Reconciling Sanitation and Resource Management (or CLTS and Productive Sanitation):

The “Clean and Green Village” concept

Linus Dagerskog
Research Fellow
SEI

2015-08-21
• Rural majority in SSA is projected to remain for another 25 years (UNDESA, 2012).
• 75% of the extremely poor (<1.25 $ per day) in SSA live in rural areas
• 62% of the rural population is extremely poor (IFAD, 2011).
Limits to present rural sanitation efforts

Narrow focus of common sanitation interventions in rural settings

Limited scalability/sustainability of many ecological sanitation projects

→ Need of new community intervention approach in rural communities:
  – Awareness of both risks/dangers and resources
  – Create demand for fertilizers and toilets/urinals that can provide them
  – Involve agriculture professionals

Desired sanitation outcomes
Dignity, convenience, health and environmental protection, sustained agricultural production, livelihood opportunities etc
Productive sanitation + CLTS = ?

Inherent conflict? Danger or Resources?
→ Danger AND Resources!

- **Movik and Mehta (2010)**: “*CLTS could fruitfully engage with ecological sanitation, finding synergies between CLTS’ focus on community action and emphasis on behaviour change and the ecosystems thinking characteristic of eco-sanitation that frame sanitation in terms of ecological resilience and robustness. Such an effort could offer huge benefits in terms of charting new pathways to sanitation that are both more robust and durable*”.

- **Kamal Kar**:  
  - Acknowledges that waste handling is not well addressed in CLTS.  
  - Concerned about distorting the CLTS concept of empowerment and expresses some doubts on the compatibility of the ecological sanitation approach: “…*the EcoSan community is struggling with community involvement and initial costs are very high. It is not a basket of choice and it is a prescription kind of approach*”.

Source: STEPS center seminar May 2014, “The potential of CLTS”;  
https://www.youtube.com/watch?feature=player_embedded&v=YfytuJ5b0D4
Productive sanitation + CLTS = ?
Initiating action research in Burkina Faso 2015/2016

• Revisit projects - synthesise learnings (now)

• Cross-sector collaboration:
  • Inspiration from intervention methods in agriculture and sanitation sectors
  • Setting human excreta in a larger framework of local organic resource management

• Draft methods and tools

• Pilot testing

CEFAME

INERA
CLEAN 1: Permanent Sanitation Village
- Durable latrines that are used
- Handwashing nearby and used

CLEAN 2: Total Sanitation Village
- Solid waste management
- Animal excreta management
- Drainage management
- Water point management
- Water quality control

GREEN 1: Conscious Village
>50% Productive Households

GREEN 2: Productive Village
100% Productive Households

Productive Household
100% of components addressed

Components of an improved and productive local resource management:
- Organic waste
- Animal manure
- Urine
- Feces
- Grey water
- Improved cook stove
- ...
<table>
<thead>
<tr>
<th>Recyclable resource</th>
<th>Component of interest</th>
<th>Examples of action/infrastructure for collection</th>
<th>Reuse</th>
<th>Relative importance compared to other waste fractions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ash</td>
<td>Fert</td>
<td>Collect and store in a protected space to avoid leaching</td>
<td>Additive to compost or direct application to crops/trees</td>
<td>Concentrated fertilizer, rich in K, P and Ca. N and S are lost in combustion. Significant quantity over the year. Ash is alkaline, important for acid soils.</td>
</tr>
<tr>
<td>Organic waste</td>
<td>H20</td>
<td>Collect and store in pits or in piles – preferably compost before use. Biogas production possible.</td>
<td>Apply decomposed as soil amendment</td>
<td>Important as soil amendment, quantity varies.</td>
</tr>
<tr>
<td>Animal manure</td>
<td>OM</td>
<td>Collect and store manure in pits or piles – good to cover and decompose before use. Mix with organic waste. Biogas production possible.</td>
<td>Apply decomposed</td>
<td>Important soil amendment – often present in significant quantities</td>
</tr>
<tr>
<td>Feces</td>
<td></td>
<td>Latrine for collection. Either empty after specific delay depending on the latrine type or plant a tree or similar on the full pit. Shallow pits can be more useful from recycling point of view. Biogas production possible.</td>
<td>Apply after hygienization (drying/decomposing/long term storage etc.)</td>
<td>Total quantity per year is not very large – however, rich in P and micronutrients.</td>
</tr>
<tr>
<td>Urine</td>
<td></td>
<td>Use of latrines and urinals that allow for urine collection, followed by storage or application on compost or trees or similar.</td>
<td>Apply either as nitrogen fertilizer (top dresser) or incorporate into compost</td>
<td>N dominant, but also P, K and other plant nutrients. 70-80% of the quantity of nutrients excreted are found in urine</td>
</tr>
<tr>
<td>Grey water</td>
<td></td>
<td>Collection or canalization for infiltration or direct reuse.</td>
<td>Good additive to compost or use together with organic matter, like mulch around trees</td>
<td></td>
</tr>
<tr>
<td>Use of improved cook stove</td>
<td></td>
<td></td>
<td></td>
<td>An improved cook stove can reduce the quantity of wood needed, can be significant</td>
</tr>
<tr>
<td>Other resources.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Challenges

Setting up the certification system

• Deciding on important resources to be included/reused? Authorities, communities?
• Level of reuse needed for a specific resource to count as well managed/recycled
• Progress monitoring (who, how, when)
• Over what time period should the reuse practice have been effective to « count »?
• Defining the process of certification (who, how)
• What indicators to chose for verification – often necessary to use indirect indicators such as presence of a technology and evidence of use (like composting pit)
• Certification – what exactly will it entail (price/certificate etc.) and how will it be celebrated?

Implementation

• Getting buy in from relevant institutions (ag/san/health/municipalities etc.)
• Develop appropriate sensitization tools
• Develop guides for facilitators/authorities
• Benchmarking and comparison between municipalities/villages to trigger interest (how)
• How to build in sustainability into the practices post certification?
Why Burkina Faso?

- The key sectors of sanitation and agriculture are under the same Ministry – Agriculture/WASH/Food security
- The Minister has assumed the leadership role for a Pan-African Productive Sanitation Initiative that African Union is mobilizing interest and funds around
- Burkina Faso has extensive research and implementation experience of productive sanitation
- CLTS with ODF certification will be the fundamental approach in the post 2015 sanitation strategy
- The post 2015 rural sanitation strategy is still under development and could include openings for reuse
- The SDGs will emphasize integrated approaches going beyond infrastructures and looking for synergies between sectors and interventions
Help!

- Is it relevant/interesting?
- Aspects of concern?
- Are there already similar systems of certification that exists in NRM/agriculture sector?