## Space-based technology and One Health: delivering an integrated approach.

Dr Joe Ryding Head of Data & Statistics The Donkey Sanctuary



#### **OVERVIEW**



#### **WHAT**

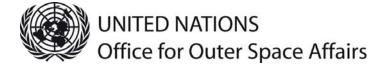
- Introduction to space technology and one health
- A review of space technology
- The Donkey Sanctuary and space technology an integrated approach
- Conclusions and discussion

#### **OVERVIEW**



#### WHY

- UNOOSA open the benefits of space to everyone
  - including animals
- Global Partnership for Sustainable Development Data
  - Better data Better decisions Better lives









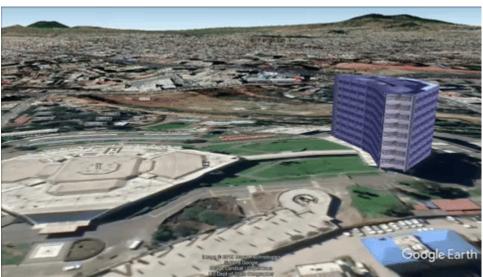
#### **INTRODUCTION**



#### SPACE TECHNOLOGY

- Technology for satellites, space flight or exploration
- Everyday services
- Rapidly evolving





#### INTRODUCTION



#### ONE HEALTH

 Human health and animal health are interdependent and bound to the health of the ecosystems in which they exist" (OIE, 2019)

- Three components:
  - Animal
  - Humans
  - Environment



#### A REVIEW OF SPACE TECHNOLOGY

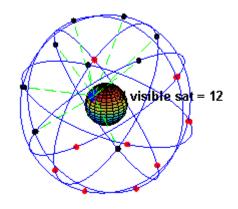


#### Three key technological domains

- Remote sensing
- Global Navigation Satellite Systems
- Satellite communications



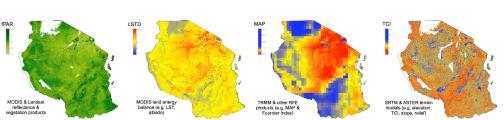




#### **TDS and SPACE TECHNOLOGY**

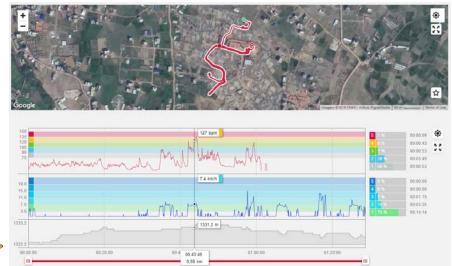
THE DONKEY SANCTUARY

- Using GPS to geotag animal welfare assessments and track movements
- Earth Observation (EO) used to gain additional data for ground points collected during survey
- Developing proxies from EO data linking people, environment and welfare









#### **CONCLUSIONS AND DISCUSSION**



- Huge potential to help understand relationships in complex situations
- Being used now for geospatial analysis of animal, human and environmental factors - integration
- Resources needed to maximise potential for future skills and sensor development
- Animal welfare needs to be part of the conversation

## Any questions?

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### Thank You

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