2014 Agro-Nutrition and Energy Report

State-approved humanitarian association
Founded in 1989 by GDF SUEZ personnel
# Our actions

**CODEGAZ, since its creation, is:**

- **2,500** access structures to water and sanitation
- **more than** 260,000 undernourished cared with spirulina
- **over** 70 classrooms and 10 health centers constructed or rehabilitated
- **more than** 36,000 beneficiaries trained in SRI (and cultures vegetables in the dry season)
- **18** projects for access to renewable energies

**in 2014:**

- **52,300** beneficiaries
- **330** members
- **206** actions in 10 countries
- **772** days on mission
worldwide
Faced with declining agricultural yields, the narrowness of the plots, and the inadequacy of traditional methods to deal with soil depletion and scarcity of water resources in the context of climate change and urbanization growing, farmers from Bama (region of the "Hauts-bassins") expressed a need for sustainable solutions to address the risk of food insecurity and fight against growing poverty.

To answer this, CODEGAZ and AMAPAD, his Burkinabe partner, have implemented a multi-year training program on the System of Rice Intensive (SRI) and ecological gardening.

Thanks to technical SRI learned from training by Pierre BELEM and AMAPAD team, now 524 farmers cultivate 576 hectares of rice with SRI, reaching an average yield of 8 t / ha, doubling from the traditional method (4 t / ha). In addition, to promote the dissemination of good practice SRI in farmers, 72 relay farmers have received extensive training and advise their colleagues present in everyday life.

For the organic gardening activity, now a total of 227 farmers cultivate 107 hectares of vegetables, allowing a wider diversification of food and a further increase in revenues. In addition, 25 relay farmers have received extensive training on best practices and market gardening, they can now effectively advise other farmers.
At the end of the program that led to a substantial reduction of food deficits associated with the lean season, 5000 people have recorded an improvement in food security. Poverty has decreased too and the level of financial income increased, enabling farmer families to assume more easily essential expenses such as school fees for children and medical expenses.

In spite of this important success and to meet the growing demand of the people around Bama who also face similar challenges, CODEGAZ and AMAPAD plan to launch by 2015 a new training program at SRI and gardening for the farmers of Bama, Sangouléma, Samandéri and Badara.

In addition, to also address the energy issues and the issue of organic fertilizers, the program plans to build biodigesters with selected farmers to produce biogas (cooking and lighting), as well as bio-slurry that will be used as fertilizer to promote soil restoration and sustainable SRI yield in the future.

Financial partner:

GrDF
Agro-nutrition

SRI and Home Gardening Training for Poor Farmers in the Menabe Region

In previous projects in the Menabe region (southwest of Madagascar), CODEGAZ found a situation of food insecurity and increasing poverty due to the limited size of land plots and insufficient agricultural yields linked with traditional cultivation practices.

In response to this situation, a farmers training program on techniques of System of Rice Intensification (SRI) and market gardening had been achieved previously in three villages. In 2014, CODEGAZ and GCD, his local partner, have extended the training program for farmers in further five villages of this region.

Thus, despite the passage of several hurricanes, 34 rice farmers have cultivated 30 hectares of rice according to the method of SRI and this has significantly increased their production (yield of 5 t/ha compared to 1 t/ha with the traditional technique).

In addition, a training in gardening and the fight against pests was given to 44 farmers who do not have ricefields and helped growing successfully 2 hectares of vegetables, and diversify their sources of food and income.

As part of the program, three wells drilled have also been set up in villages of this region, which will significantly reduce the high infant mortality and the high rate of digestive diseases.

Two experiments (use of a micro-irrigation system and use of Ramial Chipped Wood - RCW for soil fertilization), conducted in cooperation with GCD and Initiation Centre Practice Baobab, showed encouraging results.

Finally, the SRI School component, consisting of an introduction to SRI based on a pedagogy of observation, has been set up for the benefit of 750 pupils of the schools of the villages concerned.

In conclusion, the program has had a positive impact on food security and poverty reduction for beneficiary peasant families. In particular, we note that the revenue generated by rice and vegetable growers surpluses helped support more easily the children’s school fees or medical expenses.

Financial partner:

GrDF
Set up by CODEGAZ and its local partner GCD in 2011, “Abundant Rice for Morarano”, the training program in System of Rice Intensification (SRI) and gardening for the poor farmers of the rural commune of Morarano came to its end.

902 farmers trained in SRI grew 244 hectares of rice fields, averaging a doubling of yields with 7.47 t / ha against 2 t / ha for traditional culture.

116 farmers were trained in ecological gardening, promoting the diversification of their food and income sources.

Finally, to ensure the spread of SRI among the population after the withdrawal of the program, 20 farmers leaders received extensive training, enabling them in the future to train and advise their fellow farmers every day.

The impact study conducted to measure the effectiveness of the program has achieved tangible and significant progress:

- food security: a lean period shortened by a half (8 months to 4 months) was found among farmers practicing SRI;
- poverty reduction: over 70% of practicing SRI and farmers market gardening recorded an increase in income;
- welfare: increased income due to rice and vegetable growers surplus has allowed households to finance more easily the purchase of agricultural equipment, repairs on their homes, medical expenses, children's school fees, rent land for the extension of the practice of SRI.

Following the success of the program and to extend the spread of SRI and ecological gardening in Itasy region CODEGAZ and GCD decided to implement a similar program in cantons of Morarano and 6 cantons of 3 new neighboring communes.

Financials partners:

GrDF et Rotary Club de Blois
In Madagascar, wood and especially charcoal are the main fuel for cooking food, often in semi confined. This leads firstly to significant deforestation (22% of the remaining vegetation cover) and to the soil erosion associated with it, and secondly, in terms of health, many respiratory and eye diseases.

On the other hand, there is a loss of soil productivity and lower yields because farmers are overwhelmingly too poor to buy fertilizers for sustainable maintenance of soil fertility.

In order to provide a lasting solution to this problem, CODEGAZ and JIRO, his Malagasy partner, implemented in 2014 a construction pilot project of 6 domestic biodigesters for poor farming families in the town of Fianarantsoa (in High Matsiatra region on the highlands). These facilities, Indian type with floating dome and of a capacity of 8 m$^3$, can produce from animal biomass a sufficient amount of biogas for cooking food for a family of 7 people and lighting for a period of 4 hours.

The beneficial effects of the use of biogas are many and are felt in several areas:

- an environmental point of view, it reduces human pressure on ground cover and thus deforestation;
- then it has a positive impact on the health status of families with reduced respiratory and eye disease in women and children;
- the social sphere is also influenced favorably with stopping the use of wood or charcoal.
Indeed, biogas allows the disappearance of the tiresome chore of gathering wood assigned to women and children, allowing them to focus on other more productive activities (income generating activities for women, schooling for children).

In addition, the digester provides an environmentally friendly solution to the lack of good quality fertilizer, thanks to the bio-slurry output that can be used to effectively soil amendment.

Finally, the groundwater contamination caused by uncontrolled spreading of pig manure can be avoided with the transformation and neutralization of the latter in the bio-digester and the composting process.

After the positive results achieved by the pilot project and in the Rush expressed by the population of Fianarantsoa, CODEGAZ and JIRO decided to continue their efforts with a new program for the construction of 12 biodigesters in 2015.

Financial partner:
GrDF