



## Overcoming the constraints of agriculture

### **Overcoming the constraints of agriculture in the Sahel by successful community-based approaches: the case of the regeneration of land and the fight against soil salinisation in the groundnut basin in Senegal**

Senegal, like all Sahelian countries, suffers from the combined effects of population growth and climate disturbances that affect its productive bio- system and induce degradation. This is manifested in different forms depending on the physical environment and production systems in different eco-geographic areas.

Several factors are responsible for the degradation of land in Senegal, most notably industrial agriculture and soil salinization.

The adverse effects of industrial agriculture originate from the use of chemical inputs and techniques that aim at short-term maximisation of productivity without

necessarily considering the long-term effects. Such practices cause the degradation of the soil and the environment. In Senegal, the intensive production of groundnuts has been a major factor in land degradation.

Land degradation also includes salinization, which is affecting more than 1.7 million hectares of soil (LADA 2009) in Senegal, and significantly affects the potential of agricultural production.

To overcome the various problems linked to soil degradation and salinity, several local initiatives have been undertaken to regenerate the land for agricultural production.

It is in this context that various projects have emerged in the groundnut basin with the Union of Tattaguine Communities (UCT) covering two Rural Communities, those of Diouroup and Tattaguine.

## THE PROJECT

### **The objective of the project**

The main objective of the project is to revitalise and regenerate the natural resources of the land by mobilising local populations around an action-research

project. This project is intended to improve traditional management systems of family farms based on advocacy in local, national and sub-regional areas.

## Solutions offered by the project

The solutions offered by the project are evident at three levels:

### 1. Restore and maintain soil fertility:

- Training of producers on agroecological production techniques;
- Use of organic materials in fields (household waste, compost etc.);
- Reforestation of the following fertilising species: "Kadd", "Leucaena", "Dimb", "Rônier", "Filao" etc.;
- Assisted natural regeneration.

### 2. Curb land salinization:

- Creation of anti-salt dykes (using cement and mud);
- Planting salt-tolerant species such as "Niaouli";
- Provision of organic matter.

### 3. Fight against deforestation:

- Reforestation of fields and sacred forests;
- Training on assisted natural regeneration;
- Establishment of local conventions for natural resource management.

## Location and duration of the project

The project is located in Senegal in the region of Fatick, specifically in the municipalities of Diouroup and Tattaguine. It covers the period from 2011 to 2015.

## Intervention strategy

The strategy consisted of organising training / awareness creation through Farmer Field Schools in five villages where farmers test and compare two or three practices (e.g. manure plots / control plots). Exchange visits between farmer organisations and workshops on sharing the results with local elected officials and technicians were also implemented.

In terms of human resources, the project has the support of nine facilitators, two technicians and a project manager.



*A coordination visit to farmers*



*Selection of millet seeds, Dioral*

## Results achieved

Among the 140 trained producers, over 60 women have adopted the rice intensification method.

Yields on plots treated with semi-composted cow manure are on average 30% higher than those of the control plots.

**Mariam Ndiaye, farmer of the region and beneficiary of the initiative, commented:**

“Since the advent of the project, we are relieved. The lands on which it was impossible to grow are now being used. I have practiced rice production for a long time and my yields have never been so abundant. I thank the good Lord. ”

Since 2011, villagers have reforested over 30 hectares of fertilising species in communal and individual areas. The mayor of Diouroup embarked on a project of recovery of household waste. Two schools have strengthened their environmental education programs.



*A coordination visit to farmers*



*The diversity of local seeds, Diourou*

## Project benefits (local and national)

Trained and committed producers have improved their knowledge of agroecology, their crop yields and their income.

## Multiplier effects

Each year, the number of farmers engaged in agroecology increases because they see the positive effects enjoyed by their neighbours who have been trained.

## CONCLUSION

This project is moving towards the re-appropriation of local governance by the people, underpinned by a global agroecological approach to achieving food sovereignty. This re-appropriation requires strengthening citizenship with all stakeholders



*A map showing the location of Diouroupe and Tattaguine*

## CONTACT

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