Eco-systems of agricultural landscapes
and sustainable land use: Livestock systems

01 - Introduction - 3
Livestock Economics
### Numbers and biomass of domestic animals and humans

<table>
<thead>
<tr>
<th>Species</th>
<th>Numbers (million)</th>
<th>Biomass (million t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle &amp; Buffalo</td>
<td>1 496</td>
<td>512</td>
</tr>
<tr>
<td>Sheep</td>
<td>1 065</td>
<td>40</td>
</tr>
<tr>
<td>Goats</td>
<td>780</td>
<td>27</td>
</tr>
<tr>
<td>Camelids</td>
<td>24</td>
<td>8.5</td>
</tr>
<tr>
<td>Equines</td>
<td>118</td>
<td>42</td>
</tr>
<tr>
<td>Pigs</td>
<td>936</td>
<td>93</td>
</tr>
<tr>
<td>Poultry</td>
<td>17 437</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>755.5</strong></td>
</tr>
<tr>
<td>Humans</td>
<td>6 800</td>
<td>374</td>
</tr>
</tbody>
</table>

Data Source: FAO 2011 & Author's calculations
Why do we keep livestock?
Large quantity but low density of nutrients in natural and agricultural ecosystems
collected by livestock and converted into
small quantity of high nutrient density human food
In addition livestock provide

- **non-food commodities**: fibres, feathers, hides, skins, horn, bones, manure
- **services**: traction, transport, riding, leisure activities
- **subsistence needs or/and generate income**
Furthermore livestock have socio-economic functions
and livestock have socio-cultural and religious significance
Livestock assist stabilising of cropping systems by

- value adding
- internal expansion
- mobilising production reserves
- enhancing soil fertility
- nutrient recycling
- energy recovery
Contribution of livestock to total agricultural GDP

Source: World Bank 2010
Livestock provide 40 to 60 % of the agricultural GDP worldwide and contribute to

- Risk reduction
- Market integration
- Savings function
- Off-farm income
- Social coherence
- Cultural and religious concerns
World map representing the true land area by country

Source: [http://www.worldmapper.org/](http://www.worldmapper.org/) (Map 1)
World map representing the human population size by country

Source: [http://www.worldmapper.org/](http://www.worldmapper.org/) (Map 2)
World map representing annual dairy exports* by country

* annual US$ worth of net dairy exports per person living in that territory

Source: [http://www.worldmapper.org/](http://www.worldmapper.org/) (Map 45)
World map representing annual dairy imports* by country


* annual US$ worth of net dairy imports per person living in that territory
References:


http://www.fao.org/docrep/010/a0701e/a0701e00.htm

http://www.worldmapper.org/index.html