

Algemene gegevens	
PPS-nummer	AF EU 13009
Titel	BioEcoSIM
BAPS nummer	BO-21.04-001-014
Topsector en innovatiethema	
Projectleider (onderzoek)	Volkert Beekman
PPS-coördinator (namens private partij)	-
Contactpersoon overheid	-
Status (lopend of afgerond)	lopend
Type onderzoek (F, T of V)	-
Werkelijke startdatum	01-10-2012
Werkelijke einddatum	30-09-2016
Korte omschrijving bijdrage DLO aan project (max. 4 regels)	DLO-LEI is the leader of WP7 (Integrated sustainability impact assessment) and is as such primary responsible for verification, using an approach based on ISO 14040 and 14044, of the economic, environmental and social sustainability of the BIOECOSIIM process.

Highlights

In the task 7.3 of the BioEcoSIM project, the impacts on the various factors included in the social, environmental and economic system viability assessment has been compared against the benchmark with state-of-the-art as based on data scoped, collated and modelled in the previous tasks 7.1 and 7.2.

Clearly significant results:

Environmental impact assessment:

- The Quick Scan calculations and report are completed.
- A table of content of D 7.1 Environmental sustainability report is compiled. The table of content is compiled in such a way that D 7.1 can relatively easily be rewritten into a scientific article, assuming that the results are of sufficient quality to be published in a peer reviewed scientific journal.
- Results from the Quick Scan LCA study are included in D 7.1 as far as possible, and introduction is added and several sectors have been expanded.
- ESankey software is purchased and the tutorial has been studied (ESankey will be used to graphically represent the updated mass and nutrient balances).
- Information is collected aimed at improving the input data (especially the emission and conversion factors) and methods used to evaluate the environmental impact assessment. The focus is thereby on the most important and uncertain parameters identified in the Quick Scan LCA, such as 1) nitrous oxide soil emissions from application of different types of manure and fertilizers, and 2) methane and nitrous oxide emissions from manure storage, and 3) mitigation options to reduce emissions from manure storage, and 4) performance of digestion chains. This information is also needed to update and complete the mass and nutrient balances of the selected manure processing systems.

Economic impact assessment

- The Quick Scan calculations and Quick Scan report have been completed.
- An overview diagram of manure processing systems has been constructed and implemented in the Quick Scan.
- A table of content is compiled of D 7.2 Economic sustainability report. The table

of content is compiled in such a way that D 7.2 can relatively easily be rewritten into a scientific article, assuming that the results are of sufficient quality to be published in a peer reviewed scientific journal.

- Results from the Quick Scan on economy have been included in D 7.2 with an introduction.
- Actual information on economic values has been collected and synchronized with the environmental impact assessment where relevant (e.g. mass balances). This will be an ongoing process during the whole project.

Social impact assessment

- A literature and Internet quick scan has been completed and delivered as presentation in April 2014.
- This quick scan indicated that transport, odour, health, scale and governance were the most salient social impacts to assess in addition to the economic and environmental impact assessments.
- Since May 2014 work has therefore focused on gathering more in-depth information about transport, odour, health, scale and governance impacts of BioEcoSIM in comparison to four state-of-the-art other manure processing technologies.
- This information will be gathered in a report to be delivered in April 2015.

Afterwards focus group discussions are scheduled within the proximity of the BioEcoSIM pilot plant and three other manure processing plants.

Aantal opgeleverde producten in 2014			
Wetenschappelijke artikelen	Rapporten	Artikelen in vakbladen	Inleidingen/ workshops/ invited lectures
	4		Harry Luesink, Co Daatselaar, Edward Smeets: 'Quick scan Economic & Environmental Impact manure processing systems'; :International conference on manure management and valorization, 5-6 December, Belgium