

Ranger Based Monitoring in Virunga-Bwindi Landscape: *Strength and Weaknesses*

Augustin K. Basabose, PhD

IGCP Conservation Science Officer



AFRICAN WILDLIFE FOUNDATION



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Ranger Based Monitoring (RBM): What is it all about?

RBM **is not** a **monitoring program** *per se*

– it is a **tool for monitoring**

All needed data for a monitoring program (based on defined parameters to be measured) cannot be collected by RBM (see **Monitoring plans** at different PA levels).

- e.g.
- socio-economic data;
 - ecosystem monitoring;
 - Climate changes
 - Plant phenology
 - Remote sensing data

RBM : Ranger Based Monitoring

Founded on routine monitoring conducted by park staff on a day-to-day basis, RBM is a Monitoring tool developed by IGCP to identify threats to the mountain gorilla in its natural habitat

Threat abatement

- **Through different strategies, measures/efforts are being undertaken to address threats identified by RBM using adequate responses to achieve conservation targets (Mountain Gorillas and their natural habitats).**
 - Law enforcement
 - Conservation enterprises
 - Sensitization/Lobbying at different levels (Local, National, Regional, International)

Rangers' Mission

1. In Protected areas (PAs), Rangers' primarily mission is **law enforcement**
2. They must **not be overloaded** with data sheets and spend too much time recording data
3. We therefore need to decide a **few key indicators** they will collect data on
4. They are often working on **threats monitoring**

Strength of RBM

- **Simple and cost-effective monitoring tool:**
 - a. **PA staff are available to collect data.**
 - b. **CAN easily be undertaken in a relatively large part of the park.**
 - c. **Keep park staff busy while providing important information which directly contribute to the management of their PAs.**
- **Training of PA staff to improve program implementation and quality of outputs.**

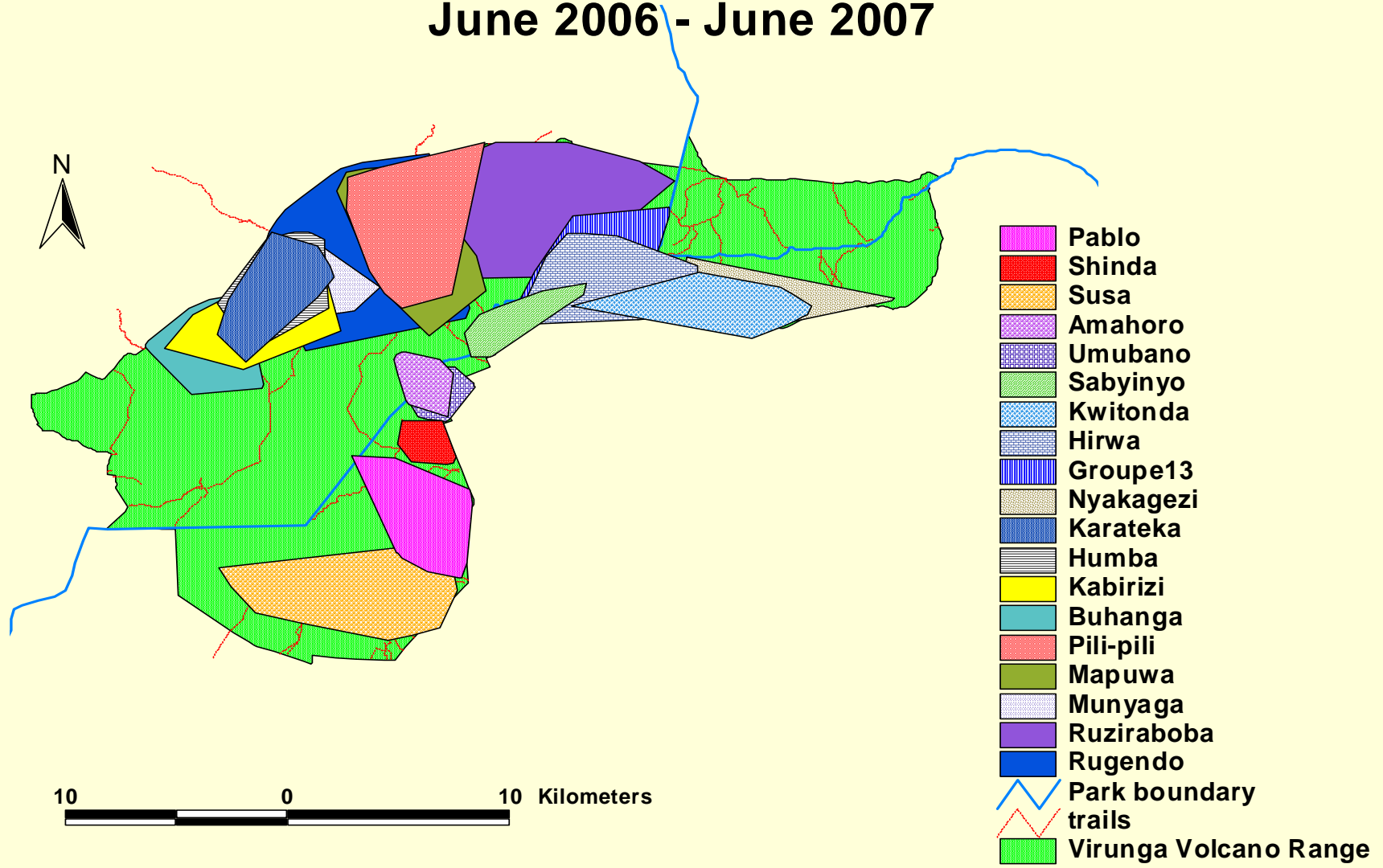
Strength of RBM

- **RBM is today fully institutionalized within the all PAs at regional level even beyond gorilla habitat, guarantying its sustainability.**
- **RBM ease warden LE capacity and facilitate a collaborative management of contiguous PAs (UWA, ORTPN and ICCN).**
 - **Patrol / illegal activity coverage well done**
 - **Regular warden meetings**
(Plan together for efficient PAs management)
 - **Coordinated patrols driven by RBM results**

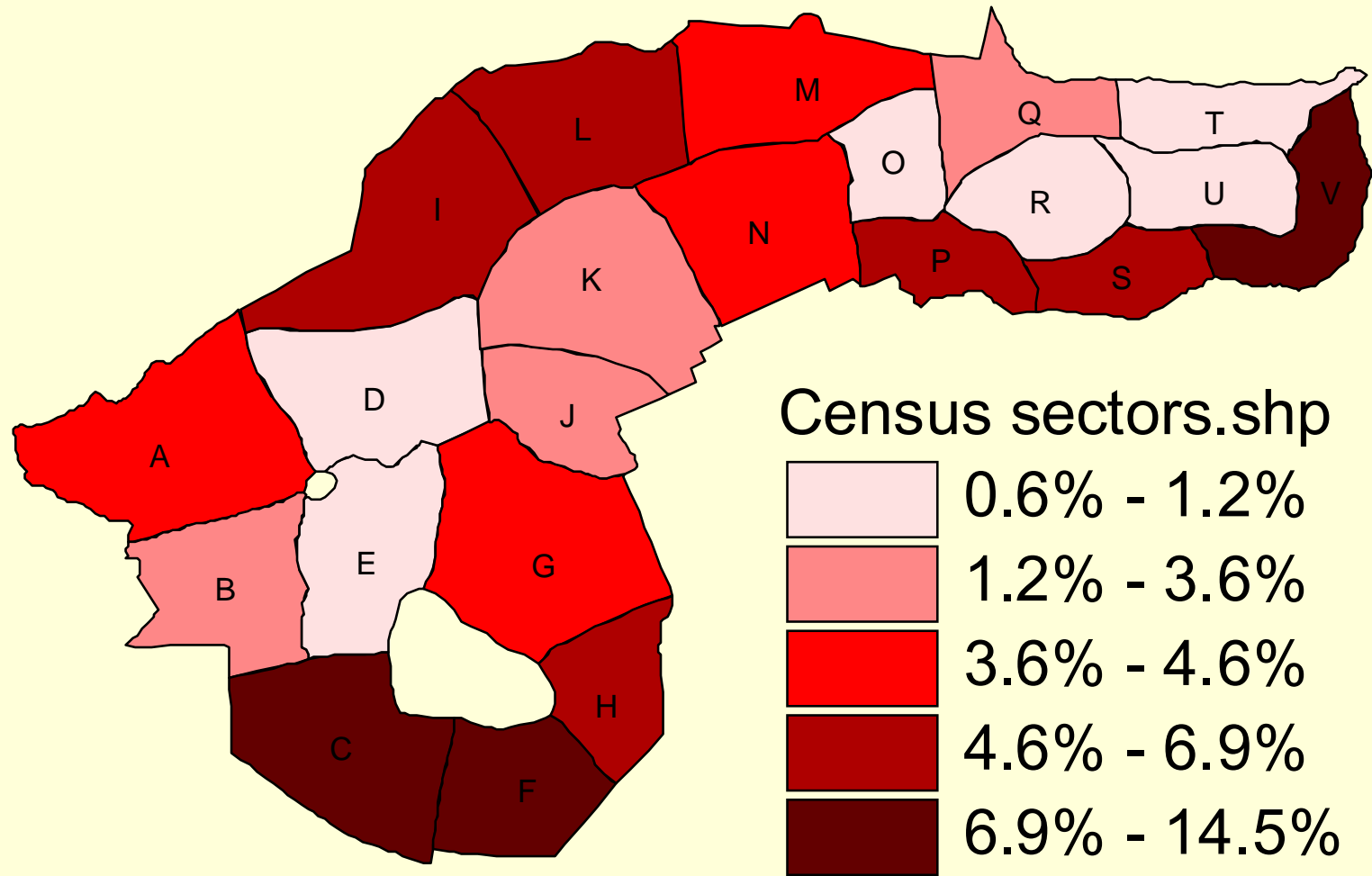
Outputs

Observed trends through RBM may raise interesting key research questions within and outside PAs

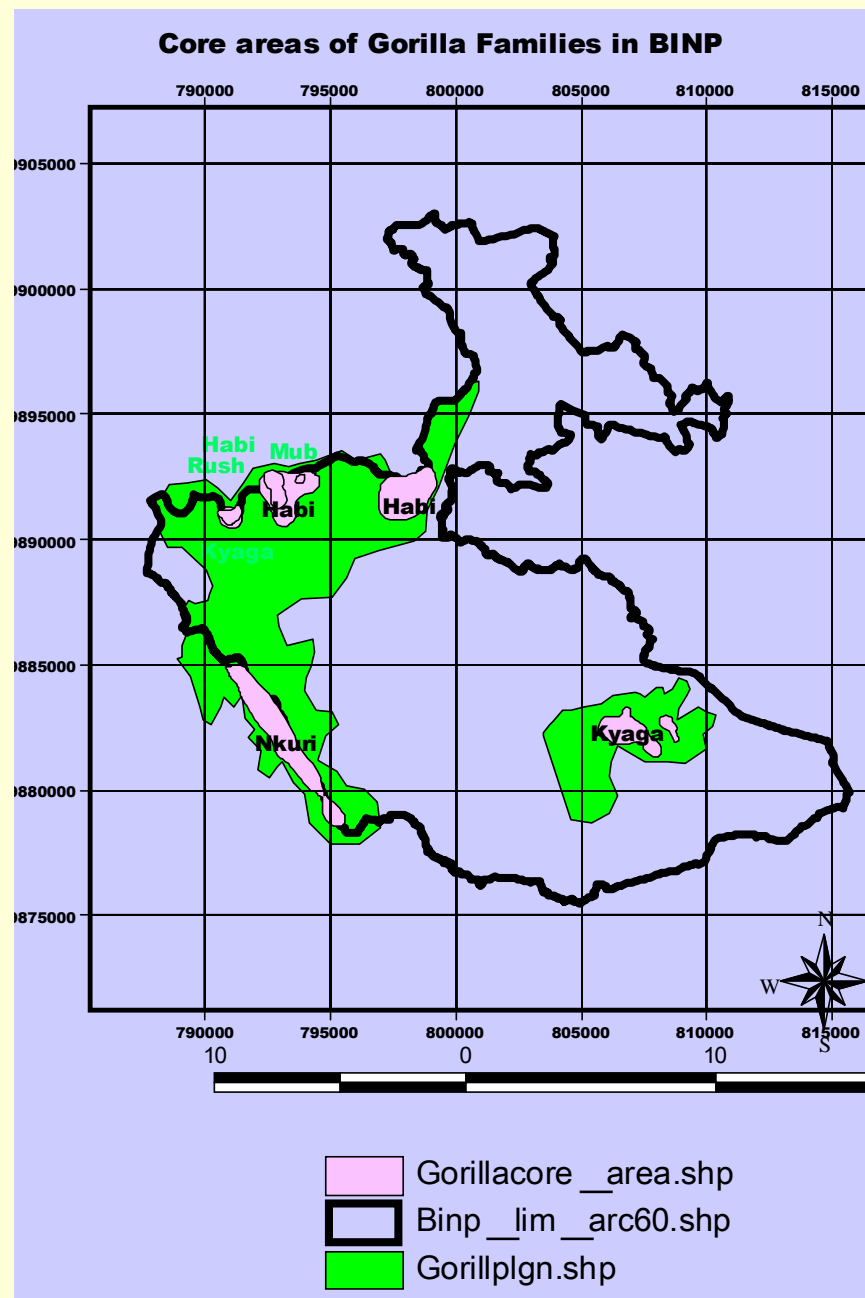
Habituated Gorilla Home Range in Virunga Volcano Range: June 2006 - June 2007



Illegal Activities within the Sectors



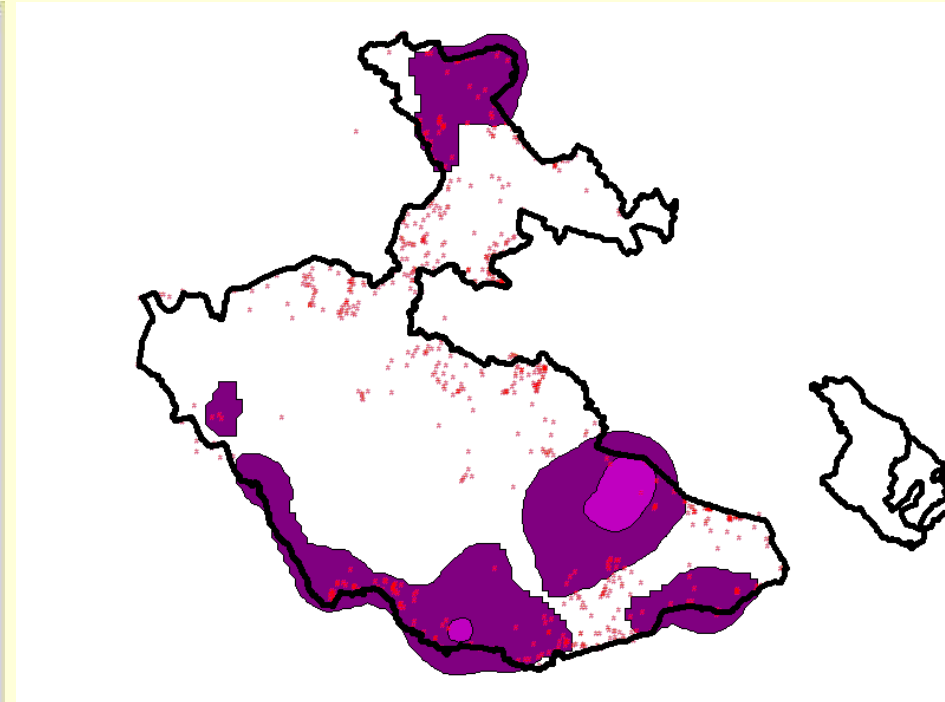
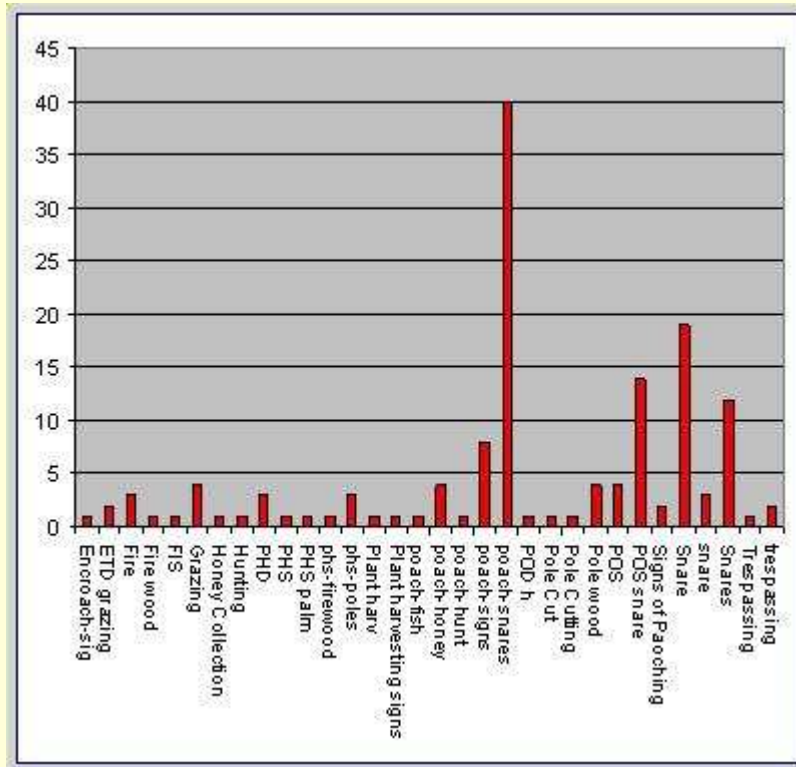
8 years RBM data analysis



The core areas of Mubare, Habinyanja and Rushegura extensively overlap over the years.

It is interesting to investigate on strategies developed by these gorilla families to avoid one another for lesser deadly interactions

Illegal activities vs patrol effort



Snares prevail as type of illegal activity in the gorilla sectors. Illegal activities (snares) substantially occurred (red dots) in some of the highly patrolled zones (pink).

RBM Weaknesses

Data collection

Not systematic

Almost limited to threats

Movements of guards are biased towards where illegal activities are occurring

RBM Data Analyses need independent verification using more standard sampling techniques –
Research

RBM Weaknesses

In Gorilla habitat:

More focus on gorilla population

Knowledge of other species (Fauna and Flora) very limited.

Impact of other factors on Gorilla conservation unknown

Too much data collected (on daily basis and continuously for years) **delaying data analysis and therefore their applicability in PA management.**

RBM Weaknesses

Lack of **defined indicators of success** to be assessed whether they were direct, objective, practical and adequate.

Existence of **various databases in use**, an indicator of the complexity of the data handling (????)

Recommendation

- Identify relationships between Direct and Indirect threats affecting conservation targets
- Undertake specific applied research programs to complement information and address questions raised by RBM
- Improve efforts to measure effectiveness of conservation actions
- Harmonize data handling system at regional level (data collection, analysis, software use, etc.)

Recommendation

Data management

No single current used database can handle all the collected data and produce desired outputs. RBM data are entered into different software (MIST, MS Access, MS Excel and ArcView / ArcGIS)

There is a need to adopt **one database** which captures all the data collected by PAAs for more **effective data management** and **exchange** at regional level.

Thank you