

**FSSIV-MARS. Inc.**

**A STUDY ON THE IMPACT OF COCOA  
AGRO-FORESTRY ECOSYSTEM ON  
SOCIAL ECONOMY AND  
ENVIRONMENT**

**IN A HILLSIDE LOCATION .**

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# OBJECTIVES

To demonstrate and quantify the triple benefits of social, economic and environmental in cocoa agro-forestry ecosystem when planted as a mixed cropping system in a degraded hillside environment.

# ACTIVITIES

- Training on concept of agro-forestry.
- Installing water reservoir and irrigation system.
- Preparation of land for planting of trees.
- Selection of the desirable tree species according to the canopy characteristics and economic values.
- Design experiment following proposed of Dr. Roger Leakey (Replacement series).

-Maintenance and taking records.

+Yield of cocoa, products of other cash crops and canopy species.

+Economic return from all different products.

+Incidence of insect pests.

+Biodiversity.

+Carbon sequestration or sequestration of other trace gases affecting climate change (NO, N<sub>2</sub>O, C<sub>2</sub>H<sub>4</sub> etc..).

+Other aspects of agro-ecosystem function (soil fertility structure, nutrient and water cycling, prevention of soil erosion, etc..)

+What combinations of cocoa can create a functioning agro-ecosystem that is also profitable for farmer?

# OUTPUT EXPECTING

- Sustainable, steady, diversified and high income for farmers.
- Friendly environment (low chemical inputs, better water management, soil conservation).
- New techniques transferred to farmers.