Improvement of Faecal Sludge Management Strategy (FSM) in Thailand

Thai authorities, academia, the private sector, and citizens have contributed to the development of a national strategy to improve FSM in Thailand. Thammarat Koottatep[1], Supattra Jiawkok[1], Antoine Morel[2]

Introduction

The pollution control authorities in Thailand have until recently used a technical approach to solve the problems of faecal sludge management faced by the municipalities in the country. Since local knowledge, capacities and perceptions of local authorities, service providers and households were ignored; the strategies applied were not adapted to the local context and thus failed. The Department of Health (under the Ministry of Public Health) and the Asian Institute of Technology (AIT) recognised the problem and launched a project to identify the main limitations to more sustainable FSM in Thailand and to develop a strategy to overcome these limitations.

Objectives and activities

The project was conducted within the framework of the Partnership Actions for Mitigating Syndromes (PAMS) component of the NCCR North-South research programme (box). The main objectives of the project were to (i) review current sanitation and faecal sludge management practices, (ii) identify the main stakeholders affecting or affected by FSM, (iii) determine the factors affecting faecal sludge management, and (iv) define a strategy to increase the sustainability of FSM in Thailand [1].

A case study was conducted in the Baan Klang municipality, Lamphoon Province in northern Thailand (Photo 1). Current sanitation and FSM practices were determined based on a household survey and focus group discussions. Performance of FS treatment plants (constructed wetlands) was assessed on the basis of conventional performance indicators (organics, nutrients, pathogens). A SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was conducted in multi-stakeholder consultation workshops. The outcomes of this analysis were (i) discussed in a national workshop to define an action plan to improve FSM in Baan Klang and (ii) used as a basis to develop a national FSM improvement strategy.

Photo: AIT

Photo 1: Constructed wetlands for FS treatment in Baan Klang municipality, Thailand.

Barriers to sustainable FSM

A review of the current management practices in Baan Klang revealed that 97 % of the FS is currently discharged untreated onto agricultural land, into aquaculture ponds or surface water and only 3 % of the FS is treated. The following causes for ineffective management of FS were identified by the focus groups:

(i) FS treatment capacities are insufficient.
(ii) Treatment plant operators are not well trained.
(iii) FS emptying services perform poorly, illicit sludge dumping remains unpunished.
(iv) Current legislation is not enforced.
(v) Management capacities at municipal level are insufficient.
(vi) The lack of strategies, activity plans or budget to improve FSM are attributed to the fact that FSM is low on the priority list of municipalities.
(vii) There is a general lack of public awareness on the importance of FSM.

National FSM strategy

The multi-stakeholder dialogue resulted in the definition of a FSM improvement strategy comprising four main components:

1. Building FSM capacity al local authority level, including (i) implementation of an administration system, (ii) increasing human resources, (iii) allocating a budget for FSM, (iv) implementing a customer service system.
2. Promoting dissemination of the state-of-the-art FS collection and treatment technologies (e. g. improved sludge emptying trucks, vertical-flow constructed wetlands for FS treatment).
3. Raising awareness on the need to improve FSM by disseminating local and national information and national monitoring systems (cf. below).
4. Creating a national monitoring and evaluation system of municipal FS management (i. e. FS emptying, treatment and reuse). The evaluation will be based on Key Performance Indicators (KPIs).

Next steps

The strategy, developed within the framework of the PAMS project, was endorsed by national and provincial authorities under the Ministry of Public Health (MoPH). Though a clear concept on the implementation strategy is still missing, some components are currently being put into practice. AIT is, for example, currently supporting the MoPH in revising national regulations on faecal sludge management (including emptying, transport, treatment, and disposal, where the outcome of PAMS is introduced. MoPH has also invited NCCR researchers to conduct training courses on improved FSM and sustainable sanitation for local authorities in Southern, North-eastern and Central Thailand.

[1] Asian Institute of Technology (AIT), Thailand
[2] Eawag/Sandec, Switzerland
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NCCR North-South PAMS component
This project was conducted within the framework of the PAMS component of the NCCR North-South research programme. PAMS are a vehicle for testing the applicability of developing research results. Each PAMS project is designed to implement strategies developed jointly by researchers and local stakeholders.
Further information www.north-south.unibe.ch

[1] Koottatep, T. and Jiawkok S. (2008): Effective sanitation systems through stakeholder involvement: A case study of faecal sludge management in Thailand. PAMS Final Report. Berne, Switzerland: National Centre of Competence in Research (NCCR) North-South.