P01: Land use maps

Maturity score

Mean: 2.9	**STD:** 0.34

Constraints and limitations

- Cloud presence
- Creating high-quality and diverse labelled data for land use mapping can be challenging for specific land cover classes.

Relevant user needs

UN10: Need to understand population density when making investment decisions.

UN11: Realistic assessment of accessibility to assets.

UN13: Need to geo-map clients.

UN27: Need to assess historical trends and baseline of natural assets.

UN43: Need to monitor changing precipitation patterns and flood risk in the vicinity of vulnerable assets.

UN47: Need up-to-date geospatial data on residential and industrial infrastructures' locations.

UN56: Need to detect changes in land use (at the level of individual buildings).

R&D gaps

- Available land use maps cover a partial set of interesting indicators.
- The variation of resolution and products around the world. There are coarse global products, various higher-resolution regional products, and specific urban-focused products.

Potential improvements drivers

- Add automatic urban settlement mapping that automatically delineates urban footprints.
- A data framework defining a structure of the available datasets outlining what sources should be used when and in which locations to give you an accurate picture of your area of interest.

Utilisation level review

Utilisation score

Mean: 2.71	**STD:** 0.7

No utilisation:

Low utilisation

- Existing mapping is considered good enough for many use cases.
- Higher cost of using the commercial EO product.
- The free product already satisfies the technical and usability requirements.

Medium utilisation

- Higher cost of using the best available commercial EO product.
- The product already satisfies the technical and usability requirements.
- High usability in the developed, but not likely emerging and developing economies. Certainly not the "global south."

High utilisation

Only this product satisfies the technical and usability requirements
Critical gaps related to relevant user needs
Guideline gap UN11: Realistic assessment of accessibility to assets UN56: Need to detect changes in land use (at the level of individual buildings)