

Dear colleagues,

I am reaching out to you today because I am looking for support and input for a scientific project, that I am currently working on. The project is called MARA – „Meta-analysis of scientific data on the composition & effects of recycled fertilizers from human excreta“

Who am I?

I am a researcher at the Network for Sustainable Sanitation Systems (NetSan) e.V., based in Germany, Austria and Switzerland. I am an environmental engineer with a circular economy background and I started working in projects related to ROSS systems in 2019, both in scientific and coordinative roles.

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What do I do?

I am conducting a **meta-analysis** on the **quality and fertilizer value** of fertilizer products **from ROSS/NASS** (resource oriented sanitation systems) systems. The aim of the study is, to give a condensed overview of the current worldwide state of the science regarding these fertilizers. So I am primarily interested in data and literature from the past 15 years, from 2009 until now.

The study is being conducted in cooperation and exchange with expert committees, networks and scientific institutions, including

- The technical committee KA-1 "NASS - resource-oriented sanitation systems" of the German Association for Water, Wastewater and Waste (DWA) e.V.
- The special committee "Self-sufficient sanitary systems" at the German Institute for Standardization (DIN) e.V.
- Circular Sanitation Network Switzerland (VaLoo)

What am I looking for?

The products I am looking at are any kind of fertilizers obtained from separately collected human excreta, dry or also mixed with water (eg. Urine from UDDT, dry toilets with and without dry/liquid separation, black water with or without urine, yellow water). I am interested in publications and also unpublished data /grey literature on

- Fertilizer **production processes**/process control parameters
- Fertilizer **properties** (nutrient concentrations, hygienic parameters, contaminant concentrations (especially pharmaceutical and personal care product values)
- **Agronomic** information and studies (fertilizing effects, nutrient use efficiencies, soil- and ecotoxicological effects)

How can you help me?

If you have any **publications**, any unpublished **data sets** that you would allow me to use in the study / publish with reference, any contact to working groups / projects that could be interested to provide me with data, please contact me or forward my email. I am very grateful for any kind of input and support.

What is the purpose?

The meta-analysis should give an overview about the **current state of the science**. Results should be made available for different stakeholder groups like politicians, practitioners or scientists in several target-group oriented publications. The analysis should serve as a **basis for legislative processes** and should help politicians and decision makers to assess whether or not - and under which prerequisites - to include urine and feces based fertilizers into fertilizer ordinances, e.g. in the EU.

More information about MARA project:

<https://www.netsan.org/projekt-mara/>

Thank you a lot in advance! I am really looking forward to your reactions, ideas and information.

Kind regards,

Corinna Schröder

(she/her)

Languages: German/English