Global Challenges:

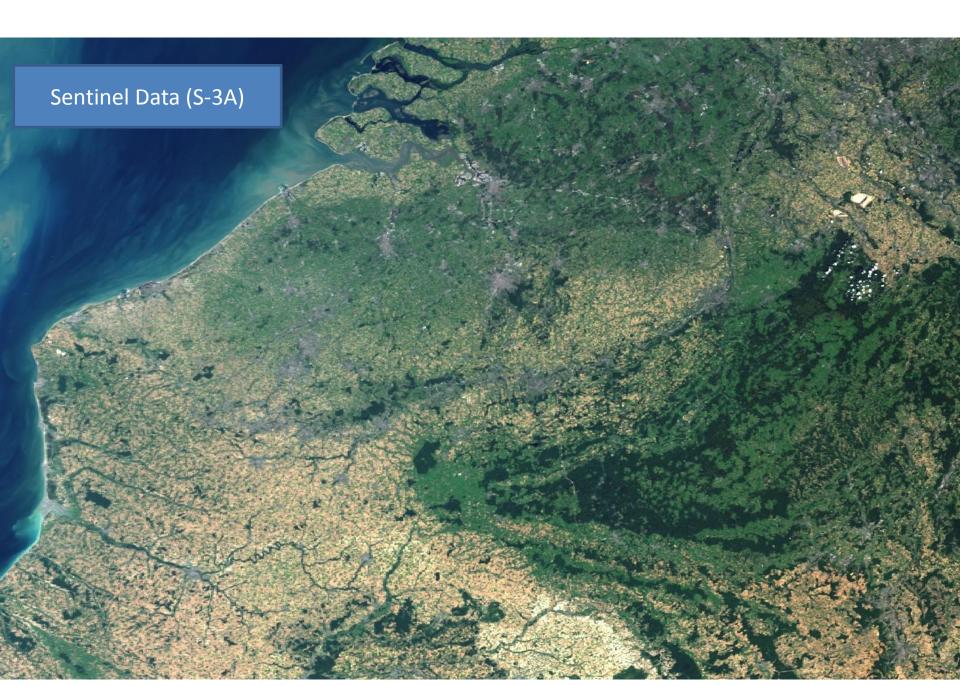**The big issues:**
Biodiversity,
Climate,
Water & Food,
Energy,
Poverty.

Climate change

Biosphere integrity

E/MSY

BII

Novel entities

?

?

Land-system change

Stratospheric ozone depletion

?

Freshwater use

Atmospheric aerosol loading

P

N

Ocean acidification

Biogeochemical flows

Beyond zone of uncertainty (high risk)
In zone of uncertainty (increasing risk)
Below boundary (safe)
Boundary not yet quantified

(Steffen et al. 2015)

We are leaving the safe operation space for humanity !

Sentinel Data (S-3A)

Fragmented
biodiversity
data via GBIF,
visualising
data gaps,
+ needs for
common data
recording
standards!

Picture © Ondřej Zicha, via EoL

Achillea millefolium

Reaching out to society!

Global Natural History collections/museums

Data from:
GRBio

für NATUR
Natur
Natur
für Natur
NATUR

**MUSEUM FÜR
NATURKUNDE
BERLIN**