



LAMNET Latin America Thematic Network on Bioenergy

**LAMNET 'Kick off' and Steering Committee Meeting
5 March 2002, 10:00 – 17:00, EUBIA Office, Brussels**

MINUTES of the MEETING

List of Participants

EC Scientific Officer responsible for the LAMNET Project

Prof. Tilak Viegas, European Commission – DG Research

Members of the LAMNET Steering Committee

Prof. José Roberto Moreira, CENBIO–Centro National de Referência em Biomassa, BR

Dr. Peter Helm, WIP, D

Dr. Giuliano Grassi, EUBIA – European Biomass Industry Association

Mrs. Angela Grassi, ETA – Energia Trasporti Agricoltura, I

Mr. Jan Lindstedt, BAFF – BioAlcohol Fuel Foundation, SE

Dr. Peter Grimm, WIP, D

Members of the LAMNET Thematic Network

Dr. Paulino López Guzmán, Ministerio del Azúcar, CU

Mr. Denis Tomlinson, Illovo Sugar Ltd., ZA

Dott. Beatrice Coda, Bioenergy expert, office EUBIA

LAMNET Project Co-ordination

Dr. Rainer Janssen, WIP, D

Welcome address by Tilak Viegas, European Commission – DG Research

Prof. Tilak Viegas presented a welcome address to the participants of the LAMNET 'Kick-off' and Steering Committee Meeting stating the great importance of projects focussing on Scientific Co-operation and Policy Research in general and especially in the field of renewable energies. The European Commission recognises that the creation of suitable policy frameworks is required prior to the development of technologies in order to successfully tackle the main challenges of sustainable development.

In the past the political dimension and the international role of science was often limited to specific fields like aviation and space, nuclear energy and oil. Today, it is agreed upon that science forms the 4th pillar of External Relations together with the fields of politics, trade and international co-operation. Therefore, scientific co-operation and the linkage of scientists, decision makers and entrepreneurs in thematic networks is expected to gain an ever increasing importance in the relation between the European Union and countries from Latin America, Asia and Africa. On this basis Prof. Tilak Viegas transmitted his best wishes for a successful implementation of the project LAMNET - 'Latin America Thematic Network on Bioenergy' and he assured his support whenever needed.

Thematic Priorities of the LAMNET Project

It was agreed upon by the participants of the LAMNET 'Kick-off' and Steering Committee Meeting that the Thematic Priorities of the LAMNET project should address the fields of 'Energy Policy Frameworks', 'Assessment of Demand', 'Assessment of Resources', 'Analysis of available Technologies and Systems', 'Development of Policy Options for the Promotion of Bioenergy' and 'Implementation of Policy Options'. Thereby, the selection of Thematic Priorities within these identified fields (see list below) is meant to present an non-exclusive overview of the aims of the LAMNET project. No guarantee can be given at the present stage that all mentioned Thematic Priorities will be addressed during the implementation of the LAMNET project.

During the discussion at the meeting it was concluded, that special emphasis will be given to the following Thematic Priorities:

- Large-scale implementation of bioethanol production based on sugar cane and other suitable biomass resources (e.g. sweet sorghum); creation of a global bioethanol market
- Promotion of small- and medium-scale decentralised bioenergy systems such as advanced pelleting/drying technologies, small plants for co-generation and refrigeration systems (tri-generation), syngas generators, micro-distilleries for ethanol production, charcoal pellets, activated charcoal for water purification

Short summaries of contributions by participants of the meeting are given in the Annex I to this Minutes.

1. Analysis of the Energy Policy framework with emphasis on promotion of bioenergy

- Analysis of existing energy policy framework (e.g. national energy plans) for certain selected regions in Latin America, China, Africa
- Assessment of Kyoto commitment (reduction of deforestation, desertification, migration), comparison with situation in EU
- Benefits and drawbacks of existing bioenergy programs

2. Assessment of Demand

- Assessment of current and future primary energy consumption of the heat, electricity and transport sector in selected regions (exploitation of existing databases by national co-ordination partners)
- Demand for transportation fuels
- Analysis of local market prices for various energy sources
- Economic opportunities, income generation and local rural development (participatory and gender specific approaches)

3. Assessment of resources and constraints

- Assessment of present and future biomass resources (energy crops, wood manure, agricultural residues, sewage, organic waste)
- Sustainable biomass production, development of new energy crops (e.g. sweet sorghum)

4. Analysis of available technologies and systems

- Technologies for the conversion of biomass crops and agroforestry residues in pellets and briquettes
- Low pollution stoves
- Small and medium scale biogas production
- Small and medium scale charcoal and activated charcoal production (for water cleaning)
- Small, medium and large scale biofuel (e.g. bioethanol, gelfuel) production
- Small, medium and large scale cogeneration and trigeneration
- Combustion and co-combustion technologies
- Local availability of bioenergy technologies
- Integrated bioenergy complexes in emerging economies
- Economic viability assessment of biomass technologies (cash flow analysis)
- Comparison with conventional energy supply with respect to cost-effectiveness, simplicity of maintenance, social acceptability, impact on development

5. Development of policy options for the promotion of bioenergy

- Potential and barriers for bioenergy CDM projects, Joint Implementation and carbon trading
- Strategies for biomass trade (e.g. biofuels)
- Analysis of successful projects/programs (best practice) of biomass use in Latin America, China and Africa including problems faced and overcome
- Realistic potential contribution of bioenergy up to 2020, benefits of mitigation of global climate change (GHG emissions)
- Potential contribution of bioenergy to development, equity and sustainability (reduction of the mitigation to the cities and the imbalance of payments)
- Programs for the use of modern biomass fuel in the transportation sector
- Development of an ethanol gelfuel industry in Africa (Priority identified by the New Partnership for African Development – NEPAD)
- Promotion of international co-operation (e.g. International Governmental Coalition on Bioethanol)
- Potential and barriers for technology transfer and joint-ventures (technological, cultural and legal differences between technology donor and receiver)
- Economic aspects of the promotion of bioenergy (financing and loan schemes, credit mobilisation, investment capital, market penetration)

6. Implementation of policy options for the promotion of bioenergy

- Definition of training programmes and awareness campaigns (operation and maintenance, financing, management)
- Promotion of joint-venture and technological co-operation activities
- Identification of potential demonstration projects (best practice)
- Design and screening of Joint Implementation and CDM project candidates

First LAMNET Project Workshop, Amsterdam, The Netherlands, 19 June 2002

It was agreed upon by the participants of the LAMNET 'Kick-off' and Steering Committee Meeting that the first LAMNET Project Workshop will be organised as a Conference Related Event on the occasion of the 12th European Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection, Amsterdam, 17-21 June 2002.

Timing: Wednesday, 19th June 2002, 11:00 – 18:00

Location: Amsterdam RAI
International Exhibition and Congress Centre
Amsterdam, The Netherlands

The following decisions concerning the content of the workshop were taken in order to facilitate the organisation of the first LAMNET Project Workshop:

- Prof. Tilak Viegas, European Commission – DG Research, will give a speech (30 min) on 'European International Co-operation Policies'
- Dr. Giuliano Grassi, EUBIA – European Biomass Industry Association, will give a speech (20 min) on 'Promotion of Small-scale Decentralised Bioenergy Systems'
- 5 speeches a 20 min will be given by Members of the LAMNET Network
 - Prof. José Roberto Moreira, CENBIO, BR
Pre-requisites for successful biofuel programs promoting sustainable development
 - Dr. Paulino López Guzmán, Ministerio del Azúcar, CU
The Cuban Bioenergy Development Programme
 - Mr. Jan Lindstedt, BAFF – BioAlcohol Fuel Foundation, SE
Overview of Conversion Technologies of Cellulose Biomass Resources
 - Dr. Omar Masera, UNAM, MX
Biomass Provision – The Wood Energy Programme of the FAO
 - tbd
Biomass based Syngas/Hydrogen Production
- LAMNET Network Members will be invited to present a poster introducing their organisation and their activities and interests within the LAMNET project. This poster presentation will serve to stimulate the dialogue between the Network Members.
- A discussion on a selected topic will be held at the end of the project workshop

The first LAMNET Project Workshop will be included as Conference Related Event in the official programme of the 12th European Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection, Amsterdam, 17-21 June 2002.

Invitations to the first LAMNET Project Workshop and information concerning the preliminary programme of the workshop will be communicated to the LAMNET Network Members within short time.

Additionally, the LAMNET Network Members will be invited to attend a Forum on International Co-operation, which will be organised in the framework of the 12th European Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection, Amsterdam, The Netherlands, 17-21 June 2002.

Title: International Cooperation between industrialised and emerging economies for the promotion of bioenergy

Date and Time: 20/06/2002 14:30 - 18:00

Location: Amsterdam RAI
International Exhibition and Congress Centre
Amsterdam, The Netherlands

LAMNET Project WEB SITE

The LAMNET project web site will be installed on the level of WIP-Munich, ETA-Florence, EUBIA, the European Biomass Industry Association, and there will be links established to and from the network members and to European Organisations working in the biomass field and interested to join the exploitation of results.

- The project web site www.bioenergy-lamnet.org will be set-up in March 2002
- Links will be established to the network members and a description of all member organisations and their activities and interests within the LAMNET project will be included in the web site. The respective material has to be provided by the Network Members.
- It is envisaged to include an 'Expression of Interest' for Interested External Parties in the LAMNET web site in order to promote a widespread dissemination of the LAMNET project results. It will be possible for External Interested Parties to be included in project mailing lists and to be provided with LAMNET project information. The structure of this 'Expression of Interest' within the LAMNET web site has to be elaborated.

LAMNET Project DATABASE

The LAMNET Project Database will serve to establish a shared data-base on a regional scale for Latin America, China and Africa to allow for enhanced comparability and long-term accessibility of the results of this project. This data-base will include all important results elaborated within the LAMNET project and it will ensure the compatibility of data collection and a suitable storage in information systems. Relevant excerpts from this data-base will be made available to interested persons and organisations.

1st issue of the LAMNET Project Newsletter

In order to guarantee an efficient dissemination of the project results, there will be two newsletters per year during the three years of the project period. These six issues of the newsletter will be distributed among the project members and potential multipliers in Latin America and other Developing Countries and the EU proposed by members of the network.

The first issue of the newsletter will be extensively circulated at the “12th European Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection” in Amsterdam.

Leaflets on Biomass key Topics

During the LAMNET project period 4-6 leaflets will be published. The LAMNET project leaflets will target key topics for the promotion of bioenergy in Latin America and other emerging countries.

The following Thematic Priorities for the LAMNET leaflets have been agreed upon:

- Analysis of existing energy policy frameworks
- Identification of successful bioenergy experiences
- Demand and available biomass resources for selected regions
- Bioenergy financing schemes, CDM, Joint Implementation
- Utilisation of energy crops
- Activated charcoal production for water cleaning
- Small- and medium size cogeneration plants
- Integrated bioenergy complexes
- Transport fuels

Annex I

Contributions by participants of the LAMNET 'Kick off' and Steering Committee Meeting

Contribution by Dr. Giuliano Grassi, EUBIA – European Biomass Industry Association

The project LAMNET should not only concentrate on development of policy strategies but also have a pragmatic focus on the promotion of Bioenergy by stimulating joint ventures and transfer of technologies. In particular the contribution of EUBIA will be to promote small-scale, decentralised bioenergy systems.

Small-scale is envisaged as its penetration (in comparison to large-scale systems) could be much easier especially in terms of 1) supply of resources and 2) investment level.

EUBIA (in the person of its Secretary General, Dr. Grassi) is preparing a series of documents related to projects which can be promoted in the framework of LAMNET activities. These documents include a detailed technological and economical description of the following commercial sub-systems, which can be easily implemented in all the regions tackled by LAMNET:

- new, advanced pelleting/drying technology
- small co-generation plants (50 , 100, 500 KW_{el}) with an overall electrical efficiency $\eta_{el} = 22\%$ and a guarantee life of 15 years
- syngas generators
- micro-distilleries for ethanol production at a small-scale
- charcoal pellets (advanced technology)
- activated coal for water purification
- refrigeration systems

These documents are currently under preparation. It is proposed that some these techno/economic descriptions may constitute the text of some of the leaflets which will be produced in the framework of the LAMNET project.

Contribution by Dr. Paulino López Guzmán, Ministerio del Azúcar, CU

The bioenergy sector in Cuba is almost entirely concentrated on bagasse as a residue of the sugar cane processing industry. 80% of the available agricultural land in Cuba is cultivated with sugar cane.

This could constitute an enormous bioenergy resource, but unfortunately Cuba has not exploited so far this enormous potential in an efficient way. There are only a very few examples of bagasse-fueled power generation systems (a 3 MW_{el} , a 42 MW_{el}, a 100 MW_{el}-scale) in Cuba, with a low combustion efficiency.

On the basis of these remarks, Mr. Lopez Guzman emphasises the need of acquiring more information on available technology for an efficient exploitation of cane bagasse (e.g. advanced combustion systems, gasification, biogas) and emphasises how it would be of benefit for the cane industry. Therefore, he suggests that the thematic priorities of the LAMNET project should be focused on the analysis of available technologies and systems

Contribution by Prof. José Roberto Moreira, CENBIO–Centro Nacional de Referência em Biomassa, BR

The experience of Brasil is strongly focused on the ethanol programme as fuel for transportation for more than 20 years - it is expected that ethanol will play a major role in the future for Brasil, but, on the other hand, it is impossible to create a global ethanol market if only one country is involved.

Current EU policy possibly will encourage the deployment of ethanol market in Europe. Prof. Moreira stressed the importance of focusing, as a LAMNET Thematic Priorities, on the assessment of resources and of technology – in fact one possible strategy to deploy bioenergy at a large-scale would be to identify a few pragmatic possibilities in terms of biomass resource + processing technology to make it available for a large commercial market.

Prof. Moreira agrees with the idea of Mr. Grassi that one focus of LAMNET should be the deployment of small-scale decentralised energy systems. On the other hand, one should keep in mind that other emerging countries like Thailand have launched a large-scale programme on bioenergy based on bioethanol.

On the basis of these examples, he emphasis the need to look at large-scale markets as this is necessary to develop countries' economies, while decentralised, small-scale energy systems may contribute to solve the problems of poverty in rural areas of the world.

Contribution by Mr. Denis Tomlinson, Illovo Sugar Ltd., ZA

Mr. Denis Tomlinson presented a brief overview of the activities of the company Illovo Sugar Ltd. in South Africa and other countries in Southern Africa such as Tanzania, Zambia, Malawi and Mozambique. Illovo Sugar Ltd. holds a share of approximately 50% of the sugar market in South Africa.

He pointed out that, historically, the sugar mill design was not focussed on power generation and that a large investment is required to up-grade boilers and/or generators. Additionally, it is necessary to pay respect to all potential biofuels and other beneficial by-products.

A mayor constraint to the large-scale implementation of bioenergy in South Africa can be identified as the State-controlled Electricity Supply for the following reasons:

- difficult access to local grid
- revenue received per kWh often less than charge rate
- tariff charges disproportionally high in some countries

Mr. Tomlinson pointed out the opportunity to use Carbon Credits to kick-start co-generation in sugar mills operated by Illovo Sugar.

Contribution by Mr. Jan Lindstedt, BAFF – BioAlcohol Fuel Foundation, SE

Mr. Jan Lindstedt presented a brief overview of the activities of the BioAlcohol Fuel Foundation – BAFF, Sweden.

The Alcohol Fuel Chain promoted by BAFF contains the segments Feedstock, Production, Vehicles (Engines, Fuel Cells), Distribution (Fuel, Mixtures), External Effects (Environment, Economy) and Rules (Taxes, Specifications).

As a pathway for developing a fuel distribution network towards sustainability, flexible solutions are required for the transition period such as blending ethanol with gasoline. With this strategy the transition from Otto Engines towards Ethanol Powered Engines and Fuel Cells is foreseen to be realised.

BAFF is engaged in international co-operation schemes for the promotion of bioalcohol such as GEC (Governors Ethanol Coalition) and CEB (Comité Européen Biocarburants). GEC combines members from Sweden, Mexico, Brazil, Canada, USA and Thailand whereas within CEB members from France, Denmark, Holland, Finland, Spain and Sweden are engaged.

Annex II

LAMNET 'Kick off' and Steering Committee Meeting 5 March 2002, 10:00 – 17:00, EUBIA Office, Brussels

Agenda

Moderator of the Meeting: WIP, LAMNET Project Co-ordination, Dr. Rainer Janssen

Welcome and introduction

Welcome address by Prof. Tilak Viegas, European Commission – DG Research
Scientific Co-operation and Policy Research

Discussion – Thematic Priorities
Thematic Priorities and Systems for the LAMNET Project
Contributions by participants of the Steering Committee Meeting

Presentation of the LAMNET project Workshop 'Latin America Thematic Network on Bioenergy' on the occasion the 12th European Biomass Conference, Amsterdam, 17-21 June 2002

Discussion – Project workshops
Decision on speakers of the project Workshop 'Latin America Thematic Network on Bioenergy' in Amsterdam
Decision on location and dates of further LAMNET project workshops

Presentation of the LAMNET activity in the framework of the forum on 'International Co-operation' on the occasion of the 12th European Biomass Conference, Amsterdam

Presentation of a suggested LAMNET project web site and database

Discussion – Project web site and database
Decision on structure and content of the project web site and database

Discussion round: Implementation of the LAMNET project

Discussion – Project newsletter and Thematic leaflets
Content of 1st and 2nd LAMNET project newsletter
Content and scope of bioenergy leaflets

Final discussion and selection on content and structure of decentralised bioenergy systems to be promoted by the LAMNET project
Conclusions and recommendations