

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

01 - Introduction - 3

Livestock Economics



Numbers and biomass of domestic animals and humans

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

Data Source: FAO 2011 & Author's calculations



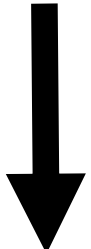
Why do we keep livestock?



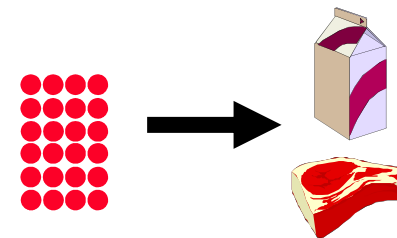
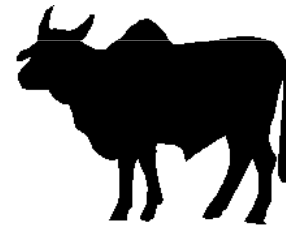
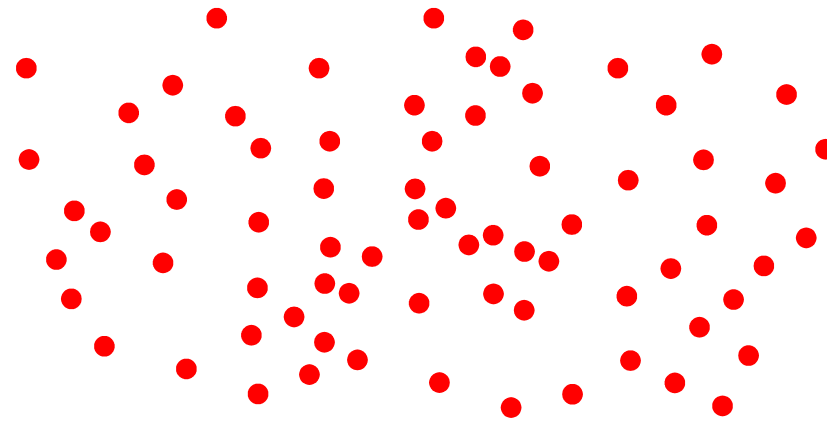
Large quantity but low density of nutrients in natural and agricultural ecosystems



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



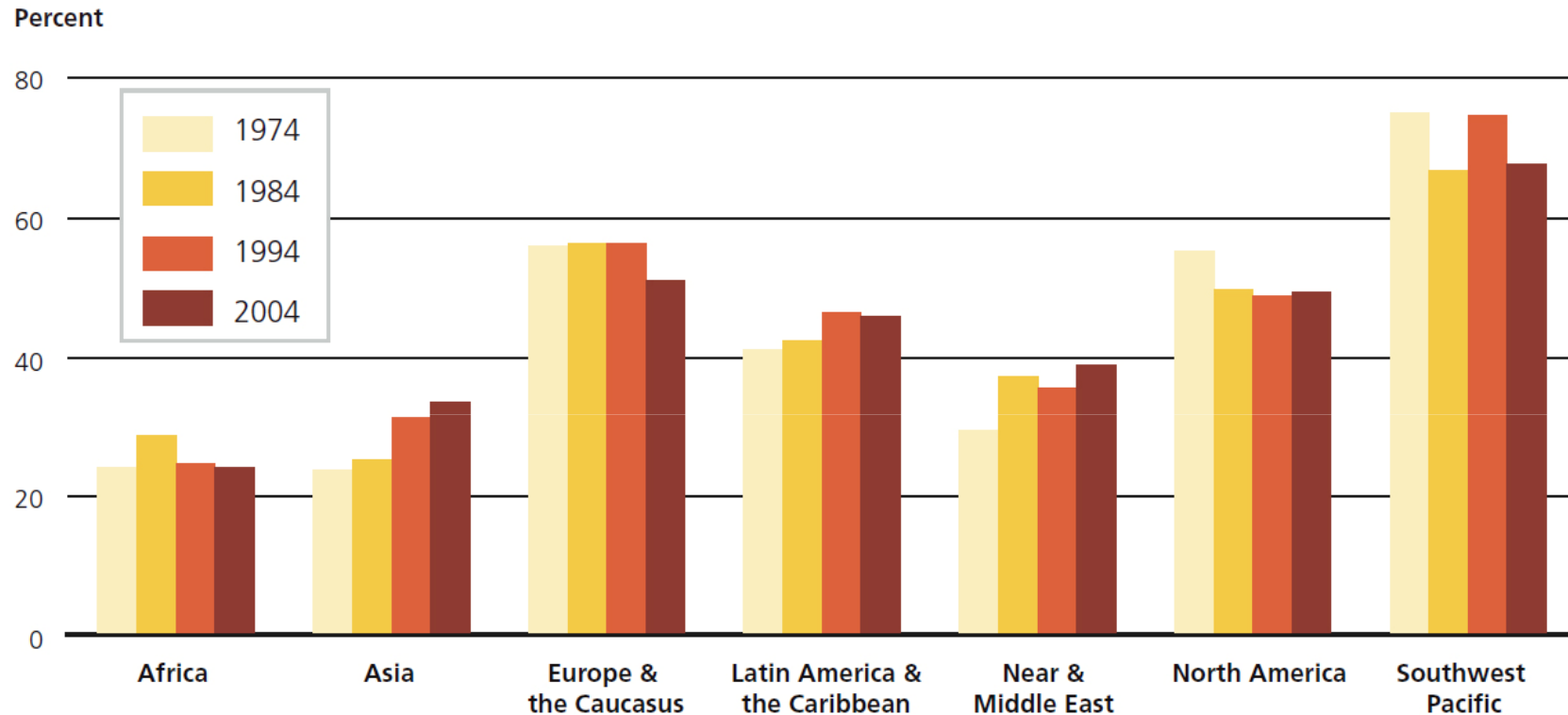


Livestock assist stabilising of cropping systems by

- 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

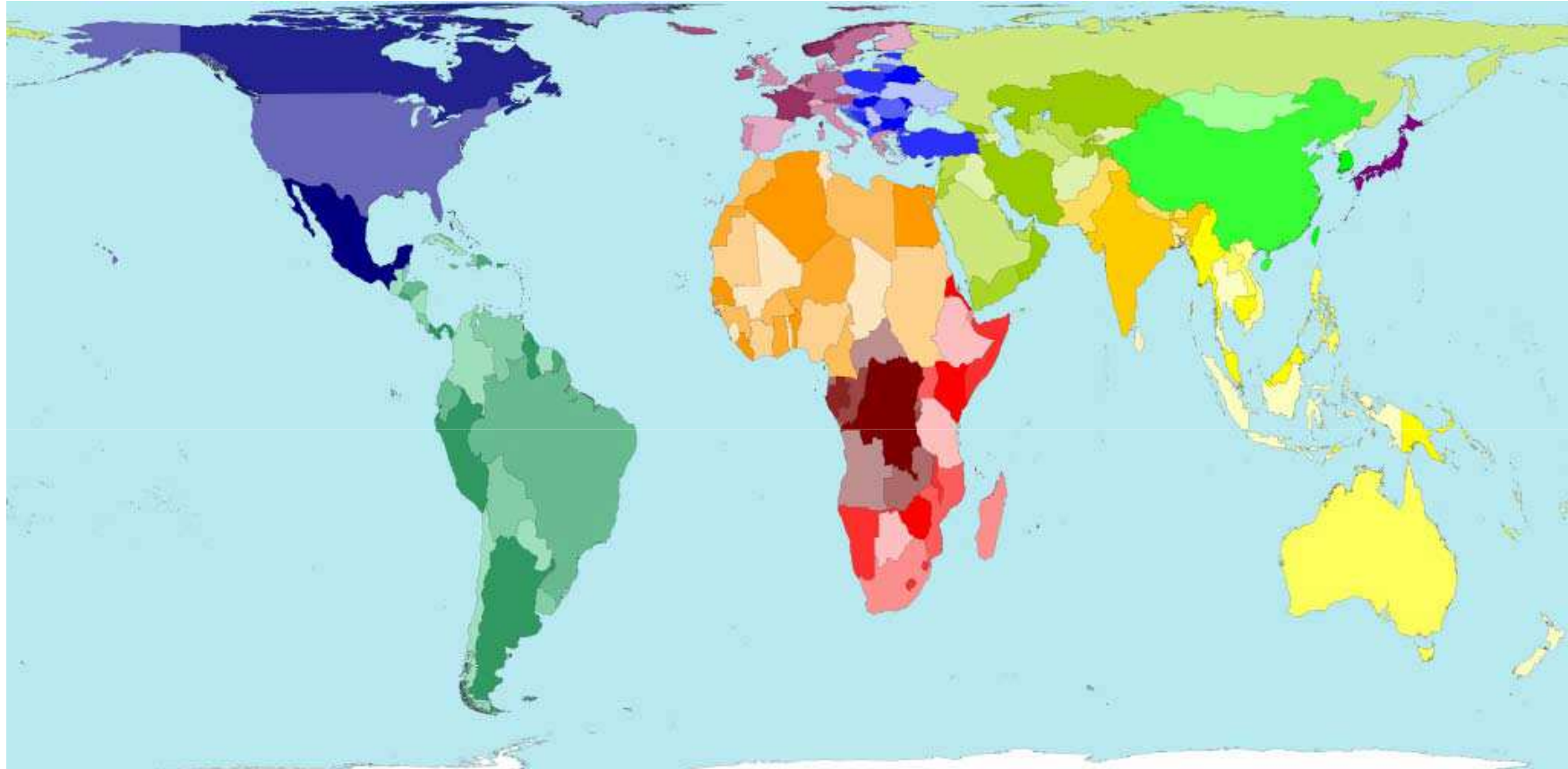


Livestock provide 40 to 60 % of the agricultural GDP worldwide and contribute to

- Risk reduction
- Market integration
- Savings function
- Off-farm income
- Social coherence
- Cultural and religious concerns



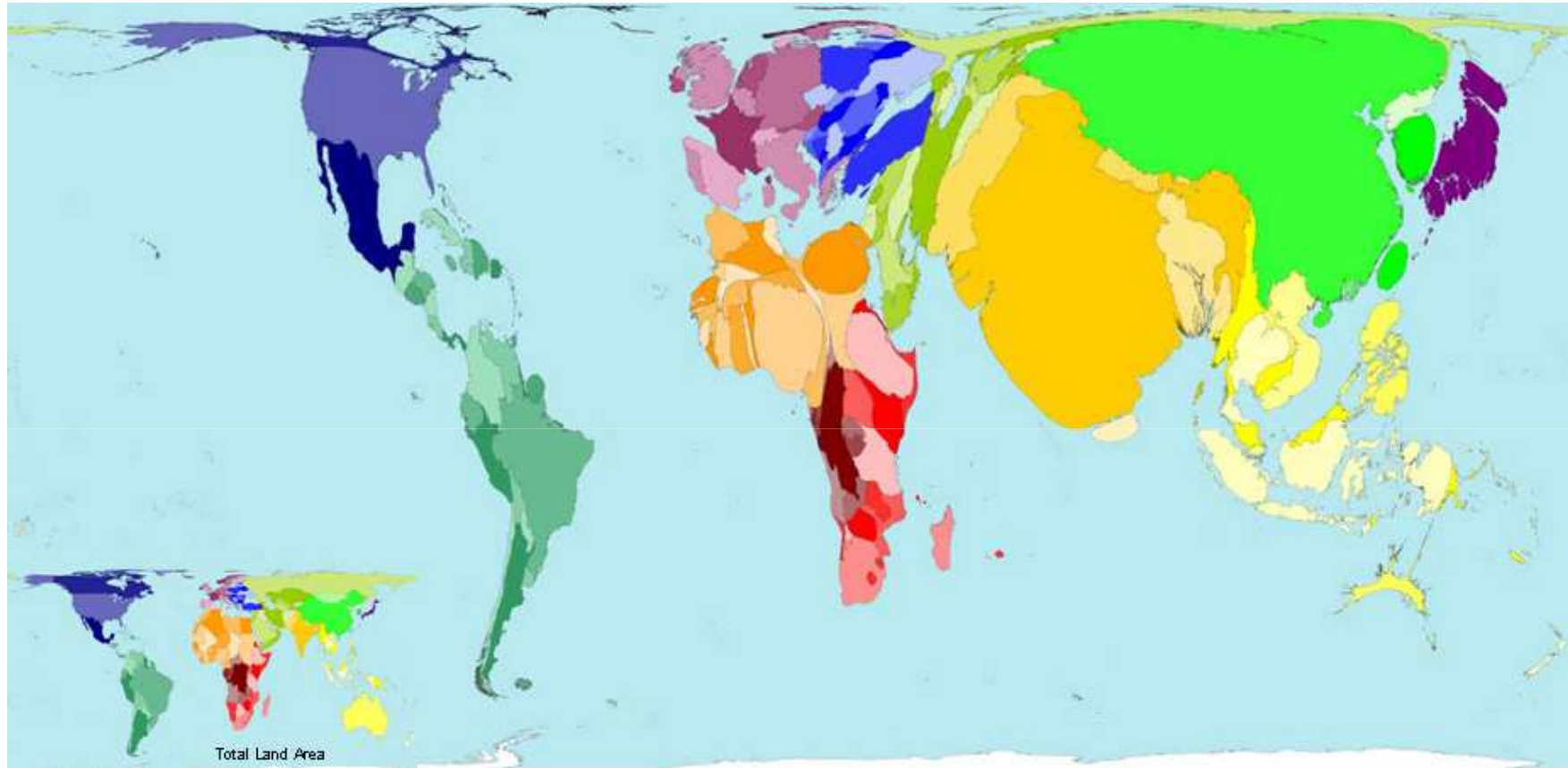
World map representing **the true land area** by country



Source: <http://www.worldmapper.org/> (Map 1)



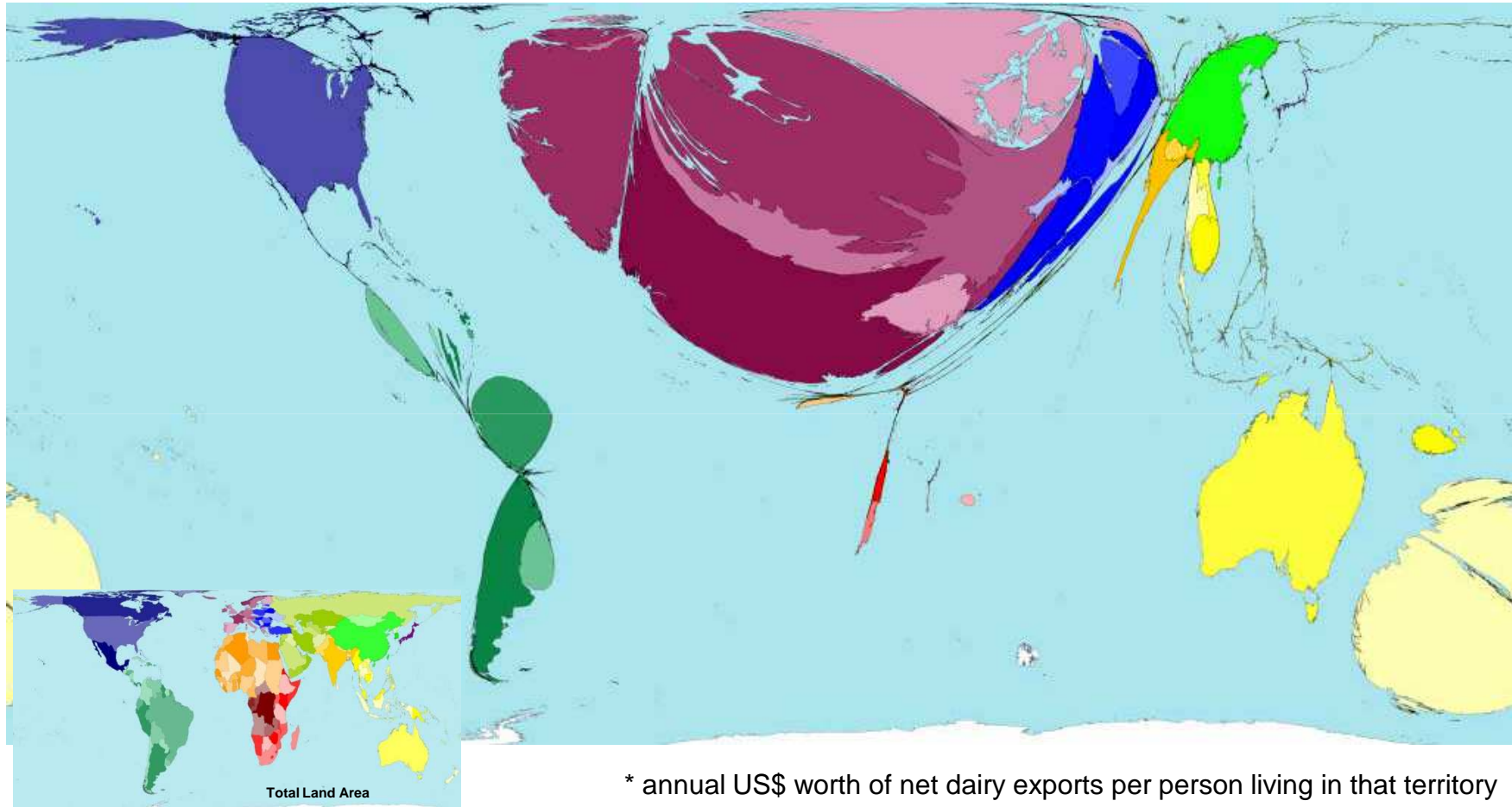
World map representing the **human population size** by country



Source: <http://www.worldmapper.org/> (Map 2)



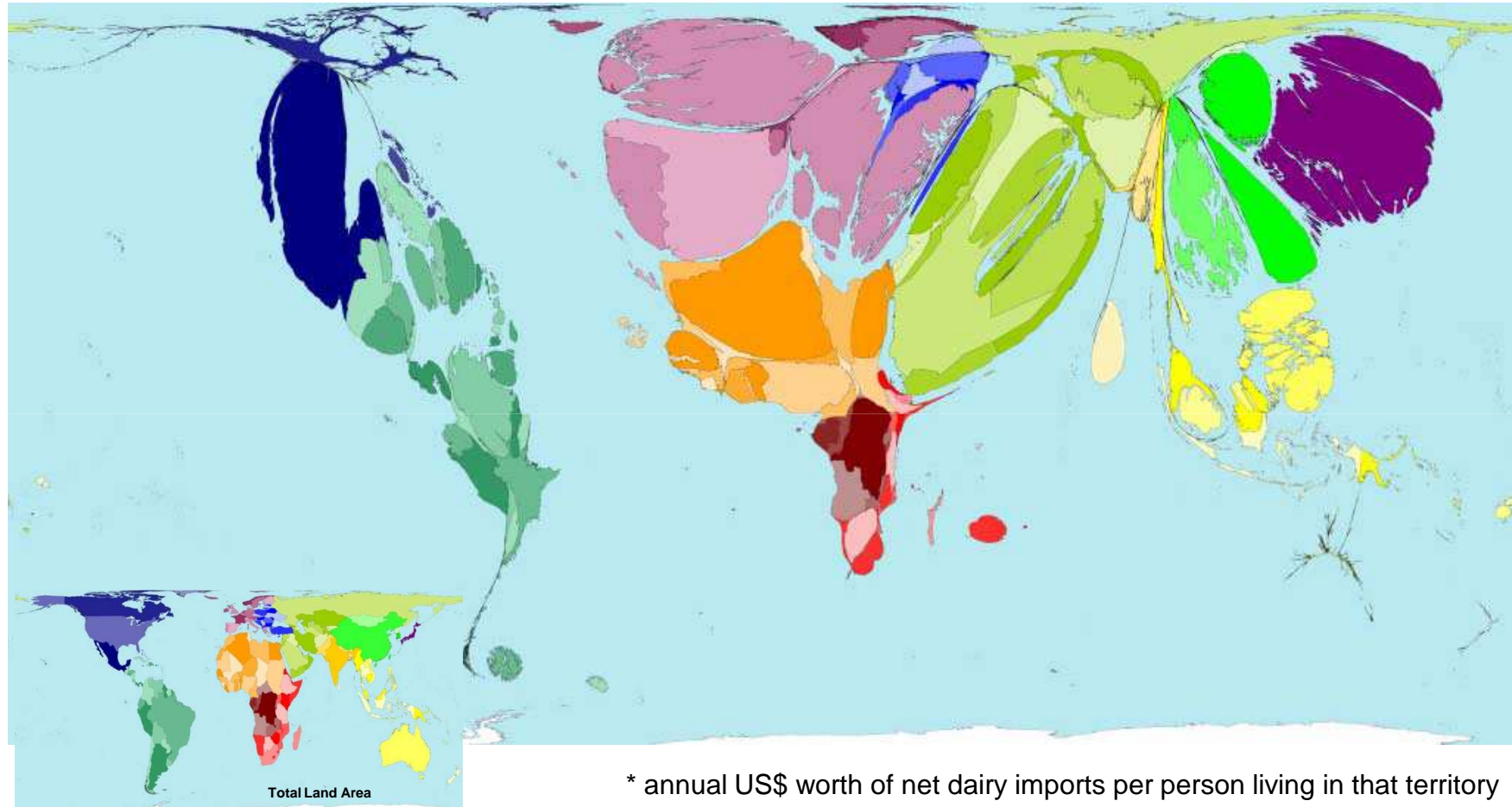
World map representing annual dairy exports* by country



Source: <http://www.worldmapper.org/> (Map 45)



World map representing annual dairy **imports*** by country



Source: <http://www.worldmapper.org/> (Map 46)



References:

FAO 2006: Livestock's long shadow: environmental issues and options. Steinfeld, H.; Gerber, P.; Wassenaar, T.; Castel, V.; Rosales, M.; de Haan, C. FAO, Rome (Italy). Livestock, Environment and Development Initiative FAO/LEAD Rome (2006) ISBN 978-92-5-105571-7

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

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

