

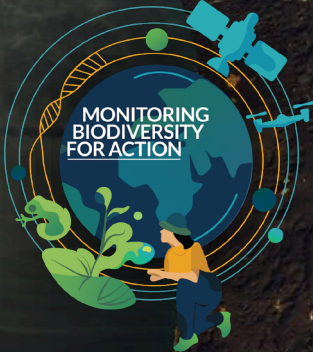
How will we know if we are bending the curve of biodiversity?

GEO BON

Andrew Gonzalez

Co-chair GEO BON

Liber Ero Chair, McGill University



Navigating to the horizon

Kunming-Montreal Global Biodiversity Framework



Monitoring framework

To ensure that we monitor the state of nature and report our progress toward the targets of the GBF.

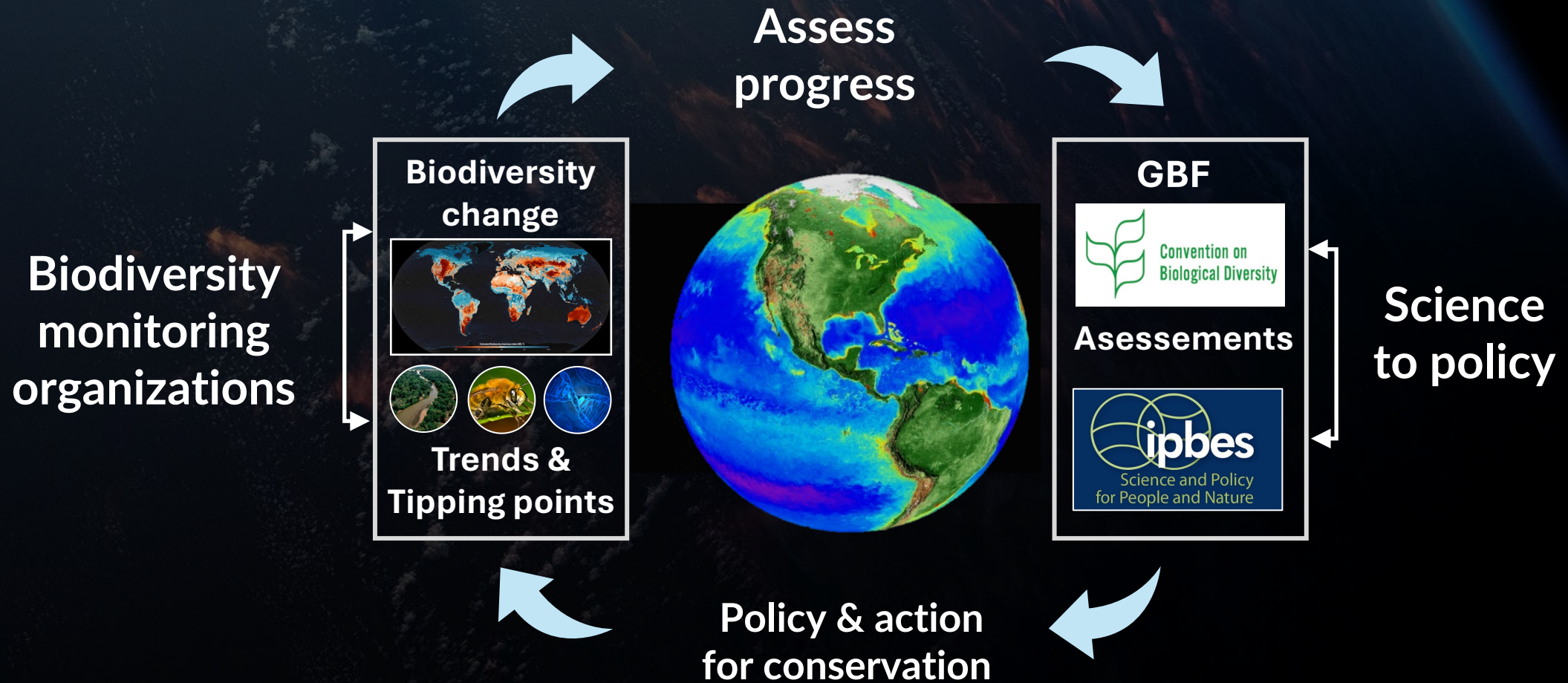


Observe



Assess and report progress

Biodiversity monitoring guiding policy and action

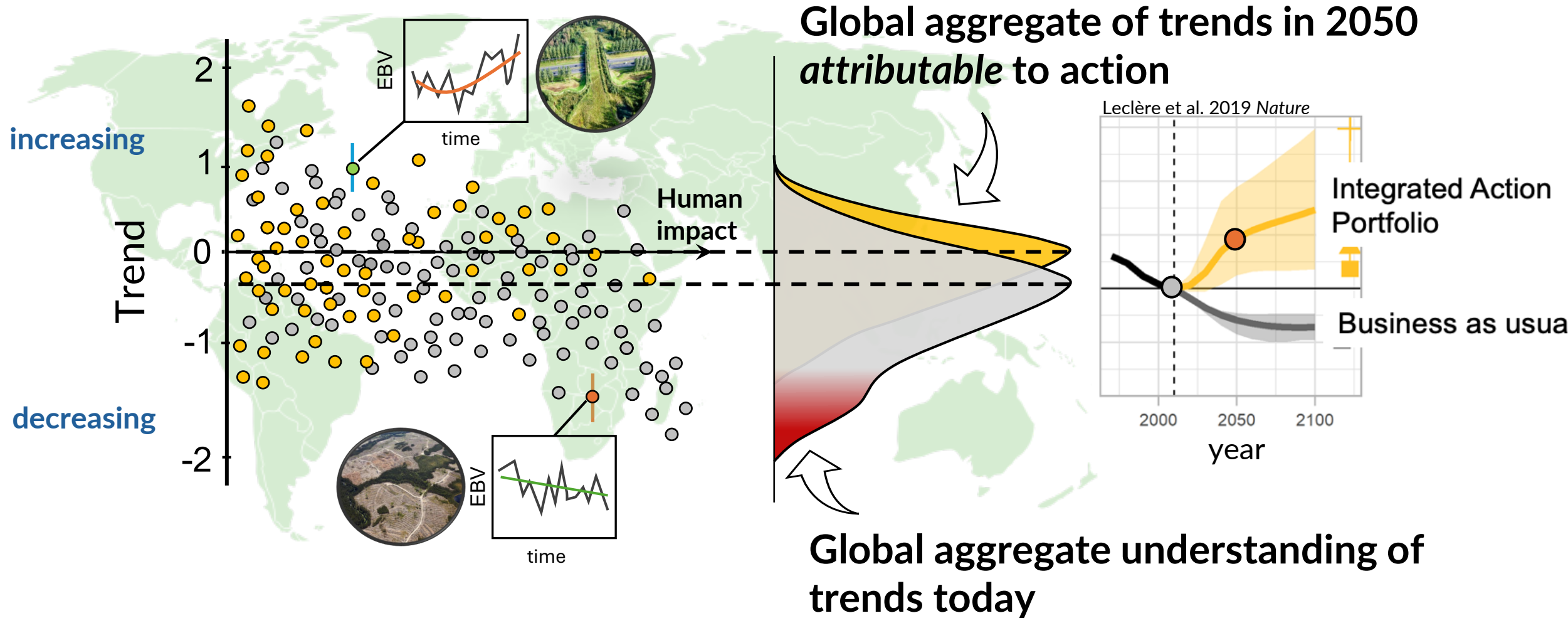


**“If you don’t know
where you’re going,
you’re likely to end
up somewhere else.”**

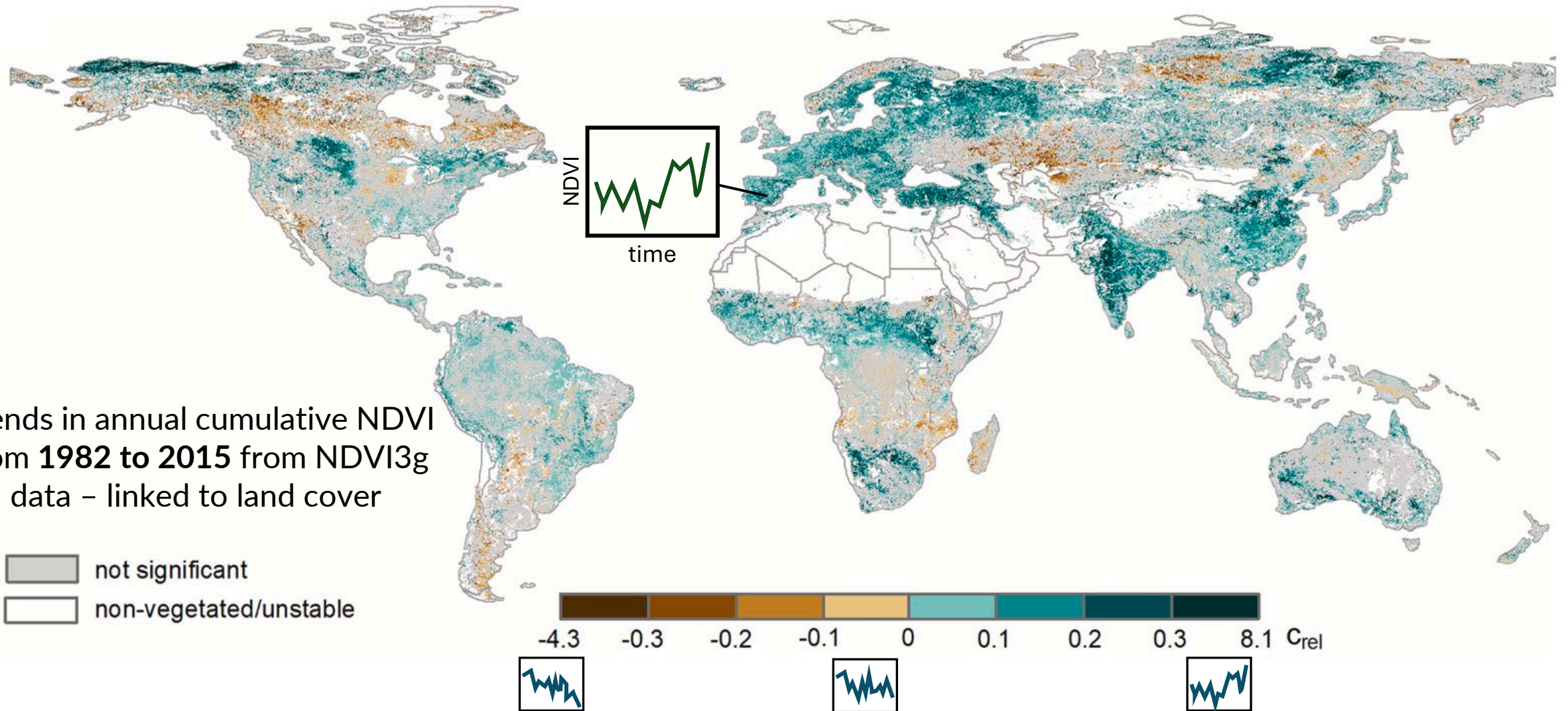
attributed to Yogi Berra



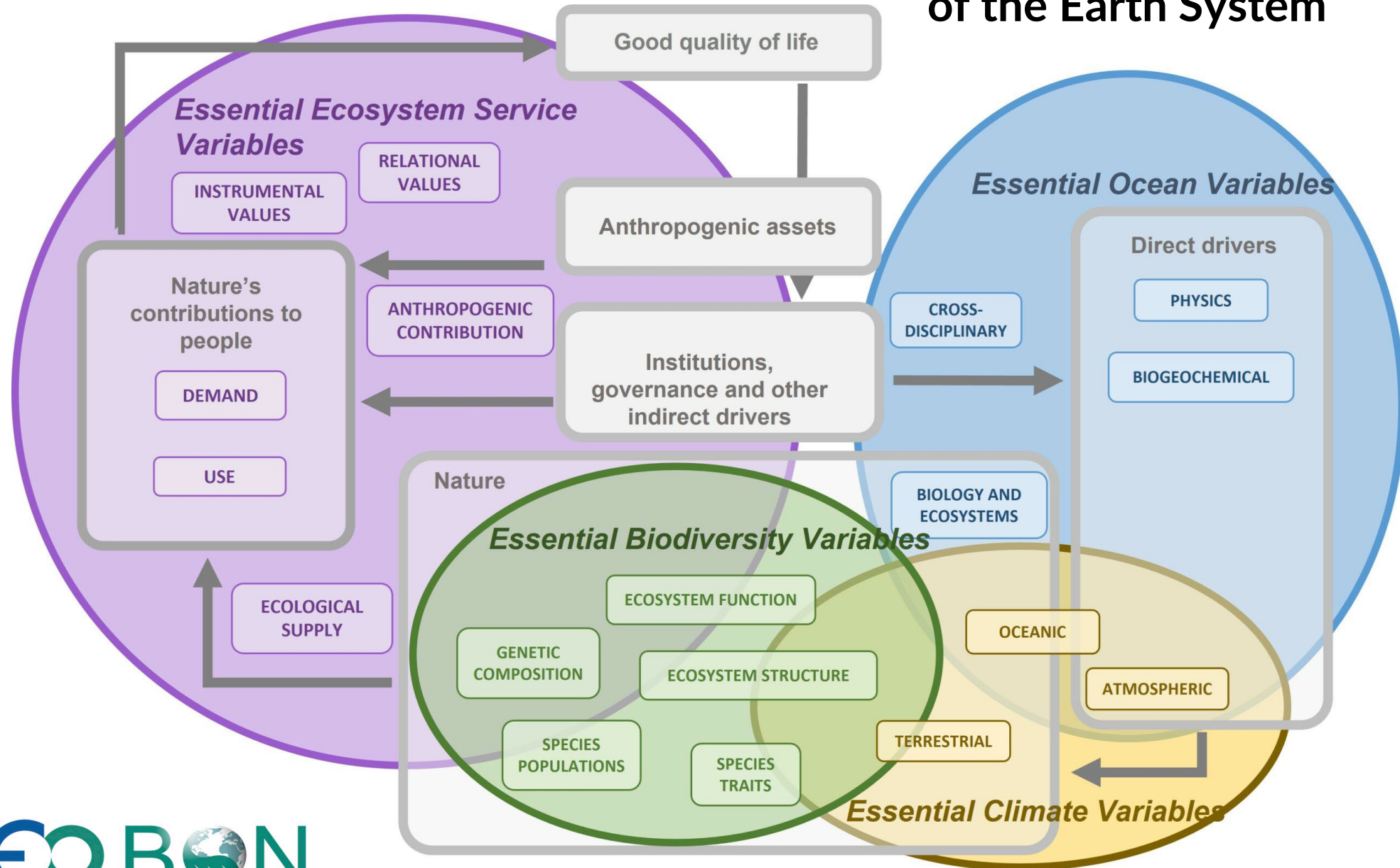
What we must know if we are to bend the curve of biodiversity



Inferring the spatio-temporal patterns of NDVI trends



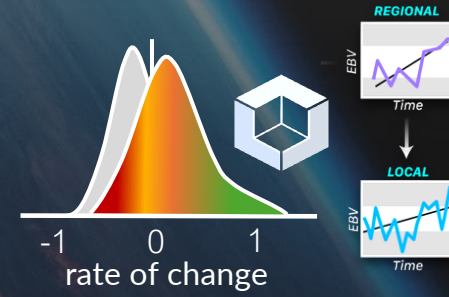
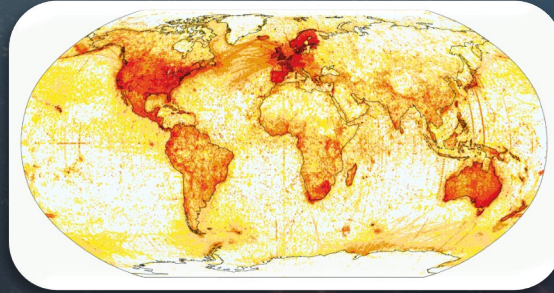
Bridging the Essential Variables of the Earth System





A globally federated network of biodiversity observation networks to transform our collective capacity to monitor national and global trends in biodiversity

Global Biodiversity Observing System - GBIOS



Earth Observations by BONs across the globe

International access to processed observations

EBV datasets, forecasting, EW & other data products



A Global Biodiversity Observing System



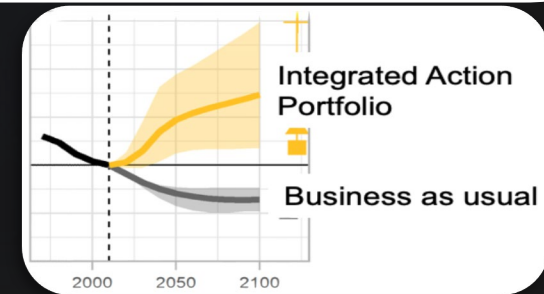
Effective policy and action

Delivery of indicators for reporting

Global biodiversity models & scenarios



Convention on Biological Diversity



Biodiversity Intactness Indicator



**GEO BON
STAC Viewer**

Explore layers available in the BON in a
Box STAC catalog

Collection

Biodiversity Intactness Ind... ▾

Variable

Biodiversity Intactness Ind... ▾

SQRT transform?



Nature's Contributions to People



GEO BON
STAC Viewer

Explore layers available in the BON in a
Box STAC catalog

Collection

Nature's Contribution to P... ▾

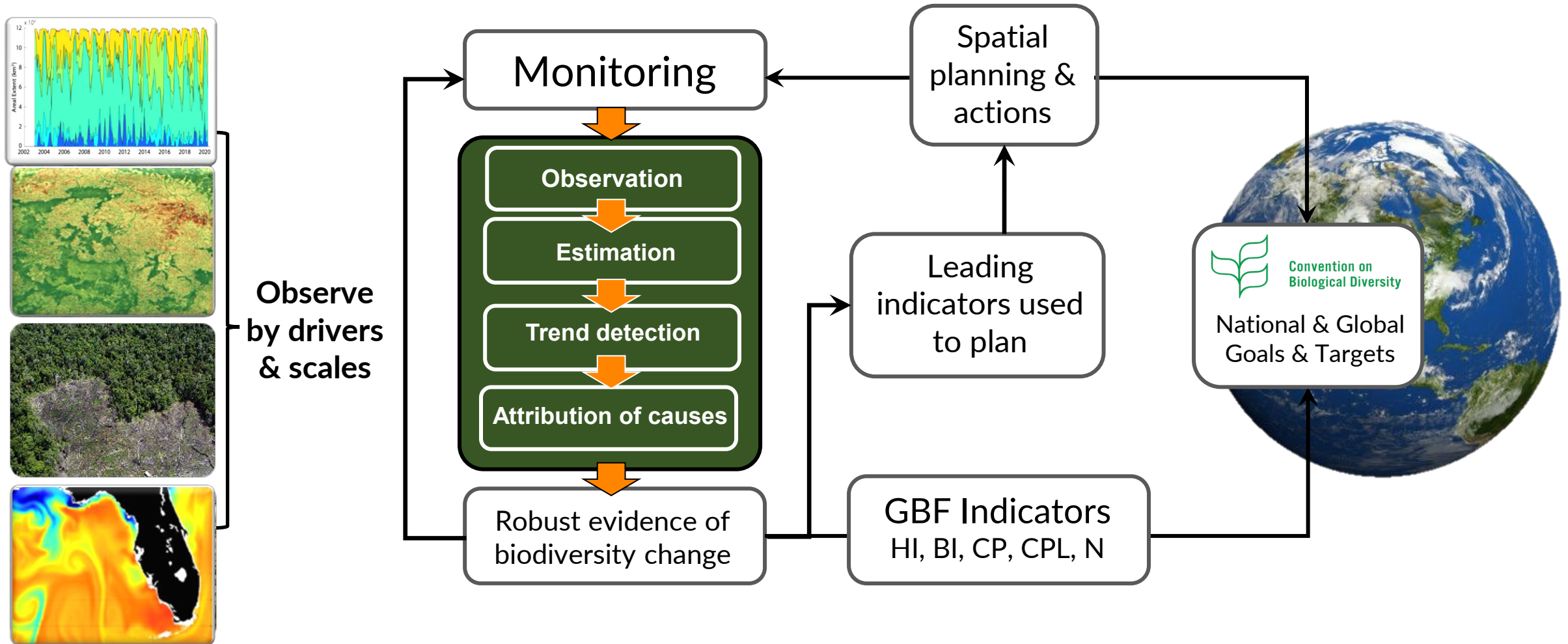
Variable

Global climate NCP (carb... ▾

SQRT transform?



Monitoring biodiversity to support planning and action





GEO BON

CEOS

esa



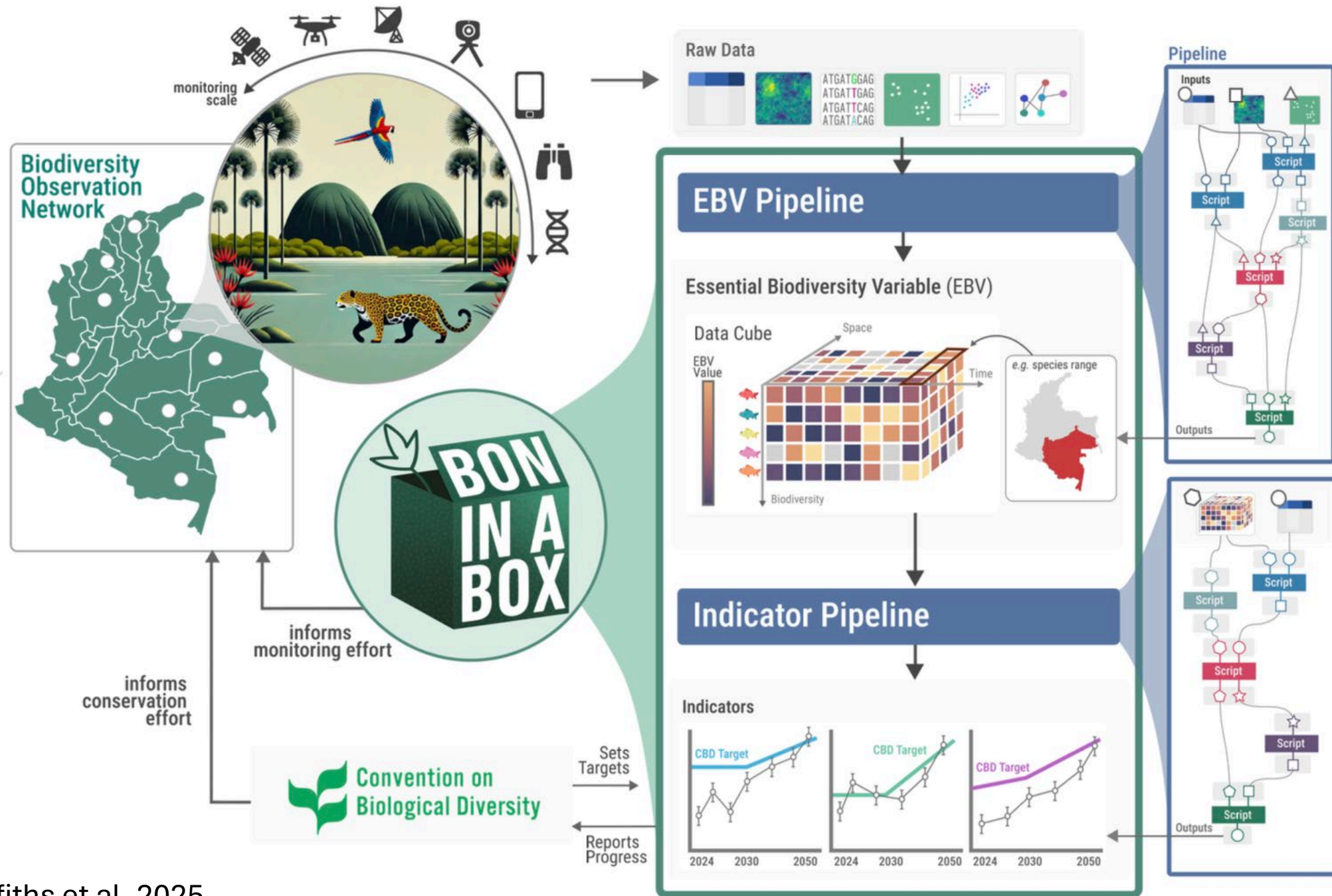
David Hockney

Thank you!

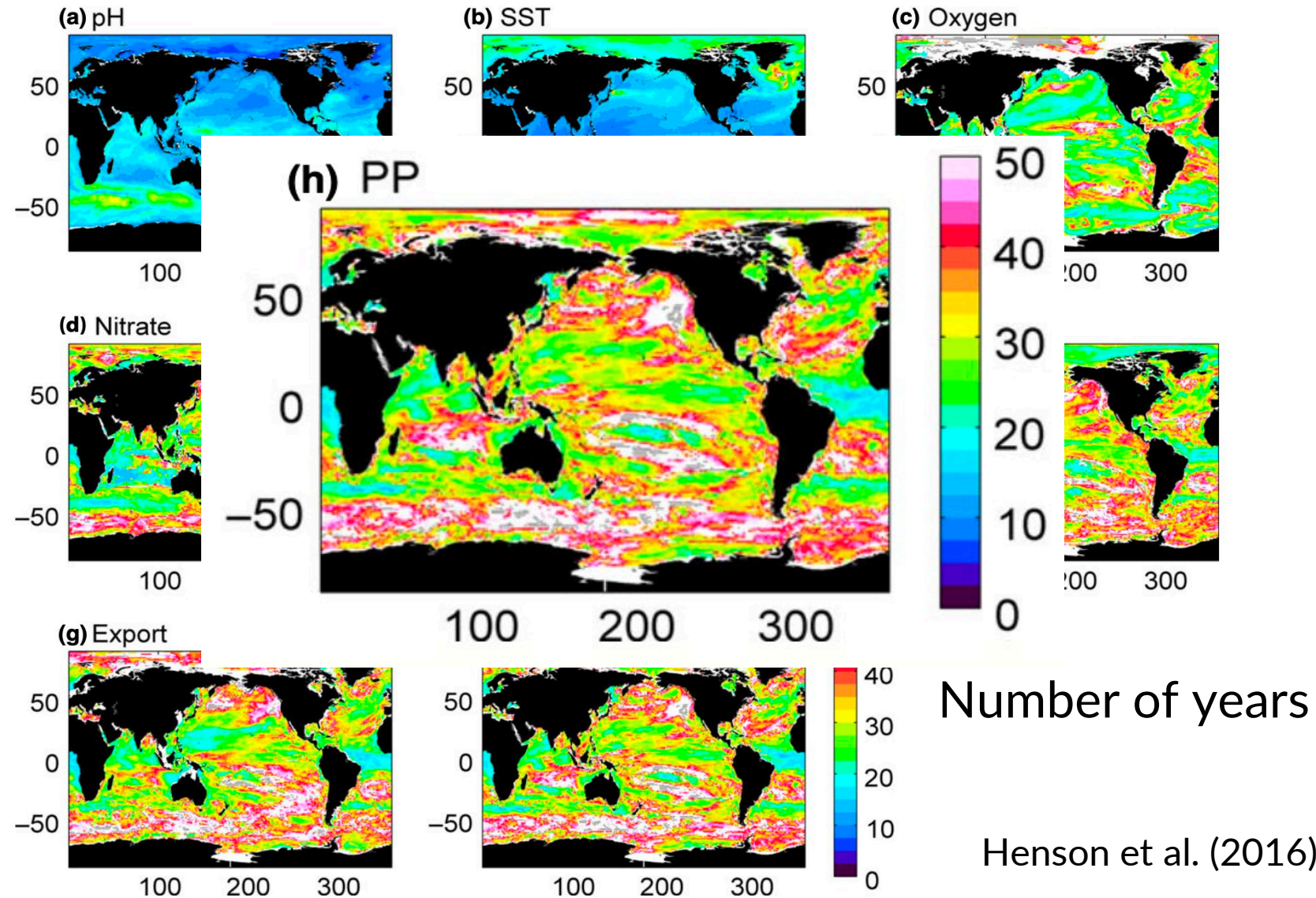
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 **McGill**
UNIVERSITY

LIBER  ERO



How many years of data are needed to distinguish a trend from natural variability?



Henson et al. (2016) GCB

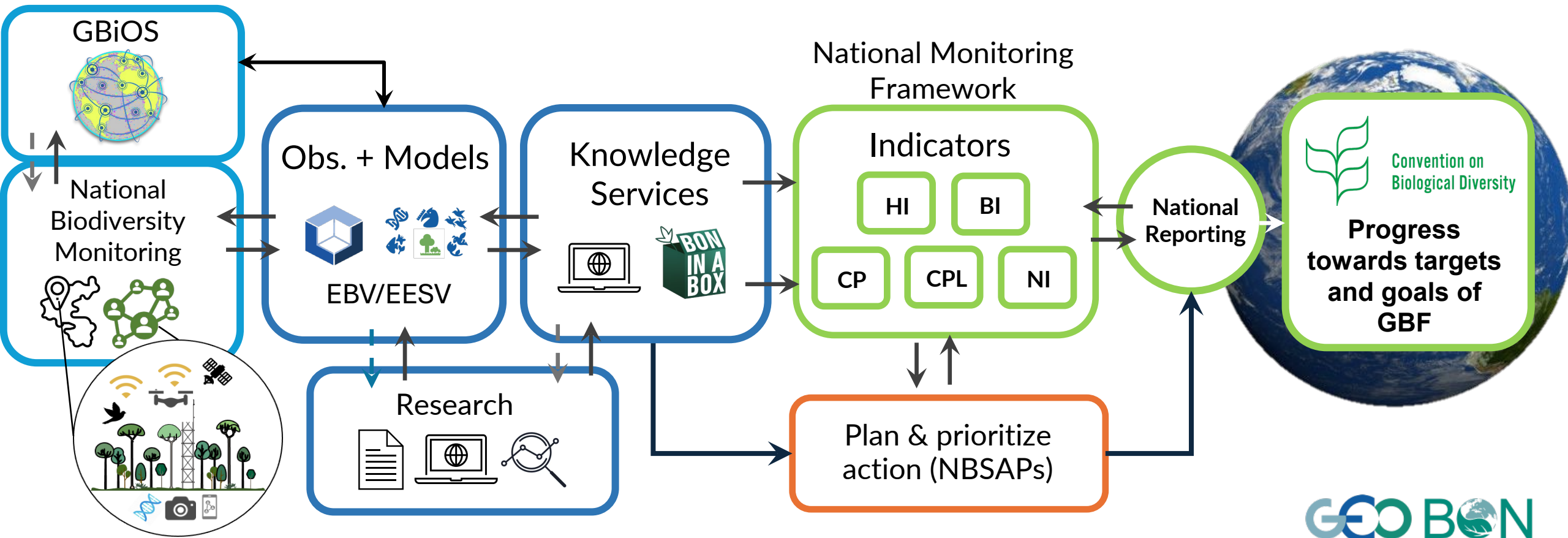
Linking national monitoring to indicators, reporting and action

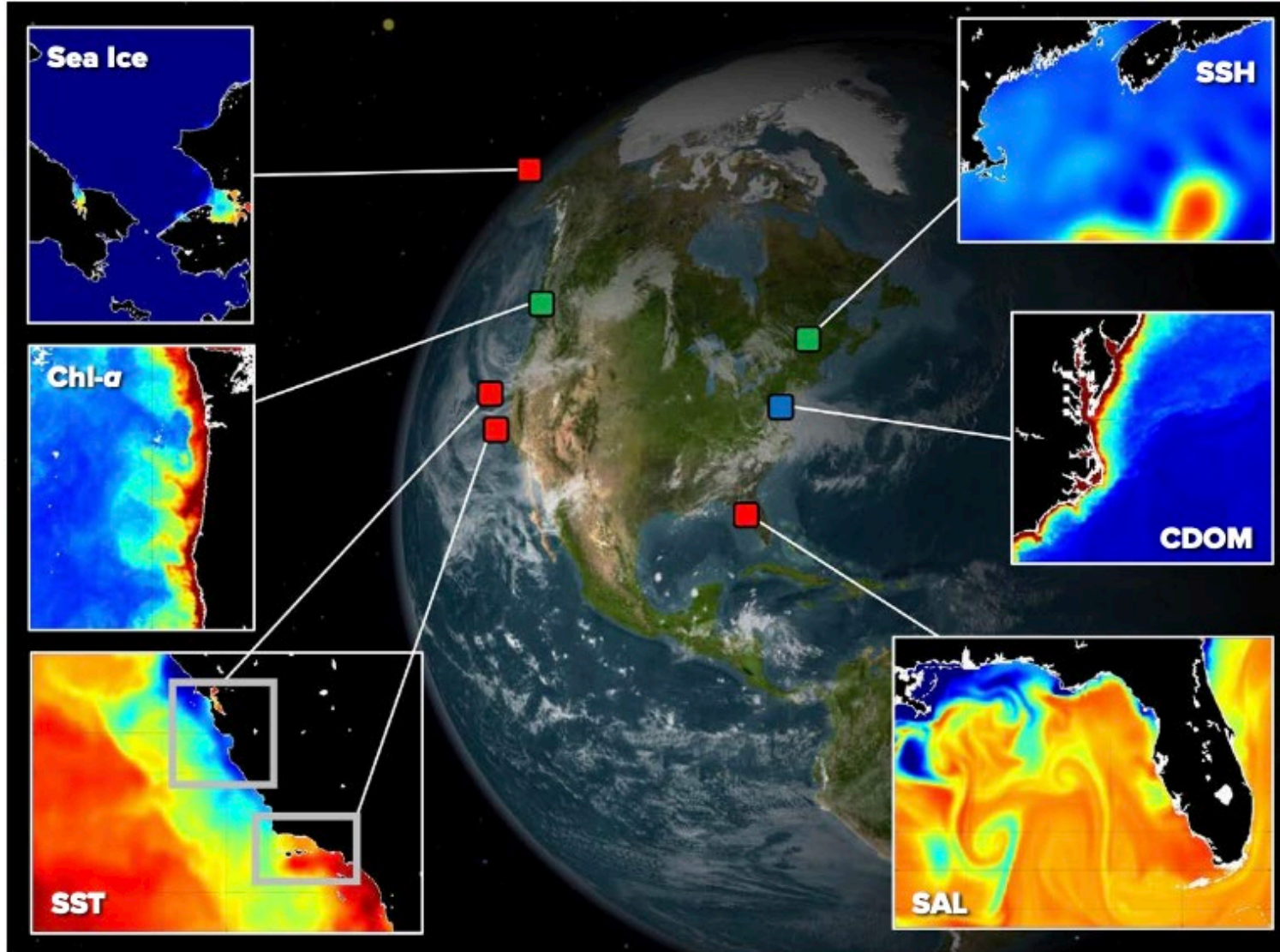
① Data production & sharing

② Monitoring science

③ Planning & prioritization

④ Reporting progress





Marine BON

1. Plankton community composition
2. Dynamic biophysical relationships to biodiversity
3. Foundation species and habitat mapping
4. SDM and habitat projections