

Chair's Summary
Second Biomass Asia Workshop
Bangkok, 13-15 December 2005

1. Significance of biomass application and technology development

- We are in need of countermeasures against global warming due to the mass consumption of fossil fuels. We must establish renewable-, distributed-energy systems that can be optimized for diverse regions.
- Rapid economic development and the large population in Asian countries will lead to increases in energy consumption and greenhouse gas emissions.
- The majority of Asian countries have abundant biomass resources, and in most of the developing countries of the region, biomass energy contributes significantly to the energy supply.
- Since biomass is carbon-neutral and renewable, we can reduce greenhouse gas emissions, contribute to energy security and build a sustainable/recycling society by replacing fossil-based energy/products with biomass-based energy/products.

2. Understandings that were confirmed/emphasized at the first Biomass Asia Workshop (Tokyo/Tsukuba in January 2005) and the Second Biomass Asia Workshop (Bangkok in December 2005)

- Common understanding of the importance of potential biomass applications and their favorable impact on the environment and society (contributing to global environment, energy security and sustainable economic growth) and of the importance of sustainable resource availability, sustainable technologies/system and sustainable development of local community/economy
- Necessity of networking within and among organizations/experts that are related to efficient biomass applications including both at the R & D and demonstration/commercialization level and policy formulation, and necessity of exchanging and sharing relevant good practices/experiences/information
- Necessity of developing and disseminating optimal technologies to secure and utilize sustainable biomass resources to meet multiple needs and of

establishing regional communities and maintaining social infrastructure required to introduce, promote and commercialize biomass utilization technologies, particularly in developing countries

- Importance of inter-disciplinary collaboration/management among relevant stakeholders (e.g. agriculture, forestry, energy, rural development, industrial use, policy-makers and R&D experts), with particular attention to effective and sustainable resource management and transfer of technologies and know-how to developing countries (including effective use and application of CDM). This can promote environmentally sustainable development in the energy/agricultural/forestry/fishery and other industrial sectors, vitalize regional communities (local economies) and can encourage more biomass utilization in developing countries which have big potential for biomass use in priority for energy security and environmental protection.
- Necessity and importance of collaborative R&D through complementary partners and of overcoming market/socio-economic constraints (e.g. human capacity, management/governance and policy initiatives, high capital costs/market mechanism/incentives, creation of sustainable industry, linkage with local community/society, public acceptance/awareness)

3. Future directions on Biomass Asia for sustainable growth; the following points were recognized as significant in addition to the above-mentioned ones.

3.1. Promoting efficient and sustainable technologies and systems of biomass applications

- R&D for the practical application of biomass
 - a) environmentally friendly technology for sustainable use
 - e.g. utilization of agricultural/forestry wastes, development of both woody and non-woody biomass crops, BTLG (Biomass to Liquid/Gas) as renewable energy/fuel and other environmental technologies
 - b) sustainable resource availability and global warming prevention
 - e.g. sustainable agricultural/forestry production with biodiversity, mass production systems for biomass industry, sustainable biomass production/harvesting, effective conversion of woody biomass
 - c) Life Cycle Assessment
 - e.g. assessment on total collection/production/utilization system
- Standardization of effective application of biomass technologies and

Multi-Assessment for sustainability (i.e. low energy consumption, environmental load reduction and economic efficiency (e.g. relevant efficient manufacturing process and materials))

- Adequate Intellectual Property management aimed at industrialization of biomass utilization

3.2. Complementary R&D collaboration and partnerships in Asia

- Establishment of trans-organizational co-operation system, multi-level network and multi-disciplinary management and common concepts/applicable approaches shared by the member countries
- Reinforcement of public private partnership (Public research organization/Academia-Industry-Government), human resources management and personnel/expert exchange
- Needs for policy development to accelerate technology development, international collaboration and commercialization

3.3. Promoting action plans for biomass utilization in Asia

- Appropriate biomass applications for each region (sharing good practices, various experimental projects/models, networking, priority setting, sense of urgency and policy development)
- Multi- or bi-lateral complementary R&D collaboration and its application, relevant multi-disciplinary management and policy measures/development (Sustainable available biomass production and resource management taking into account impacts on natural and societal environment, Sustainable technology development/system and application, Public and private partnership relating to agriculture, forestry and industrial/energy use)
- Continuing/Following-up Biomass Asia workshop and promoting the network (networking, good practice learning, information/data base, promoting R&D collaboration, policy initiatives)

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