



## Links between Sustainable Development and ABS : Argane tree case in Morocco

### **Prof. Zoubida Charrouf,** *PhD*

### Mohammed V University of Rabat Presidente of Association Ibn Al Baytar (No profit Organisation)

Business and Biodiversity Forum at COP14 14-15 November 2018, Sharm El-Sheikh, Egypt بمبية (لي (لبطار



Université Mohammed V Faculté des Sciences Rabat





## Argan tree : Argania spinosa

The Argan tree is unique to Morocco where.

There are over 20 million Argan trees covering an area of 830.000 hectares.

They are very resistant to desert-like conditions, surviving temperatures raising from 3°C to 50°C and rainfalls as low as 120 to 200 mm per year

They are the last barrier against the desert.





## **Economic, Social and ecological role of the Argania forest**

Argan tree : multipropose tree

1 ha : 400 euros/year



Provides products and income for more than 2 million people

20 million working hours / year.

# The Argan tree was considered as "green curtain"

#### against the desert.

 It stabilizes the soil, reduces erosion, maintains moisture in the air, shelters a large variety of small and wild animals
It shades domestic cultures and furnishes via its fruit the major part of the Argan forest dwellers lipid dietusiness and Biodiversity Forum at COP 14 14-15 November 2018



## The Argania forest : a fragile ecosystem





Since the 1970s, the Argania forest is on decline and is threatened by evolution of the lifestyle in rural regions.

Between IXX et XX century, we lost 50% of the forest. 1965-1980 : 600ha/an

Difficult climate Increase of the demography Need to increase surfaces for agriculture → clearing

Increase of wood consumption Over-exploitation of the soils Irrigation: exhaustion of ground water Oviers and Pingiversity Forum at COP 14 14-15 November 2018

## Research – Development : Evaluation of the Argan oil determinants of quality

Developing new ways of processing and presenting the product to make it more attractive. Organization of prodcures in cooperatives for improvement of women's social and economic condition









Business and Biodiversity Forum at COP 14 14-15 November 2018



Traditional methods : non-optimal sanitary conditions





### **Research on other argan product :Cosmetic ingredients :**

#### Sources :

#### Phytomolécules :



#### Fruits :



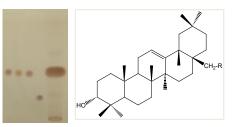
Press cake :

#### Triterpenes

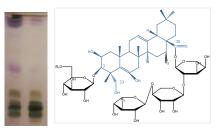
**Proteines** 

**Saponins** 

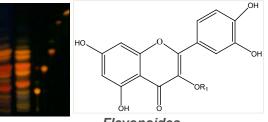
Oil



Triterpenes



Saponines



Flavonoides



Leaves : Polyphenols

## Safety assessment

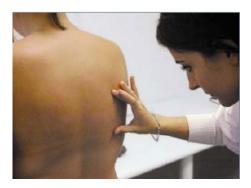
- Patch tests (contact allergy testing) : Non irritant
- Assessment of sensitizing potential : No significant reaction
- Assessment of photosensiting and phototoxic potential : ARGAN OIL, was not associated with any photoirritation or phototoxic



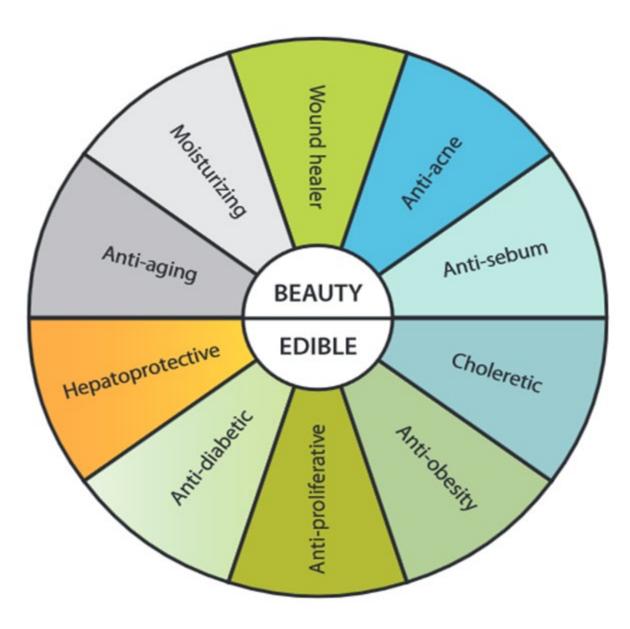












## **Research** – action : Ibn Al Baytar association Argan oil processing: creation of cooperatives



Organizing the producers into cooperatives,

. train them to use the new technology,

. train them also so they know how to run the cooperatives (administration, management, marketing, all aspects

### **Economic Benefits**

Social and economic benefits



Actually : 300 coops, 100 SMEs

Socio-economic integration of women by improving their standard of living

Women and marginalized acquire recognition and dignity (a woman was elected to parliament )

Improving women's skill levels and status

The women have the possibility to decide how to manage their income

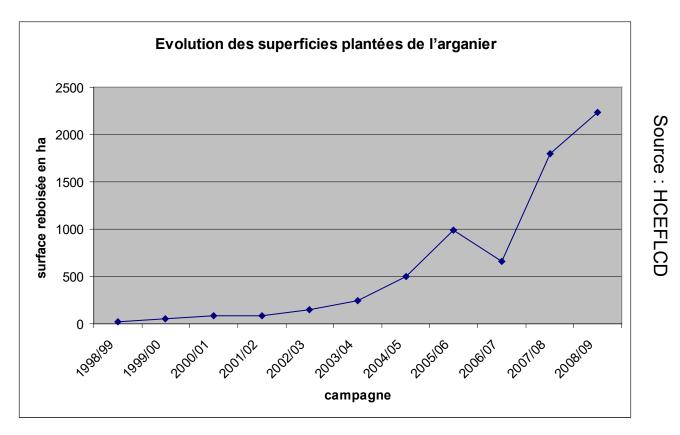
Business and Biodiversity Forum at COP 14 14-15 November 2018

More than 300 women cooperatives (5000 femmes) More than 100 SMEs

Exportation of 1400 tonnes/year Exportation : 30 MILLIONS EUROS en 2016

### **Environnemental Impact**

Reforested areas are growing exponentially



#### 200 000 ha will be reforsted by the gouvernement 2014-2020

## Pressed Cake Benefits:

 55% goes to a social fund/benefit-sharing fund to be used for the women – the women decide how to spend.

 45% goes to the cooperatives (indirectly to the women). Some paid to women and some reinvested in coop and to assure quality etc

## Social fund expenses:

- Literacy programs (Arabic)
- Health insurance fund (for under 65 year old)
- Medical expenses for the women and families (and surgeries)
- School supplies for children (books, pens, furniture)
- Doctor checkup for women and children.
- Distribution of food
- Optometry and eye glasses
- Cushions and air conditioning for coop rooms
- Pharmacy products
- Washing machines
- Sewing classes
- Blankets for a cold winter
- Planting argan trees



Agenda 2030 : Investing in biodiversity to achieve sustainable development, the SDGs and their targets







## Thank you for your attention

## zcharrouf@yahoo.fr



Université Mohammed V Faculté des Sciences Rabat

Association IBN AL BAYTAR

جمعية (بي (لبيطار