

## **Renewables 2004**

### **SIDE EVENTS REPRESENTED IN THE DAY OF BIOMASS**

#### **1) Organization: Food and Agriculture Organization of the United Nations (FAO)**

**Title of presentation:** Towards an international framework for bioenergy action

#### **The organization:**

FAO, the Food and Agriculture Organization of the United Nations, has a long-standing global mandate from its member countries on the promotion of wood energy and agro-energy within the agricultural, forestry, and related energy demanding and/or producing sectors. FAO avails of the necessary multidisciplinary expertise in agriculture, forestry and economics to comply with this mandate. For many years, FAO has been developing multidisciplinary approaches and providing technical expertise in the field of energy, in particular, bioenergy.

#### **The scope of the presentation:**

Bioenergy is the dominant source of energy for approximately half of the world's population. Recently, awareness of the need to mitigate climate change has renewed the attention on bioenergy as an environmentally friendly, cost-effective and locally available source of energy and a key factor in meeting developmental and environmental goals. The potential growth of bioenergy utilization with its direct local impacts on food security, land use, employment and rural infrastructure coupled with international impacts on trade, commodity prices and markets and the global environment require an international cooperative effort. More than for any other source of energy, the involvement of different (inter-)national actors (UN, development banks, national development agencies, academia, civil society, etc.) and different sectors (spanning from the obvious energy and technology sectors to agriculture, forestry and spatial planning) is crucial to its successful implementation.

On the basis of its experience and mandate, FAO proposes to join forces with other actors (organizations, institutions, etc.), each of whom could feed their special comparative advantage into a concerted international and intersectoral approach to promote modern bioenergy.

The Renewables2004 Conference and this side-event in particular are going to provide an excellent forum to form partnerships and work jointly towards a well functioning framework for action on bioenergy.

#### **The presenters:**

**Gustavo Best**, Senior Energy Coordinator

#### ***Food and Agriculture Organization of the United Nations (FAO)***

Dr. Best studied Chemical Engineering in his home country, Mexico. After his postgraduate studies in the UK he carried out research in thermodynamics and energy systems for 15 years in the National Autonomous University of Mexico -

UNAM. He worked with the Economic Commission for Latin America and the Caribbean from 1980 to 1986. In 1986 he joined FAO where he has promoted an integrated approach between agriculture, forestry and energy issues. He has published a large number of articles and coordinates FAO's position in the energy and environment fields.

<http://www.fao.org>

**Ingmar Juergens**, Associate Professional Officer Renewable Energy/Climate Change

***Food and Agriculture Organization of the United Nations (FAO)***

Mr. Juergens academic background is in Geoecology (Technical University Braunschweig, Germany), Environmental Science and Environmental Economics (Lund University, Sweden). Formerly working on biomass and climate change issues at the Organisation for Economic Co-operation and Development (OECD) in Paris, he joined FAO in 2003. Currently the focus of his work is on the implications of the carbon market and *Payments for Environmental Services (PES)* for bioenergy and sustainable development.

<http://www.fao.org>

**Andre Faaij**

***Utrecht University, the Netherlands***

Dr. Faaij is associate Professor and board member of the Department of Science, Technology and Society (STS-UU). He is task leader of IEA bioenergy task 40 on bioenergy and trade, and is a consultant to the FAO

Main activities: Research and coordination in the fields of bioenergy, long-term energy systems planning, sustainable use of fossil fuels and energy efficiency. Project leader at STS-UU for an EU-ALTENER project on flexibility mechanisms and their implications for renewable energy projects; course coordinator for several courses, supervision of Ph.D. and M.Sc. Students;

<http://www.uce-uu.nl/>

**Jeremy Woods**

***Imperial College, London, UK***

Dr. Woods researches the interface between development, land use and the sustainable exploitation of renewable and non-renewable resources, in particular biomass energy. Recent work has included collaborating on an assessment of renewable transport fuels for UK-DTI and assessing the potential for bioelectricity in OECD countries by 2020 for WWF as well as being a member of a 'cane resources network for southern Africa (CARENSA)'. He is currently co-ordinator of an ICSU/SCOPE research project entitled 'the sustainable use of southern African savannas'. For the last 11 years, he has also been working on the use of sweet sorghum for bioenergy production in the EU, Africa and Asia, and is a consultant to the FAO. He lectures on the Environmental Technology MSc at Imperial College London. <http://www.env.ic.ac.uk/research/epmg/JemCV.html>

## **2) The Hessian Ministry for Environment, Rural Development and Customer Protection (HMULV)**

### **Title of the Presentation:**

Biomass energy for a sustainable development in rural areas – new perspectives for rural areas, agricultural and forestry – A strategy for implementation.

### **About the ministry:**

The Hessian Ministry for Environment, Rural Development and Customer Protection is a superior administration board of the federal state of Hesse and has about 560 employees. It is responsible for the

- improvement of protection and sustainable use of the natural environment and resources
- protection of men again risks for their health
- preservation and development of rural areas.

### **Scope of the Presentation:**

Hesse, a federal state of Germany, presents their integrated concept for the use of bio-energy for a sustainable development of rural areas. New ideas for new product lines and value creation chains will be demonstrated, showing a network cooperation of all actors in information, consulting, education, research and development, technology and transfer. This process is optimized by a regional management. Representatives of politics, science and economy will give a joint presentation of their model.

### **About the speakers:**

Wilhelm Dietzel

Hessian Minister for Environment, Rural Development and Customer Protection since 1999 and member of the Hessian Parliament since 2003. Before that he was vice president of the Hessian Farmer's Union (1987-1999) and member of the Federal Parliament (Deutscher Bundestag) from 1994-1999. He is still an independent farmer.

Konrad Kutt, Dipl.-Hdl

scientific employee in the Federal Institute for Vocational Training in the field of "Pilot Projects, Innovations and Transfer" with a focus on "Vocational Training for a sustainable development".

Kristian G. Milenov, Architect

specialized in sustainable urban planning, energy efficiency & environmental architecture, is the executive director of the Agency for Sustainable Development and EUROintegration at Sofia (since 1997) and the responsible secretary of the working group on e-government on local level (2002). Since 2004 he is adviser to the Minister of State Administration.

Dr. Anna Runzheimer

is head of the division "Rural Area" in the Hessian Ministry of Environment, Rural Development and Customer Protection since 2003. From 1998

to 2003 she was chief of the sub-division “Environmental Protection” in the government of the Hessian District of Giessen.

Professor Dr. Konrad Scheffer

professor of Crop Science at the Faculty of Organic Agricultural Science of the University of Kassel since 1976. His focus of research during the last 10 years lies in the production of energy crops and their conversion to energy.

Dr. Wolfgang Steiger

was scientist at the Technical University of Darmstadt. Later he became head of department for “diesel engines development” at Adam Opel AG, Rüsselsheim. Since 1997 he is responsible as group research director powertrain at Volkswagen AG, Wolfsburg.

### **3) The Fachagentur Nachwachsende Rohstoffe e.V. (FNR)**

**Titel of the Side Event:** Bio-energy look ahead

#### **About the Agency:**

founded in 1993 is charged with the coordination of all German activities concerning renewable resources. Funded by the Federal Ministry of Consumer Protection, Food and Agriculture (BMVEL), the FNR has not only to promote research and development but also market introduction of renewable resources and bioenergy. In addition, FNR gathers, processes and provides technical data from the field of science and economy. From this ensues a broadly diversified advisory and information service for industry, agriculture, administration and other interested agencies and persons.

FNR has 65 members which includes four federal ministries, 16 Länder ministries, and representatives of agricultural, industrial and economical associations and federations. As, due to the federal structure of Germany, renewable resources related activities take place on different levels and under different umbrellas, the membership structure of FNR ensures a smooth exchange and flow of information.

#### **Title of Presentation:**

"Rural Energization through Bioenergy"

#### **Speaker:**

Dr. Gustavo Best

Senior Energy Coordinator

Food and Agriculture Organization of the United Nations - Rome

#### **Abstract:**

The concept of "energization" in the rural bioenergy context will be introduced. Focusing on the energy and economic dynamics of rural areas of developing countries, the presentation will highlight the particular role that bioenergy should play in promoting development and assisting poor societies out their present poverty situation. Since agriculture (and forestry) is at the base of most rural economies, particular attention will be given to the energy function that these sectors can play. The possible synergies between food and energy production will be highlighted as critical in avoiding possible negative impacts on food security. The presentation will stress the need to integrate under any bioenergy development scheme a series of elements such as: land and product tenure; energy and agriculture policies; water and forest management; farming practices; employment and other labour considerations; gender, equity and other social issues; production, conversion and utilization technologies; and national and international trade issues.

The presentation will stress the need for integrated action at the national level to make top-down approaches "converge" with bottom-up initiatives. Information will be provided on FAO's proposal for an International Framework for Bioenergy, a topic which will be discussed in the afternoon session of the Biomass Day.

**The organization:**

FAO, the Food and Agriculture Organization of the United Nations, has a long-standing global mandate from its member countries on the promotion of wood energy and agro-energy within the agricultural, forestry, and related energy demanding and/or producing sectors. FAO avails of the necessary multidisciplinary expertise in agriculture, forestry and economics to comply with this mandate. For many years, FAO has been developing multidisciplinary approaches and providing technical expertise in the field of energy, in particular, bioenergy.

**The presenter:**

**Gustavo Best**, Senior Energy Coordinator

***Food and Agriculture Organization of the United Nations (FAO)***

Dr. Best studied Chemical Engineering in his home country, Mexico. After his postgraduate studies in the UK he carried out research in thermodynamics and energy systems for 15 years in the National Autonomous University of Mexico - UNAM. He worked with the Economic Commission for Latin America and the Caribbean from 1980 to 1986. In 1986 he joined FAO where he has promoted an integrated approach between agriculture, forestry and energy issues. He has published a large number of articles and coordinates FAO's position in the energy and environment fields.

<http://www.fao.org>

#### **4) Organisation: World Alliance for Decentralized Energy (WADE)**

##### **organisation / institute**

"WADE, the World Alliance for Decentralized Energy, is a non-profit research organisation that was launched in June 2002 to accelerate the development of decentralized energy systems worldwide. DE technologies consist of:

- High efficiency cogeneration/CHP
- On-site renewable energy systems
- Energy recycling systems, including the use of waste gases, waste heat and pressure drops to generate electricity on-site.

WADE's Five Key Objectives and Programmes are:

- To bring about effective power sector reform which eliminates barriers to efficiency and creates real market opportunity for DE;
- To compile global data on all aspects of DE development;
- To support the establishment of DE groups in every country;
- To conclusively demonstrate the economic advantages of DE.
- To co-ordinate the creation and monetisation of high quality carbon credits from DE projects."

##### **Title(s) of the presentation(s)**

- Bagasse Cogeneration – Introduction to Concepts, Benefits and Project Case-Studies Michael Brown, Aurelie Morand, Research Executive, WADE.
  
- Global Potential Achieving the Potential – Energy Market Regulatory Challenges. Rian van Staden, ISES

##### **brief description of the speaker(s) of the presentation**

Michael Brown, Director, WADE (World Alliance for Decentralized Energy)

Aurelie Morand, see above.

Rian van Staden, Executive Director, International Solar Energy Society

##### **The scope of the presentation**

Bagasse cogeneration - introduction to concepts, benefits and project case-studies.

"Cogeneration describes the high efficiency generation of electricity and heat at the point of use and represents the most efficient means of deriving useful energy from any fuel. The milling and refining of sugarcane, one of the most important agricultural sectors in the developing world, is highly energy intensive and therefore represents an ideal opportunity for expanded cogeneration use, based on a renewable fuel - bagasse. Bagasse is the residue that remains once the juice has been extracted from the raw cane. WADE research indicates that the expanded use of bagasse cogeneration in developing countries can make a very significant contribution to rural economic growth and expanded access to clean electricity."

Michael Brown

Director  
World Alliance for Decentralized Energy (WADE)  
15 Great Stuart Street  
Edinburgh EH3 7TP, UK  
Tel: +44 131 625 3333  
Fax: +44 131 625 3334  
Mobile: +44 771 184 6933  
[michael.brown@localpower.org](mailto:michael.brown@localpower.org)  
[www.localpower.org](http://www.localpower.org)



## **5) German Biogas and Bioenergy Society GERBIO International Biogas and Bioenergy Center IBBK**

Fördergesellschaft nachhaltige Biogas- und Bioenergienutzung e.V. FNBB  
Internationales Biogas and Bioenergie Kompetenzzentrum IBBK

**Title of the Side Event:** Recycling Crops and Waste to Energy

### **Description of the organisation:**

FNBB e.V./GERBIO is a NGO and trust for no gain and an amalgamation and network of experts and companies, as well as interest groups and educational institutes in the field of biogas and bioenergy. The work covers regional, national and international activities. The organisation is setting up an additional impulse beyond the traditional lobby work and is striving to cover the growing demand for independent, neutral dissemination of information in the field of biogas and bioenergy. The main emphasis is in educational, project and consulting work. Supporting organisation of IBBK.

### **Presentations and Speakers:**

Michael Köttner, Dipl.Agr.Biol.

Managing Director of the International Biogas and Bioenergy Center of Competence IBBK and member of the board of directors of the German Society of sustainable Biogas and Bioenergy Utilisation GERBIO (Fördergesellschaft nachhaltige Biogas und Bioenergienutzung FNBB e.V.).

### **Theme: Biogas Production from Agricultural Feedstock and Energy Crops**

Scope: Energy crops in cofermentation with agricultural feedstock's have the most potential in energy production through biogas technology and are digested more and more frequently in agricultural biogas plants. The most technology development is taking place in this sector. Through the revised Renewable Energy Law (EEG) good frame conditions have been granted for a sound technical and economical development.

Heinz-Peter Mang, Dipl. Ing.

Member of the board of directors of GERBIO and project engineer at the GTZ sector project "ecosan". Biomass and Biogas expert with world wide experience for more than 20 years.

### **Theme: How to make sanitation and waste treatment sustainable and ecological?**

Scope: Waste treatment and sanitation technologies are often still end of pipe solutions in many countries of the world. In an ecological sanitation system a separation and effective anaerobic treatment of these wastes is taking place, which are not only producing energy in form of biogas, but also ensure hygienisation, nutrient reuse and the protection of water resources. Recycling beats disposal !!

Biogas Specialized Group

Heimstraße 1, 74592 Kirchberg / Jagst, Germany

Tel.: +49 - (0)7954 - 926 203

Fax: +49 - (0)7954 - 926 204

Email: [info@biogas-zentrum.de](mailto:info@biogas-zentrum.de)  
Internet: [www.biogas-zentrum.de](http://www.biogas-zentrum.de)

## 6) Southern African Development Community (SADC)

**Title of the Presentation:** Getting Biomass Energy Fit for the Future!

### **Description:**

Audiovisual Introduction into the current situation of Biomass Energy (10 min.)

Presentation of ProBEC objectives, approaches and successes (10 min.)

Panel discussion with four participants and one facilitator (60 min.)

Short statements (max. 5 min.) by each participant, then discussion with questions from the audience.

(10 min. buffer space)

### **Participants:**

Freddie Motlathedi, SADC	regional approach
Dr. Alison Doig, ITDG	smoky kitchens
Grant Ballard-Tremeer, HEDON Network	information exchange
Khamarunga Banda, SAGEN/Energia	gender + energy
Xy, Donor	funding

### **Facilitator:**

Dr. Stephen Karekezi, AFREPEN	to be confirmed
-------------------------------	-----------------

### **Scope:**

The side event shall give the audience an overview of measures for biomass energy conservation. After an introduction into the current situation of biomass energy, its pre-dominance in fulfilling energy needs and its current inefficient use, focus in the presentation will be on improved stoves and supporting measures. The panel discussion will take up the issue of the impact of improved stoves on gender, health and income and will discuss future necessary support.

### **Organisation:**

ProBEC (Programme for Biomass Energy Conservation) promotes the efficient use of biomass energy. It enables rural and urban low-income groups to meet their energy needs in a socially and environmentally sustainable manner. To achieve this aim ProBEC works together with governments, development organisations and private entrepreneurs.

ProBEC is a SADC (Southern Africa Development Community) programme, operating so far in 6 countries. The GTZ (Deutsche Gesellschaft fuer Technische Zusammenarbeit) has been commissioned to implement ProBEC.

## 7) “The Bioenergy Village”

### Interdisciplinary Centre of Sustainable Development, University of Goettingen

#### The organisation / institute

The Centre was founded in September 1998 as an innovative answer of different Departments of the University of Goettingen to implement concepts of sustainable development to society.

The objectives of the Centre are to stimulate and co-ordinate interdisciplinary research and teaching activities in the field of sustainable development and to promote the dialogue between University and the society, especially concerning the implementation of the Agenda 21.

The Centre is currently undertaking research activities in different fields where conflicts between economic, social and ecological objectives are particularly pressing and a contribution from the social sciences is especially promising:

- Evaluation and conservation of biodiversity in the context of the international convention on biodiversity;
- Local production of regenerative energy, mainly originating from biomass, and its economic, ecological, social, and psychological implications;
- Changes in individual life styles as a local Agenda 21 project;
- Development and monitoring of indicators of regional sustainability.

#### Title(s) of the presentation(s):

The bioenergy village – Ecological, Economical and Social Aspects

1.1 Impetus and Scientific approach

1.2 Technical, ecological and economical aspects

1.3 Motivation, participation and realisation

**brief description of the speaker(s) of the presentation** (Name, function, organisation, no more than three sentences of every speaker)

2.1 Prof. Dr. Hans Ruppert: Leader of the project “The Bioenergy Village”  
Interdisciplinary Centre of Sustainable Development, University of Goettingen

2.2 PD Dr. Ing. Marianne Karpenstein-Machan: Co-ordinator of the project “The Bioenergy Village”  
Interdisciplinary Centre of Sustainable Development, University of Goettingen

2.3 Dipl. Ing. Eckhard Fangmeier: Speaker of the Co-operative Bioenergy Juehnde GbR

#### The scope of the presentation

The central aim of the project is to switch the electricity and heat supply in rural areas from conventional to biomass energy sources. This is realized as a lighthouse project by the active participation of the population of the village Jühnde (Southern Lower Saxony), which is the first “bioenergy village” of Germany.

Our scientific team from the universities of Goettingen and Kassel has initiated that project and actually analyses the ongoing ecological, economical and social changes. Our long term goal is to develop social, technical, ecological and agricultural knowledge necessary for extending the bioenergy concept to other interested villages.

The economic basis of the project is guaranteed by the majority of the village households, which trust on the planned concept and voluntarily decided to get their heat demand from the central plants via pipeline.

## 8) POPULATIONS & DEVELOPMENT – NGO POPDEV

### The scope of the Organization:

#### POPULATIONS & DEVELOPMENT – NGO POPDEV

The NGO POPDEV is a Mauritanian organization of action of development and its goal is non-profitable and of public interest.

POPDEV helps the target peoples to promote themselves and to self-development toward:

- The adequation of actions to the needs of chosen groups,
- The participating approach,
- The reinforcement of the technical and organizational capacities of communal organizations. And this in the following domains:
  - Rural development (Agriculture, Breeding ...),
  - Environment (Biodiversity, Renewable energies...),
  - Micro – finance.

### Title of the Presentation:

Program Research – action on mechanism of financing of biogas

### Brief description of speakers:

- Mr. EL GHASSEM Aguibou Niang Specialist of Ecosystem of Sahel is member of the technical team of NGO POPDEV.

He is the Coordinator of the project durable Management of Yew Forest (Program of Biogas).

- Mr. BA Hamet Mamadou is an Economist; he is working at the Ministry of Fisheries. He is member of the technical team of NGO POPDEV; he is Responsible of the Communication.

### The scope of the presentation:

In the framework of the project durable Management of Yew forest, our NGO, in partnership with the **Mauritanian Association for Self – development (AMAD)** has as object to find the optimum means of financing in a community of interest (creation of a Popular Bank Saving and credit) in the locality of Wotchie (Mauritania).

In the first site, the Biogas Program has treated with the Saving Bank which finances the basic equipments of biogas and allows to all its savers members to benefit of biogas.

In the second site, the program entrusted the production and the distribution of a biogas to a small enterprise which treats individually with the savers of the Bank Saving.

The results of experience have shown that in the first case the solidarity assures biogas to every body but the system of collection of the dues is very difficult and the quality of management of the basic equipments is bad, however in the second case there are less solidarity (some homes can stay without biogas) but the pay of the royalties and the maintenance of the basic equipments are best.