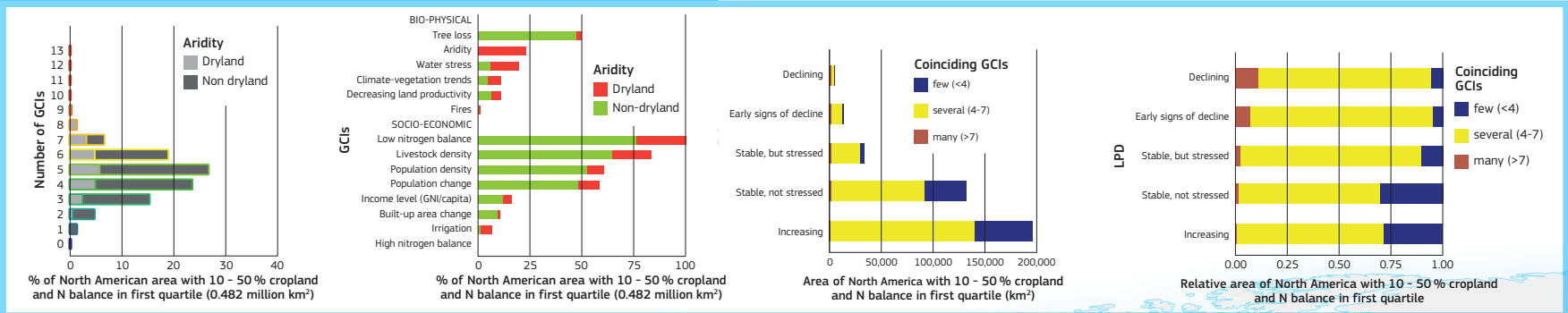


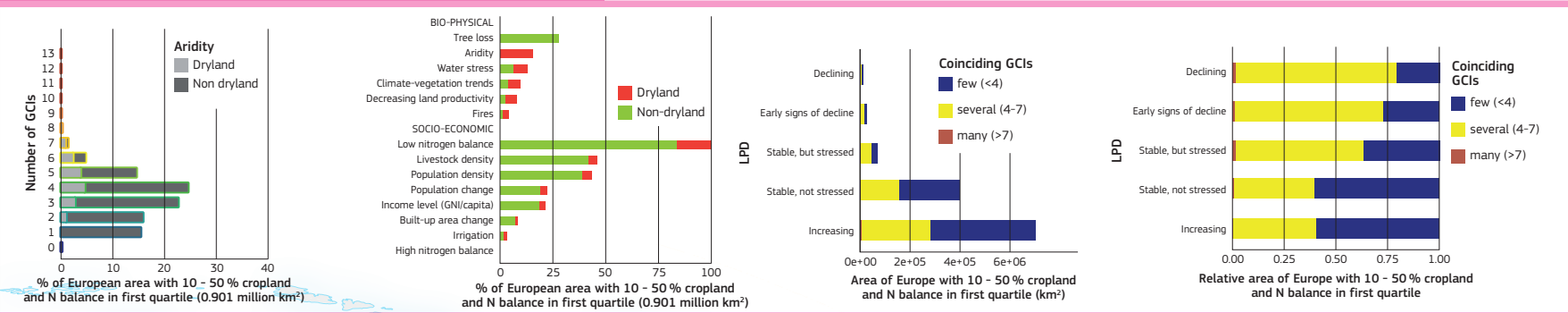
Convergence of Evidence: Low Density – Low Input cropland

Low density – low input cropland are areas where between 10 - 50% of each grid cell (1 km²) is under cultivation and where there is a low rate of nitrogen fertiliser application

Distributions of predominant issues in NORTH AMERICA

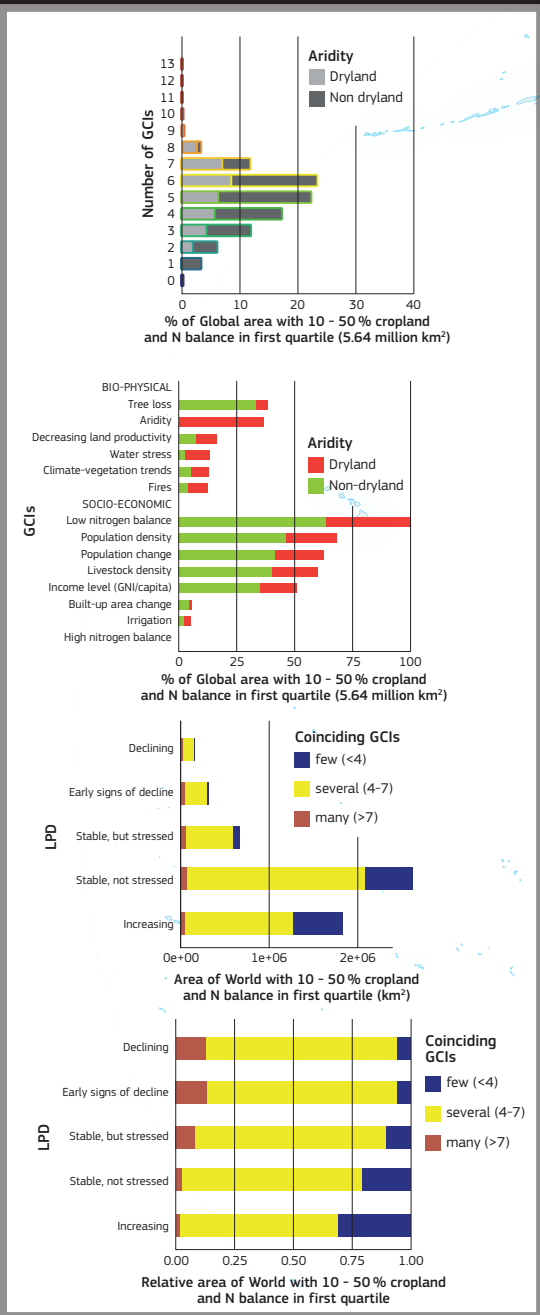


Distributions of predominant issues in EUROPE

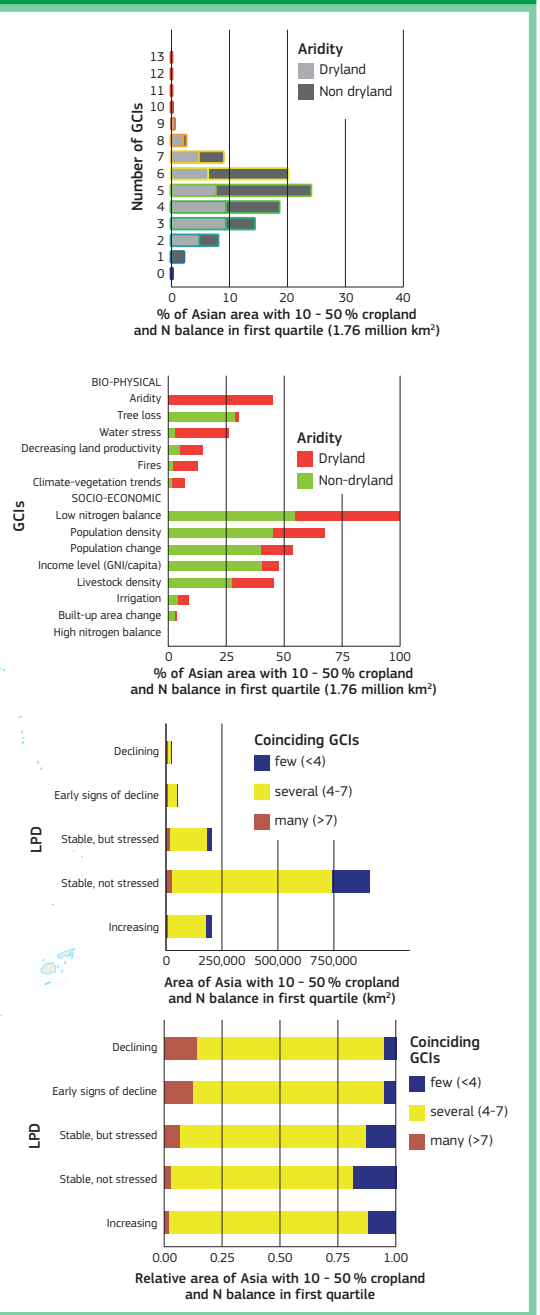


See next page for explanatory text.

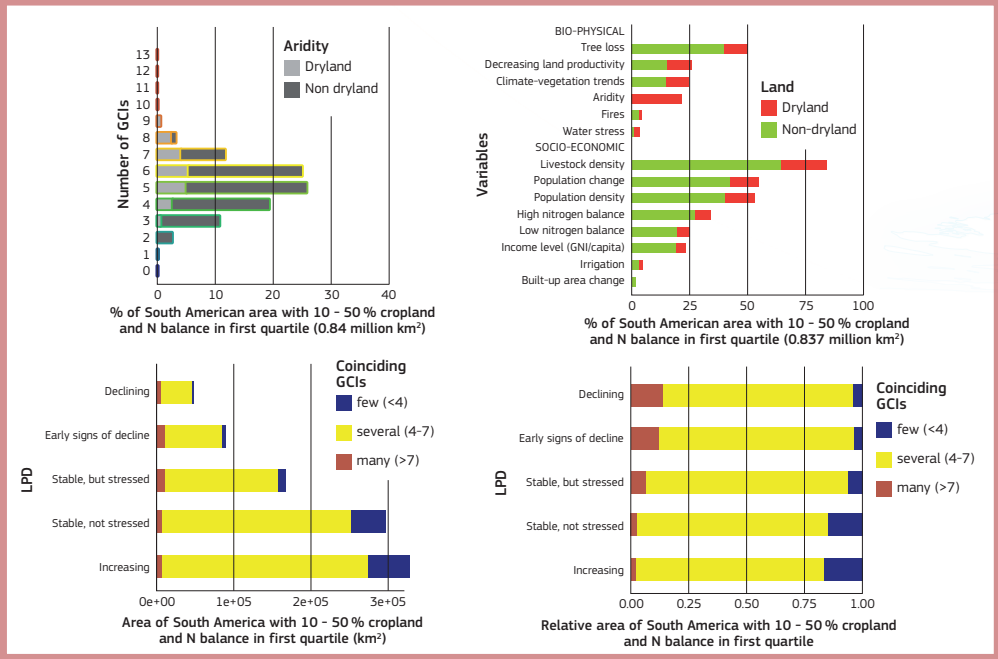
Distributions of predominant issues in WORLD



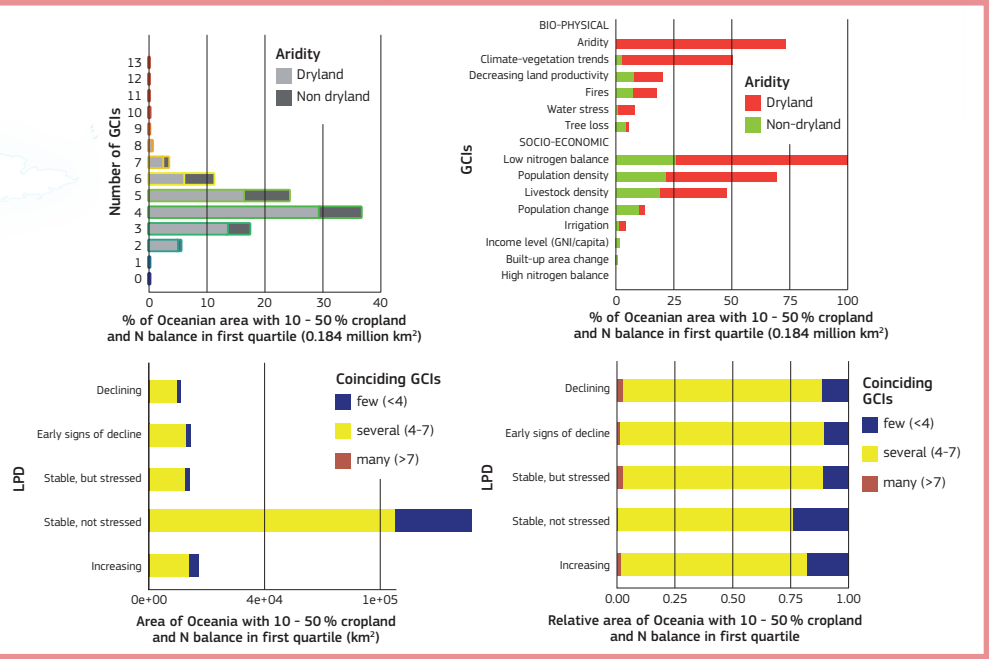
Distributions of predominant issues in ASIA



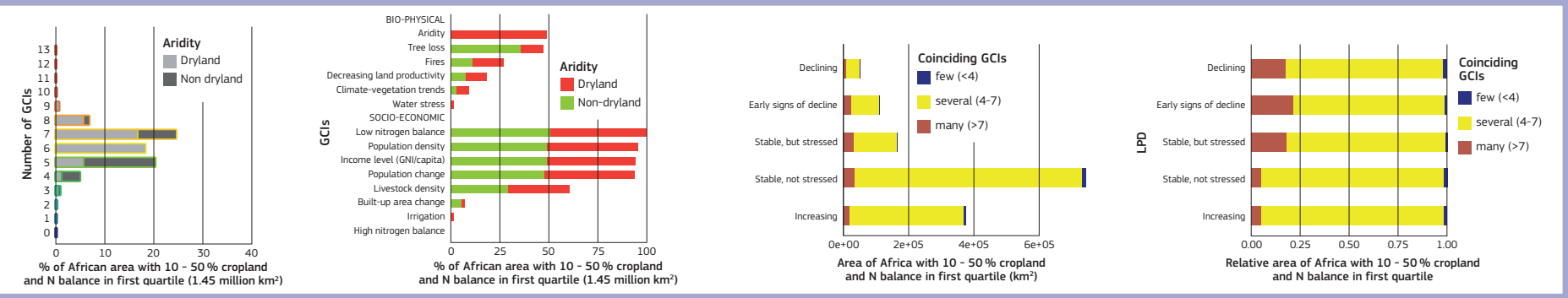
Distributions of predominant issues in SOUTH AMERICA



Distributions of predominant issues in OCEANIA



Distributions of predominant issues in AFRICA



Convergence of Evidence: Low Density – Low Input cropland

See previous spread for data.

- Examples of global regions where low density – low input cropland are affected by global change issues (GCI; see Table, page 145) include:
- Africa: Western Sahel, coastal zones of Gulf of Guinea, coastal areas of Somali and Tanzania, coastal and inland areas in the Democratic Republic of Congo;
 - Asia: South-East Asia, the lower part of the Irrawaddy Basin (Myanmar), and some areas in Vietnam;
 - Central Asia: Some of the “revived” agriculture land in southern Russia, Kazakhstan and Kyrgyzstan;
 - Latin America: Brazil (southwest of Brasilia, Rondonia and the Amazonia delta areas), Chaco region of Bolivia and Argentina, southern Ecuador, Maracaibo region in Venezuela, and smaller areas in central America (such as the Flores region in Guatemala);
 - United States and Europe: Limited areas, which are usually scattered within high density – low input cropping areas.

- Global change issues (GCI) associated with transformations (including land degradation) in low density-low input cropland include tree loss (which involves all continents, totalling about 35% or nearly 2 million km²) and low income. As compared to high density-low input cropland, income level is the most important GCI, and occurs in about 51% of the low density-low input cropland area.
- Analysis shows that in low density-low input cropland:
- About 4% (or 0.22 million km²) of the high density – high input cropland area experiences potential pressure from 8 to 13 GCIs. Signs of land productivity decline are observed in 54% of this area (0.12 million km²).
 - Approximately 74% (4.17 million km²) of the high density – high input cropland area experiences potential pressure from 4 to 7 GCIs. Signs of land productivity decline are observed in 22% of this area (0.91 million km²).
 - Approximately 21% (1.19 million km²) of the high density – high input cropland area experiences potential pressure from 1-3 GCIs. Signs of land productivity decline are observed in 8% of this area (0.09 million km²).

- Less than 1% have no GCIs.
- Around 45% of these cropland systems have 5 – 6 coincident GCIs, of which tree loss is primary, followed by decrease in land productivity (about 16%), water stress, drought conditions (i.e. climate-vegetation trends GCI, see table), and fires (each over about 13%).
- Biophysical GCIs (e.g. water stress, drought conditions, fire) are less common in these cropping systems than in high density – low input systems.

Low income is a main issue in low density – low input cropland and might constrain land management options.

- At a continental scale, some patterns with regard to low density-low input cropland and global change issues (GCI) emerge:
- **Africa.** Nearly all the low density-low input cropping area in Africa has high population density and low income. This is a reflection of the prevalence of smallholder farms (see page 64). Tree loss (about 48% of area) and fire (about 26% of area) are the main biophysical issues. Land degradation is a potential concern in about 17% of the area where land productivity is decreasing. More GCIs are coinciding in Africa than the global average.
 - **Asia.** Tree loss (about 30%) and water stress (about 26%) are the main biophysical issues in Asia. Next to population density (67% area), income level (about 48% area) is the more frequent coincident GCI.
 - **South America.** Tree loss (about 52% of area) is the most important biophysical issue. Maps on the forest loss (see page 36) and expanding agriculture (page 50) illustrate that, in many cases, low density -- low input agriculture follows a transition from forest to cultivation. Over the total area, GCIs population change occurs in about 70% and low income in 40%.
 - **Europe.** Fewer coincident GCIs occur in Europe where tree

- loss is the main biophysical issue. Drought conditions, fire and decreasing land productivity all occur over less than 10% of the area. Below average income level is an issue over about 23% of the area and increase in built-up space occurs in about 8% of the area, the second highest after North America.
- **North America.** Tree loss occurs over 50% and built-up area in 10% of the total area of low density - low input agriculture, the highest globally. Water stress is found over about 20% of the area.
 - **Oceania.** Mostly, 3 – 4 GCIs coincide with drought conditions and decreasing land productivity. Population change is an issue in about 70% of the area. Most of the area has stable land productivity.

In South America, low density – low input cropland systems are often located where forest to cultivation transition is observed, population changes and low income are the main coinciding global change issues.

- Theme layer derived from: FAO GLC-SHARE v1.0³⁹, 2014 and nitrogen balance on landscape: West P. 2014³⁵ (see page 54).
- This map has grid cells of 1 km².
- Statistics - in total area (km²) or percentage of total area - are given for both global and/or continental scales.
- Refer to global change issues (GCI) in the table on page 145.
- Refer to ‘how to read the maps’ on page 146.