

# The Urinal Project



*Urine is an undervalued resource in an untapped market.*

Author: Lillian Volat

## Abstract

The Urinal Project was born from a desire to solve the widespread mismanagement of finite resources, to recover precious nutrients that we flush away every day, and to create a new economy around nutrient recovery and reuse. The catalyst to start the project stemmed from the 2011 Syrian refugee crisis, where the emergency response was dominated by traditional, non-environmental technologies and approaches, creating pollution, high expenditures and missed the opportunity to develop market-based responses to sanitation provision. The Urinal Project provides safe, odourless, unisex urinals for refugee or recently displaced women with young children and elderly persons to use in the safety and convenience of their tents. The Urinal Project also develops market-based service chains for each context where the urinals are used, consisting of collection, transportation, treatment, testing and reuse.

## Problem statement

Humanitarian responders in Syria, Jordan, Iraq and Lebanon do not have access to quickly deployable, safe, hygienic, cheap, environmental, market-based sanitation solutions for rapid emergency response. Refugees and internally displaced persons in urban and rural areas and people migrating are resorting to using plastic bags, or unsafe and unhygienic methods. In immediate emergency response, toilets are usually at a distance from the shelters and women and children must travel in the dark and sometimes in very harsh weather conditions. They are prone to harassment and attack and the elderly have difficulty accessing the facilities. In addition, humanitarian responders are deploying technologies in emergencies that are generally not managed across the entire service chain, and these technologies are consuming limited resources (fresh water) and creating expensive externalities (polluted wastewater that needs to be transported and treated). The result is an increase in social tensions between refugees and hosting communities whose ecological systems are being polluted and their natural resources are increasingly stressed. Humanitarian responders don't have the time and resources to innovate the existing sanitation solutions, nor do they tend to have

the capacity to think too far beyond the crisis situation and ensure the financial and ecological sustainability of their projects.

## Company description

**Vision:** The economies of the MENA region grow towards inclusivity, environmental justice and sustainability.

**Mission:** Solve the widespread mismanagement of finite resources, to recover precious nutrients that we flush away every day, and to create a new economy around nutrient recovery and reuse.

**Our Products:** A convenient, odourless, well designed urine collection system for the 1-12 months of service provision following a crisis/displacement.

The Urinal Project provides an ecological, market-based sanitation solutions to immediate emergency responses (between the first 1-12 months of a service provision in a crisis). We design, produce and train on the local production of unisex urinals that are easily modified to be attached to any standing container (e.g. used jerry can) and develop a service chain for any situation, whether rural, urban, migrant to manage the collection, transport,

## Key facts:

- The Urinal Project provides ecological, market-based sanitation solutions to immediate emergency responses
- The project provides safe, odourless, unisex urinals for refugee or recently displaced women with young children and elderly persons to use in the safety and convenience of their tents.



**Figure 1. Founder, Lillian Volat, testing jerry cans at an industrial recycling warehouse in Erbil, Iraq, 2014 (source: Urinal Project).**

treatment, testing and reuse of urine. In addition, we research and develop with our implementing partners a value chain for the final output within the context of crisis situation with different local actors. For example, in Iraq a local fruit tree farmer agreed to use the urine as a fertilizer on his trees and in Lebanon a USAID funded reforestation project agreed to take the urine as a fertilizer. Other types of outputs can involve using urine to provide electricity for toilet facilities in the camps, or for greening the camps. Our product provides a convenient, odourless, well designed sanitation solution that reduces the need for expensive or finite inputs such as desludging and fresh water. The Urinal Project was founded by Lillian Volat, a sustainable sanitation enthusiast who has been living in the Middle East since 2011. She was joined by Phil Jones at Byspokes, a consulting company working in the region, and Carmen Andronache as a project assistant.

### Building a viable business model

This business idea developed at the cewas start-up trainings in Switzerland. Cewas provided the coaching and expertise necessary to turn the initial idea into a feasible business project. After coaching through variations of business models and research, cewas also helped to make important connections that supported the development of the project.



**Figure 2. Internally displaced camp for Iraqis in Erbil, Iraq, 2014 (source: Urinal Project).**

### Challenges in starting and growing a business

It is difficult to enter into a market that hasn't been tested before as a start-up. The market didn't even exist. We also didn't have the leverage that a university or established NGO has to approach customers such as humanitarian responders in our case.

Another challenge was trying to design, develop and test the entire service and value chain of the product. Because the value chain didn't exist yet for urine, the collection, transport, treatment, testing and reuse services had to be designed and developed from the base. There was no outsourcing of any of these services into the existing market.

“The market didn't even exist.” Lillian Volat, founder.

### Lessons learned as a start-up entrepreneur

Starting the business gave us the best insight into how the system worked and how it could be improved. We didn't have any experience in humanitarian sanitation response, but just observed what was happening around us. We learned a lot about our customers and how to approach them, just by diving headfirst into starting the initiative. We learned that our business was too broad to function individually, and that we couldn't provide a urinal and full-fledged tailor-made service for each context, but rather needed to focus on finding partnerships for the parts that we didn't have the expertise for (data collection



**Figure 3. Syrian refugee tending her okra plant in a garden she planted next to her tent, Erbil, Iraq, 2014 (source: Urinal Project).**

and analysis, reuse testing, implementation of collection, transport and treatment services).

### **Entrepreneurial success stories**

The Urinal Project is the winner of the 2014 environmental award from a Swiss Environmental Foundation (Umweltpreis der Schweizerischen Umweltstiftung) and received 10'000 CHF in seed funding, which helped to develop the project in Iraq and Lebanon. We also received seed funding from the Pollination Project to build and test the urinal prototype and through them we were featured in the global innovation section of the Huffington Post. With the Rich Earth Institute, we hosted the 2nd Annual Urine Diversion Summit in Vermont, USA bringing together actors working in urine diversion from government, academia, business and agricultural sectors. Currently, the project is on hold, and I focus efforts more broadly on developing resource recovery and reuse business orientation in the region. The Urinal Project is serving as a basis to support, develop and promote other waste to value-based sanitation projects in Lebanon, Jordan, Iraq and Palestine.

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