MOROCCO

Rural Development Programme in the Mountain Zones – Phase I (PDRZM)

The designations employed and the presentation of the material in the map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

ISSUES
Morocco is a middle-income country with an economy highly reliant on agriculture, accounting for 14 per cent of the country's gross domestic product (GDP). The sector is responsible for employing 43 per cent of the rural population and agricultural products also represent 23 per cent of exports. Unfortunately the mountain areas in Morocco are threatened by erosion and desertification, and this is only becoming worse with climate change.

Since 1960, average temperatures have increased by 0.9°C, which is an average rate of 0.2°C per decade. This temperature increase is most severe in the dry season from April to June. By 2060 it is projected that the average temperature increase will be between 1.1-3.5°C, and reaching 1.4-5.6°C by 2090. This trend of rising temperature will massively impact the agricultural sector of Morocco, making it harder to grow crops. To exacerbate this situation, all climate forecast models project a decrease in annual rainfall in Morocco, and whilst models vary, it has been projected that the decrease could be anywhere from 15-52 per cent.

The programme’s objective is to reduce the vulnerability of the rural population in the mountainous provinces of Sefrou, Azilal, Tinghir and Ouarzazate. However, there are many other constraints that have an effect on productivity in the rural economy. Issues include:

- Significant training needs
- Difficulties of access to finance and to markets for small producers
- High illiteracy rates amongst women
- An adaptation deficit in rural areas
- Management of water, soils, rangelands and in the use of fertilizers and pesticides
- Inappropriate use of fertilisers and pesticides

ACTIONS
Concentrating on areas where climate change has contributed to the worst erosion and desertification, the project has two main objectives: 1) the development and improvement of the agricultural sector, 2) the sustainable management of natural resources coupled with climate change adaptation and crop diversification.

The first programme component will focus on three areas: plants/crops, animals and infrastructure. Emphasis will be placed on improving production techniques whilst simultaneously reducing post-harvest losses. This will be done by improving product storing, processing, packing and marketing. Additionally the current high losses due to decay from improper handling and distribution will be reduced.
The programme will also work with animal breeders. In partnership with associations such as the National Sheep and Goat Association (ANOC) and the National Food Safety Office (ONSSA), PDRZM will tackle issues like animal health, genetic selection and veterinary practices. As the livestock industry adopts better standard practices, the output quality of meat and animal products is expected to improve. Increased health and disease prevention will naturally help keep livestock strong and productive which in turn will protect farmers income.

A large part of the programme will be aimed at the development of infrastructure and hydro-agriculture. The project will introduce solar energy systems along with good practices disseminated through farmer field schools. Additionally, the programme is commissioning a study on groundwater resources in the provinces, along with various methods of improving irrigation systems, including the construction of canals. There are also plans to build and maintain rural tracks which will facilitate access to farms, allowing products to be moved easily to processing units and wholesale markets in towns.

The programme will combat climate vulnerability in many ways, such as those mentioned in the previous paragraph. The project will also set up and train water users associations (WUAs) to better use and manage irrigation infrastructure.

To aid in climate adaptation the project will also promote diversification into beekeeping and improve the quality of honey products and by-products; and develop markets for traditional agricultural products.

PDRZM will support local user associations, cooperatives and other groups that are adopting natural resource management to both restore and enhance, local ecosystem such as forests, water bodies and landscapes. Through tailored investments, associated with professional training and involving local youth and women, the project will:

- Support soil conservation activities (i.e. retaining walls, afforestation)
- Introduce water conservation and management practices for farmers and herders (i.e. irrigation schemes, solar wells and solar pumps)
- Create better local services (i.e. meteorological stations, climate adaptation extension assistance)
- Introduce tailored post-harvest technologies (i.e. solar heating of barns / storage rooms, climate proofing of production)
- Provide certified professional training to women and youth in order to create local employment

The project will professionally train beneficiaries in all aspects of the project. One very important aspect of training will concentrate on post-harvest practices. As mentioned above, post-harvest losses are high, therefore sharing knowledge and technology on how to avoid this is essential. This training will be certified and should create agricultural spin-off and local employment opportunities for those who participate.

The project will also promote income diversification aimed specifically at local women and youth, through innovative income-generating activities (eco-tourism, handicrafts, value-added to local products, etc.) and improved access to technical, marketing and financial services.

**EXPECTED IMPACTS**

The project will increase community resilience and climate adaptability. It will manage this through a few key outcomes such as: increases in the number of small businesses; increase of productivity by investing in products preservation, handling and packaging; and reduction of rain fed farming hectares.

The project's intended actions will also allow beneficiaries to address climate adversities directly by increasing overall quality of available natural resources (water, non-timber products, crops and livestock). This will allow smallholders more bargaining power at market and access to diversified investments. Furthermore, as expenditures on gas, water and electricity represent almost one tenth of the rural poor's budget (8 per cent), the project will aim to reduce farming expenditures and increase income. This will increase the potential for investments in more climate resilient crops and technologies whilst reducing dependency on aid and money lenders. Thanks to climate-smart practices and technologies, this programme will decrease dependency on forest wood for heating and other domestic/farming purposes by providing environmentally sound alternatives to charcoal and other forest products.

During phase one of the programme the project will impact approximately 180,000 direct beneficiaries (30,000 households) in the two targeted provinces and 205,000 indirect beneficiaries (32,500 households). This is a total of 385,000 beneficiaries directly and indirectly affected (62,500 households), approximately 45 per cent of the total population of the two provinces.

This project will have many far reaching impacts for Morocco. It will increase both the production and development of agricultural products. It will also enhance the resilience to climate change of the people, communities and production systems within the target areas.

The labelling and marketing of locally produced goods will be improved, and this is expected to lead to a larger income for smallholders. Staff will be trained and supported in order to manage and maintain the new infrastructure works that are constructed. Training is integral to ensuring that the new storage facilities etc. are used to their optimum capacity.

Local leaders will be specially trained in the dissemination of new and innovative techniques and technologies. Using these leaders as focal points, inexpensive and sustainable practices will be brought directly to the farmers in the project area, and they will learn from on-farm demonstrations.

The programme will campaign for gender equality and the empowerment and integration of women in the rural economy. Giving women more responsibility, allowing them to own land and take part in decision making processes has been proven to increase productivity and profitability of small-scale farms.

Finally, the restoration of productive lands affected by climate change and land degradation will be a principal theme of PDRZM. By prioritizing resource efficiency and more sustainable land management practices, the programme will increase the productivity of available lands for crop and pastoral systems, while making the agricultural sector more resilient to hotter, more arid conditions.