



Food and Agriculture
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Water and agriculture information systems for IWRM

*FAO tools to involve stakeholders in data
collection and analysis*

Virginie GILLET

Land and Water Officer

FAO Land and Water Division



Data and information for IWRM

- IWRM requires a participatory, coordinated and integrated process in order to achieve economic efficiency, environmental sustainability and social equity.
- Data and information of evidence-based decision making is key in IWRM.
- FAO has developed a number of tools and methodologies to collect and disseminate data at different levels.

Water information levels



FAO tools to involve stakeholders in data collection and analysis

- AQUASTAT – FAO’s Global information system for water and agriculture – Monitors SDG 6.4. – **National and water basin level**
- WAPOR – Using remote sensing data for water productivity – **National level**
- Participatory water accounting – MASSCOTE – Irrigation district level



AQUASTAT

- **FAO water flagships program. Since 1994.**
- Article 1 of FAO's Constitution "*Collect, analyze, interpret and disseminate information related to nutrition, food and agriculture*".
- In 2018, a network of national correspondents was established to promote national stakeholder participation and country ownership of data.

AQUASTAT – Areas of work

- **Data release**: water and agriculture statistics
 - AQUASTAT collects, analyses and provides free access to over 180 variables and indicators by country from 1960.
 - AQUASTAT collects data and monitors target **SDG 6.4 water stress and water use efficiency**. FAO is the **custodian agency** for SDG 6.4. Focal point for SDG 6.4
- **Methods and Standards** – Glossary, methodological guidelines
- **Capacity Development** – extensive training at regional level on the monitoring of SDG 6.4

AQUASTAT – Main data base

The screenshot displays the AQUASTAT web interface with the following sections:

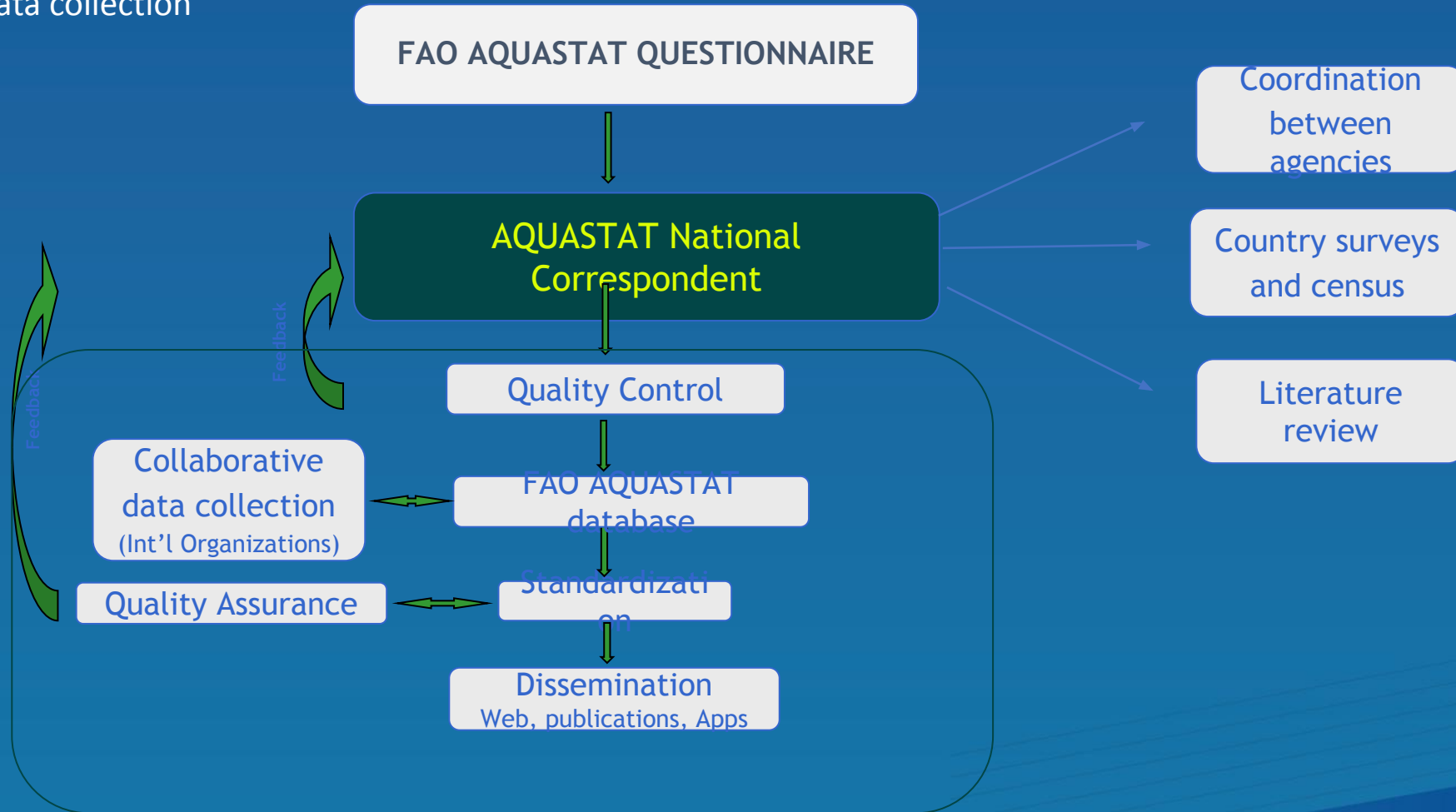
- SELECT VARIABLES:** A tree view of variables. A green oval highlights the following items:
 - MDG 7.5. Freshwater withdrawal as % of total renewable water resources
 - Agricultural water withdrawal as % of total renewable water resources
 - SDG 6.4.2. Water Stress
 - SDG 6.4.1. Water Use Efficiency
 - SDG 6.4.1. Irrigated Agriculture Water Use Efficiency
 - SDG 6.4.1. Industrial Water Use Efficiency
 - SDG 6.4.1. Services Water Use Efficiency
- SELECT COUNTRIES (1):** A list of countries with checkboxes. Bahrain is selected.
- SELECT PERIOD:** A timeline from 1960 to 2020. A range of 1968-1972 is selected.
- OPTIONS:** Includes 'Data Symbols' (checked) and 'Value Years' (checked).

180 variables:

15 geography & population
45 water resources
40 water use
70 irrigation and drainage
10 health and environment

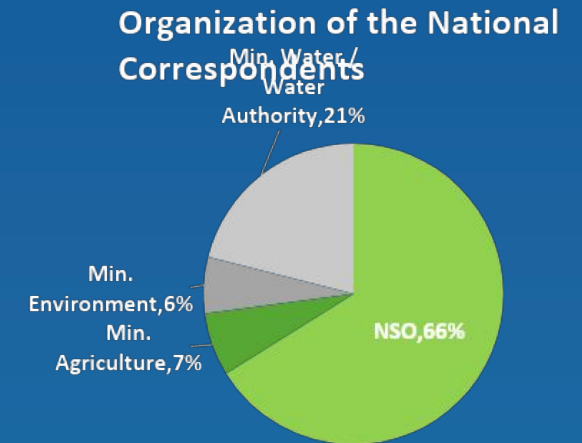
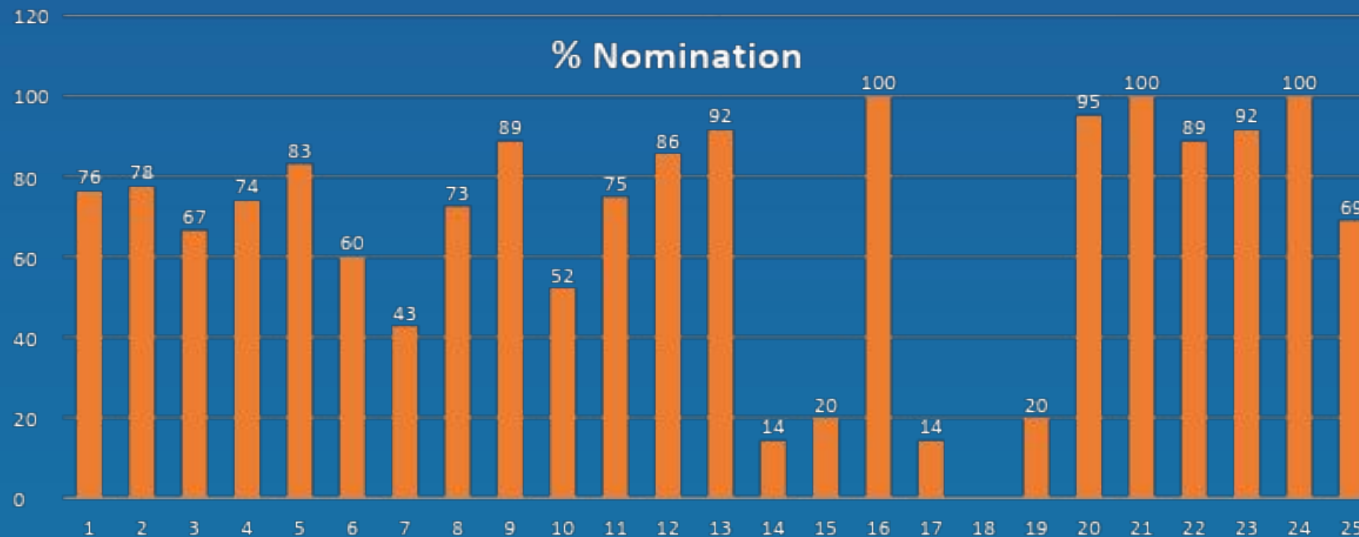
AQUASTAT – Data collection process (since 2018)

Annual data collection

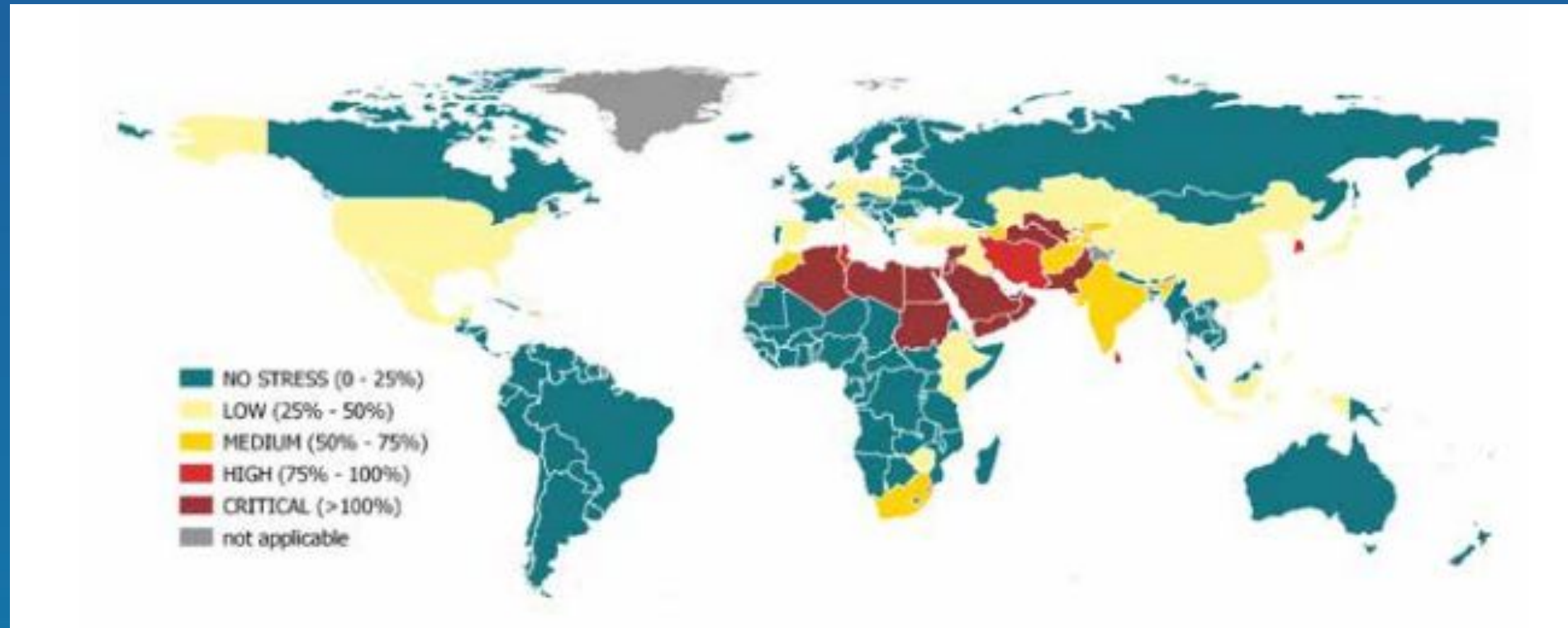


AQUASTAT – National correspondents

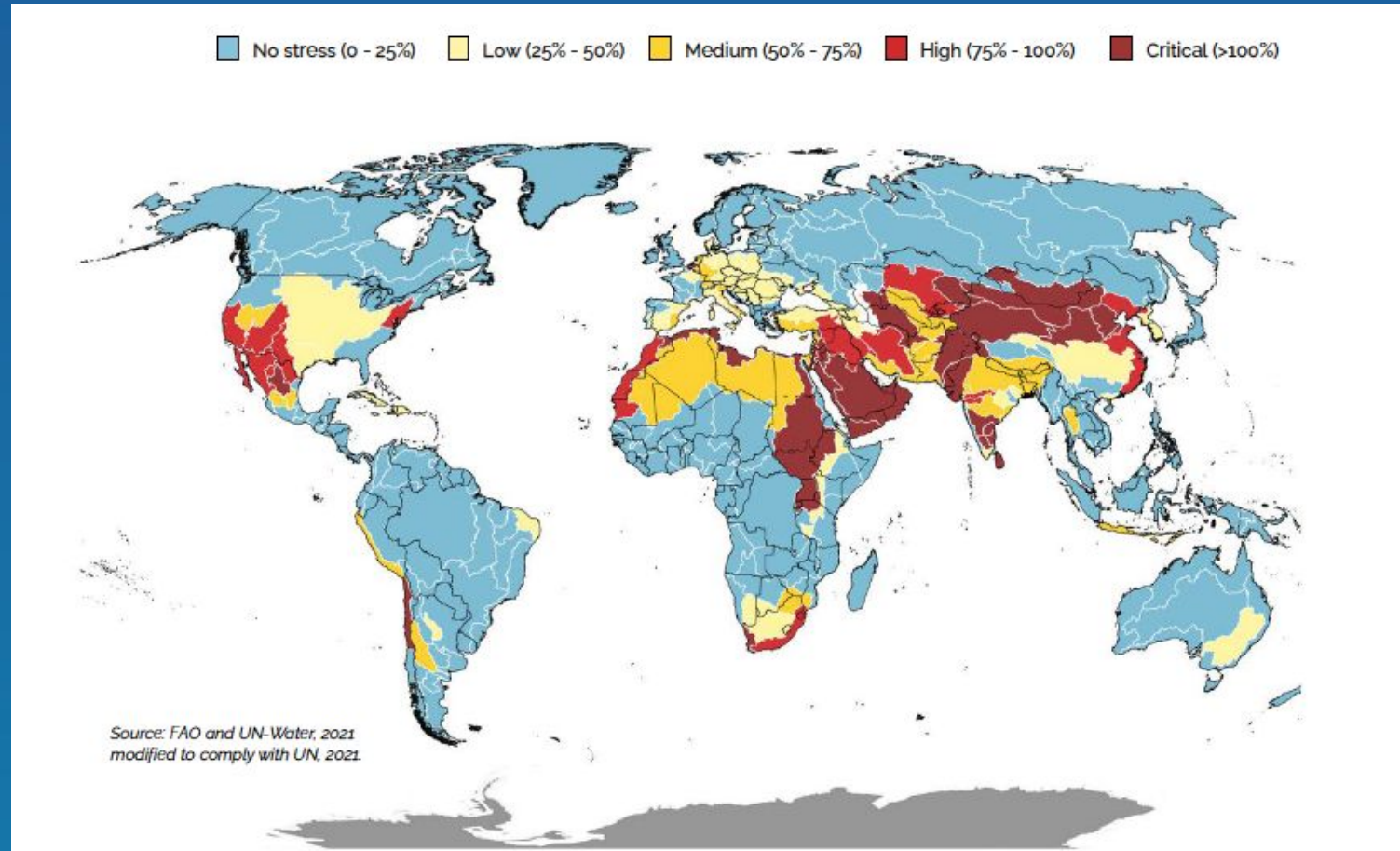
146 National Correspondents Nominated



SDG 6.4.2 – water stress (%) at national level



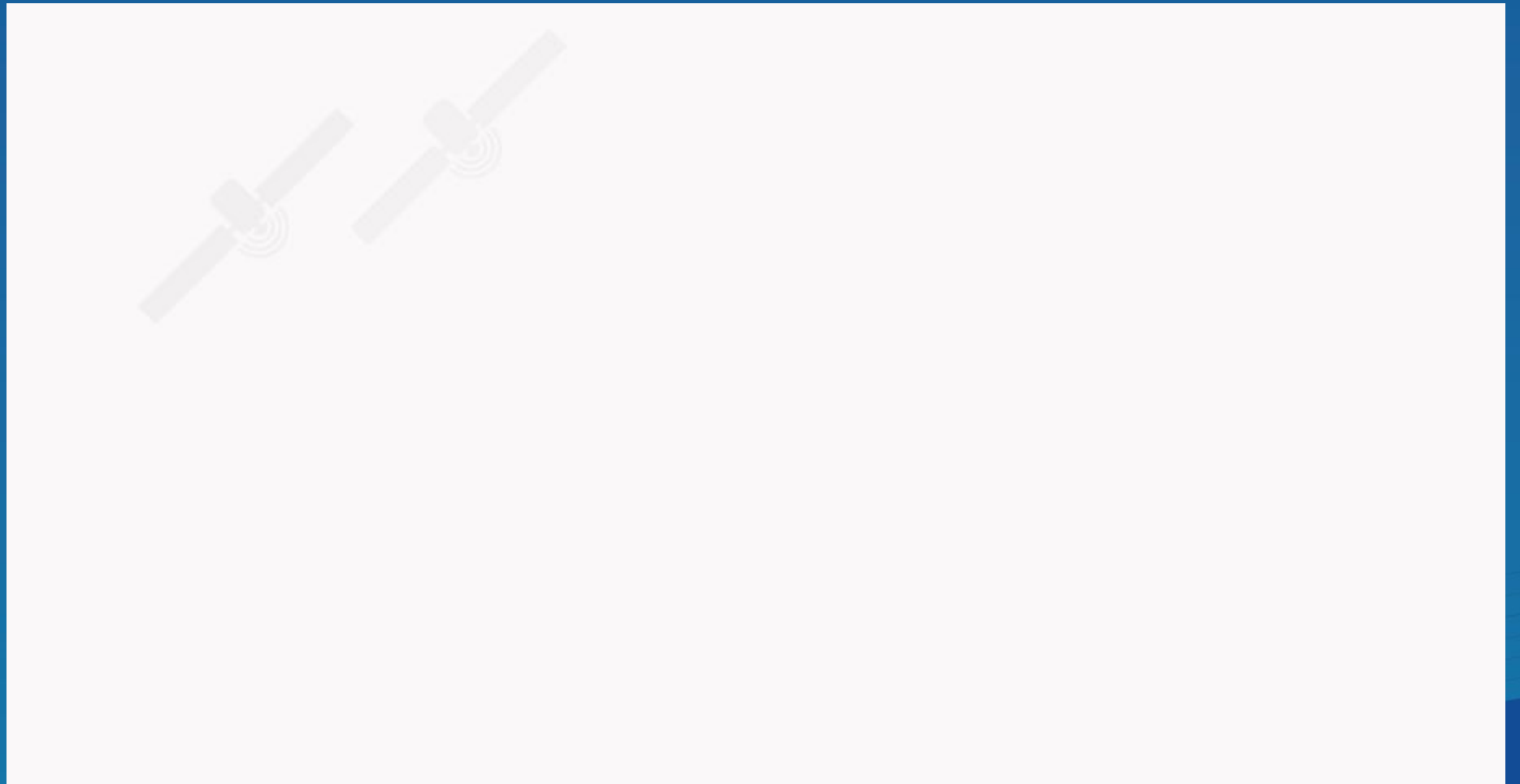
SDG 6.4.2 – water stress (%) at basin level



WaPOR: Water Productivity from Remote Sensing



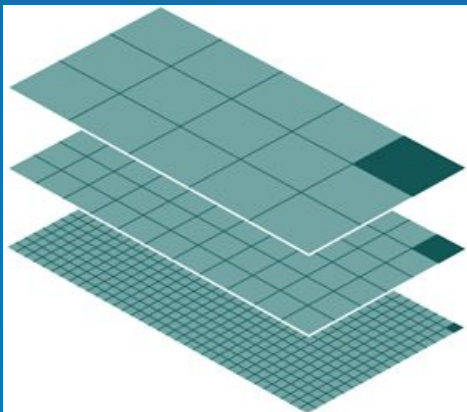
Consortium:



WaPOR provides actionable information

Near-real time (every 10 days) data on biomass development and water consumption (actual evapotranspiration), in addition to agro-climatic parameters on a daily time step (reference ET and precipitation).

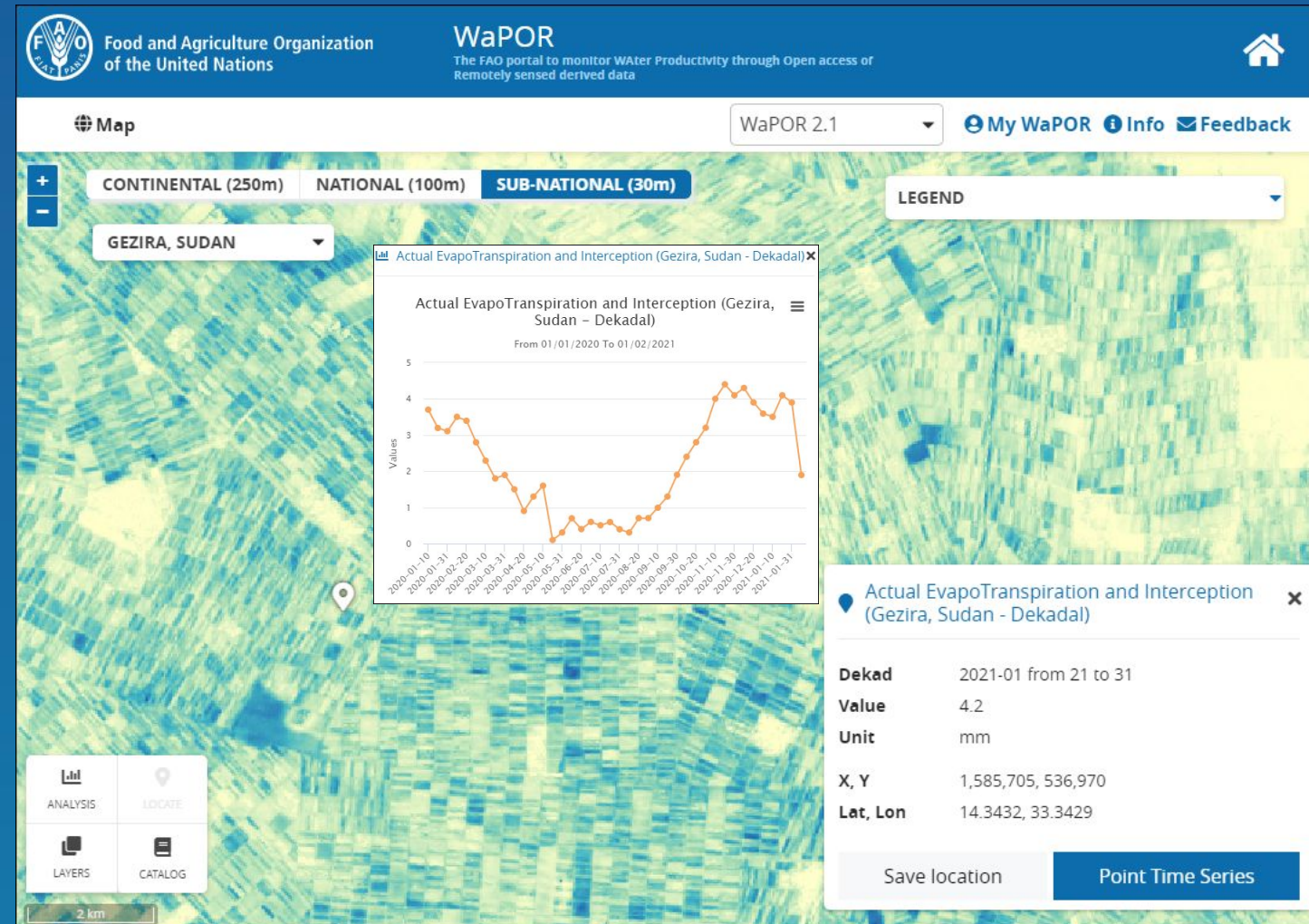
Spatial resolution ranges between 250 m and 30 m



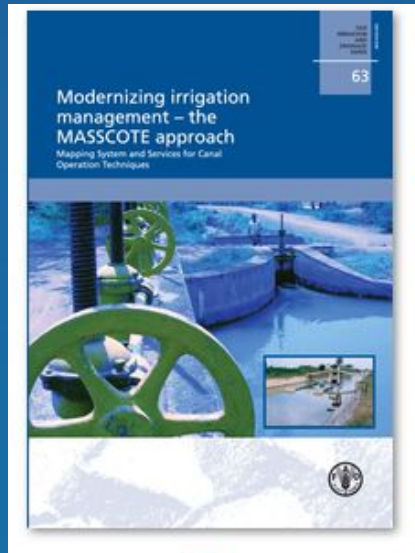
250m

100m

30m



MASSCOTE - Mapping System and Services for Canal Operation Techniques



The tool consists in a systematic way for collection data and information and diagnosing the performance of irrigation system improve the service to users.

<https://www.fao.org/publications/card/en/c/38967ec5-ab59-5394-bef3-ebb24b1f2ae2/>



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Thank you !

Virginie GILLET
Land and Water Officer
Virginie.Gillet@fao.org
aquastat@fao.org
wapor@fao.org

www.fao.org/land-water
Twitter: @FAOLandWater

