

Ecological sanitation

Ecological sanitation (ecosan) is aimed at closing the nutrient and water cycles. Nutrients from human excreta should be returned to the soil to fertilize crops. The success of ecosan projects is dependent on the effective implementation of policies. These new policies need to be supported by appropriate and functional regulations. Three key areas of regulation for ecosan are public health, environmental protection, and agriculture.

Current legislation and regulations

The regulatory frameworks that impact on ecosan projects were studied for four countries: Sweden, Mexico, South Africa, and Uganda. Within each country the regulatory institutions cover a range of scales from national to regional to the local scale. Regulations that will affect ecosan fall not only under water and sanitation sectors, but also under health, agriculture, and planning and building sectors. Various agencies and authorities are responsible for the development and enforcement of laws and regulations, and the follow-up and monitoring of the performance of the sanitation systems. Common among these four countries is a well-developed legal system at the national level. However, there are differences in their ability to enforce these laws. Sweden and South Africa both have strong local/municipal institutions that have the power and the resources to enforce the regulations. Uganda and Mexico either lack strong local institutions, or these institutions fail to make use of the available regulations. This creates an implementation deficit.

Differing interpretations of regulations

One challenge, when looking at the regulatory framework regarding sanitation in different countries, is that the term "regulation" is not understood in the same way in different legal traditions. There are also differing traditions of

compliance or non-compliance to any existing regulation.

Political interference and longevity

Political decisions are needed to make progress regarding water and sanitation services. Political interference can become a problem when decision-makers (politicians and civil servants) try to change the rules of the game after they have been set, or try to influence the regulator to take decisions that favour political interests over society's interests. One way of minimizing the risks of political interference is the division of powers at the municipal and regional levels between the politically elected members of different boards and the municipal employees in charge of implementation of political decisions. This division is done in Sweden and Uganda, in contrast to the Mexican system where almost everybody, including politicians and employees, is replaced after each election. The system employed in Sweden will al-

low for strategic, long-term planning and decisions, which will be difficult if most or all employees of the municipality are replaced every three years, as is the Mexican case. However, more inertia and less motivation for change could be drawbacks of the Swedish system.

Gaps and overlaps in agencies and their mandates

Gaps and overlaps in the mandates of different agencies might render the implementation of large-scale ecosan projects difficult due to, among other things, confusion in applicable legislation and non-compliance of regulation by both the governing agency and the private sector. Major gaps can include the lack of a legal definition of human excreta, which agency or institution is ultimately responsible for the organic material produced, and what methods should be used for treatment, reuse and disposal. Overlaps can include scale issues, where agencies at varying levels of gov-

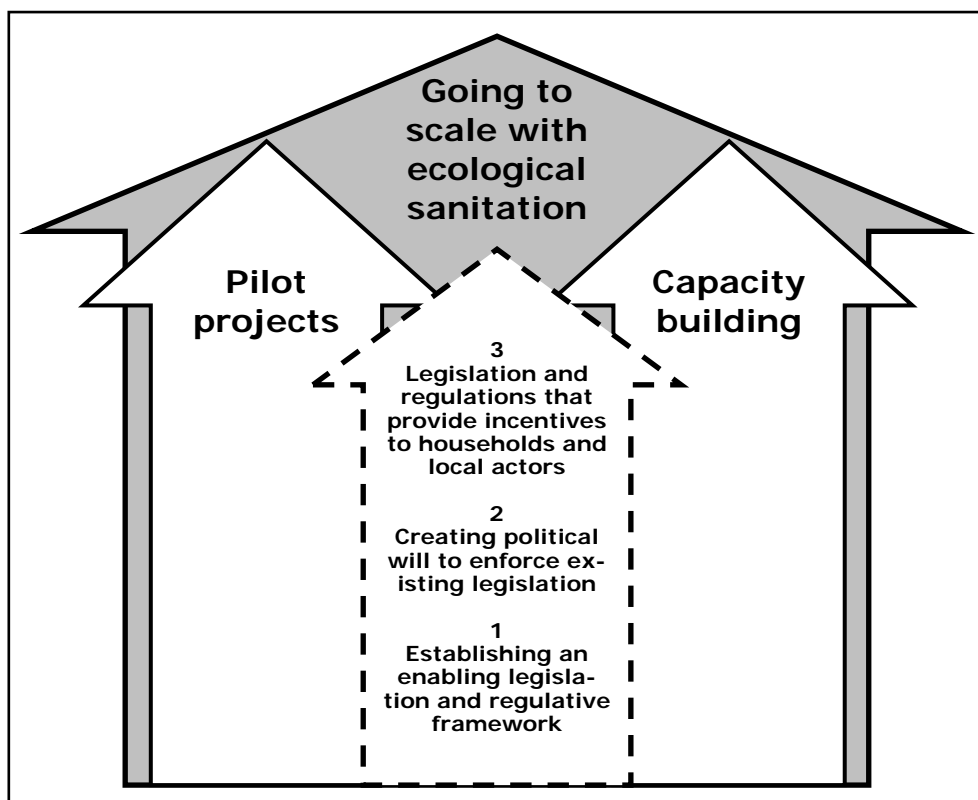


Figure 1: Conceptual illustration showing the need for legislative aspects to be part of both pilot projects and capacity building activities

* Based on Johansson, M., Kvarnström, E., Ramos, L. E., Cordova, A., Sawyer, R., Holden, R., and Semakula, P. 2005. A Review of Sanitation Regulatory Frameworks. EcoSanRes Publication Series. Report 2005-1. Stockholm Environment Institute; Stockholm, Sweden. Available from www.ecosanres.org

ernment are responsible for different aspects of the same sanitation system.

Formulation and implementation of sanitation policies

When implementing ecological sanitation the regulatory framework may be ineffective even if there are national or regional laws with strong objectives. In all the studied cases an implementation deficit has been identified in relation to the existing regulations. Appropriate legislation, coupled with sufficient fiscal and budgetary discretion to provide services and monitoring, is of utmost importance in provision of sanitation services. Possible reasons for implementation deficits include:

- outdated legislation or legislation based on international recommendations without being adapted to the country setting;
- new legislation/regulation has not been integrated into the daily implementation of the responsible authorities at different levels;
- inconsistencies in bordering legislations/regulations /responsibilities of enforcement;
- lack of personal/financial resources or knowledge/capacity for the responsible authorities and actors, one possible effect of an incomplete decentralization process; and
- lack of public adherence to the legislation/regulation.

It is important to stress that the development of legislation/regulation on the national level is an internal affair that must be undertaken by national experts in order to guarantee the appropriateness of the legislation to the context. Moreover, it is important to remember that legislation might quickly become outdated if it is too specific and that one needs to strive for a balanced situation between legislation and regulation.

Barriers to ecological sanitation

Barriers to ecological sanitation can derive from regulatory gaps, concur-

rent jurisdictions and policy implementation weaknesses. The lack of capacity and resources to meet the implementation deficit is a major barrier against the implementation of ecological sanitation, as are the weak institutions and the seemingly universal lack of political will for sanitation. Outdated legislation which is not harmonized with related legislation or overall development in the sector is also a significant barrier. Many of the barriers and impediments to implementation of ecological sanitation are similar to general aspects documented for the water supply and sanitation sector as a whole. Therefore, it is essential to document and disseminate lessons learned within the water supply and sanitation sector in each country and also within each region. It is important to, at an early phase, draw the "institutional map" for each setting and identify the barriers for a specific project or programme.

Opportunities for ecological sanitation

The existing legislation and regulation can in many cases, if enforced, serve as a good platform for promoting the implementation of sanitation systems such as ecological sanitation. New interpretations or minor changes to existing legislation and regulation can create opportunities for ecological sanitation. By raising political will at the local or regional level the regulatory framework can be changed and allocation of resources for implementing the rules will create incentives for households to choose an ecosan solution. The opportunity of an "allowing" or flexible legislation based on principle rather than technology would make it possible for households to make the changes themselves as long as their activities remain within the legislation. A combination of awareness raising and the availability of affordable and acceptable sanitation systems can lead to progress at the household level.

Target areas for ecological sanitation projects

Specific areas that need to be addressed for ecological sanitation projects include:

- Identification of opportunities for the promotion of ecological sanitation within existing regulatory framework;
- Lobbying for implementation and enforcement of existing legislation that is supportive of ecological sanitation;
- Proposal of reforms of parts of the legislation/regulation that have been identified as crucial to embrace ecological sanitation; and
- Work with demand-driven approaches to sanitation.

Creating the political will for EcoSan

An enabling legislation and regulatory framework do not alone produce the fulfilment of the desired objectives of solving the sanitation problem. Without a political will and the institutional capacity to enforce and implement the regulations from the national level down to local level the laws will remain beautiful words that do not call for action. Creating the political will to solve the sanitation problems at all levels in society is a major challenge. It is appropriate to ask if there will be more support and political will for ecological sanitation in a country than there is for conventional water and sanitation. The specific benefits of the closed loop approach must be communicated and promoted in such a way that the advantages of ecological sanitation, compared to other available sanitation systems and approaches as well as to the "business as usual" alternative, become obvious to politicians and decision-makers.

Political endorsement and support are a key element of policy development while political will is needed in implementation. Much effort must be devoted to political facilitation of policy reforms and the enforcement of the policies for ecosan to be successful.

www.ecosanres.org



Stockholm Environment Institute
Kräftriket 2B, 10691 Stockholm, Sweden
Tel +46 8 674 7070 Fax +46 8 674 7020
www.sei.se



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