

Good Practice Guidance for S03

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Big thank you to the whole team:

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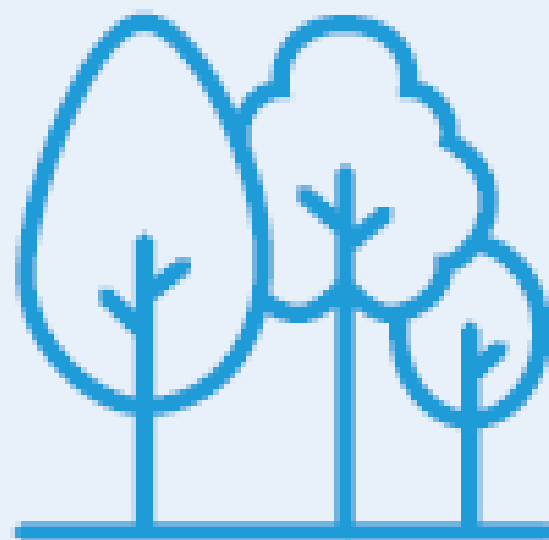
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Strategic Objective 3

STRATEGIC OBJECTIVE 3:

To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.



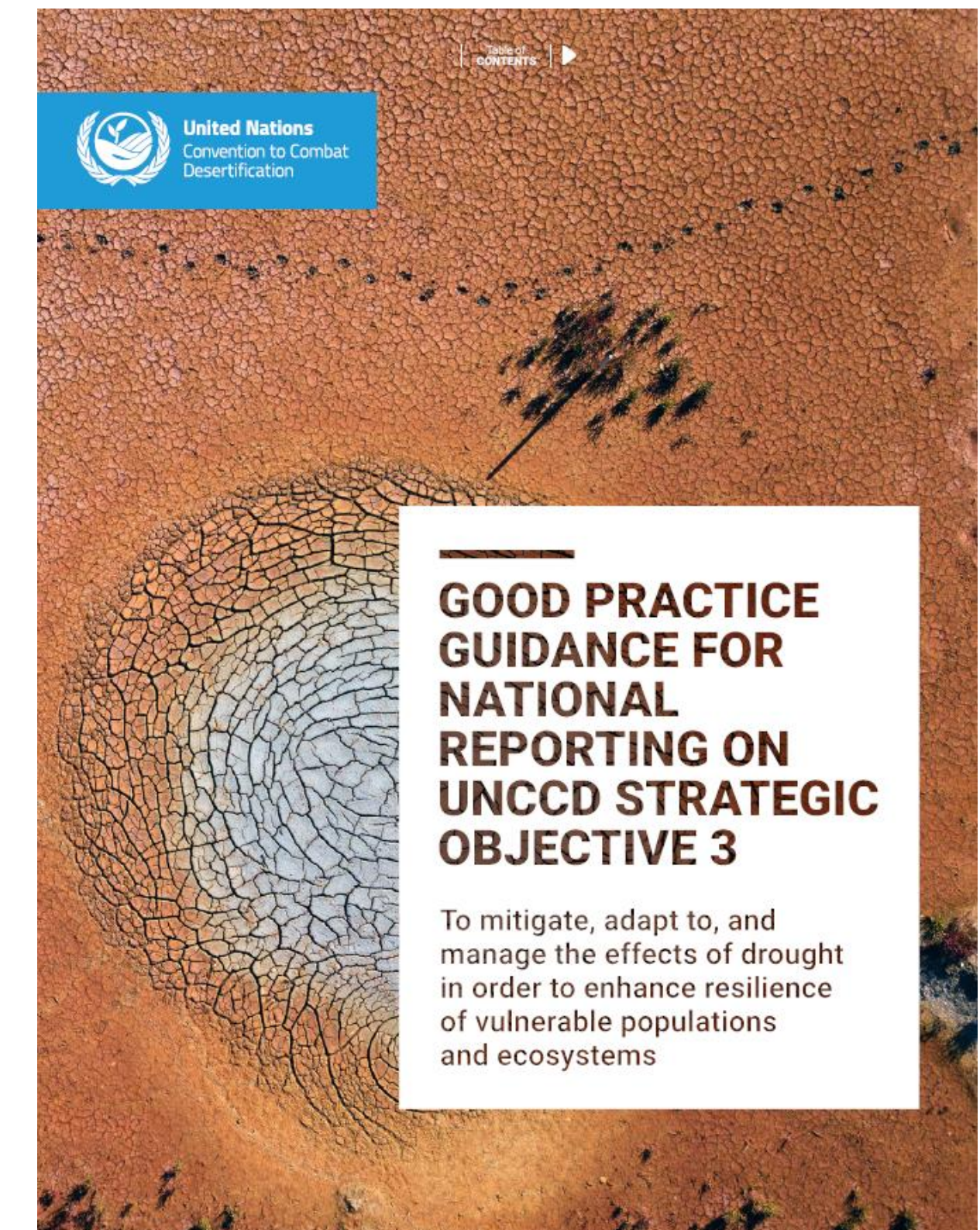
EXPECTED IMPACT 3.1:

Ecosystems' vulnerability to drought is reduced, including through sustainable land and water management practices.



EXPECTED IMPACT 3.2:

Communities' resilience to drought is increased.



Strategic Objective 3 Indictors

- 4 year reporting cycles – first one 2016-2019
- Baseline period 2000-2015

Table 1

Summary of the indicators and the basis for the metrics/proxies relevant to each of the three levels of the proposed drought indicator and monitoring framework as given in the Annex to Decision 11/COP.14

Level	Progress indicator	Basis for candidate metrics/proxies*
Level 1 – Simple drought hazard indicator	Trends in the proportion of land under drought over the total land area	World Meteorological Organization Global Drought Indicator ²⁵ (standardized into classes) monitored and mapped monthly, and aggregated for the United Nations Convention to Combat Desertification reporting period.
Level 2 – Simple drought exposure indicator	Trends in the proportion of the population exposed to drought of the total population	Percentage of the population exposed to each drought class defined in Level 1.
Level 3 – Comprehensive drought vulnerability indicator	Trends in the degree of drought vulnerability	Composite index of relevant economic, social, physical and environmental factors that contribute to drought vulnerability.

* The description provided for the candidate metrics/proxies should be considered preliminary as these will evolve through a multilateral process such as the World Meteorological Organization Global Multi-Hazard Alert System framework. This will help ensure progress towards the collaborative development of standards in methods and data supported by good practice guidance, as well as national ownership of the reporting process.

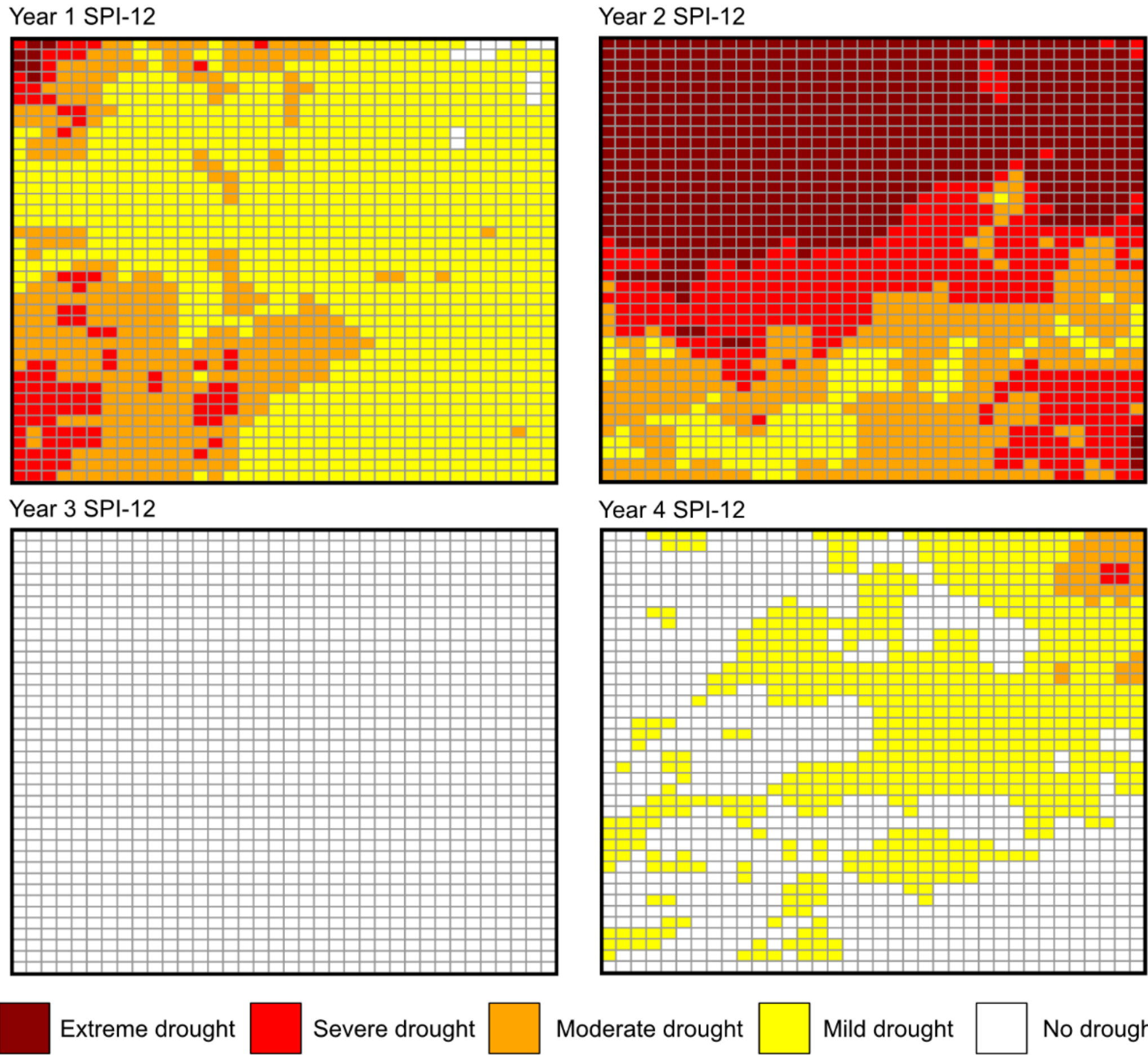
Methodological requirements

- Methods had to have been reviewed in the scientific literature
- Make use of existing guidance and international agreements on data, methods etc.
- Use open globally available datasets, but allow Parties to use in-country datasets where available and suitable
- Be simple to calculate and interpret

Level 1 Indicator calculation (Hazard)

“Trends in the proportion of land under drought over the total land area”

- Relatively simple, based on WMO recommendations to use the Standardized Precipitation Index (SPI) for drought monitoring
- % of land area in four drought intensity classes for each year



SPI values	Drought intensity class
0 to -0.99	Mild drought
-1.0 to -1.49	Moderate drought
-1.5 to -1.99	Severe drought
-2 and less	Extreme drought

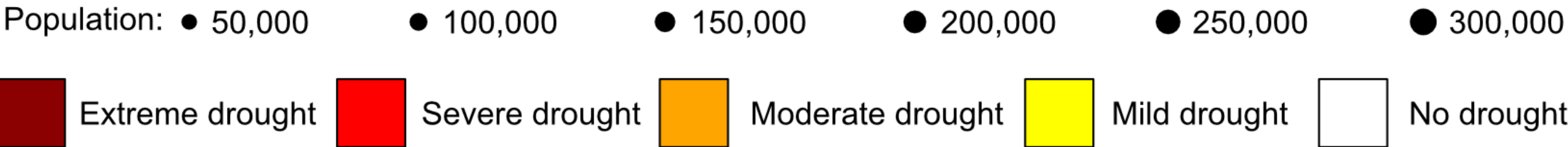
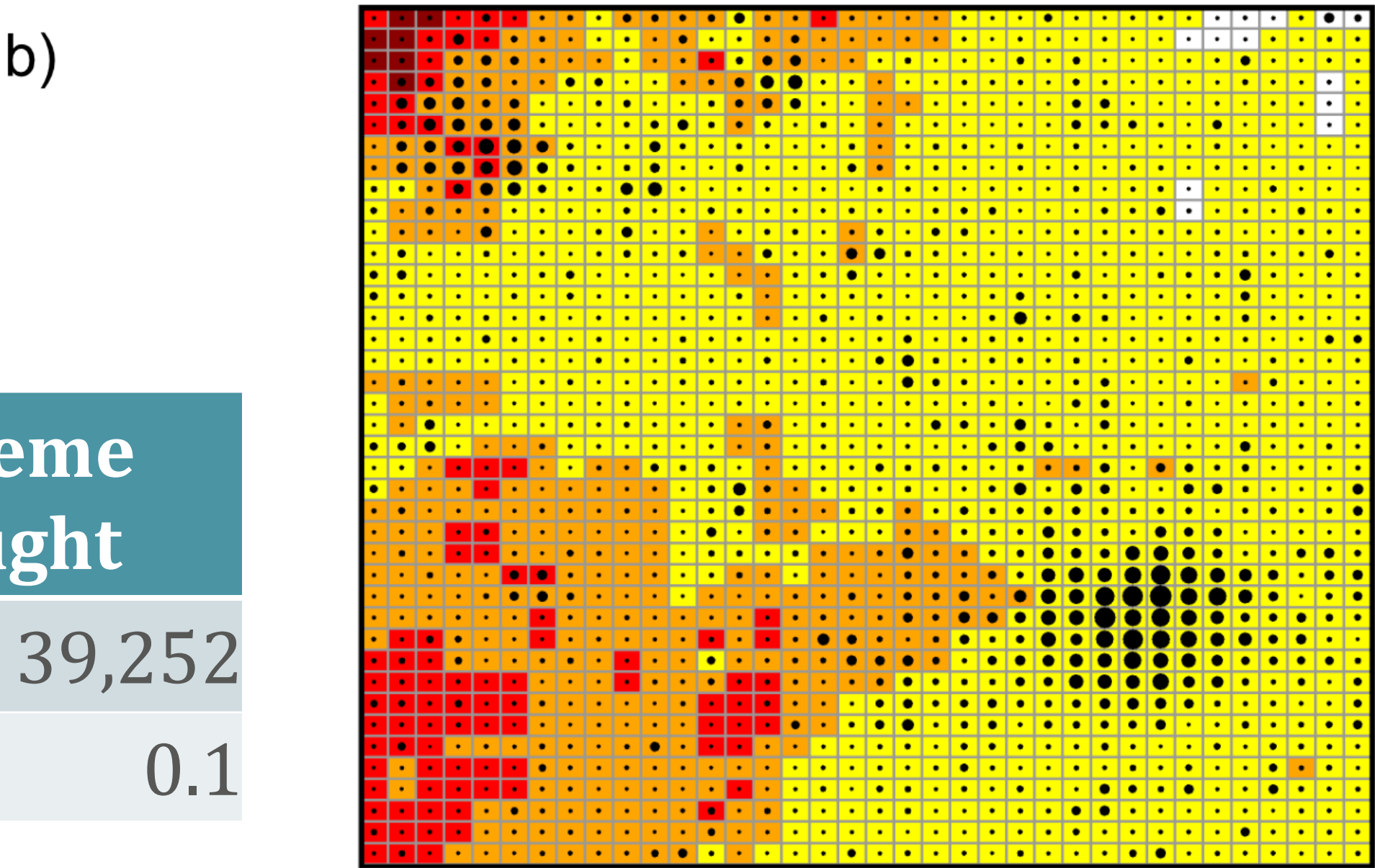
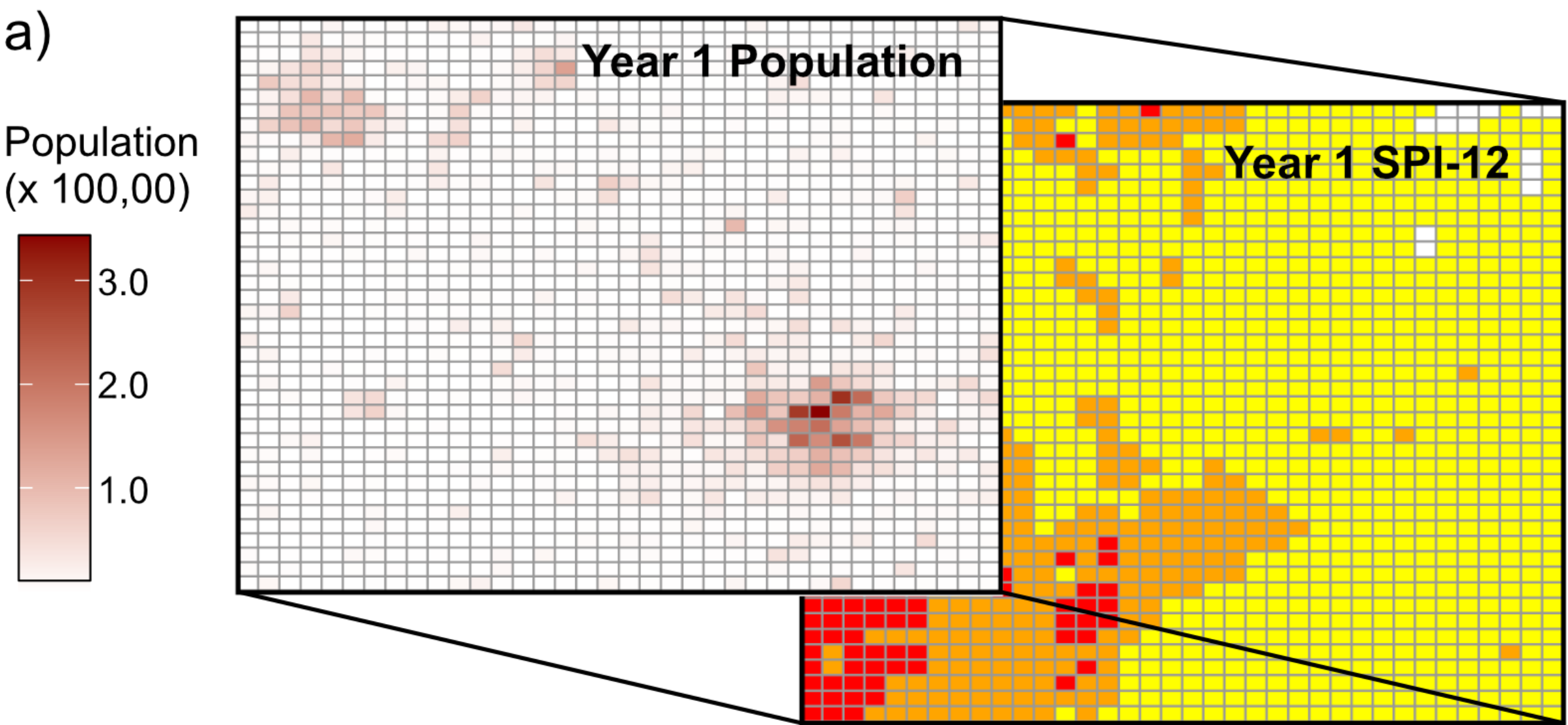
Year 1	Mild drought	Moderate drought	Severe drought	Extreme drought	Total
Total number of cells affected by drought	973	350	97	7	1,427
% of land area under drought	67.6	24.3	6.7	0.5	99.1

Level 2 Indicator calculation (Exposure)

“Trends in the proportion of the total population exposed to drought”

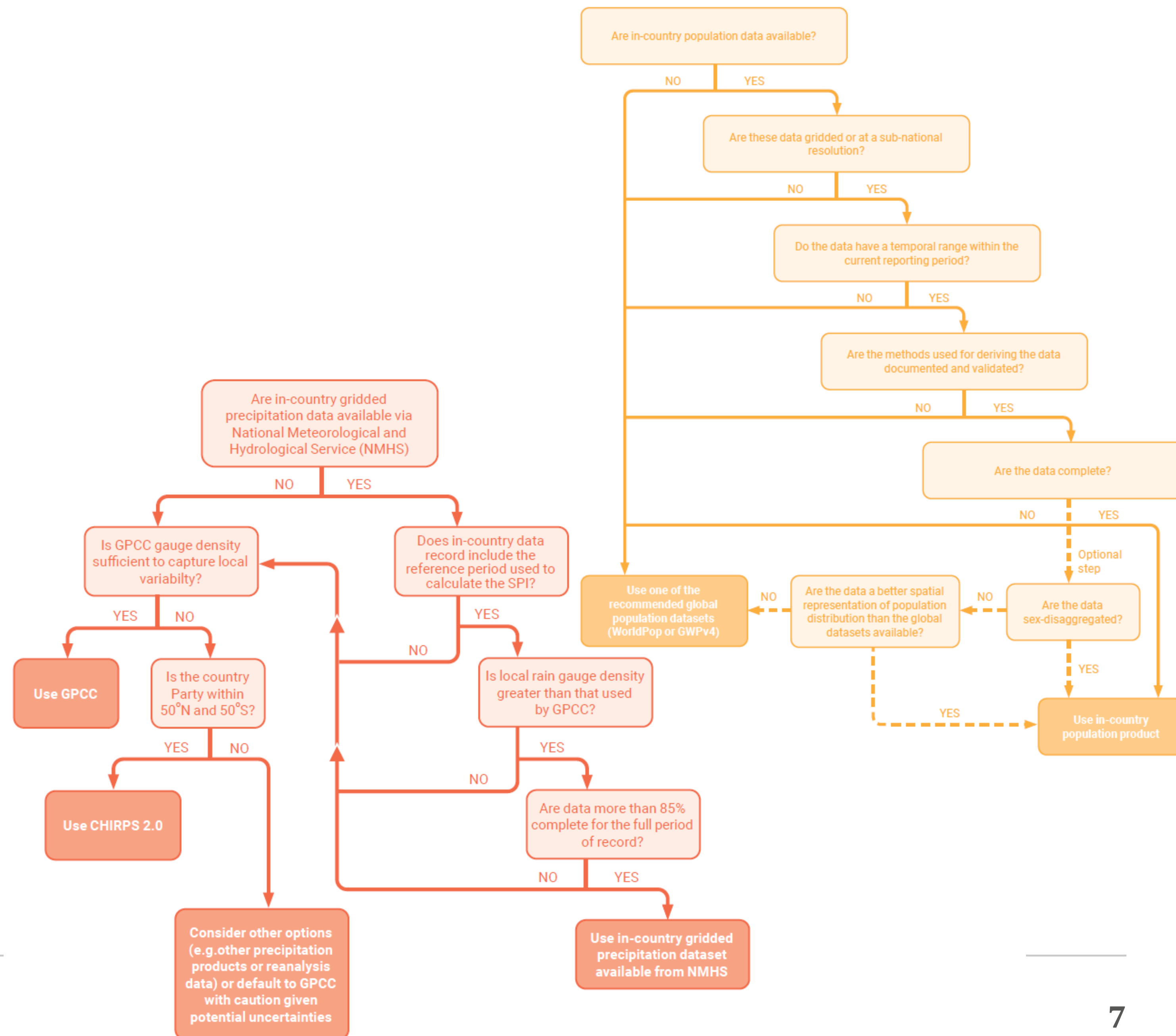
- Overlays gridded population data with the outputs from the Level 1 Indicator
- % of population in the four drought intensity classes (total + optional male/female) for each year

Year 1	Mild drought	Moderate drought	Severe drought	Extreme drought
Count	18,359,965	4,298,522	1,101,441	39,252
%	76.8	17.9	4.6	0.1



Level 1 & 2 Data

- Guidance whether Parties should use in-country data or the global recommended data sets
- Based on quality, resolution, period of record, trust...



... but what about vulnerability?!

- There is much less agreement in the literature on **how** to assess drought vulnerability
- There is lots of variability in the methods and the datasets used

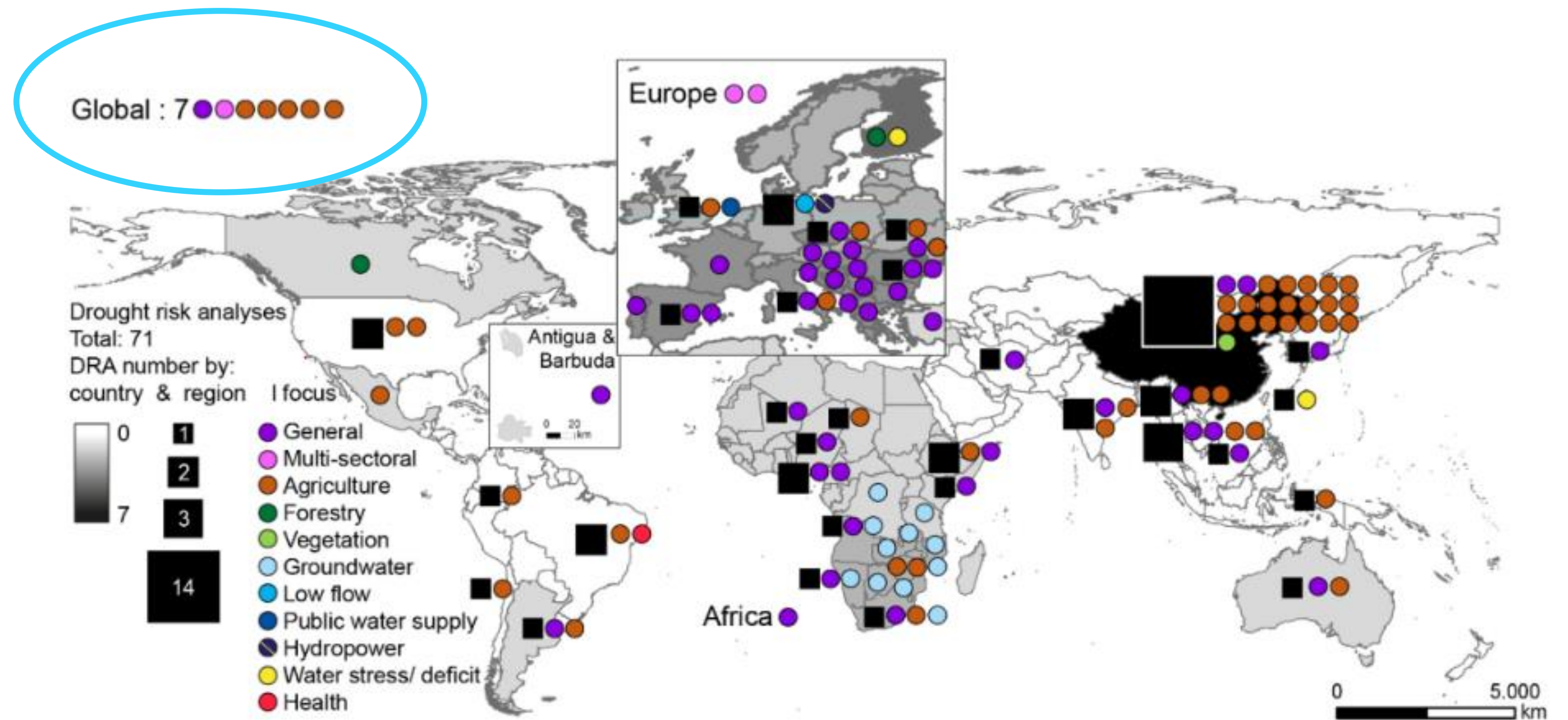
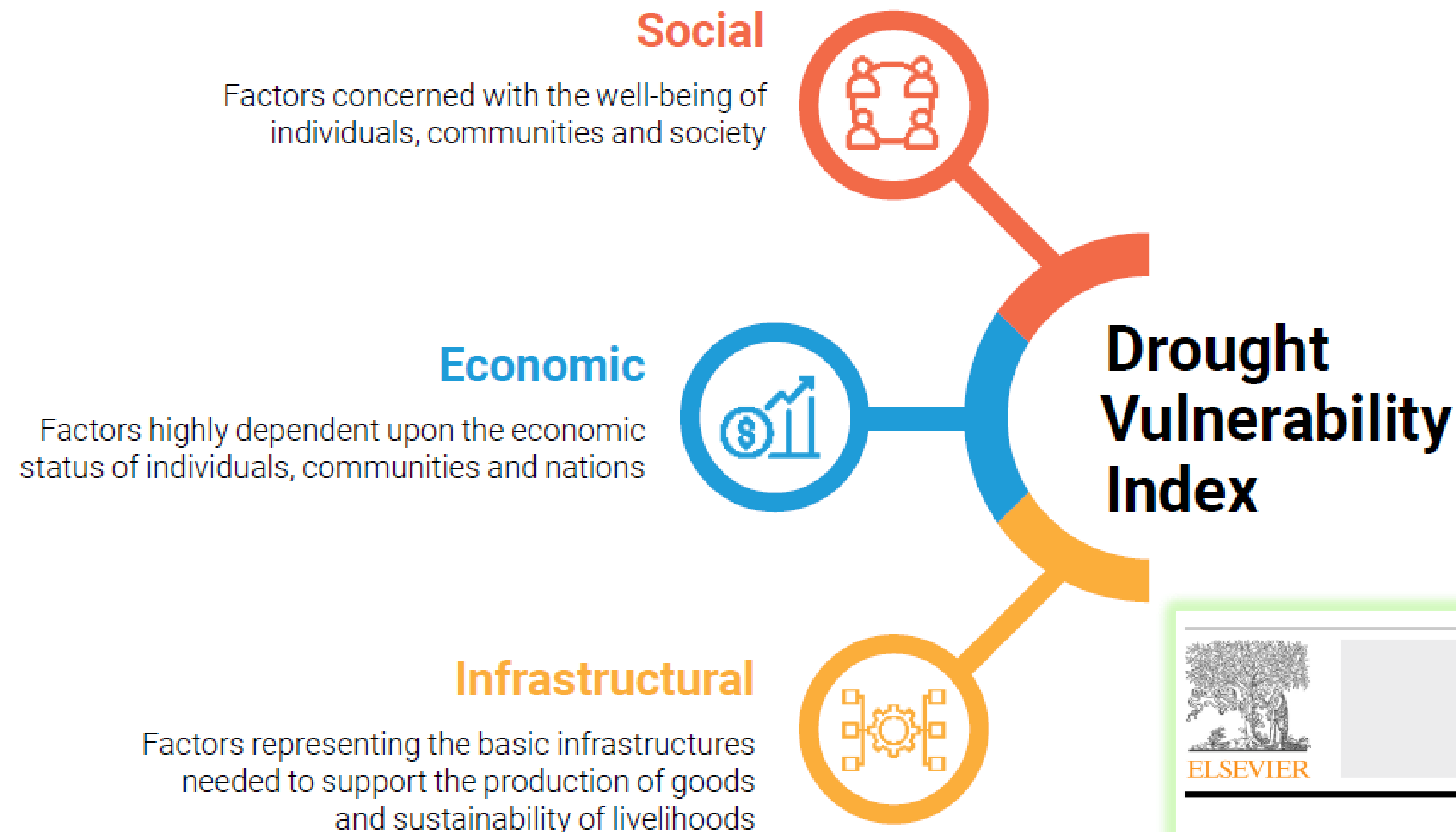


Fig. 1. Drought risk analyses around the globe, summed by country (including regional analyses in the country) and regional scale.

Blauhut, 2020

Drought Vulnerability Index (DVI)

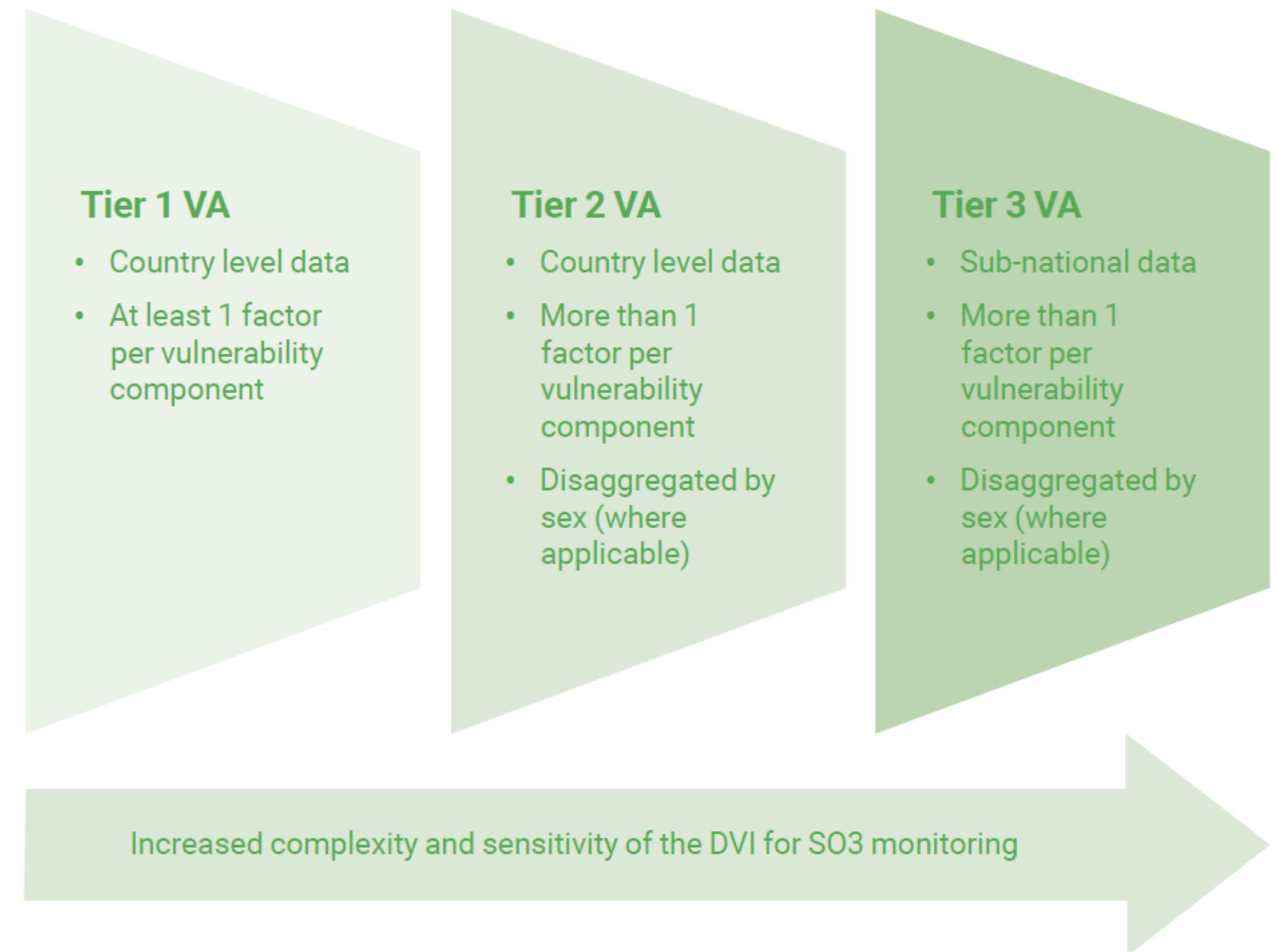


0=not vulnerable
1= most vulnerable

Level 3 Indicator calculation (Vulnerability)

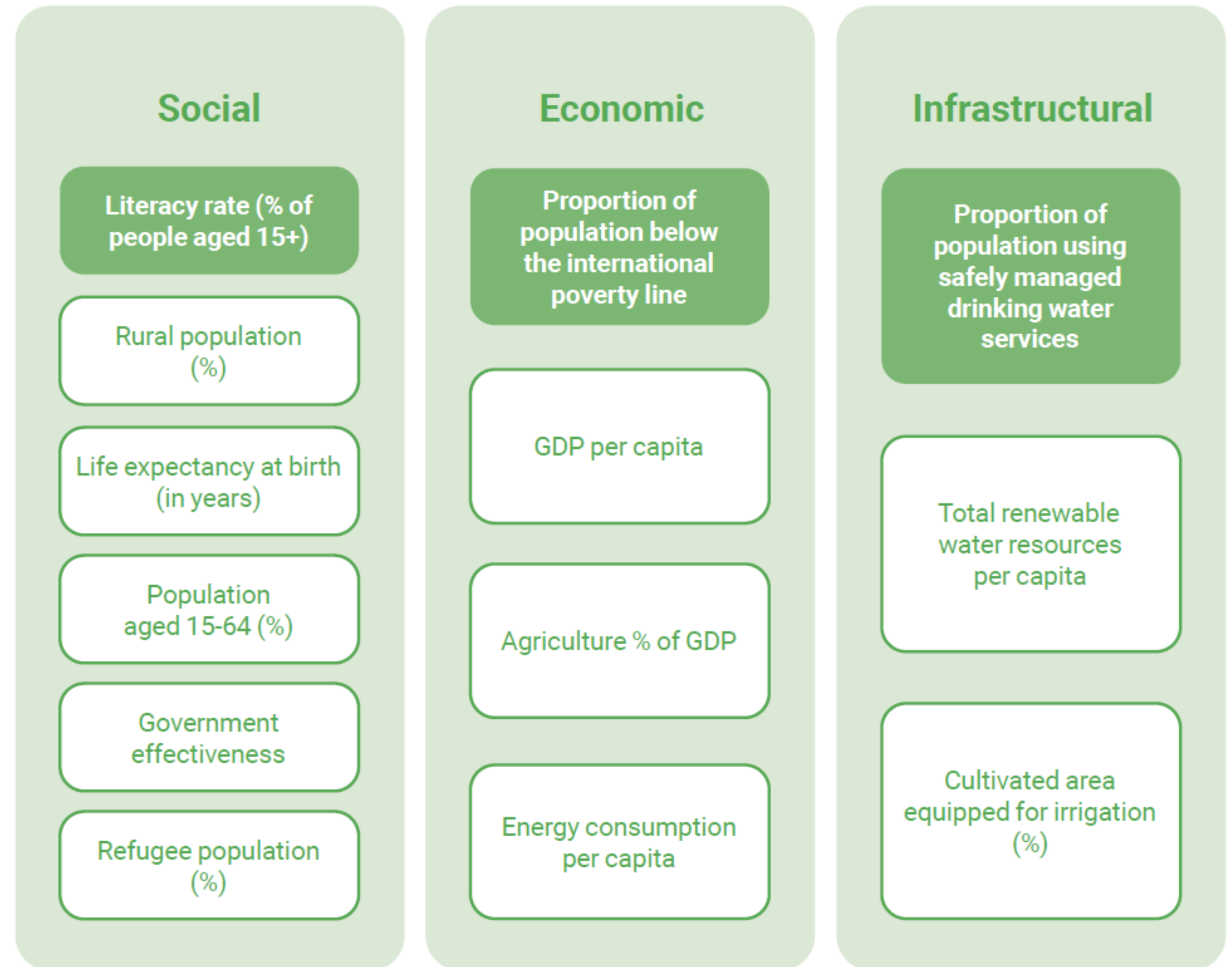
“Trends in the degree of drought vulnerability”

- Slightly modified DVI calculation: normalising data in time for each country
- Tiers of vulnerability assessment (VA) to account for varying levels of capacity and data availability
- To include options for sex-disaggregated data and sub-national datasets
- Calculated for each four-year period



Level 3 data

- Uses national datasets reported to the UN for SDG monitoring and other reporting available for most countries
- Tier 1 VA factors highlighted



Limitations and possible future improvements

Level 1 Indicator (Hazard)

- Use SPEI as recommended default
- Assess other drought types
- Different timescales might be a better fit for impacts

Level 2 Indicator (Exposure)

- Include other aspects of exposure
- Assess the exposure of ecosystems to drought
- How to account for distant impacts of drought?

Level 3 Indicator (Vulnerability)

- Guidance on weighting factors/components
- Guidance on validating vulnerability assessments
- Include an assessment of ecosystem vulnerability

What happens next...?

- Parties start reporting SO3 indicators in September this year
- The GPG will be discussed at COP15 and CRIC 20 (May-October 2022)
 - May need revising based on these discussions and after one round of reporting...
- We are discussing opportunities for further work with UNCCD to address the challenges and limitations discussed in the GPG
- A paper applying the methods to several case studies around the world linking with other projects

Thank you
Any questions?

