

Land Degradation and Restoration Assessment (LDRA)

Summary for policymakers (SPM)

Supplementary Material

Figure SPM.1

Notes by RJ (Bob) Scholes, LDRA co-chair

The purpose of Figure SPM.1 is to support the statement that land degradation occurs just about everywhere in the world (i.e. it is 'pervasive'), takes many forms, and that examples of successful restoration are also widespread. The figure consists of a backdrop map of the world from a multiple land degradation perspective, showing the level of uncertainty between studies, overlaid with dots representing all the places specifically mentioned in the eight chapters of the main Assessment Report on Land Degradation and Restoration, including case studies of both degradation and restoration. Around the map are brief notes regarding the main forms of degradation encountered.

As Chapter 4 of the LDRA clearly puts forth, no global-scale, widely-accepted, single map of land degradation currently exists. Even the maps of particular forms of degradation – for instance, of forest degradation or rangeland degradation – disagree substantially between themselves. Nonetheless, there are peer-reviewed, published 'best practice' maps of some of the main forms of land degradation. In the background map for Figure SPM.1, we splice together a map of deforestation, a map of cropland degradation, and a map of dryland degradation, all with their original legend classes recalibrated to a common concept, based on the accepted scoping definition of 'land degradation' in the main Assessment Report (further details on the scoping document and the given definitions for the Assessment please see [Annex VIII of decision IPBES-3/1](#))

We are not encouraging readers to interrogate this backdrop map with fine local detail, so the size at which the map is reproduced is that which fits on about half a page.

Procedure

The following maps were projected to a standard projection (Robinson), and classified as described below, then overlaid. Any area of land not covered was left blank, and assigned the legend description 'Unassessed'. The layers were laid down in the order specified, so that if there is overlap, the later-applied maps are the ones displayed.

1. 'Last of the wild' Map from Watson *et al.* (2016). Assign to the wilderness areas, which are places where 'ecological and evolutionary processes operate with minimal human disturbance', the colour green, and the remainder of the global land area blank. The associated legend is 'Areas with little human influence'.

2. The map of 21st century areas of deforestation from Hansen (2013) figure 1B, only including the areas with 20% or more loss during the 21st century, coloured in red.
3. Map from Zika and Erb (2009) on the extent of global human-induced dryland degradation. Drylands with more than 20% of degradation per grid-cell area were colored in brown.
4. Map of places with severe soil degradation stressed or declining land productivity dynamics, from the JRC global soil degradation map (Cherlet et al 2013), coloured in grey.
5. Overlaid on all of these, the agreement map of Gibbs and Salmon (2015). It is treated analogously to the IPCC maps of agreement and disagreement between models: hatched in diagonal black lines for areas of high agreement (shown as dark green in Gibbs and Salmon), stippled for medium agreement (light green in Gibbs and Salmon); and blank for low or no agreement (yellow and red in Gibbs and Salmon).
6. Overlaid in circular dots, with colours specific to each chapter, the places where specific cases of degradation have been reported in the LDRA main text.
7. Overlaid with an orange star the successful restoration cases reported in chapter 1 and in yellow the restoration actions in chapter 6.

References

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