Summary for WP4: South-South and North-South International Cooperation

Participants (WP-leaders in Bold)

Winrock International India (WII)

Stockholm Environment Institute (SEI)

European Biomass Industry Association (EUBIA)

Wirtschaft und Infrastruktur GmbH & Co Planungs-KG (WIP)

Chinese Academy of Agricultural Sciences (CAAS)

Centro Nacional de Referencia em Biomassa (CENBIO)

Indian Institute of Science (IISC)

The Energy and Resources Institute (TERI)

Universidad Nacional Autonoma de Mexico (UNAM)

University of Campinas (UNICAMP)

Joint Graduate School of Energy and Environment (JGSEE)

Chinese Association of Rural Energy Industry (CAREI)

Objectives of WP4

South-South Cooperation

- Link project activities in Africa with on-going successful efforts in Latin America and Asia
  - document and exchange info on agriculture and sustainable agro-forestry systems in Asia and Latin America
  - identify best practices for application in Africa and carry out impact assessment of selected schemes
  - prepare strategy document for implementation of best practices in Africa

North-South Cooperation

- concerned with transfer of knowledge and technical know-how between developed and developing countries as well as the promotion of joint ventures for common activities in the field of new energy crop and agro-forestry systems

WP4 Deliverables

- **D4.1:** Report on best practices, successes and failures of agro-forestry systems and energy crops in Latin America and Asia
- **D4.2:** Organisation and documentation of Seminar 1 (Brazil)
- **D4.3:** Organisation and documentation of Seminar 2 (India)
- **D4.4:** Organisation and documentation of Seminar 3 (Mexico)
- **D4.5:** Report on recommended best practices for Africa, challenges and implementation strategy
- **D4.6:** Report on innovative village level bioenergy complexes for production of food, feed, fuel, etc.
- **D4.7:** Report on promotion of knowledge transfer and joint ventures

Brazil Study Visit (22-26 October 2007)

- COMPETE **Seminar**: overview of biofuels in Brazil, discussion
- BEST (Bioethanol for Sustainable Transport) project - inauguration of an **Ethanol Bus** by Scania, Sweden - launched at Univ. of São Paulo, followed by short seminar about BEST project and press conference.
- Technical visit to **Dedini Industrias** de Base, Piracicaba, manufacturing for sugar factories, distilleries, cogeneration plants
- Visit to **Santo Antonio Sugar Mill**, Sertãozinho: sugar, ethanol, cogen
- **TGM Manufacturers**, Sertãozinho; make turbines and transmissions; conduct turnkey inspections and repairs on steam turbines, combustion turbines, generators and associated equipment.
- **Bertin Biodiesel Factory** at Lins, the plant produces 100,000 tons of biodiesel annually from approximately the same amount of tallow, a waste product from cattle slaughterhouses.

Field Visit to India (February 2008)

- PRAJ biofuel initiatives in Pune, India
  - experience with corn, wheat sorghum, rice, cassava, sugar, molasses, beet, jatropha.
  - Also non-conventional options, to avoid food-fuel conflicts; sweet sorghum, cellulosic ethanol from grasses, biodiesel from algae and oils.
  - By using effluent in the processing of biofuels, Praj process of conversion has improved efficiency and economics.
  - Sweet sorghum trials have been conducted in India (Maharastra) and Australia
- Thermax Large boiler division, cogeneration in sugar industry
- Rural village electrification project (jatropha) in Ranidhera
  - 100 houses involved in the Village Electrification Community (VEC):
  - Sustainability is ensured as follows:
    - Technical : the simplicity of the power plant and training of operators
    - Social: ownership of the project and capacity building of the villagers
    - Financial: collections of tariffs used for operation costs and generation of future projects (such as briquetting of jatropha press cake)
    - Institutional: the VEC is actively operating the plant as a business
- Jatropha plantations, biodiesel processing facilities near Raipur
- 5th international biofuel conference

Mexico Study Visit and Seminar

- 1 Mar (Sun) Arrival to Mexico City Intl Airport
- 2 Mar (Mon) Visit to the Chinampas in Xochimilco – Pre-hispanic sustainable agricultural system still practiced today
- 3 Mar (Tue) Visit to National Anthropology Museum in Mexico City & Visit to UNAM - Botanic gardens and bio technology research centres
- 4 Mar (Wed) Bus trip to Valle del Mezquital - World oldest waste water irrigation system, traditional marketplace and arid land plant use
- 5 Mar (Thu) Visit to botanic research centre in Morelos – Research on jatropha
- 6 Mar (Fri) Visit to Chapingo (Most important agricultural university) and CIMMYT (International maize and wheat improvement centre in Texcoco)
- 7 Mar (Sat) Departure

Biofuel production in arid lands

(Field visit to CEPROBI & seminars on jatropha and biofuel production)

Lessons learned:

- Research on different species of jatropha is necessary to understand the possibilities and risks for adaptation for biofuel production
- In the present only a toxic species of jatropha curca is used for biofuel production but there are 175 species , some of them may as well have potential for biofuel production and adapt to different environments
- Dangeros to jump on implementation without previous analysis of the risks
- Great opportunities for south-south cooperation to exchange experiences, technologies and best practices

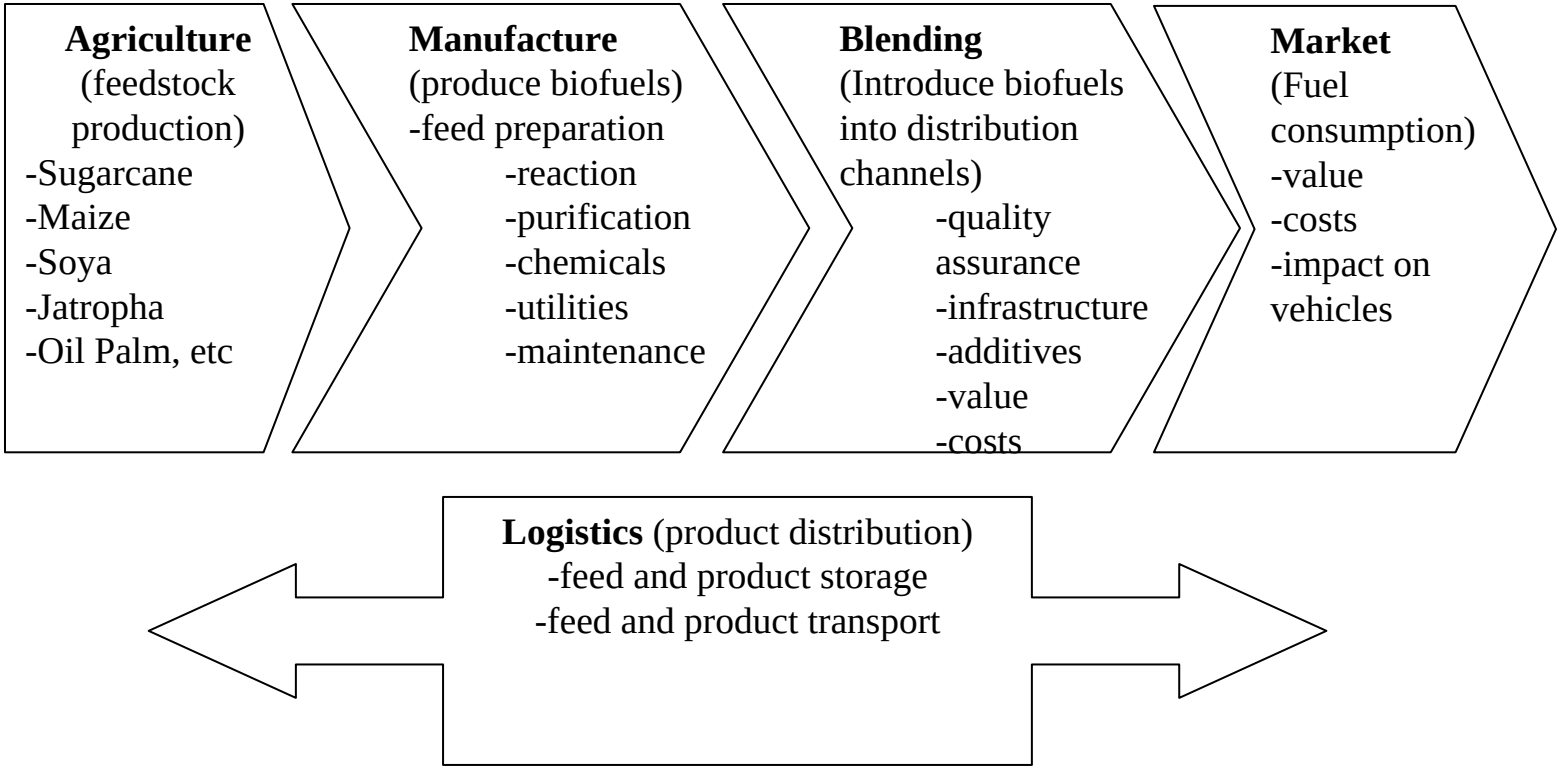
Non toxic jatropha experimantal field in CEPROBI (Biotic products development centre) in Morelos, central Mexico

Study visit to Valle del mezquital water irrigation district

Valle del Mezquital: The world´s oldest water irrigation district, & one of the largest agricultural regions in central mexico

Experiences with energy crop value chain

Biofuel value chain



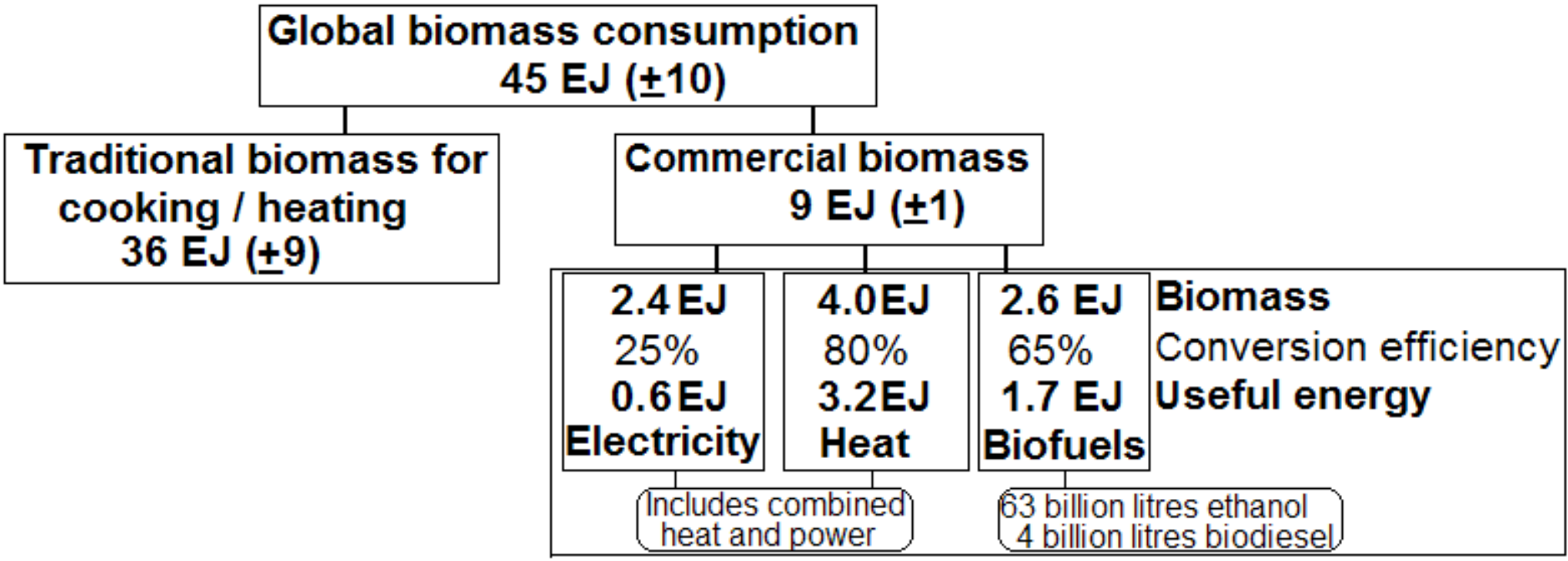
Policy and support programmes

Type of policy tool	Some examples
• Incentive – Tax or Subsidy	• Excise tax credit, Carbon tax, subsidies for flex fuel vehicles, price supports and deficiency payments, tariffs or subsidies on imports/exports, investment risk reduction for next-generation facilities, support for biofuel-compatible infrastructure and technologies, government guarantees and purchasing policies
• Direct control	• Fuel standards, Mandatory blending, emission control standards, efficiency standards, acreage control, quotas on import/export
• Enforcement of property rights and trading	• Cap and trade
• Educational and informational programs	• Labeling, public education and outreach
• Improving governance	• Certification programs
• RD&D	• Crop research, conversion technology development, feedstock handling, etc;

Key Lessons Learnt

- Assessment of local needs, development potential and constraints
- Community involvement and incorporating social development issues
- Provision of effective agricultural extension services and capacity building
- Enacting supportive policies and institutions
- Provision of affordable finance
- Setting sustainability criteria and performance indicators
- Developing local value chains

Distribution of biomass used for energy by type and end-use




Thank you for your attention!