

AQUASTAT, FAO

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Summary

AQUASTAT is the UN's Food and Agriculture Organization (FAO) global information system on water resources and agricultural water management. It collects, analyzes, and provides free access to over 180 variables and indicators by country and year from 1960. AQUASTAT plays an important role in monitoring of the UN's Sustainable Development Goal 6 that sets out to "ensure availability and sustainable management of water and sanitation for all". Additionally, AQUASTAT's new dissemination system allows users to download up to 100,000 data points and the data is made available yearly.

The data team uses AQUASTAT for a number of series including SeriesDesalinatedWater, SeriesLandCultivatedArea, and SeriesLandIrWaterLogged to name a few. To pull data, please follow the instructions below.

Tables In IFs

The latest data has been pulled from the report updated on April, 2025 which focused on the preprocessors and covers 184 economies. There are 60 series in total, 18 of them used in preprocessors and 42 of them are not in preprocessors.

The "Name in Source" is the "Variable" column in downloaded data.

Preprocessors

Tables	Definition	Unit	Years	Source	Original Source	Preprocessor	Preprocessor Name	Code
WaterTotalWithdSector	Total water withdrawal (summed by sector)	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Total water withdrawal
WaterGroundWithD	Ground Water Withdrawal	10^9 m3/year	1970-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Fresh groundwater withdrawal
WaterWithdMunicipal	Municipal water withdrawal	10^9 m3/year	1965-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Municipal water withdrawal
WaterWithdIndustrial	Industrial water withdrawal	10^9 m3/year	1965-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Industrial water withdrawal
WaterWithdAgriculture	Agricultural water withdrawal	10^9 m3/year	1965-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Agricultural water withdrawal
WaterTotalWithdSources	Total water withdrawal (summed by sources)	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Total freshwater withdrawal
WaterSurfaceWithD	Surface Water Withdrawal	10^9 m3/year	1970-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Fresh surface water withdrawal
WaterResExploitSurface	Exploitable: total renewable surface water (10^9 m3/yr)	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Exploitable: total renewable surface water
WaterResOverlap	Overlap between surface and groundwater	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Overlap between surface water and groundwater
WaterResTotalExploit	Water resources: total exploitable	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Total exploitable water resources
WaterResTotalRenewGround	Total renewable groundwater (actual) (10^9 m3/yr)	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Total renewable groundwater
WaterResTotalRenewSurface	Total renewable surface water (actual)	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Total renewable surface water
WaterResExploitGround	Exploitable: regular renewable groundwater	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Exploitable: regular renewable groundwater
WastewaterProduced	Wastewater: produced volume (10^9 m3/yr)	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Produced municipal wastewater
WasterwaterTreated	Wastewater: treated volume (10^9 m3/yr)	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Treated municipal wastewater
WastewaterTreatedReused	Treated wastewater reused (10^9 m3/yr)	10^9 m3/year	1964-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Treated municipal wastewater discharged (secondary water)
WaterDesalinated	Desalinated Water Produced	10^9 m3/year	1980-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Desalinated water produced
WaterResTotalRenew	Water resources: total renewable (actual)	10^9 m3/year	2000-2022	FAO AQUASTAT	https://data.apps.fao.org/aquastat/?lang=en 1	WATER		Total renewable water resources

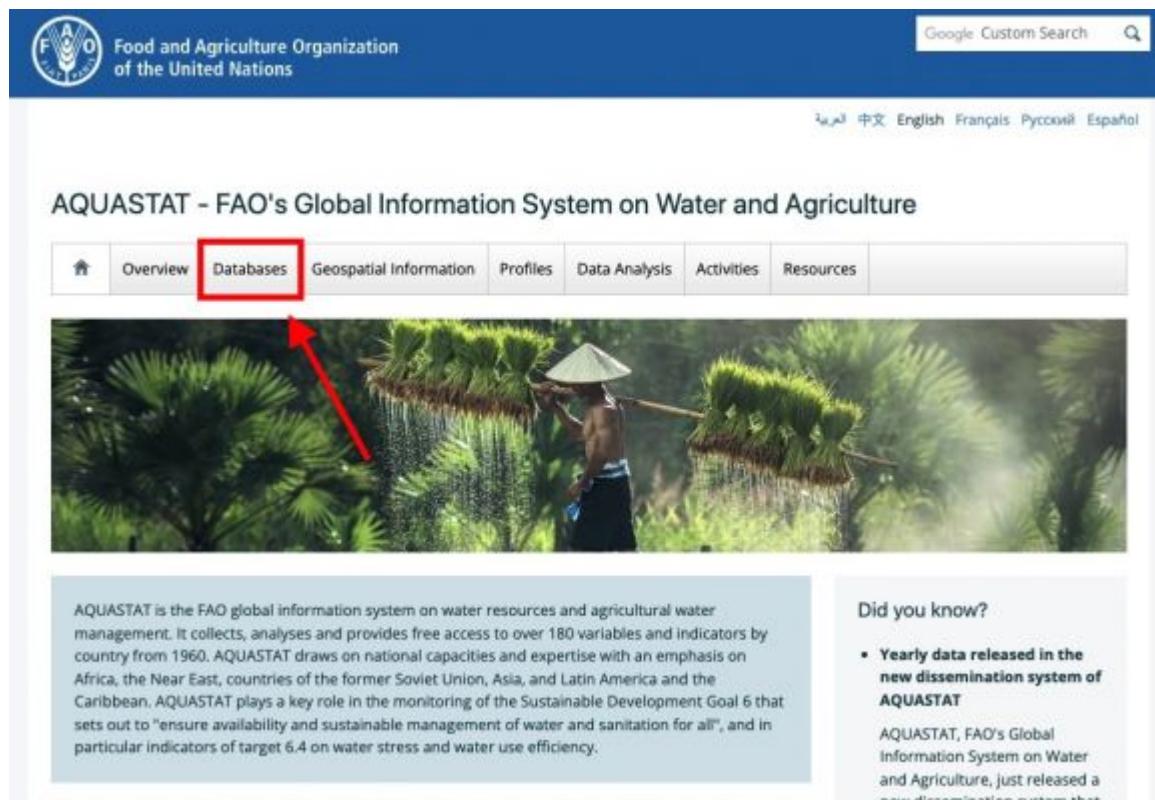
Non-preprocessors

Variable	Definition	Units	Years	Name in Source
DesalinatedWater	Desalinated Water Produced	10^9 m3/year	1980-2020	Desalinated water produced
IrWaterReq	Irrigation water requirement	10^9 m3/year	1987-2020	Irrigation water requirement
IrWaterWith	Irrigation water withdrawal	10^9 m3/year	1970-2020	Irrigation water withdrawal
WasteWaterDirectNotTreated	Direct use of not treated municipal wastewater for irrigation purposes	10^9 m3/year	1985-2020	Direct use of not treated municipal wastewater for irrigation purposes
WastewaterIrDirectTreated	Direct use of treated municipal wastewater for irrigation purposes	10^9 m3/year	1994-2020	Direct use of treated municipal wastewater for irrigation purposes
WaterGroundEntering	Groundwater entering the country (natural)	10^9 m3/year	1964-2020	Groundwater: entering the country (total)
WaterGroundLeaving	Groundwater leaving the country (naturally)	10^9 m3/year	1964-2020	Groundwater: leaving the country to other countries (total)
WaterGroundProdInternal	Groundwater produced internally (natural)	10^9 m3/year	1964-2020	Groundwater produced internally
WaterGroundTotal	Groundwater total renewable	10^9 m3/year	1964-2020	Total renewable groundwater
WaterTotalWithd	Total water withdrawal (summed by sector)	10^9 m3/year	1964-2020	Total water withdrawal
LandCultivatedArea	Cultivated area (1000 ha)	1000 ha	1964-2020	Cultivated area (arable land + permanent crops)
LandEquipIrActual	Area equipped for irrigation: actually irrigated	1000 ha	1964-2020	Area equipped for irrigation: actually irrigated
LandEquipIrFullControl	Area equipped for full control irrigation: total	1000 ha	1964-2020	Area equipped for full control irrigation: total
LandEquipIrFullControlActual	Area equipped for full control irrigation: actually irrigated	1000 ha	1964-2020	Area equipped for full control irrigation: actually irrigated
LandIrAreaEquip	Area equipped for irrigation: total (1000 ha)	1000 ha	1964-2020	Area equipped for irrigation: total
LandIrAreaSalinized	Area salinized by irrigation (1000 ha)	1000 ha	1972-2020	Area salinized by irrigation
LandIrEquipActual	Area equipped for irrigation: actually irrigated (1000 ha)	1000 ha	1964-2020	Area equipped for irrigation: actually irrigated
LandIrEquipDrained	Area equipped for irrigation drained (1000 ha)	1000 ha	1985-2020	Area equipped for irrigation drained
LandIrEquipGround	Area equipped for irrigation by groundwater	1000 ha	1964-2020	Area equipped for irrigation by groundwater
LandIrEquipMixed	Area equipped for irrigation by mixed surface water and groundwater	1000 ha	1989-2020	Area equipped for irrigation by mixed surface water and groundwater
LandIrEquipSurface	Area equipped for irrigation by surface water	1000 ha	1964-2020	Area equipped for irrigation by surface water
LandIrHarvestedCropArea	Total harvested irrigated crop area (1000 ha)	1000 ha	1964-2020	Total harvested irrigated crop area (full control irrigation)
LandIrPotential	Irrigation potential (1000 ha)	1000 ha	1964-2020	Irrigation potential
LandIrWaterLogged	Area waterlogged by irrigation (1000 ha)	1000 ha	1980-2020	Area waterlogged by irrigation
WasteWaterLandEquipDirectNotTreated	Direct use of not treated municipal wastewater for irrigation purposes	1000 ha	1972-2020	Area equipped for irrigation by direct use of not treated municipal wastewater
WasteWaterLandEquipDirectTreated	Area equipped for irrigation by direct use of treated municipal wastewater	1000 ha	1971-2020	Area equipped for irrigation by direct use of treated municipal wastewater
WaterTotalAgManagedArea	Total agricultural water managed area	1000 ha	1964-2020	Total agricultural water managed area
WaterTotalRenewPC	Water resources: total renewable per capita (actual)	Cubic Meter	1964-2020	Total renewable water resources per capita
WaterTotalWithdPC	Total water withdrawal per capita	Cubic Meter	1964-2020	Total water withdrawal per capita
TotalDamCapacity	Total dam capacity (km3)	km3	1964-2020	Total dam capacity
IrrigatedCropIntensity	Irrigated Crop Intensity	Percent	1964-2020	Irrigated cropping intensity
LandIr%Grain	% of total grain production irrigated (%)	Percent	1984-2020	% of total grain production irrigated
LandIrActual%Equip	Area equipped for irrigation: actually irrigated, %	Percent	1964-2020	% of the area equipped for irrigation actually irrigated
LandIrEquip%Cultivated	% of cultivated area equipped for irrigation (%)	Percent	1964-2020	% of the cultivated area equipped for irrigation
LandIrEquip%Potential	% of irrigation potential equipped for irrigation (%)	Percent	1964-2020	% of irrigation potential equipped for irrigation
LandIrEquip%WaterManaged	% of agricultural water managed area equipped for irrigation (%)	Percent	1964-2020	% of agricultural water managed area equipped for irrigation
WaterDependencyRatio	Dependency ratio, percentage of total renewable water resources originating outside of the country	Percent	1964-2020	Dependency ratio
WaterWith%Agric	Water withdrawals, percent used in agriculture (1990=70-99;2000=update, mostly 2000)	Percent	1965-2020	Agricultural water withdrawal as % of total water withdrawal MDG 7.5. Freshwater withdrawal
WaterWith%Fresh	% of total actual renewable freshwater resources withdrawn (%)	Percent	1964-2020	as % of total renewable water resources
WaterWith%Household	Water withdrawals, percent used by households (1990=70-99;2000=update, mostly 2000)	Percent	1965-2020	Municipal water withdrawal as % of total withdrawal
WaterWith%Ind	Water withdrawals, percent used in industry (1990=70-99;2000=update, mostly 2000)	Percent	1965-2020	Industrial water withdrawal as % of total water withdrawal
WaterWithAgr%FreshAquastat	% of total actual renewable water resources withdrawn by agriculture (%)	Percent	1965-2020	Agricultural water withdrawal as % of total renewable water resources

Data Pulling Instructions

Step 1.) Navigate to the home page of AQUASTAT FAO's Global Information System on Water and Agriculture,

Step 2.) Near the top of the page, click on the tab labeled "**Database**"



The screenshot shows the AQUASTAT homepage. At the top, there is a blue header with the FAO logo, the text "Food and Agriculture Organization of the United Nations", a "Google Custom Search" bar, and language links for English, Français, Русский, and Español. Below the header, the title "AQUASTAT - FAO's Global Information System on Water and Agriculture" is displayed. A navigation bar contains tabs for Home, Overview, **Databases** (which is highlighted with a red box and a red arrow pointing to it), Geospatial Information, Profiles, Data Analysis, Activities, and Resources. The main content area features a photograph of a person in a traditional conical hat working in a lush, green agricultural field. To the left of the image is a text box containing a brief description of AQUASTAT's mission and history. To the right is a "Did you know?" section with a bullet point about a new dissemination system and a link to a press release.

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?

- Yearly data released in the new dissemination system of AQUASTAT

AQUASTAT, FAO's Global Information System on Water and Agriculture, just released a new dissemination system that

AQUASTAT's Homepage

Step 3.) On the left hand side of the page, click on the tab labeled "**Country Statistics**"

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



The screenshot shows the AQUASTAT homepage. At the top, there is a navigation bar with tabs: Home, Overview, Databases (which is highlighted in orange), Geospatial Information, Profiles, Data Analysis, Activities, and Resources. Below the navigation bar is a large image of a computer screen displaying a block of code. To the left of the image is a sidebar with the following menu items: Country Statistics (which is highlighted with a red box and a red arrow), Irrigated crop calendars, Sub-national irrigation, Dams, Institutions, and Glossary.

Country Statistics

Databases

The AQUASTAT portal enables users to access the core database of country statistics, focused on water resources, water uses and agricultural water management. Along with it, other water information in the form of complementary databases, such as the irrigated crop calendars and the sub-national irrigation areas databases, the detailed database on dams and reservoirs and the water-and agriculture-related institutions database are available.

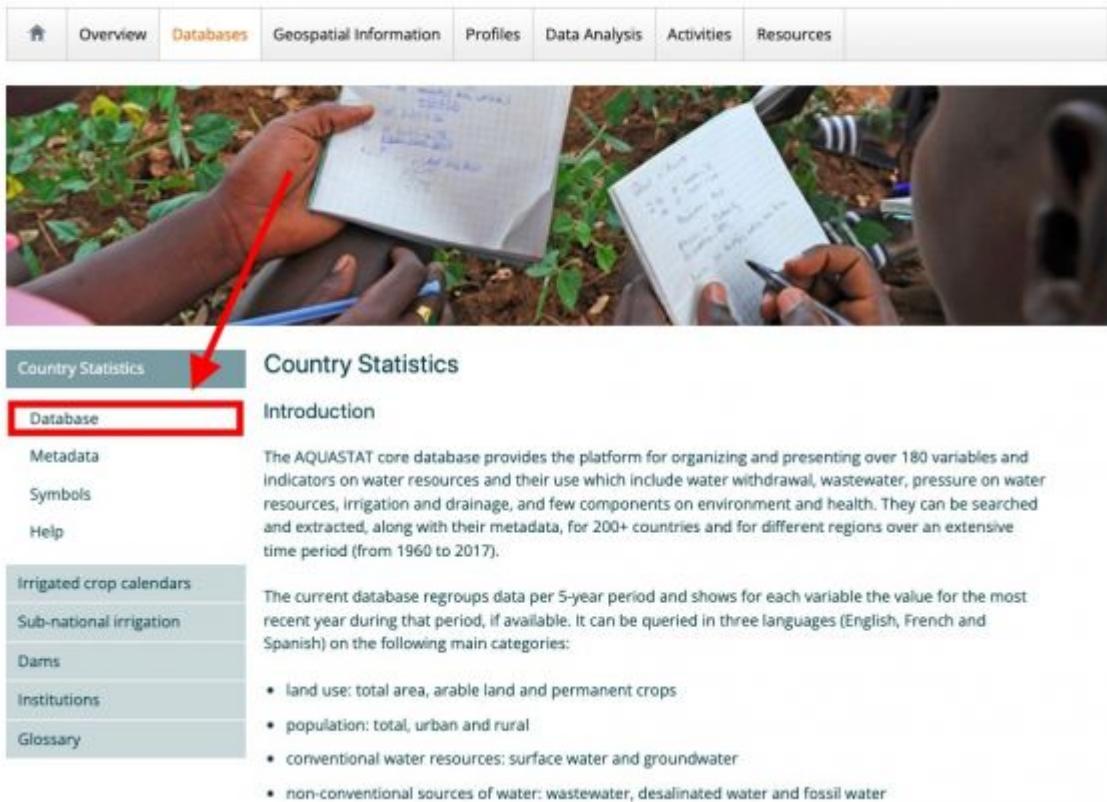
The glossary is also an important component of AQUASTAT, offering multilingual definitions of 500+ water-related terms and key indicators, including detailed reference sources and links to related terms.

AQUASTAT's Database Homepage

Step 4.) On the left hand side of the page, click on the tab labeled "**Database**", under "Country Statistics"

THIS WILL OPEN A PAGE ON ANOTHER TAB

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



The screenshot shows the AQUASTAT Country Statistics page. At the top, there is a navigation bar with tabs: Home, Overview, Databases (which is highlighted in orange), Geospatial Information, Profiles, Data Analysis, Activities, and Resources. Below the navigation bar is a large image of two people in a field, one holding a clipboard and the other writing in a notebook. To the left of the image is a sidebar with the following menu items: Country Statistics (which is highlighted with a red box and a red arrow), Database (which is highlighted with a red box), Introduction, Metadata, Symbols, Help, Irrigated crop calendars, Sub-national irrigation, Dams, Institutions, and Glossary.

Country Statistics

Database

Introduction

The AQUASTAT core database provides the platform for organizing and presenting over 180 variables and indicators on water resources and their use which include water withdrawal, wastewater, pressure on water resources, irrigation and drainage, and few components on environment and health. They can be searched and extracted, along with their metadata, for 200+ countries and for different regions over an extensive time period (from 1960 to 2017).

Irrigated crop calendars

Sub-national irrigation

Dams

Institutions

Glossary

AQUASTAT's Country Statistics Page

AQUASTAT Homepage

Step 5.) Under the "Areas" section on the left side, select **(World)** to select all countries. You can also select different regions.

Select (World)

Step 6.) Under the "Year" section on the left, select each year to see it represented in the data.

Area
World
Select Area

Year
2020 X 2019 X 2018 X X |
2017 (highlighted with a red arrow)
2016
2015
2014
2013

AQUASTAT Dissemination System

Country, Variable by Year Change

Country	Variable	Unit	Symbol	Yea
Afghanistan	Agricultural water withdrawal as % of total renewable water resources	%	I	
	MDG 7.5. Freshwater withdrawal as % of total renewable water resources	%	I	
	SDG 6.4.1. Industrial Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Irrigated Agriculture Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Services Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	
	SDG 6.4.2. Water Stress	%	E	
Albania	Agricultural water withdrawal as % of total renewable water resources	%	E	
	MDG 7.5. Freshwater withdrawal as % of total renewable water resources	%	E	
	SDG 6.4.1. Industrial Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Irrigated Agriculture Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Services Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	
	SDG 6.4.2. Water Stress	%	E	

Select Years

Step 7.) To find your specific variable, click which "Variable Group" it is in, then the "Variable Subgroup", and finally your "Variable". You can also start typing your variable name in the "Select Variables" space and it will display that variable and similar ones.

AQUASTAT Dissemination System

Variables
Pressure on water resources
Select Variables (highlighted with a red arrow)

+ Environment and health
+ Geography and population
+ Irrigation and drainage development
+ Water resources
+ Water use

2020 X 2019 X X |
2017
2016
2015
2014
2013

AQUASTAT Dissemination System

Country, Variable by Year Change

Country	Variable	Unit	Symbol	Yea
Afghanistan	Agricultural water withdrawal as % of total renewable water resources	%	I	
	MDG 7.5. Freshwater withdrawal as % of total renewable water resources	%	I	
	SDG 6.4.1. Industrial Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Irrigated Agriculture Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Services Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	
	SDG 6.4.2. Water Stress	%	E	
Albania	Agricultural water withdrawal as % of total renewable water resources	%	E	
	MDG 7.5. Freshwater withdrawal as % of total renewable water resources	%	E	
	SDG 6.4.1. Industrial Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Irrigated Agriculture Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Services Water Use Efficiency	US\$/m3	E	
	SDG 6.4.1. Water Use Efficiency	US\$/m3	I	
	SDG 6.4.2. Water Stress	%	E	

The Variable Group of your Series

Step 8.) Download the data by clicking "Share/Download". You will then be given download options. Click "Excel". An Excel file will download. Now you can format the data to upload it into IFs. To import data into IFs, please follow the instructions found in the Importing Data (general instructions) page.

Select "Download"

SPECIFIC VARIABLE EXAMPLE: SeriesIrrigatedCropIntensity

Step 9.) On the left hand side, under "Year", select desired years of data. This example will use years 2000-2020. **"Irrigation and drainage development"**

Country	Variable	Unit	Symbol	Year					
				2009	2011	2012	2013	2014	2015
Afghanistan	Irrigated cropping intensity	%	E						
Albania	Irrigated cropping intensity	%	E						
Algeria	Irrigated cropping intensity	%	E		100.00	101.40	102.54	103.49	104.30
Angola	Irrigated cropping intensity	%	I						100.00
Antigua and Barbuda	Irrigated cropping intensity	%	I						
Argentina	Irrigated cropping intensity	%	E	131.14	135.32	139.45	135.53	132.06	128.98
Armenia	Irrigated cropping intensity	%	I	100.00	100.00	100.00	100.00	100.00	100.00
Australia	Irrigated cropping intensity	%	E						
Austria	Irrigated cropping intensity	%	E						
Azerbaijan	Irrigated cropping intensity	%	E	82.40	87.97	92.62	97.72	102.65	102.35
Belarus	Irrigated cropping intensity	%	E	110.00	110.00	110.00	110.00	110.00	110.00

Select Years

Step 10.) Start typing "**Irrigated cropping intensity**" into the "Select Variable" box. "**Irrigated cropping intensity**" will be under variable group "Irrigation and drainage development" and variable subgroup "Irrigated crop area and cropping intensity". Select the variable and a blue check mark will appear.

AQUASTAT Dissemination System

Variables

Irrigated cropping intensity

Irrigated cropping

Irrigation and drainage development

Irrigated crop area and cropping intensity

 Irrigated cropping intensity

Year

2020 ✕ 2019 ✕ 2018 ✕

2017 ✕ 2016 ✕ 2015 ✕

Country, Variable by Year

Change

Country	Variable	Unit	Symbol	Year					
				2000	2001	2002	2003	2004	2005
Afghanistan	Irrigated cropping intensity	%	E						
Albania	Irrigated cropping intensity	%	E						
Algeria	Irrigated cropping intensity	%	E			100.00	101.40	102.54	103.49
Angola	Irrigated cropping intensity	%	I						100.00
Antigua and Barbuda	Irrigated cropping intensity	%	I						
Argentina	Irrigated cropping intensity	%	E	131.14	135.32	139.45	135.53	132.06	128.98
Armenia	Irrigated cropping intensity	%	I		100.00	100.00	100.00	100.00	100.00
Australia	Irrigated cropping intensity	%	E						
Austria	Irrigated cropping intensity	%	E						
Azerbaijan	Irrigated cropping intensity	%	E	82.40	87.97	92.62	97.72	102.65	102.35
Bolivia	Irrigated cropping intensity	%	E	100.00	100.00	100.00	100.00	100.00	100.00

Select the Variable

Step 11.) To select all countries, make sure "World" is selected under "Area".


AQUASTAT

Variables

Irrigated cropping intensity

Select Variables

Area

World ✕

Select Area

Year

2020 ✕ 2019 ✕ 2018 ✕

2017 ✕ 2016 ✕ 2015 ✕

2014 ✕ 2013 ✕ 2012 ✕

2011 ✕ 2010 ✕ 2009 ✕

Country, Variable by Year

Change

Country	Variable	Unit	Symbol	Year					
				2000	2001	2002	2003	2004	2005
Afghanistan	Irrigated cropping intensity	%	E						
Albania	Irrigated cropping intensity	%	E						
Algeria	Irrigated cropping intensity	%	E		100.00	101.40	102.54	103.49	104.30
Angola	Irrigated cropping intensity	%	I						100.00
Antigua and Barbuda	Irrigated cropping intensity	%	I						
Argentina	Irrigated cropping intensity	%	E	131.14	135.32	139.45	135.53	132.06	128.98
Armenia	Irrigated cropping intensity	%	I	100.00	100.00	100.00	100.00	100.00	100.00
Australia	Irrigated cropping intensity	%	E						
Austria	Irrigated cropping intensity	%	E						
Azerbaijan	Irrigated cropping intensity	%	E	82.40	87.97	92.62	97.72	102.65	102.35
Bolivia	Irrigated cropping intensity	%	E	100.00	100.00	100.00	100.00	100.00	100.00

Select "World"

Step 12.) Data will now populate the page on the right side.

Data Notes

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This page was last edited on 15 August 2025, at 16:36.