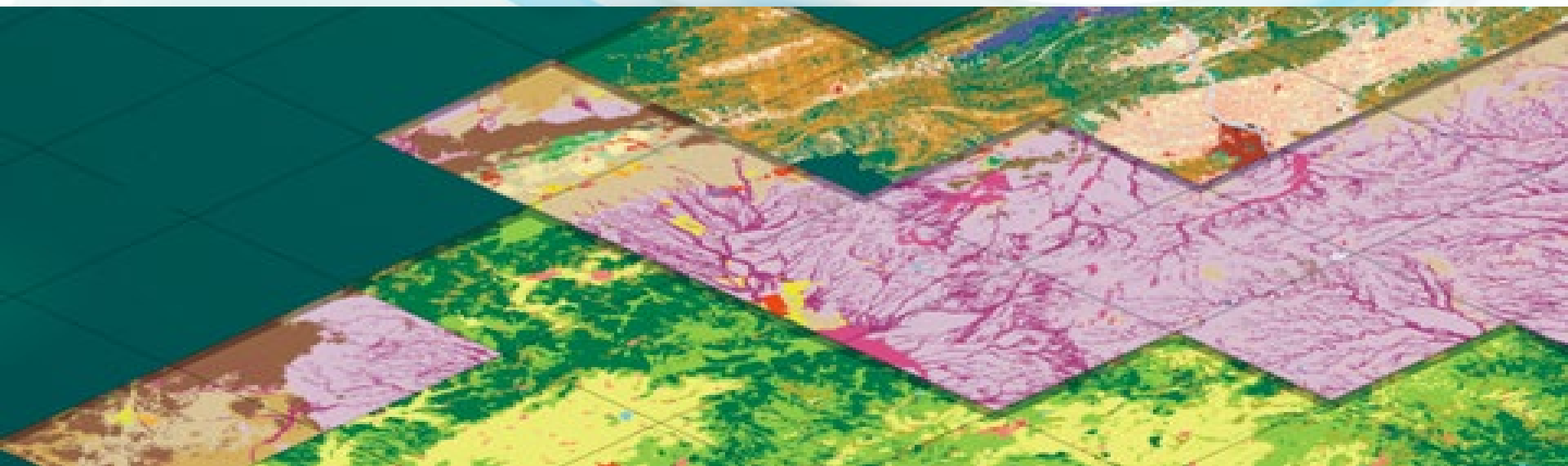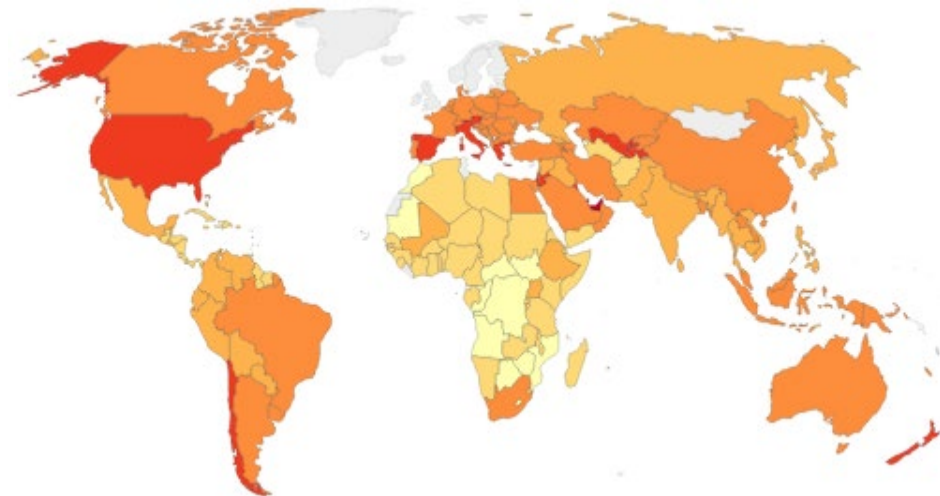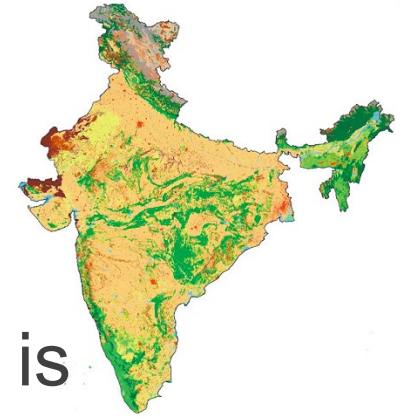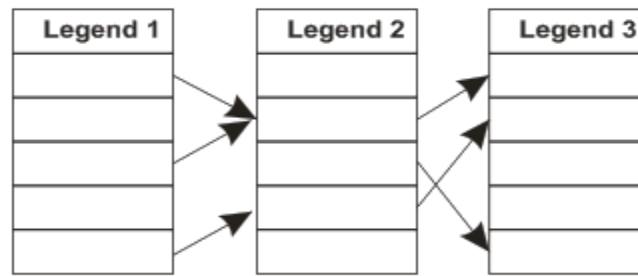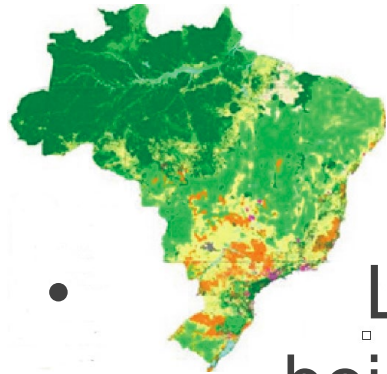# Geographic information – Classification Systems TC211 Advisory Group 13 on Land Cover Land Use

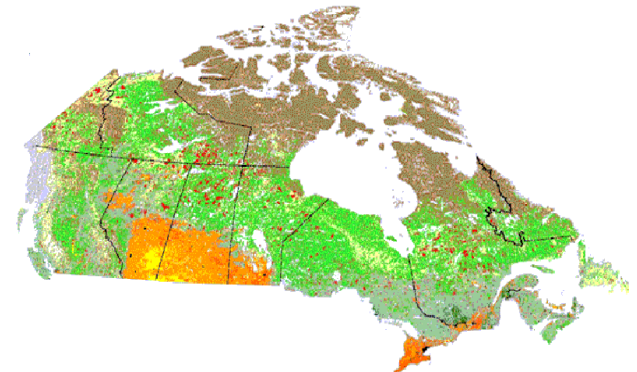C Douglas O'Brien IDON Technologies Canada

- The classification of land cover is one of the primary measures driving climate science and is critical for the estimation of world agricultural production.

- The aggregation of world data sets requires consistency in data, which is difficult to achieve.

20 August 2021

Average maize (corn) yields, Source: UN Food and Agriculture Organization (FAO)

- 　　　　　Land Cover and Land Use data is being collected now, worldwide, by many different nations and agencies to satisfy their own requirements. Massive amounts of long term data already exist using many national or regional classification schemes.

- Standards are needed so this data can be integrated.

Many of the UN SDGs are based fully or in part on Land Cover & Land Use

One of the focuses of the FAO is "putting information within reach. (Without sound data on food and agricultural production, eliminating hunger and making food and agricultural systems sustainable is impossible)" [FAO].

"Land cover influences climate by modifying water and energy exchanges with the atmosphere and by changing greenhouse gas and aerosol sources and sinks." [NOAA National Centers for Environmental Information]

The first task is to know which UN and national data sets are available: i.e., an inventory.

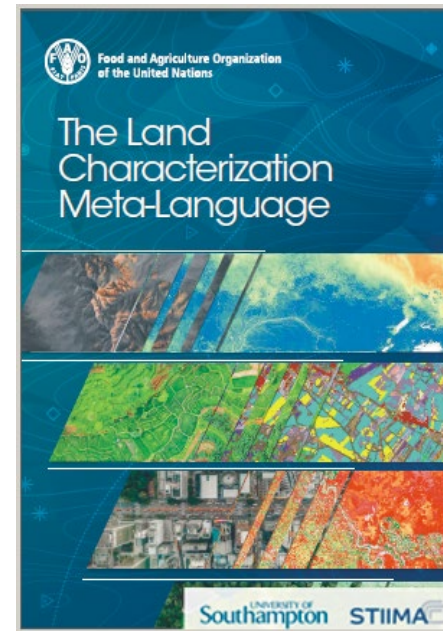This is why the UN FAO internal register was built.

- Its aim is to create an open register with partners.

This will be described in more detail in this seminar.

The ISO 19144 series of standards provides a metalanguage for addressing classification systems..
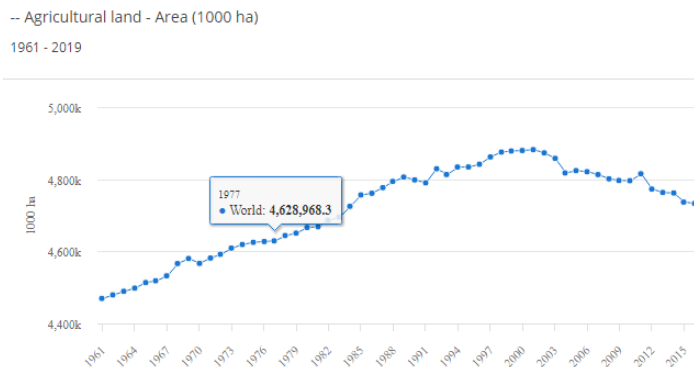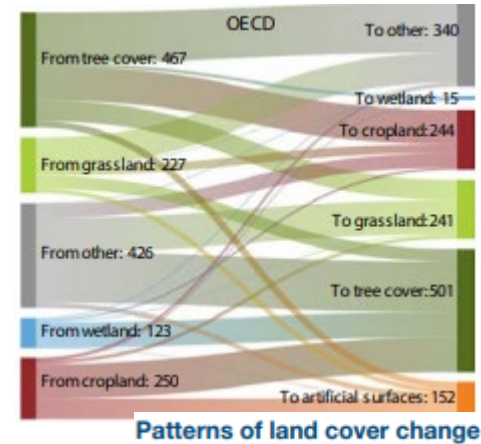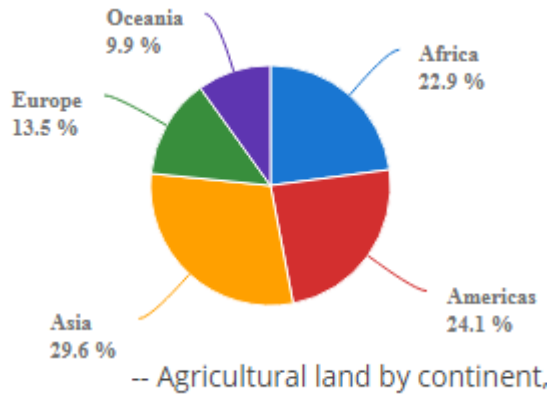
ISO 19144-2
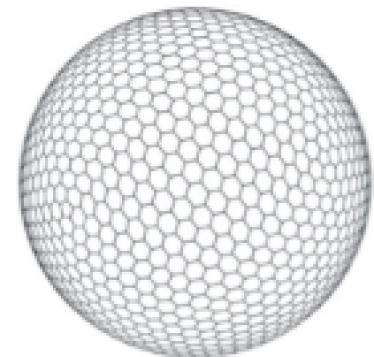addresses Land Cover

ISO 19144-3
addresses Land Use.

These standards will be discussed as the bridge to integrate data.

Geostatistics allows for Land Cover and Land Use change analysis.

-- Agricultural land by continent,

Patterns of land cover change

-- Agricultural land - Area (1000 ha)
1961 - 2019

Geostatistics depends upon having comparable data.

The "User Study" being undertaken by the TC211 Advisory Group 13 on Land Cover Land Use allows data from different sources to be identified.

The register allows it to be recorded, and

The metalanguage supports integration of data.