



Food and Agriculture
Organization of the
United Nations

AQUASTAT

AQUASTAT : FAO's global information system on water and agriculture

Multi-stakeholder workshop on the monitoring and reporting of SDG 6.4 target indicators (water use and scarcity) for RNE countries

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AQUASTAT

- **FAO water flagships program. Since 1994.**
- **Article 1 of FAO's Constitution to:**
“Collect, analyze, interpret and disseminate information related to nutrition, food and agriculture”.
- **AQUASTAT collects data and monitors target 6.4 water stress and water use efficiency. FAO is the custodian agency for SDG 6.4.**

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.

- **Methods and Standards** – Glossary, methodological guidelines
- **Capacity Development**

AQUASTAT - FAO's Global Information System on Water and Agriculture

	Overview	Databases	Geospatial Information	Profiles	Data Analysis	Activities	Publications
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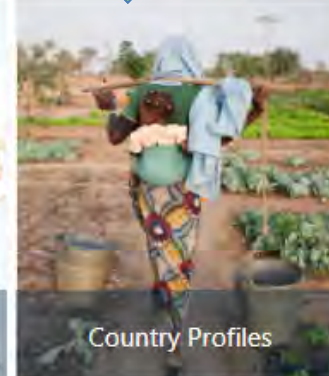


AQUASTAT is the FAO global information system on water resources and agricultural water management. It collects, analyses and provides free access to over 180 variables and indicators by country from 1960. AQUASTAT draws on national capacities and expertise with an emphasis on Africa, the Near East, countries of the former Soviet Union, Asia, and Latin America and the Caribbean. AQUASTAT plays a key role in the monitoring of the Sustainable Development Goal 6 that sets out to "ensure availability and sustainable management of water and sanitation for all", and in particular indicators of target 6.4 on water stress and water use efficiency.

Did you know?

- **79 countries compiled the 2018 AQUASTAT questionnaire on water and agriculture.** The data collected through this questionnaire and validated are now available in the AQUASTAT core database. The 2019 questionnaire has also been sent out to over 180 countries.
- **WaPOR version 2 database and the WaPOR 1.0 quality assessment report were launched at the 2nd International seminar on Drought and Agriculture 2019.** The technical report describes the quality assessment of the FAO's data portal to monitor water productivity through open access of remotely sensed derived data. [[Read the report](#)].

Highlights



AQUASTAT – Databases

- Main database: water and agriculture statistics (SDG 6.4 indicators)
- Institutions
- Dams
- Irrigated crop calendars



The screenshot shows the AQUASTAT website homepage. At the top, there is the FAO logo and the text "Food and Agriculture Organization of the United Nations". To the right, there is a search bar with "Google Custom Search" and a magnifying glass icon. Below the header, there are navigation links: "About FAO | In Action | Countries | Themes | Media | Publications | Statistics | Partnerships". The main heading is "AQUASTAT - FAO's Global Information System on Water and Agriculture". Below this, there is a navigation menu with "Overview", "Databases", "Geospatial Information", "Profiles", "Data Analysis", "Activities", and "Publications". A large image shows a person carrying baskets of green plants. Below the image, there is a text box describing AQUASTAT: "AQUASTAT is the FAO global information system on water resources and agricultural water management. It collects, analyses and provides free access to over 180 variables and indicators by country from 1960. AQUASTAT draws on national capacities and expertise with an emphasis on Africa, the Near East, countries of the former Soviet Union, Asia, and Latin America and the Caribbean. AQUASTAT plays a key role in the monitoring of the Sustainable Development Goal 6 that sets out to 'ensure availability and sustainable management of water and sanitation for all', and in particular indicators of target 6.4 on water stress and water use efficiency." To the right of this text box, there is a "Did you know?" section with two bullet points: "79 countries compiled the 2018 AQUASTAT questionnaire on water and agriculture. The data collected through this questionnaire and validated are now available in the AQUASTAT core database. The 2019 questionnaire has also been sent out to over 180 countries." and "WaPOR version 2 database and the WaPOR 1.0 quality assessment report were launched at the 2nd International seminar on Drought and Agriculture 2019. The technical report describes the quality assessment of the FAO's data portal to monitor water productivity through open access of remotely sensed derived data. [Read the report]." Below the text box, there is a "Highlights" section with three images: "Country Statistics" (a word cloud with "water" and "irrigation" highlighted), "Maps" (a world map showing water scarcity), and "Country Profiles" (a person carrying baskets of produce).

AQUASTAT – Main data base

Spatial coverage	193 countries and territories
Temporal coverage	1961 -2019
Thematic	Water resources: internal, transboundary, total Water uses: by sector, by source, wastewater Irrigation: location, area, typology, technology, crops Dams: location, height, capacity, surface area Water institutions, policies and legislation.

AQUASTAT dissemination system



AQUASTAT Dissemination System

Table

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English

About

AQUASTAT Dissemination System

Country, Variable by Year

Variables

Pressure on water resources x

Select Variables

Area

World x

Select Area

Year

2020 x 2019 x 2018 x

Country	Variable	Unit	Symbol	Year		
				2018	2019	2020
Algeria	SDG 6.4.1. Water Use Efficiency	US\$/m3	E	14.75	14.74	13.81
	SDG 6.4.2. Water Stress	%	E	137.92	137.92	137.92
Benin	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	36.11	39.12	39.55
	SDG 6.4.2. Water Stress	%	E	0.98	0.98	0.98
Burkina Faso	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	11.85	12.90	13.36
	SDG 6.4.2. Water Stress	%	E	7.82	7.82	7.82
Cabo Verde	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	54.05	57.66	49.72
	SDG 6.4.2. Water Stress	%	E	8.43	8.43	8.43
Côte d'Ivoire	SDG 6.4.1. Water Use Efficiency	US\$/m3	E	35.42	37.65	38.51
	SDG 6.4.2. Water Stress	%	E	5.09	5.09	5.09
Egypt	SDG 6.4.1. Water Use Efficiency	US\$/m3	E	4.59	4.81	4.87
	SDG 6.4.2. Water Stress	%	E	141.17	141.17	141.17
Gambia	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	11.27	12.43	11.52
	SDG 6.4.2. Water Stress	%	E	2.21	2.21	2.21
Ghana	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	30.50	33.08	32.58
	SDG 6.4.2. Water Stress	%	E	6.31	6.31	6.31
Guinea	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	9.12	9.33	10.47
	SDG 6.4.2. Water Stress	%	E	1.37	1.37	1.37
Guinea-Bissau	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	4.48	4.80	4.67
	SDG 6.4.2. Water Stress	%	E	1.50	1.50	1.50
Liberia	SDG 6.4.1. Water Use Efficiency	US\$/m3	E	4.63	4.38	4.27
	SDG 6.4.2. Water Stress	%	E	0.26	0.26	0.26

AQUASTAT – FAO Corporate Statistical Working System

The screenshot displays the AQUASTAT web interface. At the top, the FAO logo and 'Statistical Working System' are visible. The user is logged in as 'Ms Virginie Mireille Gillet'. The main workspace shows a table of data for 'Geographic Area M49' with columns for years 1996-2001. The table includes various water resource indicators. A 'Data inspector' window is open for the cell containing the value 3.502, showing the 'Data value' field and dropdown menus for 'flagAquastat' (set to 'L') and 'flagAquastatVisibility' (set to '3').

Geographic Area M49	[1996] 1996	[1997] 1997	[1998] 1998	[1999] 1999	[2000] 2000	[2001] 2001
[4196] Total exploitable water resources [10 ⁹ m3/year]	7.9		7.9	7.9	7.9	7.9
[4541] Interannual variability (WRI)						
[4542] Seasonal variability (WRI)						
[4197] Total dam capacity [km3]					5.006 L	
[4250] Agricultural water withdrawal [10 ⁹ m3/year]						3.502 L 3
[4252] Industrial water withdrawal [10 ⁹ m3/year]					0.5 I 1	
[4251] Municipal water withdrawal [10 ⁹ m3/year]					1.721 I 1	
[4152] Evaporation from artificial lakes and reservoirs [10 ⁹ m3/year]	0.1836 L	0.1836 L	0.1869 L	0.1943 L	0.1943 L	0.2078 L
[4253] Total water withdrawal [10 ⁹ m3/year]						
[4475] Irrigation water withdrawal [10 ⁹ m3/year]						3.502 L

Imputation : linear interpolation, carry- forward, vertical imputation

AQUASTAT – AQUASTAT country profiles



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AQUASTAT - FAO's Global Information System on Water and Agriculture

Overview Databases Geospatial Information Profiles Data Analysis Activities

AQUASTAT - FAO's Global Information System on Water and Agriculture

Overview Databases Geospatial Information Profiles Data Analysis Activities Resources



Country profiles

Regional overviews

- Africa
- America (Southern and Central) and the Caribbean
- Asia (Central)
- Asia (Southern and Eastern)
- Eastern Europe
- Middle East
- Transboundary River Basins

Regional overviews

The regional overviews provide data and analyses on groups of countries with similar geographic and climatic conditions.

The purpose of the regional overview is to present a regional perspective on water resources, agricultural water management and water infrastructures to support continental and regional analyses by providing systematic, up-to-date and reliable information that can serve as a tool for large-scale planning and projection making.

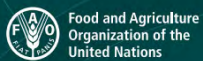
Regional overviews are available for six regions: 1) Southern America, Central America and the Caribbean (2016); 2) Eastern Europe (2016); 3) Central Asia (2013); 4) Southern and Eastern Asia (2012); 5) Middle East (2009); 6) Africa (2005).

Select a region on the map



Country, Regional and Transboundary River

section, 147 country profiles, 6 regional overviews and 11 river profiles. The profiles provide information on the water resources and water use, as well as the state of water infrastructure. The profiles also support the conservation, development and management of water infrastructure such as irrigation.

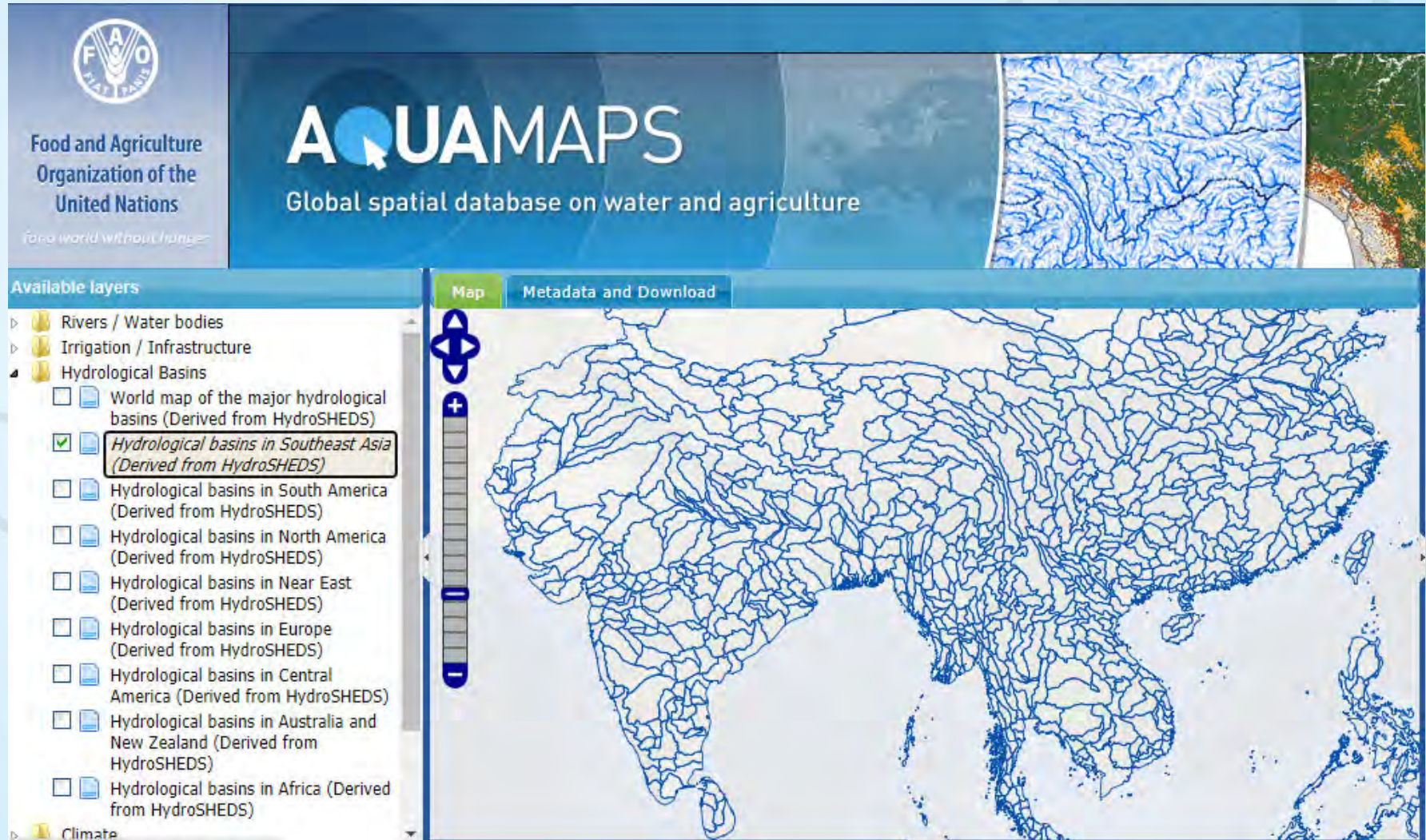


Food and Agriculture
Organization of the
United Nations

AQUASTAT
Country profile

Oman

AQUASTAT – Geospatial information – AQUAMAPS and Remote sensing



The screenshot displays the AQUAMAPS web interface. At the top left is the FAO logo and the text "Food and Agriculture Organization of the United Nations" with the slogan "for a world without hunger". The main header features the "AQUAMAPS" logo and the subtitle "Global spatial database on water and agriculture". Below the header, there are two tabs: "Map" (selected) and "Metadata and Download". The "Available layers" panel on the left lists various data layers, with "Hydrological basins in Southeast Asia (Derived from HydroSHEDS)" selected and highlighted with a red box. The main map area shows a detailed network of blue lines representing hydrological basins over the Southeast Asian region. Navigation controls, including a compass and a zoom slider, are visible on the left side of the map.

FAO
Food and Agriculture
Organization of the
United Nations
for a world without hunger

AQUAMAPS
Global spatial database on water and agriculture

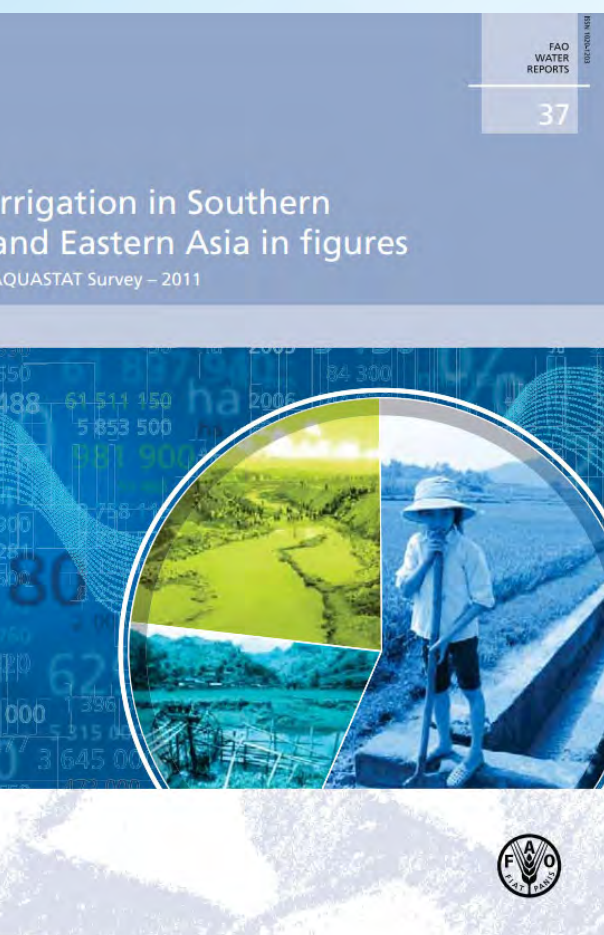
Available layers

- Rivers / Water bodies
- Irrigation / Infrastructure
- Hydrological Basins
 - World map of the major hydrological basins (Derived from HydroSHEDS)
 - Hydrological basins in Southeast Asia (Derived from HydroSHEDS)**
 - Hydrological basins in South America (Derived from HydroSHEDS)
 - Hydrological basins in North America (Derived from HydroSHEDS)
 - Hydrological basins in Near East (Derived from HydroSHEDS)
 - Hydrological basins in Europe (Derived from HydroSHEDS)
 - Hydrological basins in Central America (Derived from HydroSHEDS)
 - Hydrological basins in Australia and New Zealand (Derived from HydroSHEDS)
 - Hydrological basins in Africa (Derived from HydroSHEDS)
- Climate

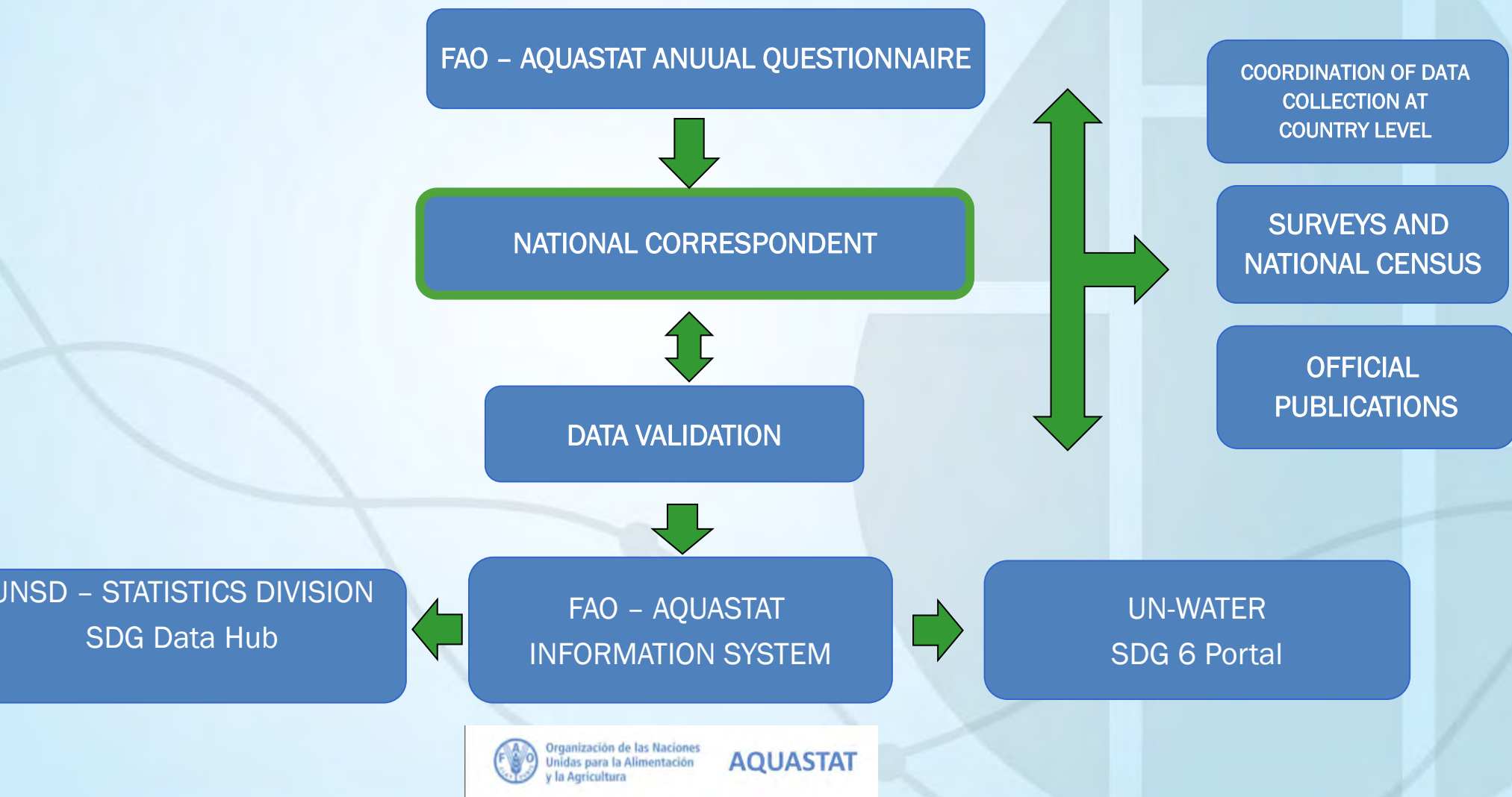
Map Metadata and Download

WWW.FAO.ORG/AQUASTAT

AQUASTAT – Publications and knowledge products

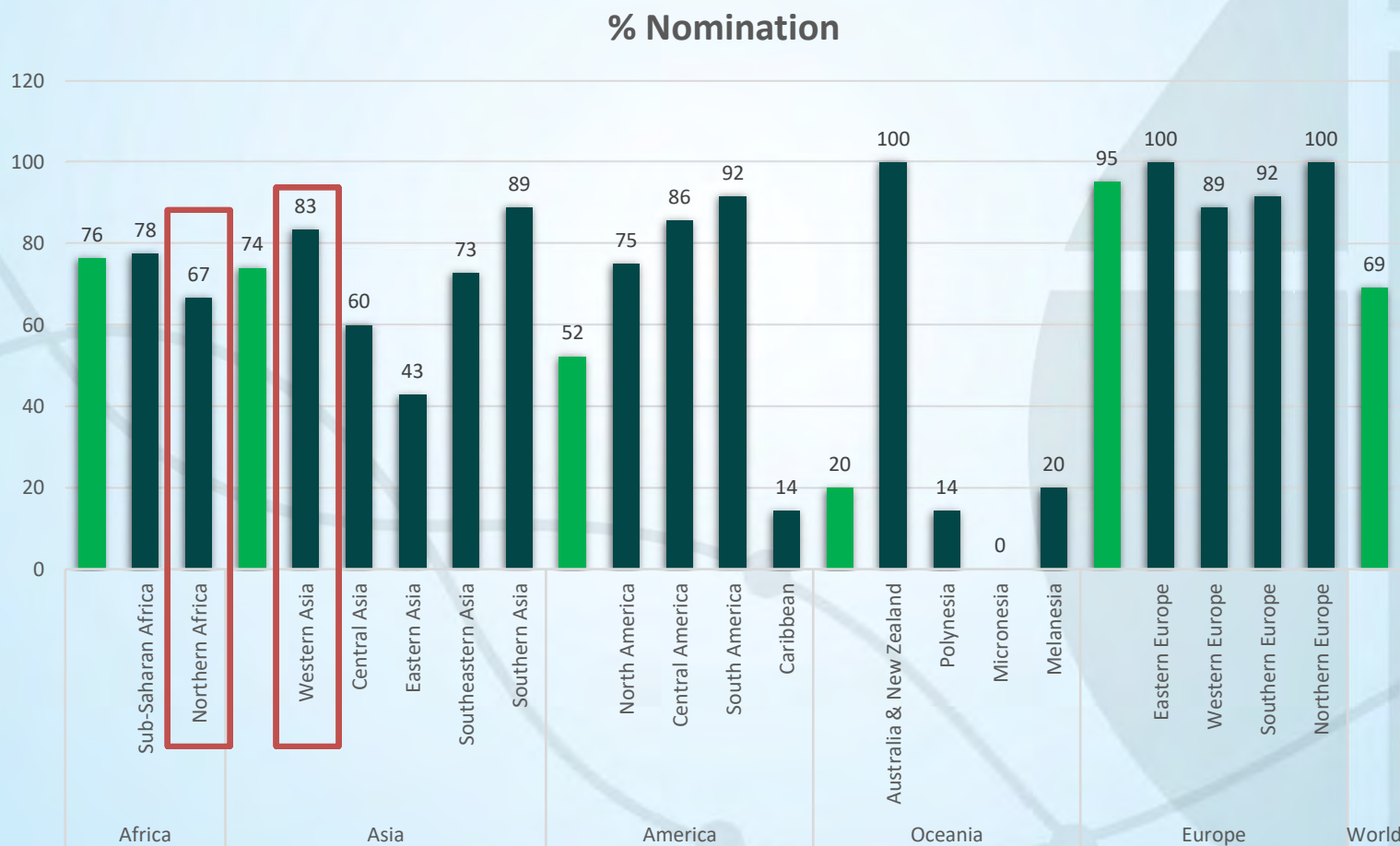


AQUASTAT – Data collection process (since 2018)

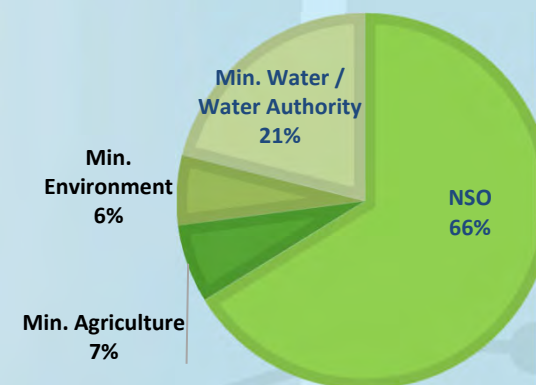


AQUASTAT – National correspondents

146 National Correspondents Nominated



Organization of the National Correspondents



AQUASTAT – QUESTIONNAIRE

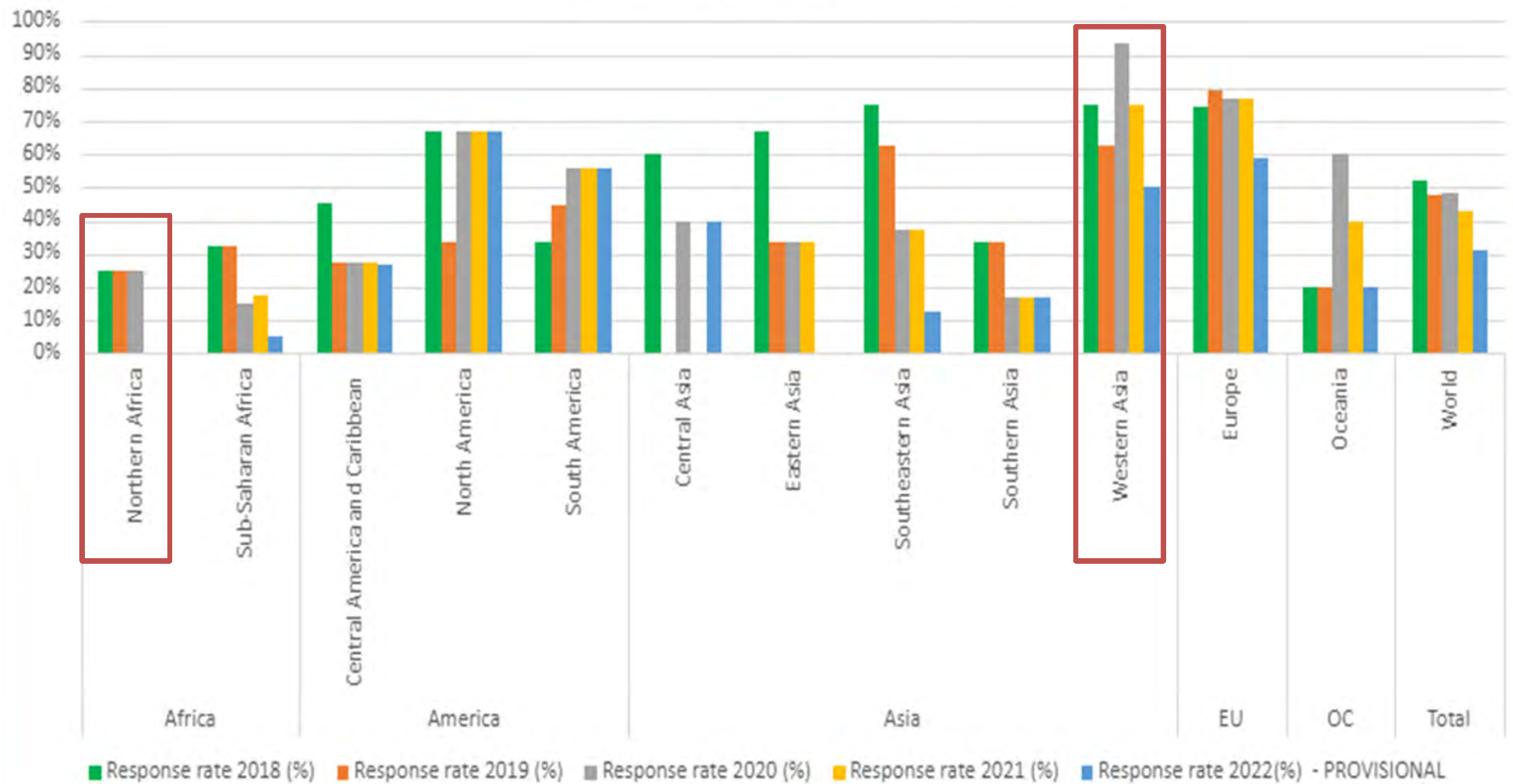
0 Water Resources		Unit	2015	2016	2017
0.1.					
011	Total Renewable Water Resources (Long-term average)	10 ⁹ m ³ /year			
I Water withdrawals					
I.1. Water withdrawals by sector		Unit	2015	2016	2017
111	Total water withdrawal (1111 + 1112 + 1113)				
1111	Agricultural water withdrawal: total (11111 + 11112 + 11113)				
11111	Water withdrawal for irrigation				
11112	Water withdrawal for livestock (watering and cleaning)				
11113	Water withdrawal for aquaculture	10 ⁹ m ³ /year			
1112	Municipal water withdrawal				
1113	Industrial water withdrawal (incl. water for cooling of thermoelectric plants)				
11131	Water withdrawal for cooling of thermoelectric plants				
112	Environmental flow requirements (stable over time)				
I.2. Water withdrawals by source		Unit	2015	2016	2017
121	Total surface water and groundwater withdrawal (freshwater) (1211 + 1212)				
1211	Surface water withdrawal				
1212	Groundwater withdrawal	10 ⁹ m ³ /year			
122	Desalinated water produced				
123	Direct use of treated municipal wastewater				
124	Direct use of agricultural drainage water				
II Municipal wastewater		Unit	2015	2016	2017
21	Produced municipal wastewater				
22	Collected municipal wastewater	10 ⁹ m ³ /year			
23	Treated municipal wastewater				
III Irrigation and drainage		Unit	2015	2016	2017
III.1. Area under agricultural water management					
311	Total agricultural water managed area (3111 + 3112 + 3113)				
3111	Area equipped for irrigation: total (31112 + 31113 + 31114)				
31111	Area equipped for irrigation: part actually irrigated				
31112	Area equipped for full control irrigation: total (311122 + 3111232 + 311124)				
311121	Area equipped for full control irrigation: part actually irrigated				
311122	Area equipped for full control irrigation: surface irrigation	1000 ha			
311123	Area equipped for full control irrigation: sprinkler irrigation				
311124	Area equipped for full control irrigation: localized irrigation				
31113	Area equipped for irrigation: equipped lowland areas				
31114	Area equipped for irrigation: spate irrigation				
3112	Cultivated wetlands and inland valley bottoms non-equipped				
3113	Flood recession cropping area non-equipped				
III.2. Irrigated production					
321	Total harvested irrigated crop area (full control irrigation only)	1000 ha			
III.3. Drainage					
331	Area equipped for irrigation drained	1000 ha			
IV Environment		Unit	2015	2016	2017
41	Area salinized by irrigation	1000 ha			

- Annual questionnaire (12 SDG variables out of 34 variables)

SDG indicators 6.4.1 & 6.4.2

Response rate (%) by Sub-region and year

Response Rate (%) by Sub-Region



Main challenges in SDG 6.4 monitoring process

- **Improve response rate– imputed data to calculate SDG 6.4**
- **Incomplete questionnaires and data inconsistencies, different definitions**
- **Institutional coordination at national level**
- **Lack of metadata (methodology, sources)**
- **Harmonization of methodologies for the calculation of SDG 6.4. indicators at national level**



Thank you

For more detailed information on AQUASTAT

WWW.FAO.ORG/AQUASTAT