PCSA
SOLAR COOKING PROJECT IN AFRICA
I.
PROJECT HISTORY

Following an outbreak of diarrhea occurred in April 1989 in the Garba Sinthiou Matam, it was sterilized water before consumption to avoid spread of the disease. The scarcity of firewood and using limited school for the purchase of butane gas, the water basin of the school was transformed into sterilizer water following a simple principle of physics:

The pool water is transformed solar oven that works on the principle of the effect of emissions. The short-wave solar radiation through a window serving as a lid without loss of energy. By touching the inside walls of the basin covered with special paint, black and non-toxic, solar rays become ray longest heat wave, which heats the water in the containers. With excellent thermal insulation, heat loss incurred within the furnace are minimized.

A more efficient design and the selection of a construction material more is appropriate given birth to the first solar cooker in Senegal in 1990.

2Epaisseur window glass
simple
Reflector
Iron rod
home
insulation
Aluminum foil
Insulation
Rope adjustment

With the support of the Swiss Cooperation, the first experiment performed s'ext Gouyayar Sarr in the department of Luga from 1992 to 1996. The results were mixed because women did not master cooking traditional dishes with solar cooker. With a German Cooperation, the project was exported to Burkina Faso with success. It is now one of the countries that use the most solar cookers in cooking and heating water in the world.

In 2001, a training workshop of trainers, organized by the association Mekhe PALETTE, trained trainers in four carpenters build solar cookers and 3 facilitators to their use, and was born on Project Solar Cookers for Africa (PCSA)

The solar cookers obtained successively:

¬ The **Gand Prix ILCA** for business start 1998

¬ **Grand Prix of the President of the Republic** for the Promotion of Innovation and technological invention in 1999 (Region Louga)

¬ **First Prize in the** 2001 edition of Tambacounda **TECHNOFOIRE**

In2001-2008 Abdoulaye Touré, solar cookers designer is posted succession to the Office of the Ministry of Education and the Ministry of Scientific Research for the implementation of the project Solar Cookers. The August 5

2008, the Office of solar cookers is to create the Ministry of Research Science.

II.

PROJECT SOLAR COOKERS

The project to install solar cookers in Senegal started by a module of instruction in schools, it is passed as proposed Community at the request of parents' associations 2001: It is a "field study" part of a "Transaction test" implementation of solar cookers, prepared and followed experimentally in order to draw "Lessons generalizable" to other countries, climates, food, culture ... etc.

The use of simple technology such as the solar oven, **presents many advantages** that we allow ourselves to briefly below:

¬ The first function of the solar cooker is "naturally" to allow **cooking food** without further input of energy that the sun (natural wealth inexhaustible). It can also heat water at 72 ° and thus provides water drinking, which is considerable interest in Africa, where water is both a symbol of life (essential element) and a symbol of death (vector spread of diseases ...).

¬ But the solar cooker has many other advantages:

 For Health: Avoid eye diseases and lung (smoke) or back (Timber port), eliminates diarrhea (water pasteurization), keeps the vitamins food.

 For the environment: reducing deforestation and soil **erosion, reduces "Greenhouse effect"** keeps the biomass, grass and "dung" usable natural as fertilizer to enrich the soil.

 For the economy: reduced by 90% spending "fuel" of households (wood, charcoal, gas, oil), creates jobs for local manufacture of solar cookers.

 For freedom and the family frees women and children of time important and painful past to the "drudgery of wood", this time becoming available for education, training, family care ...

 If the benefits of solar cooking are numerous and incontestable by traditional methods of cooking food in Africa, there are Yet the reluctance, and sometimes even real "cultural barriers" to the use of solar energy, as evidenced by several officials Association who are not all totally convinced of its fit national needs and local customs ... This observation led us to certainty following before launching an ambitious plan for implementation of solar cookers Senegal (in Africa or elsewhere ...), you must first persuade and then achieve a real "implementation study and feasibility" to set clearly identified:

¬ The nature of the brakes (cultural or otherwise) that may limit or prevent the Development of solar cooking in Senegal.
¬ Above the means to implement to remove or circumvent barriers identified.

 To carry out this research, a first approach was to start a "laboratory study" certainly exciting and instructive, but likely to remain too theoretical and therefore unenforceable in practice ... After reflection and discussion with other actors in this area, it was preferable that this survey is truly a "field study", Part integral of a "trial run" implementation of solar cookers, prepared and followed experimentally in order to draw "lessons generalizable "to other countries, climates, food, culture ... etc..
This is the substance of this project
OBJECTIVES
GENERAL: Reducing inequalities in access to domestic fuels to improve social welfare, education, health and income populations.
SPECIFIC OBJECTIVES:
1. information on inventions and innovations on existing solar cookers national and local levels;
2. collection of local processes and how the use of solar cookers in for improvement based on scientific data and technologies;
3. the concrete achievements of science and technology in order to meet the socioeconomic needs of the population;
4. the transfer of advanced technologies;
5. dissemination of knowledge and know-how in close relationships with society and the business world.
III. EXPECTED RESULTS
Result 1 production and flow cookers are provided
Result 2 The target population using the solar cooker
Outcome 3 Marketing of solar cookers
Training in construction in Thies
Training in cooking Ndoukoura

COOKERS WOOD
COOKERS METAL
COOKING of traditional
Rice and fish (white rice and tomato rice)
Couscous
Dakhin
Ndamba