# SOIL PROTECTION AND REHABILITATION FOR FOOD SECURITY IN ETHIOPIA IASS ACCOMPANYING RESEARCH ON ISFM<sup>+</sup> ROLL-OUT IN AMHARA REGION

Under its special initiative "One World, No Hunger" (SEWOH), the German Federal Ministry for Economic Cooperation and Development (BMZ) is prioritizing efforts to deliver food security and enhance the management of natural resources. The protection and rehabilitation of agricultural land managed by smallholder farmers are central to this dual agenda and form the objectives of a GIZ programme implemented in five countries. Seeking to explore new forms of development cooperation, SEWOH mandated the Global Soil Forum (GSF)

### **Understanding Adoption of ISFM<sup>+</sup> Packages in Context**

@ Micro Watersheds (MWs) level

Social space

Land use arrangements Labor availability & mobilization Social compatibility Profitability

**Technical space** Improved soil fertility Selection of experimental plot Increase in wheat yield Increase in Teff yield

### **3. Understanding the Context and Anchoring**

#### 1960s - 1970s:

- Practiced Intercropping and crop rotation
- (Faba bean, Teff, Barley, Linseed and Pea)
- Introduction of artificial fertilizer
- (only for few land owners)
- Dense forest of local species
- Resettlement program
- Land distribution (1975)

## SHIFT IN CEREAL PRODUCTION **DECLINE IN PRODUCTION** SOIL FERTILITY DECLINE

LESS NUTRIENT SOIL **OVER** RESTORATION **EROSION CULTIVATION** Less organic matter Inadequate \_ess compost Labor shortage SWC structures Crop-residue Land shortage & Less manure burnina fragmentation Monocropping Decline in Heavy rainfall Lack of livestock number awareness Deforestation Shortage of **Poor extension** Population fodder growth support

### 4. Emerging Lessons

- Farmers are heterogeneous: appropriate categories of farmers need to be addressed
- Farmers own different land units with various soil fertility status scattered within the MW
- Land fragmentation could influence both adoption of ISFM technologies and future rural transformation
- Explore the possibility of piloting Voluntary Land Consolidation (VLC) in selected ISFM micro watersheds
- ISFM delivery mechanisms should go beyond Model Farmers (MFs) and Farmers Field Days (FFD) Approach
- Co-design socially sensitive approaches such as "Trust-based Twining (TBT) with MFs"



to accompany the work of the GIZ through transdisciplinary research. The accompanying research project focuses on the socio-economic and cultural factors that constrain the uptake of sustainable land management (SLM) techniques by smallholder farmers. The GSF's approach stresses co-development and the pursuit of research themes with local partners, including researchers, policymakers, actors of development cooperation, civil society organisations, and farmers.

### **1.** Rationale and Objective

#### Co-generation of knowledge about the three dimensions

### **Political space**

Land tenure policy Market information Extension services Overall rural transformation

#### 1990s-2000s

- High rain fall variability and land slides
- Introduction of insecticide
- Crop rotation practice reached its minimum
- High Mono-cropping of Wheat
- Increase in soil acidity/less fertile
- Increase in inorganic fertilizer use
- Increased use of physical and biological soil and water conservation (SWC) measures

#### 1980s - 1990s

- Introduction of the first wheat variety
- (locally termed *Encoye*)
- High deforestation caused by return from settlement
- Increased soil erosion
- Land fragmentation
- Introduction of soil bund construction practice

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#### Synthesis and way forward

- Identify technologies that can be scaled up
- Spill-over effect of technologies beyond beneficiaries and MWs
- Sustainability outlook

#### **Reflect and analyze:**

- Acceptability and appropriateness of ISFM technologies
- Implications for the circumstances and priorities of resource

KEY

TRIBUTARIES

... FERTILE SOIL

This : FOREST AREA

COMMUNA

YESIBICH MW

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