G4AW project ‘GIACIS’

Geodata for Innovative Agricultural Credit Insurance Schemes

Kees de Bie (Sept’14; NSO)

FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION
The Public-Private Partnership proposition

- Offers a geodata-driven risk-mitigation (insurance) product
- Targets smallholder farmers in Ethiopia (80% < 0.5ha)
- Aims to boost purchase of agricultural inputs
- Protects farmers against shocks caused by weather related perils
- Uses branchless banking technology
- Makes the insured credit package (bundled) locally available
- Is aligned to the rural finance strategy (RFS) program, managed by ATA
- Is a systematic synergetic approach:
  - provides financial inclusion
  - promotes agricultural investment
  - brokers sustainable production methods
  - provides risk transfer tools

Business Deal Farmers
Farmers can statistically expect each 10-years indemnity payments that equal paid insurance premiums
Monetary: Value-Cost ratios are high

Business Deal Kifiya
Charges very small transaction costs, that, multiplied by no.of annual transactions, pays for costs and creates profit expectations

The 3 year target
Households reached: 7.2m
Adopting households: 1.6m
Indirect beneficiaries: 7.0m

Expected Impact
Increase in yields: 25%
Increase in income: 15%

RFS program: Credit Scheme
State bank guaranteed capital: 400m $
Must be managed as ‘revolving fund’
Farmers must remain able to pay-back
A very complementary Partnership

**ATA**
- Product Policy, Marketing, Extension, Support, etc.
- Monitoring + Benchmarking
- Product Approval by agro-zone

**Kifiya** (Key Private Partner; Expertise in Financial Inclusion and Financial Technology)

**Swiss-Re** (Credit / Insurance Know-How)

**Insured Credit Products**
- **ITC** (RS & Weather GIS/IT Know-How)
- **Swiss-Re** (Credit / Insurance Know-How)

**Credit-Insurance ‘Collaborators’**
- **MFI’s (1 per region)**
  - ACSI (Amhara)
  - DECSI (Tigray)
  - OMO (SNNPR; South region)
  - OCSCO+CBO (Oromia)
- **MFI’s (Micro-Insurance Offerings)**
  - Terafine
  - Nyala
  - Kifiya (?)
  - …

**Grassroot Activities**
- **Kifiya** (Agent Points to manage farmer accounts; execute monitoring for ATA)

**Field**
- **Farmers**
  - They keep their own decision making and risk aversion role

**Primary Coops (Aggregators/Retailers)**
- Farmer Unions
- Cooperatives
- NGO’s

**Swiss-Re** (Re-Insurance Service; regular & for disasters)

**Financial Institution (Bank + Board)**

**Developing / Operation of the “Index Insurance” System**
- **ITC** (Historical Risks, Index development, area and season Stratifications, etc.)
- **NMA** (Backbone set-up/Operations plus weather data/forecasts)

**Remote**
- Monitoring Products

**Phases out at project end**

XXX = Full Project Partner
XXX = Collaborators
**Proposed Index**

Key Index: NDVI
Optional: NDWI, NDDI

---

**Looking at inputs**

- RS
- Weather (Ra, T, P, etc.)
- Soil
- Available-H₂O

**Yield limiting & reducing factors**

- Agricultural Management

**Growth**

- NDVI, Biomass, Leaf-Area-Index, fAPAR

**Actual Yield**

---

**Technology facts**

- Branchless Banking
  - Presence of agents on markets twice weekly

---

**Insured is credit taken (NOT yields!!), based on condition of the growing season**

Will be crop a-specific
Thank You