Optimizing the faecal sludge management scheme in Ouagadougou, Burkina Faso

This paper shows the benefits of involving local stakeholders such as collection and transport operators and municipal representatives in the development of an optimized faecal sludge scheme.

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Introduction

In 1996, the National Utility of Water and Sanitation (ONEA) in Burkina Faso was one of the first West African National Utilities to adopt a National Sanitation Strategy including faecal sludge (FS) management. ONEA is thus responsible for the challenging task of organising effective FS management for about 90 % of the population served by on-site systems in Ouagadougou, the capital city.

The French Agency for Development (AFD) provided funding to establish a three-year partnership between ONEA and the Department of Water and Sanitation in Developing Countries (Sandec) at the Swiss Federal Institute of Aquatic Science and Technology (Eawag). One of the main goals of this unique collaborative partnership is to implement sustainable solutions for FS management by joint research, stakeholder capacity strengthening, and the design of guidelines and tools. This article presents the activities conducted in collaboration with ONEA to develop an adequate institutional framework for FS management in Ouagadougou, and strengthen the capacities of the collection and transport companies.

Initial assessment of the situation

FS production in Ouagadougou is estimated at 500–1000 m^3/day, with an increase during the rainy season (Koanda et al., 2010; Bassan et al., 2010; Pöyry, 2010). To avoid the discharge of this liquid waste into the environment, ONEA plans to construct four FS treatment plants with unplanted vertical-flow drying beds in the two main cities of the country, Ouagadougou and Bobo-Dioulasso. The end product of the drying beds (leachate and biosolids) will be further treated for potential use in agriculture.

An institutional assessment was conducted to understand the stakeholders, legal documents and activities that need to be taken into account for the design of the institutional framework. The stakeholders involved in FS management were assessed, and representatives of the stakeholder groups participated in informative and consultation workshops. They include ONEA's staff, FS collection and transport entrepreneurs, but also local universities, ministries in charge of water, environment, land and health, municipal technical services and policy, local press, AFD and NGOs. The analyses revealed a lack of human resources dedicated to sanitation in several institutions, a weak coordination of the stakeholders, a need in capacity strengthening concerning the FS management modes and technologies, and the necessity to develop measures to ensure institutional efficiency.

Key facts:

- Three years of collaboration between ONEA and Eawag/Sandec to assist the planning process for faecal sludge treatment plants in Ouagadougou
- Need for an increased communication among the local stakeholders to allow an optimized management scheme for the faecal sludge
- Need for an increased recognition of faecal sludge collection and transport operators by the official stakeholders and the population in order to ensure the sustainability of the management chain
- Design of several official documents (partnership agreement, decree, license, …) regulating the collection and transport of faecal sludge to ensure its discharge at the treatment plants in environmentally acceptable conditions, and the coordination of the local stakeholders.

The current sanitation policy in Burkina Faso comprises four main components that unfortunately do not define the responsibilities and quality standards for the FS supply chain, or their enforcement (Bassan et al., 2012):

- The code of environment requires everyone to dispose of urban waste properly (Assemblée des députés du peuple du Burkina Faso 1997).
- The decree regulating urban waste storage, collection, transport, treatment, and disposal, requires FS to be transported to treatment or discharge sites in special vehicles.
- The discharge standards set limits for pollutants release into the air, water and soil.
- The code of public hygiene appoints local authorities to manage urban waste and provide sanitation services.
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The analysis revealed that the collection and transport operators require strong recognition at the institutional level, as well as capacity strengthening. This is a crucial condition to ensure the sustainability of the FS management chain. Indeed, they face difficulties in disposing of the large quantities of FS produced in Ouagadougou due to the long distances to illegal discharge areas and harassment by police and the population. They are not involved in urban planning programmes, do not benefit from government assistance, have poor business management skills, and often operate in poor hygiene conditions. On account of financial difficulties, only 60 % of the FS collection and transport operators surveyed in 2007 were still active in 2010. Thus, focus should be placed on strengthening the organisation of these stakeholders.

Institutional development and capacity strengthening

The crucial information obtained during visits, interviews, workshops and informal meetings allowed the organisation of a consultation platform to define an optimized management system for FS. The following official draft policies and documents were developed:

1. A decree on FS collection and transport in Ouagadougou regulating:
   - Type of FS and obligation to discharge in authorised sites.
   - Provision of an official address by the collection and transport operators, registration of information related to their activities and payment of discharge fees at FS treatment plants.
   - Safety equipment and health measures required.
   - Right of collection and transport operators to establish their service price.

2. A municipal license authorising the collection and transport operators who adhere to the above decree to deliver their services for a period of three years.
3. A partnership agreement between ONEA and the municipality defining their responsibilities in terms of awareness raising among the population, establishing discharge and treatment sites, enforcing a regulatory framework and assisting the collection and transport operators (Figure 2).

The consultation activities of the collection and transport operators conducted from June 2010 to 2012 allowed to improve their recognition by the other stakeholders. Several information workshops were also held to discuss their difficulties and develop solutions. Their professional association was thus reorganized, and

Figure 1: The collection and transport operators often lack of management skills, safety measures, and operate in poor hygiene conditions (photo: T. Tchonda)

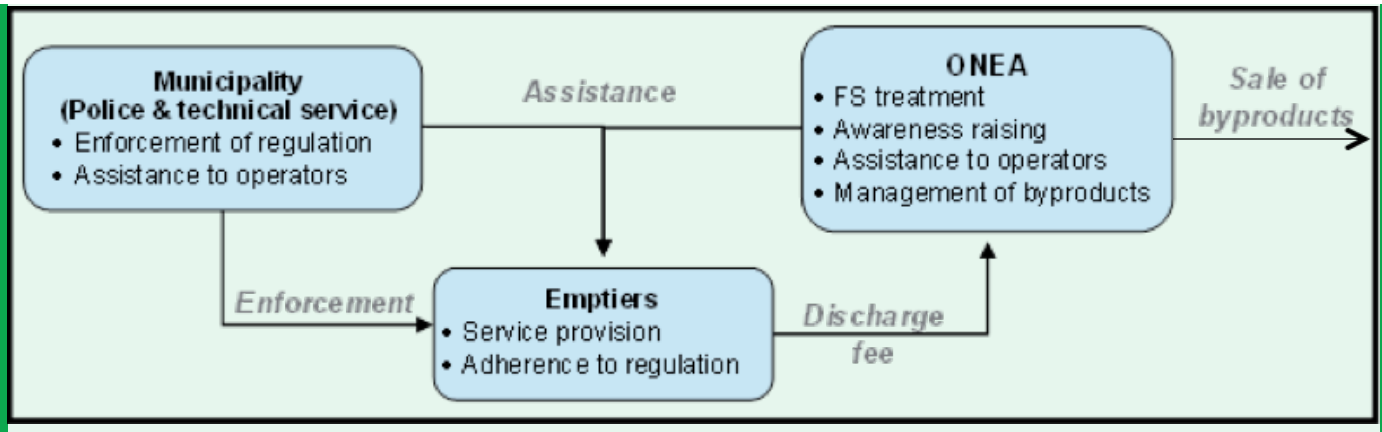

Figure 2: Stakeholders' responsibilities (boxes) and their relationships (arrows).

guidelines developed to provide information about on-site sanitation, safety, hygiene practices, and financial management of the collection and transport companies. This document was used as a basis for a training held to strengthen their management practices, improve their capacity to communicate with customers, and initiate associative activities.

Conclusion

The uninterrupted flow of communication throughout project implementation has created a very strong collaborative exchange and trusting environment between ONEA and Sandec. The participative process has also allowed the official involvement of the collection and transport operators, who are often not considered in urban planning, and provided other stakeholders insight into their difficulties and weaknesses. The exchange between the authorities, sanitation experts and collection and transport operators is crucial as it improves the quality standard of these services in terms of hygiene, safety and environmental protection. Both the participative process and the resulting documents may readily be adapted to other cities and countries and contribute to adequate and appropriate FS management.

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