Adapting to Climate Change in Baouth



The island community of Baouth, population of 1,089 and located 20km from the nearest district of Foundiougne, is no longer able to practice agriculture. **Seynabou Thior, 52, a member of the women's group** on the island says that this is because "the rising sea levels caused by climate change are strongly affecting the land, making the soil very salty..." Crops cannot grow in the saline soil, meaning that food security and livelihoods from farming have become impossible on Baouth.

Cooking without vegetables was often a reality for this island community. Instead of cultivating their own, they had to travel to the nearest district of Foundiougne to purchase vegetables at the local market. This has posed many implications for their diets, because often the women either don't have the time or the money to make these trips. To take the boat to Foundiougne, it costs 1,000 fCFA per person and the trip is two hours there and back. With the average household income per month amounting between 2,000 and 5,000 fCFA (roughly $\ensuremath{\in} 4$ to 10), this was no way to lead a sustainable life.

In 2014, ActionAid brought Agroecology and Resilience into the community with the introduction to and



training on a raised table garden project. There are tables that stand high above the ground and raised beds surrounded by cinderblocks. The beds are lined with plastic and the soil is a mix of compost, peanut shells, rice straw, and water. These structures are protected from any flooding that may occur, making it easier for the women to cultivate different vegetables, such as:carrots, cucumbers, eggplants, turnips, parsley, mint, lettuce, lemongrass, yam, okra, and bissap.

"The garden project is a success for women and also for the whole community. Now when I need vegetables, like peppers and eggplants, I take my time to go to the garden to buy them. The village garden has really reduced the amount of travel we have to do to Foundiougne.

We participate in this project to not only address our lack of vegetables, but to also to improve the nutritional quality of our meals. We have noticed that our families and our children are healthier as a result because now, when we cook our meals, we have enough vegetables for our dishes. Can you imagine a dish without them? You wouldn't have any vitamins or nutrients. This project gives us hope."

Weather Information System Helps Avoid Farming Losses in Bakho





Before the intervention of ActionAid's Agroecology and Resilience project, the community of Bakho, located in the region of Kédougou, had no exact information on oncoming weather conditions. Radio and TV were generally late in providing information and often no information was provide at all. This meant that women were cultivating crops without any knowledge of when the first rains would actually come, and even if they did come, whether or not they would be heavy or light.

Gouda Camara, 36, a member of the women's group,

notes that with the weather becoming more erratic as a result of climate change, she often had to sow seeds twice in a season. Sometimes, when she though the rainy season was about to start, she would sow her fields and seeds would germinate. But a false start to the rains meant a lack of water and the seeds would die. So, she would need to replant her fields and try again.

Furthermore, because of climate change, the amount of rainfall in the rainy season has become extremely variable, meaning that some years the rainy season would being heavy rainfall, while other years would see only occasional light rainfall. Overall however, Gouda has observed that the amount of rain has really decreased compared to past years. She says that "this has major consequences for our crops. Our yields are declining and the land is becoming harder to cultivate. We understand these issues to be brought upon by climate change."

Now, the community has been equipped with a weather information board that alerts them of the types of weather conditions to expect each day. It displays several options for the types of weather, such as a pause in rainfall or heavy storms. It also has a space to alert the community if the conditions are dry enough to anticipate the possibility of a field fire.

"The panel is regularly informed, which allows us to link our cultural activities with this information. We are also able to better organize the activities of our children to prevent them from being victims of accidents and such. Our community is better prepared now thanks to this information that the community member who manages the board receives on her phone from the National Agency of Civil Aviation and Meteorology (ANACIM).

The project has really raised the standard of living for women - we are now more conscious in choosing different types of seeds and knowing the correct periods to sow. Solidarity is more and more constant between village women, which ultimately contributes to the effective fight against poverty. The men in our village now understand the importance of us women taking on responsibility, as we are making more significant contributions to the households through the funds we are deriving from our new income-generating activities."



Saving Seeds for quality in Bady



In Senegal, the government subsidizes all seeds for farmers. Though this makes them cheaper, these seeds arrive late, are not sufficient for all farmers, and often do not have the best quality like domesticated varieties, which possess strong adaptability and maintenance of the seed gene pool. This particularly affects women because they generally lack the same access to seeds as their male counterparts. As a part of ActionAid's Agroecology and Resilience project, a seed bank was introduced to the village of Bady, to not only improve access to seeds but also the quality of seeds.



Famara Diawarra, 35, is the president of the seed bank in Bady tasked with seed control and spreading awareness of the importance of having the bank. He notes that "before, when the government provided us with seeds, they were covered in chemicals and spoiled very quickly. The quality of the seeds was just very bad and they caused so many health problems for our population."

With the seed bank located not too far from the road, farmers from the surrounding villages are able to collect and store seeds in the bank. To maintain sustainability and respect within the communities, whenever a farmer collects seeds from the bank, they must bring back seeds once harvested so that they can reconstitute the initial stock.

One conservation technique that Famara highlights is the usage of neem. This is a locally available multi-purpose plant that has also been used in promoting agro-forestry and used as animal fodder, poultry feed, and organic manure as it is very rich in nitrogen. Specifically for the seed bank, the neem leaves are collected and then turned into powder. Once there is enough powder, it is then spread over all of the seeds. This protects them from any insects and fungi that might grow if the room becomes somewhat moist. Indeed, this has greatly improved the longevity of the seeds and reduced the community's reliance on chemicals.

"The biggest difficulty we have with the bank, though, is the size. It is very small and if we want to allow any more farmer participation, it really needs to be expanded," expresses Famara. This bank currently supports 45 households, all located in the village of Bady and also surrounding communities. Famara hopes that there will



be an expansion in the near fuure so that families can continue to maintain their food security and become even more self-reliant.

Clapping his hands together with a smile stretched across his face, he exclaims, "this bank has greatly impacted our lives here. I am very, very satisfied with the work of ActionAid Senegal; not only with the seed bank, but also with the market gardening project and the support given to the women's group. We are now so resilient."

Solar Water Pump Improves Food Security in Bady



For the roughly 716 people who live in the village of Bady, located just several kilometers (km) from the town of Missirah which is 485 km from Dakar, climate change is no stranger. The rough winds brought by adverse weather and the lack of consistent rainfall has made it very hard, especially for women, to cultivate their land. Before the arrival of ActionAid's Agroecology and Resilience project, there was no source of water in the village, so the women indeed had to rely on this inconsistent rainfall.





from Bady. Because of this distance, Sira notes that "there was no garden in the village. We were not able to grow any vegetables, so we took root plants to resell them and earn some small income so we could feed our families."

The quality of life was low and a secure access to nutritious foods was even lower. Sira expressed how tired the women always were because they had to constantly travel to collect water and come up with alternatives to simply feed their families. This highlights key issues of gender discrepancies and unpaid labour from women that is often the reality in many communities. Fortunately, in 2002, ActionAid in partnership with the Producers Association of the Gambia River Valley (APROVAG), introduced the market gardening plot and a solar water pump. Women were finally able to grow their own vegetables and no longer had to travel so far to collect water, thus improving their quality of life and dignity.

"Since the arrival of the project, there is so much more ease within the village, especially with the solar water pump," expresses Sira with a big smile. At the entrance of the gardening plot are several solar panels standing tall that create the power to pump water into the three large basins. The women now only have to walk a couple steps from their vegetables to get all the water they need and they even have the time to sit down briefly while the water pumps into their watering cans.

"I mainly produce okra, chilies, and onions and learned how to cultivate through trainings on organic farming and how to use the land by APROVAG and ActionAid. I am very pleased with the partnership we have because now the food security has increased for our village. So many difficulties we encountered before are now diminished.

For the future, I envision many things. I see more planting of different kinds of vegetables in the garden and maybe even more plots of land to cultivate."

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Agroecology and Resilience Project: Stories of Change