Sustainable Financing

Sustainable financing of Water, Sanitation and Hygiene (WASH) services needs an adequate mix of public and private financing, and significant reliance on local finance options. Dutch WASH Alliance partners RUAF and WASTE have explored options for the financing of new sanitation by linking safe and productive use of waste for urban and peri-urban agriculture. How? By including this use in the sanitation value chain, and by valorisation of urban waste with clear benefit impacts for the urban and peri-urban agricultural sector.

Main WASH strategies

In order to improve the financial sustainability of the WASH services we follow four main strategies:

1. Stimulating business approaches: assisting actors in the value chain to analyse the market chain and looking for opportunities
2. Promoting private sector involvement: involving private entrepreneurs and financial institutions
3. Developing innovative financing concepts: developing adequate mixes of finance (both public and private) for innovations and new enterprises
4. Tracking and utilizing government (WASH) budgets: with and for relevant service providers and government institutions

In this mini-magazine you can read all about sustainable financing of water, sanitation and hygiene services. We present to you inspiring stories from the ground and share practical tips and tricks on financing WASH. Have a good read.

RUAF: Facilitating the development of sanitation business

Within the Dutch WASH alliance, the RUAF Foundation focuses on the issue of safe and productive use of wastes. RUAF collaborates with local partners in Ghana, Nepal, Kenya, Bangladesh and Ethiopia. In each city the potential for resource recovery and UPA is unique and requires proper analysis, planning and policy development. The main aim of this work is to facilitate the development of sanitation business models and pilots or demos that fit within the development momentum of the selected towns and cities.

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Linking WASH and Food Security
Lack of access to sanitation negatively impacts food security, but at the same time both issues are linked in seeking solutions. Increasingly it is acknowledged that WASH issues need to be seen in relation - a nexus - to areas such as health, food security, energy and economic growth. There are multiple interactions, and taking such a nexus perspective helps to identify drivers and enabling factors, and can create synergies. Sanitation systems allowing for reuse of treated water, nutrients and energy facilitate important energy savings.

Integrated and sustainable
The safe treatment and productive use of domestic wastewater and human excreta (urine and faeces) have been important issues throughout history, whether related to protection of the environment or to growing food. The idea is not new, but limitations do prevent scale up, and these include issues other than technology. The idea includes a variety of sanitation system solutions that aim to make productive use of the nutrient, organic matter, water or energy content of human excreta and wastewater in agricultural production and aquaculture. Such solutions can be sustainable, if adequate emphasis is placed on understanding the functioning and dynamics of technical, institutional, social and economic aspects. New, integrated approaches are being developed to overcome these limitations: WASH fosters a business approach, multi-stakeholder involvement and cross-sector partnerships.

Creating demand and seeking scale
An increasing number of entrepreneurs are engaged in activities such as commercial recycling and the reuse of faecal sludge. As a result, urban and peri-urban areas are hot spots for various resource recovery options. There is general agreement that reaching scale is better accomplished in urban areas, although the market for water, nutrients and energy products might also have to be sought out beyond farming (urban departments in charge of landscaping or the private sector engaged in housing) and in the peri-urban and nearby rural areas (rural farmers and enterprises).

Farmers meet sanitation service providers
From a sanitation point of view, urban agriculture as well as wastewater-fed aquaculture, offer opportunities for converting urban waste into productive resources. Productive reuse of waste water in urban agriculture has the potential to reduce the demand for freshwater supply as well as diminishing the discharge of untreated waste water into rivers, canals and other surface water sources. Urban waste water can be recycled for irrigation, fertilisation of horticultural crops, as well as for irrigation of forest plantations, and turning steep slopes or low-lying lands into urban green areas. Decentralised collection and composting of urban organic wastes also present opportunities to reduce the costs of public waste management, even whilst large quantities of nutrients are reclaimed. The reuse of faecal sludge as an alternative nutrient source for agricultural production will reduce the demand for finite mineral resources (like phosphorus) and lower the energy requirements for producing related artificial fertilisers.

Service & value chain
Opportunities for entrepreneurship and new product/market combinations can be created when the right actors work hand-in-hand to meet product demand needs. Key economic actors include sanitation service providers, engineers, farmers and financial institutions. The sanitation chain can generally be split into two distinct components:

a) Service chain: the delivery of services, related to costs
b) Value chain: opportunities for use of waste products, and creation of value
Read more about how we bring sustainable financing and business development into practice in Kenya, Nepal, Ethiopia and Ghana on the next pages.
Case #1 Business Opportunities in the Safe and Productive Use of Waste in Ghana

Tamale is the largest urban centre in Northern Ghana. In this rapidly growing city, people have to deal with developmental challenges such as limited drinking water availability, inadequate collection of urban waste and lack of planned areas for urban agriculture.

What did we do?
In Ghana, RUAF works on safe and productive use of water and sanitation products in urban agriculture. Together with a local partner - the University of Development Studies - RUAF developed a programme that focuses on capacity building, awareness raising, action research and the training of trainers. Monitoring activities and sharing experiences are other important activities within the programme.

Business opportunities
As a result, various scenarios to increase city resilience through urban and peri-urban agriculture were developed. Amongst these scenarios, some innovative business opportunities were recognised:

- Pit latrine emptying and use of faecal sludge by organised peri-urban farmers
- Organic waste separation and composting, including co-composting of faecal sludge
- Development and rehabilitation of public toilets
There is an increased influx of people settling along the Nairobi-Namanga route in the north of Kenya, bringing with it challenging burdens of rapid urban growth. This includes issues such as lack of access to clean and safe drinking water or inadequate collection of urban waste.

**What did we do?**
As part of our general WASH activities in Kenya, our partners worked together with the University of Nairobi to develop a number of sanitation and water business models and pilots to encourage agriculture as an alternative to cattle rearing. More specifically we raised awareness on recycling in relation to improving food production and rainwater harvesting systems.

**Business opportunities**
Our business development programme in Kenya resulted in the introduction of interesting business opportunities, such as the production of natural fertilizers (partly) based on human waste for intensive gardening or integrated institutional eco-sanitation to improve food production.
Case #3 Linking WASH to Urban Agriculture in Ethiopia

Within the WASH programme in Ethiopia, WASH Alliance partner RUAF collaborates with various local partners such as RiPPLE to enhance urban and peri-urban agriculture in the city of Dire Dawa in Ethiopia. In this large urban centre, financing WASH services poses a serious and growing challenge.

What did we do?
As many small and micro enterprises in the region are struggling with issues of adequate fund allocation and cost recovery, several sustainable financing workshops were organised. These workshops aimed to share and discuss experiences of integrated waste management and reuse, and to bring potential entrepreneurs and financial institutions together.

Business opportunities
Innovative business cases for safe and productive use of waste for urban and peri-urban agriculture developed within the programme include:

- Public toilets systems that produce biogas
- Household EcoSan toilets that yield natural fertilizers of human waste
- Condominium integrated recycling
- Solid-waste recycling initiatives, such as briquette making
Waste management is a major challenge in the Surkhet valley of Nepal, primarily due to the rapidly growing population and the lack of a management plan and awareness. Many households in and around the city of Birendranagar depend on agriculture for their livelihood.

What did we do?
Dutch WASH Alliance members WASTE, RAIN and RUAF collaborated in the Surkhet valley with local partner ENPHO to develop various sanitation business models. In addition to building capacity, conducting business support training and creating demand for sanitation services, we executed pilot projects and developed prototypes of promising sanitation hardware.

Business opportunities
By looking at the current and potential practices in the value chain, the value of waste could be increased, which can result in interesting new income generating activities for households and entrepreneurs. Two good examples are urine separation and composting of faeces at household and community level and integrated school sanitation.
Are you looking for ways to sustainably finance your WASH programme? Or do you want to learn more about business opportunities within water and sanitation?
Contact us: www.washalliance.nl