The University of Lampung, INDONESIA (WG Member from 2008)
- Khoo Hsien Hui, Research Fellow, Institute of Chemical & Engineering Sciences (ICES), Agency for Science, Technology & Research (A*STAR), Singapore
- Atsushi Kurosawa, Vice Director, Research & Development Division, The Institute of Applied Energy (IAE), Japan
- Yucho Sadamichi, Lecturer, Life Cycle Management Centre, Chiang Mai University, Thailand
- Vinod K. Sharma, Professor, Indira Gandhi Institute of Development Research (IGIDR), India
- Chen Sau Soon, Senior General Manager, Environment & Bioprocess Technology Centre, SIRIM, Malaysia

WG Discussion Concept on Sustainability

Triple Bottom Lines for Sustainable Development

- Domestic/Regional Gap Abatement
- Food vs. Energy
- (Culture, Education, Poverty, Health, Peace, Human Rights …..)
  by HDI or similar index
- GHG Emission Reduction
  (Global & Regional Environment ……..)
  by LCA
- Economic Sustainability, Energy Security (Economic Development)
  by Gross Value Added
- Environmental Performance
- Economic Performance
- Social Performance

INDEX
2007 ERIA WG for “Sustainable Biomass Utilisation Vision in East Asia”

The WG developed the following policy recommendations:

- Addressing Macro and Micro Levels Needs to Reap Maximum Economic Benefits
- Mitigating Negative & Enhancing Positive Environmental Impacts
- Realising Direct & Indirect Monetary Returns for Societal Benefit
- Developing Sustainability Indicators to Enhance the Decision Making Process
- Standardising Tools to Generate Quantifiable & Verifiable Information
- Considering Country-Specific Needs & Available Biomass Resources
- Promoting Regional & International Cooperation

The WG also provided scientific backup for adoption of “Asia Biomass Energy Principles” by Energy Minister Meeting, EAS

Asia Biomass Energy Principles Aug. 2008 in Bangkok

1. Ensuring Quality
2. Respect for Natural Diversity
3. Compatibility with Food Supply
4. Compatibility with Environment
5. Stable Supply of Biomass Energy
6. Cost Efficiency
WG Meetings

- WG1 27, 28 and 29 Nov. 2008 in Jakarta
- WG2 9 and 10 March 2009 in Bangkok
- WG3 5, 6 June 2009 in Tsukuba (Japan)

Discussion Points

- Indices of “Sustainability” HDI, LCA, Gross Value Added and/or similar indices
- Management of Studies for Developing Guidelines of the Indices

Individual Studies for Guideline Development

- Investigation of Guideline for Sustainable Agro-industries Biomass Waste Utilization in Indonesia (ULRI, Indonesia)
- Investigation of Approaches for Environmental, Economic and Social Assessments for Biomass Utilization (JGSEE, Thailand)
- Investigation of Guidelines for Life Cycle GHG Calculation in the Utilization of Biomass for Bioenergy (SIRIM, Malaysia)
- Investigation of Methodologies Used in the Calculation of Indices for Economic Assessment of Biomass Utilization (CDSF, Philippines)
- Investigation of Guidelines for Indicators of Social Impact of Biomass Utilization (NEEF, India)
- Investigation of Guideline to Estimate Bioenergy Production in the Northern Thailand as an Example (CMU, Thailand)
WG Report: Guidelines to assess Economic, Environmental and Social impacts

- The WG have challengingly developed quantitative indices for assessing sustainability of biomass utilisation.
- Human Development Index (HDI) or similar indices can indicate the endpoint impacts of social issues.
- Gross Value Added or similar indices can indicate the economic impacts.
- Life Cycle Assessment (LCA) or similar methods can be used to measure the environmental impacts.
- Substantial questionnaires and measuring variables to get the indices have been developed.
- Since some necessary parameters for the indices are difficult to obtain, methodologies to .

WG Plan 2009

The WG will execute the pilot studies to adopt assessment guidelines developed by the WG in 2008

**Nominated study fields & subjects:**
- Khon Kaen, Thailand
  EtOH from Sugarcane, etc.
- Lampung, Indonesia
  EtOH from Cassava, Jatropha, etc.
- Quezon, the Philippines
  BDF from Coconut Oil, etc.
- Andhra Pradesh, India
  Beneficial utilisation of Jatropha, Pongamia, Neem, etc.

**International Workshop on**

“**Sustainable Biomass Utilisation in EA**”
(tentative)

will be hosted by the ERIA WG in 2010

The outcome of the studies, East Asian opinions will be presented at the workshop to worldwide participants.