



B-PAUPS

Exploratory project
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Coordination

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Keywords

Bioraffinerie

Biodéchets

Déchets organiques

Flexibilité

Résilience

Territoires

INRAE Divisions

[ECOSOCIO](#)

[TRANSFORM](#)

How can the local bioeconomy in areas with interlinked agricultural and urban characteristics combine products and services and develop the use of biomass by micro-structures?



Explore the benefits of the joint development of diversified, local bioeconomic activities in urban areas to answer the following question: can co-activity (i.e. one or more types of bio-refineries that jointly add value to services and products) within the same structure or several value-adding structures make it possible to increase the value of biomass and render micro-structures more sustainable, particularly in combination with intra- or peri-urban agricultural activities?

On the scale of urban areas or areas characterised by large urbanised zones, scrap or waste biomass not only have an impact but also represent a resource that can be recycled through processing within the bioeconomy. In cases where biomass management is already in place, the most widespread approach tends to be large-scale collection for centralised processing in large-scale units that are usually located far from the area where the waste biomass is produced. However, interest is growing in other possible solutions including local small-scale management and recovery. In addition to waste biomass in these areas, different kinds of biomass may also be available, produced by agriculture on the outskirts or even within urbanised areas (urban agriculture or the Creole garden model). Some of these biomasses are potential resources for small-scale intra- or peri-urban biorefineries aimed at producing high added-value products, but whose development models remain to be consolidated

Goals

In the above context, investigating the benefits of the joint development of diversified, local bioeconomic activities in urban areas, would help answer the following question: **can co-activity (i.e. one or more types of bio-refinery jointly offering services and products) within a single**



structure or several development structures increase the value of biomass and make micro-structures more sustainable, particularly when combined with intra- or peri-urban agricultural activities?

To answer this question, B-PAUPS first aims to define **original service bioeconomy and product bioeconomy concepts and to clarify the notion of proximity and micro-structure**. It will then explore the ways in which solutions linked to the two types of bioeconomy can be combined, by looking at the **constraints or opportunities from the point of view of the technologies** ('necessary but sufficient' or low-tech technologies; tools for biomass capture logistics) **and the economic and governance models that need to be associated with them to ensure sustainability..**

B-PAUPS will be a new form of collaboration between Guadeloupean and French research units on bioeconomy issues, and will be able to feed into the "ambition Guadeloupe" plan led by INRAE.

Partners

INRAE Division	INRAE units	Expertise and contributions
ACT	UMR SADAPT	Regional agronomy and agri-food metabolism, urban agriculture
AES	EU PEYI	Microfarms
ECOSOCIO	UR ASTRO	Modelling agricultural biomass supply and knowledge of farms
	UR ETTIS	Socio-economic models of the circular bioeconomy
	UMR MOÏSA	Management sciences and economics
PHASE	UR ASSET	Zootechnician, Characterisation of tropical plant resources; biotechnical innovations; knowledge of the local network
MATHNUM	UR LISC	Complex systems
SPE	UR ASTRO	Biological resources and diversity, treatment of waste by insects, health impact on plants
TRANSFORM	UR OPAALE	Process engineering; local bio-waste management
		Environmental assessment; transition drivers; low-tech
	UR PROSE	Processes (including micro-methanisation, bio-electro-chemical processes and possible coupling), adapted design of environmental biorefinery socio-technical systems in an urban context
	UMR SAYFOOD	Process engineering, decentralised processes, design (simulation/optimisation); sustainability assessment

Partners	Team	Expertise and contributions
Compost'ond	SME local bio-waste recovery solution	Economics, governance, low-tech engineering, agricultural education and consultancy contacts (Guadeloupe / Réunion).
ANTHROPILE	SAS Méthanisation	Development model for methanisation in Guadeloupe
ASTREDHOR	UMT FUP: Sustainability of Professional Urban Farms	Urban agriculture
Troyes University of Technology (UTT)	UMR INSYTE	Territorial metabolism and territorial ecology, metabolic city-agriculture relations, transition of agricultural territories
Arkeale	TPE micro methanisation solution	Expertise in the field of micro-methanisation, technical and economic aspects of local infrastructures, low-tech engineering, risk analysis and ICPE regulations, feedback from exchanges with local authorities, etc.



Métaprogramme
BETTER



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