

World Water Online

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Is Global Geospatial Consciousness Possible?

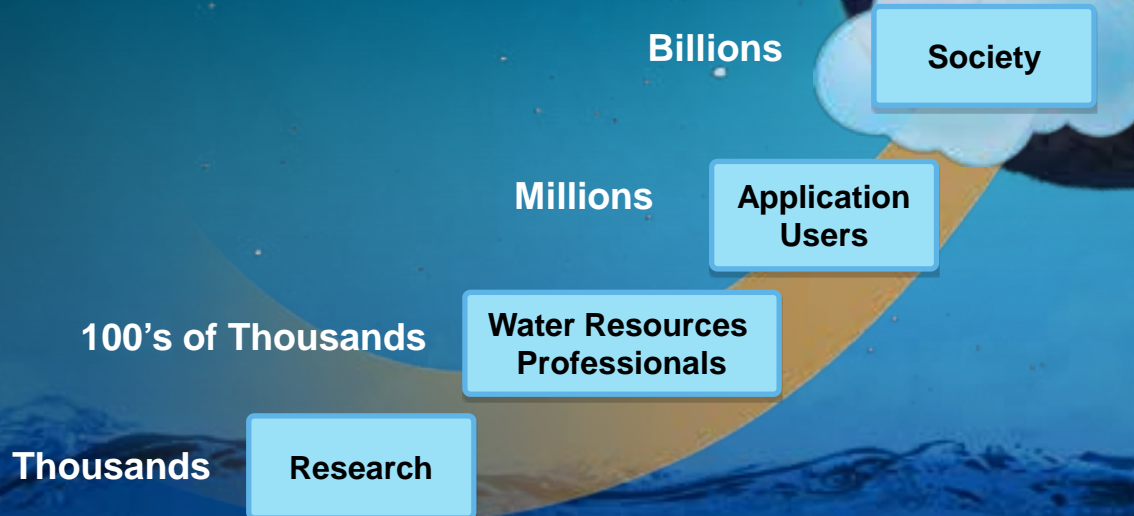


Slide from Jack Dangermond, ESRI

Is Global *Hydrologic* Consciousness Possible?

World Water Online

*Linking People Everywhere
with Water Data, Maps and Models*



Water is Vital



Four water problems to be solved

Too much water



Not enough water



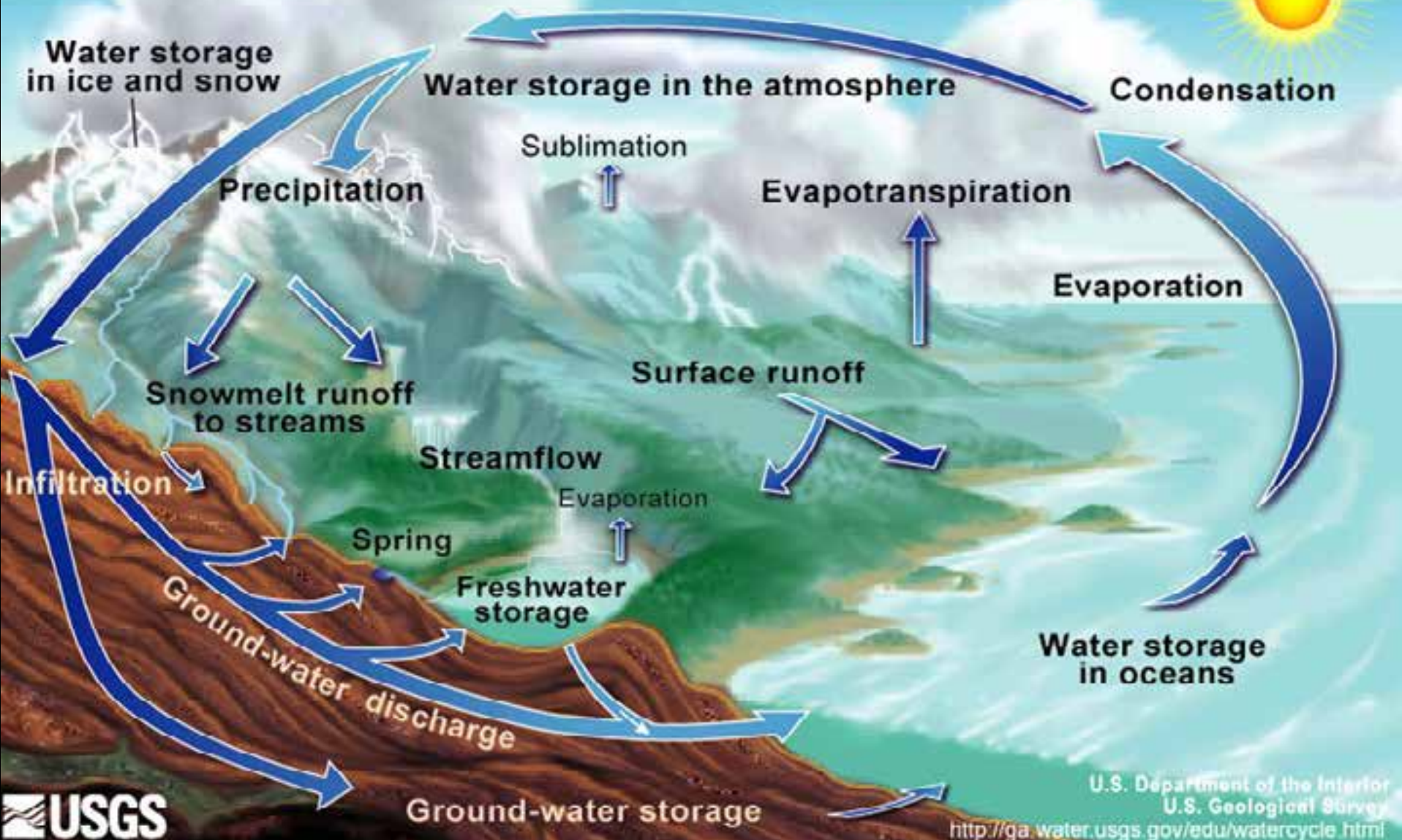
Dirty water



Environmental Issues



The Water Cycle



Collecting Water Data Locally

Water Quantity



Rainfall



Soil Water



Water Quality



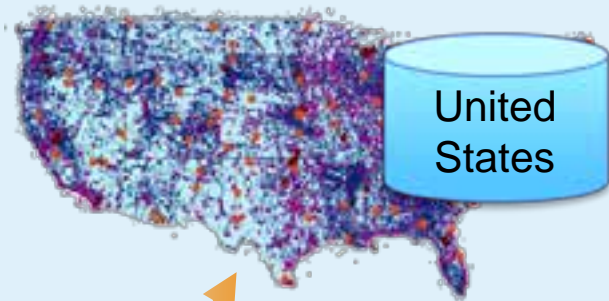
Meteorology



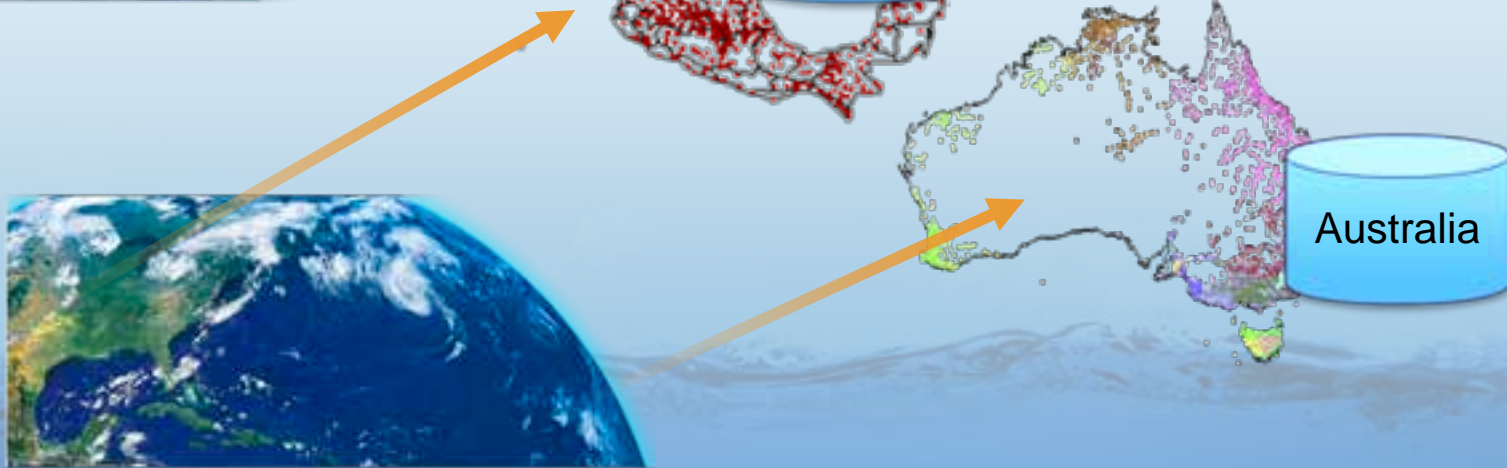
Groundwater



Every Country Collects These Data

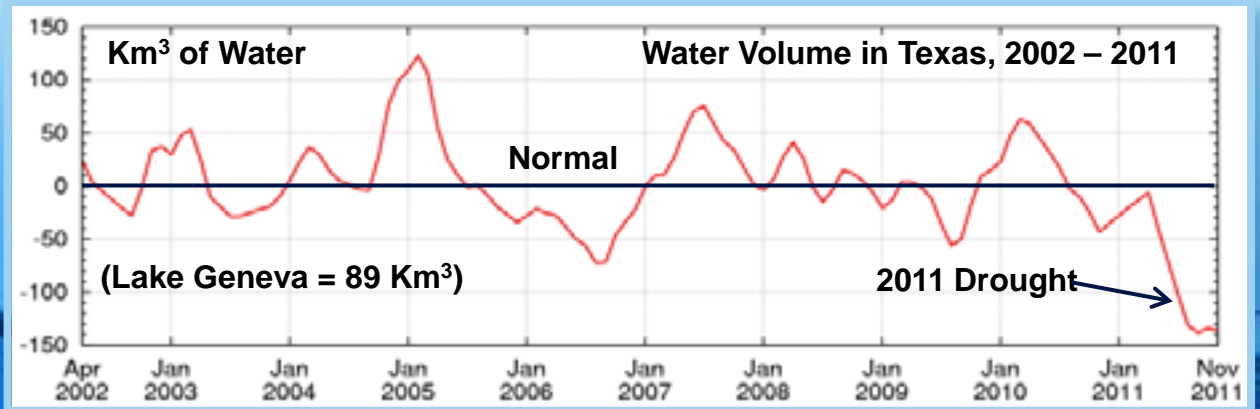
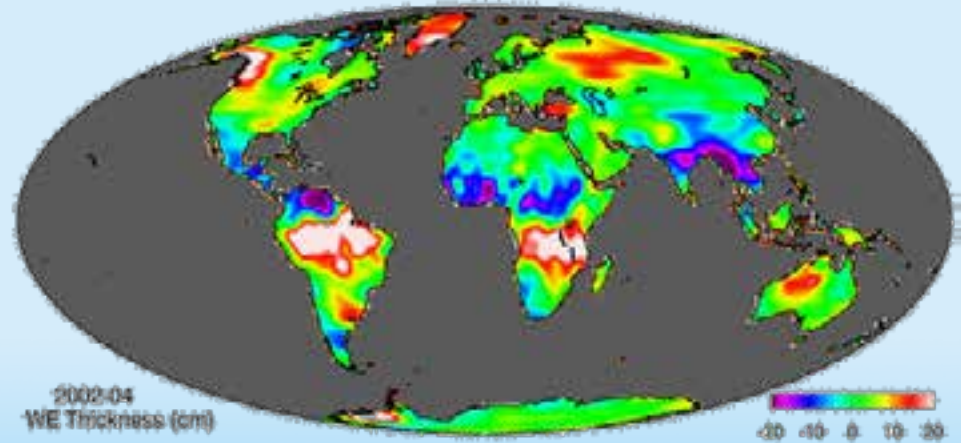


We Lack a Global Water Information System!



Collecting Water Data Globally (GRACE)

Measuring the gravity anomaly from space



Global processes . . .

. . . Local consequences

WaterML

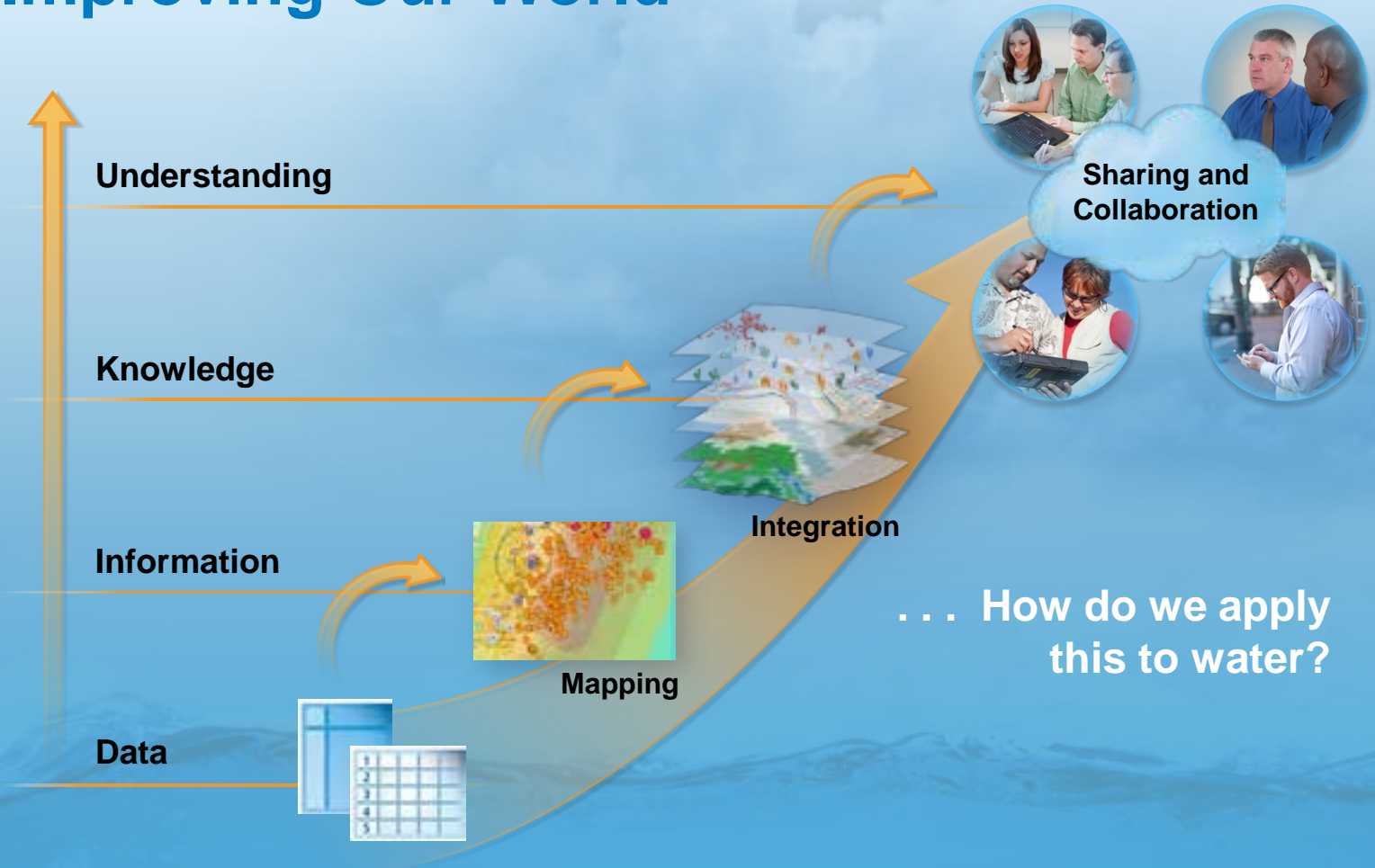
Water time series data on the internet



WaterML2— emerging international standard for water data transmission (OGC and WMO)

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Geospatial Technology Is Improving Our World



... How do we apply this to water?

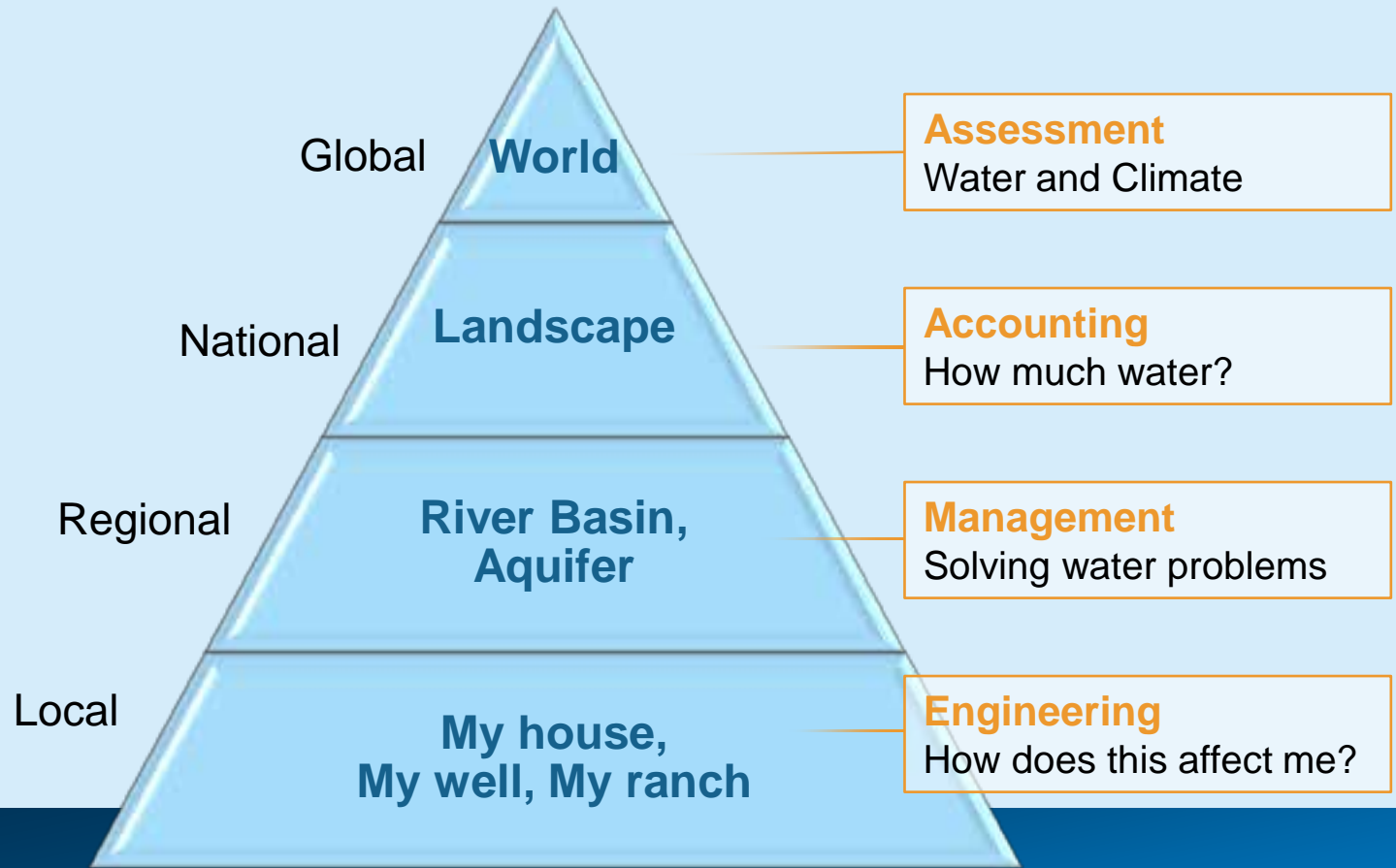
World Water Online



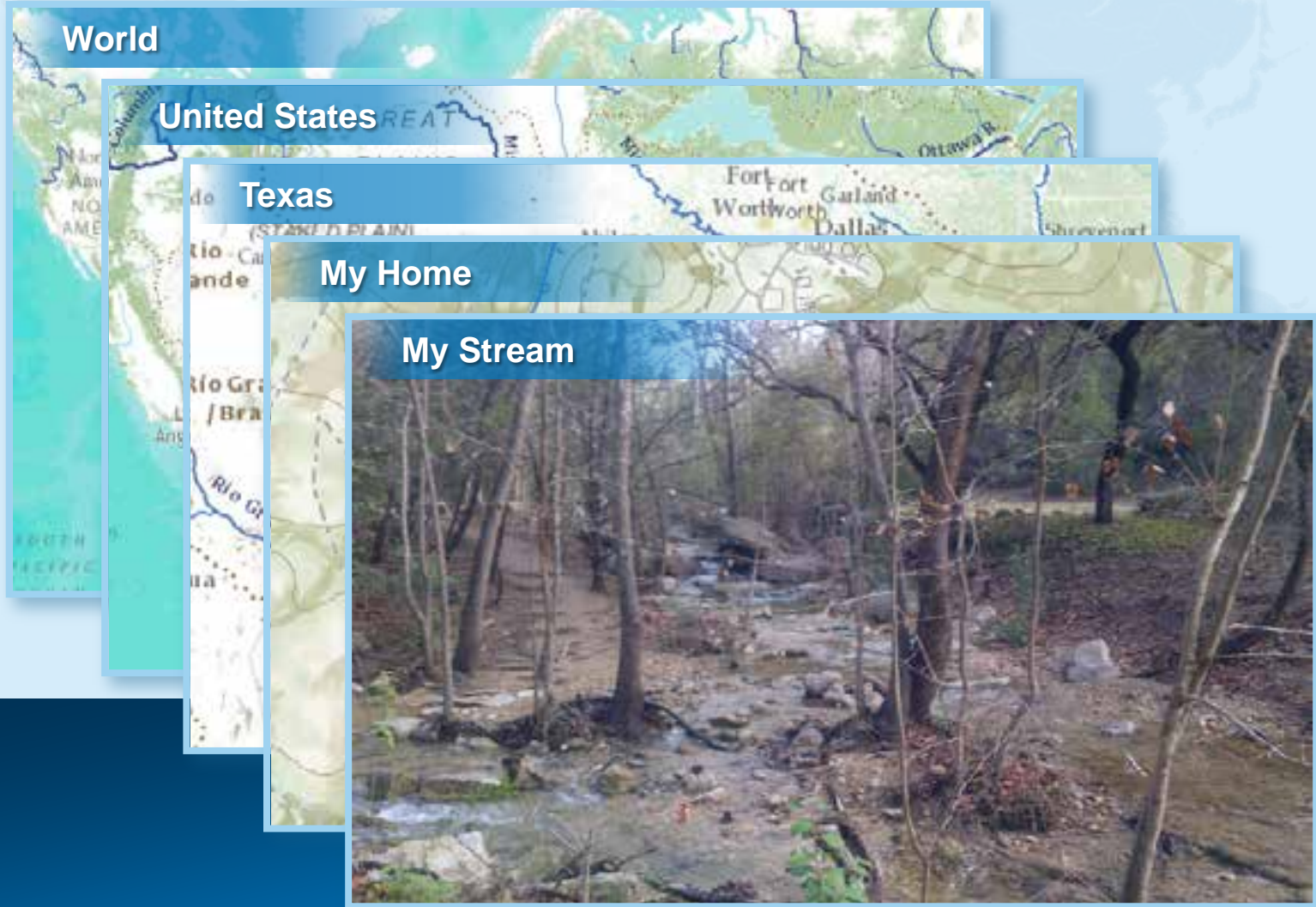
- Bring together **water information** for the whole earth
- All **spatial scales**: global, national, regional, local
- Both **geospatial and temporal** information
- Linking **data and modeling**
- Everything on the **web**

... a transformation
of our world!

Scales of Application



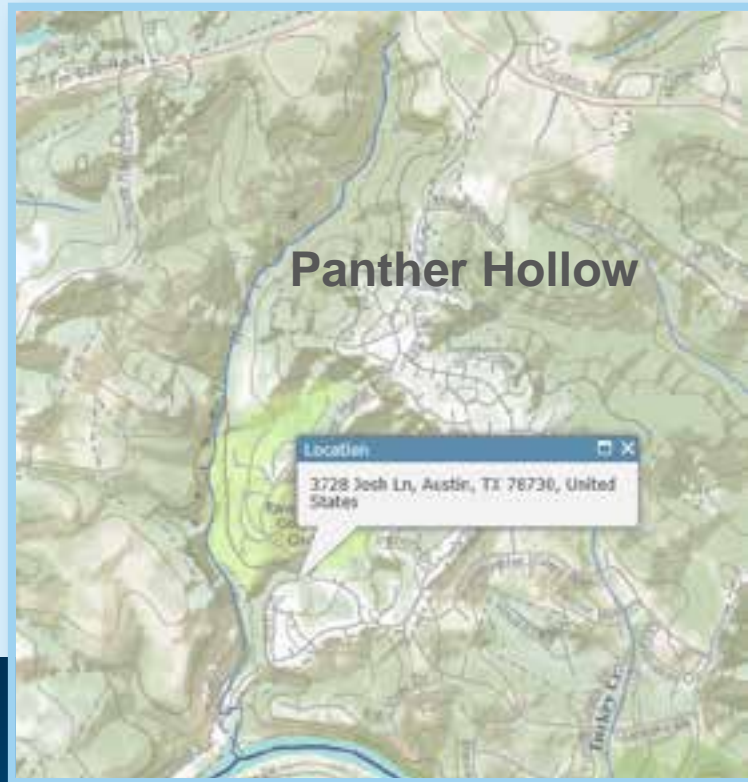
World Hydro Overlay Map



Watershed of My Stream

ESRI Base Map and Delineation Services

My stream



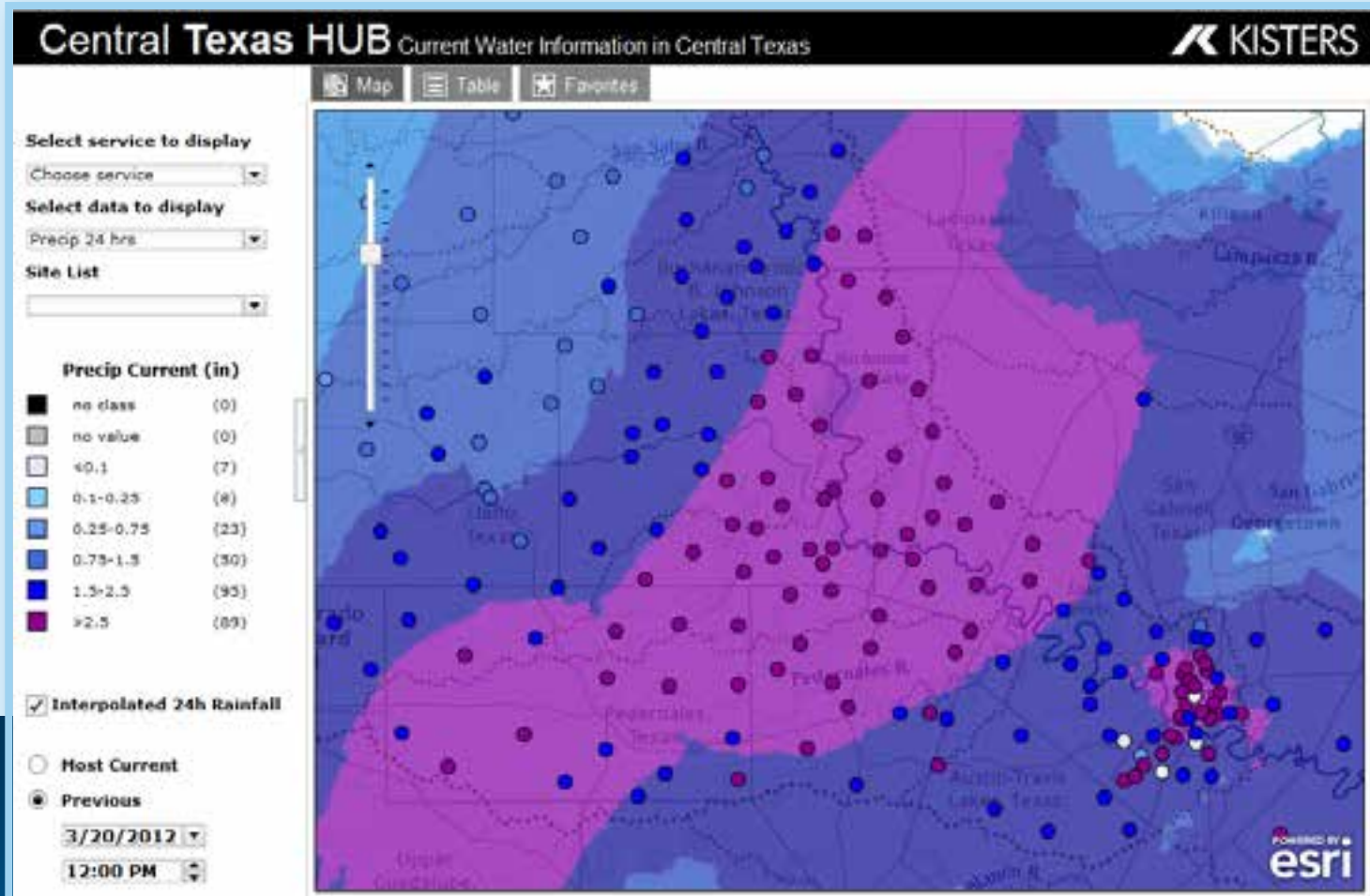
My watershed



Delineate the watershed of any stream or river anywhere on earth

Central Texas “Hub”

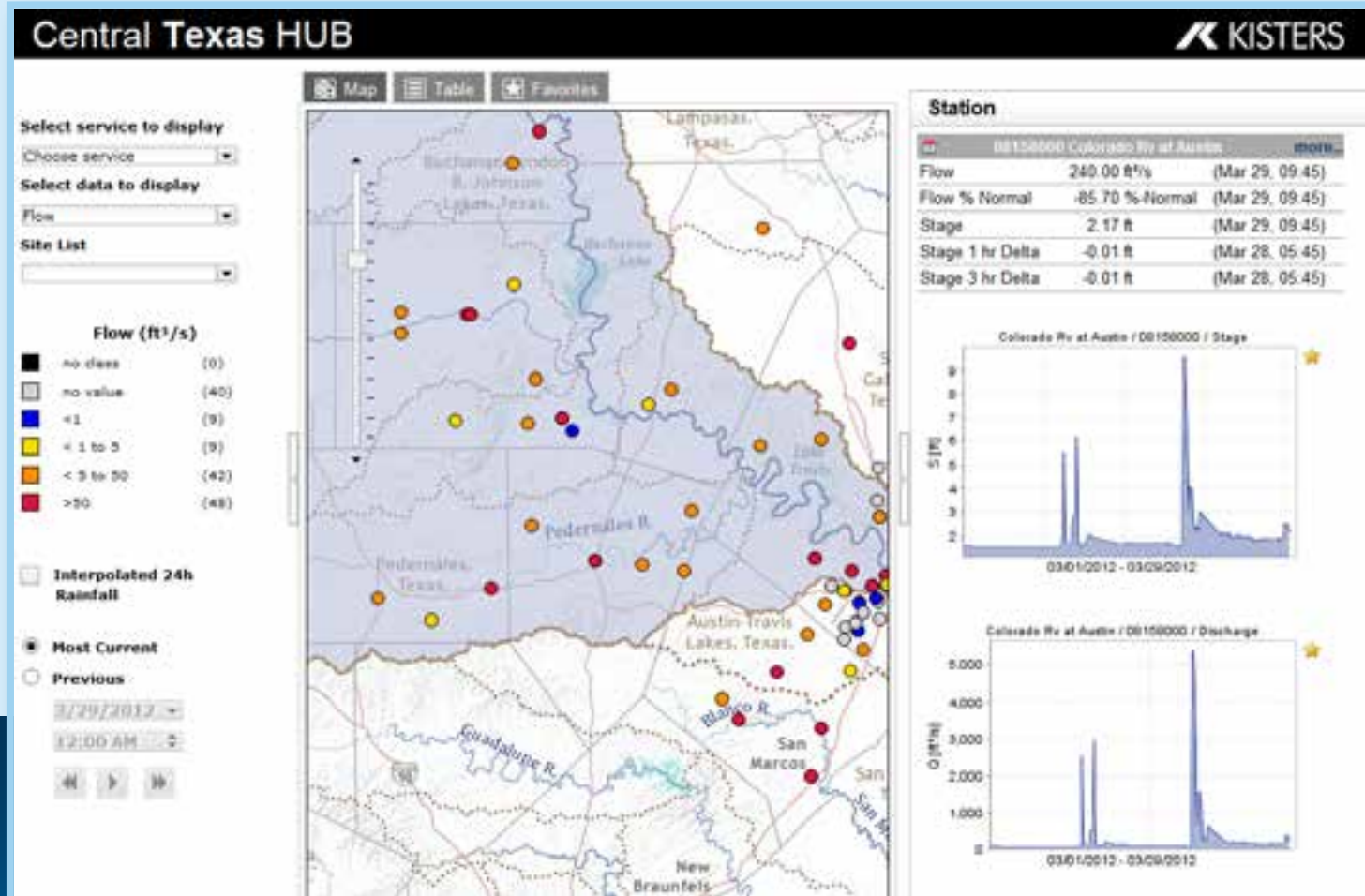
Synthesis of Water Observations Networks into Thematic Maps



Precipitation map for storm of 20 March 2012 at my home

Flow Maps and Charts in the Hub

Colorado River at Austin, Texas



Real-time information from a “network of networks”

Congo River Basin

Global river mapping and watershed delineation

World Hydro Overlay Map

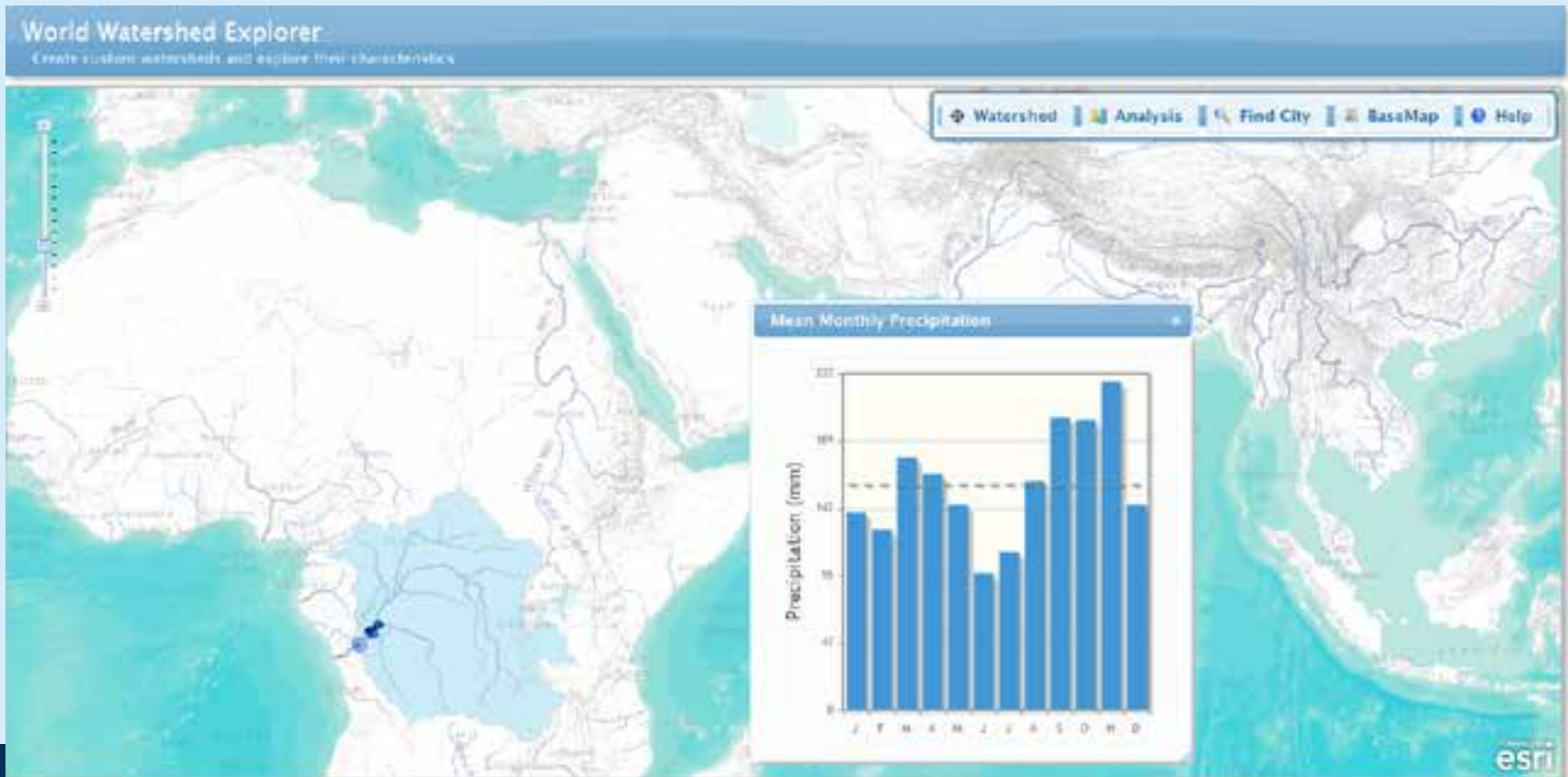


River Basin Delineation



Delineate a watershed from any point on a river

World Watershed Explorer – Congo Basin

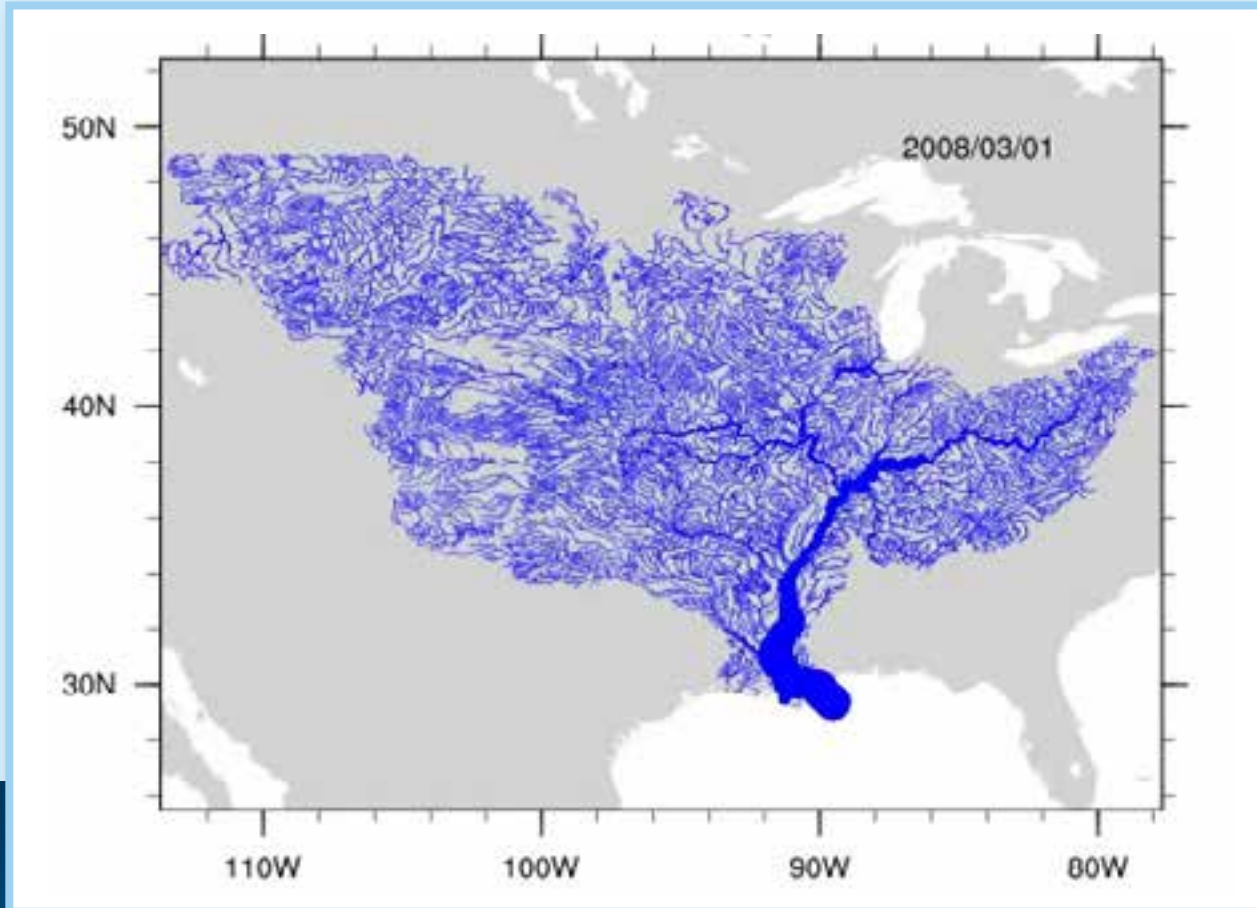


Watershed characteristics . . .

. . . precipitation, soils, land cover, population...

Flow in the Mississippi River Basin

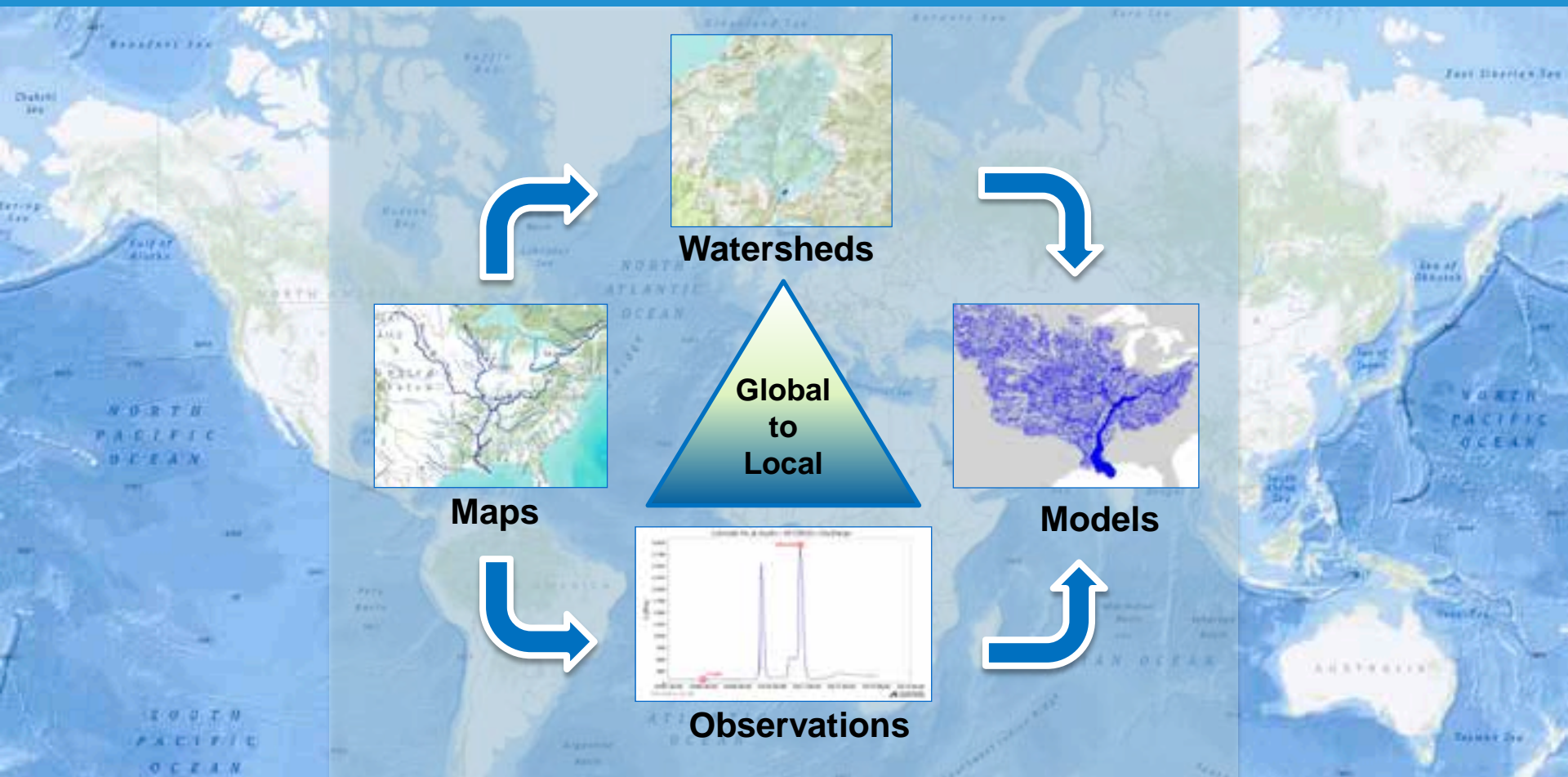
March to May 2008



River maps . . .
. . . River models

World Water Online

Hydrology on the web



A combination of proven industry technologies and open standards

World Water Online

Linking people everywhere with water data, maps and models

