

New initiatives

The System of Rice Intensification was originally developed in Madagascar from the 1960s onwards, with the practices being integrated in the 1980s. Its acceptance has been slow in its country of origin, however today, as in many other countries throughout the world, new initiatives are emerging. More people are promoting SRI, and more farmers are harvesting the results.

Alain Oscar



Positive steps towards food security. Photos: Alain Oscar

Founded in 1989, CODEGAZ is a French non-profit organisation promoting food security in many different countries. Since 2009, it has been developing four organic SRI-based projects, two of them in Madagascar. The first was implemented in the Ménabé region, where 150 families were invited to follow a training programme aimed at increasing their food security and helping them overcome poverty. Since 2010, CODEGAZ has been developing a larger-scale SRI project to train 3,000 families in Morarano.

Work in Morarano began with a meeting with members of the Malagasy association TAOEZAKA, founded by a follower of SRI's originator, Henri de Laulanié. It identified the villagers' greatest need as increasing and diversifying their food crops and, in particular, improving their rice production. A needs assessment exercise showed large numbers of greatly deprived people within the region. Most rural inhabitants live from agriculture and face chronic food insecurity, particularly in the period between their two rice crops. The main reasons for this are the very small size of their plots (often just 0.25 hectares), the poor quality of their soils and insufficient yields (just 2 ton/ha).

Many people face a life of malnutrition and debt, which drives many to migrate to city slums.

SRI and market crops as an answer Drawing on previous experience of carrying out SRI projects in similar situations, CODEGAZ developed a pilot project in 2010 with TAOEZAKA. They began to train farmers in SRI methods and organic production of crops for the market, which made better use of the resources available to them. In the first year, the pilot project trained 1,117 farmers, focusing on how to increase their food security. This began to yield results, helping to reduce poverty levels among those who practised these techniques.

After this initial success, CODEGAZ and TAOEZAKA decided to extend the project to nine villages within the Morarano commune, with the aim of training 3,000 farmers over three years. The project had three

main objectives: (1) significantly improve food security; (2) reduce poverty levels; and (3) preserve the environment and natural resources.

The strategy for achieving the first objective was to increase rice production and diversify food production, growing other crops between the rice seasons. Expanding the production of rice and vegetables beyond household consumption needs will enable families to sell the surpluses. Environmental protection was achieved through reducing the use of water, and employing the use of compost and organic soil management techniques. Growing other crops also plays an important role here, because it allows the soil to be naturally fertilized between rice seasons by bringing in leguminous crops.

Good results The 2011-2012 campaign showed encouraging results: 1,549 farmers were

SRI in Madagascar

SRI has only been slowly accepted in Madagascar, partly due to initial resistance from government actors and the few rice scientists in the country. An important consideration was the relative labour-intensity of SRI. Most Malagasy rice farmers were used to production methods that require far less labour input in the early stages. The discipline and demands of SRI practice made it unattractive even if farmers saw the potential of increased yield. SRI practices can become *labour saving* once they have been mastered, but the transition to SRI crop management often requires more labour than many Malagasy farmers were willing to expend, and more than poor households might be able to afford.

It is difficult to assess the extent to which traditional beliefs were a deterrent for adopting SRI. In indigenous Malagasy culture people are taught that they should respect and follow "the ways of the ancestors" – or risk the wrath and retaliation of their ancestors' spirits for showing disrespect. In Madagascar, rice is not just a food crop; it also has cultural significance. And practising SRI is a very public matter. Everyone can see when SRI methods are being used because the fields are initially almost bare, with sparsely-placed tiny seedlings, and then they are profuse at harvest time (making the SRI farmer possibly a target for jealousy among neighbours). It takes considerable independence of thought and bravery on the part of pioneer SRI farmers to deviate from long-established practices.

Paradoxically, the uptake of SRI methods has been much greater in other countries, although this is now changing. Malagasies are learning that farmers in other countries are making good use of the techniques discovered in their own homeland, while their own rice sector continues to be relatively stagnant. Association Tefy Saina, the NGO that Father de Laulanié established with Malagasy friends and colleagues in 1990, has, together with many other organisations, persevered with its extension efforts. Today the Malagasy government is taking a more favourable, proactive stance toward SRI, while major conservation groups and various donor agencies are also backing its spread.

A turning point in the acceptance of SRI in Madagascar occurred in 2008, when Jim Carrey's Better U Foundation decided to support the establishment of a national SRI network and secretariat for Madagascar, known as *Groupement SRI* (or GSRI). At the outset it had 13 member-partners; now it has 13 regional platforms and 267 members, ranging from well-recognised international NGOs to small community organisations, as well as some international partners. The Secretariat is based in Antananarivo and operates a website in Malagasy, French and English (<http://groupementsrimada.org/>). Data provided by GSRI member-partners indicate that in 2012, there were more than 218,000 farmers using SRI methods on 63,714 hectares, getting yields of five to six tons/ha, two to three times the typical paddy yield in Madagascar. The Secretariat estimates the total SRI area is 130,000 hectares. (Norman Uphoff)

trained in SRI methods, and 434 rice farmers applied SRI methods on 85 hectares of paddy fields. Yields in these paddy fields tripled, giving an average of 8 to 9 tons per hectare.

A small study of a sample of 20 participating households provided evidence that adapting SRI methods has been extremely beneficial. There was an improvement in the families' financial situation, their health, their children's education and their

general well-being. The rice growers interviewed were unanimous about the effectiveness of SRI, especially those with very small plots, who previously struggled to grow enough to meet household needs.

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SRI in Mali

Hamidou Guindo had been in charge of the Mali Ministry of Agriculture's SRI programme in the eastern region of Gao for three years, but had to flee after the jihadists took over in March 2012. He returned to his hometown of Douentza, then still under government control, and together with a few colleagues set up *3A-Sahel*, a self-help association.

Farmers around Douentza have little access to store-bought seed or fertiliser, but can use SRI as it does not require outside inputs. This presented Hamidou with an opportunity to examine how farmers at a new site adapted the methodology to their conditions. With a small grant from the NGO SRI Global and collaborating with SRI-Rice from Cornell University, 3A-Sahel worked to introduce SRI in seven villages with ten farmers per village using comparison trials and collecting systematic data.

Hamidou and his team worked closely with farmers and the village authorities, and supplied basic tools and the simple, locally-made mechanical weeders needed for SRI. The project was going well, but everything became complicated in early September, when well-armed jihadists occupied the town. Suddenly there were roadblocks everywhere; the school was shut down; men were forbidden to shave. Anyone found with a laptop or camera was interrogated and risked a beating.

To get around without arousing suspicion, Hamidou and his team let their beards grow and dressed in the simple, worn clothing of village farmers. Fortunately, the team was able to finish their work unharmed. They harvested the 140 control and SRI plots following scientific methods. These showed excellent results: yields on the SRI plots averaged 8 tons/ha, which was almost double of 4.3 tons/ha obtained in the control plots.

In January 2013 the jihadist occupiers fled Douentza following the French intervention. Farmers



Hamidou Guindo holding up two plants: SRI plant on right, "conventional" plant on left. Photo: Erika Styger

can move around freely again. As information about SRI results circulates, more people knock at Hamidou's door to ask to learn about the new method. 3-A Sahel has developed a proposal for the 2013/2014 season with the aim of making knowledge about SRI available to all interested farmers around Douentza. (Edward Baxter, Director of SRI Global Inc. E-mail: sri.global.inc@gmail.com)