



## Linkages between Water, Sanitation and Food Production for Food and Nutrition Security

### Background.

There is a close link between the *human right to safe drinking water and sanitation* and the *human right to food*. Safe drinking water and sanitation are crucial for human health and nutritional up-take, while water and plant nutrients (often in the form of fertilizers) are indispensable for producing food. The ambitions of the Sustainable Development Goals are that all people should have access to safe water and sanitation, and all people should be food and nutrition secure. However, despite multiple linkages between water, sanitation and food production, these are often handled as separate sectors, both within research, governmental institutions and by practitioners. A holistic approach to providing clean drinking water, sanitation and ensuring nutritious food production is challenging and rarely addressed simultaneously. An expert group consisting of researchers and practitioners has been formed under the SIANI (Swedish Agricultural Network Initiative) umbrella in order to explore linkages between water, sanitation and food (WSF) sectors.



Please participate in our on-line survey:  
<http://goo.gl/forms/3zNqk4LGtoUD2mC3>

### The group aims to:

- identify most important linkages between water, sanitation and food production.
- map information and technology transfer between Swedish WSF actors and actors in low to middle income countries.
- develop policy recommendations for integrated management of WSF linkages in low to middle income countries.

The expert group is a result of collaboration between researchers and practitioners at KTH Royal Institute of Technology, Stockholm Environment Institute (SEI), Salvation Army, Stockholm Resilience Centre, Uppsala University, Swedish Agricultural University (SLU) and EcoRelief as well as contributors in workshops.



### MSc research on resource recovery from productive sanitation.

Master student *Daniel Ddiba* has successfully defended his master thesis at KTH on resource recovery from sanitary waste.

Daniel developed a tool in M.S.Excel to allow estimation of value of different recovery options for Kampala Uganda. Daniels results were well received at the *Kampala WASH symposium* (June 2016). Read more about Daniels work [here](#).

### Upcoming Events.

- Visit Dome of Visions (Valhallav.79, Stockholm) for exhibit on "Water Visions" and water tasting during August 2016. <http://domeofvisions.se/>
- Development Research Conference, Stockholm University: Contribute to discussions and policy recommendations during our Panel 34, Weds 24<sup>th</sup> of August at 9-10.30 am! <http://su.se/devres2016>
- *Synthesis workshop*: September 2016, Stockholm, exact date TBC. Please contact Helfrid to [participate](#)



We welcome Arslan Ahmad, Research Scientist at KWR Water Cycle Research Institute of the Netherlands. He is engaged in the development of innovative solutions including use of residues from drinking water production processes for application in agricultural fields to increase the soil nutrient content. More on Arslans work can be found [here](#).

# SIANI Expert group: Linkages between Water, Sanitation and Food Production for Food and Nutrition Security

## Workshop: Exploring linkages.

An inception workshop was held in March to explore WSF linkages. Introductory talks to set the scene by Linus Dagerskog, Sarah Dickin (SEI), Mats Johannsson (Eco-loop) and Anna Richert (WWF).

Causal loop maps were constructed, exploring important linkages between water, sanitation and food production as well as knowledge gaps and challenges to integrated management of WSF system. An example of causal loops developed is provided in Fig. 1.

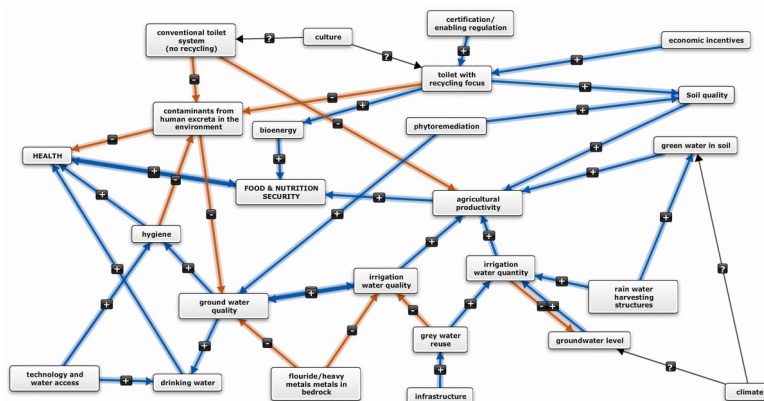


Fig. 1. Causal loops linking water, sanitation and food production for food and nutrition security and human health. Blue arrows indicate positive effect, orange a negative effect.



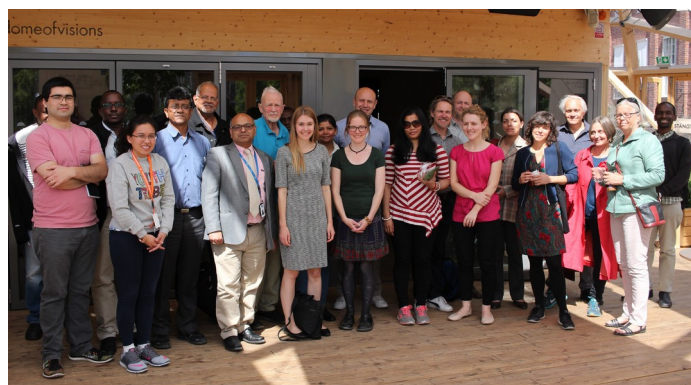
## Seminar: Water and Health – Do we dare drink the water?

Presenters: Tonie Wickmann (Stockholm Stad), Hanna Brandvik (Salvation Army), Helfrid Schulte-Herbruggen (KTH), Mattias von Brömssen (Ramböll), Ingegerd Rosborg (KTH), Gunaratna Kuttava Rajarao (KTH) and Prosun Bhattacharya (KTH).

Active discussions followed, which touched upon 1) the need to monitor a diverse range of contaminants, 2) the challenge of finding appropriate water treatment for local circumstances and 3) the importance on building on and strengthening local knowledge.



Discussions was followed by water tasting of 13 different water types. Opportunity to view exhibit and conduct water tasting is available *through-out August* at Dome of Visions! **Welcome!**



The events included researchers, practitioners and interested members of public from SRC, KTH, Tyréns, GWP, SLU, Salvation Army, SU, SP, WWF, EcoLoop, Campus Roslagen, Ericsson, HM, MSCE consulting, SCB, Action Aid and Eco Relief.

