Presentation

Presentation from the 2008 World Water Week in Stockholm

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The SuSanA working group on Food Security & Productive Sanitation Systems

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Stockholm
- collaborative partnership (more info: special session tomorrow 17:15 - 19:00 in room K21)
- over 80 participating organizations - open to all
- more than 10 working groups
- this presentation is only on the working group “Food Security & Productive Sanitation Systems”
the working group tries to

- catalyze synergies between (institutions engaged in) sanitation and agriculture

- raise awareness for re-use oriented sanitation and its valuable contribution to food security
working group participants
(selected institutions in alphabetical order)

- Aquamor (Zimbabwe)
- Ecosanlac (Ecological Sanitation for Latin America & the Caribbean)
- FAO (Food and Agriculture Organisation)
- gtz (German Development Cooperation Agency)
- IDRC (International Development Research Centre - Canada)
- IEES (International Ecological Engineering Society)
- IFAD (International Fund for Agricultural Development)
- IWMI (International Water Management Institute; CGIAR)
- PUVeP (Periurban Vegetable Project - Philippines)
- RUAF (Resource Centres for Urban Agriculture and Food Security)
- SEI (Stockholm Environment Institute / EcoSanRes)
- TTZ (Technology Transfer Centre, Bremerhaven, Germany)
- University of Essex (United Kingdom)
- Water for People
- WHO (World Health Organisation)
- Xavier University (Cagayan D’Oro - Philippines)

- and others
aimed deliverables

- general factsheet on the topic
- collection of supporting case studies
- practical guide(s) for farmers and extension staff
- co-publications like special journal issues (e.g. UAM 20)
- special sessions & presentations at international fora
to provide stakeholders with a brief but comprehensive overview

final version can be downloaded from SuSanA homepage: www.susana.org

hard copies available in Stockholm
to provide information on options for the reuse of excreta, greywater and wastewater in agriculture and aquaculture

- generic farmers’ guide and/or
- well structured template for locally adapted manuals and/or
- collection of local guides

- to be discussed at next working group meeting this Friday at SEI in Stockholm
case study collection

- to demonstrate the wide range of experiences and re-use options
- number of collected case studies increasing - but more are needed
  - co-composting of faecal sludge and solid waste in urban agriculture - Kumasi (Ghana)
  - ecological sanitation and reuse of excreta in urban allotment garden project - Cagayan D’Oro (Philippines)
  - wastewater use in aquaculture - Kolkata wetlands (India)
  - Gebers housing project - Stockholm (Sweden)
  - reclaimed water project (Jordan)
  - compost and biogas plant for farmers (Kenya)
  - urine use in aquaculture - West Bengal (India)
  - ...
Linking sanitation and food production

Household/school level

Municipal level (low-income countries)
Experiences from Ghana

1. Use of faecal sludge
   a) directly from septic tanks/trucks
   b) co-composted with organic solid waste

2. Use of municipal solid waste compost

3. Use of raw or diluted wastewater

4. Use of urine from public toilets
1a. Faecal sludge – direct use

- Yield booster
- Safe on cereals
- Wide adoption where dumped on farmers’ fields
1b. Faecal sludge – co-composted

- Yields clearly enhanced
- Safe product
- Limited adoption even with fully subsidized production due to easier access to poultry manure
2. Municipal waste composting

- Limited yield increase (low in nitrogen)
- Safe product
- Limited adoption even if subsidized due to low quality and farmers’ compost transportation costs
3. Wastewater use

- Yield increase + extra yield (water > nutrients)
- Not safe, but options for risk reduction known
- Widely used where water available close to farms
4. Urine as fertilizer

- Yield booster, but biased nutrient input (N)
- Safe product
- Even with subsidized collection and storage, only viable for farmers if delivered/stored on farmers’ fields
Feasibility study on urine use from public urinals in Accra

Replenishing nitrogen lost in 1.2 t maize

50 kg Urea
27 Euro

1000 kg poultry manure
10 Euro

7 m³ urine
34 Euro (only transport) + storage investment

Source: F. Tettey-Lowor, 2008
lessons from the Ghana cases

- solid and liquid waste supply is no limiting factor
- high theoretical demand from agriculture
- productivity gains are in most cases clear
- health risks are manageable
next steps of the Working Group 2008-2009

- continue the compilation of case studies
- continue to work on the farmers’ guide(s)
- continue to use events and conferences to promote productive sanitation and to allow the working group to meet
  - next meeting: this Friday at SEI

Thank you