BLP 2025

BIOENERGY FOR LOCAL PRODUCTION
INTERNATIONAL CONFERENCE

28 - 30 january 2025
Montpellier (France)

Local bioenergy for production units

Technical, social and economic aspects of current practices to meet challenges and promote innovation

Join us for three days of exchanges, experience sharing and building a sustainable energy future for SMEs.
Together, let's cultivate innovation for local and responsible bioenergy.

BIOSTAR DES BIOÉNERGIES POUR LES PME D'AFRIQUE DE L'OUEST

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INTRODUCTION

Today, **bioenergy** is an essential solution for ensuring a local and sustainable supply of energy for productive purposes, particularly for **small and medium-sized enterprises (SMEs).** Their development on a small scale for local use is fully in line with a **circular economy approach**, not only in Africa and Europe, but also in other regions of the world, underlining their universal character.

Combining and comparing technical, social and economic feedback, as well as the opinions of development players, private-sector players, decision-makers and researchers working on bioenergies, is becoming imperative to ensure their development and dissemination. The aim of this collaboration is to collectively identify methodologies and practices to be promoted, fostering the sustainable development of bioenergy innovations for the benefit of SMEs.

To achieve this goal, it is essential to develop bioenergy processes tailored to the specific needs of SMEs, by working on the **downscaling** of commercial processes. In this context, local manufacturing and maintenance become key elements, requiring adapted technologies that are easy to design and to maintain locally, and above all, accessible.

Disseminating these innovations, adapted to the needs and contexts of local stakeholders, requires a **multi-actor approach,** integrating innovation trajectories and an in-depth understanding of the interplay between stakeholders.

The challenges faced by the private sector and SMEs in controlling their energy supply can be seen in concrete examples such as agri-food processing, highlighting the close link between **energy and economic development.**

We need to create an environment conducive to the development of bioenergy for productive use, involving incentive policies and effective mobilization of key players. It is just as important to take into account the competition for biomass use, exploring strategies to ensure local synergies and make the best use of **biomass** in response to the specific needs of local stakeholders.

Finally, ensuring that **social impacts** and the **quality of working** conditions are monitored becomes imperative to guarantee the ethical and sustainable implementation of bioenergy for productive purposes in SMEs. This holistic approach underlines the crucial importance of balancing technical, social and economic aspects in the promotion of bioenergy for SMEs.

OBJECTIVES

This international conference is organized by all partners of the BioStar et Bio4Africa projects, under the auspices of the UNESCO IDBio Chair*. The aim is to bring together **researchers and development players** to discuss bioenergy innovations for productive use in small and medium-sized enterprises.

Base on field feedback and research & development work, the aim is to catalyze the promotion and sustainable development of bioenergies, integrated into a circular economy approach, whether in Africa, Europe or other regions of the globe.

Who are you?

- **Development and private-sector players:** share and benefit from feedback from the field, share knowledge and contribute to sustainable energy solutions.
- **Researchers:** present your research work and access concrete data and experience to enrich your research and catalyze new ideas.
- **Decision-makers and funders:** gather practical recommendations for implementing incentive policies and discover high-impact project ideas.

PROGRAM estimation

Four main themes will be addressed:

1. **Technical developments dedicated to the use of biomass energy by enterprises**
2. **Strategies for scaling up bioenergy innovations**
3. **Bioenergy as part of the circular economy**
4. **Bio4Africa project: bio-based solutions for sustainable agri-food systems in rural Africa**

In the form of:

- **Plenary sessions**: introduction to the main themes
- **Thematic sessions**: feedback presentations
- **Round tables**: forum for in-depth multidisciplinary and cross-disciplinary discussions, enabling participants to interactively share experiences, exchange ideas and collaborate to promote the sustainable development of bioenergy for small and medium-sized enterprises

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Session 1

Technical developments dedicated to the use of biomass energy by enterprises

Biomass is a key resource for the global energy transition, as it can be easily stored, unlike solar and wind energy. It therefore occupies an essential place in the modern renewable energy mix. In developing countries, although wood and charcoal are a major and often very cheap energy resource, the sustainability of their use is widely questioned. On the one hand, renewal of the resource is not always guaranteed, and the technologies used, which are extremely rustic, are not very efficient.

Among sustainable biomass sources, **residues from agri-food processes and waste** often offer an opportunity for local valorization within the companies that produce them, or in neighboring companies.

However, the heterogeneous nature of residues, and storage and supply constraints, make the use of these deposits more complex for companies than a solution based on charcoal or, even more simply, the use of fossil resources. Pressure on the climate and the need for an energy transition are prompting us to reconsider this position and integrate residues into energy resources. As well as environmental issues, **local social and economic ones are also important.**

The **development of innovative technologies tailored to the needs** of end-users and the resources of local manufacturers is a major challenge for the energy transition. Existing technologies on the international market, generally optimized for quality biomass (pellets, chips), are not adapted to the specificities of residues, the needs of local users or the technical constraints of implementation.

Thus, session 1 will provide an opportunity to discuss local technological solutions for residue valorization.

This session will focus on both heat production (hot water, hot air, steam) and electricity generation.

Session 2

Strategies for scaling up bioenergy innovations

In order to increase the impact of bioenergy innovations for productive purposes, this session will attempt to answer the question of scaling up innovations conceived on pilot or experimental scales, at the level of a few agricultural or agri-food SMEs.

We'll be looking at **strategies and conditions that are suitable for the deployment of innovations on the scale of agricultural and agri-food sectors,** or the transition from local to regional or national levels:

- Scaling up can be envisaged as early as the innovation design phase. So what are the **innovation trajectories** and the various players involved in the innovation process on which to draw? How can we confirm the validity on a wider scale (industry, sector) of a

bioenergy technological innovation conceived on a pilot scale with one or a few SMEs, and enable it to move on to an industrial phase? How can we support the transition to an industrial production phase? What strategies, systems and support measures are needed to enable this change of scale?

- What support systems and measures are needed to deploy and disseminate innovation on a regional, national or even international scale? How can we encourage the circulation of innovative solutions across territories? What regional or national support tools are needed for bioenergy development? Which strategic public or private players should be mobilized to give agricultural and agrifood SMEs access to bioenergies? What **public policies** are needed to promote the deployment of productive bioenergy technologies within agricultural and agri-food SMEs?

Session 3

Bioenergy as part of the circular economy

The **circular economy** is increasingly being put forward as a response to structural challenges and transitions in Africa. African countries can reduce their dependence on finite resources, diversify their economies and create new employment opportunities. The African Union Commission has drawn up the Continental Action Plan for the Circular Economy in Africa, which serves as a roadmap for the transition to a circular model. The agricultural and agri-food sector will need to create jobs in the territories over the next two decades, but is faced with limited access to resources, particularly energy resources.

Bioenergy is an option for **combining access to energy with local job creation**. Similarly, while agriculture employs over 60% of the population, food processing activities still account for only a small share of employment compared to agriculture. Yet these are fast-growing activities that could help generate jobs in the years to come, even if the development of these activities is often constrained by access to and the cost of energy, particularly for SMEs. In this respect, the development of bioenergy production is a way of generating added value and jobs through *clustering*.

Despite the potential of bioenergy in the agricultural and agrifood sector, there is still little feedback on models operating on a territorial scale, and few results on what they produce. Methodological challenges also remain in assessing the impact of the circular economy and its role in transitions.

In this context, session 3 will focus on the following questions:

- **Bioenergy production - food production – SMEs: which models** work, which don't, and why? How do they complement other energy sources (e.g. solar)? What lessons have been learned from the implementation of bioenergy promotion projects in the global South?

- How can we value **the impact of bioenergy**, particularly in terms of social and environmental gains? Quantitative impact assessment methods are ill-equipped to assess the social gains perceived by individuals in terms of well-being, health, the environment, etc.

- **Bioenergy and development:** what results, what impacts and what prospects? Bioenergy and the competitiveness of food processing plants.

Session 4

Bio4Africa : bio-based solutions for sustainable agri-food systems in rural Africa

During session 4, **Bio4Africa project's final conference** will present numerous cases of biobased solutions for rural Africa.

Robust agri-food systems are vital to combating poverty, enhancing food security and driving inclusive, sustainable development within African farming communities. The EU Horizon 2020 Funded project Bio4Africa will showcase several technological innovations implemented in four African countries that will give better opportunities.

These examples are around bioenergy (Pyrolysis, anaerobic digestion and HTL) but also **bioeconomy**, exemplified by Green biorefining, cascading of sidestreams for livestock, biomass for composite materials, biochar for soil amendment and water purification etc.

The questions to be reflected upon are how we can enhance more sustainable and profitable use of the bio-resources available to make better, more diverse and higher total value of the produced biomass and food.

INFORMATION & CONTACTS

Duration : 3 days
Location : Montpellier (France) – Campus Agropolis
Dates : january 28 - 30, 2025
Languages : english and french, with simultaneous translation
Audience : 150 attendees

Contact : blp2025@cirad.fr

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