

SUBMISSION TEMPLATE

Research-2-Practice Symposium on Renewable Energy, Water and Climate Security in Africa
16 - 18.04.2018, Tlemcen, Algeria

Category: Practice and Non-Scientific Contributions

Within the broad themes of water, energy, climate change and the nexus within these themes, forum organisers encourage non-scientific participants/stakeholders interested or involved in practice and applied oriented initiatives to send a submission. These participants may be seeking knowledge, strategic partnerships, funding strategies or merely an opportunity to showcase their work based on real-life scenarios and practice within the priority areas of this call (energy, water, climate change and the nexus between energy, water and climate change).

General Guidelines:

Project should be directly and indirectly contributing to AU's vision 2063 and operating in the priority sectors of this call. Project submissions shall be written in Calibri font, single line spacing and 10 font size. Submissions can contain figures, tables and/or images. Page format should be A4 page size with margins 2.5 cm wide from the right, left, top and bottom. **Submissions should not exceed 4 pages (including images)** and pages should not be numbered.

Projects (in PDF format) shall be submitted via <https://easychair.org/conferences/?conf=res2prac>

For submission of projects, registration on easychair.org is required. The conference name on easychair.org is "Res2Prac 2018". **Guidelines for abstracts submissions at easychair.org are provided in the Call for Abstracts.** For more information on the Research2practice Conference on Energy, Water and Climate Security in Africa, visit <http://www.pauwes.com/Res2Prac2018>

Author's details: please complete the table below before submitting the abstract.

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SolarSack

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Project Summary

SolarSack is a water container that uses the sun to kill bacteria and virus in water, making it safe to drink.

SolarSack combines a clever design, with the right material, resulting in a retail price of only 2€. With a SolarSack, you can purify 4 liters of water in 4 hours, and it can be reused over 150 times, providing over 600 liters of water.

SolarSack is a good investment, both for the customers and the planet, as it is 10 times cheaper than boiling with charcoal, and 20 times less of a strain on the environment, per liter of purified water.

Website link for the project:

www.solarsack.com

1. **Background** (Title: numbered, bold, Calibri, 10pt, left alignment)

Over 2 billion people currently rely on charcoal or wood for boiling their water or must drink unsafe water directly from the source.

SolarSack is developed with the locals in Africa, where it was clear that they needed a cheaper and safer solution than their current use of boiling and chlorine tablets.

With SolarSack we want to provide a solution that is both cheaper for the user while having a positive impact on the increasing deforestation and carbon emission from the use of wood and charcoal.



SolarSack In the sun, purifying water



*SolarSacks on the roof
Kibera slum in Kenya*

2. Beneficiary profile

Our product is relevant for both users used to buying wood or charcoal or government and NGO's that want to provide a solution to people who currently don't have access to safe water.

Seen from the private user's side, this is a way of getting way cheaper access to safe water, so that they don't have to deal with the illnesses and deaths related to that, and by saving with a price per liter being 10 times less than using charcoal, so that they have resources available to reinvest in building a future for themselves.

Seen from the government or NGO's point of view, SolarSack is by far the cheapest way of establishing a safe water source for their people, ensuring that even more people will have access to safe water.

This also hugely affect the nature and climate, as SolarSack emits 20 times less carbon, compared to boiling the same amount of water with wood, while also not contributing to the deforestation.



A local reading the instruction on how to use SolarSack

3. Achievements and challenges

SolarSack was initially developed in mid-2017, where the first working prototype showed great results, killing the contaminants in as short as 30 minutes.

Since then, SolarSack has won the Danish nationals for climate start-ups, and later got a top placement in the international championship (ClimateLaunchpad). This has led to acceptance in the Climate KIC accelerator, and a grant of 20.000€ for further development.

SolarSack has also gotten a lot of media attention, both with articles and being on the national news in Denmark.

SolarSack recently expanded to a team of 4 people, covering the different skills needed in both production, management, and sales.



*SolarSack presented at the international
finals of ClimateLaunchpad*

Link to articles:

<https://www.sciencedaily.com/releases/2017/06/170626105013.htm>

<https://www.digitaltrends.com/cool-tech/solarsack-purifies-water/>

<https://www.engineersaustralia.org.au/News/solarsack-purifies-drinking-water-using-sun>

<https://mothenature.com/tag/aalborg-university/>

4. Project support and sustainability

Current support and alliances

SolarSack has a broad network of people who want to buy, but most importantly people who want to help the development.

We are part of the Access2Innovation community, who is the leading Danish company in business development in developing countries.

Clinical trials and testing will be conducted with the Biology and Toxicology Department at Aalborg University, both for the development of SolarSack and to make sure the final product works as intended.

Further support

The most important future partners in Africa, are partners who can help us get access to the users, so that we can collaborate testing and further developing SolarSack to fit the need of the local people.

5. Future plans

The next half year will be used to further develop SolarSack toward a version which is suitable for production, while establishing collaborations with NGO's, so that the testing of SolarSack in Africa can start in mid-2018.

Clinical trials will be conducted alongside the development to ensure that the version tested with the locals, will be safe to use.

The implementation of a return system is also important. We hope to develop this alongside the distributor or NGO in Africa so that it fits into the context. This way we can make sure SolarSack gets recycled and thereby put even less of a strain on the environment.

With all this we will have a fully developed and tested SolarSack ready for production in end-2018, and with increasing market coverage we hope to be the leading water purification method in Africa.