

# Bio-based economy: Trends in Wallonia

**Rol van Biomassa in de Vergroening van de Vlaamse Economie**  
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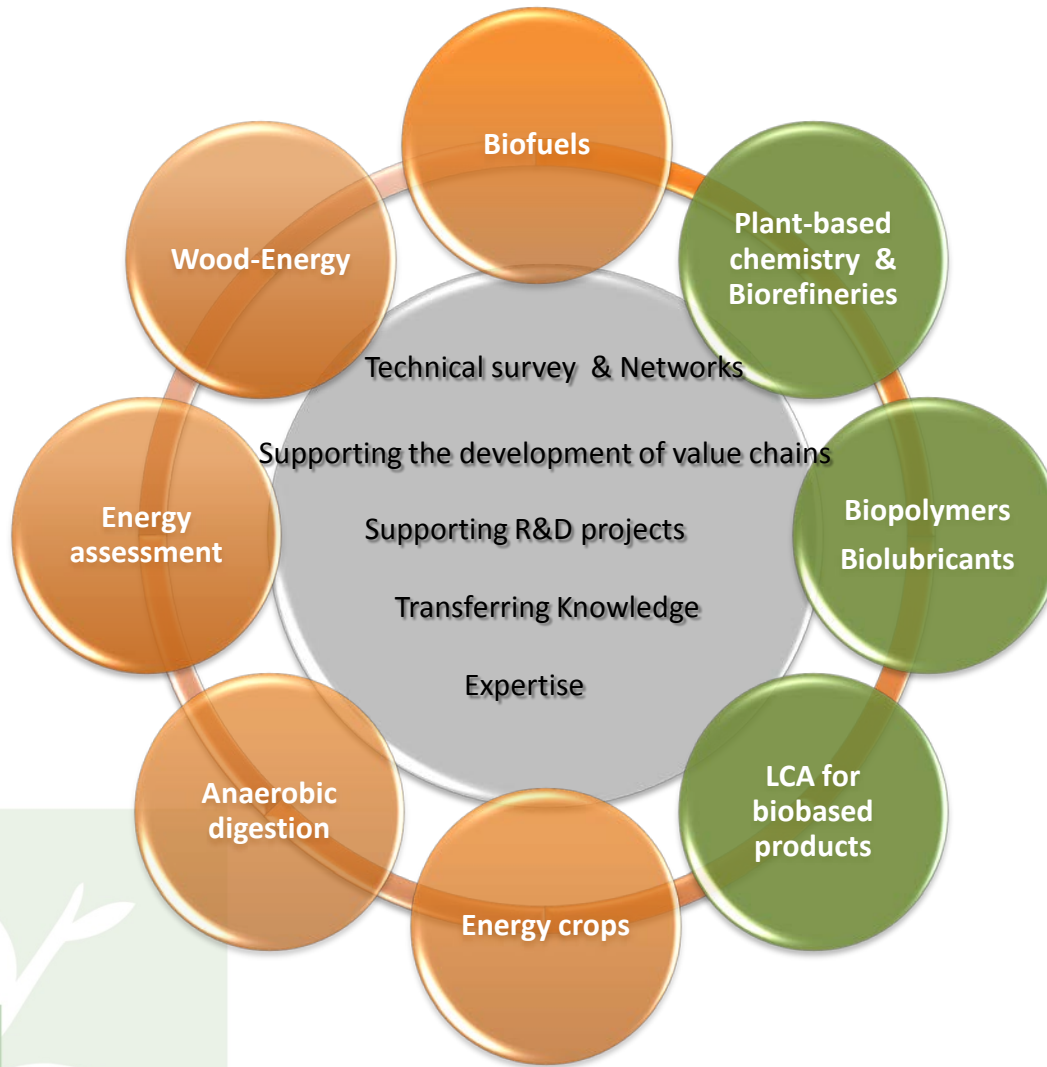
# ValBiom at a glance

- ValBiom is a non-profit association that works to promote the **non-food uses of biomass** while respecting the principles of sustainable development (Art.3 bylaws 7/1/2002).
- ValBiom is mainly funded by the **Walloon Ministry of Agriculture** and works in close collaboration with:
  - Gembloux Agro-Bio Tech (University of Liege)
  - The Catholic University of Louvain (UCL)
  - The Walloon Agricultural Research Center (CRA-W)



*Gembloux Agro-Bio Tech site, ValBiom*

# ValBiom at a glance



Biobased  
ENERGY Unit

Biobased  
PRODUCTS Unit



9 persons

# History: biomass inventories & enabling initiatives in Wallonia

1994

- Permanent inventory of Walloon **forest resources** (FUSAGx)

1995

- Inventory of **lignocellulosic biomass resources** for **energy production** in Wallonia (ERBE)

2002

- Annual report entitled “**Agricultural and Horticultural Economic Trends in the Walloon Region**” (SPW-DGO3)

2003

- Inventory of **lignocellulosic biomass resources** for **energy production** in Wallonia (ERBE)

2007

- Study on **wood energy resources** in Wallonia (UCL, consultant firm, and Wallonia)
- Walloon Government Decree: requirements for companies involved in an activity that is covered by the E-PRTR regulation to provide “waste” data required in the “Environment” survey form - Waste inventory (REGINE)

2010

- Walloon renewable energy action plan – **Biomass component** (VALBIOM)

2011

- Project « **Studie ter kwantificering van de biomassastromen, geproduceerd en geïmporteerd in het territorium van het Belgische koninkrijk met het oog op de productie van energie en van industriële producten** » (SPF environnement, VITO, CRAw-VALBIOM)

# History: policy & studies on biobased ENERGY in Wallonia

2001

- **Wood-energy plan** & Rural Development (PBE & DR)
- **Biomethanation** facilitator

2002

- Introduction of **Green Power Certificates system**

2004

- **Wood-energy** facilitators (for manufacturing sector and domestic use)
- **Liquid biofuel** facilitator
- Investment aids for Sustainable Use of Energy (**UDE**)
- “Wood –burning boilers “ and “wood stoves “ **grants** for households

2006

- Walloon Government Decree of 30 Nov. 2006 on the **promotion of electricity produced from renewable energy sources** or through **co-generation**
- **NEOCHIM** (Feluy) and **BIOWANZE** (Wanze): biodiesel & bioethanol plants

2007

- **FUTUR ENERGY**: Energy Research Mobilization Programme dedicated to Renewable Energies (LIGNOFUEL Project : development of an integrated conversion route to produce 2<sup>nd</sup> generation biofuels from lignocellulosics)

2009

- **Walloon Regional Policy Statement 2009-2014** : 20% renewable energy in 2020

2010

- Walloon Renewable Energy Action Plan – **Biomass component** (VALBIOM)
- Updating of the **Walloon Plan to Master Sustainable Energy** (PMDE) including Walloon biomass potential
- **ERABLE** : mobilization research programme on energy efficiency and **renewable energies**

2011

- **2050 low-carbon and renewable energy roadmap** for the Walloon Region – Biomass consultation
- CAPGEMINI: complementary study on **biomass**

# History: policy & studies on biobased PRODUCTS in Wallonia

1997

- **VALONAL** asbl

2002

- **VALBIOM** asbl (merging of VALONAL and BELBIOM) : **BIOBASED PRODUCTS** unit
- **Agro Food Valley** : first R&D Walloon center dedicated to **green chemistry**
- **Agrobiopôle wallon** : belgian center of excellence in agronomy & biotechnologies (doesn't exist any more)

2004

- **Industrial biotechnology and sustainable chemistry** (Comité de l'Académie pour les Applications de la Science, WG32)

2005

- Agro-Food Valley is changed to **NATISS**

2006

- **Chanvre wallon** asbl

2008

- Merging of NATISS and MATERIA NOVA in **MATERIA NOVA**
- **TECHNOSE**: excellence research program on **biorefinery** (ULg-GxABT)
- GIE **Walchanvre**: Economic Interest Grouping bringing together **hemp** actors in Wallonia

2009

- Essenscia Wallonia white paper "Create a 6<sup>th</sup> pole of competitiveness dedicated to green chemistry"
- **Sinopliss** asbl : coherent and unifying projects in the field of green chemistry (GxABT-ULg,UMH,ULB and Materia Nova)
- Strategic study on **hemp** (STRATELLIA)

2010

- ValBiom release entitled "Biobased products: a lead market for Wallonia"
- **CHANVRECO** : first plant to transform hemp in Belgium .

2011

- **GreenWin** competitiveness cluster
- **GREENOMAT**: mobilization research programme



# History : conclusion

## BIOMASS INVENTORIES

- Before 2010
  - Inventories mainly focused on **lignocellulosic resources** for energy purpose.
- Since 2010 with the Walloon Renewable Energy Action Plan:
  - **Identification of most data sources** allowing the estimation of the entire Walloon biomass potential,
  - But some biomass flows are **not well documented**,
  - And only biomass for energy is considered.
- Today, there is a need for an **integrated**, more **complete** (including biomass for biobased products) and **regularly updated** Walloon biomass inventory.





# History : conclusion

## BIOBASED ENERGY & BIOBASED PRODUCTS

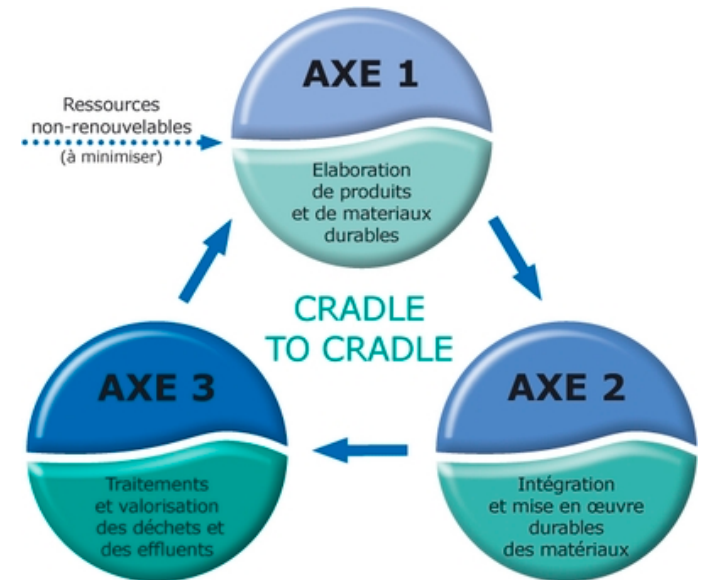
- Wallonia **has invested in bio-economy** but there has been **no specific dedicated strategy**.
- **Sustainable energy** has been one of the main topics of the Walloon government: programmes/subsidies related to bio-economy have been mainly directed towards **biobased energy** (but measures have been opened to all types of renewable resources).
- **Biobased products** have received less attention and the initiatives have been mainly launched by the **academic community**.
- Support of the bio-economy in Wallonia has been rather a **short-term vision** with initiatives/supports mainly directed towards biobased energy.



# Trends in biobased products

## GreenWin

- 24 February 2011: GreenWin is recognized as the 6<sup>th</sup> Walloon **competitiveness cluster**.
- GreenWin is focused on **materials life cycle** with a special interest in *green chemistry* and *valorisation/recycling* of raw materials.
- **Biosourcing** is one of the cluster strategic priority.
- A **strategic study on bio-economy in Wallonia** has been commissioned by GreenWin, in partnership with ValBiom. The study is mainly focused on the use of biomass for **biobased products** (biomass approached in terms both of “fresh biomass” and “waste”). The study is planned to be finalized by summer 2012. It will identify potential value chains leading to biobased products and will serve as the basis for the development of a Walloon strategy in terms of biobased products.



Source: [www.greenwin.be](http://www.greenwin.be)



# Trends in biobased energy

- In Wallonia, discussions about renewable energies go on
  - **Walloon Renewable Energy Action Plan**  
Biomass technical potential for 2020: 9900 GWh (ValBiom)
    - Scenario 1: the objective is 13% renewable energy in the final Walloon consumption (=19600 GWh) → biomass  $\cong$  50%
    - Scenario 2: the objective is 20% of renewable energy in the final Walloon consumption (=30200 GWh) → biomass  $\cong$  30%
  - **2050 low-carbon and renewable energy roadmap for the Walloon Region**
- ValBiom continues to be highly engaged in biobased energy issues



# Conclusion

## BIOBASED ENERGY / BIOBASED PRODUCTS

- Up to now, Wallonia has been traditionally oriented towards **renewable energy** and has supported **biobased energy**.
- Despite its strengths and potential, **Wallonia lags behind neighbouring countries concerning biobased products** strategy .
- There are **great expectations** concerning some Walloon companies or projects in the field of biobased products (PLA from GALACTIC/FUTERRO for example).
- With the strategic study commissioned by GreenWin/ValBiom, Wallonia is now **exploring the opportunities linked to biobased products** => 2012: building of a **clear and shared** vision of biobased products in Wallonia as a **long-term strategy**.
- What could be useful: develop a **Walloon policy for the biobased economy (energy AND products)** and then develop an **integrated policy at the federal level**.

## USE OF BIOMASS

- Biobased energy and products should be generally produced in Wallonia **using first local feedstocks** (fresh biomass, waste) and respecting the cascade order when relevant (FOOD&FEED/MATERIALS/ENERGY),
- But, **importing biobased feedstocks will be unavoidable** .



Thank you for your attention

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