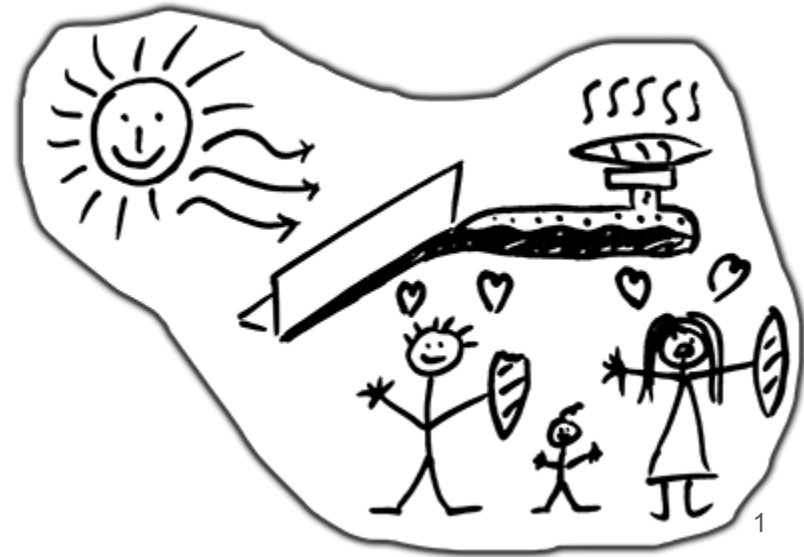


# Humanitarian Applications of an Efficient Solar Collector Device



# The Team

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The SRB Energy



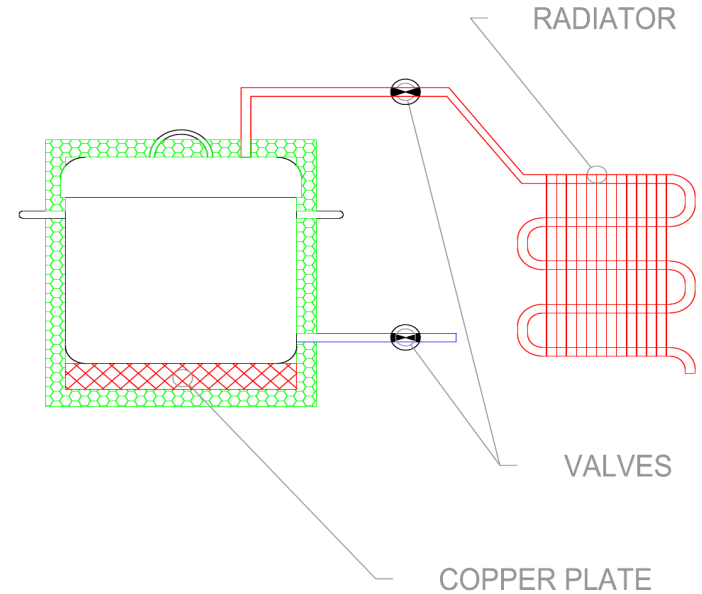
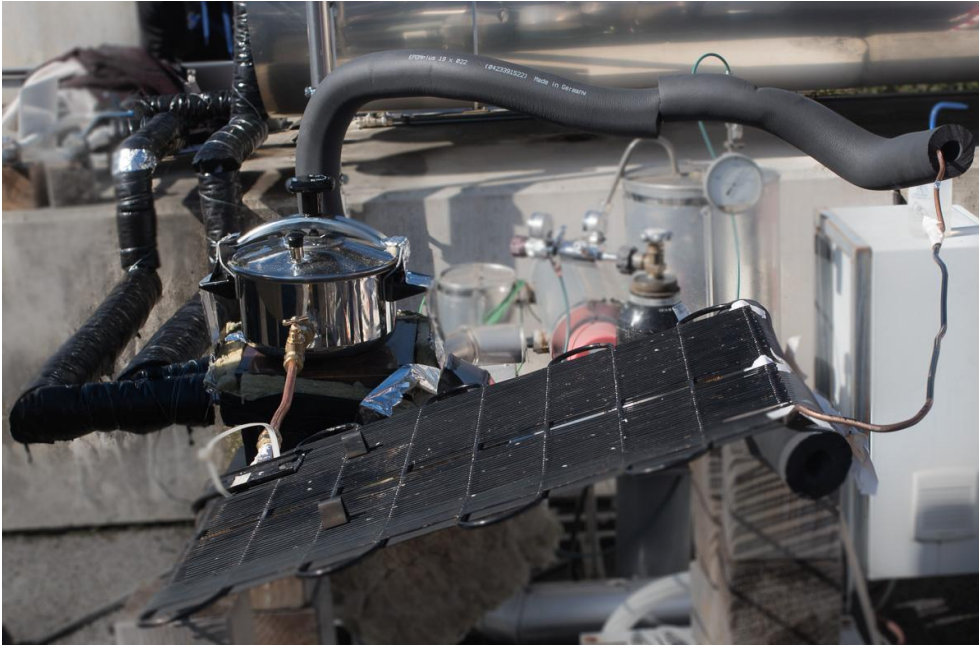
# Our Statement of Work

**The goal is to produce a prototype of a system of devices combining the capabilities of water heating, room air heating and cooking power, using the sun as the source of energy.**

Many solutions already tackle the issues in question and are ready to be applied. We wish to focus on an integrated solution which can be produced locally, is easy to maintain and has high probabilities of being accepted by the local communities. The system should be applied to the weather conditions and typical houses of high altitude villages in Nepal. There, the average temperature range from 0 to 21 degrees in Summer and 0 to 8 degrees in Winter. Solar irradiation is around 366.10MJ/m<sup>2</sup> in the worst month for the region of Simikot.

The objective is to provide the same living comfort in terms of temperature (room temperature of about 15 degrees inside a typical Nepalese 5-6 person single family house ) with 100% renewable energy during the colder period of the year, enough energy for cooking two hot meals/ day and constant hot water for a family of 4 people. The materials used should be the ones available locally and the components should be modular for easy adaptations to different houses and possibilities of upgrades. The price should range the same as the local already existing solutions. If the system works in high-altitude villages in Nepal, it is expected to work in many other places.

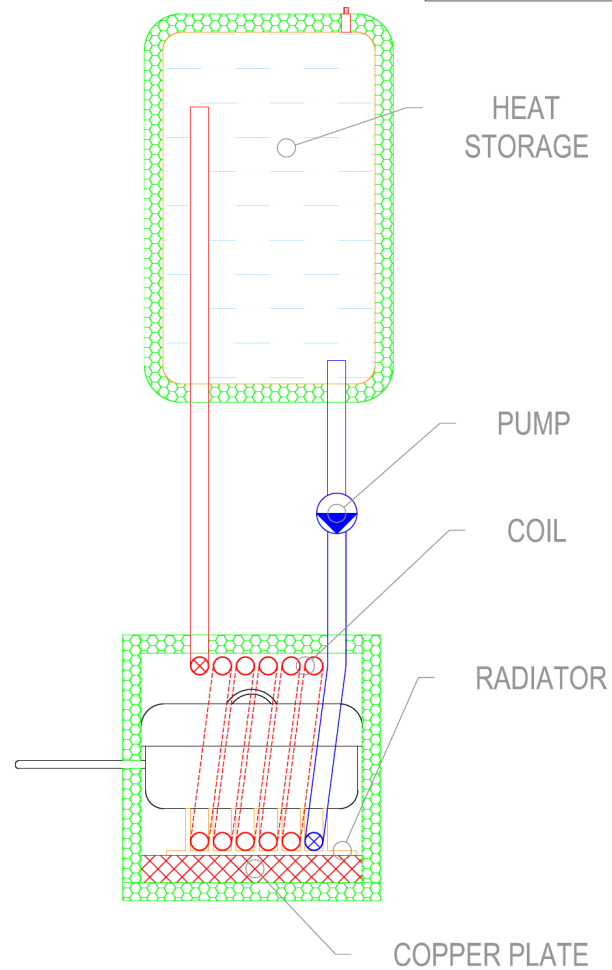
# The Prototype 3 in 1 Device



# our prototypes

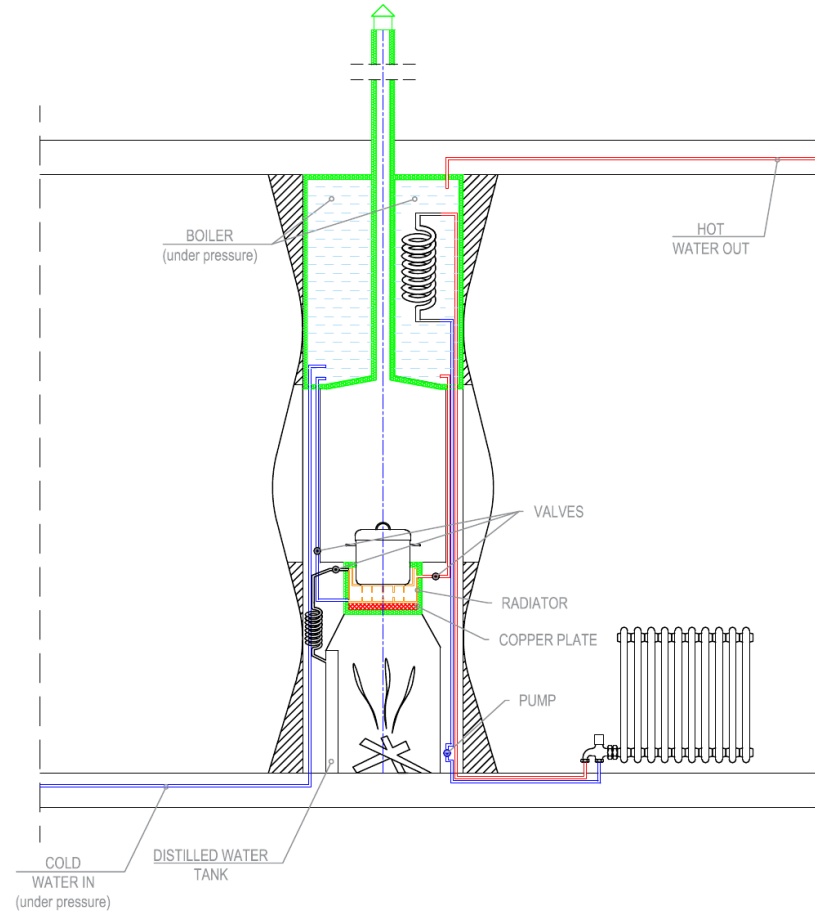
THE Po

PROTOTYPE - B

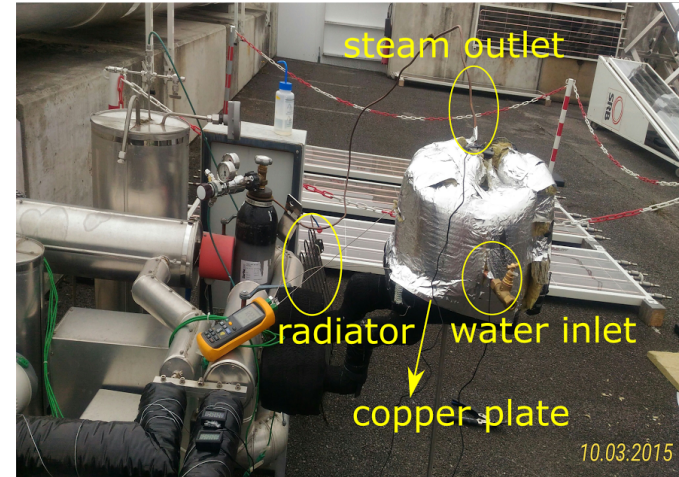
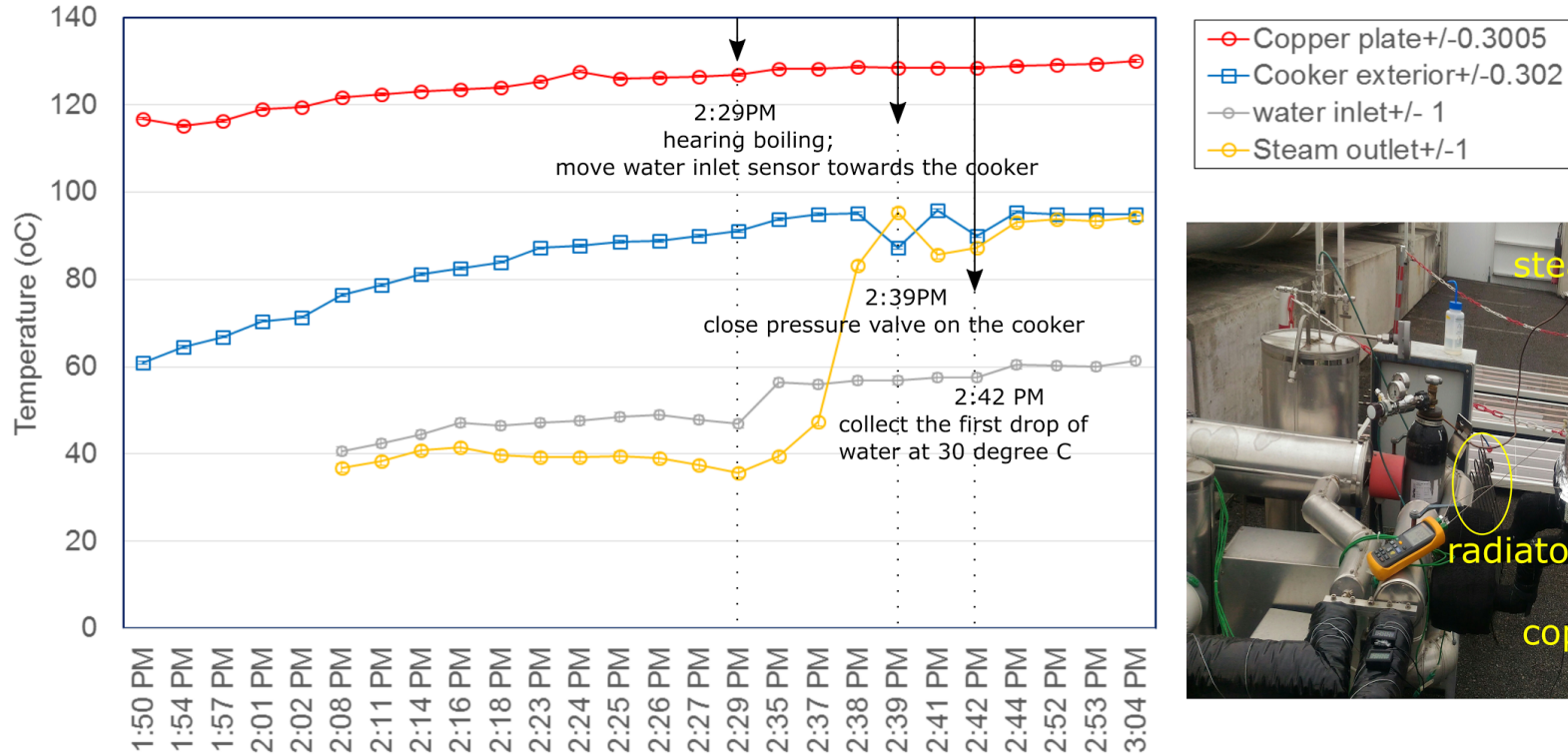




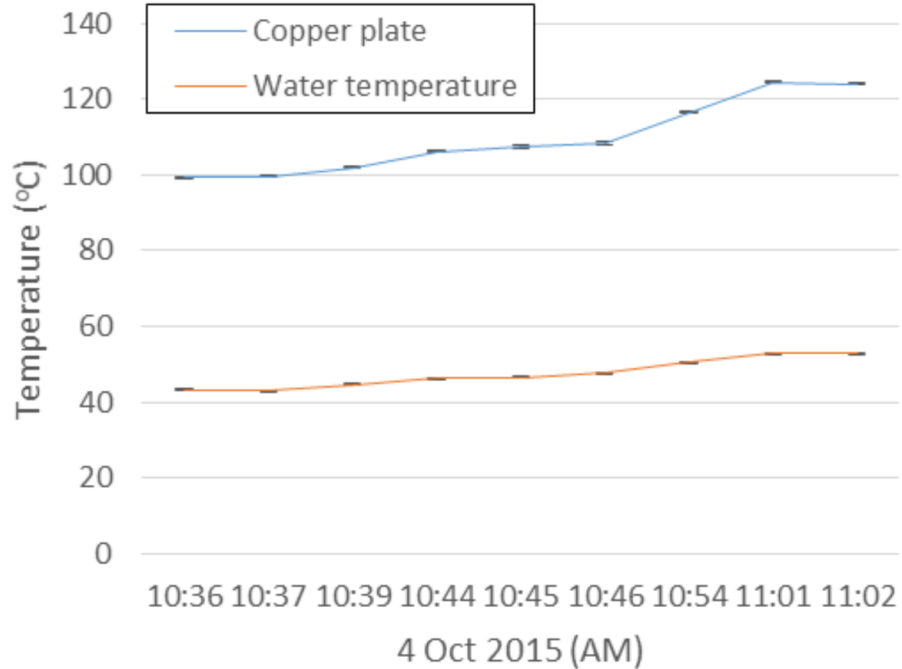
# OUR CONCEPTUAL DESIGN

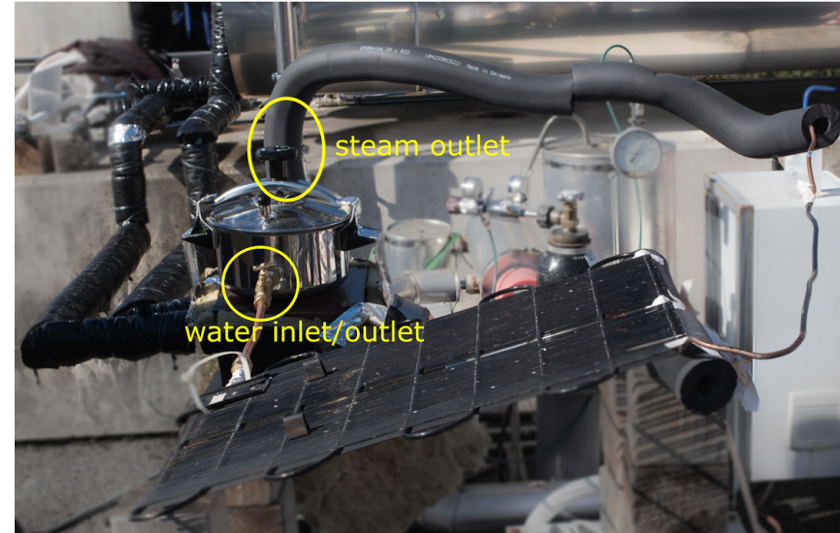
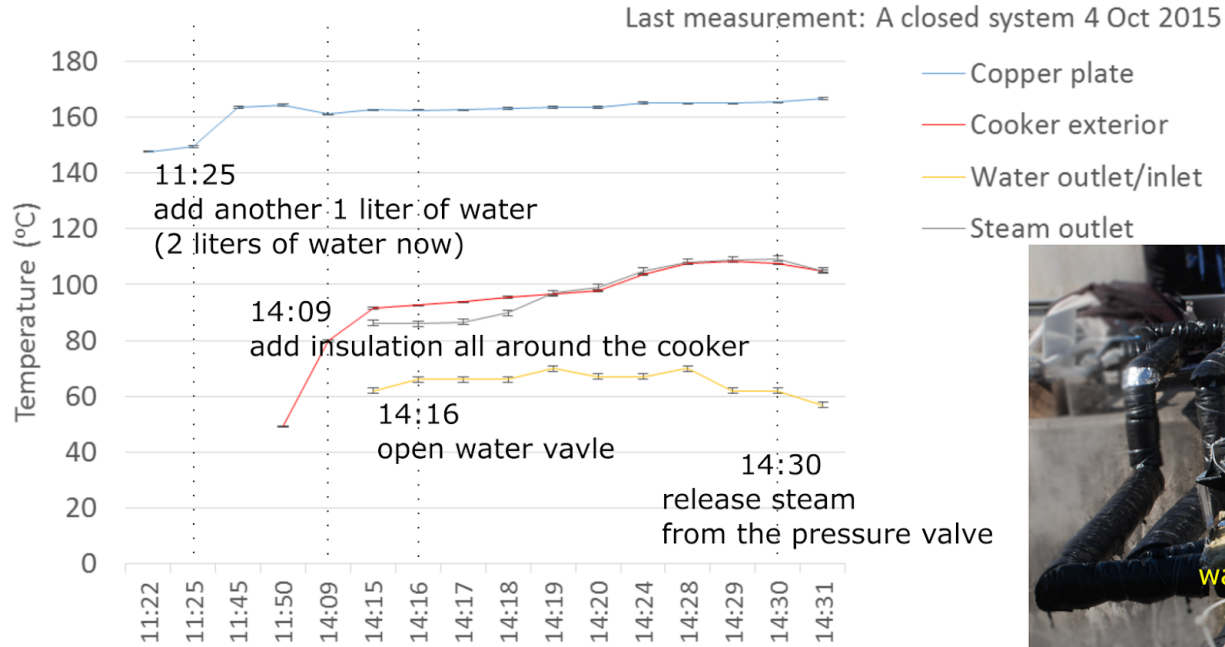


3 Oct 2015



## Open pan with no insulation





# Our Ideas and Prototypes



heating : room heaters, water heating

energy storage

SOLAR HOUSE + PV

cooking

HOSPITAL

cooling

drying

SOLAR TRUCK (modular. heating / hot/clean drinking water / cooking

sterilisation

distilling / purifying water / desalination

+ water filters

+ water piping

humidifying

crude oil extraction

+EDUCATION

electricity

Special thanks to SRB Energy



SRB Solar Collector

