

Welcome to Madagascar!

**Association for
The Development
Of Solar Energy
Swiss – Madagascar
(ADES)**



ADES – A Swiss Nonprofit in Madagascar



- ADES Association pour le Developpement de l’Energie Solaire Suisse – Madagascar, founded by Mrs. Regula Ochsner in 2001
- ADES develops, manufactures and sells solar cookers, solar dishes and fuel efficient improved cookstoves in Madagascar
- Provides employment for local people
- Intent is to mitigate the problems of deforestation
- Provides environmental training to students and teachers through their Schools Program.

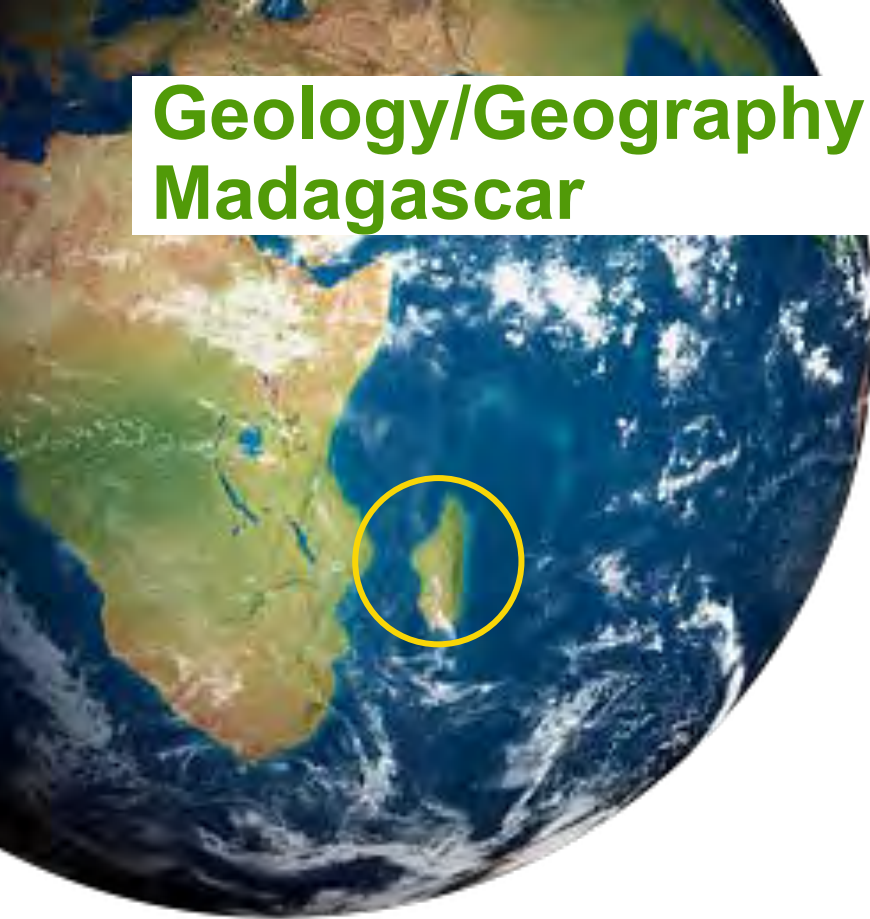
How Did I Get Involved



- Concern for Environment
- Trip to Madagascar 2018
- Wanted to find a way to help
 - Amazon
 - Create a Nonprofit
- Found ADES



Geology/Geography - Origin of Madagascar



- 65 Million years ago, Madagascar split from Africa and became its own island
- The area of Madagascar is approximately the same as Texas



Madagascar: Noah's ark of endemic species



Madagascar - Frog



Madagascar - Fody



Giraffe Neck Beetle



Citrus Swallowtail

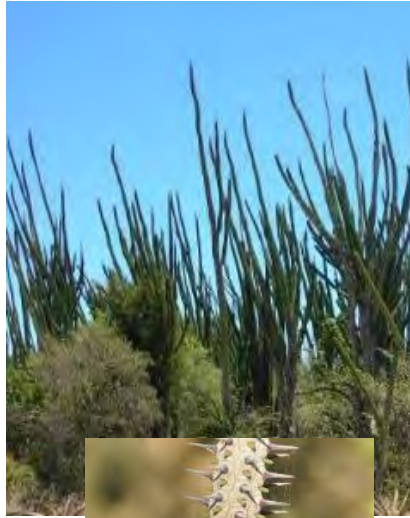


Radiated Tortoise



Chameleon

Flora



Lemurs



Many of the approx. 100 endemic species are threatened by the destruction of their habitat due to deforestation.

Challenges of a beautiful country with warm and friendly people.



- Population – 50% under age 20
- 89% of the population lives on \$2 / day
- 85% of population has no access to electricity
- Cook with wood or coal
- 25% of income spent on cooking fuel
- Many families can only have one meal a day.
- Lack of infrastructure
- Climate change

Deforestation Within Madagascar



- Only 10% of the original forests exist today
- Each household needs more than one ton of coal for cooking per year (equivalent to ten tons of wood).
- With the current population, that equates to a forest loss of 250,000 acres a year
- It is estimated that it within 20 years the forests will be gone

Fatal Consequences of Deforestation



- Erosion of the soil reduces the productivity of farmland within two or three years
- During the rainy season, sediment is carried throughout the watershed is washed out to the sea, suffocating the coral reefs.
- Reducing charcoal consumption can be done by using alternative fuels or cooking technologies

Efficient Cooker Production



The Solutions - Energy Saving Ovens OLI-b and OLI-c



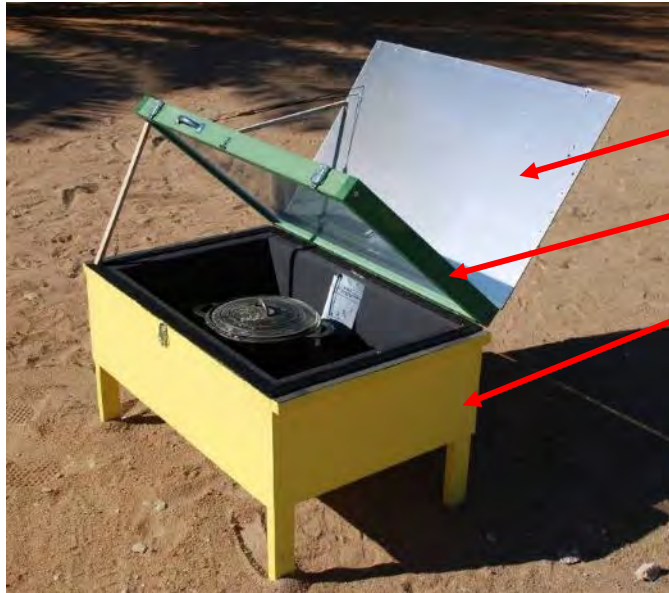
ADES has developed energy saving stove to burn wood (OLI-b) or charcoal (OLI-c).

These stoves consist of three main parts:

- a fired clay center, the core of the energy-saving stove
- a pan support made of aluminium or iron
- a sheet metal exterior. For the OLI-b, a metal rest as support surface for the wood.



The Solar Cookers



Reflective lid

Glass cover

Insulated box

Box solar cooker

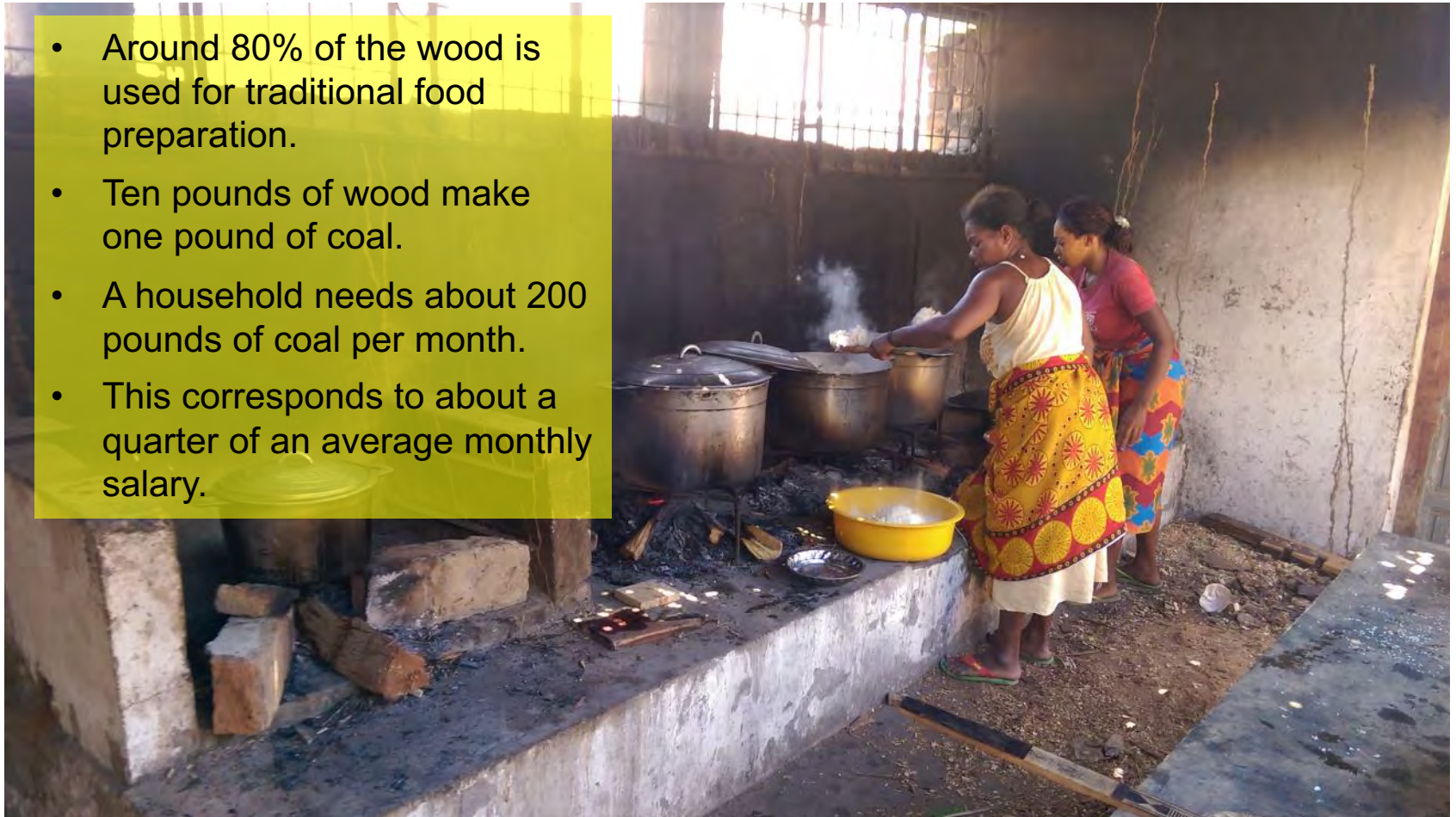


Parabolic solar cooker

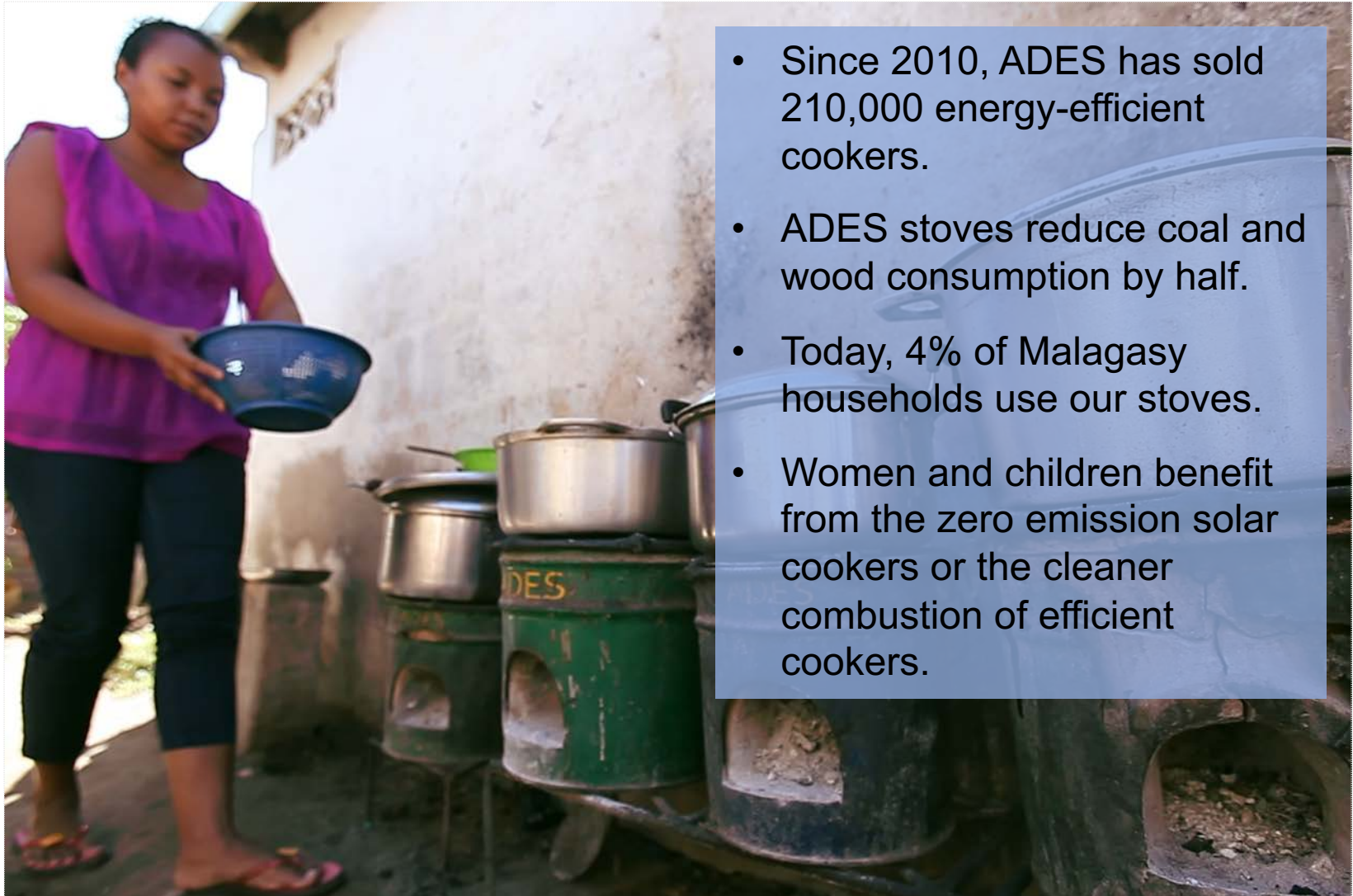
Why Do They Need Efficient Cookers?



- Around 80% of the wood is used for traditional food preparation.
- Ten pounds of wood make one pound of coal.
- A household needs about 200 pounds of coal per month.
- This corresponds to about a quarter of an average monthly salary.



Efficient ADES Cooker



- Since 2010, ADES has sold 210,000 energy-efficient cookers.
- ADES stoves reduce coal and wood consumption by half.
- Today, 4% of Malagasy households use our stoves.
- Women and children benefit from the zero emission solar cookers or the cleaner combustion of efficient cookers.

ADES Creates Jobs and Apprenticeships



- 141 Number of employees
- 143 jobs with local suppliers
- 117 independent resellers
- Fair wages and above-average social benefits
- Training for resellers
- Internships for students in the fields of environmental education, computer science, metal and woodworking and pottery



ADES today



2011



2008



2003



2009



2013



2014



2013



2006



Manufacturing Process for Stoves



Sales



Cooking Demonstrations



Besides the production of energy-saving and solar ovens, our main task is information and education.

Our team invites the village residents to participate in demonstrations.

In the villages the demand for stoves is greater than what ADES is currently able to produce.



Resellers and Training



Mobile Center



Children of Aga Kahn in Anjialava

Sales Figures



- 217,000 ADES cookers sold
- 1.2 million people benefit from ADES stoves
- ~~2,200,000~~ tons of wood saved since 2001
- 55,000 school children sensitized to environmental issues
- 2,200,000 Tons of CO₂ off-set
- For every cooking appliance sold, ADES plants a tree seedling.

Training and Awareness



Women are trained by the ADES team to become future cooks, who in turn share their recipes and knowledge of solar cookers, with others in their village communities.



ADES School Program



ADES develops complete teaching programs, including environmental education, healthy nutrition and efficient cooking so that teachers can continue to teach these topics to class each year.



Cooperation with Partners



The **HERi** energy kiosk chain has included our cookers in its sales concept and is now a reseller.

- WWF
- Bel Avenir
- Red Cross
- GIZ
- Energie-Kiosk HERi
- **myclimate**



Reforestation Plan – Healthy Forests



Reforestation in the village AMBARAZY

- Currently five tree nurseries managed in ADES centers
- Incremental expansion of reforestation activities into 15 more villages by 2024
- A diverse mix of trees are planted to achieve a healthy forest (no monocultures)
- Fruit from mature trees will be harvested to feed the villages
- Endemic hardwoods are planted and will not be harvested for economic purposes
- Additional tree species will be planted and available for sustainable harvesting after 7 years of growth



How You Can Help

1. Every dollar counts. Make a donation of any amount
 - \$30 will plant 10 trees
 - \$50 donation - You can buy a stove for a family
 - \$100 – You will provide school supplies for one student for a year.
 2. Tell your friends about ADES
 3. Do you belong to an organization that would like to know more? Or have a presentation?
 - Fiscal partner – King Baudouin
- From Google: Search for “Donation ADES”
<http://www.adesolaire.org/en/support-en/make-a-donation-en>