United Nations
Educational, Scientific and
Cultural Organization

International
Hydrological
Programme

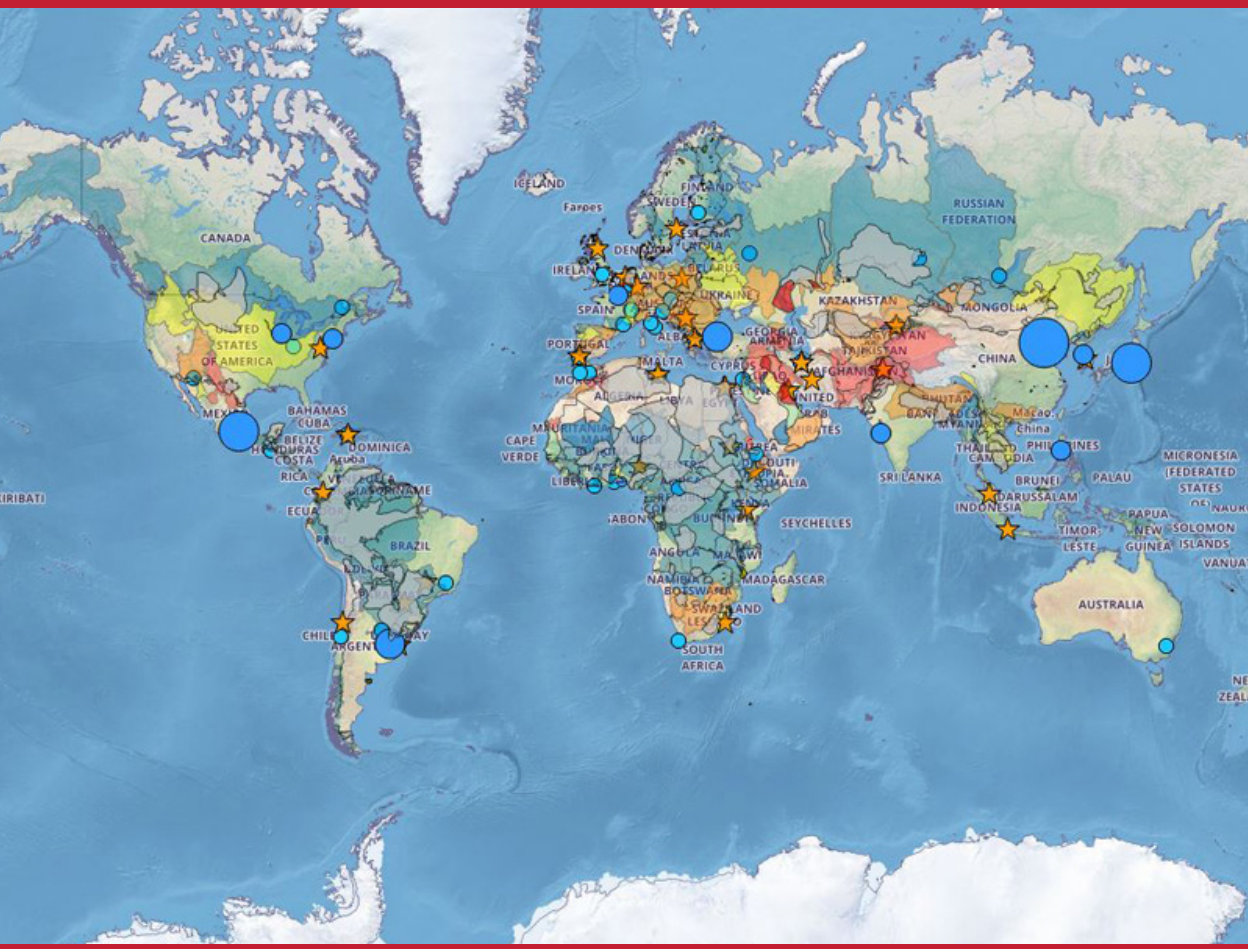
資料２－２

International Hydrological Programme

Water Information Network System

IHP-WINS

INTERNATIONAL HYDROLOGICAL PROGRAMME (IHP)
Division of Water Sciences



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“IHP-WINS will make water-related information available online, allowing countries and stakeholders to access reliable data on an open source platform”.

Leticia Casati, Deputy Permanent Delegate of Paraguay to UNESCO

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IHP-WINS: DATA ABOUT THE GLOBAL WATER CYCLE IS JUST A FEW CLICKS AWAY

The International Hydrological Programme's Eighth Phase (IHP-VIII) helps Member States in their quest for Water Security. This objective entails a growing need for enhanced public awareness, improved standards and better coordination among water stakeholders and makes the use of advanced technologies indispensable. To address this challenge, UNESCO-IHP has developed the Water Information Network System, an interactive open-access database, launched in January 2017. (http://ihp-wins.unesco.org)

IHP-WINS is a global reference database covering the entire water cycle. It provides continuous updates and new data, allowing users to create tailor-made maps incorporating specific information (e.g. on arid zones, rainfall, transboundary water basins and irrigation).

IHP-WINS combines the largest available validated data on the water cycle. It draws on global information sources such as:

- The FAO AQUASTAT database
- The WHO/UNICEF joint monitoring programme
- The United Nations Statistics Division
- UNESCO's "Water Family" including water programmes and initiatives comprising over 3,000 water professionals worldwide.

IHP-WINS also incorporates key information on UNESCO networks relating to crosscutting water-related issues, such as the World Heritage List, Biosphere Reserves and UNESCO Global Geoparks.

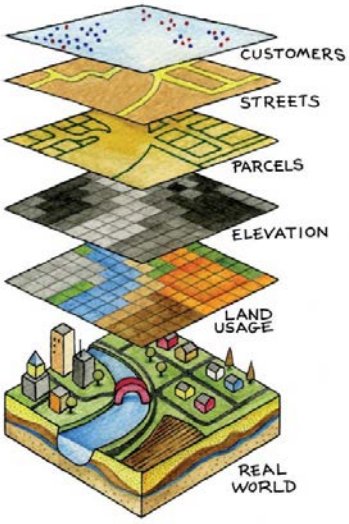
IHP-WINS: AN INTERACTIVE AND USER-FRIENDLY PLATFORM DESIGNED FOR A WIDE AUDIENCE OF WATER STAKEHOLDERS

IHP-WINS is a user-friendly "one-stop shop", offering a wide-ranging set of data services:

- Access to large datasets on the water cycle at global, regional, national and local levels, both spatial and non-spatial, and supported by standardized metadata (i.e. "data about data").
- Data available for download by water-related stakeholders, country officials, civil society, international, regional and national institutions, public and private sectors, and academia.
- A dedicated networking platform also enables the exchange of knowledge and expertise among stakeholders.

IHP-WINS:

A **geographical** information platform



A **knowledge** sharing platform

A **networking** platform

WHY IHP-WINS? MOBILIZING A WATER-DATA REVOLUTION FOR SUSTAINABLE DEVELOPMENT

In 2013, the United Nations Secretary-General's High-Level Panel on the Post-2015 Development Agenda called for a 'Data Revolution' for Sustainable Development to improve the quantity and quality of available information. The revolution strives for a new approach to open and free data exchange and collection, as well as the development of innovative methodologies and presentation of disaggregated data and geospatial information, to address cross-cutting issues.

As the only intergovernmental programme of the UN system devoted to scientific, educational and capacity development in hydrology, the UNESCO International Hydrological Programme (IHP) is contributing to this data revolution through its Water Information Network System (WINS), the first web-based platform providing information on the water cycle in its entirety. IHP-WINS was established as a tool for the implementation and monitoring of IHP-VIII; and to address the request of the IHP's 22nd Intergovernmental Council to "provide support to Member States to build their institutional capacities, human resources and a sound basis in science capacity for the monitoring and implementation of Sustainable Development Goal 6 (SDG 6) targets, and those of other water-related goals" (Resolution XXII-7; June 2016).

It also contributes to the priority Water Action Plan for Climate Resilience, which includes the development of water knowledge, decision support and information systems (WIS).

A KEY TOOL FOR MONITORING AND IMPLEMENTING SDG 6 ON WATER AND SANITATION

Regular data updates are essential for monitoring the SDG 6 indicators on water and sanitation. IHP-WINS is a resource-efficient tool for water data collection that helps build a repository of knowledge for water security. It is easy to use and has reduced data entry and retrieval costs. IHP-WINS also supports policy processes among Member States that encourage access to open and free data, and the sharing of data between different communities, experts and countries.

DEVELOPS CAPACITIES AND FACILITATES DIALOGUE AMONG WATER STAKEHOLDERS

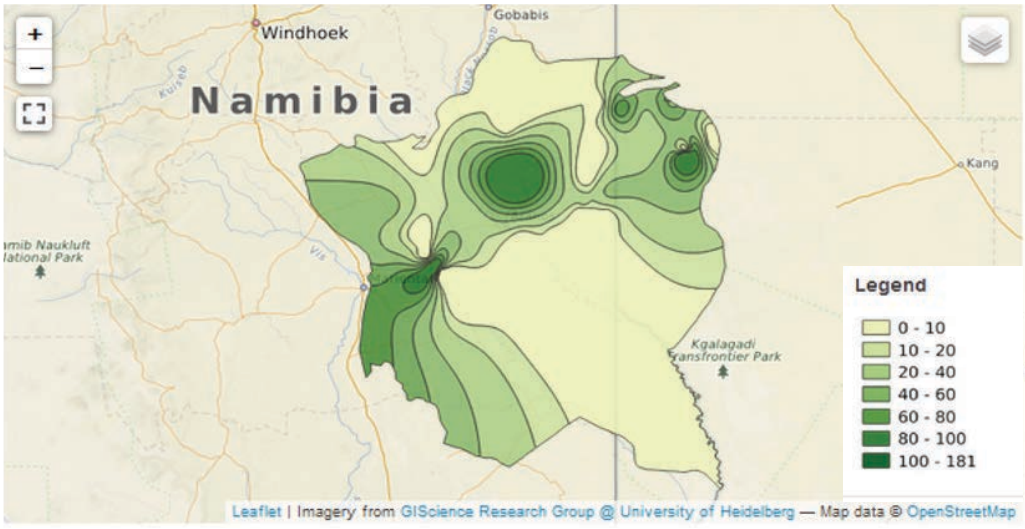
As a cooperative platform for water stakeholders, IHP-WINS helps to improve institutional and human capacities to ensure high-quality, timely, reliable and disaggregated data. This enhances the capacity of national statistical offices and data systems, especially in developing countries, and provides a solid basis for scientific decision-making. Its interactive approach enables Member States to update and upload national and regional water-related data, facilitating their involvement in the data revolution.

Water professionals are invited to use and promote IHP-WINS as a networking platform to share experiences and lessons learnt, mentor early career water professionals and strengthen partnerships within the water sector.

IHP-WINS IN ACTION

Stampriet Transboundary Aquifer System (STAS)

IHP-WINS is currently being used in the assessment of the Stampriet Transboundary Aquifer System (STAS) shared by Botswana, Namibia and South Africa. IHP-WINS is playing a crucial role in strengthening water cooperation among the countries. Indeed, Botswana, Namibia and South Africa are using IHP-WINS to visualize and generate tailor-made products to meet their specific needs. IHP-WINS is also facilitating the exchange of data among national stakeholders, enhancing interdisciplinary cooperation and the creation of networks.



Borehole yield in the Auob aquifer, Namibia © UNESCO IHP-WINS

Ocotepeque-Citalá Transboundary Aquifer

IHP-WINS is also being used in the assessment of the Ocotepeque-Citalá Transboundary Aquifer shared by Honduras and El Salvador. Cutting across all the economic sectors, water is instrumental in the implementation of integrated solutions. In general, water resources are commonly developed and managed by different parts of governments and within different sectors, with little coordination among them and without an overall picture of the state of the resource. IHP-WINS allows the inclusive participation of a wide range of water stakeholders, i.e. institutions at various levels: national (ministries), regional (Plan Trifinio and Transboundary Lempa River Trinational Intermunicipal Board) and local (municipalities, local water management committees), as well as academia.

Lempa River in the Trifinio region © UNESCO-IHP/IUCN

HOW DOES IHP-WINS' INTERACTIVE PLATFORM WORK?

System

IHP-WINS is an open source and open access database. It receives regular technical updates at a low cost, and is built on GeoNode, a web-based application and platform for developing Geospatial Information Systems (GIS) and deploying spatial data infrastructures (SDI).

The architecture is designed to be expandable and modifiable, easily integrating (and linking) with existing platforms. It is in line with international Open Geospatial Consortium (OGC) standards that enable access and integration of other databases, and constitutes an example of UNESCO's policy to support open access to scientific information.

User interface

IHP-WINS' users can visualize and generate tailor-made products meeting their specific needs. The system also facilitates the exchange of data and ideas among stakeholders, and fosters interdisciplinary cooperation and the creation of networks.

It consists of **three** main components:

1) Geospatial (GIS) data on the state of water resources at the global, regional, national and local level, allowing users to visualize and generate maps

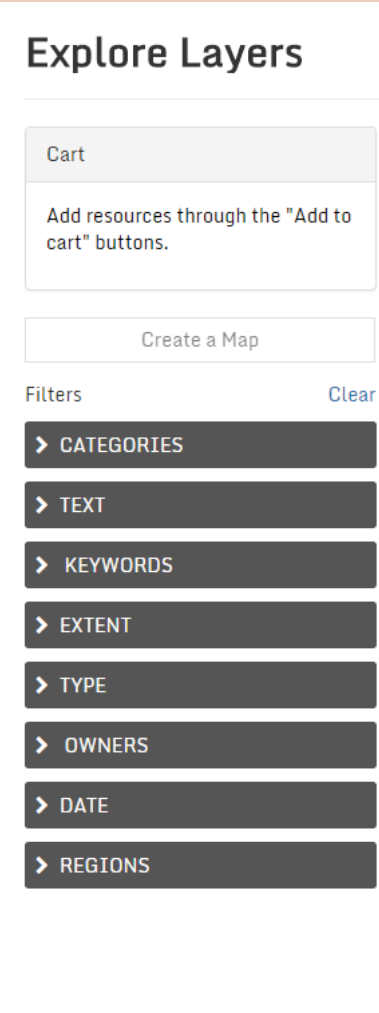
2) A platform for inter-disciplinary collaboration and knowledge sharing among water stakeholders (i.e. databases, reports, graphs, tables, videos, webinars, etc.)

3) A platform for stakeholders to build networks (i.e. discussion groups).

IHP-WINS' geospatial data can be viewed across time and uses a powerful search engine. Data uploaded by users comply with copyrights, intellectual property rights and data agreements.

Data security and reliability

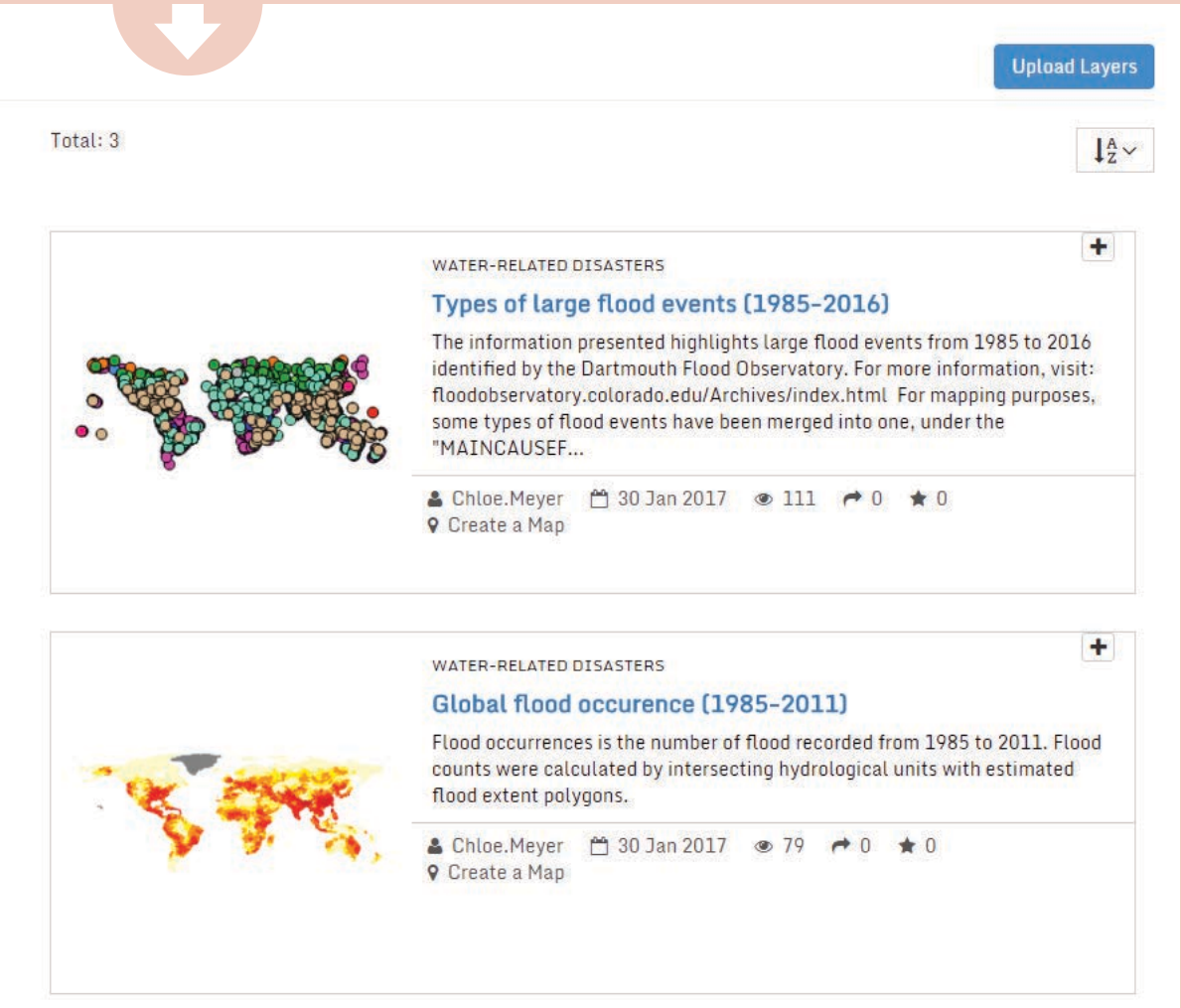
IHP-WINS draws on officially validated data provided by Member States and UNESCO's water programmes and networks. IHP undertakes an overall data format quality check before data are released, which is further reinforced by a data rating and feedback system. Data are then uploaded in line with user-defined permissions. The IHP-WINS platform and data are safely stored on UNESCO's servers at its Headquarters in Paris.



WHAT CAN USERS DO WITH IHP-WINS?

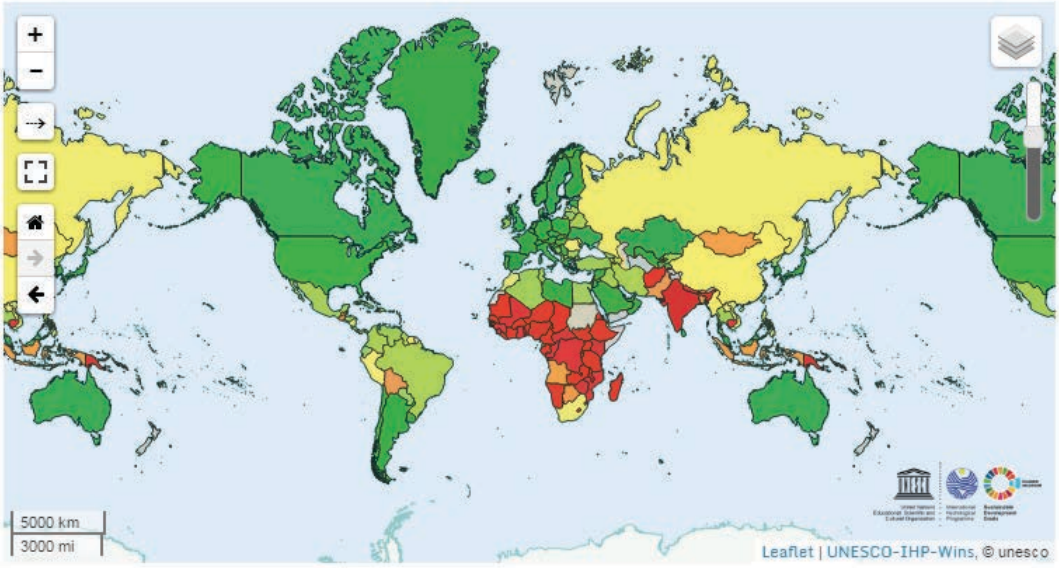
Layers and Maps provide geospatial information

GIS is an effective tool to store, manage and display spatial data for water resources management. IHP-WINS provides access to GIS data on the state of water resources at the global, regional, national and local level through its *Layers* function.



Layers present a spatial data source, either in vector or raster representation. GIS vector data are uploaded in ESRI[1] Shapefile format, and satellite imagery and raster data are uploaded as GeoTIFFs. *Layers* can be uploaded, viewed and downloaded. Metadata provide information related to each layer (e.g. owner, author, date, source, abstract and contact person).

SDG Indicator 6.2.1: Proportion of population using safely managed sanitation services (2015)



Info | Attributes | Share | Ratings | Comments

Title	SDG Indicator 6.2.1: Proportion of population using safely managed sanitation...
Abstract	Population using an improved sanitation facility at the household level that is not shared with other households and where excreta is safely disposed of in situ or treated off site, including a handwashing facility with soap and water in the household. Improved sanitation facilities include flush or pour flush toilets to sewerage systems, septic tanks or pit latrines, improved pit latrines (pit latrines with a slab or ventilated pit latrines) and composting toilets. A handwashing facility is a device to contain, transport or regulate the flow of water to facilitate handwashing.
Publication Date	Jan. 30, 2017, 2:47 p.m.
Type	Vector Data
Keywords	Hygiene , SDG , SDG6.2.1 , WASH , Water Quality , Water Use
Category	Cross-cutting
Regions	Global
Owner	Chloe.Meyer

By stacking *Layers*, users can generate new pieces of information and create tailored *Maps*. Users can also print the resulting *Maps*, save them on the IHP-WINS platform, export them in several formats (PDF, JPEG, etc.) and share them for public viewing.

1 The Environmental Systems Research Institute (ESRI) is an international supplier of geographic information system (GIS) software, web GIS and geodatabase management applications.

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Download Layer

Metadata Detail

Download Metadata

Legend

- 95 - 100%
- 80 - 95%
- 65 - 80%
- 50 - 65%
- 6.72 - 50%
- No data

Maps using this layer

This layer is not currently used in any maps.

Create a map using this layer

Click the button below to generate a new map based on this layer.

Create a Map

About

Owner, Point of Contact, Metadata Author

Chloe.Meyer
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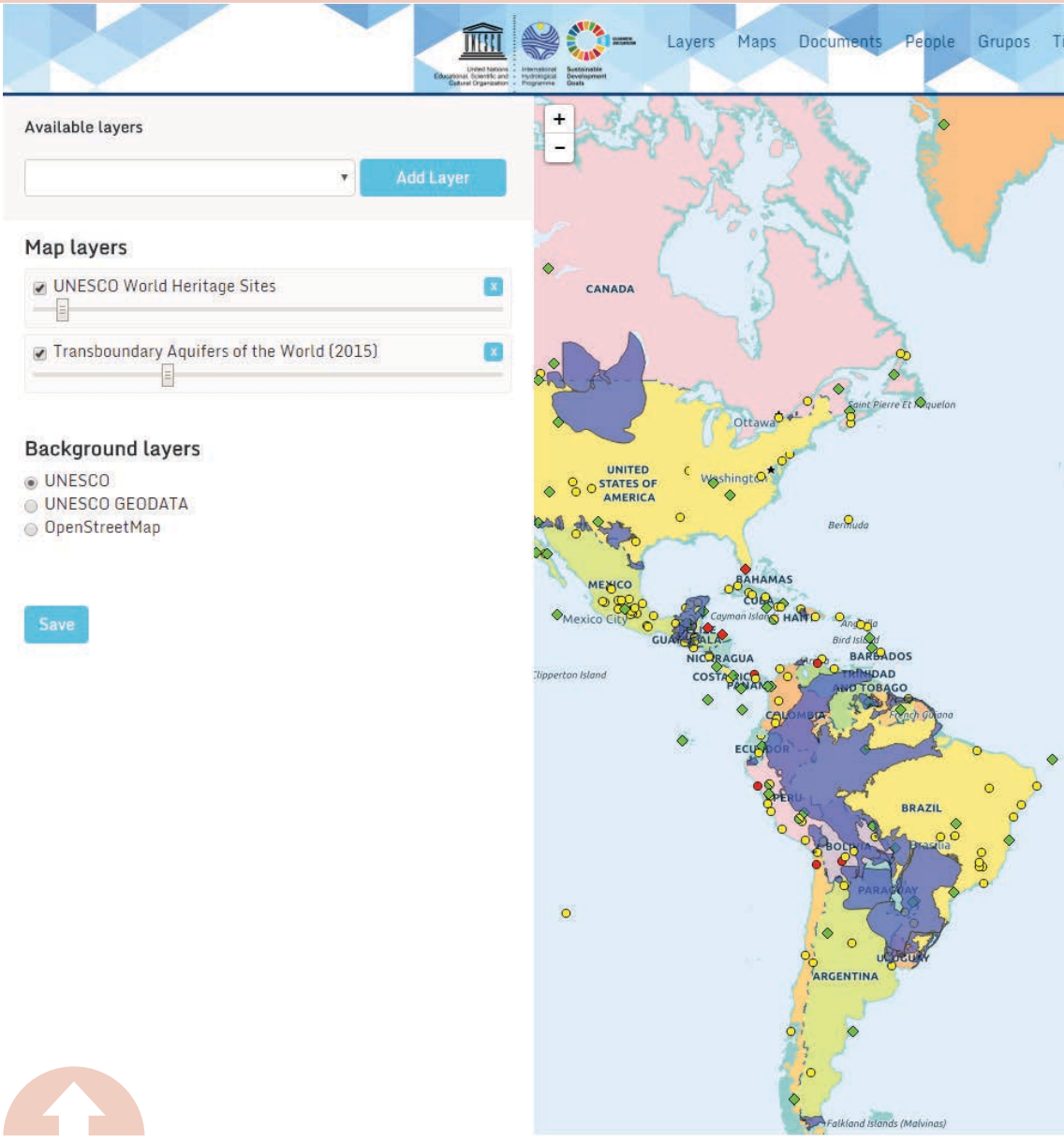
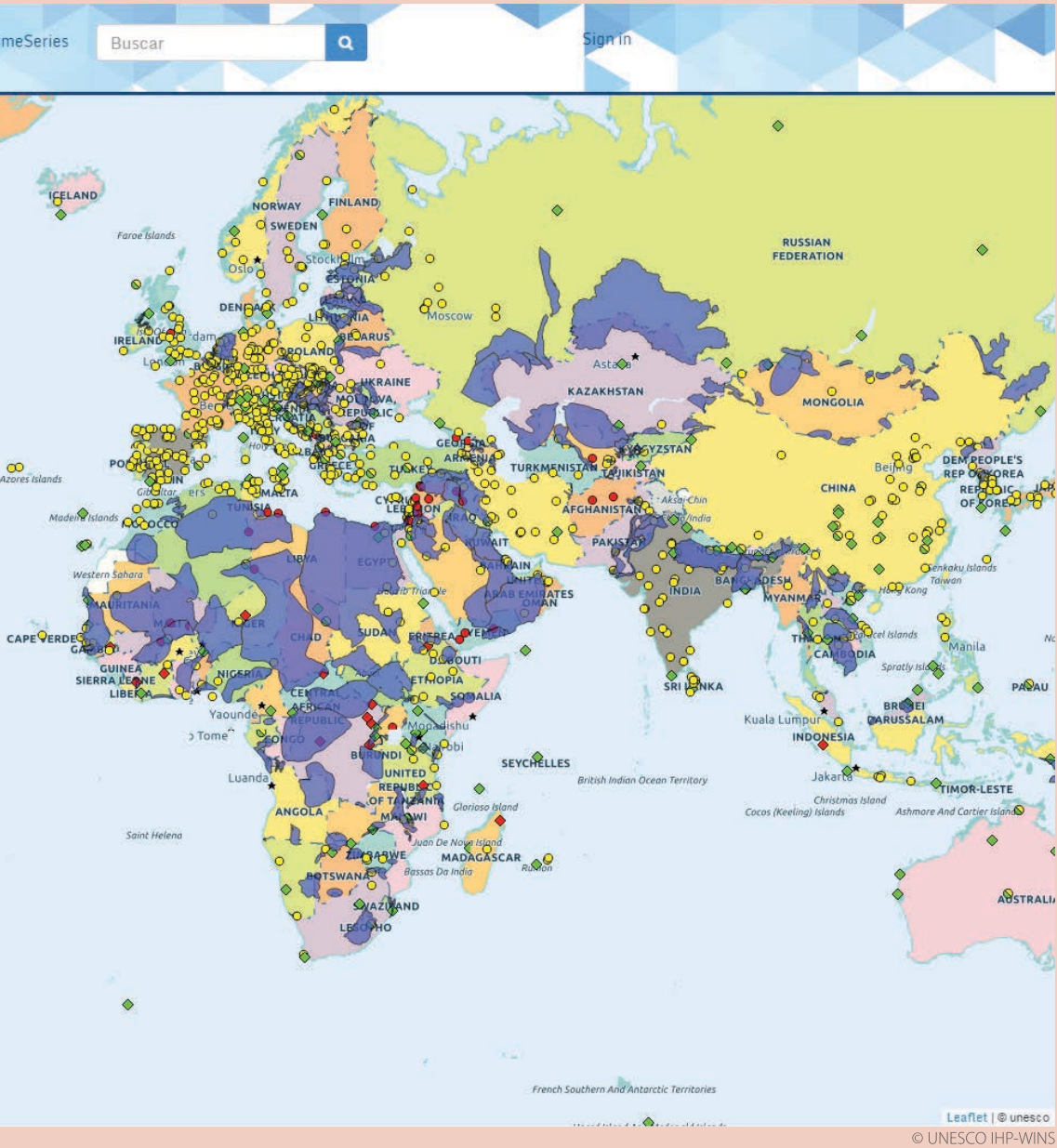


IHP-WINS STRENGTHENS KNOWLEDGE MANAGEMENT AND INSTITUTIONAL MEMORY

Knowledge management goes beyond the storage and sharing of data and information. A structured, systematic approach is required to share knowledge with decision-makers in a timely manner, and to ensure sustainable access to information (i.e. institutional memory).

IHP-WINS' *Documents* function allows users to store and access databases, reports, graphs, tables, videos, webinars and other formats. The documents can then be viewed, printed and/or downloaded.



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HOW TO CONTRIBUTE TO IHP-WINS

To contribute to IHP-WINS, Member States and Institutions could request user accounts at: ihp-wins@unesco.org

IHP-WINS also welcomes questions, comments or suggestions from users. Please contact UNESCO's IHP-WINS team at: ihp-wins@unesco.org

IHP-WINS is designed, implemented and maintained by the International Hydrological Programme of UNESCO.

For more information on IHP initiatives contributing to IHP-WINS, please visit our website: http://en.unesco.org/ihp-wins

Watch the video here:
http://en.unesco.org/news/wins-data-about-global-water-cycle-few-clicks-away

"IHP-WINS' graphical representation of reliable data is one of the most powerful ways to raise understanding of one of the most complex problems – it will help decision makers".

Jack Moss, Executive Director,
International Federation of Private Water Operators (AquaFed)

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