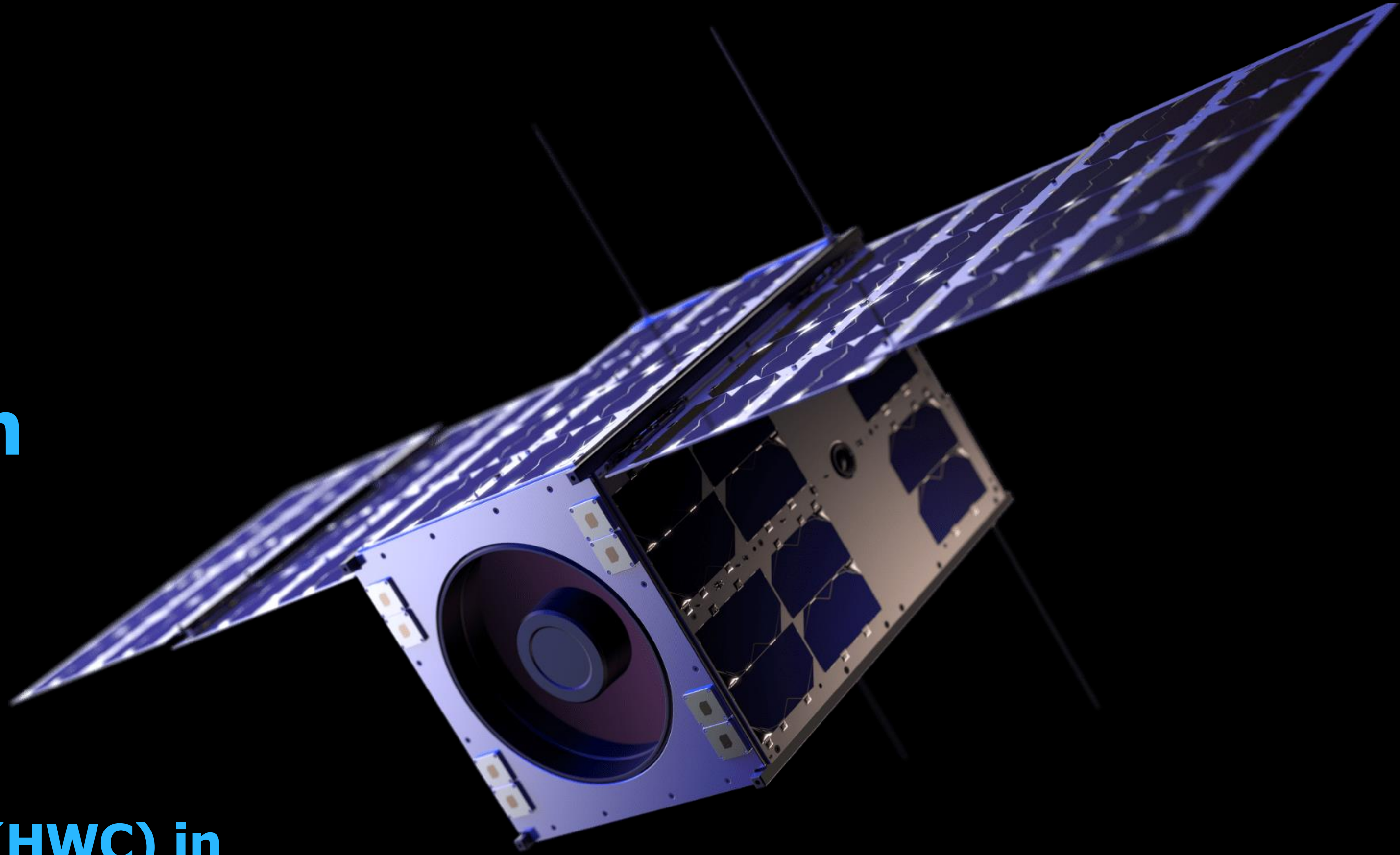


IOT Constellation Mission

Mission:

Mitigating Human-Wildlife Conflict (HWC) in Botswana

Modisa Mosalaosi; Lead Engineer, BOTSAT



AGENDA

- **Introduction to HWC**
- **Causes of HWC in Botswana**
- **Consequences of HWC**
- **Examples of HWC in Botswana**
- **Response To HWC in Botswana**
- **Proposed IOT Solution**
- **Mission Idea**

INTRODUCTION TO HWC

- **HWC results from encounters between wildlife and humans.**
- **Occurs when wildlife and humans compete for space and resources, with costs to both humans and wild animals.**
- **These encounters affect all aspects of human life, including the habitat and conservation of the species involved.**
- **The number of people sustaining serious injuries and/or losing their lives due to wildlife attacks has increased in recent years**

Indicative Incidence Statistics

The department of wildlife and national parks (DWNP) conducted a survey on HWC incidents between 1994 and 2006 on crops and livestock in three districts: Chobe, Ngamiland, and Central

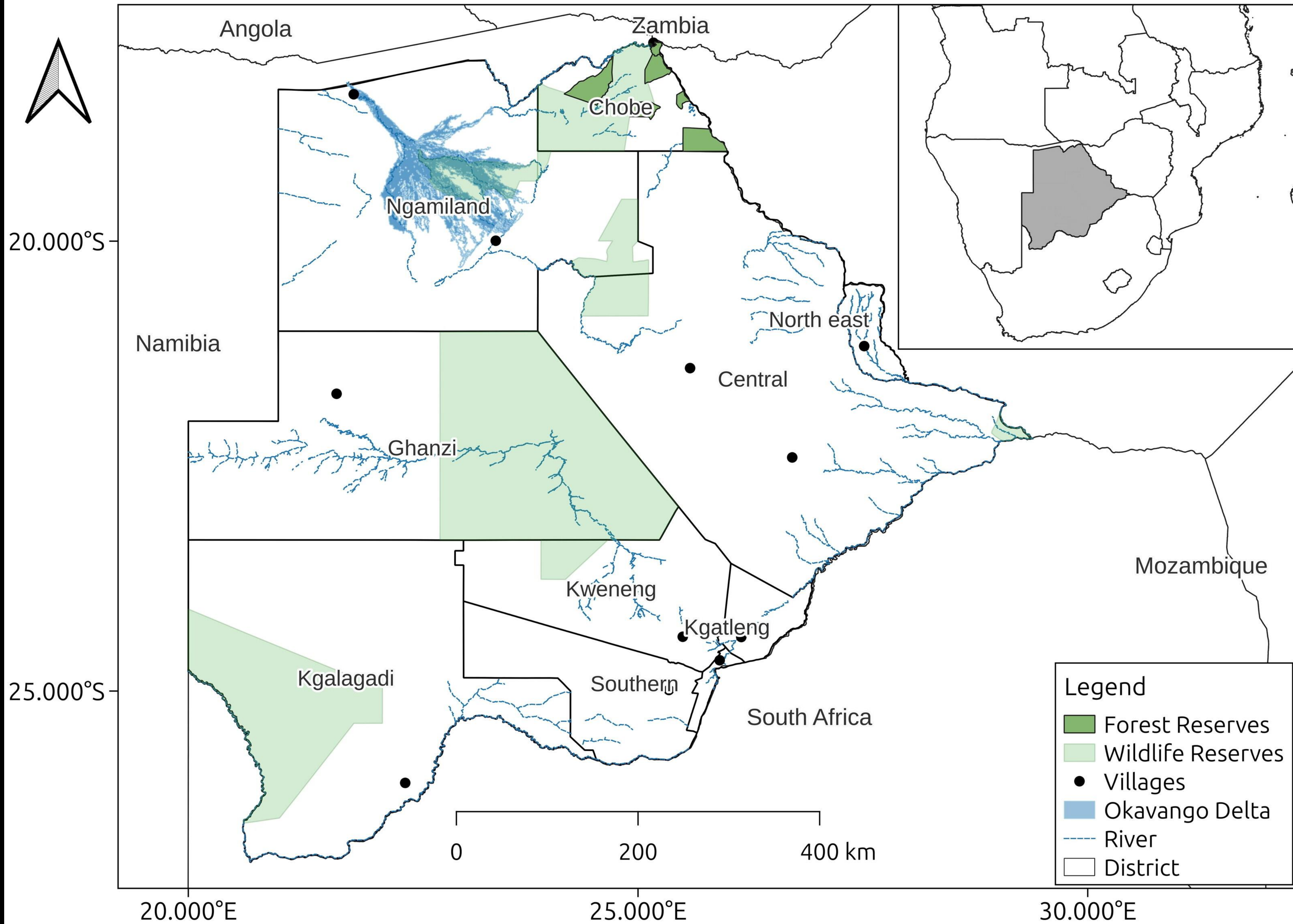
District	Crops	Livestock
Chobe	1212	1013
Ngamiland	1919	5666
Central	1712	8254

The department, additionally, documented 19,198 HWC incidents in Botswana between 2010 and 2014 for species attracting compensation.

Compensation Budget: Government has paid P124 million in compensation- (2018-2023).

Time Resource: UP to 60% of the DWNP district staff time is spent on HWC issues

Since 2018: Over 45 000 incidents recorded, over 60 human deaths, 50 major injuries.



Causes of HWC in Botswana



- **Competition for Resources**
- **Human Encroachment**
- **Wildlife Population Growth**
- **Crop Damage**
- **Wildlife Predation**
- **Livestock Disease**

Consequences of HWC in Botswana



- **Loss of Livelihoods**
- **Human Safety Risk**
- **Retaliation**
- **Poor Attitude Towards Conservation**
- **Loss of Wildlife**

Examples of HWC in Botswana: Okavango Delta



The Okavango Delta is severely affected by HWC, particularly with elephants causing significant damage to crops as well as posing threat to human safety.

Examples of HWC in Botswana: Eastern Okavango Panhandle



In the Eastern Okavango Panhandle, large herds of elephants and local people compete for access to water and food, which leads to conflict.

Examples of HWC in Botswana: Chobe District

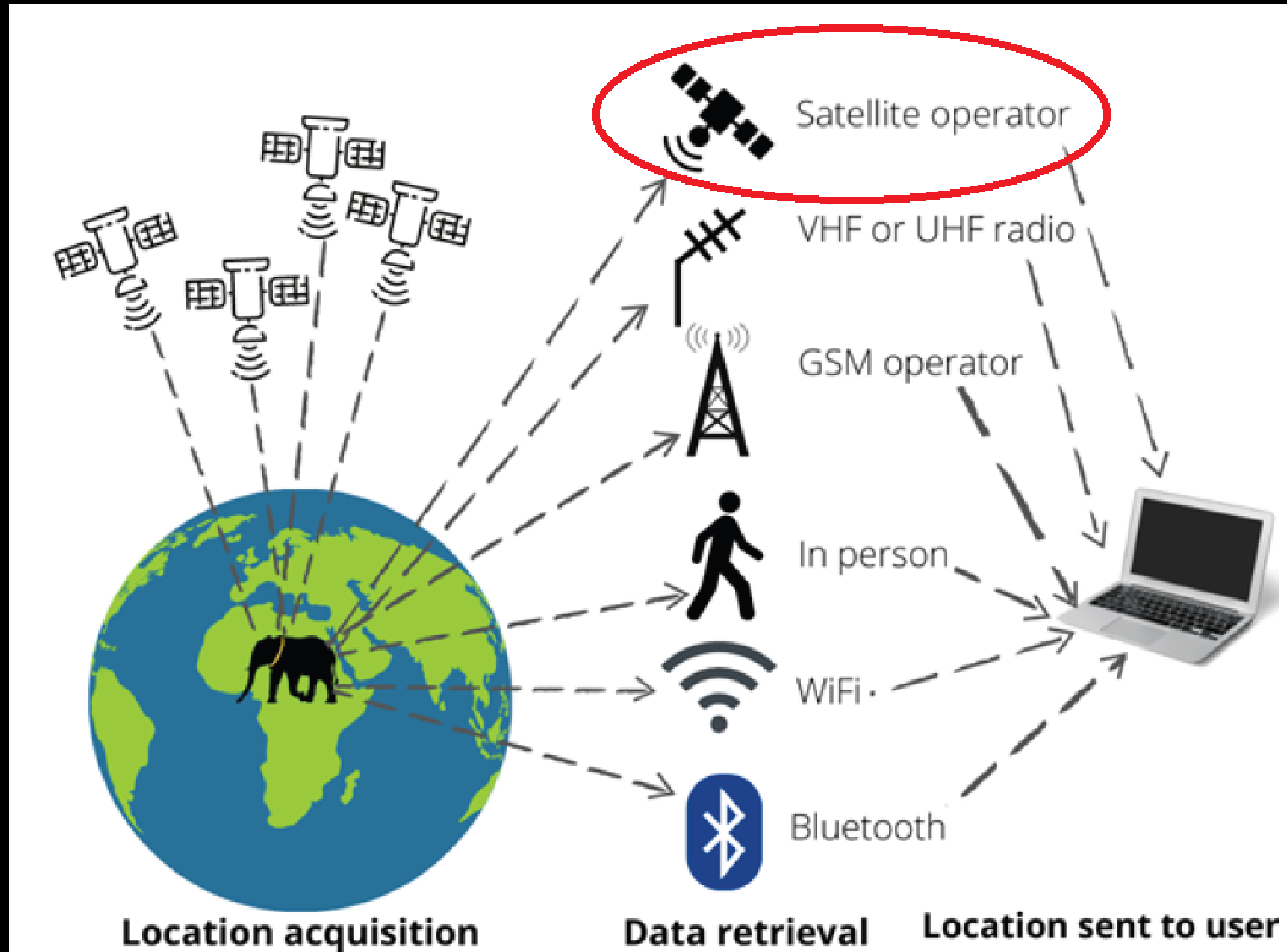


The Chobe National Park experiences high levels of HWC, with elephants, buffalos, lions and other animals impacting human livelihoods.

Response To HWC in Botswana

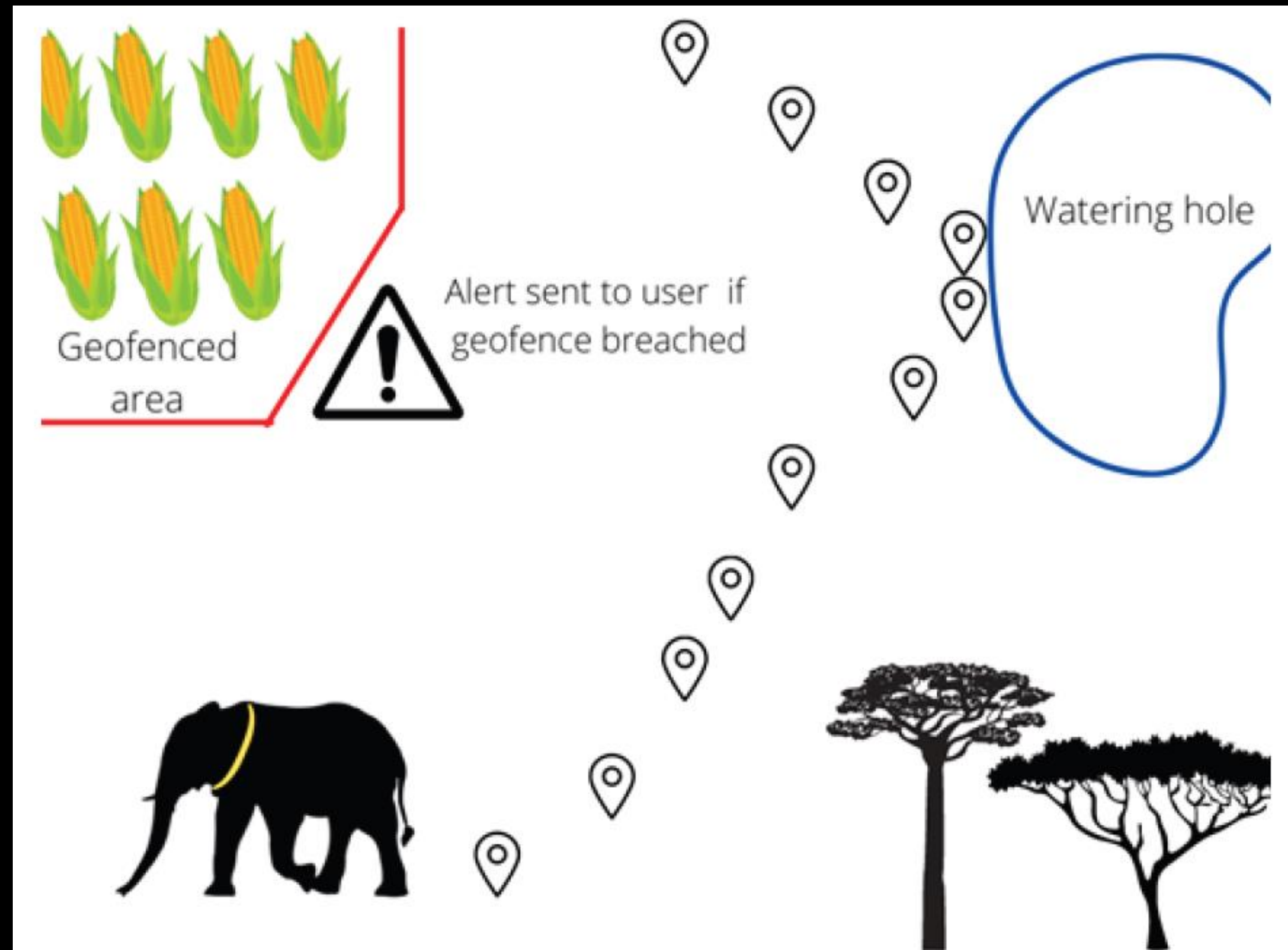
- **Compensation Schemes:** To address crop damage and predation
- **Mitigation Measures: Strategies to reduce HWC**
 - Develop community-based natural resource management**
 - Promote sustainable land use practices**
 - Implement wildlife proof fencing**
- **Public Education and awareness:** Raise public awareness about HWC
- **Research and Monitoring:** Identify root causes of HWC
- **Community Involvement:** Plan and implement HWC strategies

Proposed IOT Solution



Mission Idea

- **Near Real-Time monitoring of animals at risk of conflict with people.**
- **Geofencing of Critical areas of conflict (settlements, water sources, farms).**
- **Create Early Warning System if geofence breached.**
- **Deduce possibilities of poaching from change in animal behavior.**



THE SKY IS THE VIEWPOINT