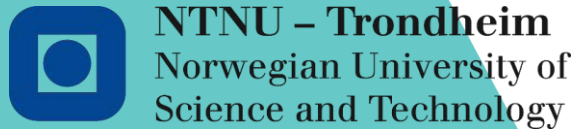# Servicescape of the Greater Serengeti-Mara Ecosystem:

Visualizing the linkages between land use, biodiversity and the delivery of wildlife-related ecosystem services

KØBENHAVNS UNIVERSITET

NINA
Norwegian Institute for Nature Research

NTNU – Trondheim
Norwegian University of
Science and Technology

AfricanBioServices

Roel May, Craig Jackson, Kjetil Bevanger & Eivin Røskaft

Living with Wildlife

❖ Safari tourism
❖ Trophy hunting
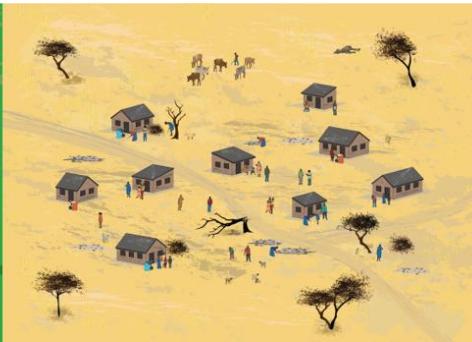❖ Bushmeat hunting
❖ Depredation

❖ Biodiversity
❖ Welfare

Managing Co-Existence

- Visualizing trade-offs between ecosystem services and evaluating implications of management strategies

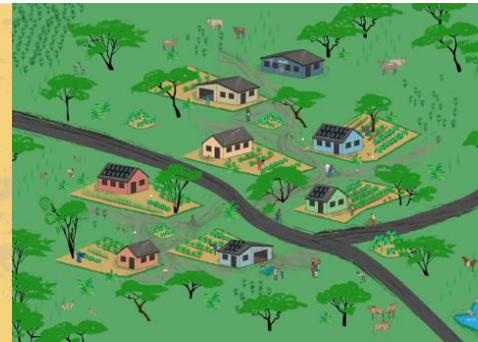- Contrasting effects of four development scenarios, incl. Business As Usual
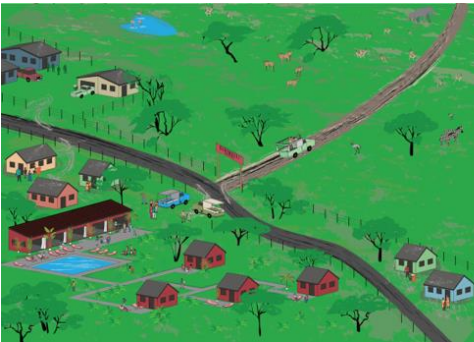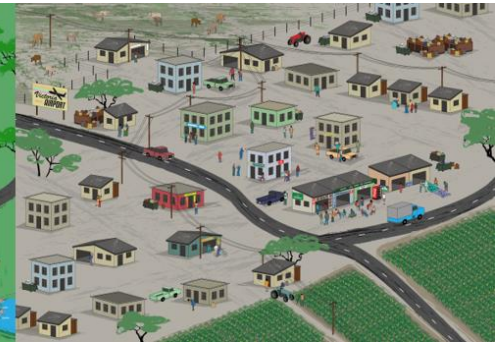
**Green Haven**   **Downward Spiral**   **Local Communities**   **Globalization**
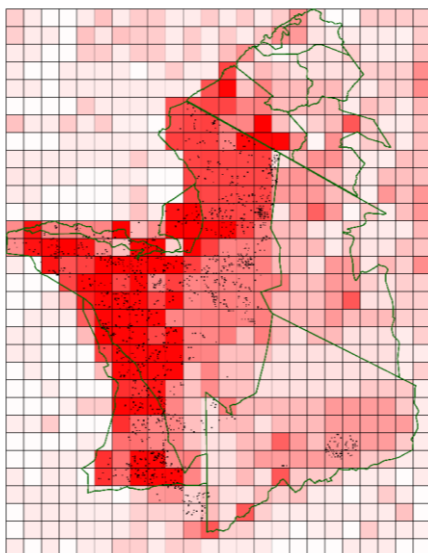
Modelling Co-Existence

- Knowledge-driven model that is able to capture complex social-ecological systems

- Bayesian Belief Network to model the likelihood of specific management on wildlife or environmental states

- Geographic Information Systems (GIS) to visualize the spatial distribution of ecosystem services in the landscape
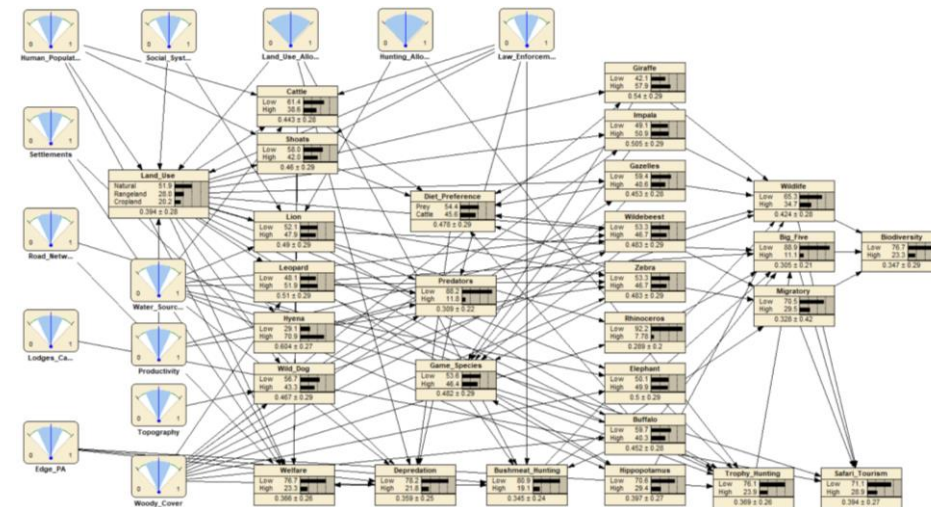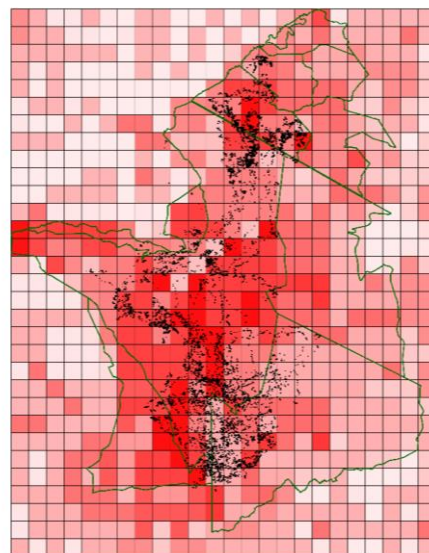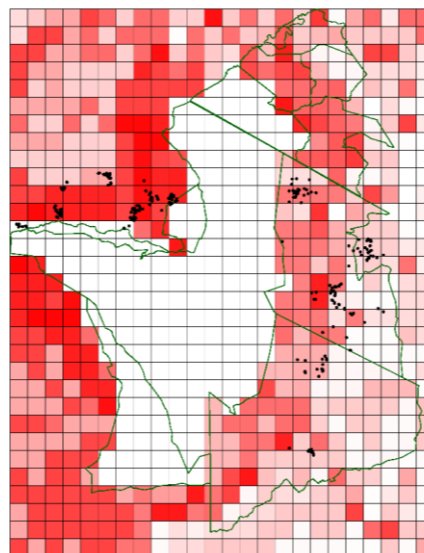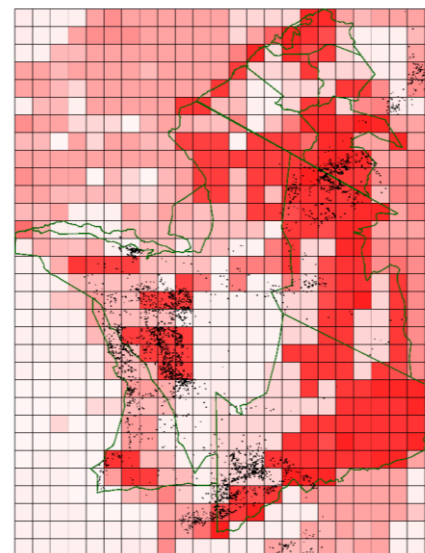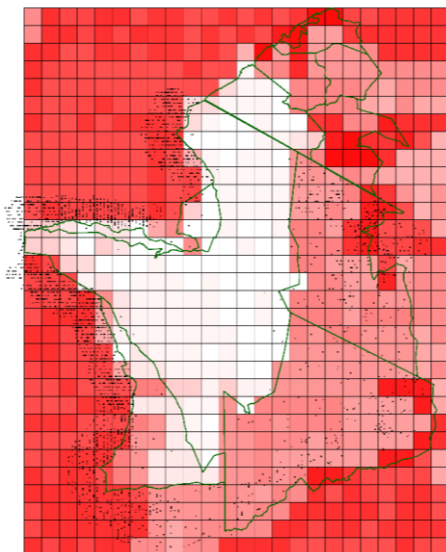
···Reality check···

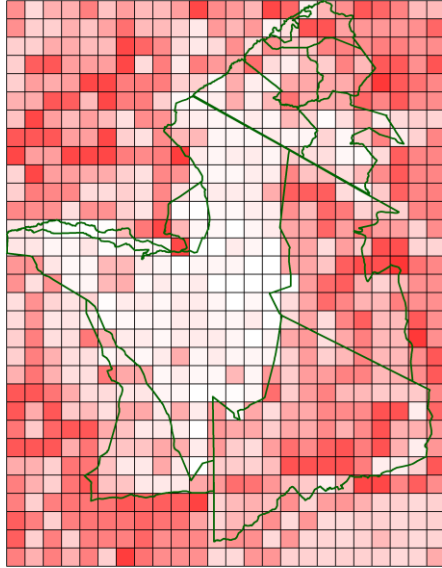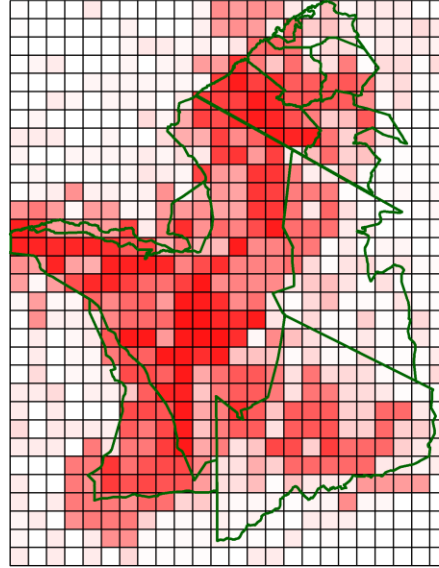Buffalo · Wildebeest · Depredation · Wild dog · Cattle · Shoats · Impala · Elephant
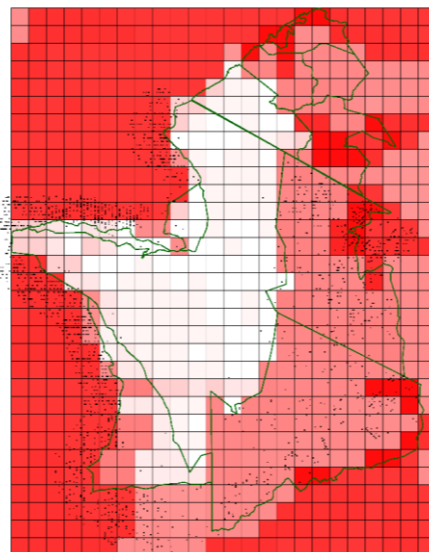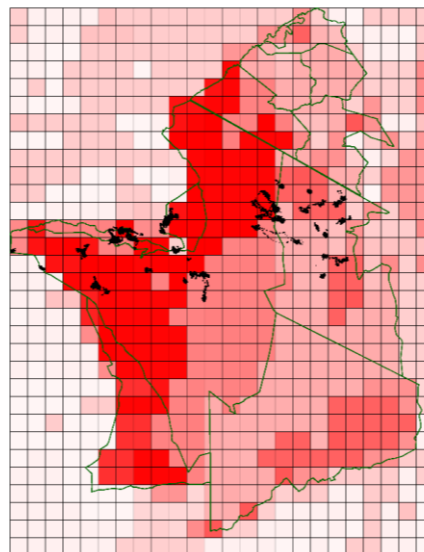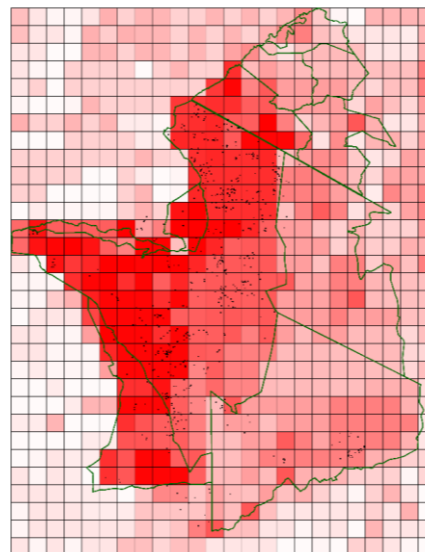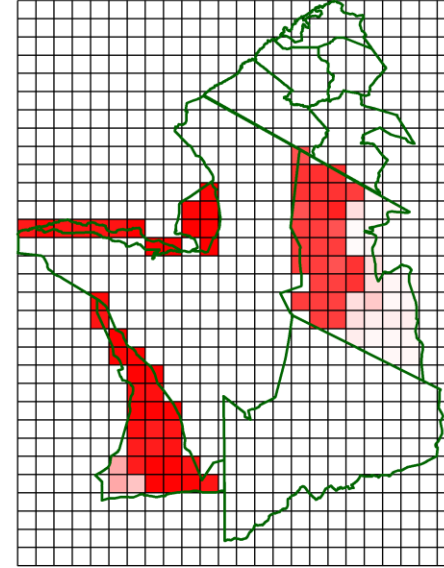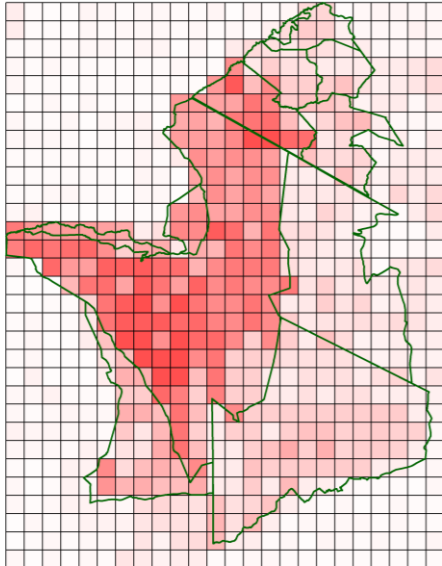
···Believe It Or Not···

Welfare

Safari Tourism

Trophy Hunting

Biodiversity

Bushmeat Hunting
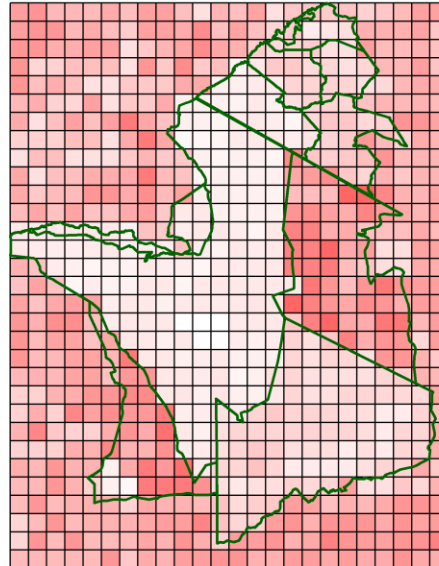
Livestock Depredation

···Where to go···

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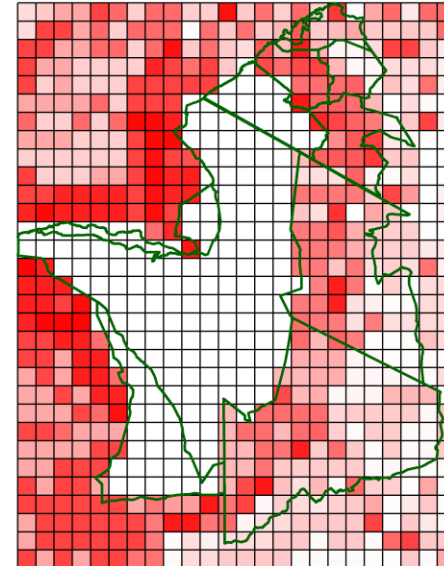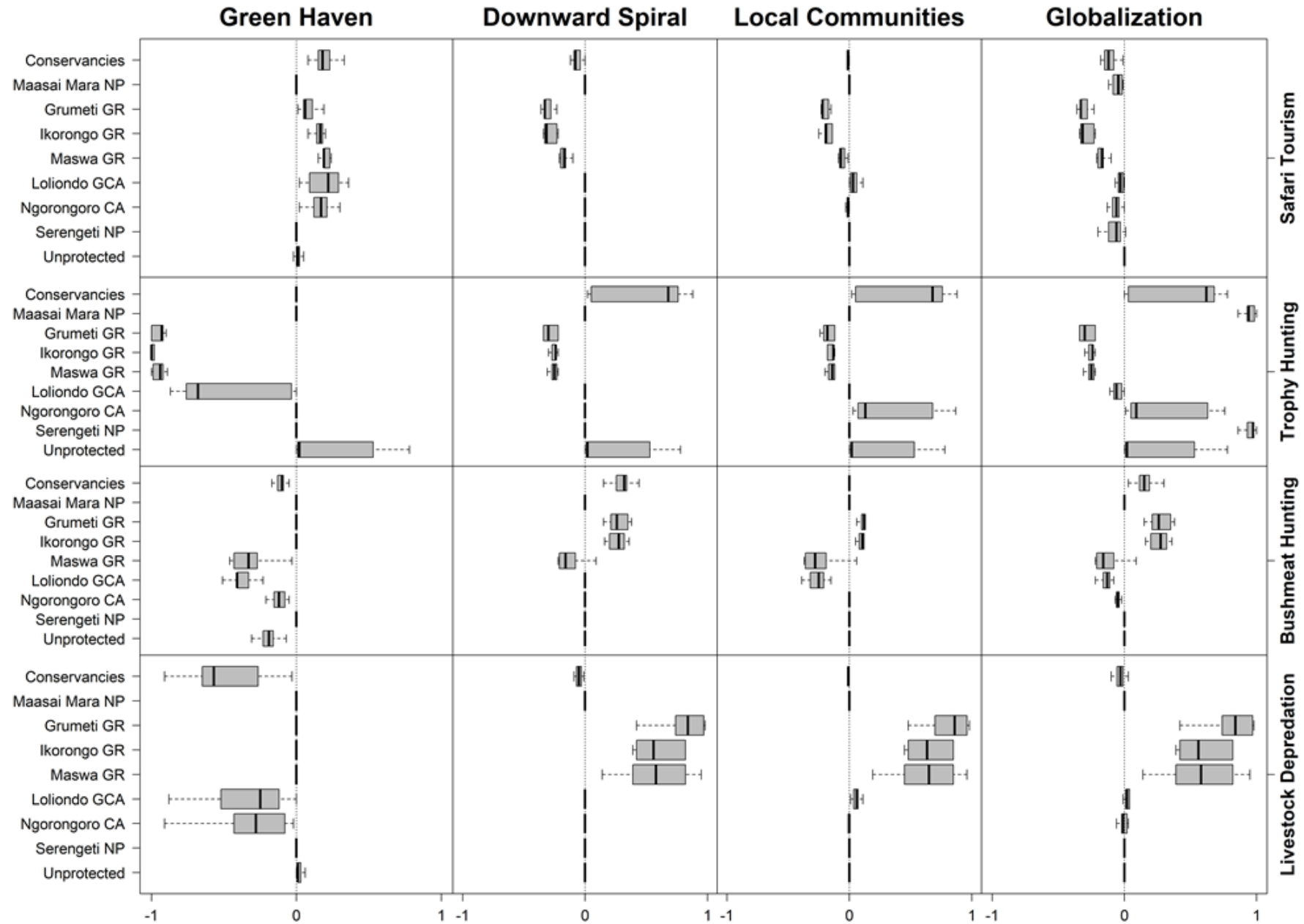
The Serengeti ServiceScape

Information   Maps   Plots   Capital

Settings

Step 1. Choose your Development Scenario of interest:

Business as Usual ▾

Step 2. Do you wish to compare Development Scenarios?
○ No (go to Step 4)   ● Yes (go to Step 3)

Step 3. Choose your Development Scenario for comparison:

Globalization ▾

Step 4. Choose your Ecosystem Service of interest:

Bushmeat Hunting ▾

Step 5. Do you wish to compare Ecosystem Services?
● No   ○ Yes (go to Step 6)

Step 6. Choose your Ecosystem Service for comparison:

Bushmeat Hunting ▾

AfricanBioServices

This tool is a product of the EU-project AfricanBioServices.
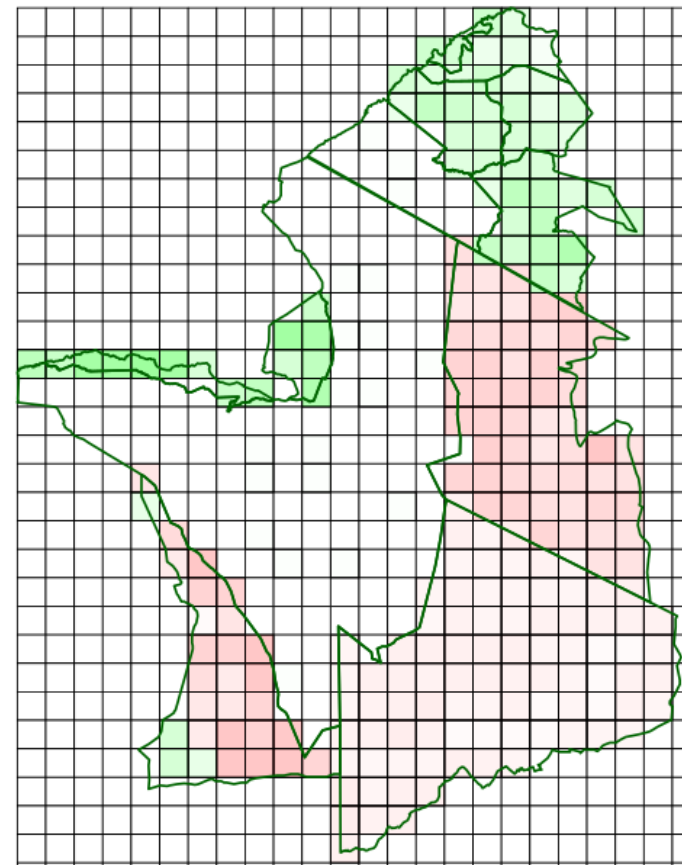
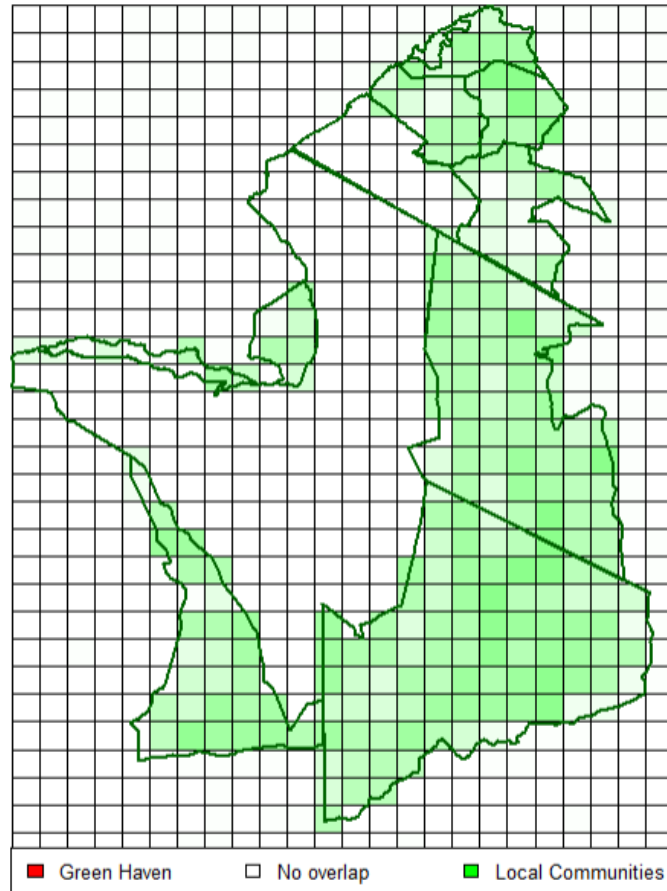Programme funded by EU - grant agreement No 641918

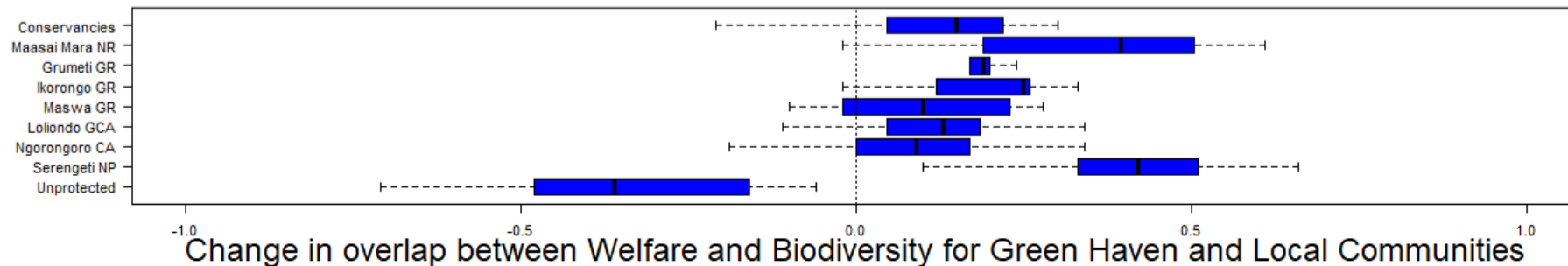### Relative change between Business as Usual and Globalization for Bushmeat Hunting

■ Business as Usual   □ No change   ■ Globalization

https://africanbioservices.shinyapps.io/servicescape/
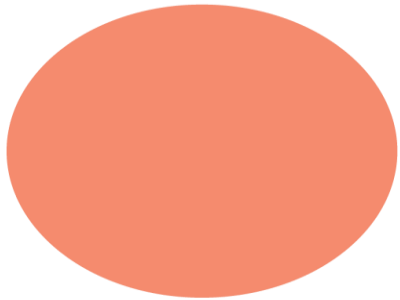

Change in Welfare between Green Haven and Local Communities

Change in Biodiversity between Green Haven and Local Communities
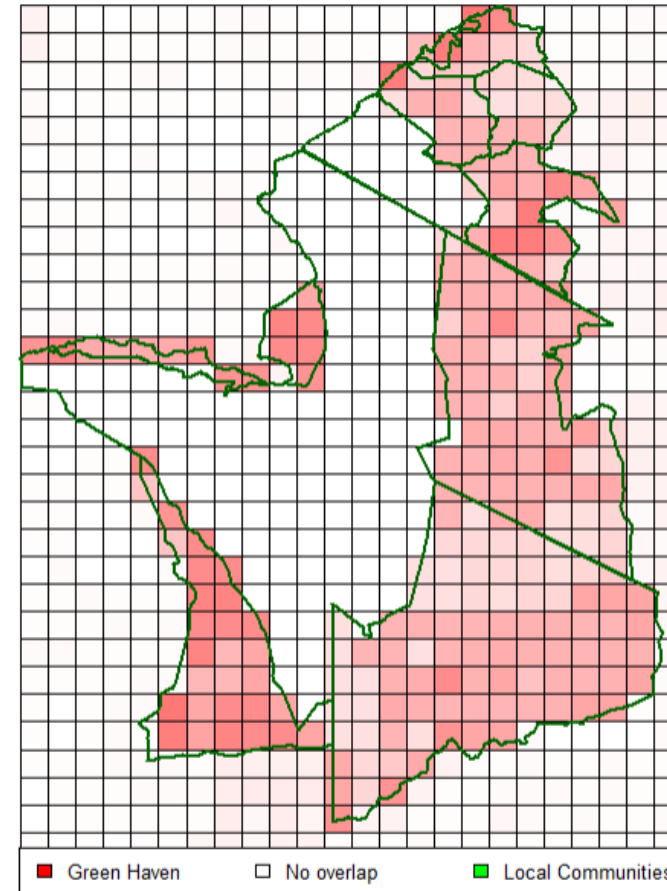
Live on the wild side

Faring well is capital

At your (dis)service!