Land requirements for Mediterranean diet:
standard agriculture vs new agroecology

A proposal

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Suggestions/collaboration on proposal: highly welcome!

Interaction of human species with ecosystem

Business as usual: BAU

Declining resources
Increasing pollution
Increasing population
mechanized, monocultural, energy/water intensive, soil disruptive agriculture

Sustainable(?) survival

Food production

Alternative “Culture”

Define parameters to assess sustainable food production (quantity & quality)

Measure & compare

land surface for food production

Care for the Ecosystem

prevent/reduce/stop soil erosion
use energy and water efficiently
close cycles
develop urban food scheme
balance interaction with other living animal & vegetal species

Analysis method

Scale the quantity of a food F used by a diet (D) with the average Yield for F

\[ RL(D) = \sum_{F=1}^{F} \frac{Q(F, D)}{Y(F)} \frac{1}{\Delta T} \]

Perform Sensitivity analysis: uncertainties

Derive & Compare Required Land Area for individual and groups of (diet, food production) scenarios

Indicators for scenario feasibility, energy cost, integration in community food chain, ecosystem restoration/preservation