Why a landscape perspective is important in agroecological transitions

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What is a landscape?

- A distinct area of land that is larger than a single farm
  - District – administrative
  - Watershed – hydrological
  - Agroclimatic zone
  - Road access to markets and urban centres
  - Proximity to protected areas such as national parks, forests and wetlands

- An area where biophysical elements interact through ecological and human connections

Sources: FAO, 2012; Scherr et al., 2012; Milder et al., 2014; Sayer et al., 2017

Western Usambaras, Tanzania

Uluguru Mts, Tanzania

Rivers Waki and Wambabya watersheds, Uganda
Motivation for AE transitioning

VALUES - Dignity. Recognition. Environmental sustainability. Future generations

VISIONS - immediate and long term emergencies and opportunities
- Small scale farmers:
  • Earn a living income to afford good food, education and healthcare
  • produce the right balance of food needed for healthy and sustainable diets
  • Farming that can be integrated with other sources of livelihood or farming that transitions beyond production to value addition

Communities:
• Social organisations and networks that protect individuals and widen their opportunities
• Secure culture and land tenure
• Markets
• Sustainable access to natural resources beyond farm

National governments:
• Rural development
• Employment – youth
• Social protection
Why AE from a landscape perspective?

**Biophysical interconnections**
- Smallscale farms with other non-farm ecosystems in landscape mosaics
- Ecological flows beyond farm boundaries – pollinators, pests, pathogens, soil erosion, pollution, invasive species, species range
- Carbon cycle, water cycle, nitrogen cycle etc.

**Human socio-economic interactions**
- Small-scale farms are key intervention points for various ecosystem concerns
- Small-scale farmers interact with each other and with other stakeholders
- Farmer decisions are influenced by broader frameworks markets, institutions and governance
Landscape approach

- Addressing multiple environmental and livelihood considerations at large spatial scales
- Managing farm and off farm benefits, challenges, opportunities and aspirations
- Engaging in policy and institutional processes

Farmlands as part of a system interconnected with other people’s farms, grazing areas and uncultivated areas

Cumulative impacts of farm-level decisions

Negotiation between diverse stakeholders – inclusion, tension, power
Some approaches

• Collective action
• Inter-sectorial dialogue and action - land sparing and sharing
• Policy regulation
• Conservation and development – Participatory ecosystem management, revenue sharing, payments for ecosystem services

South Western Uganda
Example: Effectiveness of some practices in Sasumua watershed, Kenya

<table>
<thead>
<tr>
<th>Landuse practices</th>
<th>Sediment yield reduction (%)</th>
<th>Reduction in surface runoff (%)</th>
<th>Increase in base flow (%)</th>
<th>Establishment cost per ha (Ksh)</th>
<th>Annual maintenance cost per ha (Ksh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contour farming with trees</td>
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<tr>
<td>Terraces</td>
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<td>22</td>
<td>10</td>
<td>50,000</td>
<td>5,000</td>
</tr>
</tbody>
</table>

*Mwangi et al. 2011 ICRAF Policy Brief*
Data can be used in stakeholder negotiation e.g. Sasumua watershed, Kenya

- We have no authority to increase tariffs
- Sediment treatment savings are small change
- We pay multiple levies to government

- We are willing to pay more for assured regularity of flows

- We are willing to accept payment for improving land use for reducing sedimentation

- Payments for Ecosystem Services can make a strong business case – net savings in sediment treatment

- We cannot pay land owners under the existing policy

References:
Mwangi et al. 2011 ICRAF Policy Brief
Thank you