Sustainable livestock production
The role of sustainable pastoralism
IUCN, a unique democratic union since 1948...
International Union for Conservation of Nature

Members

- 1067 Members worldwide from over 160 countries
- States, Government agencies, NGO
- Over 60 regional and national committees

Commissions

- 10000+ voluntary experts in 6 thematic groups:
  - CEM
  - CEC
  - CEESP
  - WCPA

Secretariat

- 1000 full time staff worldwide
- 350 temporary staff, consultants and interns
- HQ in Gland, Switzerland
- Over 60 offices around the world
Governments, NGOs, research institutes, private sector
The Global Programme

- West & Central Africa
- East & Southern Africa
- West Asia
- Europe
- Mediterranean
- North America
- Mesoamerica
- South America
- Oceania
- Asia

- IUCN Headquarters
- Regional offices
- Country offices
- Outposted offices
What is WISP?

- Knowledge management on pastoralism and empowering practitioners
- Provision of mechanisms to understand the rationale of this livelihood, including own studies
- Long-term advocacy at UN fora for understanding pastoralists and pastoralism.
Supporting Sustainable Pastoral Livelihoods

A Global Perspective on Minimum Standards and Good Practices
What makes livestock (un)sustainable?

• High use of resources
  • Energy loss at trophic level change (90%)
• High level of emissions
  • Methane (CH$_4$) emissions
• High level of degradation
  • Effects on soil conservation and biodiv.
• High level of pollution
  • Associated with high concentrations

⇒ every challenge hides an opportunity!
Use of resources

**Marginal lands**

- Marginal lands cannot sustain most land uses
- If livestock is eliminated, others will take their place
- Specialized livelihoods (Krätli & Schareika 2010)
- Biodiversity crisis in abandoned landscapes

$\Rightarrow$ Biodiversity needs herbivory!!!
Use of resources

**Adapted breeds**

- Adapted breeds are more suited to marginal lands than productive breeds (the Ferrari vs. 4WD in rough roads*)
- Outside stimuli usually work in the wrong direction
- Market opportunities – niche marketing

*I thank Laura Cortada González for this genial metaphor.*
Use of resources

**Market opportunities**

- Increasing livestock commodity prices
- Challenge or opportunity?

⇒ Clear opportunity for poverty reduction in marginal areas!!
⇒ Clear opportunity to reduce burden on natural resources!!
Use of resources / pollution

Integration of different production systems

• Agropastoralist systems have a high efficiency in terms of nutrient recycling
• Efficient nutrient recycling prevents faecal pollution
  \(\Rightarrow\) Win-win situation

Illustration by Clara Herreros Murueta-Goyena
Emissions / land degradation

- The potential of rangeland soils, is it really well quantified?

<table>
<thead>
<tr>
<th>Biome</th>
<th>Area (billions ha)</th>
<th>Vegetation</th>
<th>Soil</th>
<th>TOTAL</th>
<th>ratio (t C/ha)</th>
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</thead>
<tbody>
<tr>
<td>Trop forest</td>
<td>1.76</td>
<td>212</td>
<td>216</td>
<td>428</td>
<td>243.18</td>
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<tr>
<td>Temp forest</td>
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<td>59</td>
<td>100</td>
<td>159</td>
<td>152.88</td>
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<tr>
<td>Bor forest</td>
<td>1.37</td>
<td>88</td>
<td>471</td>
<td>559</td>
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<tr>
<td>Trop savannah</td>
<td>2.25</td>
<td>66</td>
<td>264</td>
<td>330</td>
<td>146.67</td>
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<tr>
<td>Temp grassl</td>
<td>1.25</td>
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<td>4.55</td>
<td>8</td>
<td>191</td>
<td>199</td>
<td>43.74</td>
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<tr>
<td>Tundra</td>
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<td>6</td>
<td>121</td>
<td>127</td>
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<tr>
<td>Wetlands</td>
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<td>225</td>
<td>240</td>
<td>685.71</td>
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<tr>
<td>Croplands</td>
<td>1.6</td>
<td>3</td>
<td>128</td>
<td>131</td>
<td>81.88</td>
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<tr>
<td>TOTAL</td>
<td>15.12</td>
<td>466</td>
<td>2011</td>
<td>2477</td>
<td>163.82</td>
</tr>
</tbody>
</table>

Emissions / land degradation

- Evidence at hand: proper management increases soil carbon

Source: Tony Lovell
Emissions / land degradation

- Reduction of emissions can also be possible through extensification of animal husbandry!

<table>
<thead>
<tr>
<th></th>
<th>Transhum by foot</th>
<th>Transhum by lorry</th>
<th>Sedentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fodder</td>
<td>54.76</td>
<td>115.20</td>
<td>370.75</td>
</tr>
<tr>
<td>Fuel</td>
<td>67.84</td>
<td>138.40</td>
<td>106.67</td>
</tr>
<tr>
<td>TOTAL</td>
<td>122.60</td>
<td>253.60</td>
<td>477.41</td>
</tr>
</tbody>
</table>

Life Cycle Analysis, mixed-feeding Spanish sheep farms around the Conquense Drove Road

How can pastoralism be improved?

Governance systems & solutions to solve actual problems

- Updating / formalization of governance systems
- Modernisation (they have already started!)
- Provision of useful services (adapted education, health)
BZ-Interview: José Graziano da Silva*, Jan 21st 2013

“Das Problem sind Methoden, die Erzeugung zu intensivieren aber zugleich umweltschonend zu gestalten. Es geht oft nur um Kleinigkeiten. Die Nomaden in der Sahara müssten nicht weiterziehen, wenn sie Wasserkollektoren hätten, durch die sie in der trockenen Winterzeit ihr Vieh versorgen und ihre Pflanzen wässern könnten.”

(The problem are the methods to intensify the production but at the same time to restructure in an environmentally friendly way. It’s often just about trifles. The nomads in the Sahara would not need to migrate if they would have water collectors, by which they could provide their livestock with water and irrigate their plants during the dry winter.)

⇒ Pastoral mobility still considered something that should be eradicated! (perhaps by the journal doing a wrong translation)

*President of FAO
Source: http://www.badische-zeitung.de/nachrichten/wirtschaft/die-welternaehrungsorganisation-will-den-hunger-ganz-ausrotten
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