

The state of the world's land and water resources for food and agriculture (SOLAW)

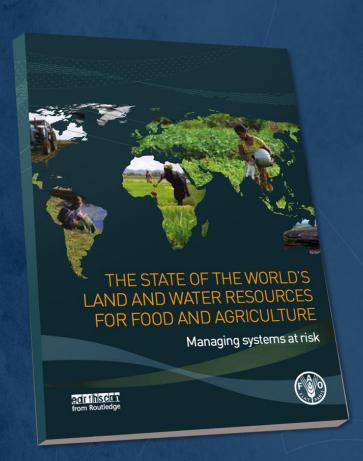
Systems at breaking point

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#### SOLAW 2011 and 2021





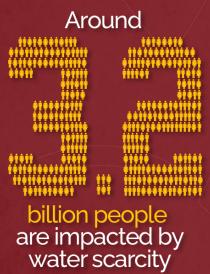
#### **The Context**





more food, feed and biofuel than we did in 2012





### The Status of agricultural land

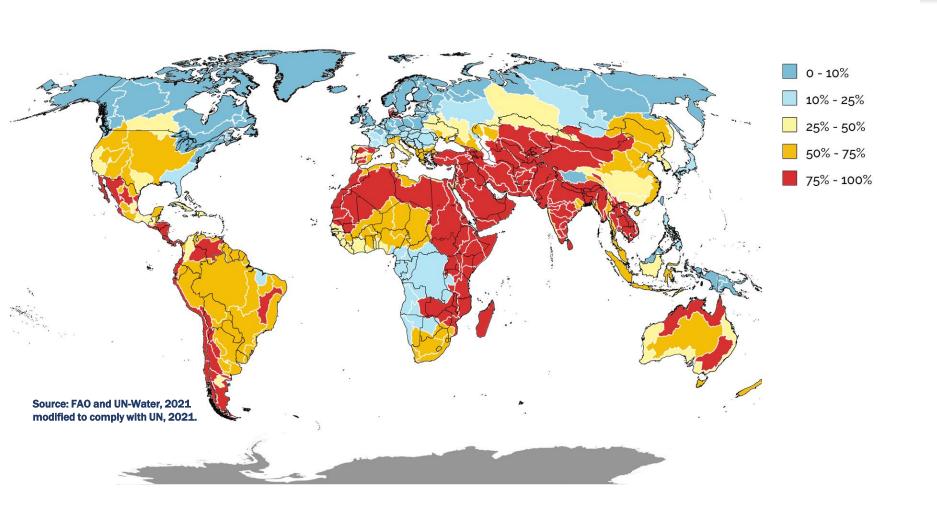
#### Land-use class change, 2000–2019 (million ha)

Land-use class	2000	2019	Change
Land under permanent meadows and pastures (a)	3 387	3 196	-191
Cropland (arable land and permanent crops) (b = b1 + b2)	1 493	1 556	+63
- Arable land (land under temporary crops) (b1)	1 359	1 383	+24
- Land under permanent crops (b2)	134	170	+36
Agricultural land (total of cropland and permanent meadows and pasture) (C = a + b)	4 880	4 752	<sup>-128</sup> <b>22</b> %
- Land area equipped for irrigation	289	342	+53
Forest land (land area > 0.5 ha with trees > 5 m + 10% canopy cover)	4 158	4 064	-94
Other land	3 968	4 188	+220

Source: FAO. 2020a. FAOSTAT. http://www.fao.org/faostat/en/#data/QC

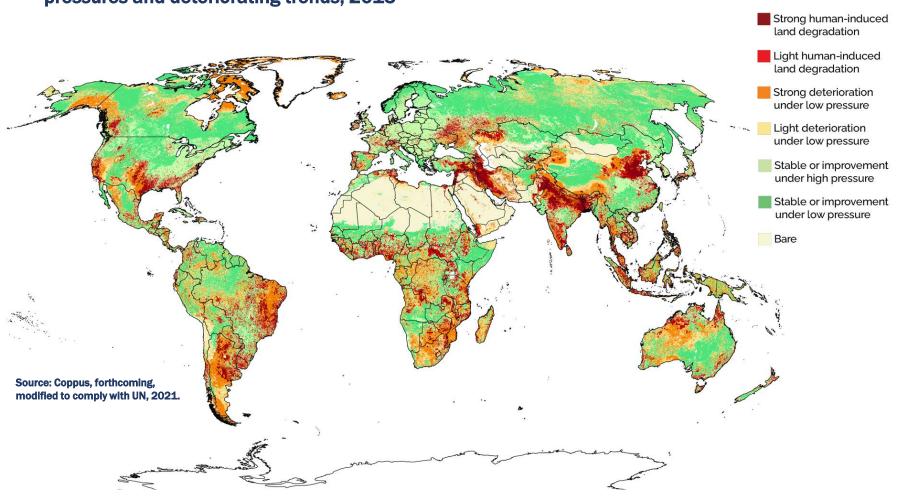
# The State: The interconnected systems of land, soil and water are stretched to the limit

Level of water stress due to the agricultural sector by basin, 2018



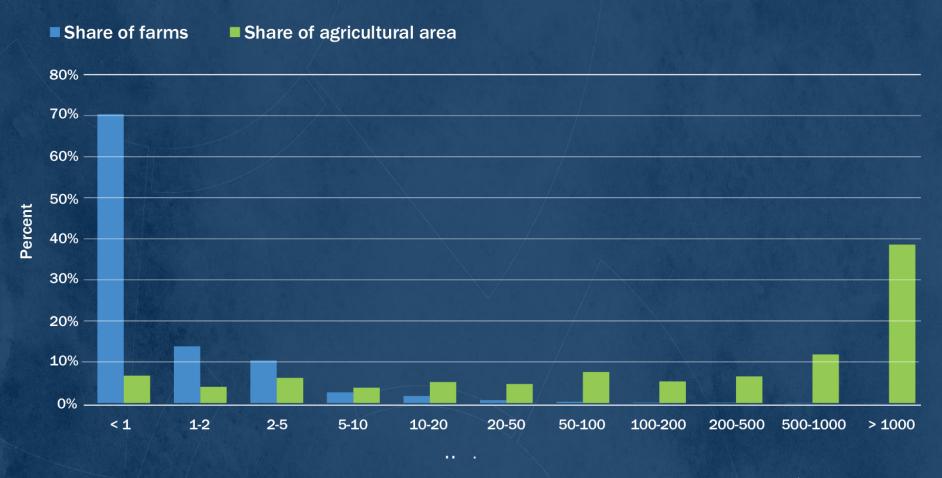
# The State: Current patterns of agricultural intensification are not proving sustainable

Land-degradation classes based on severity of human-induced pressures and deteriorating trends, 2015



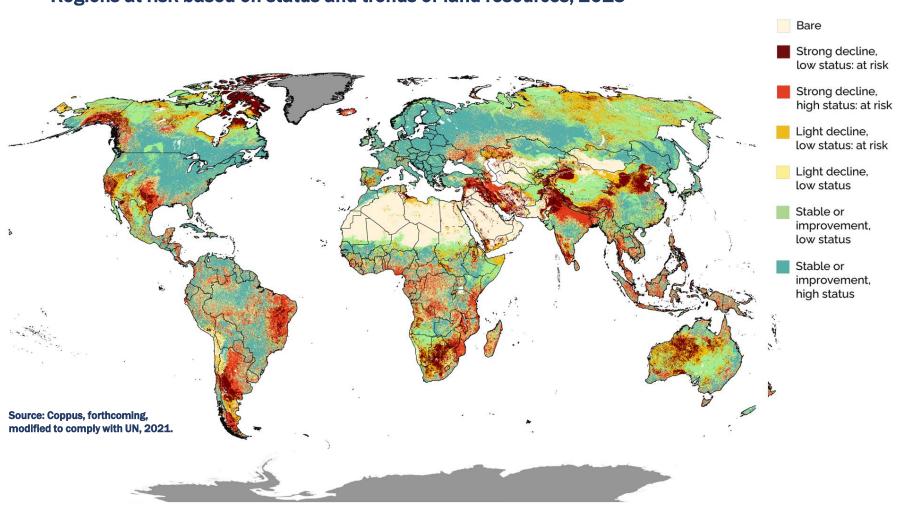
#### The State: Farming systems are becoming polarized

#### Global distribution of farms and farmland by land size class, 2010

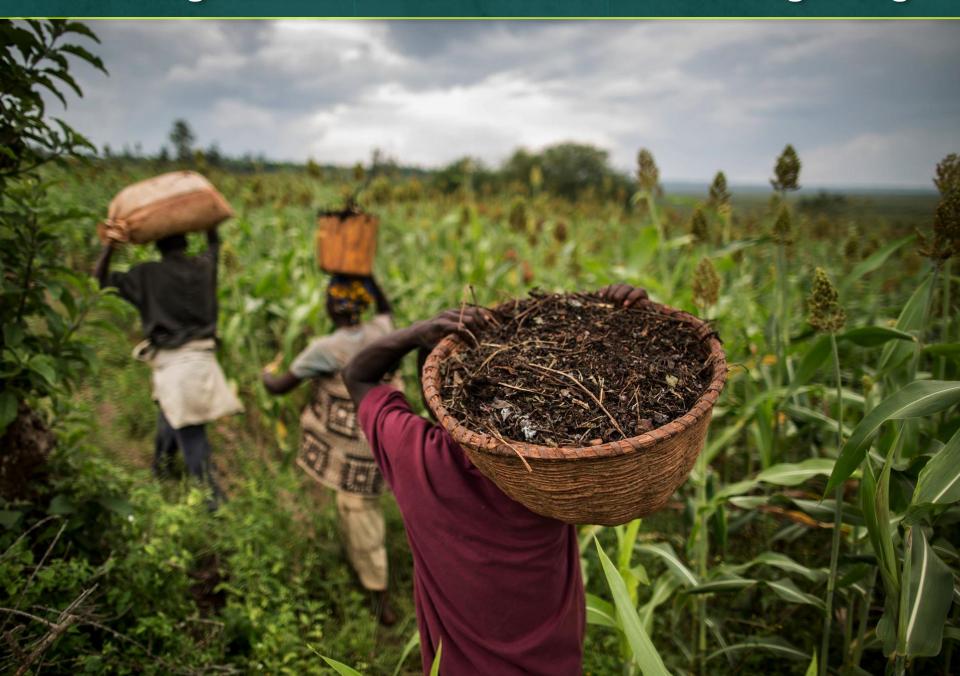


# The Challenge: Future agricultural production will depend upon managing the risks to land and water

Regions at risk based on status and trends of land resources, 2015



### The challenge: Land and water resources will need safeguarding



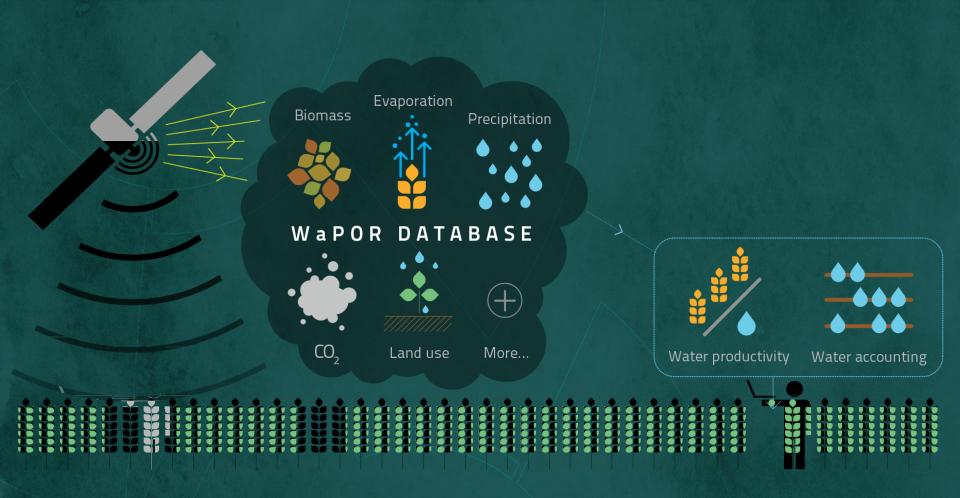
The responses: Land and water governance has to be more inclusive, adaptive and effective.



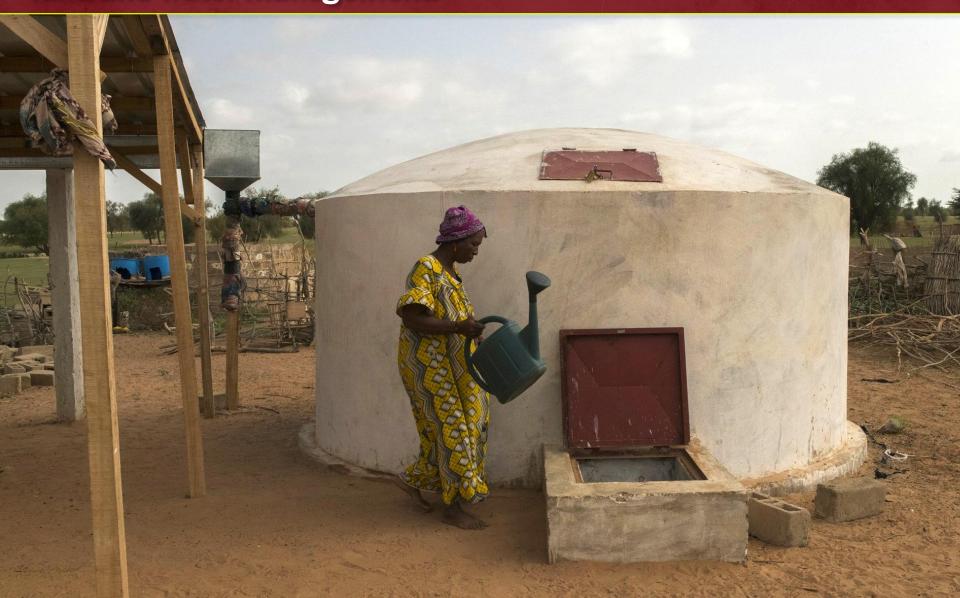
# The responses: integrated solutions need to be planned and implemented at all levels



# The responses: Technical and managerial innovation can be targeted to address priorities and accelerate transformation



The responses: agricultural support and investment can be redirected towards social and environmental gains derived from land and water management.



### No "one size fits all" solution exists, but a "full package" of workable solutions is available

Integrated water resource management

Transboundary water management

water

Land and water resource planning

Soil organic carbon sequestration

Sustainable use and

Modular Soil desalinization

management of fertilizers

farming system

Multi-stakeholder knowledge exchange

Solar-powered irrigation Water accounting

### **Innovative technologies**

**River basin management** 

**Soil biodiversity** 

**Nature based solutions** 

**Capacity** building

Adaptive governance

**Circular economy** 

**Climate mitigation** 

Drought preparedness

**Food security** 

Integrated landscape management

### **Irrigation modernization**

Marian Integrated solutions €

ട്ട് Land and water ഗ്ഗ് resource planning

Ecosystem restoration

Green infrastructure

Sustainable soil management

Inclusive land and water governance

auditing Climate adaptation

Water

Water, food, energy

Wastewater treatment Investment

Sustainable land<sup>s</sup>and water management

**Environmental health** 

Watershed management

**Water tenure** 

Data collection Coordinated policies

Biosaline agriculture

Salt-tolerant crops

Remote sensing

Innovative financing

**Ecosystem** restoration



Over 95% of food is produced on Land and begins with Soils and Water.

Let's work together to produce more with less and safeguard these resources for the future.

Thank you!

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