

Digital Water Atlas (DWA)

Holm Voigt & Marcel Endejan
GWSP IPO – Bonn, Germany



Ultimate Goal

The purpose and intent of the Digital Water Atlas is to describe the basic elements of the Global Water System, the interlinkages of the elements and changes in the state of the Global Water System by creating a consistent set of annotated maps.

<http://atlas.gwsp.org>

Home Contact Us News Links search...

MAIH MENU

- Home
- About ...
- Maps ...
 - browse
 - alphabetic list
 - by EIONET category
 - by graphical overview
 - by UML diagram
- Links
- Credits
- Disclaimer

Home • Maps ... • **alphabetic list** • Domestic Water Use

Domestic Water Use

Go to: [Description](#) - [Dataset](#) - [Interactive Map](#)

Global domestic water use for year 2000 (millions of m³/year per 0.5 degree grid cell).

Map description and dataset provided by: Water Systems Analysis Group, Complex System Research Center, Institute for the Study of Earth, Oceans and Space, University of New Hampshire, USA.

Description

This map shows the distribution of contemporary domestic water use throughout the globe and illustrates the considerable demand for water in the highly populated and industrialized regions of the globe. "Hot Spots" of very high domestic water demand can be readily seen in developed nations associated with the metropolitan areas.

Interpretation

Domestic water demand is linked closely to both population growth and economic development. Over the past few centuries global water use including domestic use has grown nearly exponentially with the more populous and faster growing areas showing the greatest increases in use. With increases in population and industrialization of developing nations the world may face substantial challenges to water infrastructure and associated water services potentially incurring large economic costs.

Source

The dataset for this map was provided by: Charles J. Vörösmarty, Water Systems Analysis Group, Complex System Research Center, Institute for the Study of Earth, Oceans and Space, University of New Hampshire, USA.

Background

This dataset was developed for the Millennium Ecosystem Assessment Series, Ecosystems And Human Well-Being: Current State And Trends, Findings of the Condition and Trends Working Group (<http://www.maweb.org/en/Condition.aspx>) and represents an update to the water demand dataset developed for Vörösmarty et al., 2000.

Citation

Please cite this map as: "GWSP Digital Water Atlas (2008). Map 46: Domestic Water Use (V1.0). Available online at <http://atlas.gwsp.org>."

Contact Information

Charles J. Vörösmarty, Water Systems Analysis Group, Complex System Research Center, Institute for the Study of Earth, Oceans and Space, University of New Hampshire, Durham, NH USA 03824, charles.vorosmarty@unh.edu, Phone: +01.603.862.0850, Fax: +01.603.8

Legend
country
Domestic Water Use, year 2000 [mio. m³/y]

0
less than 1
1 - 10
10 - 100
more than 100

GWSP Digital Water Atlas 0 7922km

< Prev Next >

[Back]

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12. March 2011 GTN-H Coordination Panel Session, Tokio 3

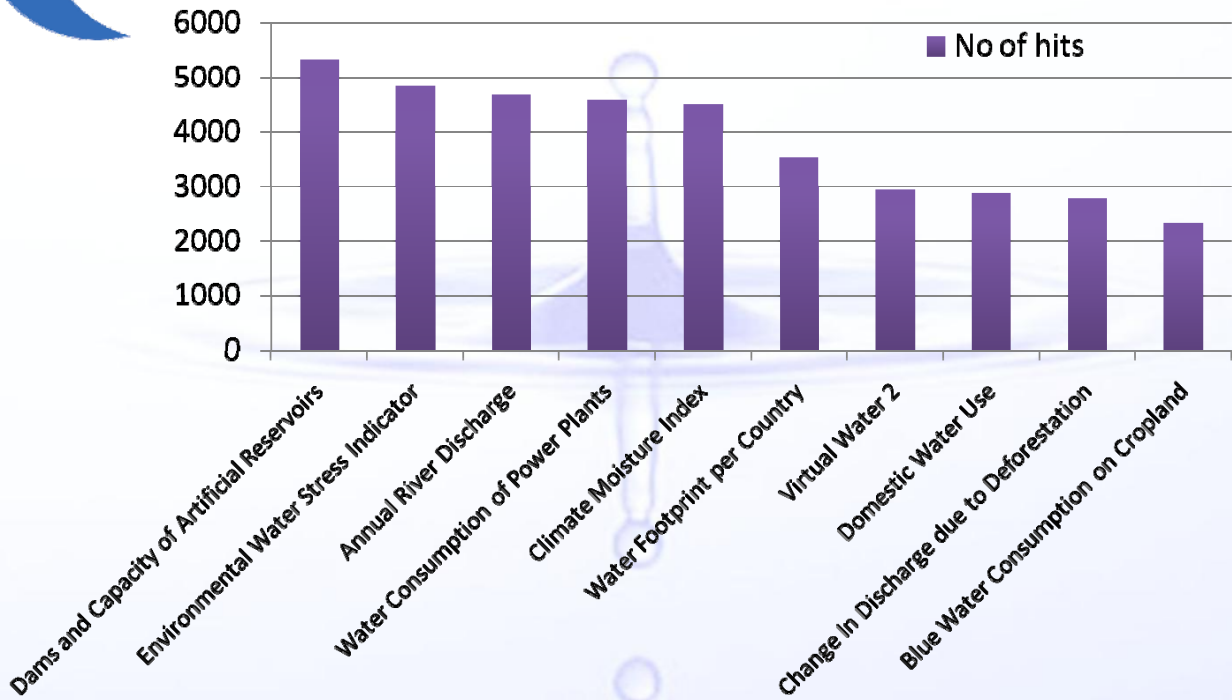
Status

- 68 global maps (including descriptions & datasets)
- 141 web links to other info/data sources
- > 140,000 map visits
- > 1600 registered users from ~45 countries
- > 4500 dataset downloads
- Last update of maps: March 2011

12. March 2011 GTN-H Coordination Panel Session, Tokio 4



Top 10 Maps



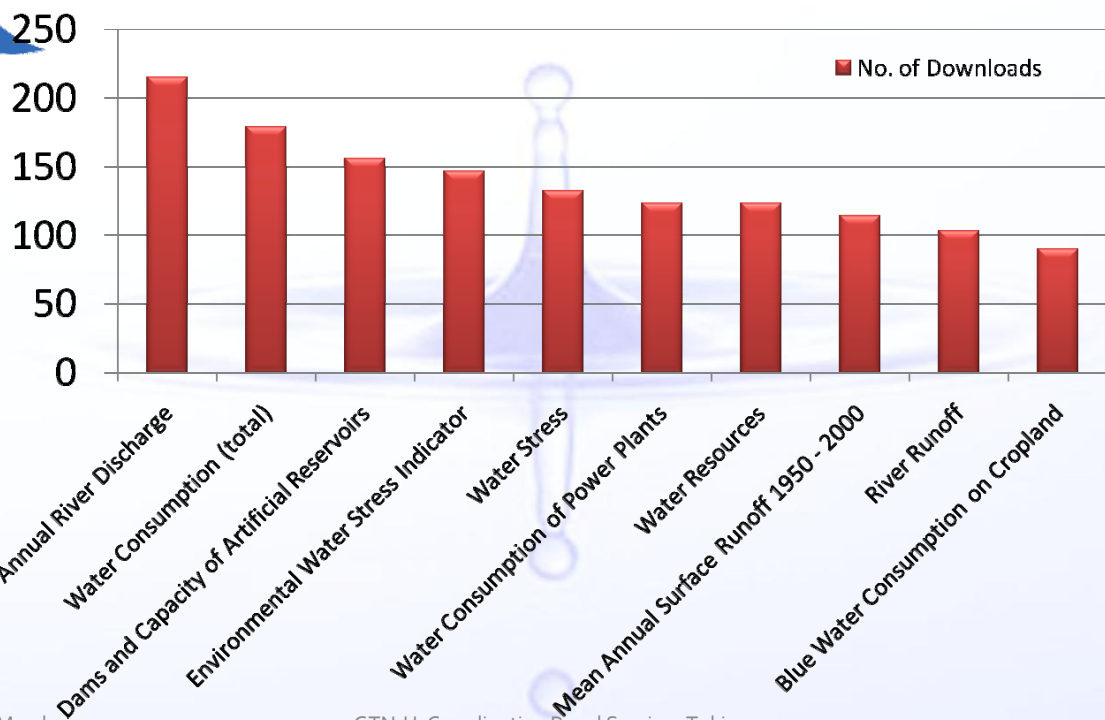
12. March 2011

GTN-H Coordination Panel Session, Tokio

5



Top 10 Dataset downloads



12. March 2011

GTN-H Coordination Panel Session, Tokio

6



Vision

The GWSP Atlas as a central contact point for all kinds of maps, information, and discussions related to the global water system.

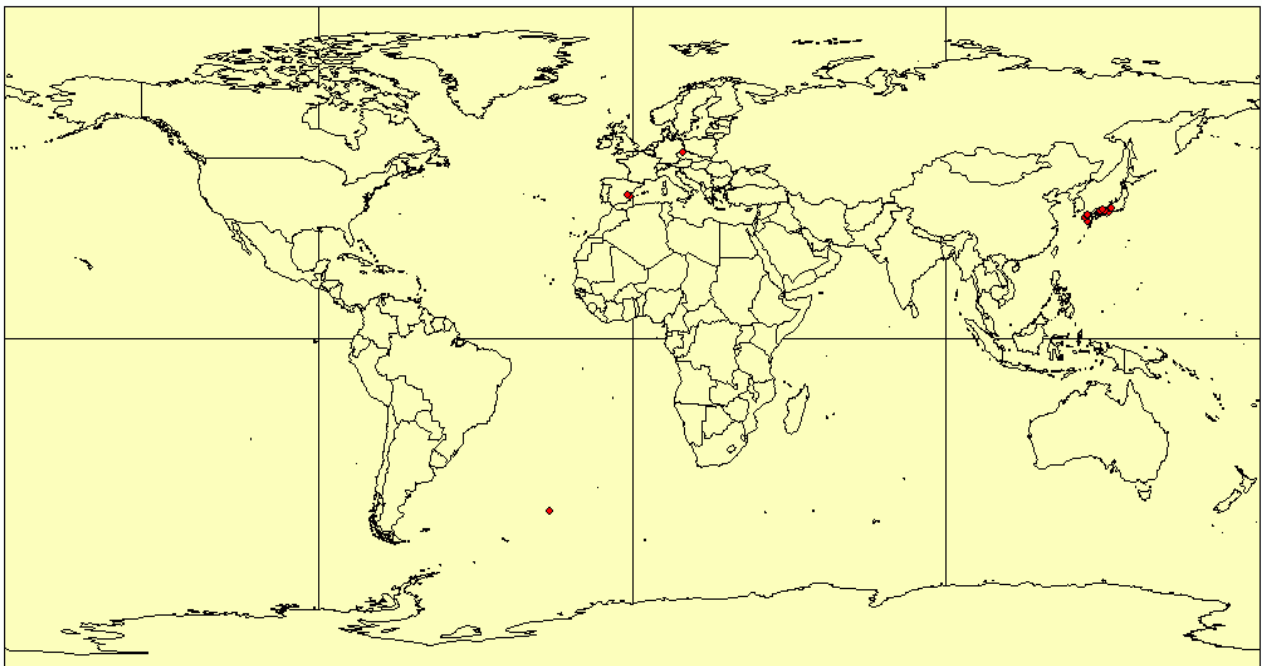
No researcher, policy maker or other stakeholder has an alternative to consult the GWSP Atlas when interested in issues of the global water system.

Global Reservoir Database

~1750年

13,382 dams

1750-2000



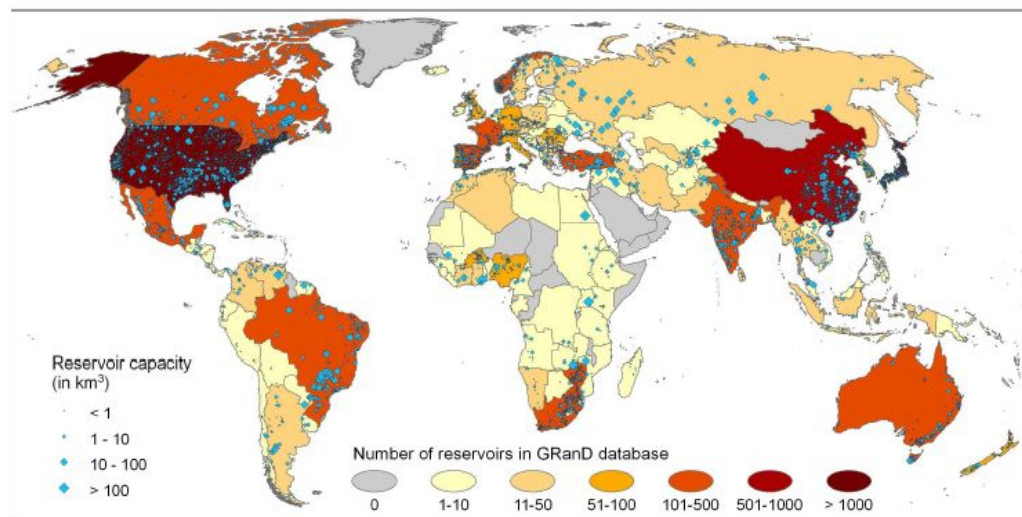


Global Reservoir and Dam (GRanD) Database (1/2)

<i>Institution</i>	<i>Provided data and focus of contribution</i>	<i># of independent data records^a</i>
European Environment Agency, Denmark	Provided point and attribute data for Europe ^b	3,793 (Europe)
Food and Agriculture Organization of the United Nations (FAO)	Provided point and attribute data for Africa (AQUASTAT ^c)	1,138 (Africa)
McGill University, Canada	Provided GLWD ^d ; updated/improved data for Australia ^e and globally; final global data consolidation of GRanD	1,226 (GLWD); 846 (Australia)
The Nature Conservancy (TNC), USA	Updated/improved data for South America	149 (South America)
University of Frankfurt, Germany	Co-author of GLWD ^d ; updated/improved data for China	568 (China)
University of Greifswald, Germany	Provided global point and attribute data; updated/improved data for Europe	8,157 (global, excluding USA, China, Africa); 4,230 (Europe)
University of Kassel, Germany	Co-author of GLWD ^d	-
University of New Hampshire, USA	Provided global point and attribute data; updated/improved data for North America (incl. NID ^f)	1,897 (USA); 236 (Canada); 226 (Mexico)
Umeå University, Sweden	Provided global point and attribute data	5,575 (global, excluding North America, Europe, Russia)
University of Yamanashi, Japan	Provided global point, polygon, and attribute data; updated/improved data for Japan	15,073 dams ^g ; 4,648 polygons (global); 560 (Japan)
World Wildlife Fund (WWF), USA	Co-author of GLWD ^d ; updated/improved data for Asia	215 (Asia)



Global Reservoir and Dam (GRanD) Database (2/2)





Possible next steps

- Include a set of selected, highly 'attractive' new maps
 - Use data/maps from GWSP workshops on deltas and the 'database on dams'
 - Concentrate on datasets that are on the GWSP 'wish list'
- Publish the Atlas as a printed version
 - Use the series of 'GWSP Issues in Global Water System Research' for a first and simple version to attract more data providers
- Provide updated versions of maps and maps for future scenarios



THANK YOU