Monitoring wildlife with camera traps at a global scale: challenges and opportunities

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Tropical Ecology Assessment & Monitoring

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Tropical Ecology Assessment and Monitoring (TEAM) Network

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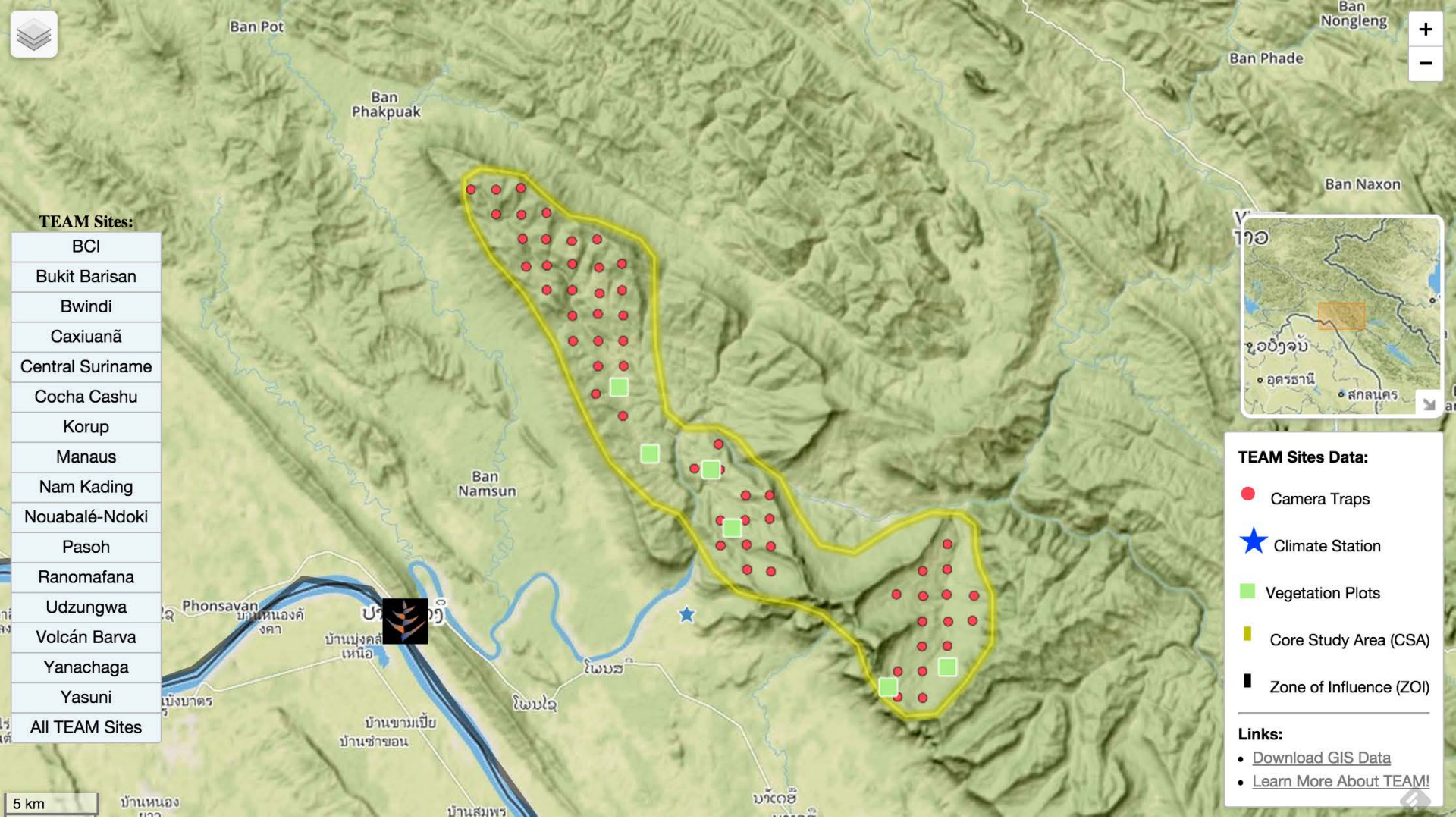
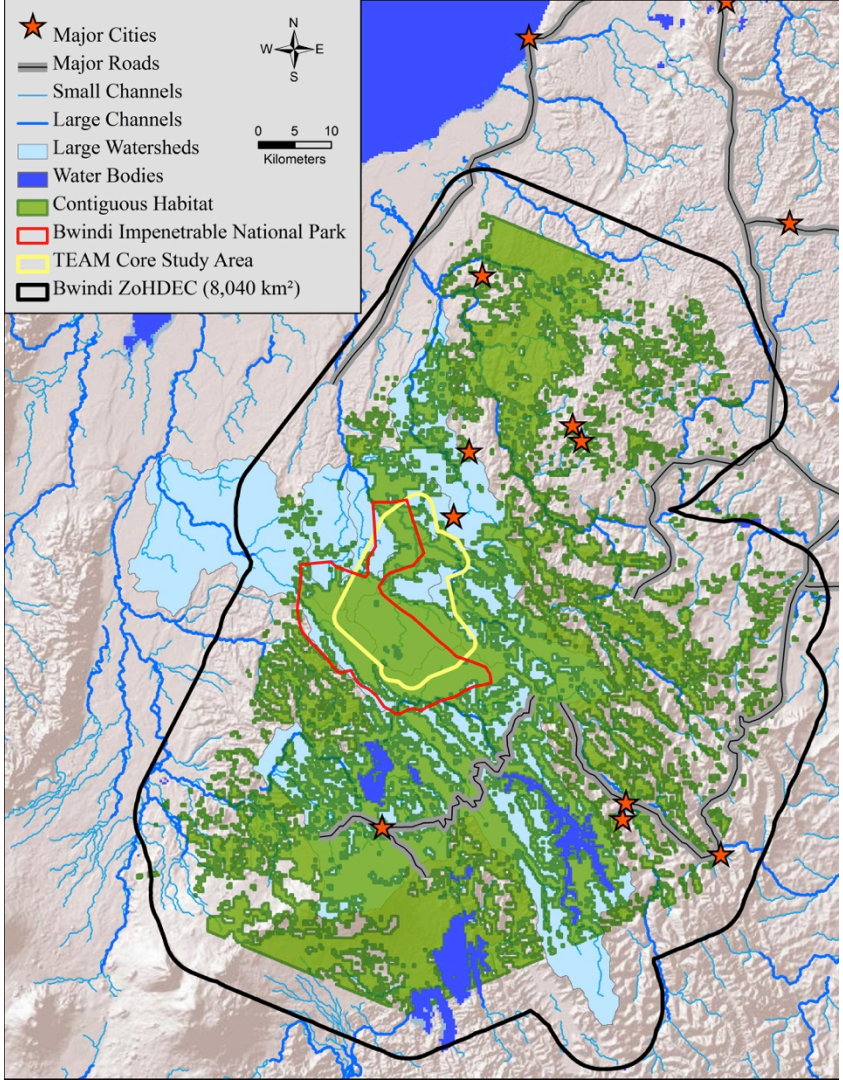
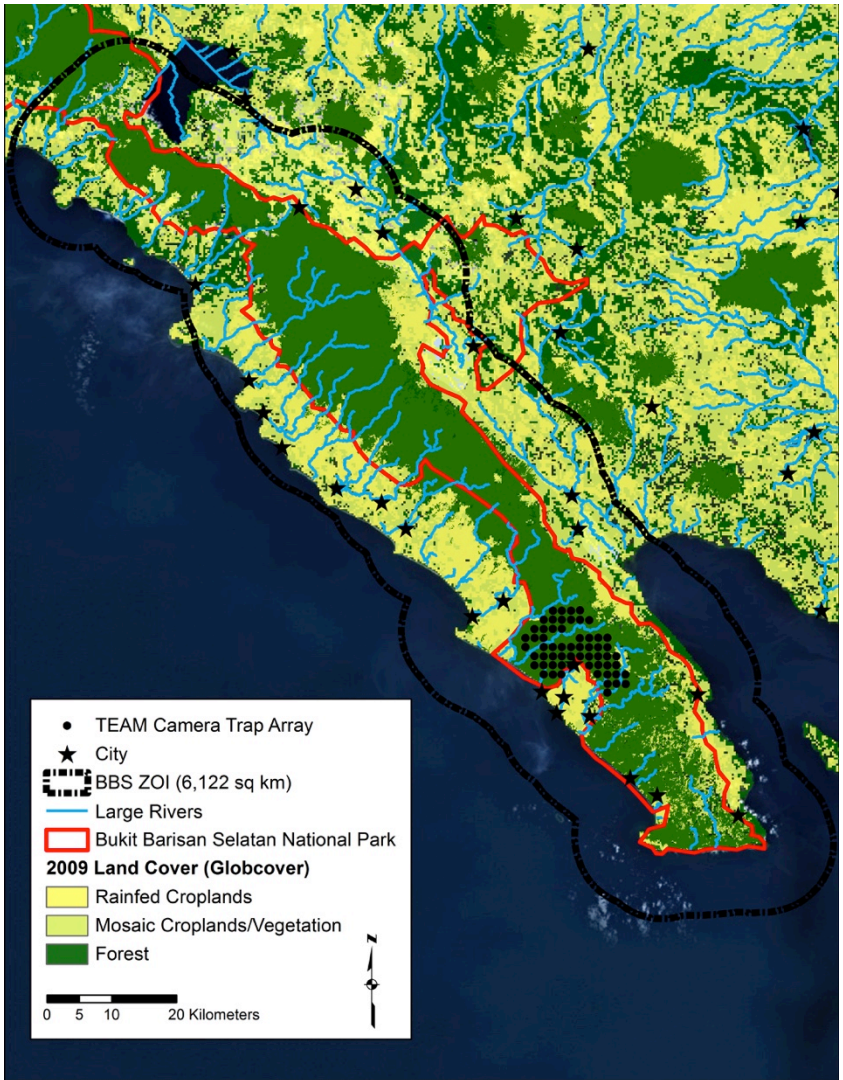
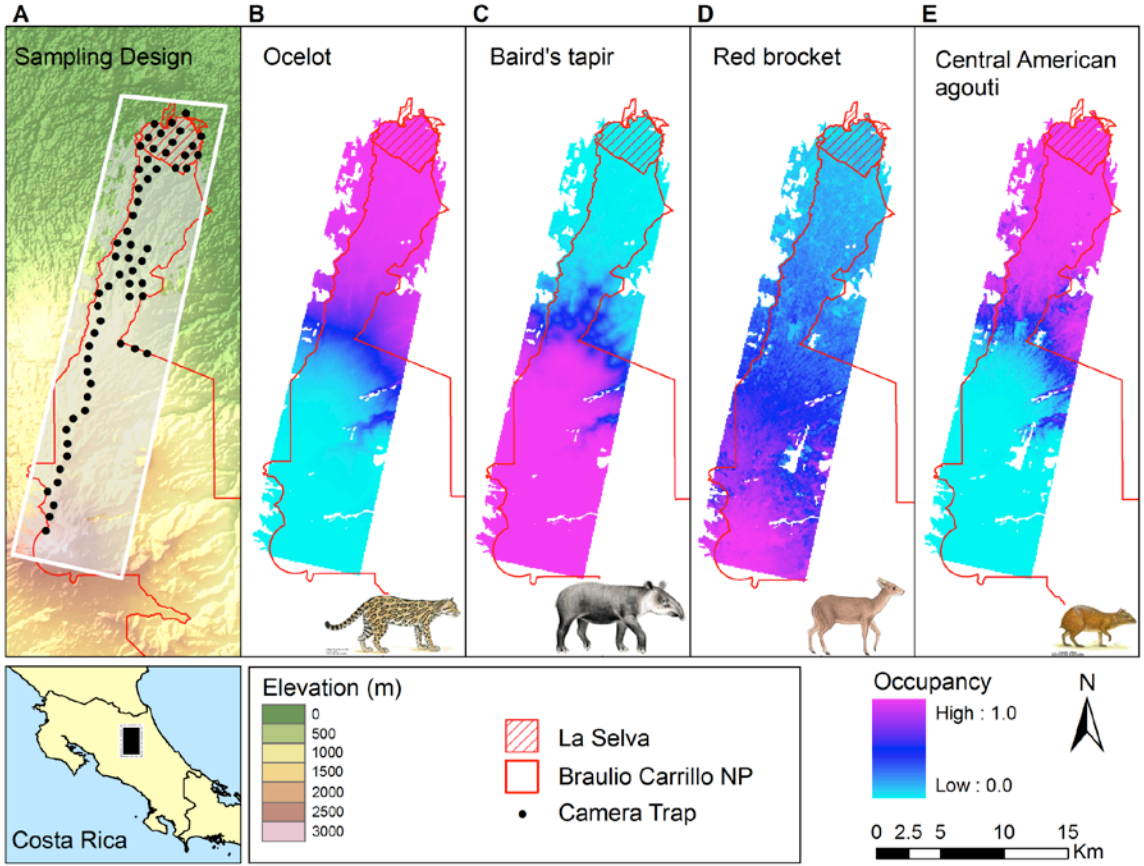
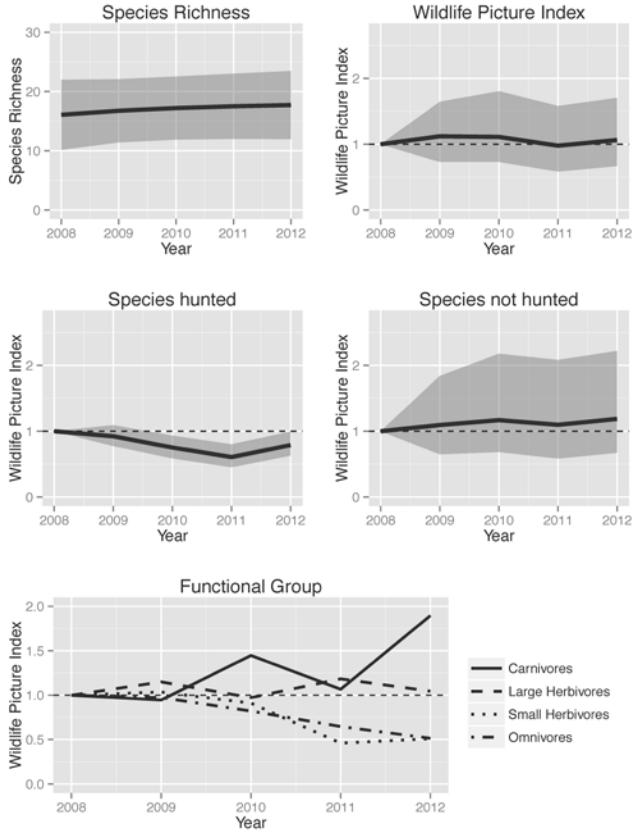

Ban Pot
Ban Phakpuak
Ban Nongleng
Ban Phade
Ban Naxon
Ban Namsun
Phonsavan
5 km
TEAM Sites:
BCI
Bukit Barisan
Bwindi
Caxiuanã
Central Suriname
Cocha Cashu
Korup
Manaus
Nam Kading
Nouabalé-Ndoki
Pasoh
Ranomafana
Udzungwa
Volcán Barva
Yanachaga
Yasuni
All TEAM Sites
TEAM Sites Data:
Camera Traps
Climate Station
Vegetation Plots
Core Study Area (CSA)
Zone of Influence (ZOI)
Links:
Download GIS Data
Learn More About TEAM!


Major Cities
Major Roads
Small Channels
Large Channels
Large Watersheds
Water Bodies
Contiguous Habitat
Bwindi Impenetrable National Park
TEAM Core Study Area
Bwindi ZoHDEC (8,040 km²)
N
W
E
S
0 5 10
Kilometers


TEAM Camera Trap Array
City
BBS ZOI (6,122 sq km)
Large Rivers
Bukit Barisan Selatan National Park
2009 Land Cover (Globcover)
Rainfed Croplands
Mosaic Croplands/Vegetation
Forest
N
0 5 10 20 Kilometers





Ahumada et al. 2013. PLoS ONE 8(9): e73707

Quick stats

- Tropical forest network – 17 sites in 16 countries
- More than 2.5 M images, 4-8 years of data/site
- Half million images added every year
- Ground-dwelling mammals birds, ~300 species
- Software to quickly process field images (OpenDesk TEAM)

Challenges

- Data management: camera trap data accumulates quickly

Challenges

- Turning camera trap data into useful indicators for policy makers

Challenges

- Sustainable funding: everybody needs data but nobody wants to fund ‘just monitoring'

Opportunities

- Standardized, cost-effective and verifiable
  - $30-40K per year/PA
  - Camera traps are getting cheaper
  - Images allow for easy verification

Opportunities

- Available indicator (Wildlife Picture Index) can be calculated through a specialized analytics system (WPI AS). WPI can be easily aggregated/disaggregated starting at the species level

Opportunities

- Methods and analyses are scalable to the level of national protected area networks or other relevant national and regional networks

Opportunities

- Represent some key Essential Biodiversity Variables
  - species distribution
  - population abundance
  - taxonomic diversity trends.

Opportunities

- Many countries (in particular tropical) need monitoring systems for wildlife and not sure where to start

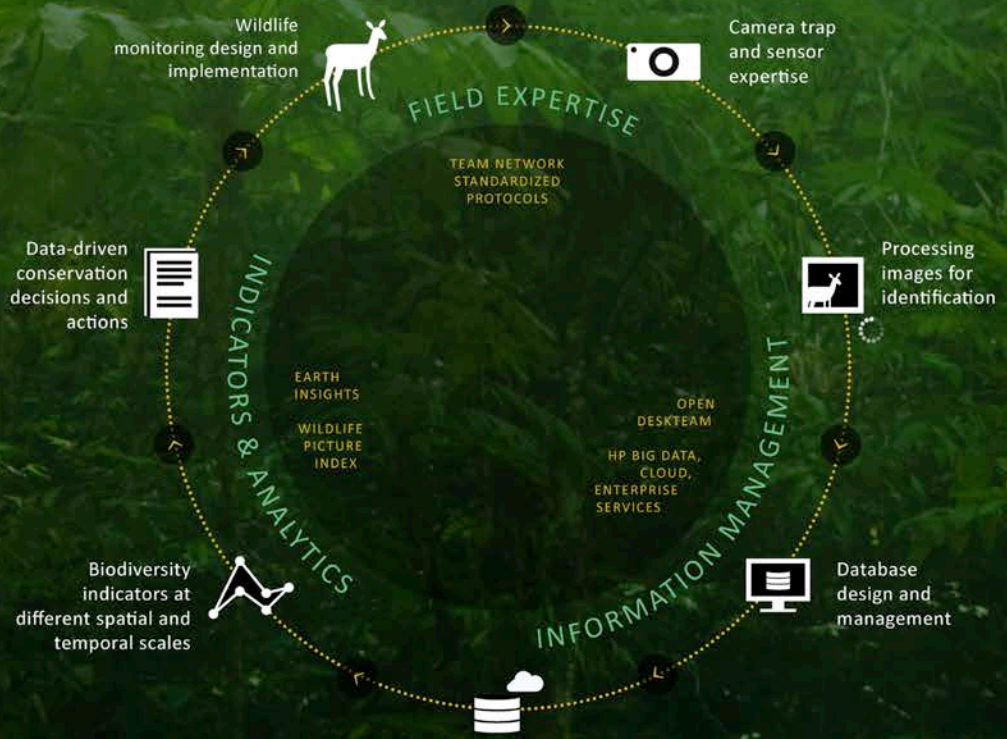
Opportunities

- Images of animals are a key asset for communication and education at local, regional and national levels

Opportunities

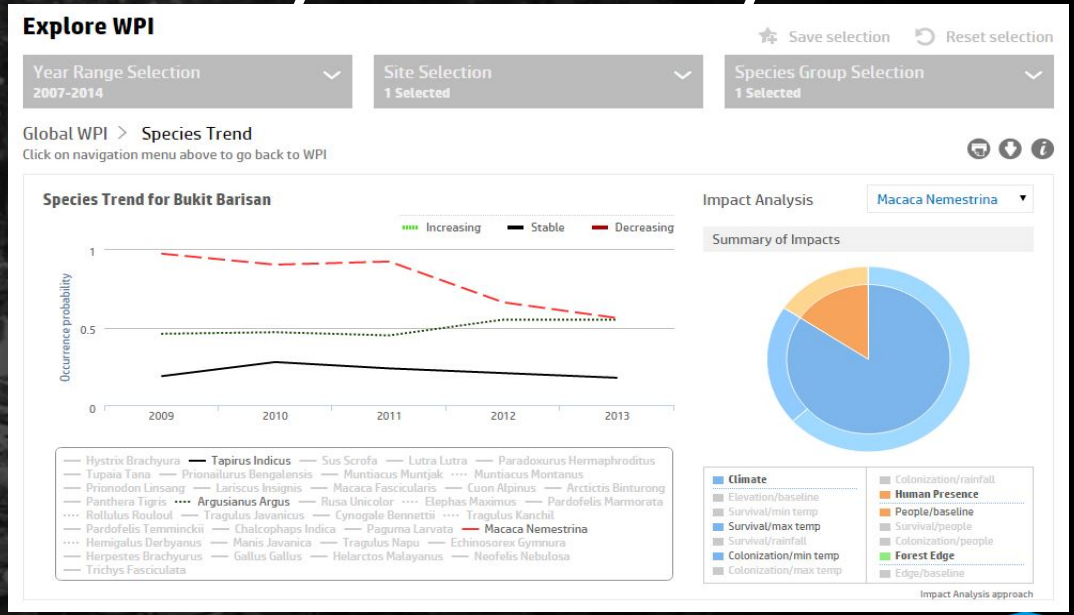
- Protected area effectiveness indicators (e.g. METT scores) need more quantitative ways to assess biodiversity outcomes

A comprehensive biodiversity monitoring solution to improve protected area effectiveness



Learn more at
www.teamnetwork.org/solution

Wildlife Picture Index Analytics System



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Camera Trap Data Network

The Camera Trap Data Network is an archive for camera trap images and metadata for use by researchers and conservationists trying to discover and save wildlife communities around the world. Camera trappers can use this network to ensure their data properly archived, protected from loss, and available for global studies (at a range of access levels).Biodiversity data analysts can use the network to ask new scientific questions and track population trends. Animal lovers can enjoy millions of unique pictures.

“Data driven Wildlife Monitoring and Management”

How Wildlife Monitoring Works ?

Upload Camera Trap Data

Share your data with collaborators around the world by synchronizing with the network’s data standard…

Compute Analysis

Camera Trap Images and survey data are analyzed and computed for various analytics on new data arrival from the parks and …

View Camera Trap Data

View, analyze and download globally shared camera trap data by individuals and organizations


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