

# Youth-Led Sustainable Sanitation in the MENA region

*This paper is a step-by-step guide on how youth innovate and scale sustainable sanitation solutions.*



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## Abstract

As a solution to the alarming sanitation situation in the MENA (Middle East and North Africa) region and the lack of efficient scalable sustainable solutions, BENAA developed a business model that is highly dependent on the power of youth. It aims at implementing sanitation solutions for poor and rural communities, through the utilization of the power of youth, which is often neglected by the planning and executive bodies in the region.

BENAA completes the whole loop of change-making in the field of WASH (Water, Sanitation and Hygiene); by producing knowledge on sustainable sanitation and water management, strengthening youth capacities and implementing knowledge-based youth-led sanitation projects on the ground.

The three pillars of this loop form the Social Innovation Pyramid invented by BENAA. The implementation of this approach on the ground was conducted by BENAA throughout the last two years and proved its effectiveness and ability to scale in the region.

## Problem statement

The lack of sustainable sanitation is an alarming issue challenging development in the MENA region. Proper wastewater collection and treatment is missing in the majority of rural areas and some urban areas in MENA countries. Out of 360 million inhabitants in the region (World Bank, 2015) there are more than 7 million people in North Africa that still practice open defecation (AMCOW, 2012), and about 37 million people (around 10%) in the MENA region suffer from a lack of improved sanitation (World Bank, 2015). The insufficient sanitation infrastructure has led to surface and groundwater contamination, negatively impacting the environment, public health and, consequently, leading to socio-economic challenges.

In Egypt, 30,000 rural villages lack improved sanitation facilities (Ismail, 2018). With more than 60% of the Egyptian population under 30 years old (the average age of the overall Egyptian population is 25.1 years) (Insights MENA, 2011), Egypt holds a very strong youth power. Therefore, those youth have to take the lead and play a major role towards innovation for sustainable sanitation.

Notwithstanding, the actual situation shows that Egyptian youth are suffering from a lack of motivation, knowledge, and experience in the field of sustainable sanitation and water management. Empowering youth and providing them with the required knowledge and experience is a necessary outcome which BENAA aims to achieve.

## Business Description

BENAA – in Arabic – stands for “Building up”, in which we aim at building the youth’s capacities, to develop participatory sustainable sanitation projects in Egypt and the MENA region. BENAA completes the whole loop of change-making in the field of WASH; by producing knowledge on sustainable sanitation and water management, strengthening youth capacities and implementing knowledge-based youth-led sanitation projects on the ground. These three main pillars shape the Social Innovation Pyramid invented by BENAA.

## Knowledge Production

BENAA aims to build an open-source library containing applied knowledge in the field of water and sanitation.

## Key facts:

- Knowledge production: Knowledge material produced by BENAA has reached 200,000 young Arab users on the internet and has been downloaded more than 20,000 times.
- Since September 2015, BENAA has trained and empowered more than 3,000 Egyptian youth to implement participatory, youth-led WASH projects.

We produced Arabic versions of some main knowledge sources:

- the Compendium of Sanitation Systems and Technologies
- the Sustainable Sanitation and Water Management in Humanitarian Crisis Toolbox
- the Guidelines for Community-Led Urban Environmental Sanitation Planning (CLUES), in addition to 30 Planning Tools for Sustainable Sanitation

Our produced knowledge materials have reached 200,000 young Arab users on the internet and have been downloaded more than 20,000 times. (link to one of the shared documents: <https://goo.gl/ctHoXV>). This translated library represents the knowledge basis for all of BENAA's activities.

### Capacity building

BENAA utilizes the translated knowledge to prepare several trainings for youth who can build on the acquired knowledge for further actions. All the trainings include group discussions, brainstorming, and exploring innovative ideas for implementation. We have delivered several trainings with the aim of enabling the youth to implement participatory sanitation projects in rural Egypt. Since September 2015, we have trained more than 3000 Egyptian youth from different regions in Egypt.

### Participatory projects

Our work aims at protecting and preserving regional water resources by creating integrated WASH solutions and building a youth-led enabling environment. The trained youth are developing BENAA's local and community-led solutions, which have significant impact and an increased possibility for successful scaling (BENAA, 2018). In addition, BENAA focusses on building up an enabling environment by: raising public awareness, facilitating institutional arrangements, fostering socio-cultural



Figure 1. Nile Delta region is suffering the lack of proper sanitation facilities (source: Kareem Hassan).

acceptance, supporting socio-economic development, performing financial arrangements, and continuous monitoring and evaluation.

Based on the transferred knowledge, BENAA started a new company called “100 WASH Solutions”, which aims at innovating local and sustainable WASH solutions. The company was funded by Misr El Kheir Foundation

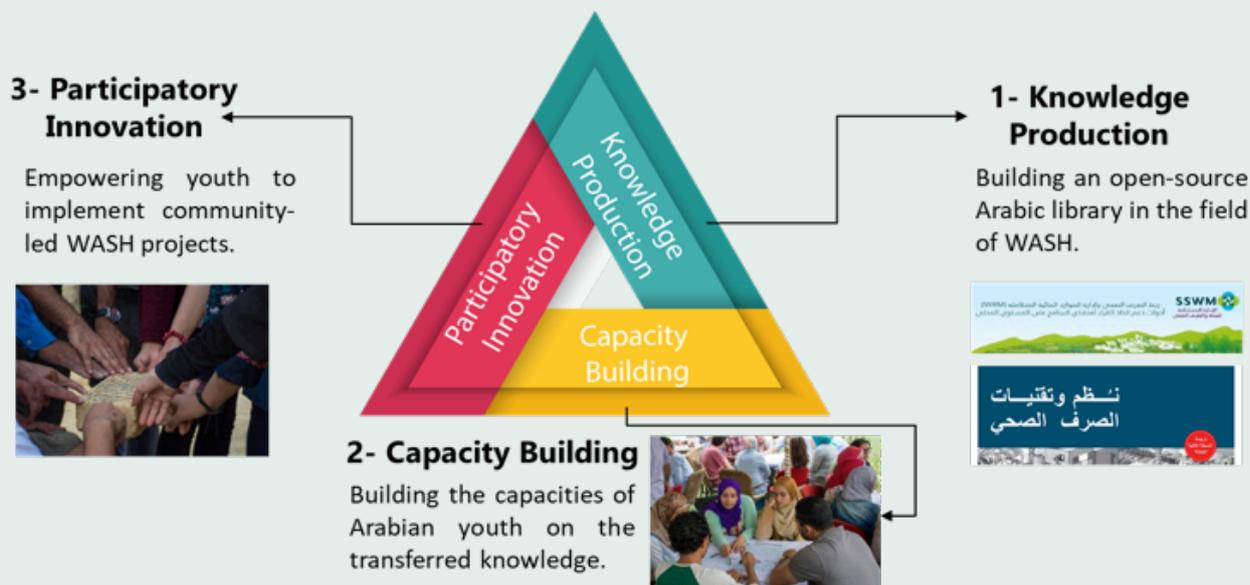


Figure 2. BENAA's innovative approach: „Social Innovation Pyramid“ (source: BENAA, 2015).



**Figure 3. BENA's trainings for the youth on Sustainable Sanitation and Water Management. (source: BENA, 2015-2018)**

to design and implement EABRA (Egyptian Anaerobic Baffled Reactor with Aquaponics/Hydroponics) systems. The first unit was installed in Ayat (Giza), where it serves a community school and its surroundings (300 persons). The treated wastewater is used to irrigate the school's landscape and 400 trees around it. BENA was responsible for its implementation on the ground during the last year, proving the unit's effectiveness and ability to scale up in the region.

Over the next three years (2018-2021), BENA will aim to:

1. Build the capacity of 150 enthusiastic youth leaders in the fields of water, sanitation, hygiene and social entrepreneurship;
2. Transfer, adapt, test and re-create 30 integrated water, sanitation and hygiene solutions;
3. Raise awareness among low- and middle-income communities for possible solutions in five major regions in Egypt;
4. Empower communities in targeted areas by strengthening their social, economic, cultural and governmental environments;
5. Transfer our experience to the millions of youth in the MENA region.

### People behind this business

BENA's story started with a young man from Egypt with immense motivation to change lives and empower youth in the MENA region. Kareem Hassan along with his friend Mohamed Ateia, started the journey towards this dream in 2015.

Kareem spent 10 years on research and gathering knowledge on sustainable development, travelled to more than 20 countries to find inspirations, and interviewed more than 500 experts in the field of WASH and sustainable development to build up his mentality regarding starting up this entity.

### Target Groups

1. The main target group of BENA is the youth (18-35 years old) who are trained to build up projects and carry on their implementation on the ground.
2. National and international development organizations, charities, governmental organizations, etc. who are seeking sustainable, cost-effective and locally produced WASH solutions for poor and rural communities.
3. Our products and services



**Figure 4. Implementing the EABRA system: Egyptian Anaerobic Baffled Reactor with Aquaponics/Hydroponics. (source: BENAA, 2017)**

### Building a viable business model

BENAA has a unique business model with several local and international partners. Each track has its funding streams and supporters. For example, at the Knowledge Production track we work with publishing organizations that seek to translate and localize their knowledge, such as: Eawag, seecon gmbh, GIZ, etc. For our Capacity Building track, we got support from LUSH Spring Prize, Cairo Greater Library and several local partners. At the participatory implementation track we provide products and services offered by Misr Al Khair Foundation, The Ministry of Water Resources and Irrigation, Care International, Manahyaha, Handover etc.

### Challenges of starting/growing a business

We are facing plenty of challenges in Egypt, however, we believe that the main challenge was the initial stage of converting our ideas into prototypes. This stage requires funding, technical support, and external mentors; these requirements are not easy to get by in the initial stages of any new project. But after we got something done on the ground, many people and entities showed up with the willingness to support.

### Lessons learned as a start-up entrepreneur

BENAA started almost 2 years ago envisioning the empowerment of youth in the MENA region. The many lessons learnt during this journey can be summarized as following:

1. Strengthening capacities of the youth in order to build up sustainable water and sanitation projects in the Arab region is a must.
2. Incubating youth's innovative ideas in their early stages is game-changing for the region.
3. A youth-led enabling environment in the MENA region could foster the social innovation activities, and will lead to more effective policy-making.

4. No matter how well we are prepared for our activities, they are still many obstacles and challenges along the way. They will never cease, and accordingly, we have to stand up after every failure, try again, and again, until we succeed.

### Entrepreneurial success stories

One of our greatest accomplishments is the installation of the EABRA (Egyptian Anaerobic Baffled Reactor with Aquaponics/Hydroponics), a seven-years dream that has become reality. More than 30,000 marginalized small villages in Egypt suffer from a lack of sustainable sanitation infrastructure. These villages are in a need of efficient and cost-effective solutions. We started the realization of this dream last year with the installation of EABRA1, the first unit of its kind in Egypt for ecological sanitation. With that, we started our journey towards 30,000 environmental sanitation projects in the Egyptian villages that are marginalized from the urban masterplans. This unit was the first product of our 100 WASH Solutions project, which we started last year. We installed it at a community school where it will provide improved sanitation for 300 children. The treated wastewater is used for irrigating the school's landscape, and to produce economic crops that benefit the community. This accomplishment showed great institutional arrangements, community participation and governmental support.

Since our launch on the 1<sup>st</sup> of September 2015 we achieved so much besides the EABRA1. So far we achieved the following:

- Mobilized 3,000 Egyptian youth;
- Initiated 35 successful social projects;
- Created a community of 1000+ active volunteers;
- Initiated five massive awareness campaigns;
- Our produced knowledge has reached 200,000 Arab users on the internet, and has been

1. Knowledge Production	<b>Service</b>	<b>Description</b>	
	Technical Translation (English-Arabic)	BENAA translates - into Arabic - the essential practical knowledge in WASH.	
	Knowledge Dissemination	BENAA widely publishes (online and offline) its produced materials and creates public awareness. BENAA converts and simplifies the translated knowledge into innovative and interactive materials to create interest among the target groups.	
2. Capacity Building	Capacity Building	An intensive training aims at motivating youth to envision sustainable life goals and foster their implementation on the ground. We have activated 2,000 of Egypt's youth during the last 2 years.	
	Technical Modules	We offer several workshops and trainings on Environmental Sanitation and Water Supply based on the knowledge that we have translated.	
	imp!act Modules	A joint program with the Swiss-based youth organization "Euforia", which aims at empowering the youth to start up local initiatives in the field of environmental sustainability.	
3. Participatory Implementation	<b>Products</b>	<b>Accompanied Services</b>	<b>Description</b>
	EABRA: The Egyptian Anaerobic Baffled Reactor with Aquaponics/Hydroponics	Community-Led Planning and Implementation	A small scale locally produced prefabricated unit for wastewater treatment accompanied by resource recovery systems.
	GTRS: Greywater Treatment and Reuse System	Implementation and reforming landscapes	To collect, store, treat, and safely reuse greywater.
	WashaLOT	Rehabilitate water and sanitation facilities	Group washing facilities at schools in addition to rehabilitating the toilets' superstructures and facilities, with a complete guideline for toilet management and maintenance.
	Soap roll	CHAST (Child Hygiene & Sanitation Training)	Cooking Oil Recycled Soap; Easy and cheap way of making soap. In addition to promoting personal hygiene practices among children using exercises and educational games.

downloaded more than 20,000 times;

- We are enhancing the living conditions of 10,000 people in five Egyptian villages.

In addition, BENAA won several awards: Lush Spring Prize London 2017; Winner of GESR Prize Cairo 2017; Winner of the Ministry of Environment's prize, Cairo 2016.

Lastly, BENAA participated in many global events: World Water Forum in Brazil 2018, the Young Mediterranean Water Heroes Forum 2018, World Water Week, 10th UNESCO Youth Forum, and many more.

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