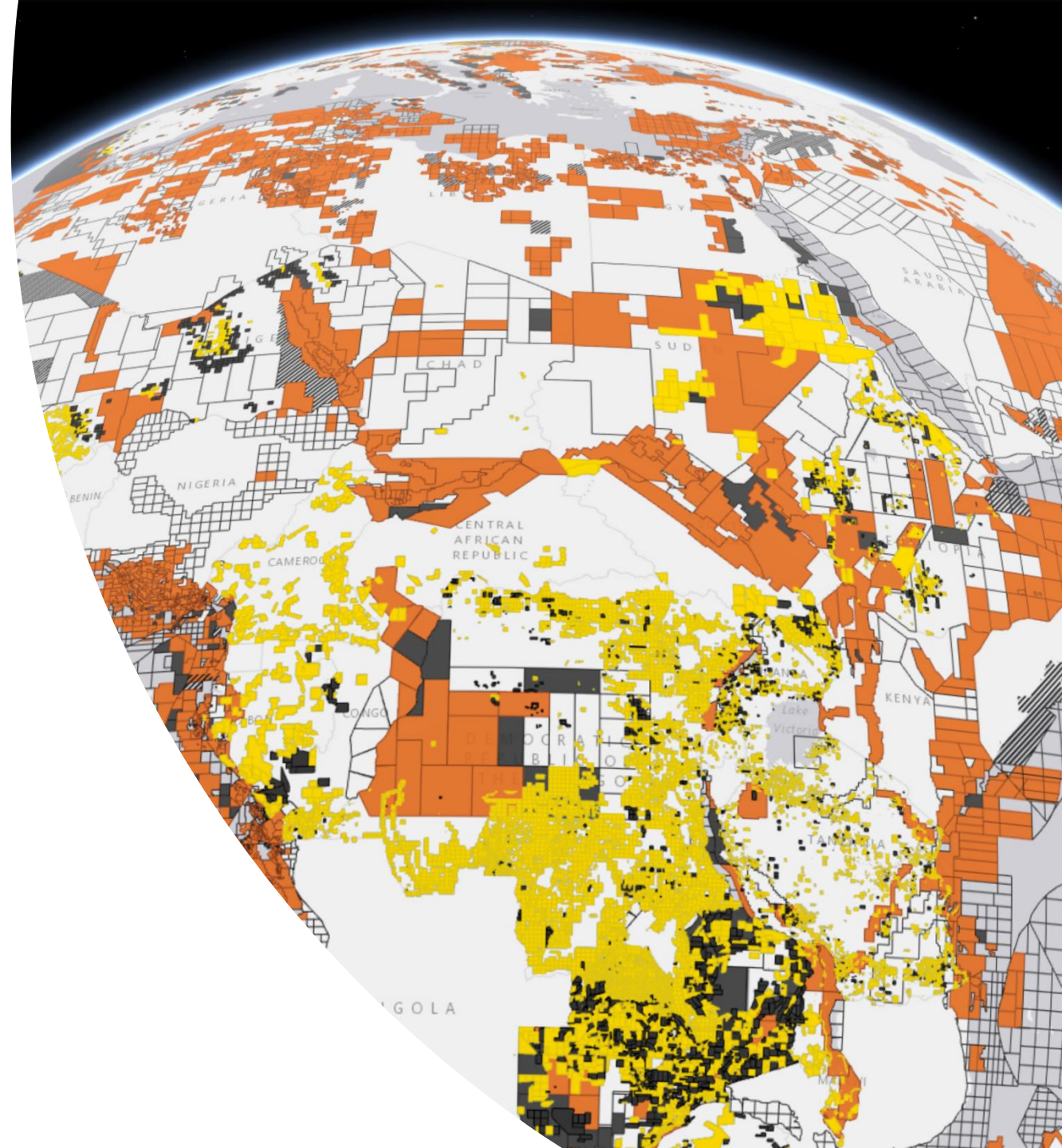




EXPLORING GEOSPATIAL ESG

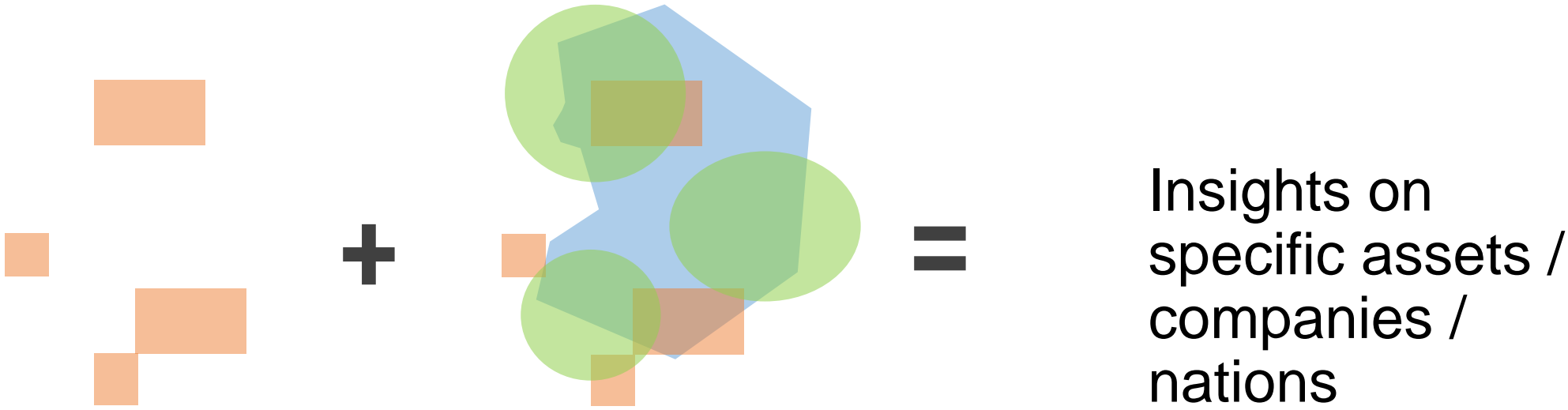
wwf-sight.org
David Patterson



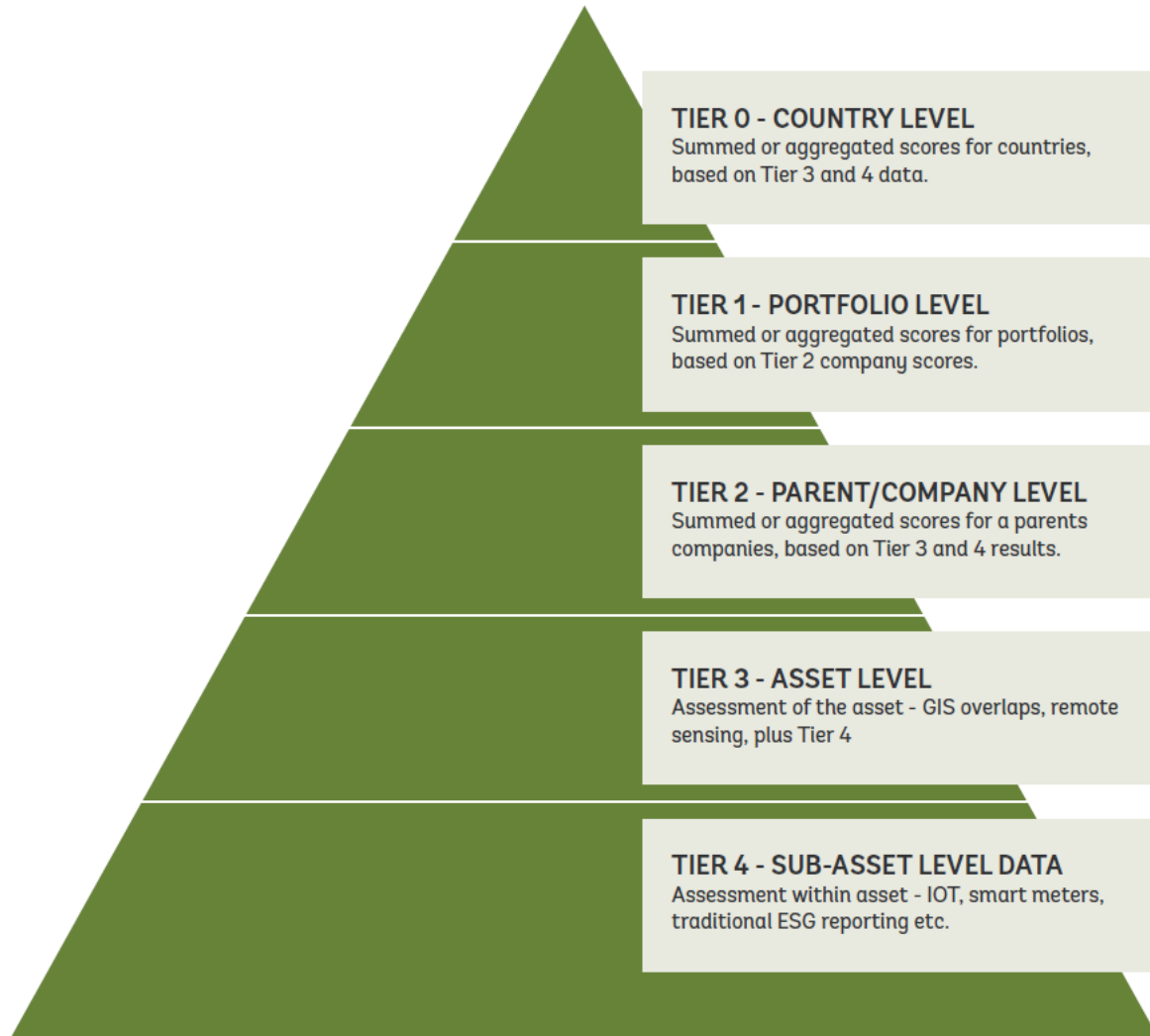
- Corporate Sustainability Reporting
 - Self Reporting
 - Regulation Reporting
- Web scrapping (NLP)
- Biodiversity Footprint Modelling / Company Financials
- Geospatial Insights / Earth Observation

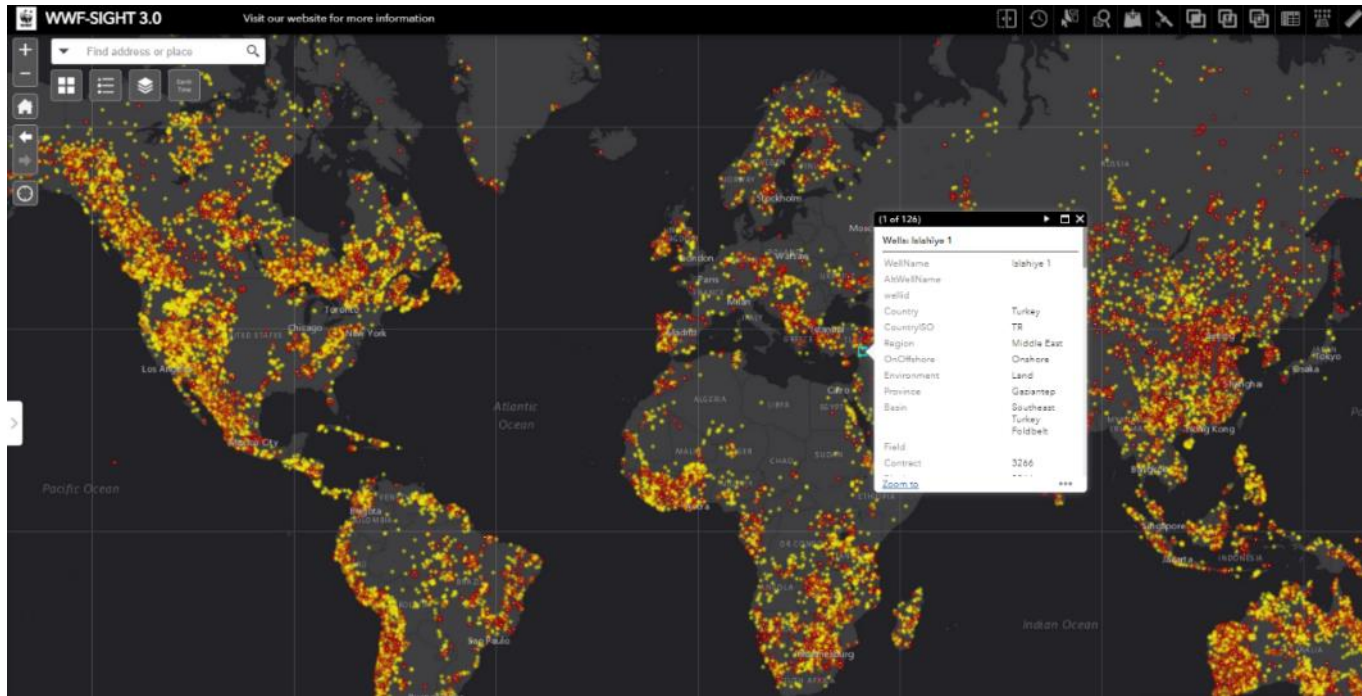
- Or All the Above

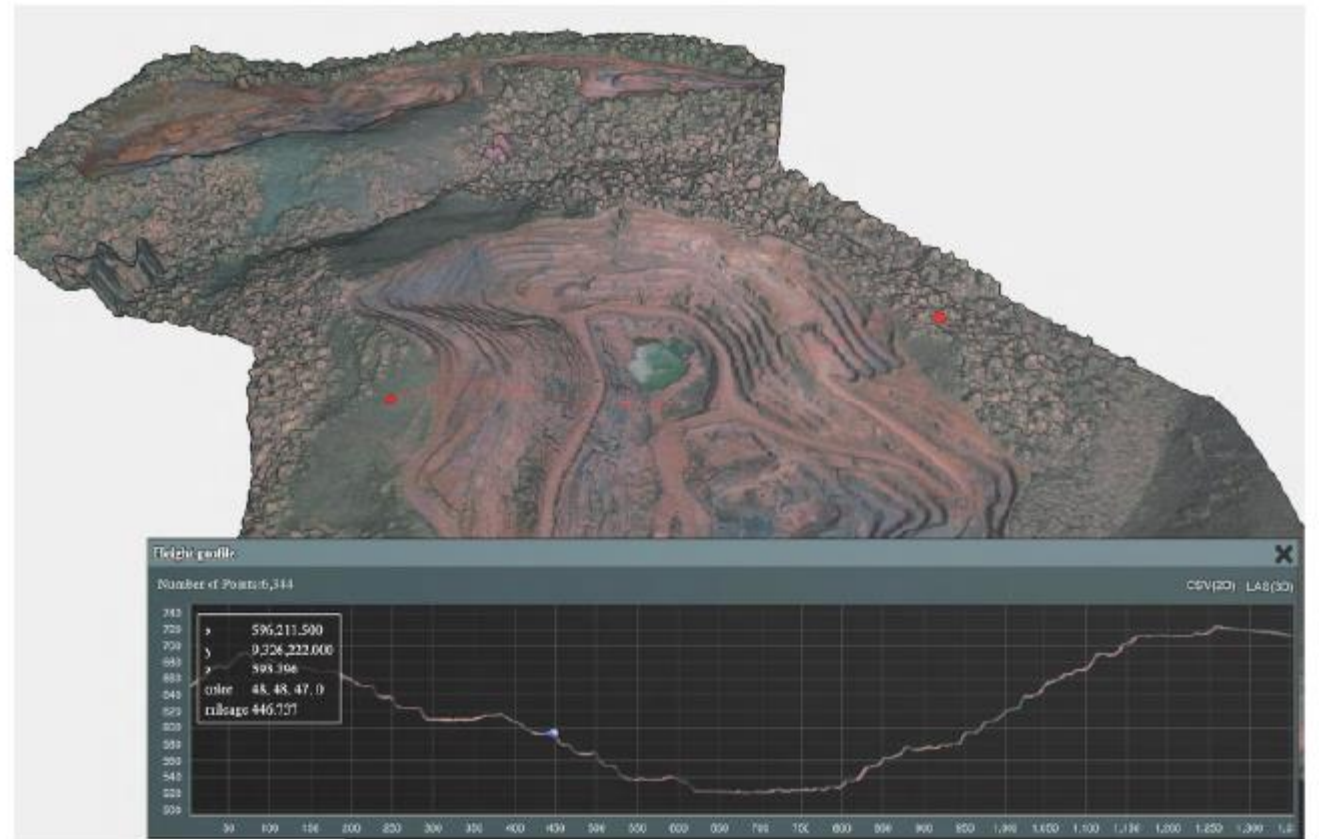
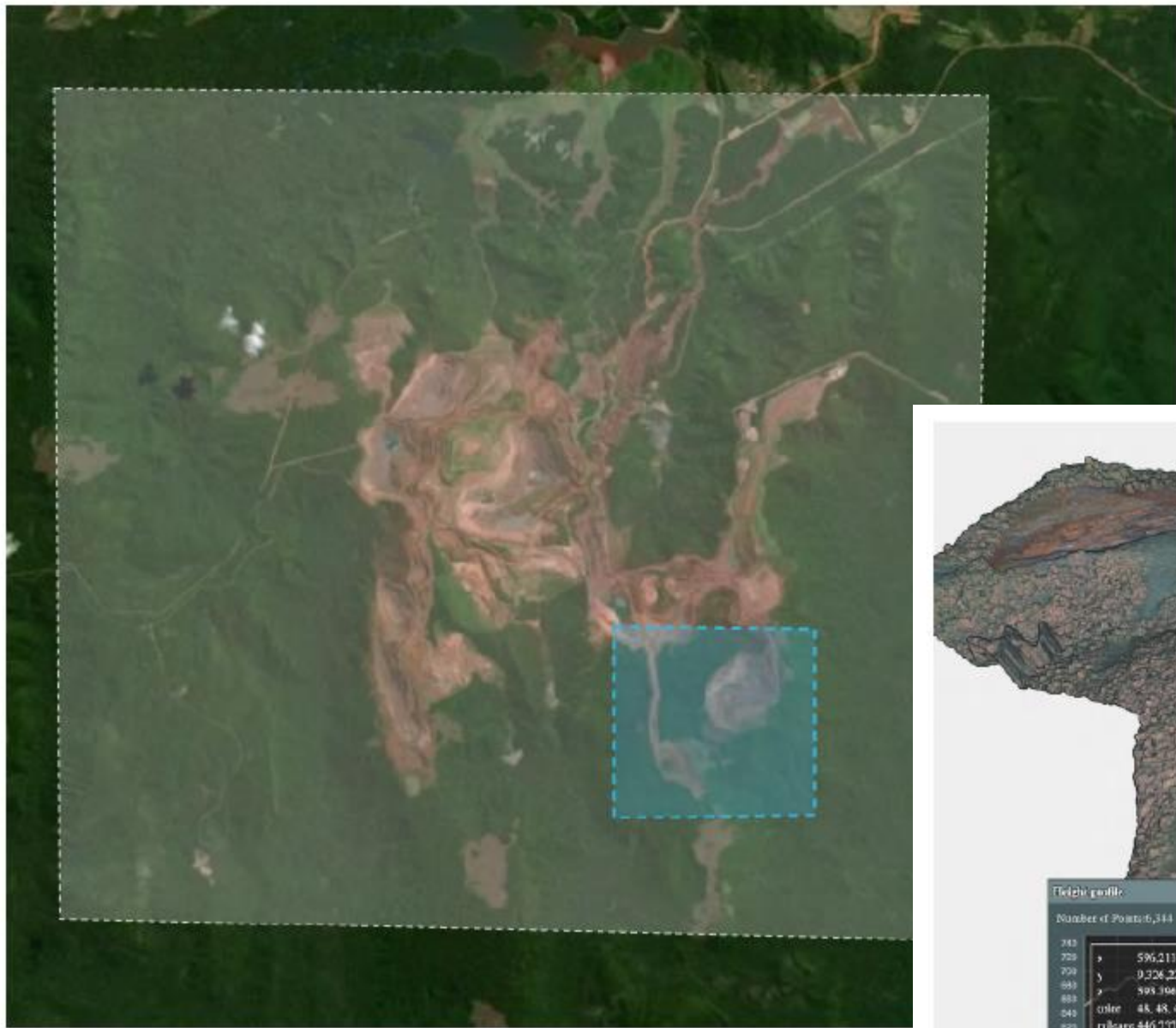
What is the geospatial ESG approach?

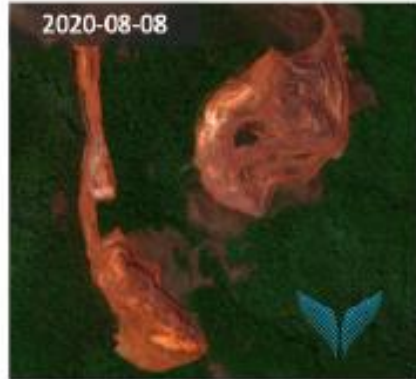


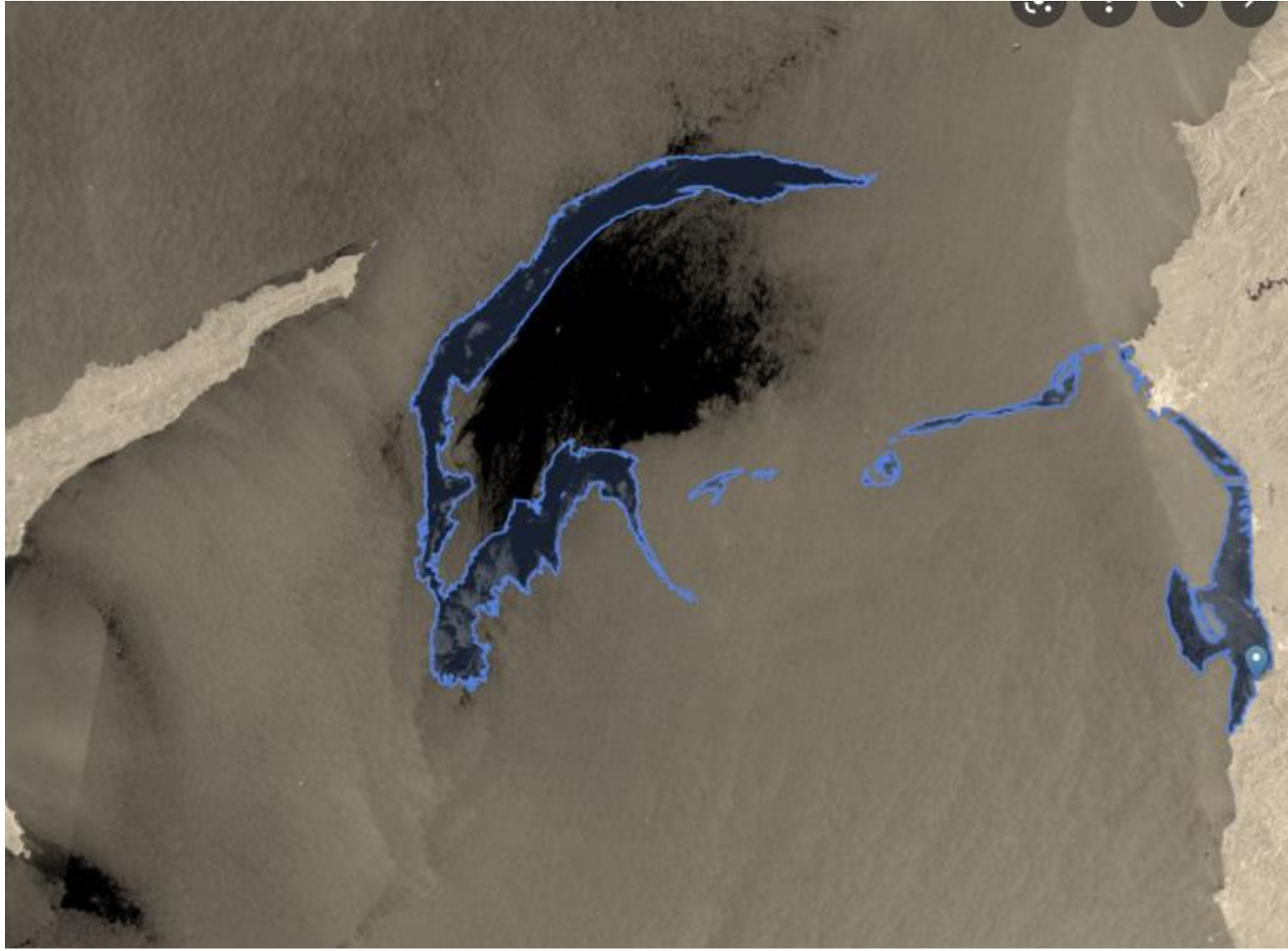
Asset/s + Observation/s = Information







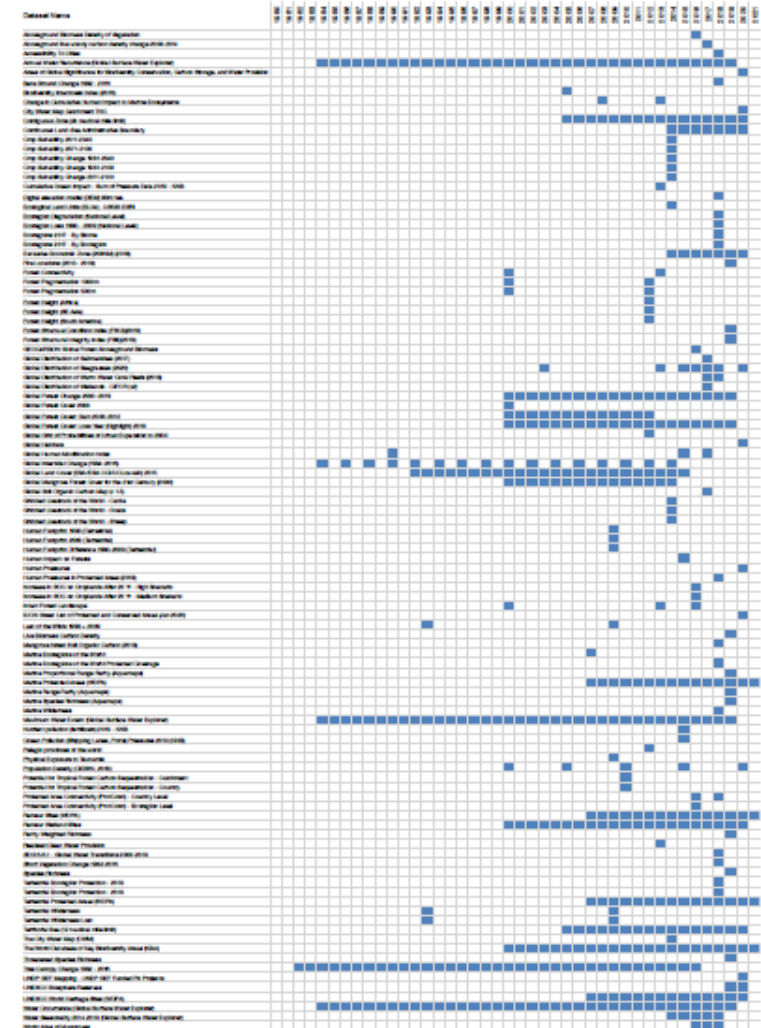




Mine Name	Aurizona	Capanema	Northern System
Ecoregion	Mangroves	Tropical & Subtropical Grasslands, Savannas & Shrublands	Tropical & Subtropical Moist Broadleaf Forests
Biodiversity Intactness Index (Mean Score)	0.94	0.66	0.73
Ground Carbon (Mean Score)	9650	8700	0
Forest Loss 2019 (km ²)	0.99	0.0026	0.0215
Forest Structural Condition Index (FSCI) (Mean Score)	No Data	No Data	1.26
Forest Structural Integrity Index (FSII) (Mean Score)	No Data	No Data	0.12
Protected Areas (Area Overlap – km ²)	6.28 ⁵⁷	3.13	3.14
Key Biodiversity Areas (Area Overlap km ²)	3.14	3.14	3.14

Data Issues:

- Asset data and supply chain data
- Property boundaries
- Entity matching
- Temporal consistency
- Spatial resolution
- Accuracy
- Data interdependencies
- Relevancy
- Challenges of ‘biodiversity’



Moving Forward on 'Biodiversity'

1. Ex-situ 'biodiversity' data challenge

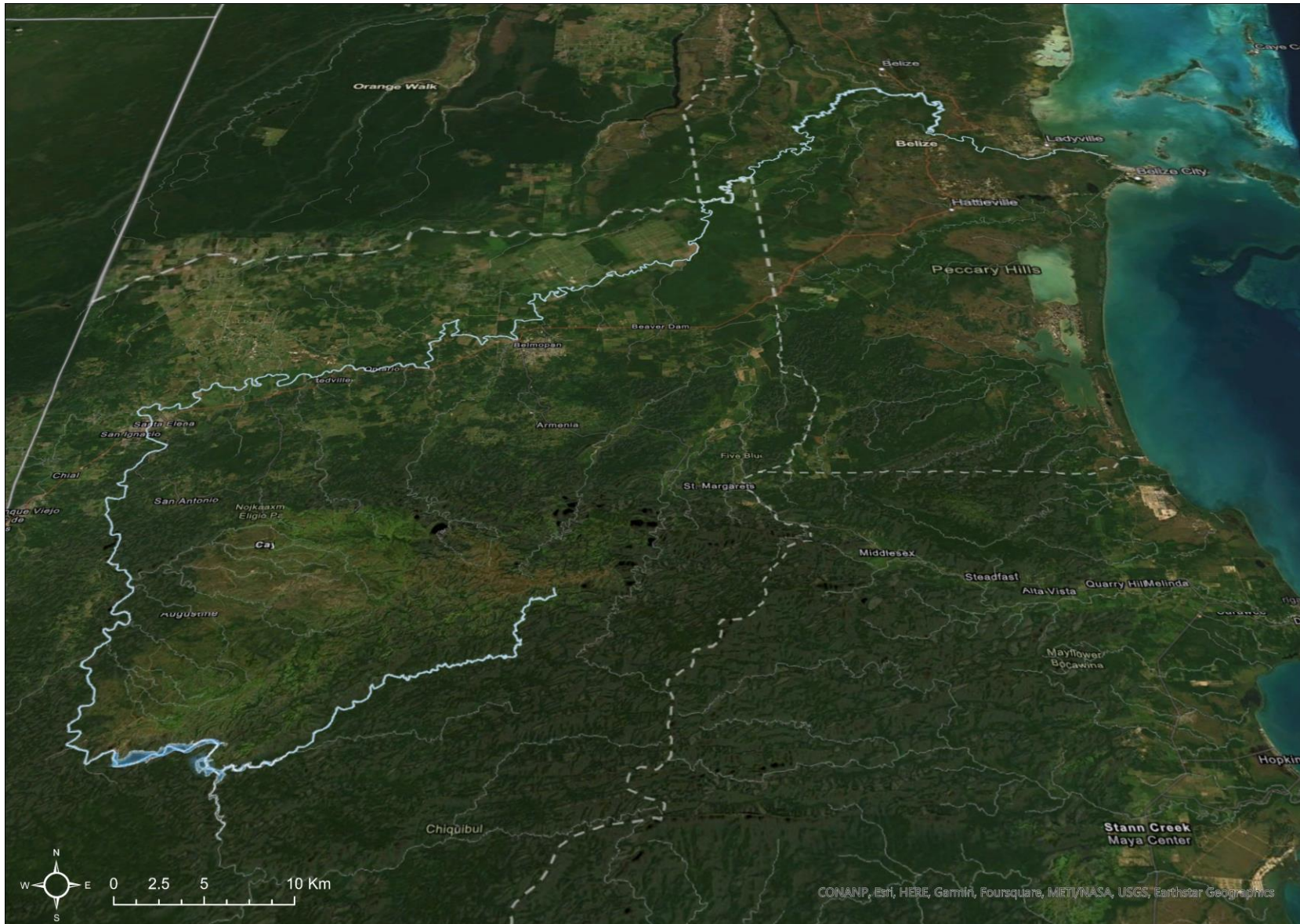
How to define, then quantify, ecosystem and biodiversity impact?
Environmental impacts as proxies

2. The realities of asset and supply chain data

Where are we going to get it from and update it?
Supply chains importance

3. The need for standards + public data infrastructure


1. Biodiversity






Regional Indicators
(Water Basins – Level 6)

e.g., relative density of mercury river barges

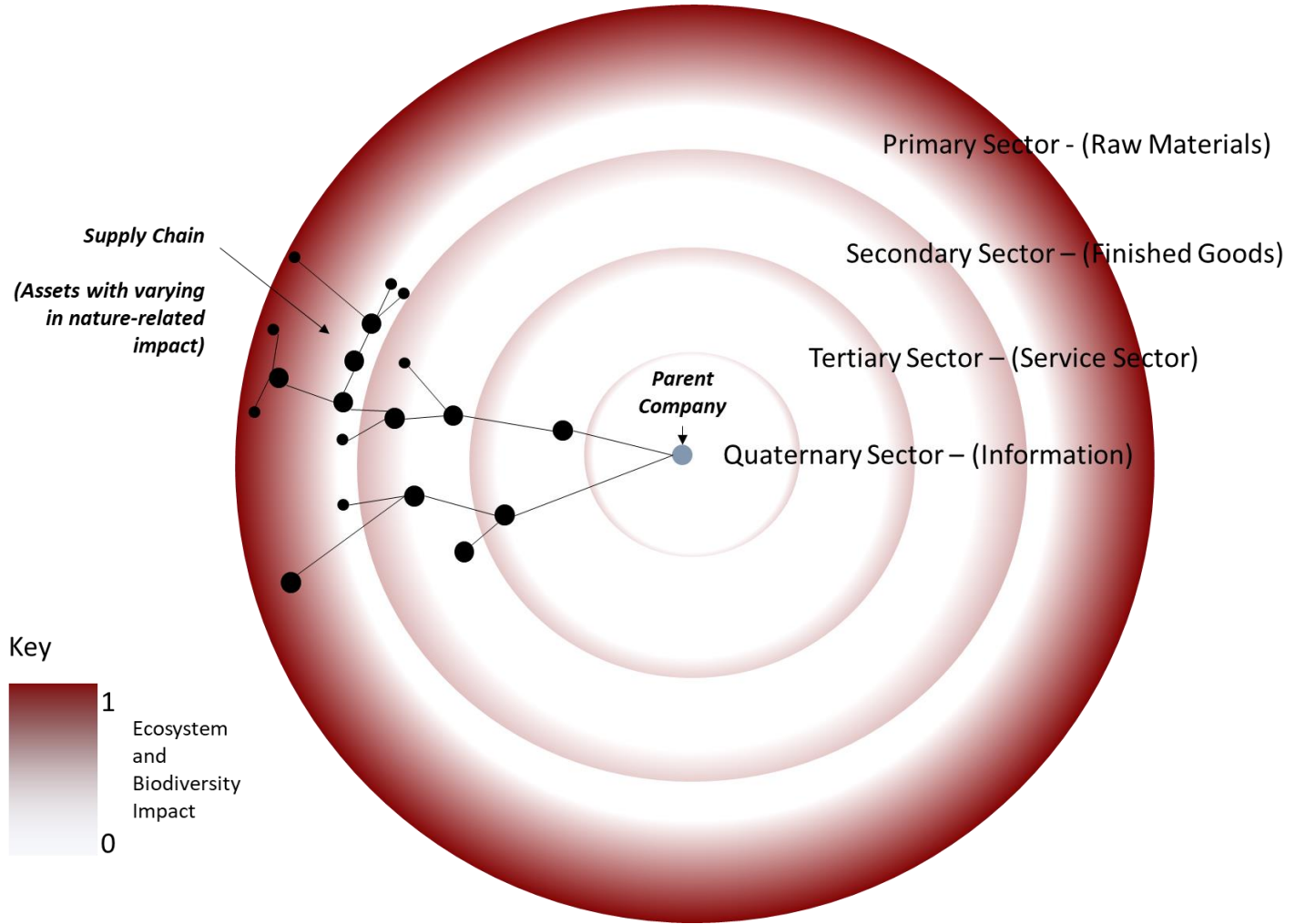


Global Indicators
(Water Basins – Level 6)

e.g., forest extent, forest condition kNVDI, river e-flow inconsistency

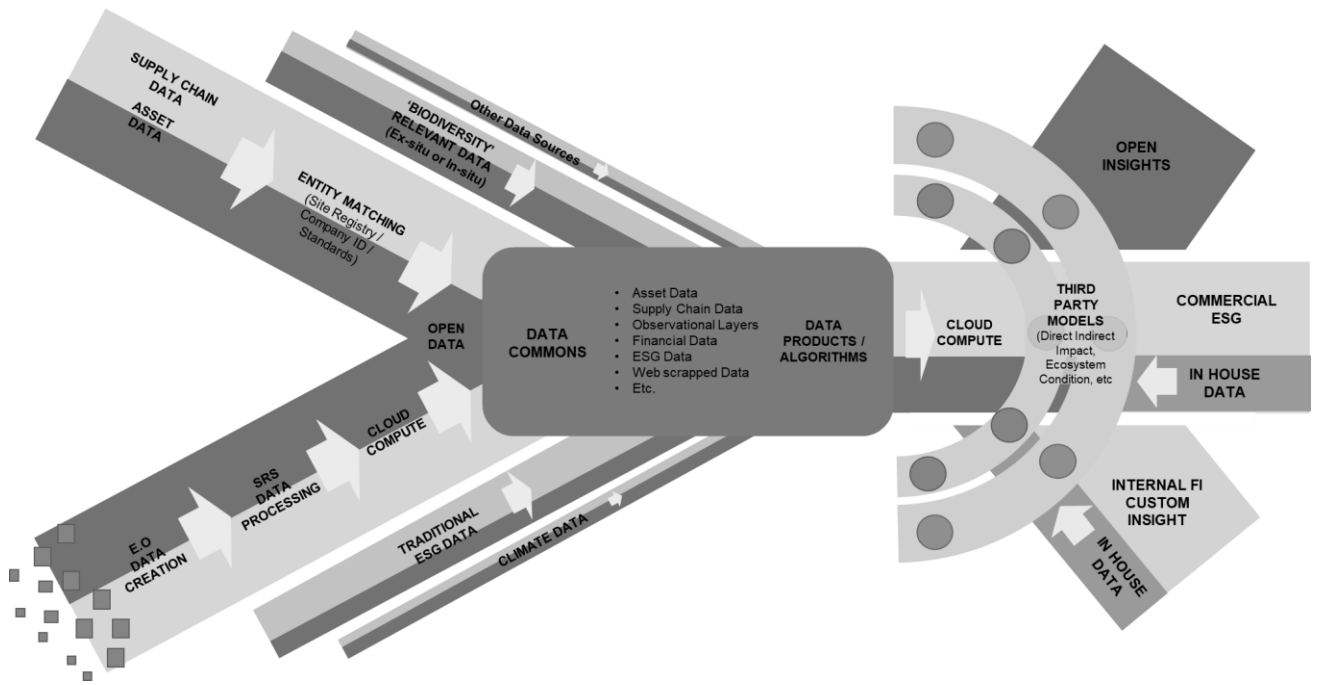
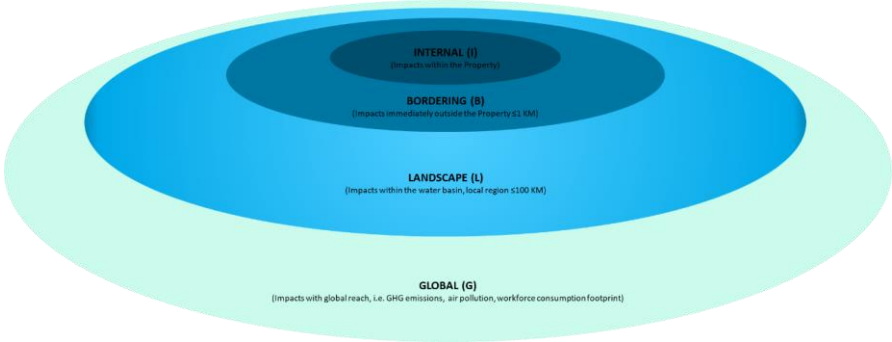



2. Asset and Supply Chain Data



How do we get better at measuring
'biodiversity' and get more asset and
supply chain data?

3. The need for standards + public data infrastructure






AVIVA INVESTORS Investec Asset Management WWF

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GEOSPATIAL ESG

THE EMERGING APPLICATION OF GEOSPATIAL DATA FOR GAINING 'ENVIRONMENTAL' INSIGHTS ON THE ASSET, CORPORATE AND SOVEREIGN LEVEL





Q&A

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