

# LA

# CUISINE

ADES Association  
pour le Développement  
de l'Énergie Solaire  
Suisse - Madagascar

# SOLAIRE



## Project proposal

### Solar and energy-saving cookers in Madagascar

Since 2001, the Swiss based association ADES has been committed to energy-efficient cooking in Madagascar and promotes the use of renewable energies. Its core tasks are the production and sale of solar and energy-saving cookers. This enables large quantities of wood and charcoal to be saved. Moreover, it protects the climate, biodiversity and health and makes it possible to escape poverty.

#### 1. The effect of solar and energy-saving cookers

Madagascans benefit from energy-efficient cooking in many ways:

- ADES energy-saving cookers reduce the need for wood or coal by 61% and 53% respectively. This has a big impact on Madagascar's nature as well as on the families affected by great poverty  
*On average, according to the Gold Standard Report, a Madagascan family cooking above the open fire uses 4-6 tons of wood per year.*
- The cost of the fuel needed for cooking is usually about a quarter of the average monthly salary. And this in a country in which 92% of the population live with less than USD 2 per day and in which about 85% of the population has no access to electricity. Hence, ADES-cookers make a big difference.
- 520 hours of collecting wood per year and household with an ADES cooker is no longer necessary.
- An ADES energy-saving cooker saves around 3 tonnes of CO<sub>2</sub> emissions per year. This is good news for Madagascar's nature.
- Women and children benefit from massively fewer smoke emissions, from a much better indoor air quality and a lower risk of fire accidents.  
*According to the WHO, 18,700 people die prematurely each year in Madagascar from inhaling wood smoke.*
- Solar cookers are emission-free. The positive effects are therefore even greater than with energy-saving cookers.



energy-saving cookers model OLI-b and OLI-c

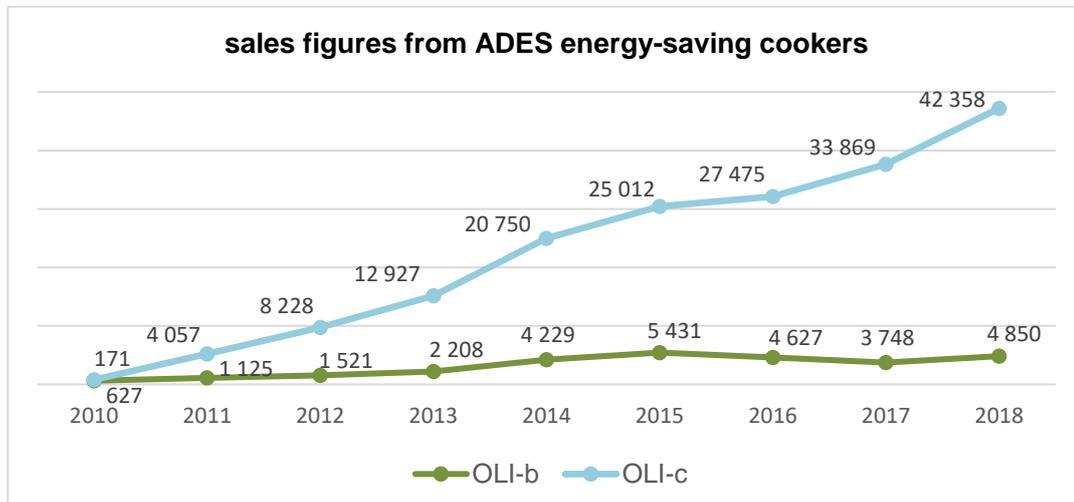


parabolic stove (photos: ADES)

## 2. Demand since 2010

The demand for the OLI-b energy-saving cooker has risen steadily in recent years. While the model OLI-b burns wood, users of the OLI-c need charcoal. Both models are available in three sizes.

To date, ADES has sold **over 203,000 energy-saving cookers**.



*« With the ADES-OLIs I only need one bag of charcoal per month, instead of two. »  
Lazatina R., Antananarivo*

Demand for solar cookers and parabolic stoves has been stagnating for a few years at around 250 and 100 units respectively. Reasons for this include the fact that users must change their cooking behaviour and that these stoves are more expensive than the OLI models. The following projects are currently underway:

1. By the end of 2019 at the latest, ADES will be in a position to manufacture parabolic mirrors itself in a semi-industrial production facility. As a result of the withdrawal of a supplier, ADES ventured to develop its own parabolic mirrors in 2018 and at the same time improved the quality of them.
2. As part of an improved kitchen concept for commercial kitchens, a combination of solar cookers and energy-saving cookers will be tested at eight schools by the end of 2019. Here, too, the goal is clear: to reduce wood consumption, CO<sub>2</sub> and smoke emissions as well as costs.
3. The Mobile Centre, which has been on the road since mid-2017, uses environmental films and cooking demonstrations to create awareness to the population in predominantly rural areas to wood-saving cooking methods, the protection of the environment and climate, the health risks associated with open fireplaces and healthy, balanced nutrition. During their stay in the project regions, the Mobile Centre team recruits independent local resellers and thoroughly introduces them to their activities. After the Mobile Centre has moved on, the resellers continue the sales activities and ensure customer service.

To date, ADEs has sold **over 13 600 solar cookers**.



solarcookingbox



energy-saving cooker OLI-b (photos: ADES)

### 3. Quality and pricing

Outstanding quality at affordable prices! ADES achieves this thanks to its own local production, the support of CO<sub>2</sub> contributions from its climate partner myclimate as well as donations.

Cookstoves from ADES are distinguished thanks to:

- A 3-year warranty.
- Close monitoring of the users. ADES cookers, in particular solar cookers, aim at a change in cooking behaviour. The training of new users is correspondingly important. After purchase, new users are closely accompanied and advised by several visits from ADES personnel.
- Thanks to the contributions and donations mentioned above, ADES is able to sell the cookers at greatly reduced prices. Only in this way can the poor population of Madagascar afford to cook in a climate and health friendly way.
- Each cooker is provided with a code and has been scanned electronically since 2019 (previously recorded by hand). This enables the independent auditors to trace each cooker back to the buyer and to check when it is in use and what effect it has. This data is necessary in order to possess the Gold Standard seal of approval from our partner organisation myclimate.
- These audits take place annually and show that energy-saving cookers from ADES are very often in use for five years or more.

***"My OLi is already over eight years old and has first rust holes, but it works still flawlessly!"***

*Madame Yolande, housewife and mother of four children, Toliara*

Energy-saving cookers cost between CHF 3.50 and CHF 28.00, depending on size and firing method. Solar cookers are available from CHF 18.00, parabolic cookers from CHF 53.00. This includes the often very time-consuming and expensive transport and - very importantly - the training of users in correct handling of the cookers.



*ADES equips Malagasy households, restaurants, schools and hospitals with the necessary equipment to meet local conditions and the respective use of adapted cooking appliances.*

### 4. Production targets and budget 2019

ADES has budgeted the production and sale of 45,000 solar and energy-saving cookers for 2019. This corresponds to a slight increase compared to the previous year. Due to the high demand, several customers had to be put off in 2018. In order to secure financing and quality, ADES pays great attention to proper planning. Only in this way can we guarantee sustainability, the right use and reliable delivery.

## Budget 2019

Expences	Project components	Activities	CHF
<b>1</b>	<b>infrastructure and services</b>		
1.1	cost of materials (production of 45,000 solar and energy-saving cookers)	procurement, purchasing	385 911
1.5	personnel expenses Madagascar*	wages, allowances	338 290
1.6	social security expenditure Madagascar	staff	72 658
1.7	other personnel expenses Madagascar	school fees, further education	71 002
	<b>total - 1</b>		<b>867 861</b>
<b>2</b>	<b>project support</b>		
2.1	operating expenses on site	transportation costs	196 538
	<b>total - 2</b>		<b>196 538</b>
	total - project costs 1+2		<b>1 064 399</b>
	administrative expenses (12.7 %)		135 179
	<b>Total - Project expenditure**</b>		<b>1 199 578</b>

\*ADES pays fair wages and social security. In addition, ADES finances the school fees for the children of the employees. ADES ensures a secure income for over 250 Malagasy women and men.

\*\* Around half of the production costs are covered by the CO<sub>2</sub> contributions of our climate partner myclimate. For the other half - around CHF 1.2 million this year - we are dependent on donations in order to be able to sell the stoves at an affordable price for the Malagasy population.



Demonstration of a solar cooker at a public school



production in Fianarantsoa (Photos: ADES)

**"Already as a child I have been proud of my father for him working for ADES. With his job he also fights against the destruction of the environment."**

*Hospice, student and son of a longtime employee of ADES*

## 5. How can you help?

To achieve an **annual production and distribution of 45 000 solar and energy-saving stoves** and to be able to continue the sensitization and education work for one year, we are dependent on your solidarity. Every donation is welcome and contributes sustainably to the reduction of health risks and poverty as well as to the protection of the environment and the climate. With the following amounts you enable a Malagasy family to cook in an environmentally friendly and healthy way:

**50 CHF for an energy-saving cooker  
150 CHF for a solar cooker**

**Thank you very much for your support!**

