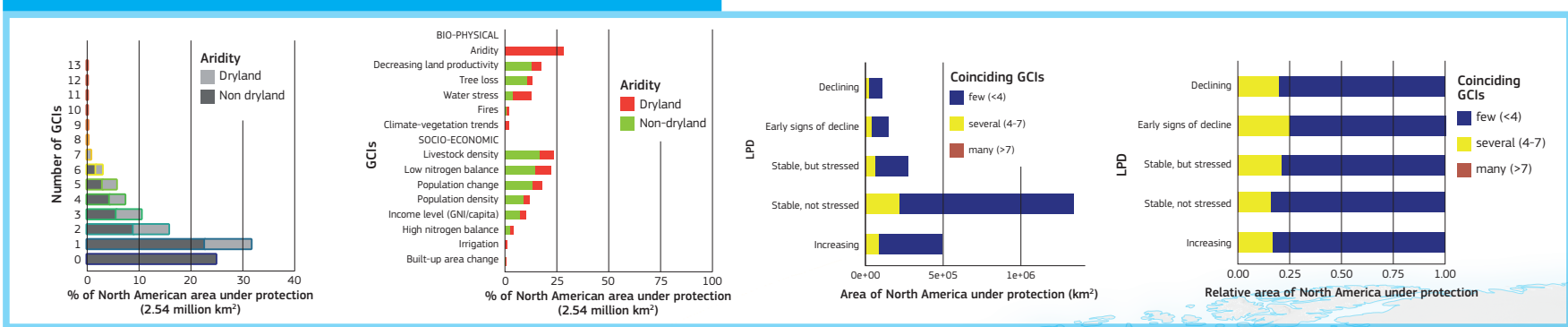


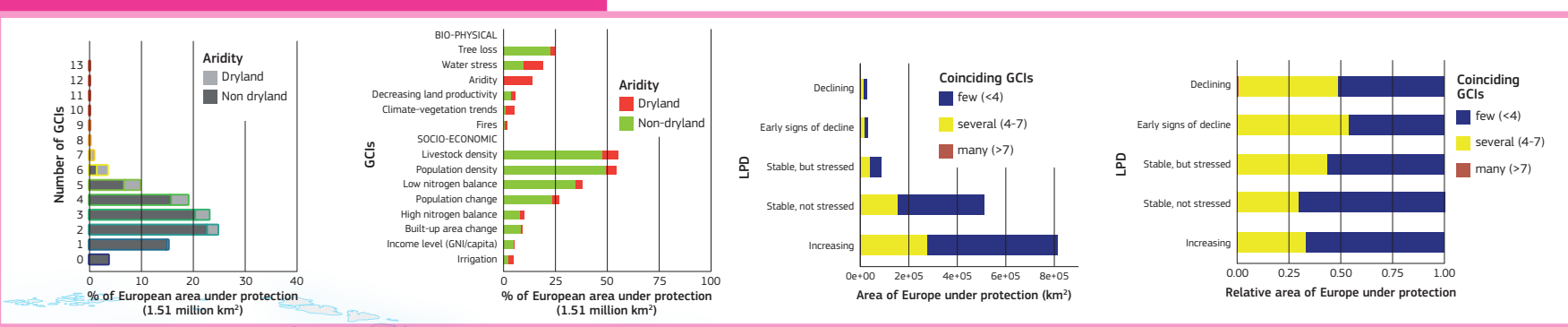
Convergence of Evidence: Protected Areas

Protected areas are those mapped by the World Database on Protected Areas (2018)

Distributions of predominant issues in NORTH AMERICA

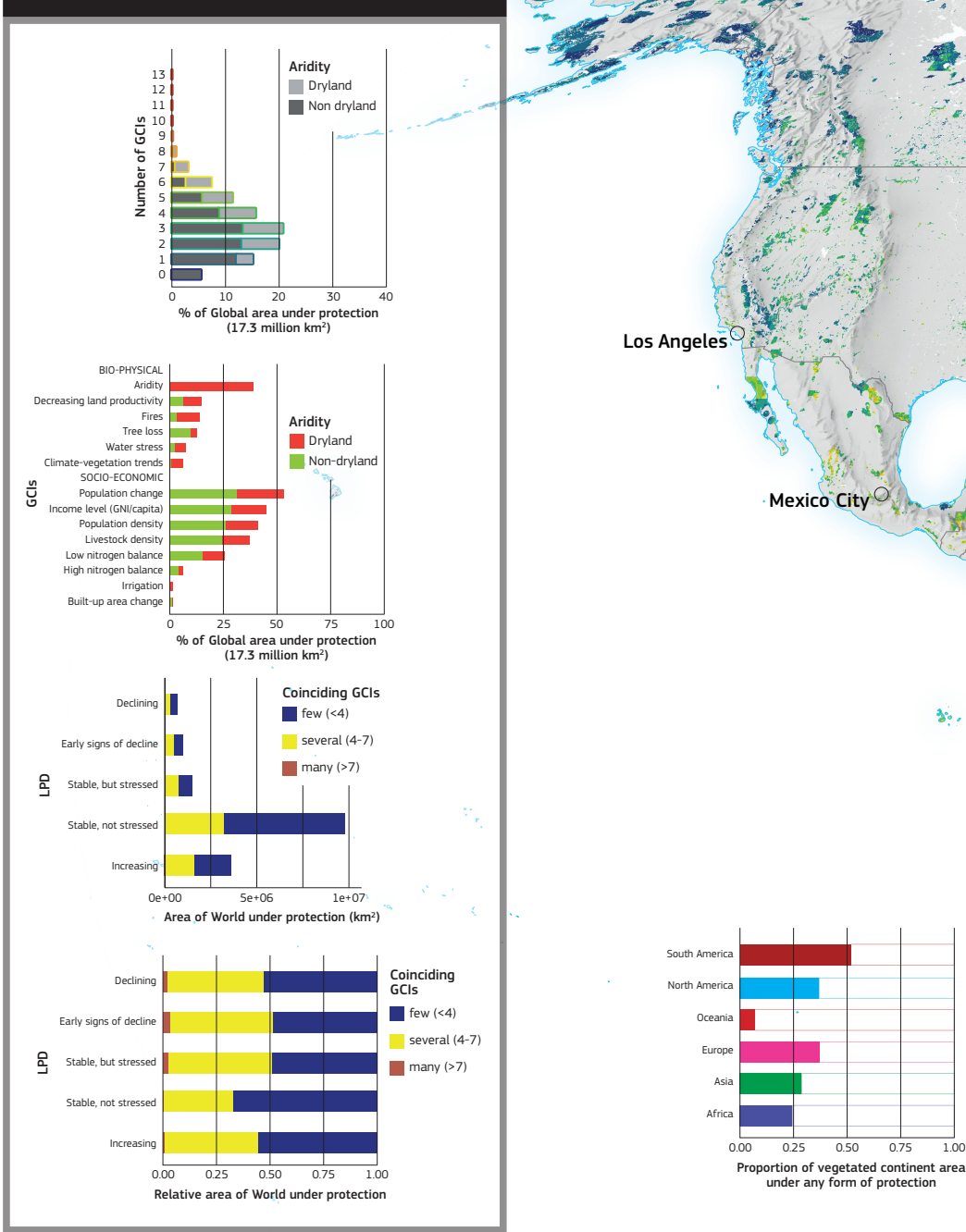


Distributions of predominant issues in EUROPE

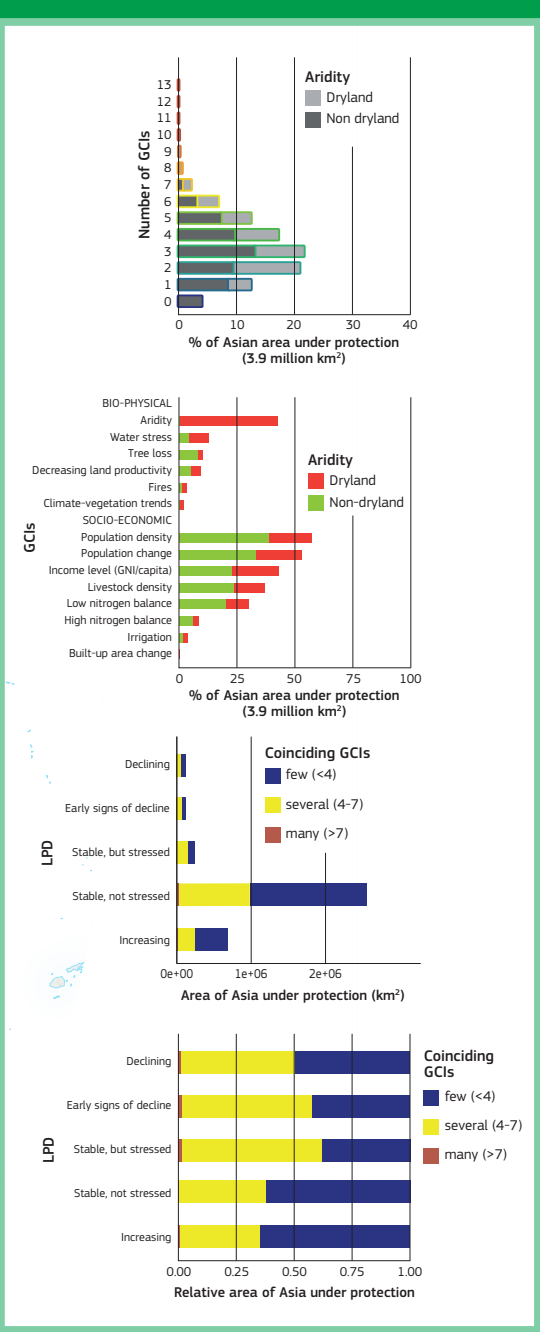


See next page for explanatory text.

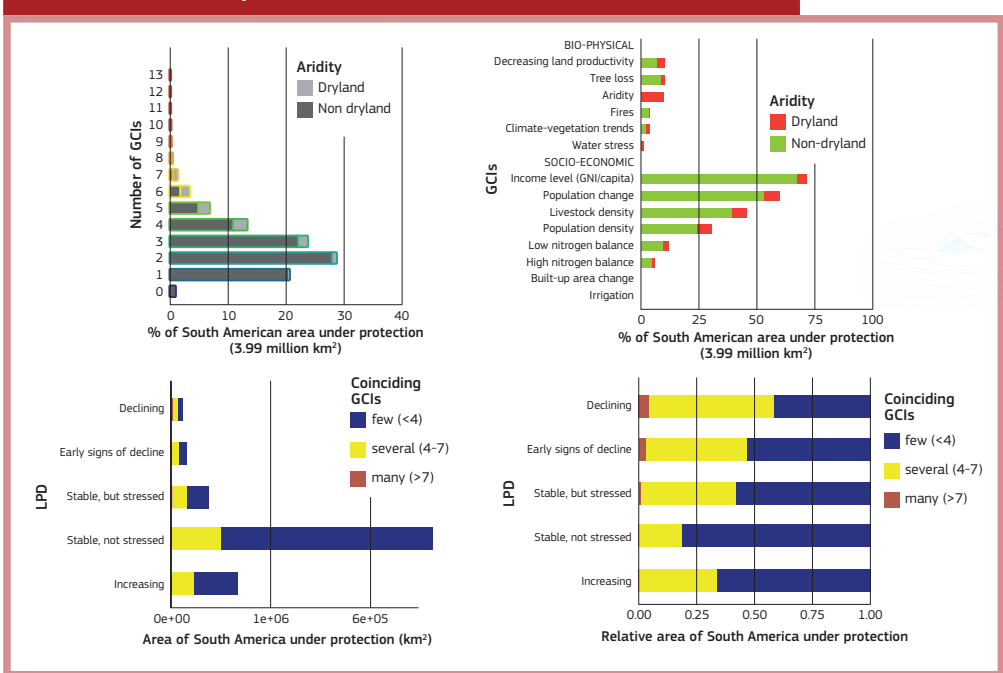
Distributions of predominant issues in WORLD



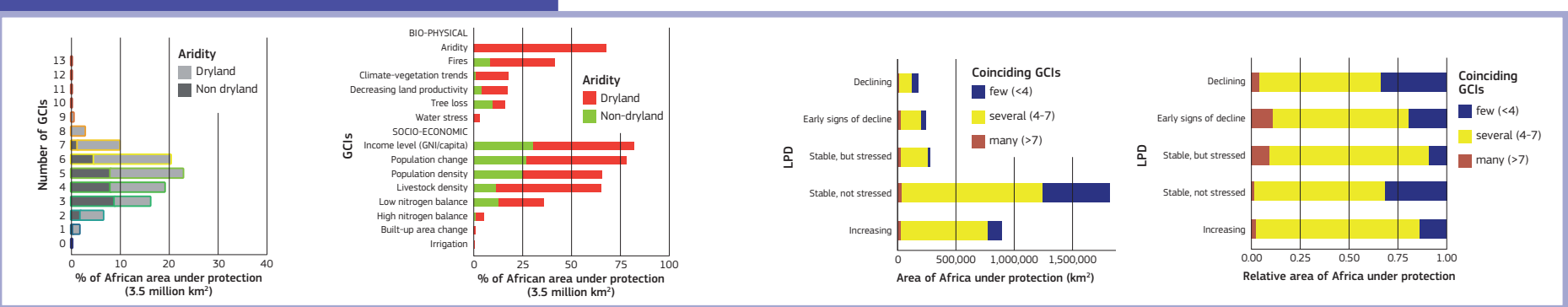
Distributions of predominant issues in ASIA



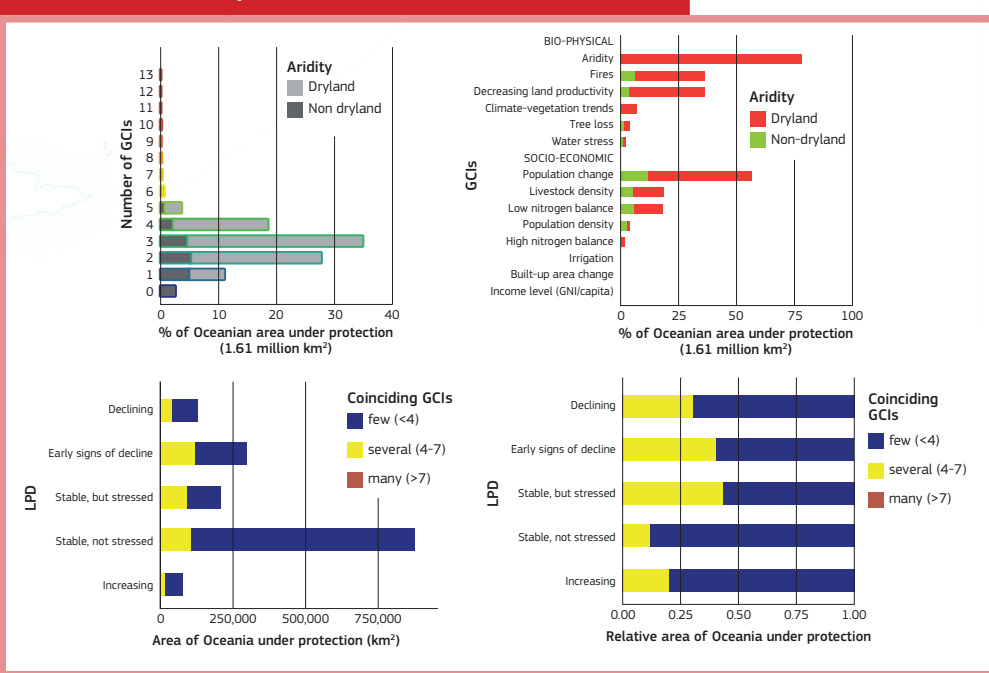
Distributions of predominant issues in SOUTH AMERICA



Distributions of predominant issues in AFRICA



Distributions of predominant issues in OCEANIA



Convergence of Evidence: Protected Areas

See previous spread for data.

Examples of global regions where protected areas are affected by global change issues (GCI; see Table, page 137) include:

- Africa: Senegal, Ivory Coast, Ghana, Nigeria, Chad, Kenya, Zambia, Zimbabwe;
- Asia: Pakistan;
- South America: North east Brazil;
- North America: Mexico.

Globally, 20 million km² are designated as protected areas (UN Environment-World Conservation Monitoring Centre). The map depicts 17.3 million km² of protected areas (based on the 2018 update of the World Database on Protected Areas - WDPA), which excludes polar regions and smaller areas.

Global change issues (GCI) associated with transformations (including land degradation) in protected areas are mainly socio-economic ones, such as population densities (50% of the area), low income (45% of the area), high livestock densities (35%) and low input agriculture (25%); less frequently occurring (all in about 15% of the area) are biophysical GCI, e.g. decreasing land productivity dynamics, fire and tree loss.

Analysis shows that in protected areas:

- About 1% (or 0.18 million km²) of the protected areas experiences potential pressure from 8 to 13 GCI. Signs of land productivity decline are observed in 49% of this area (0.85 million km²).
- Approximately 36% (6.2 million km²) of the protected areas experiences potential pressure from 4 to 7 GCI. Signs of land productivity decline are observed in 24% of this area (1.5 million km²).

- Approximately 58% (10 million km²) of the protected areas experiences potential pressure from 1-3 GCI. Signs of land productivity decline are observed in 15% of this area (1.5 million km²).
- Around 5% (0.9 million km²) have no GCI.

Human activities are a threat to more than half the protected land.

At a continental scale, some patterns with regard to protected areas and global change issues (GCI) emerge:

- **Africa.** Protected areas are present in about 17% of the continental land area, of which 70% occur in drylands. All have noticeably more coinciding GCI than in other continents. Population densities (75% of the area), low income (80%), low input agriculture (35%) and fire (40%) are the main GCI. Decreasing land productivity and tree loss occur in around 15% of the area. Further analyses (not included on this map) indicate that various issues, associated with land degradation, are increasing around the outer peripheries of protected areas (<http://dopa.jrc.ec.europa.eu/en>).
- **Asia.** Protected areas in the Boreal region have less coinciding GCI (population and livestock densities) than in south Asia. In central Asia, China and southern Asia, population and livestock densities, low input agriculture, water stress and tree loss are main GCI in protected areas.
- **South America.** Few GCI occur in the Amazonian protected areas. Other areas on the continent have GCI, including livestock density and decreasing land productivity (10% of the area).

- **Europe.** Nearly 19% of the European land area contain protected areas (WDPA). The majority are rather small size, often 'embedded' in populated anthromes of the continent. Important GCI include population densities and livestock densities (both about 50% of the area), low input agriculture (38%) and tree loss (25%). Built-up change occurs in 10% of the protected areas. In central Europe, 3-5 issues are common, while in northern Europe less than 3 issues are usually observed.
- **North America.** The main GCI in Central American protected areas include livestock densities, low input agriculture and decreasing land productivity.
- **Oceania.** Nearly 80% of protected areas are in drylands. In Australia, aridity, fire and decreasing land productivity are common GCI. In New Zealand (specifically, the northern coast on the south Island) forest loss, population changes and decreasing land productivity occur.

Protected areas in Africa are more under pressure from coinciding biophysical and socio-economic global change issues than anywhere else.

- Theme layer derived from: World Database on Protected Areas⁴³, 2018.
- 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.