



Women in Europe for a Common Future

SEMINAR
SOLAR ENERGY
IN RURAL AREAS

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Rural Communities
Development Agency

Solar Distillator



Because of the unavailability of pure water:

→ *Every 1 second, one child dies in the world*

→ *People suffer from different diseases*

One billion people in the world have no access to safe drinking water

Simple water distillators can provide:

- *Desinfection*
- *Purification*
- *Distillation of water*

The Distillator can be constructed for:

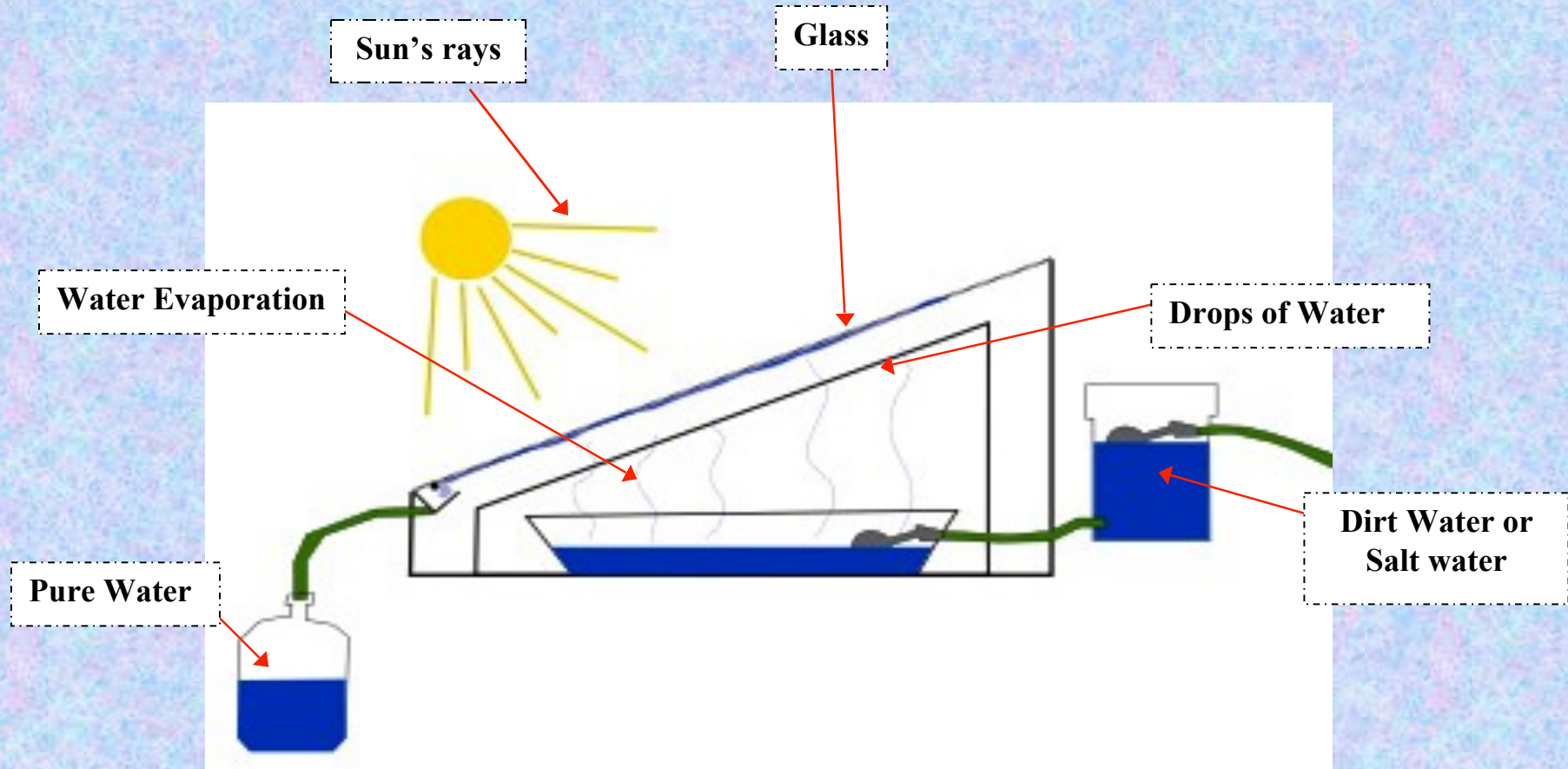
- *Individual use at household level*
- *Community use*

Solar distillation can be used to make saline or brackish, dirty water potable

Household distillator



Distillator scheme



Solar distillator developed in RCDA



Sunny day

Capacity: 5L per day for 0.64m².

Distillators are recommended by World Health Organization as a viable method for household water treatment and safe storage



Individual still designs include:

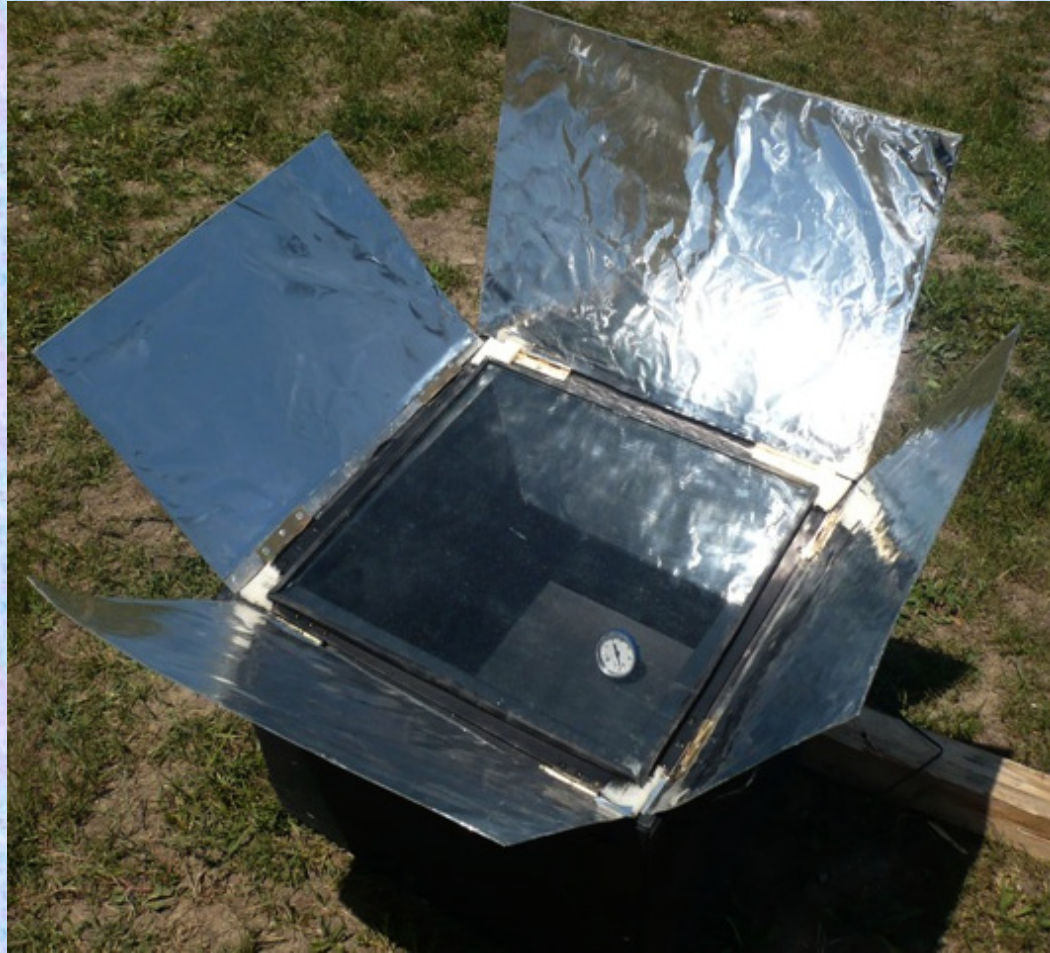
- 1. Single-slope*
- 2. Double-slope (or greenhouse type)*
- 3. Vertical*
- 4. Conical*
- 5. Inverted absorber*
- 6. Multiwick and multiple effect*

These stills can operate in passive, active or hybrid modes.

Solar Oven



Solar oven developed in RCDA



A solar oven can be used for :

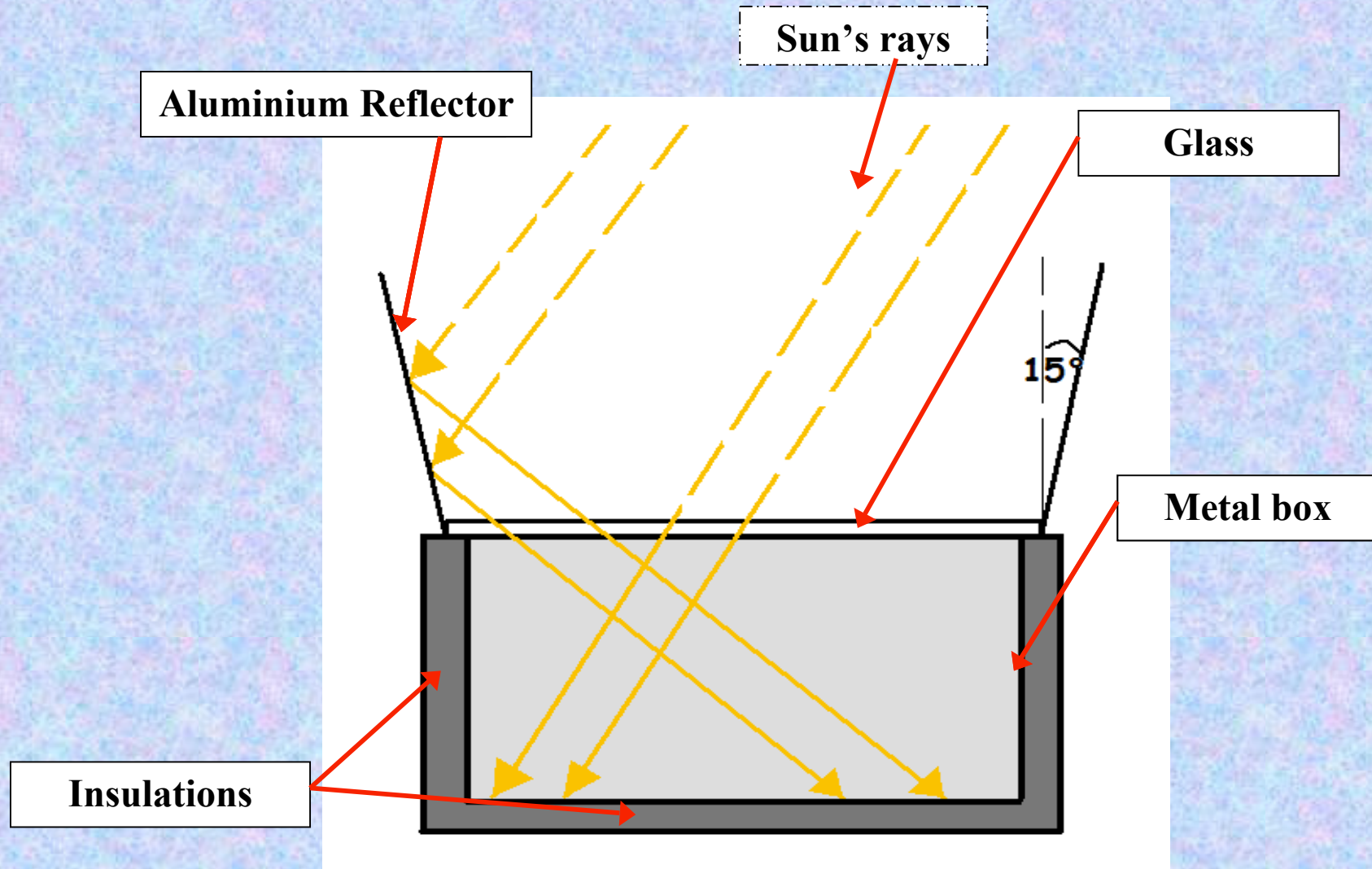
1. Substitution of firewood for cooking

2. Avoiding :

→ Deforestation.

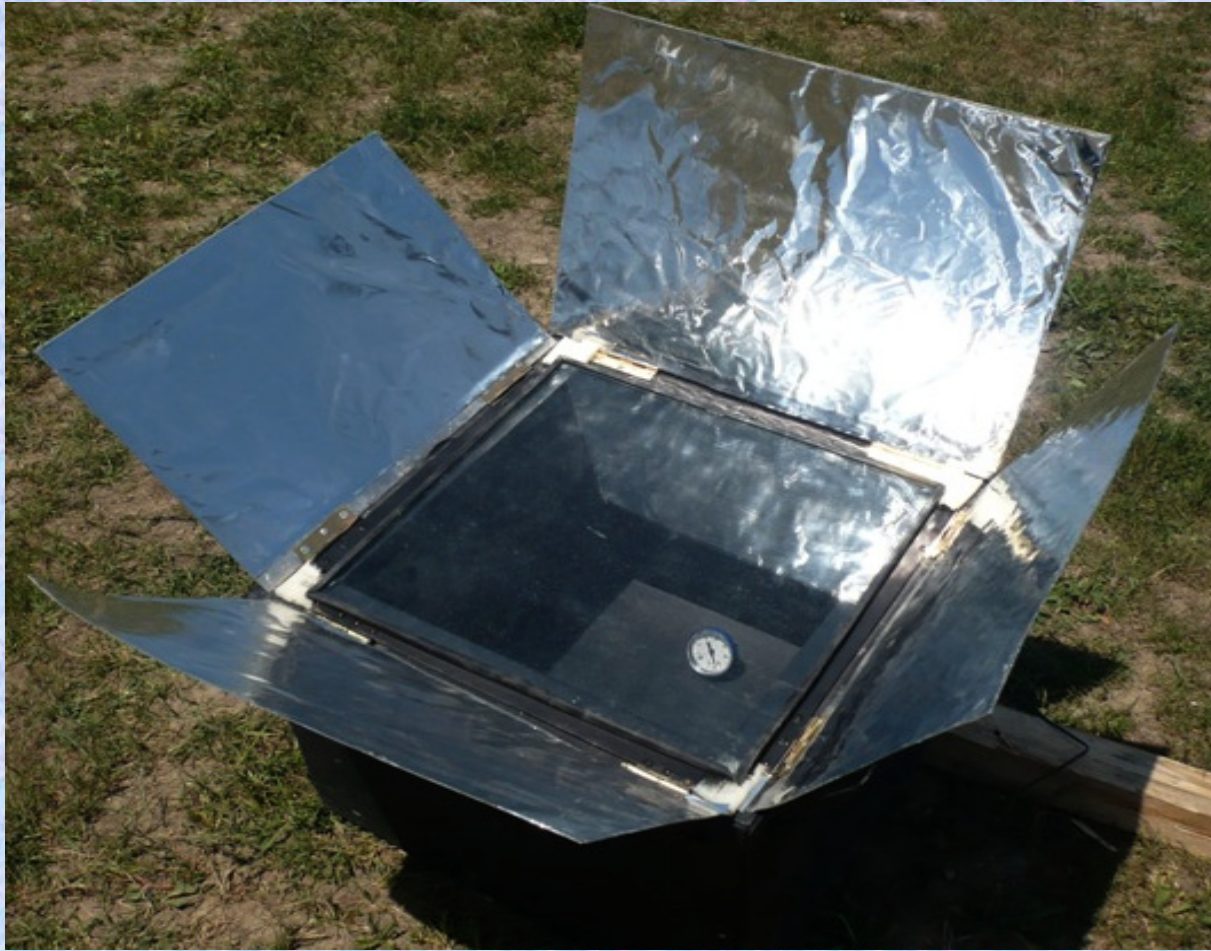
→ Emissions of CO₂.

Scheme of Solar oven



Sunny Day:

Accumulate capacity: Temperature can reach 150°



Solar Pasteurizer



Milk must be pasteurized for its better conservation:

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→ The process kills milk's bug.

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→ The process kills milk's bug.

→ The period of storage is longer.

This device is usefull for:

→ People living in the mountains

→ People without fridge.

*The milk is heated to a temperature 65°Celcius
Time for pasteurization: 15 minutes.*



*The pasteurizers can be developed of
Different capacities depending upon the
needs*

Driers

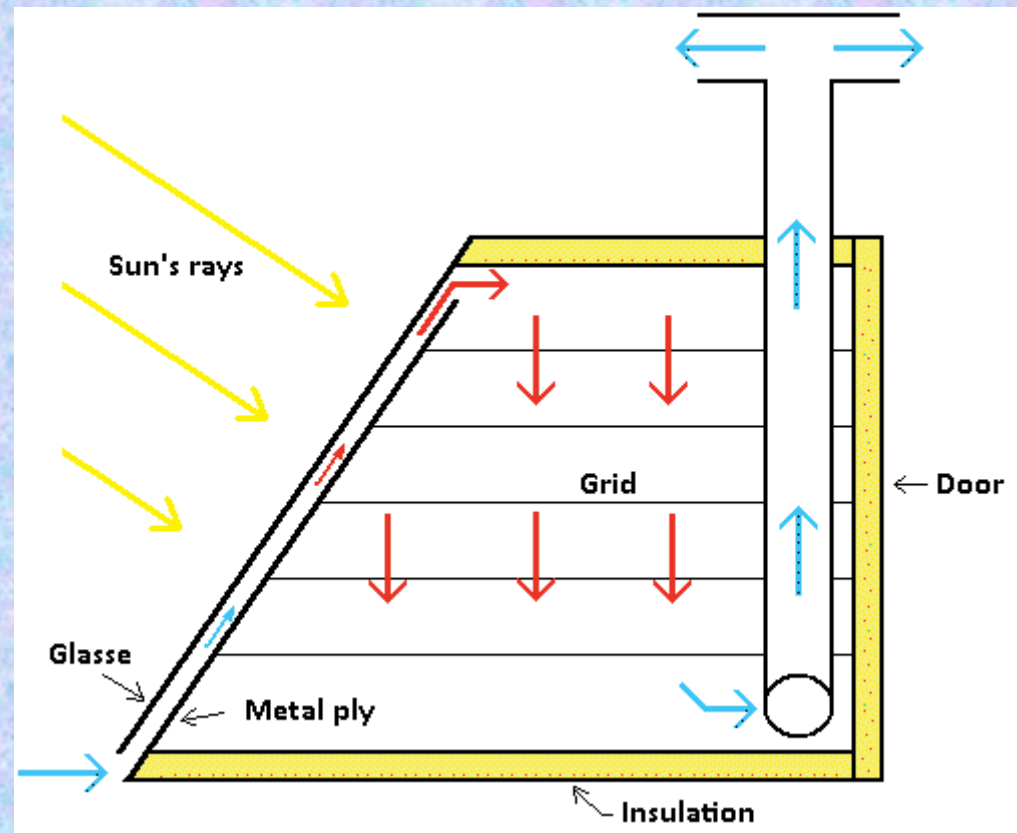
Different types of solar driers

- *Indirect passive drier*
- *Indirect active drier*
- *Direct passive drier*

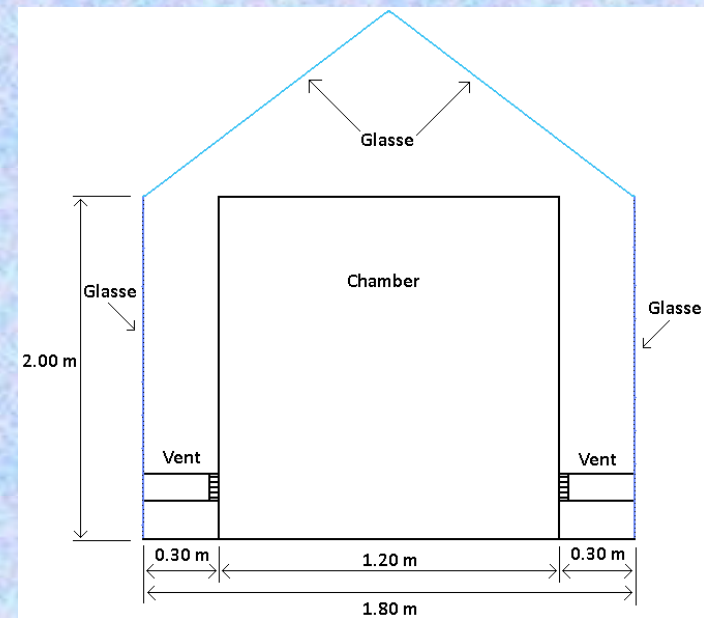
Solar Direct Drier



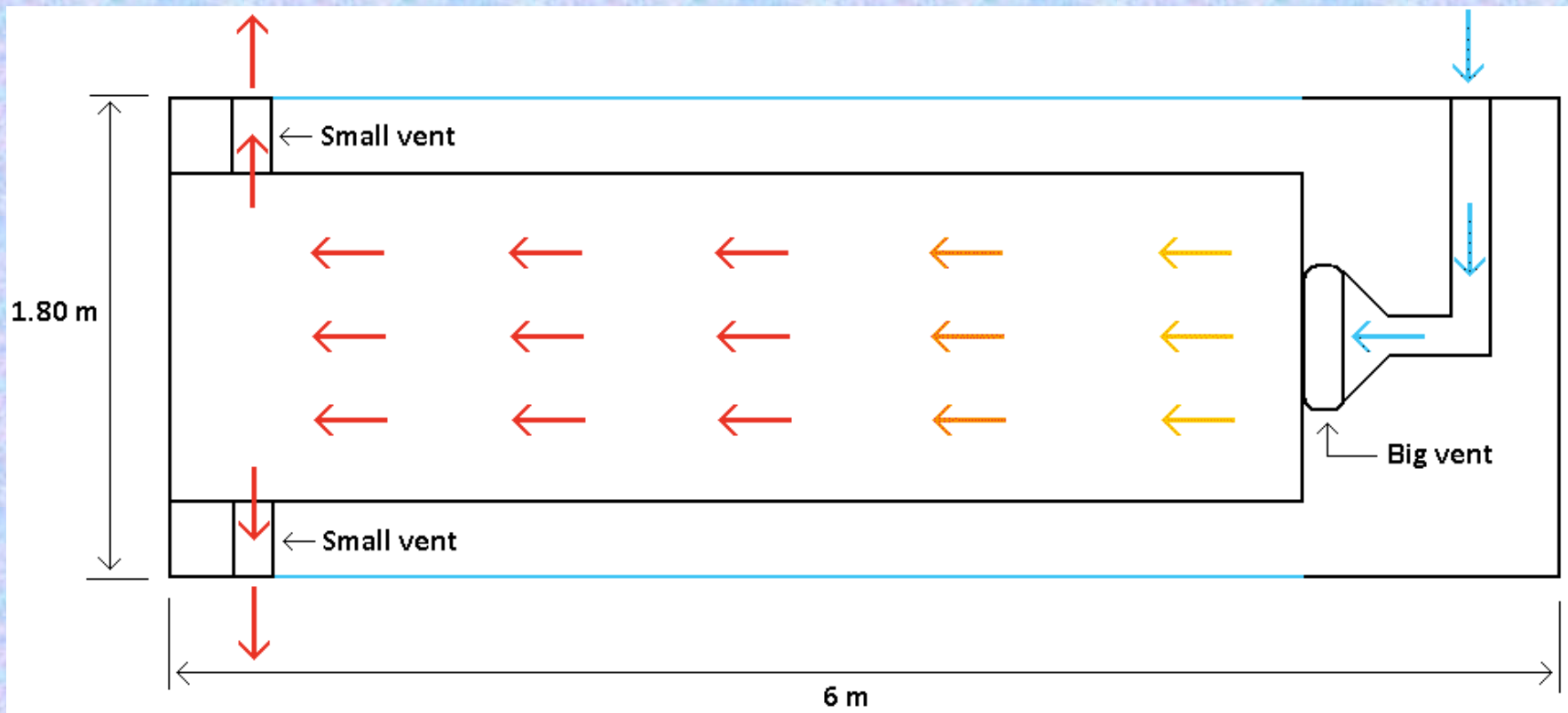
Solar Indirect Passive Drier



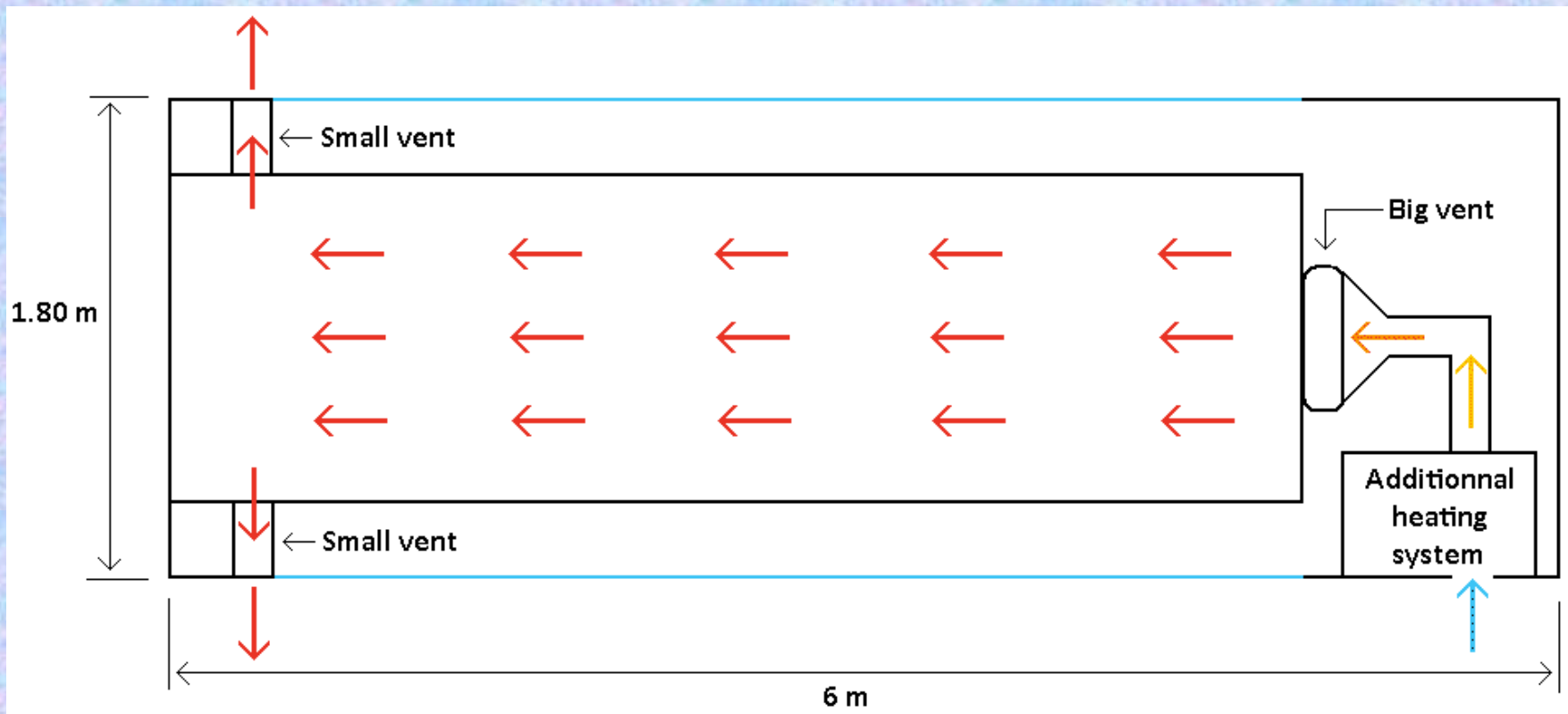
Solar Indirect Active Drier



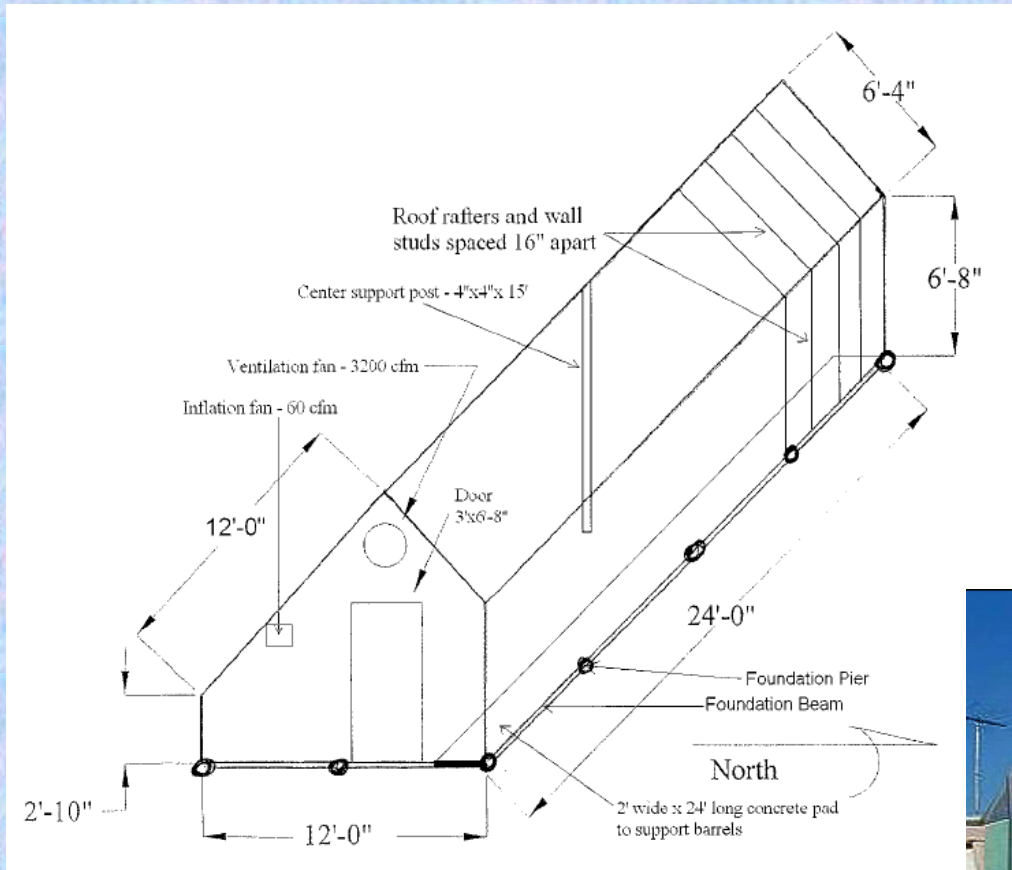
Solar Indirect Active Drier



Solar Indirect Active Drier



Solar Green House



Photovoltaic

How Solar Works



Thanks for your attention