



東アジアでの持続可能なバイオマス利活用に関する  
ERIA ワーキンググループ

# 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



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

ERIAとは？

## What is ERIA?

Source <http://www.eria.org/index.html>



### Economic Research Institute for ASEAN and East Asia (ERIA)

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.

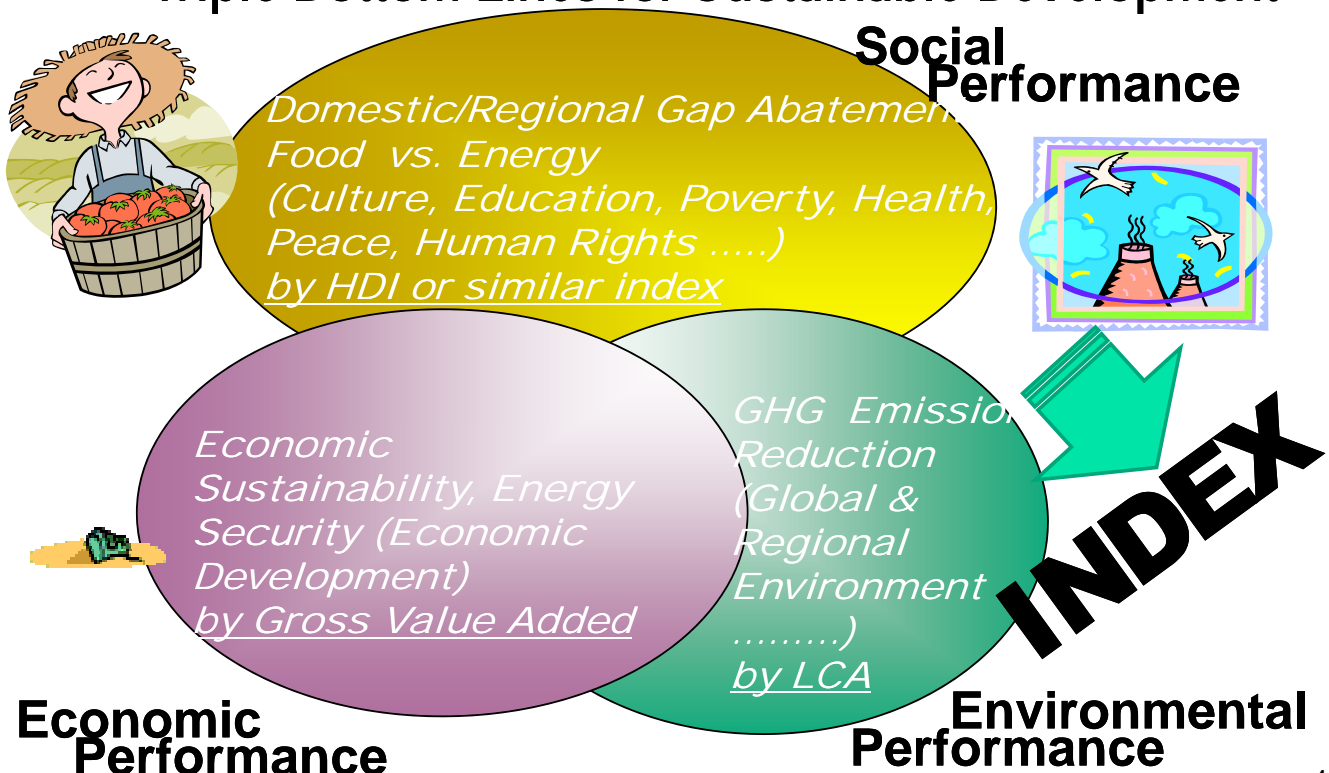
ERIA will intellectually contribute to the regional efforts for East Asian Economic Integration in wide-ranging policy areas from Trade/Investment to SMEs, Human Resource development, Infrastructure, Energy, etc. ERIA's main task will be to provide the policy analyses and recommendations to Leaders/Ministers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



- **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



- 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

5

- 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

6



## WG Meetings

- WG1 27, 28 and 29 Nov. 2008
- WG2 9 and 10 March 2009
- WG3 5, 6 June 2009



in Jakarta  
in Bangkok  
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



7



## 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*)

8



## 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 .

9



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**

10