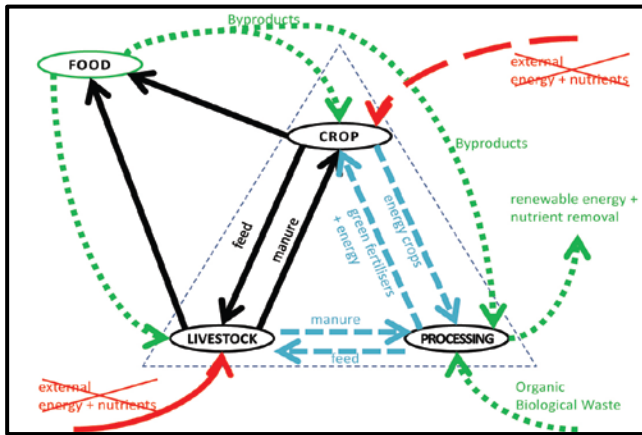


## INEMAD in short

INEMAD will concentrate on innovative strategies to reconnect livestock and crop production farming systems. New flows of energy and materials within the agricultural sector (or linked to the agricultural sector) will be analysed and will create opportunities for re-thinking the relation between crop and livestock production. INEMAD will address the question of what new methods and how new arrangements should be developed to restore the recycling within the specialisation context.



To realize these ambitions, the leading principle of INEMAD is a triangular enlargement of the traditional farming systems with a “processing” system (see figure). Processing is proposed as a third system, to be linked with crop and the livestock production, in order to increase agricultural productivity while reducing external energy input and closing nutrient cycle. Nutrient recycling can be done by biogas production and the use of digestate as fertilizer. Digestate can not only replace the manure but also chemical fertiliser because of its comparable properties. INEMAD will analyse improvements options for biogas plants, valorisation options for the digestate, improve the management by the use of optimisation models and compare organisational structures.

## INEMAD stakeholder involvement

The innovative ideas to be developed in INEMAD require a methodology that allows to detect sparkling ideas that pop up from people dealing with the problem on a daily basis. Stakeholder involvement is therefore important to be able to pick up these ideas and to make a quick scan to distinguish feasible from non-feasible ideas.

### WHO?

**FARMERS:** Arable farmers, livestock farmers, farmers union, extension services/advisors.



**PROCESSING SYSTEMS:** Energy and technology companies (incl. farmers or group of farmers with small scale installations), animal feed companies, companies that process organic waste from cities and produce compost, professional associations.



**POLICY SYSTEMS:** National ministries of agriculture, environment, spatial planning, rural development and finance (f.ex. tax systems); European policy makers (DG Regio, DG Agriculture); Regional and local government; Lobbyists, logistic firms, stakeholders from farming and processing systems.



## What can you do for INEMAD?

**Identify novel valorization strategies** to increase nutrient and energy efficiency in farming and processing systems; **Give your opinion on feasibility of strategies** implemented in other countries; What are **current problems in transport and processing** and related policies; **Enhance the understanding** between the different stakeholder groups and scientists; **Participate in surveys, interviews, focus groups** or other participatory approaches.

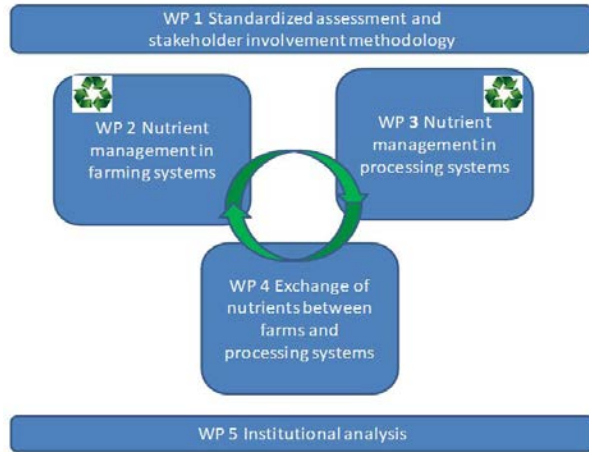


## What can INEMAD do for you?

Show the **fertilizer potential of end products**; Explains how to **upgrade digestate** from biomethanisation **to a balanced fertilizer**; Communicate on **the economic viability** of innovative nutrient recycling methods; **Develop tools** to calculate the **optimal location** for processing plants, the **optimal transport** of biomass or the best way to exchange fertilizer between farms; **Give policy advice and recommendations** on obstacles or incentive mechanisms to enhance nutrient recycling and biomass transport.

## INEMAD work packages

WP1 develops protocols for stakeholder involvement that will be used in WP2, WP3 and WP4. Stakeholder involvement is essential in the knowledge building process in INEMAD.



WP 2 will focus on the optimal use of new flows of fertilizers obtained from innovative forms of processing. Effluents of manure processing or digestate from biomethanisation offer new possibilities for improved fertilization in agriculture and partly solve the problem of manure disposal from the livestock sector. WP 3 describes the techniques for nutrient management at the processing level. The project will focus on technical and economic improvement of biomethanisation and the reprocessing of the digestate to valuable greenfertilizers or transportable rest products.

The focus of WP4 is on the interaction between different firms, which is very important to reconnect livestock and crop production. WP4 will develop optimization models to calculate the best location of processing plants or the optimal transport of biomass. WP 5 focuses on the legal aspects and policy advice on nutrient cycling. WP5 will describe and give policy recommendations on the legislation about fertilizers, urban planning, subsidies and systems for the development of renewable energy.



[www.inemad.eu](http://www.inemad.eu)  
[info@inemad.eu](mailto:info@inemad.eu)



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