















TSIRO: Thriving and Sustainable Investments for land Restoration and economic Opportunity Alliance

OVERVIEW

Madagascar is home to 5% of the world's plant and animal species. However, despite its vast natural resources, Madagascar remains one of the poorest countries in the world. Over 75% of people live on less than \$2 USD a day and nearly half (47%) of all children are chronically malnourished. One of the major issues driving poverty is years of unsustainable farming practices (slash and burn agriculture or tavy) and the use of wood and charcoal for energy. These practices have culminated in rapid and widespread deforestation and forest degradation with a loss of nearly 75% of its forests and devastating impacts on wildlife.

Reversing these trends requires that local communities have different livelihood opportunities. While many challenges exist, there is huge potential in agriculture and small business development along cacao and other spice value chains. However, the lack of workforce development initiatives and efforts to promote capacity development for small businesses continues to limit economic opportunities, especially among the most vulnerable. In response to these needs and opportunities, the Catholic Relief Services (CRS) in partnership with USAID, Beyond Good Chocolate, Guittard Chocolate, Akesson's Organics, the Fine Chocolate Industry Association (FCIA) and the Heirloom Cacao Preservation Fund (HCP) launched The Thriving and Sustainable Investments for land Restoration and economic Opportunity (TSIRO) Alliance.

TSIRO ALLIANCE

The five-year partnership, called the "TSIRO Alliance", which means 'flavor' in the Malagasy language, will provide a template for strengthening cacao and other value chains in critical biodiverse landscapes of Madagascar, as well as other chocolate- and spice-producing regions around the world. The TSIRO Alliance will provide training and support to Malagasy cacao and spice farmers, helping them adopt sustainable cultivation methods that can weather climate change, sell premium crops to buyers at a fair price, and follow an environmental plan that promotes biodiversity. Additionally, the TSIRO Alliance will work on consumer education and awareness internationally in order to increase the number of informed consumers investing in sustainably sourced quality products that benefit farmers and their communities in Madagascar.

Agroforestry techniques for cacao and spice production have been shown to provide for habitat for critical biodiversity in some areas of the country. Through mixed agroforestry systems that incorporate spices, fruits, legumes, cacao and endemic trees, farmers can diversify their production of high demand products while contributing to improved soil and water management and providing habitat for critical biodiversity. By improving these production and farm management practices, small and medium-holder farmers can maximize the use of their land. By including youth as "next generation farmers", these techniques can set the foundation for years of sustainable production and scale, providing youth with economic opportunities all along the value chain from production to consumer.

GLOBAL GOAL

Conserve biodiverse ecosystems and Improve the well-being and prosperity of 2,000 small and medium hold farmers and their communities in the Tsaratanana Forest Corridor (COMATSA) and the Fandriana-Vondrozo Forest Corridor (COFAV) landscape:

Strategic Approach 1

70% of targeted farmers use improved/ sustainable agroforestry and agriculture techniques for cacao and spice production to protect/expand habitat for biodiversity

Strategic Approach 2

60% of targeted farmers and 80% of farmer groups have improved financial & organizational management capacities for collective action

Strategic Approach 3

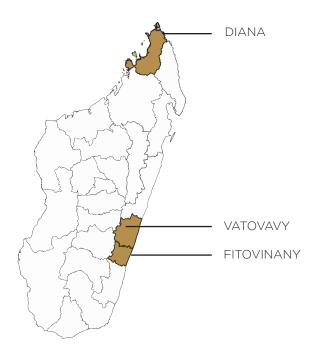
60% of targeted male and female farmers and their households have diversified and sufficient income streams

Strategic Approach 4

30% increase in consumer participation in awareness and educational platforms and a 20% increase of private sector awareness on environmental and biodiversity benefits linked to responsible cacao and spice production benefits

TARGET AREAS

The Tsaratanana Forest Corridor (COMATSA) and the Fandriana-Vondrozo Forest Corridor (COFAV) landscapes are important ecological zones under threat. Located in the northeast and the southeast of Madagascar, they are considered high biodiversity zones. These areas are home to Madagascar's unique biodiversity; however, these areas continue to be threatened by deforestation and unsustainable agricultural practices. About 150 species of COFAV's plants, birds, mammals, reptiles, amphibians, fish, butterflies and moths are on IUCN's list of endangered species while in the COMATSA landscape, 36 are on the endangered list. TSIRO Alliance will work with farmers and communities to introduce and scale up more sustainable land management practices that can contribute to protecting and expanding habitats for biodiversity while providing economic opportunities for farmers.

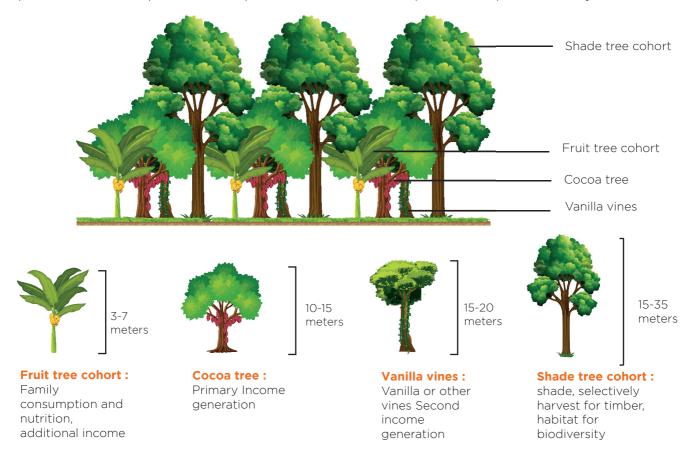




Lemur, endemic animal in Madagascar. Photo by Snyder David / CRS

COCOA IN AGROFORESTRY SYSTEM

The agroforestry approach integrates food and cash crops with trees and shrubs for viable that can help improve critical ecosystem services (soil, land and biodiversity) and provide quality products for the market and consumption. On the well-prepared soil, we plant banana to assure the temporary shading. We plant six months to one year before planting cocoa with row spacings at the same density as cocoa. In this system, it also interesting to plant second cash crop as vanilla. The plant debris is left for decomposition to improve its fertility.



COCOA VALUE CHAIN

Cocoa fruits should be harvested as soon as they are ripe. After the harvest, there is a treatment system to assure the quality of the product. The world's best chocolate makers recognize the Madagascar cocoa excellence through the "Fine Cocoa" label issued by the International Cocoa Organization (ICCO) in 2015. It is the only country in Africa who got the "Fine cocoa" label.



During the pod breaking, it is important to not damage the beans with the knife. All defective beans are removed. The beans are then brought to the fermentation station the same day of pod breaking

Fermentation is carried out in a series of 3 boxes in cascade to facilitate brewing. The fermentation time is about 6 days, not more than 7 days, as this promotes the proliferation of fungi

The beans are spread on appropriate elevated surfaces to dry under direct sunlight. Drying is carried out during about 6 days. Drying areas, equipment and tools should be cleaned regularly.

The cocoa is packaged in a food grade jute bag. Quality control must be done, cutting test, humidity, graining, packaging cleanliness. All operations made are noted and the products must be traceable

Some partners process cocoa seeds directly in Madagascar into chocolate bars before exporting them, others prefer to receive the cocoa seeds and process them abroad

PRIVATE SECTOR INVESTMENT

The TSIRO Alliance will allow private sector partners to advance and scale their work at an accelerated pace, thus creating opportunities for more farmers in different geographies of Madagascar and additional factory jobs. The companies investing the majority of their resources in this effort will scale out traceability efforts and improve farmer outreach programs that promote biodiversity protection, agroforestry, poverty alleviation and locally sourced products. With the leverage of TSIRO, strategic and budget planning for these companies is focused on growing total supply chain capabilities in Madagascar to capacity of 2-3 times currently manufacturing capacity and tripling the raw material supply needed to service the global needs of the brand. The Partner companies will also focus on strengthening the next generation of farmers in their area of production, investing in local youth who will have needed skills to continue production, biodiversity protection, management and communications.

The TSIRO Alliance consumer education activity will be led by the Fine Chocolate Industry Association (FCIA) to inform consumers on how the Alliance in Madagascar supports biodiversity while responsibly sourcing cocoa and species in local communities in Madagascar. TSIRO will also share information on conservation efforts to protect fine flavor cocoa varietals which are unique to Madagascar and are helping to maintain the genetic diversity of cocoa and species.



. Cocoa pots grow in Fiadanana, in the fokontany of Tsarahafatra (Vatovavy Region). Photo by Sedera Ramanitra / CR:

TSIRO ALLIANCE IN FIGURES



2000 Farmers and their communities reached

by the project

1200

People trained in sustainable farming and agroforestry practices, financial management and households budgeting



1100

Hectares of land restored and mainly adapted for biodiversity



500

Young people trained in sustainable farming and agroforestry practices, financial management and households budgeting

