#### Global Biodiversity Information Facility (GBIF) Project Workshop for Preservation and Use of Hunting Records Maun Technical College, 22 March 2017, 0900 h. – 1200 h.

Information collected by the Botswana Wildlife Management Association between 1996 and 2014 about hunting quotas, concession location, and trophy measurements, as well as biological specimens, forms an important piece of the knowledge legacy of legal hunting in Botswana.

Following the 2014 moratorium on hunting in Botswana, recognising the valuable insights to wildlife research that these materials can provide, the Association is working with the University of Botswana's Okavango Research Institute to catalogue, transfer and preserve the materials in ORI's library and archival collections in Maun, and to capture the data in a widely accessible online resource, the <u>Global Biodiversity Information Facility</u>. The Botswana Department of Wildlife and National Parks is providing guidance and advice to the project.

This workshop shares the experience of the project team and welcomes input from potential users of the collection and its data.

Time	Activity	Presenter
0900	Welcome remarks	Mr Zan Ngaruka, Deputy Principal, Maun Technical College
0905	Introduction	Prof K Mosepele, ORI
0910	The records and data of the Botswana Wildlife Management Association	Debbie Peake, Secretary, BWMA
1000	Using hunting records data to support wildlife management	Dr Lucas Rutina, ORI. Debbie Peake
1045	Tea break	
1100	Making hunting records and data permanently available	Ms Olebgeng Phalakwe, Mosepele Boiditswe, ORI Library and Masego Dlhiwayo, ORI GIS Lab
1130	Discussion	Led by Debbie Peake and Dr Lucas Rutina
1200	Closing	Kgosi Dithapo

Agenda









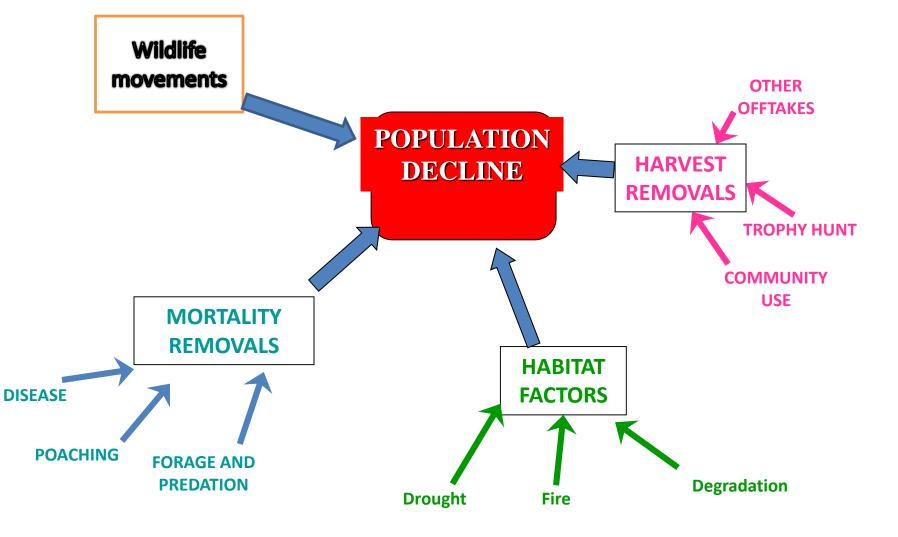
#### USING HUNTING RECORDS TO SUPPORT WILDLIFE MANAGEMENT LUCAS RUTINA OKAVANGO RESEARCH INSTITUTE DEBBIE PEAKE BOTSWANA WILDLIFE MANAGEMENT ASSOCIATION



# BACKGROUND

- What is wildlife management?
  - Management of wildlife populations and their habitat
  - \*Include interaction (intra and inter)
  - In agro-ecosystems
- What are the goals of wildlife management?
  - Population increasing
  - Population stable
  - Population decreasing
  - Leave it alone and keep and eye







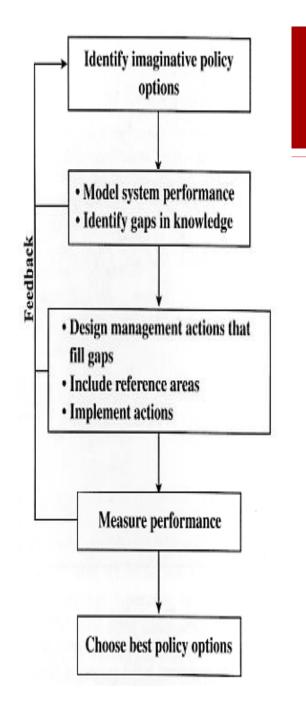
# How we learn

- Tradition ("local knowledge")
- Trial-and-error ("college of hard knocks", "on-the-job-training")
- Scientific experiment (objective, explicit, replicable, but often reductionist)
- <u>Adaptive management</u>: Combine advantages of trialand-error and scientific learning



### Adaptive management

The process of treating management as an experiment





# **Resilience and Resistance**

- In wildlife management (and ES generally) we often assume systems are linear and changes incremental, but often not the case
- Sudden shifts can alter ecosystems, as well as human understanding and the institutions that carry out management
- Ecosystems properties, :
  - Resilience: The capacity of a system to absorb disturbance and still retain its basic function and structure
  - Resistance: the capacity of the ecosystem to resist to change following disturbance



- Social-ecological systems can exist in more than one kind of stable state
  - If system changes too much it can cross a threshold and begin behaving in new and unexpected ways (it has undergone a "regime shift")



# Types of complexity

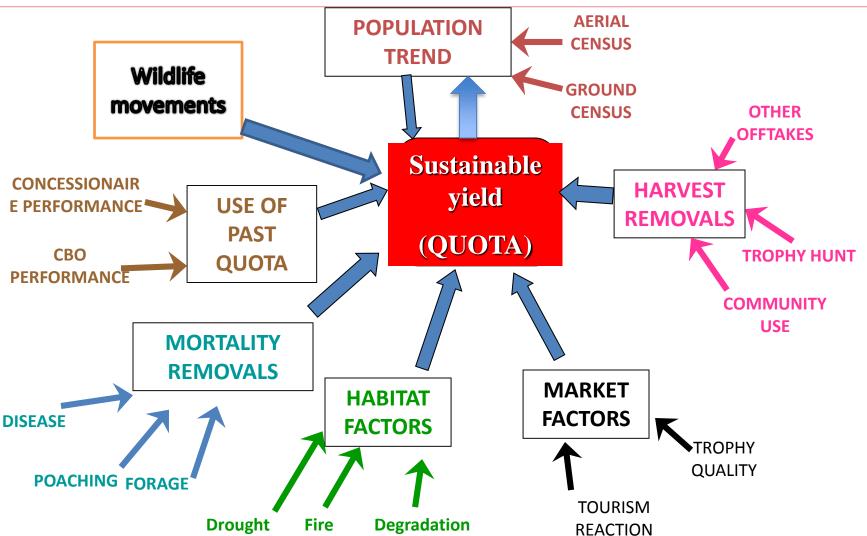
- Environmental variation
- Ecological variation in populations
- Synergistic effects (e.g., multiple stresses like drought and disease)
- Cumulative effects



# Resilience and ecological systems

- Ecological and human systems are dynamic
  - Constantly confronted with "surprise" events
  - What is optimal one year, is not the next
  - Structure and function of ecosystems change over time
- Not just *amount* of knowledge that is important (*e.g.*, species, ecosystems) but also *kind* of knowledge
  - How we perceive connections, consider uncertainty, consider resilience





GBIF Hunting Records Transfer and Processing

By M. Boiditswe, O. Phaladze & M. Dhliwayo Okavango Research Institute Maun

### About the Project

#### Data rescue exercise

- intended to ensure continued access to legacy biodiversity data related to animals formerly hunted in Botswana
- Includes reports, Excel datasets, and correspondence, related to hunting quotas, trophy descriptions, and biological specimens from the Botswana Wildlife Management Association (BWMA)
- Supported by the Global Biodiversity Information Facility (GBIF)

### Project Progress

records inventory for the BWMA's hard copy files and biological specimens has been done.



#### **Collection Processing**



- Selected files from BWMA offices have been transferred to the University of Botswana Okavango Institute Library
- Data already recorded in Excel documents were transferred to a server managed by the Okavango Research Institute's GIS laboratory.

### Hard copy records and data





# Training

- GIS Laboratory and Library staff attended online GBIF training workshop August to December 2016
- Metadata template containing all required fields to be published on the Integrated Publishing Toolkit (IPT).
- IPT provides interface for datasets to be uploaded, described, stored and shared



# Training Exercise

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I his is the overview page for the BI	irds fallen at Danish Lighthouses, 1883-1939 resource.	
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Edit	Not modified since last publication	
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#### Specimen measurements

Debbie Peake and ORI members completing the measurement of elephant jaws to add to the database



# Meaurements are used to calculate age

#### Creation of archival finding aid

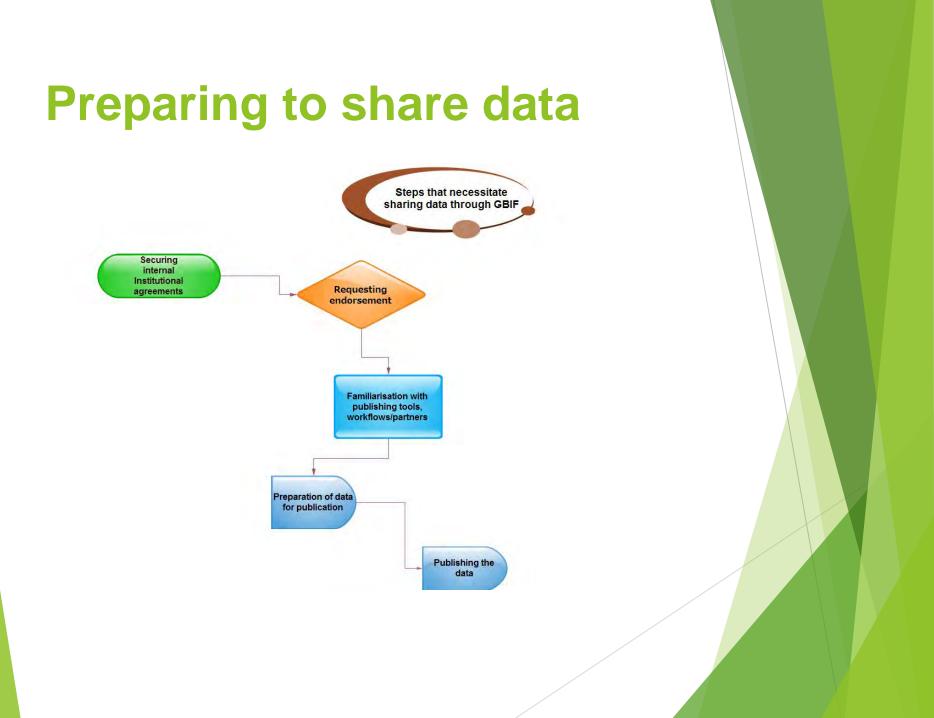
The library team is producing a description of the collection to make future use/reuse of the records easier





# Integrated Publishing Toolkit (IPT)

- The IPT is free, open source software developed by GBIF to publish and share biodiversity data
- To foster scientific research development internationally for conservation outcomes and to support public use of the data
- Allows suitable attribution of the data (originator, country, hosting institution etc)
- Data hosting at ORI is a significant commitment
  - consistent online presence
  - stable and secure infrastructure
  - helpdesk support to users
  - accuracy of data
- Publishing requires data to be organised into standards recognised by harvesting (indexing) facilities



#### Towards the final product...

The team is working on populating the metadata template with all the required data from the Excel spreadsheets

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#### Thanks for your participation!





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