

Validation of Animal Tracking Method

Concept for scientific study

Background

Terra Explora Foundation aims to conserve endangered wild life habitats by facilitating the documentation of wild life population developments through tourists and safari guides. For this, a method has been developed by which animal sightings can be recorded in a standardized way.

Objective

The use of the Animal Tracking Method for the documentation of wildlife population trends should be validated through a scientific study.

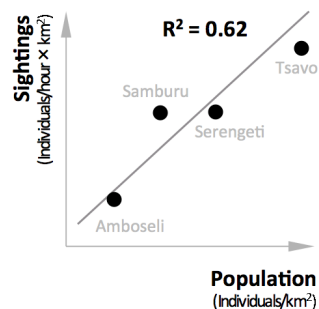
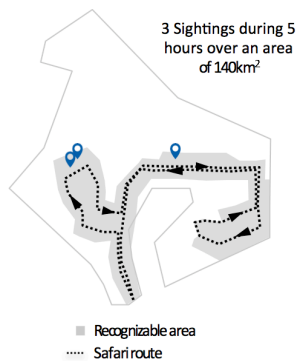
Research question

Is it possible to **determine changes in wildlife populations** based on the frequency of sightings during safaris?

Approach

The **correlation** between the **frequency of safari sightings** and the **abundance of certain species** should be investigated for several **national parks with different populations**.

- Frequency of safari sightings = Incidence of a sighting per spent hour and observed area during game drives
- Abundance of an species = Estimated population of a species in a National Park
- Correlation = The existence of a correlation coefficient > 0.3



Requirements

- At least 4 different **National Parks** (e.g. *Tsavo, Masai Mara, Samburu, Amboseli*)
- At least 1 diurnal, non-migratory, terrestrial, sufficiently common, easy-to-spot **species**, which is present in all Parks but with varying populations (e.g. *Cheetahs*)
- At least **50 sighting records** of the respective species proven with geo-tagged photos in the respective parks collected within a defined period (e.g. 2015)
- Consistently collected **population data** of the respective animal in the respective parks in a defined period

Data collection

In order to facilitate the investigation, the **number of individuals of a species**, the **place**, time & date, the **game drive route** and the **game drive duration** will be recorded.

For this, the **tour guides** of certain safari operators will **collect sighting data using special software** useable on GPS cameras and smart phones.

In addition, also the following data collection approaches will be used:

1. **Safari tourists will get equipped with free rented GPS cameras** and share their photos after their journey with Terra Explora. The memory sticks will be scanned for sightings of the respective animals and the sightings will be recorded in a standardized way.
2. **Safari tourists will get equipped with free Safari Journal Booklets** allowing the documentation approximate number of sightings and individuals of certain animals (These data will be used for understanding the correlation for animals other than e.g. cheetahs)