

# JOLISAA



JOint Learning in Innovation  
Systems in African Agriculture



**Building on illegal value chains to achieve sustainable management of natural resources?**

**The case of aloe exploitation and trade in Baringo, Kenya**

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# Elements of context

- **Externally designed & funded interventions in developing countries**
  - Short-term, externally funded projects which inject much necessary financial & human resources on a topic / region
  - Weak accountability towards beneficiaries
  - Interventions frequently dropped on the local landscape
  - Mitigated or short term effects
- **Participatory approaches based on local & traditional knowledge are an option:**
  - For sustainable use of biodiversity (CBD, 1992)
  - If sustainability and development goals are to be reached (IAASTD, 2008)
- **But lack of hindsight on local knowledge based approaches**

# Research question

***What are the implications and limits of external interventions based on local knowledge approaches?***

# Objectives

- Analyzing the effects of a 6 years external intervention...
- ... in Baringo (Kenya)...
- ... aiming at promoting regulated exploitation and trade of aloe



*Location of Kenya in Africa*



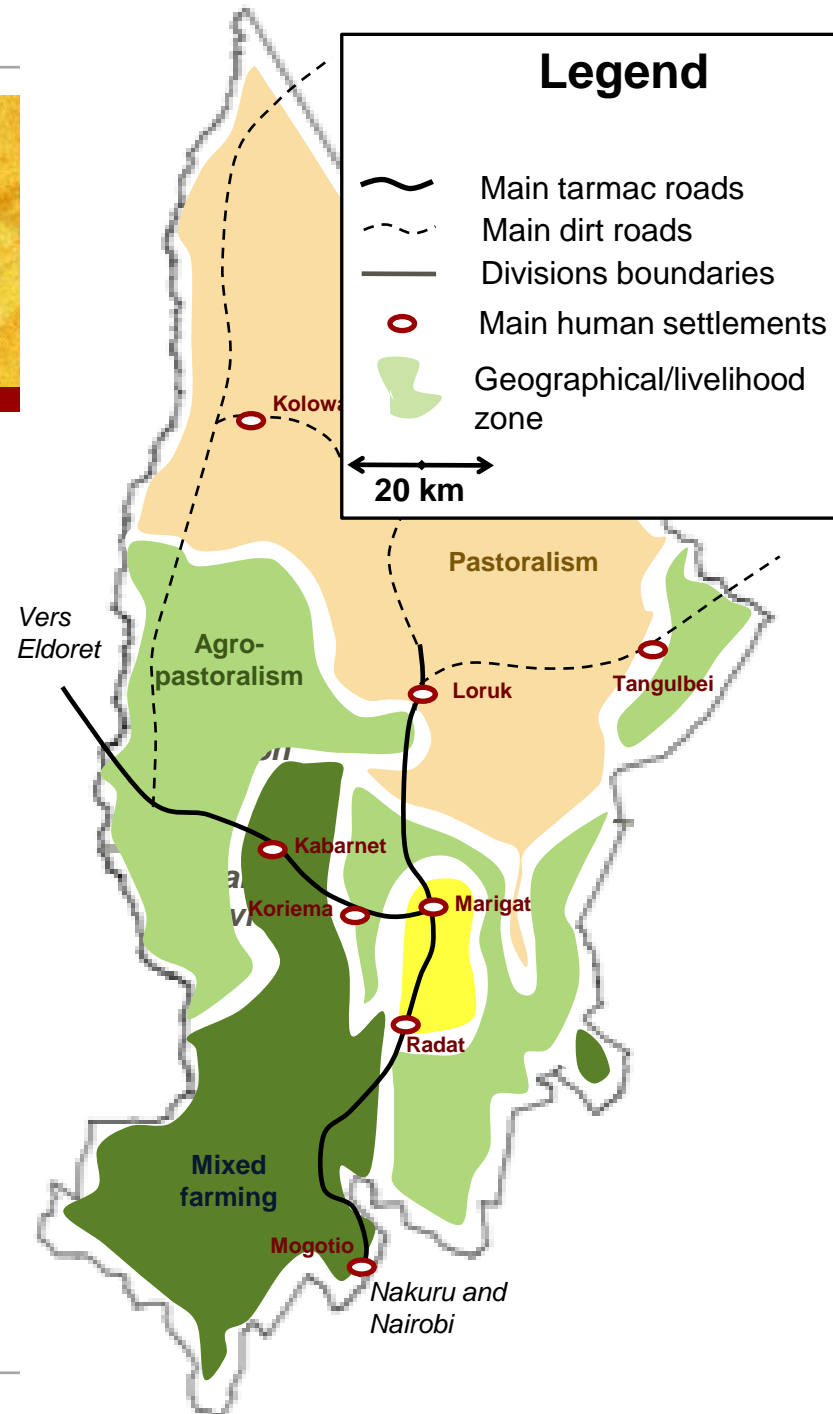
*Location of Baringo in Kenya*



*Aloe secundiflora*

# Baringo

- Semi arid area
- High poverty level
- South-North inequalities
  - Rainfall
  - Livelihood sources
  - Market access
  - Poverty



# Methods

- **The Baringo external intervention seen as an innovation process**
- **Analytical framework derived from the Innovation system perspective**
  - Innovation: type, nature, domain
  - Stakeholders' roles & interactions
  - Role of local knowledge
  - Innovation triggers & drivers
  - Innovation dynamics over several decades
  - Results and “impact” obtained
- **Data collection procedure**
  - Participative approach
  - Data sources = bibliography, interviews, (focus) group discussions, workshops
  - Guideline and tools derived from research questions
  - Opened and flexible sampling rules



*Multistakeholder workshop*



**Results**

# Triggers of external intervention

- From the 60s: Unchecked exploitation of wild aloe through informal channels
- 1986: Aloes protected by a presidential decree
- 1990s : growing interest on aloe as a resource
- 2004: Elaboration of a national regulatory framework
- A local knowledge based pilot project in Baringo
  - Ethno pharmaceutical use of aloe
  - Prior existing commercial exploitation
  - Problems of overexploitation of Aloe
  - Willingness of local leaders



*Harvest of Aloe  
secundiflora leaves*



# External intervention

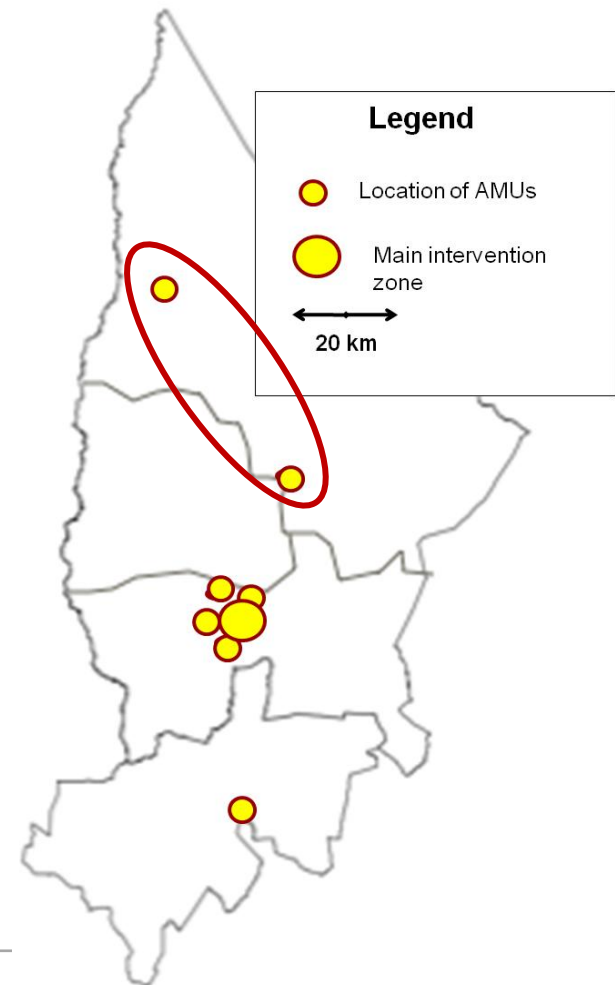
## ■ External R&D intervention 2004-2010

- Objective : Exploitation and regulated aloe trade
- Trainings and promotion of aloe cultivation
- Construction of a central processing unit
- Setting up of an organizational device
  - Empowerment of a farmer organization
  - Public-private partnership for commercialization
  - Establishment of decentralized aloe management units

## ■ Activities concentrated in the south

## ■ Mitigated results as of 2012

- Logistical & capacity challenges
- Internal conflicts leading to standstill
- Spatial disparities in innovation adoption



# Aloe cultivation



*Aloe nursery in project area*



*Plantation of aloe in Baringo*



*Aloe processing plant in project area*

# A prior existing network

## ■ 1980s: Starting of Exploitation of Wild Aloe

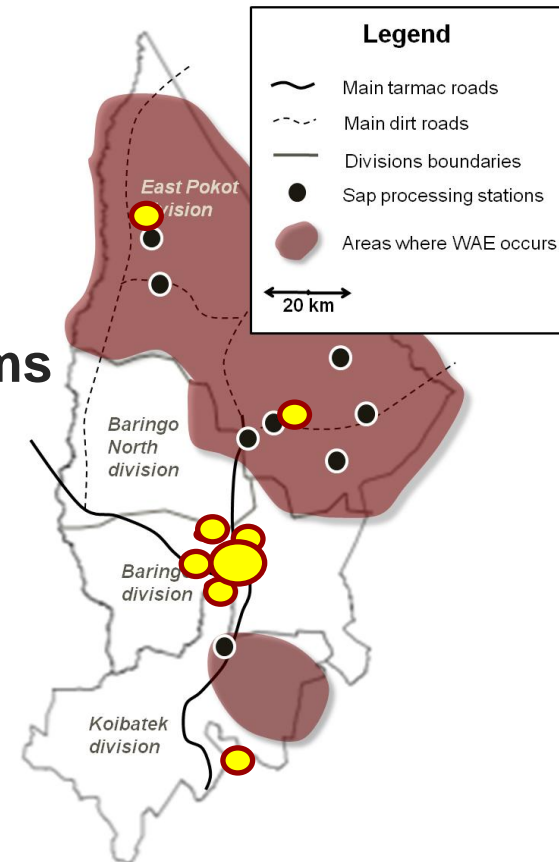
- Demand of traders for aloe sap
- Exploitation of wild aloe concentrated in the north
- Low opportunity cost of wild aloe exploitation

## ■ Traders set up networks and productive systems

- Enrollment of marginalized communities
- Knowledge development & diffusion
- Logistical arrangements along the supply chain
- Network of buyers/processors

## ■ Unmet Challenges

- Degradation of natural resources
- Unstable, conflictual, and fragile livelihood source



# Exploitation of Wild Aloe



*Transformation of aloe sap into gum*



*Solidification of aloe gum*



*Storage of aloe gum*

# Networks interactions

Traders intervention  
1980s-2012

Public intervention  
2004-2009

**Non official network**

**Interactions**

**Official network**

**Achievement**

Efficient logistical and organizational device  
Livelihood source for marginalized households  
Anchorage of aloe-related activities in livelihood strategies  
Knowledge accumulation on aloe commercial exploitation

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Interest in aloe cultivation and certified commercial outlet  
Aloe cultivation as a risk reduction strategy  
Informal supply chain reduces market uncertainties

Empowerment of community  
Public private partnership  
Bases to export according to CITES requirement

**Challenge**

Exploitation of wild aloe as a fragile and unstable livelihood source  
Natural resource depletion

Price competition between official/non official stakeholders leading to increased exploitation of wild aloe

Low interest in aloe cultivation and sap selling  
Market uncertainties  
Logistical challenge  
Weak organizational device

# Discussion

## ***What are the implications and limits of external interventions based on local knowledge approaches?***

- **External interventions can fail in identifying and mobilizing pertinent local knowledge and socio technical networks**
  - Lack of appropriate mind sets & frameworks to identify & understand informal dynamics
  - Lack of resources and time to identify and work with the most directly concerned stakeholders
  - Blindness vis-à-vis knowledge brought by some local stakeholders (innovation under the radar )
    - Disqualification of knowledge embedded in non legitimate stakeholder networks or because of negative perceptions by outsiders on its link with sustainability
    - Missing key types of knowledge (marketing)
- **Consequences of such failures**
  - Low interest of beneficiaries
  - Mistakes in implementation
  - Innovation quickly abandoned
  - Unexpected & undesirable results
- **A solution: proper hybridization between *existing* and *new* networks?**



**Thank you for your attention**