



# **OURIKA**

Mitigating extreme climatic episodes with agroforestry projects



Ourika

## **CONTEXT**

The project's area takes place in the Ourika valley, in berber villages built on hillsides, characterized by intensively pastured bare lands where natural forests cannot regenerate.

The Ourika valley is increasingly exposed to extreme climatic events, alternating between heavy rains causing landslides and soil erosion, and serious droughts that impact farmers' yields and daily lives because of difficult access to water.

The Ourika project was initiated in 2016, in collaboration with the High Atlas Foundation, a Moroccan NGO.

## **OBJECTIVES**

The aim of this project is to support communities of farmers in restoring the degraded lands on which they depend through tree planting:

- To reduce soil erosion on cultivated lands by implementing orchards intercropped with cereals.
- To restore natural forests surrounding communities by planting native trees such as Caroub, Atlas Cedar.
- To generate additional revenues in the long term through the production of fruits that can be highly valued on the local market such as Olives, Caroub, and Pomegranate.



## **ACTIVITIES**

- Integrated Landscape Restoration
- Agroforestry with Perennial Crops



## **PRODUCTS**

- Wheat
- Fruit





I grew up and have always lived in the Ourika valley. I seen the climate changing, becoming more and more unpredictable. Nowadays, entire communities are affected by water shortages, or on the contrary by flooding and landslides during heavy rains. People are starting to realize how important it is to plant trees to retain the soil on steep lands and on their parcels. The community we work with are more and more involved and committed to take care of the trees, and particularly since the Foundation got the official authorization to plant native trees on national forest lands while having the rights to benefits from co-products of these plantation, such such as Caroub fruits.

- Abdeljalil Ait Ali

## **PROJECT IMPACT**



**6,925**Trees financed in 2020\*

3,875

Trees planted to date by Accor

**Project** 

beneficiaries



6.4
Hectares
impacted by the
project



22 Species planted



## **KEY FUNDERS**



### **LOCAL PARTNERS**











# **#Plant For Good**

Regenerative planting models and native species



#### **HEDGEROWS**

150 trees per ha. Trees planted on the boundaries of the parcel, or on a line combining slow-, medium- and fast-growing trees. Trees provide a windbreak; they also limit the spread of diseases and pests among crops. They limit access to people and wild animals and enhance soil stability



#### INTERCROPPING **SHADING** PERIMETER

200-300 trees per ha. Trees are planted among crops and on parcel borders. They provide shade, fertilize the soil, regulate water, provide windbreaks as well as limit the spread of diseases and access to people and wild animals.



#### PLANTATION FULL STAND

High tree density (1000 trees /ha) to restore degraded and unused lands, combining slow-, medium- and fast-growing trees. This model provides ecosystem regeneration and protection at the landscape level, increases biodiversity, prevents erosion and regenerates the soil. Optimal for timber or fruit production and carbon storage.



#### ORCHARD

Planting fruit and nut species to generate income, using adapted varieties for dry and irrigated systems. Planting several native species to create vegetal cover, reduce erosion, regenerate soils and restore biodiversity.

At PUR Projet, we select the species we plant with great care. Most of the species planted are native and always adapted to local needs and ecosystems.

### Key species planted:



**CAROUB** Ceratonia siliqua



**OLIVE** Olea europea



**ALMOND** Amydgalus communis ou Prununs amygdalus



ATLAS CEDAR Cedrus Atlantica



**ARGAN** Persea Argania spinosa



**ATLAS CYPRESS** Cupressus Atlantica



**PERUVIAN PEPPER** Schinus molle



**POMEGRANATE** Punica Granatum



# Key project benefits

# Long term impact for people & nature



### **ENVIRONMENTAL**

<u>Severely deforested and degraded</u> <u>landscapes:</u> bare land and hills, ongoing desertification process, extremely high level of erosion and fuelwood extraction.

<u>Climate adaptation</u>: very low resilience as farmers are affected by soil losses, climate extremes, drought, lack of water and high temperatures.

Farming conditions: in general, poor and subsistence production systems: wheat, barley, olives, almonds, walnuts, caroub fruits, pomegranate, etc. with a few examples of layers and successional exploitation systems.

<u>Carbon</u> <u>sequestration</u>: limited carbon sequestration potential in some areas (steppe type ecosystems, dry mountain systems).



## SOCIAL

Adverse conditions in rural mountainous areas: the project region is highly marked by unemployment in rural areas amongst women and men. The parcels are generally small and in most of the cases, not big enough to produce surplus.

High farmers' dependency on selfsufficiency potential: trees can bring fruits, animal feed, fuelwood, as well as diversification income through timber and other products as flowers and grains.

<u>Supporting women and cooperatives empowerment:</u> women, are included in the project supply-chain and activities. In addition, cooperatives and local associations as considered as real implementers and thus give them responsibilities and formalized working conditions.

Revenues diversification and increase



## **ADDITIONALITY**

Farmers already have orchards traditionally cultivated: (with olive, almonds, walnut, etc.), but in the most fertile areas only (flat land along the rivers), and not much outside of these naturally irrigated areas. The project allow them to expand at a larger scale the productive orchard, and especially make it feasible to expand to severely degraded and slope areas (in particular with irrigation).

Improvement compared to a public program of reforesting public land: the Waters and Forest department already has large campaigns of reforestation in their public territory, however limited in size (compared to the scale of reforestation needed). The project would allow to increase the scale of those reforestation activities, and strengthen the link with the concerned communities. Also, the project foster more species diversification.









