

# Resource Recovery and Reuse: From Research to Implementation



## Innovative RR&R solutions...

Most initiatives to reuse “waste” are project based, depend heavily on subsidies, remain small or do not survive beyond their pilot phase.

**A new approach** is needed to make resource recovery and reuse (RR&R) solutions viable, to enable them to go to scale and to ensure they continue to work for many years. This can support livelihoods, enhance food security, and improve sanitation and health.

## Developing knowledge

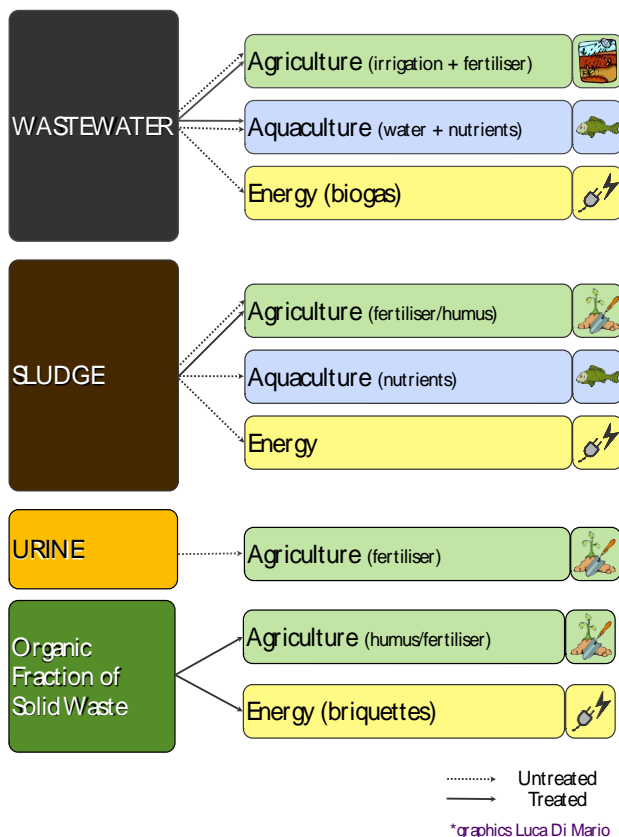
Successful solutions to RR&R are emerging around the world. The **“Resource Recovery and Reuse: From Research to Implementation” (RR&R)** Project aims to learn from these solutions and to develop models to overcome the limitations to RR&R so often seen.

## The RR&R Project

The project, which is funded by the Swiss Agency for Development and Cooperation (SDC), is being implemented in four cities – Lima, Peru; Kampala, Uganda; Hanoi, Vietnam; and Bangalore, India – by over 20 partners and research organizations.

The work is divided into a number of components, based on elements of a multi-criteria approach to assessing RR&R options.

There are two distinct phases to the project. The first is to assess cases of RR&R across the world and to identify options that appear successful and can be researched further. The second stage is to develop potential “business models” out of these and to assess their feasibility in the four research cities.



Some of the options for turning waste into a useful product being reviewed by the RR&R Project.

## How the research is structured

The waste supply, resource demand and technology components are being overseen by Department of Water and Sanitation in Developing Countries (SANDEC). The Health and environmental safety component is being overseen by the World Health Organization (WHO) and Swiss Institute of Tropical Health (Swiss TPH). The institutional support, financial feasibility and wider social and environmental externalities components are being coordinated by the International Water Management Institute (IWMI).



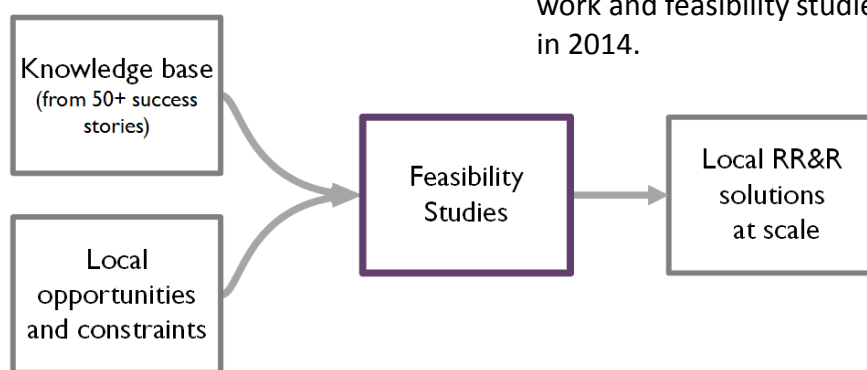
Components of the multi-criteria analysis used by the RR&R Project.

### The team in Hanoi

Multiple partners are also involved in Hanoi.

- Center for Public Health and Ecosystem Research (CENPHER) – Hanoi School of Public Health (HSPH)
- Institute of Environmental Science and Engineering (IESE) – National University of Civil Engineering
- Hanoi University of Agriculture (HUA)
- World Health Organization (WHO) in Hanoi

The project approach.



For more information see:

[http://www.eawag.ch/forschung/sandec/gruppen/EWM/projects\\_ewm/rrr/index\\_EN](http://www.eawag.ch/forschung/sandec/gruppen/EWM/projects_ewm/rrr/index_EN)

[http://www.iwmi.cgiar.org/Topics/Resource Recovery and Reuse/index.aspx](http://www.iwmi.cgiar.org/Topics/Resource_Recovery_and_Reuse/index.aspx)

### What has been achieved so far?

Over 100 RR&R cases have been reviewed and compiled, documenting successes around Africa, Asia and Latin America. 50 of them have been reviewed in more detail by a multi-disciplinary team to identify the key success factors. Following the multi-criteria framework, over 20 RR&R business models have been derived from the existing cases.

### Feasibility studies to achieve scale

This research aims to go beyond theory and to understand the complexity of implementing innovative solutions at larger scales.

Starting from the knowledge base developed through the cases and models, the project aims to work with local research institutions and stakeholders to test the feasibility of these solutions in Hanoi, Lima, Bangalore and Kampala. Based on this study local solutions can be identified that could work across the whole city.

### Timeframe

The project began in 2011 with work in the four project cities being initiated in the form of a baseline survey in 2012. In 2013 the project held city workshops to introduce the project to the stakeholders. The research work and feasibility studies will be completed in 2014.



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