

ESKEN Webinar

14 September 2023

**Leveraging existing and emerging technologies for
biodiversity monitoring in land-use investments**



Agenda

1 Welcome

2 Presentation:

- **Boi Tshwene-Mauchaza** | Programme Officer, UNEP-WCMC

Panel:

- **Anne Rosenbarger** | Global Engagement Manager for Commodities and Finance, WRI
- **Ben Tregenna** | Chief Technical Officer, Pivotal
- **Leo Murphy** | Climate Asset Management, Impact Manager

3 Q&A



Speakers



**Boi Tshwene-
Mauchaza**
Programme Officer
UNEP-WCMC



Anne Rosenbarger
*Global Engagement
Manager for
Commodities and
Finance*
WRI

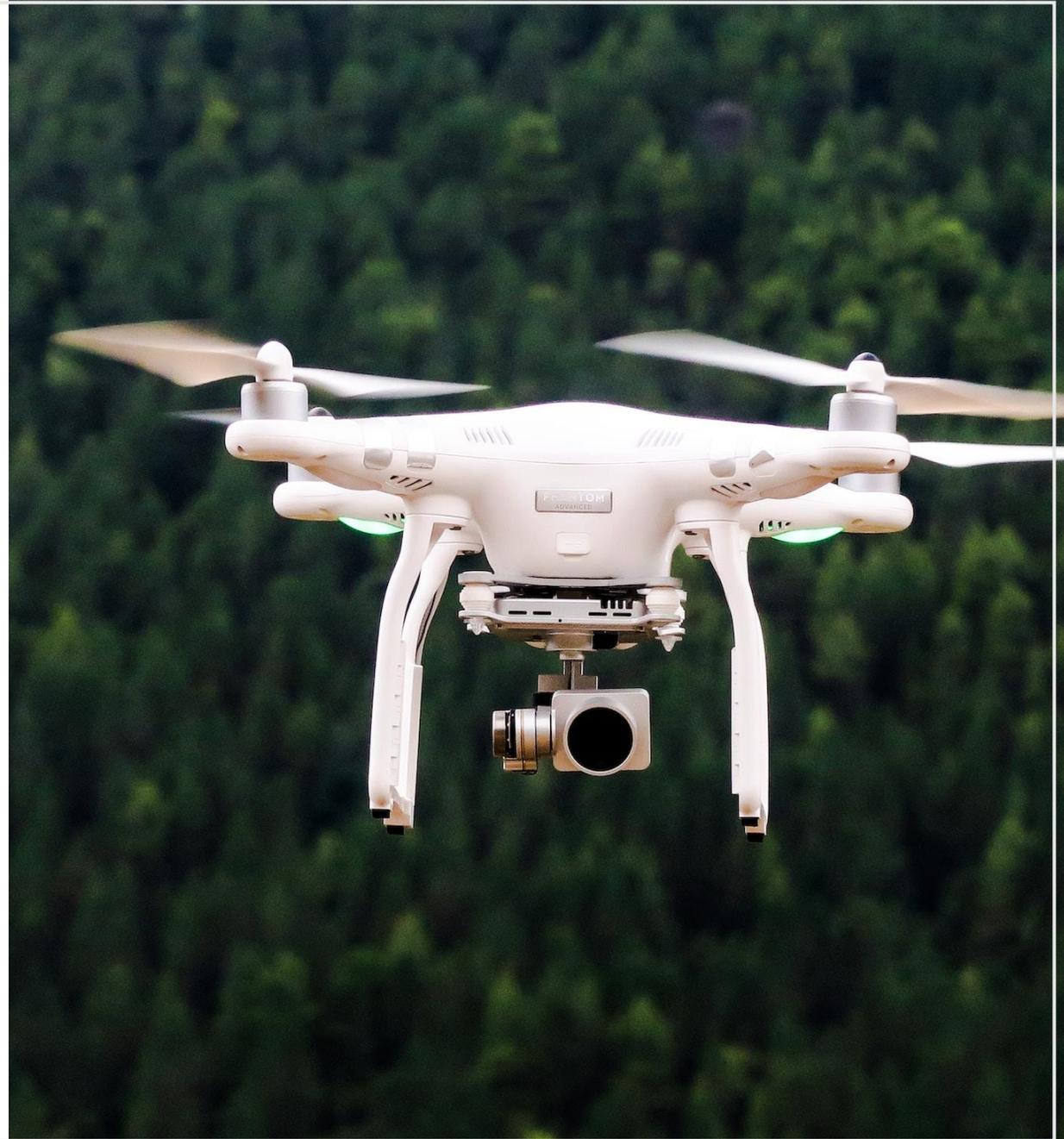


Ben Tregenna
Chief Technical Officer
Pivotal

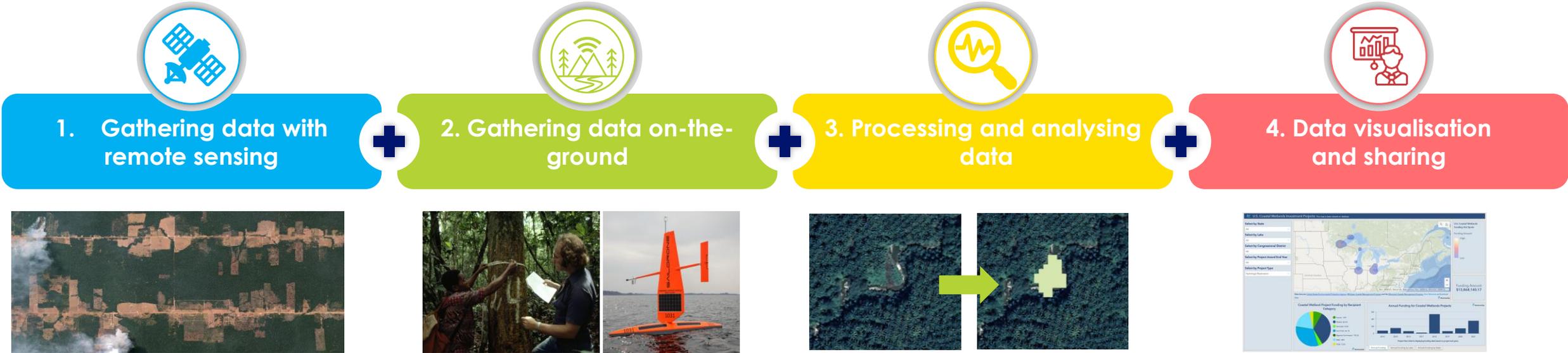


Leo Murphy
Impact Manager
Climate Asset
Management

SETTING THE SCENE: STATUS AND TRENDS IN BIODIVERSITY MONITORING TECHNOLOGIES



THE 'DATA VALUE CHAIN' FROM DATA COLLECTION TO SHARING



FOR EACH STEP, NEW TECHNICAL DEVELOPMENTS ARE CHANGING THE GAME

Step	Key developments
1 Remote sensing 	<ul style="list-style-type: none"> a Satellite remote sensing: increasing spatial, temporal, and spectral resolution of satellites support refinement of existing impacts, and opportunities for measuring new impacts.
2 Gathering data on-the-ground 	<ul style="list-style-type: none"> a Terrestrial (sensor) data: networks of sensors can contribute to more automated and standardised monitoring of species and habitats, although traditional observer-based methods will still be needed. b eDNA/genomics: the use of eDNA makes biodiversity surveys and nature mapping cheaper, easier, and more comprehensive although not all species can be mapped using eDNA.* c Citizen science: the impact of citizen science could massively increase due to the use of mobile applications and increased public interest, although data inconsistencies and bias will always remain.
3 Processing and analysing data 	<ul style="list-style-type: none"> a Data processing: less time and effort is needed for data filtering, processing and storing (i.e. due to increased processing power, cloud storage); and aggregation and integration of nature and climate datasets is becoming easier b Integration of nature/ climate data with supply chain data: integrating asset and supply chain data (collected using both remote sensing and observational data) is technically feasible and could have great impacts on reporting and accounting c Data analysis: applications and importance of Artificial Intelligence for processing and analysing nature & climate data are increasing, as the amount of 'raw data' is expected to increase.
4 Data visualisation 	<ul style="list-style-type: none"> a Data visualisation and sharing: private parties are accelerating a shift from directly selling unprocessed data, to selling analysed information, which can be used by everyone (less expertise is needed) and anywhere (accessible via a laptop with internet).

6 *Environmental DNA (eDNA) is not a 'silver bullet'. eDNA can only be used to identify species after genotyping technologies have already identified the 'barcodes' of these species.

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Panel Discussion

