Global Terrestrial Network Hydrology

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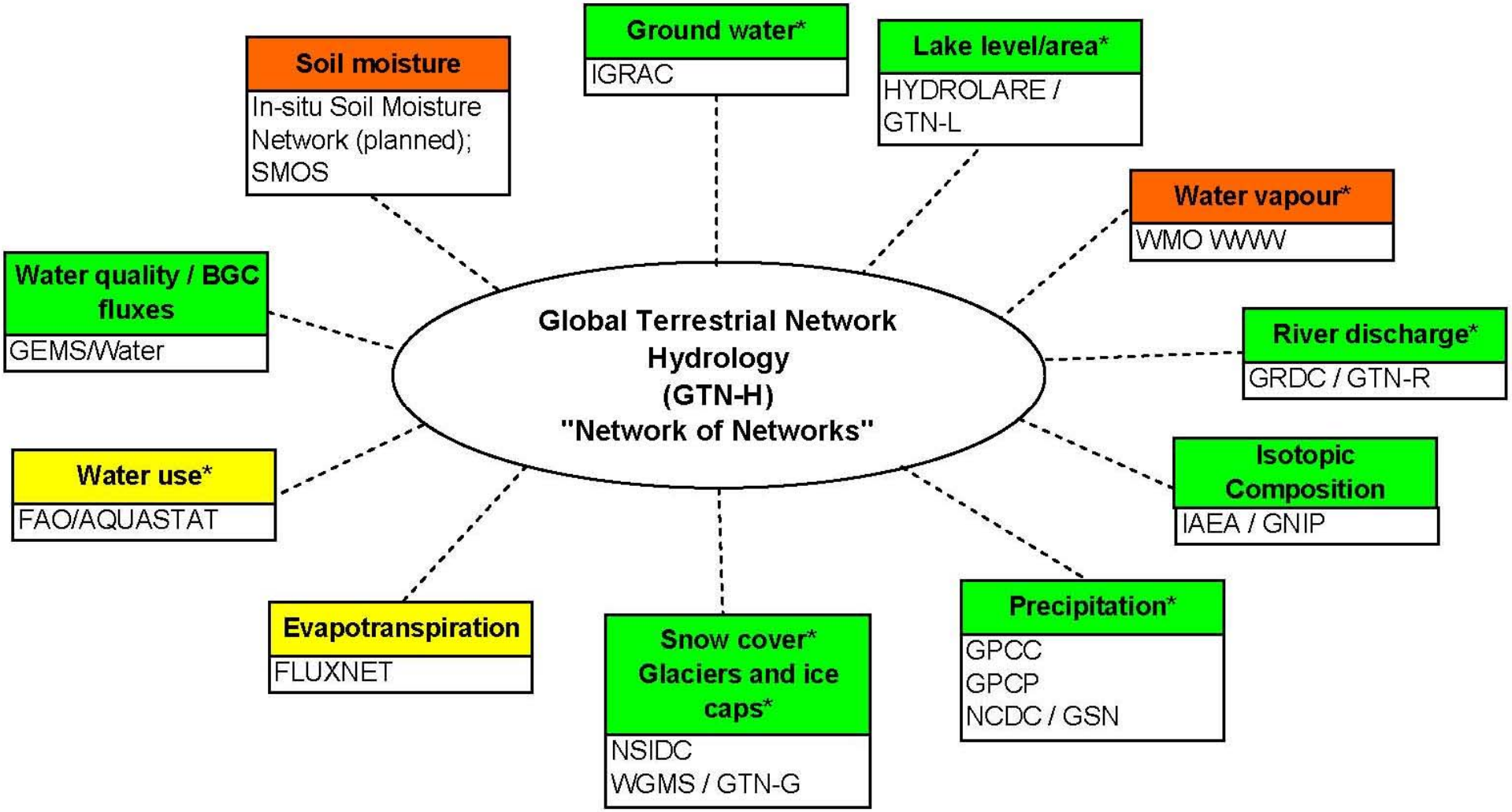
About GTN-H

- Links existing networks and systems for integrated observations of the global water cycle
- Established in 2001
- “network of networks” for global and regional climate and water applications

GTN-H Configuration



GTN-H Website

Global Terrestrial Network – Hydrology (GTN-H) „Network of Networks"

http://www.gtn-h.net/

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Global Terrestrial Network - Hydrology (GTN-H)

"Network of Networks"

GTOS WMO

GCOS | GTOS | WMO-CLW | HOME

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Hosted by the Water Systems Analysis Group in the Institute for the Study of Earth, Oceans, and Space at the University of New Hampshire and sponsored by: WMO-CLW, GCOS and GTOS.

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Welcome

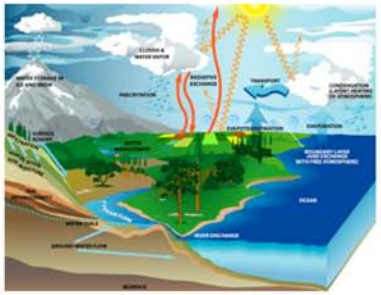
The Global Terrestrial Network – Hydrology (GTN-H) links existing networks and systems for integrated observations of the global water cycle.

The network war established in 2001 as a „network of networks" to support a range of climate and water resource objectives, building on existing networks and data centres, and producing value-added products through enhanced communications and shared development.

The GTN-H is a joint project of the Global Climate Observing System (GCOS), the World Meteorological Organization / Climate and Water Department (WMO/CLW), and the Global Terrestrial Observing System (GTOS).

The GTN-H website is a gateway to a great number of global observing systems for hydrological data. You can find descriptions and links to all network partners of GTN-H and the hydrological data products developed under the cooperation the network.

Additional material is continuously uploaded to this page and a few pages are still under construction.



The global water cycle (US Global Change Research Program, 2003)

WMO | ICSU | IOC | UNEP

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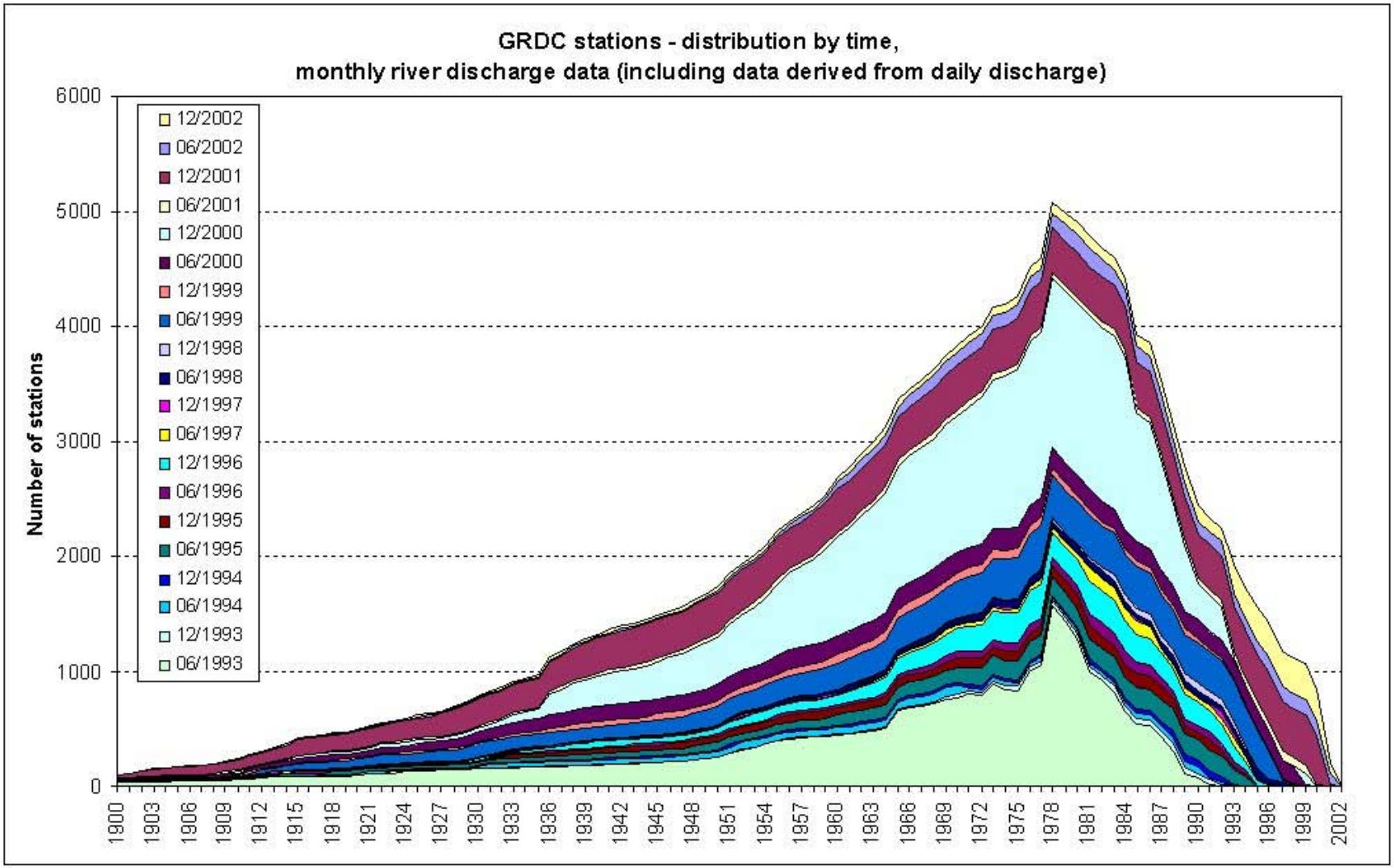
Precipitation Products

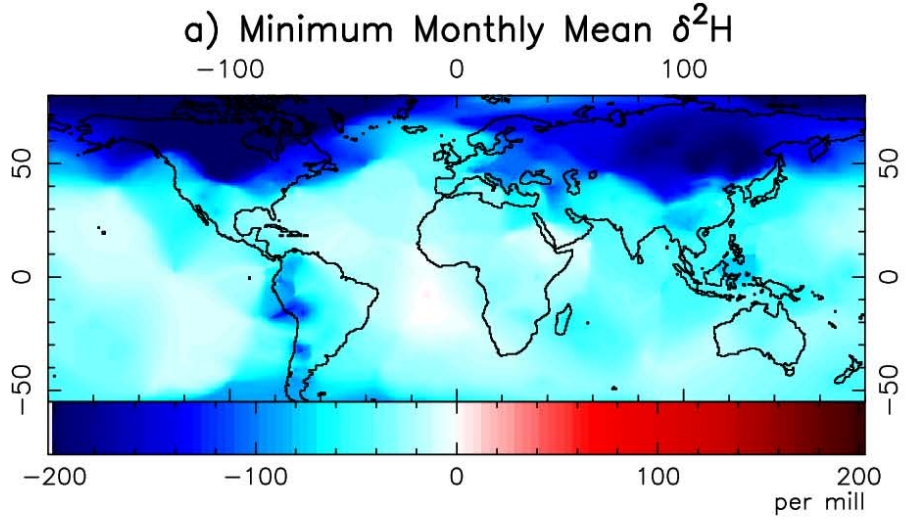
Names	Product	Frequency	Resolution	Source	Start	End
Climate Research Unit	CRU TS2.1	monthly	30min	Univ. East Anglia	1901	2002
CPC Morphing Technique	CMORPH	3 hourly	15min	NOAA	2003	present
Global Precipitation Climate Center	GPCC Monitoring	monthly	1 degree	Deutche Wetterdinst	1986	present
Global Precipitation Climate Center	GPCC Full	monthly	30min	Deutche Wetterdinst	1901	2007
Global Precipitation Climatology Project	GPCP V2.1	monthly	2.5 degree	NASA-Goddard	1979	present
Global Precipitation Climatology Project	GPCP 1DD V1.1	daily	1 degree	NASA-Goddard	1997	present
NCEP Reanalysis	NCEP	6 hourly	2.5 degree	NCEP	1949	present
PERSIANN		6 hourly	15 minute	UC Irvine	1998	present
Tropical Rainfall Measuring Mission	3B42v6	3 hourly	15 minute	NASA-Goddard	1998	present
Tropical Rainfall Measuring Mission	3B43	monthly	1 degree	NASA-Goddard	1998	present
Variability Analysis of Surface Climate Observation		monthly	30min	Deutche Wetterdinst	1951	2000
Willmott-Matsuura	V1.01	monthly	30min	Univ. of Delaware	1900	2006

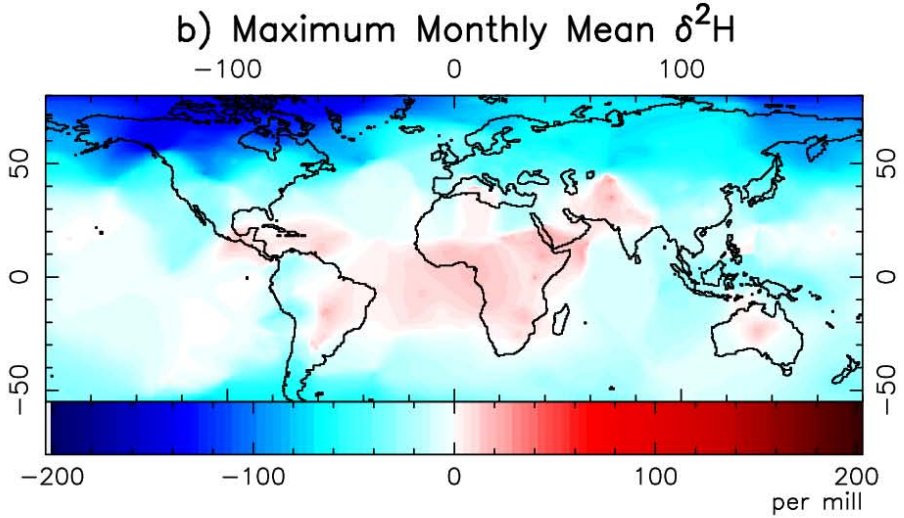
Continental Precipitation

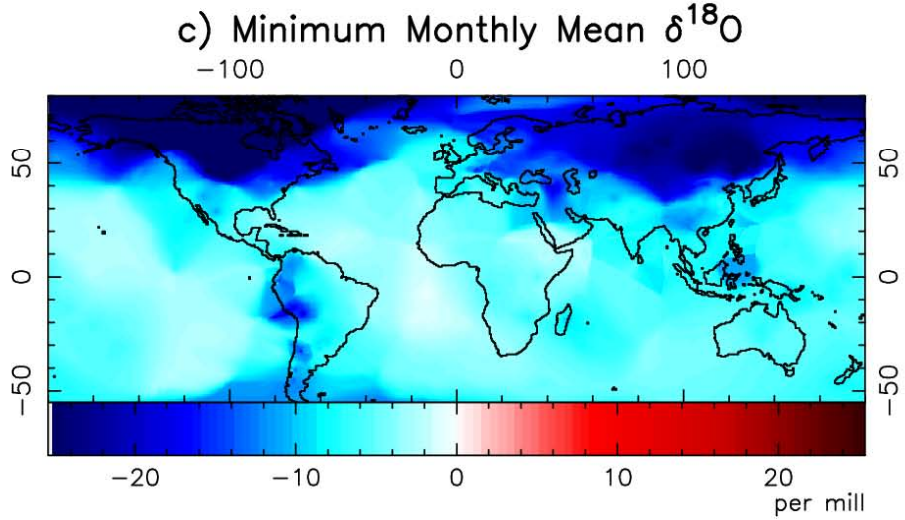
GRDC Discharge Data Archive

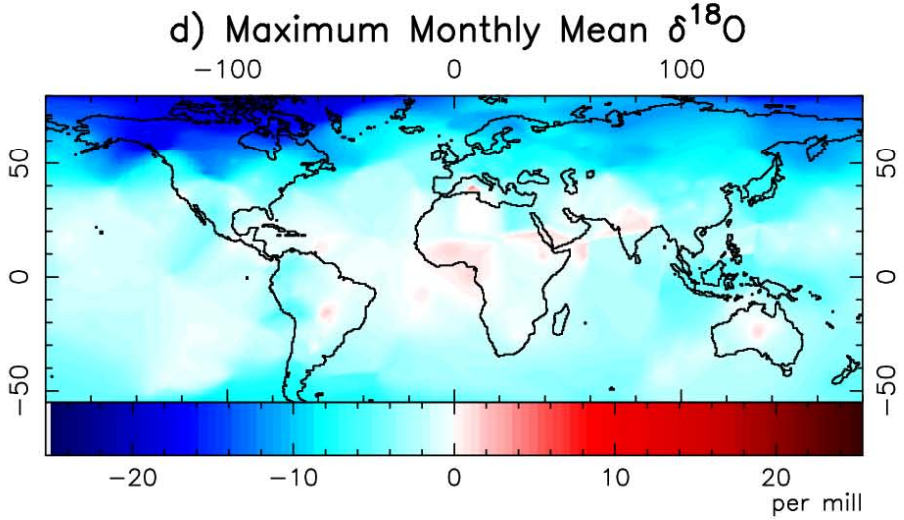


Stable Isotopes in Precipitation

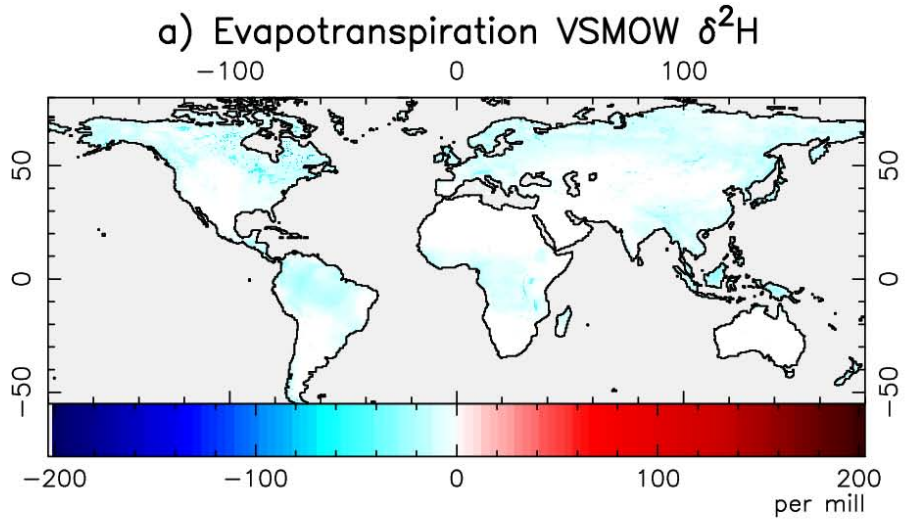


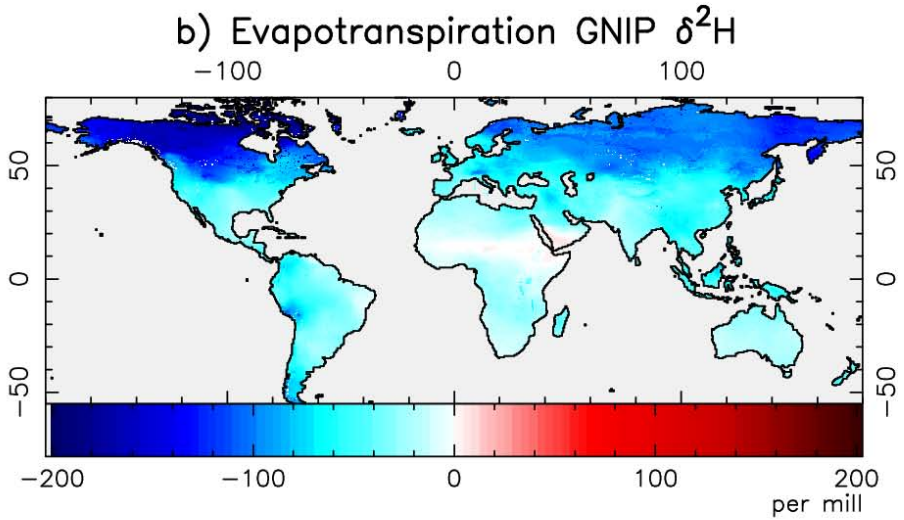


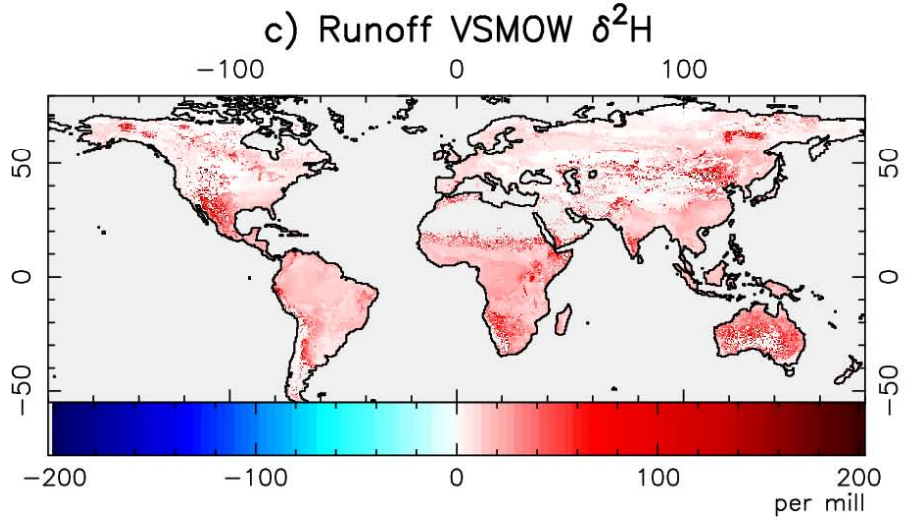


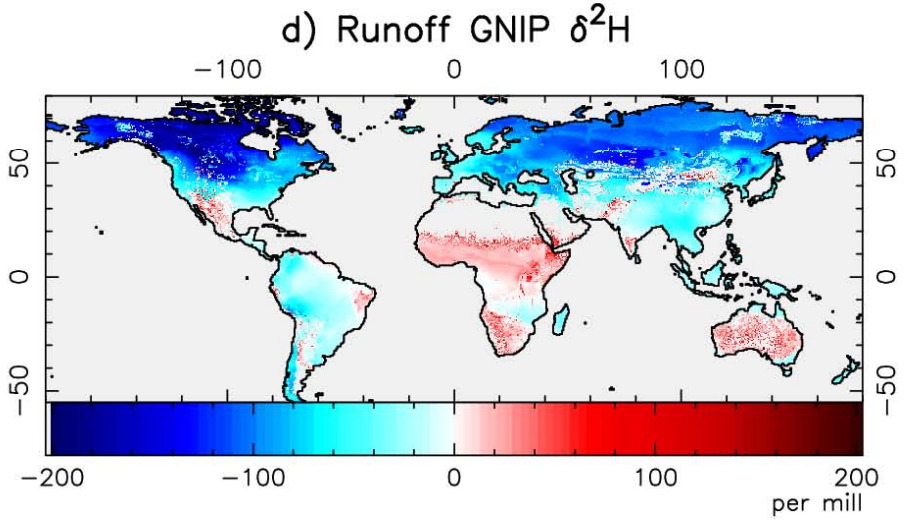


Deuterium in Evapotranspiration and Runoff

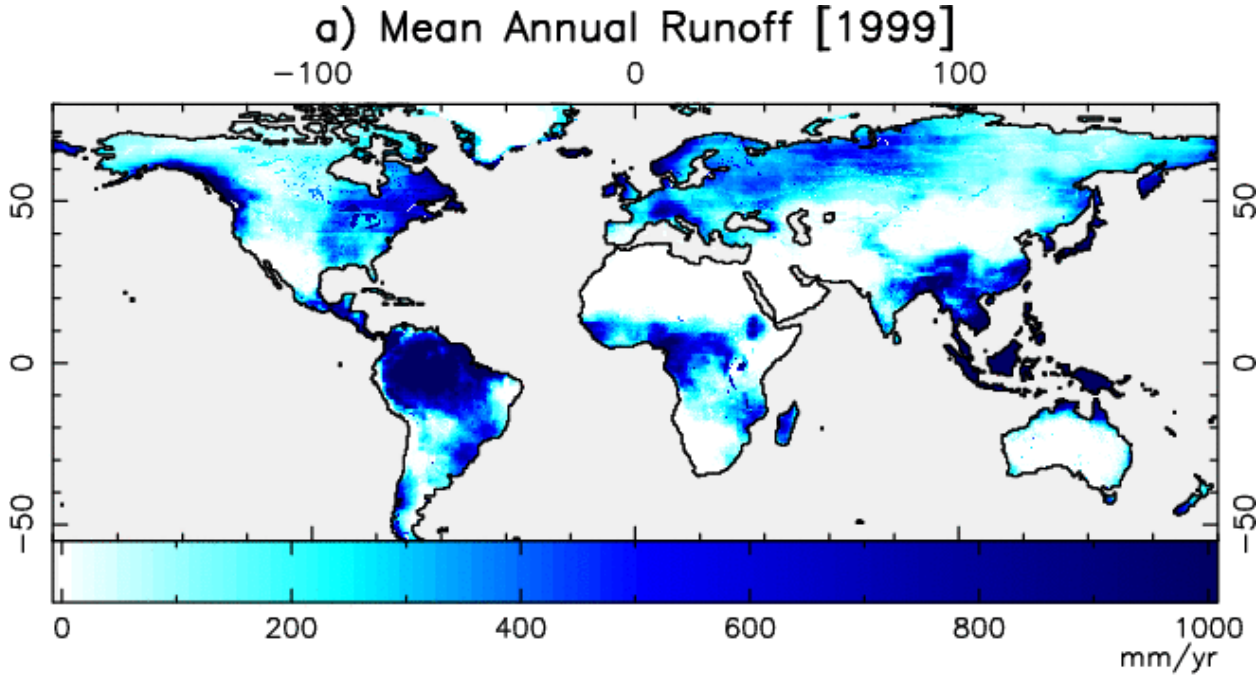


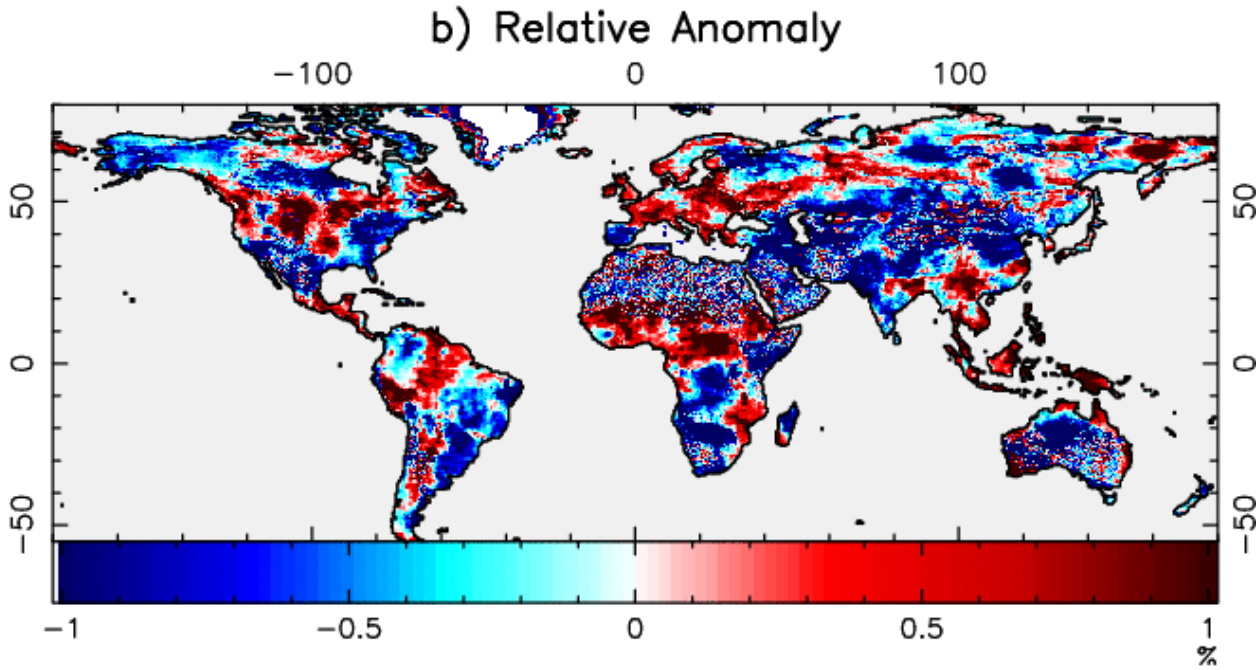






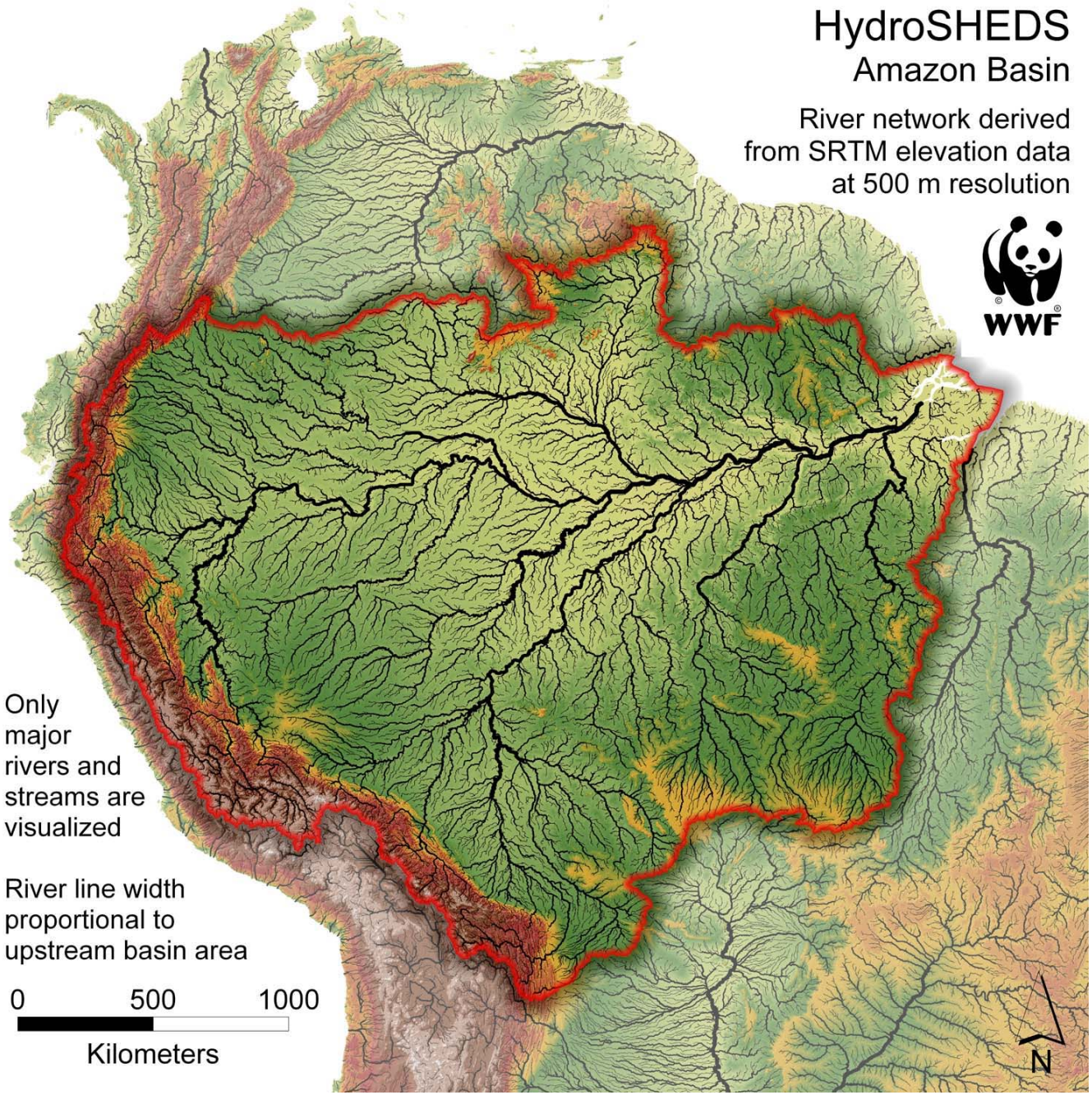
Contemporary Runoff



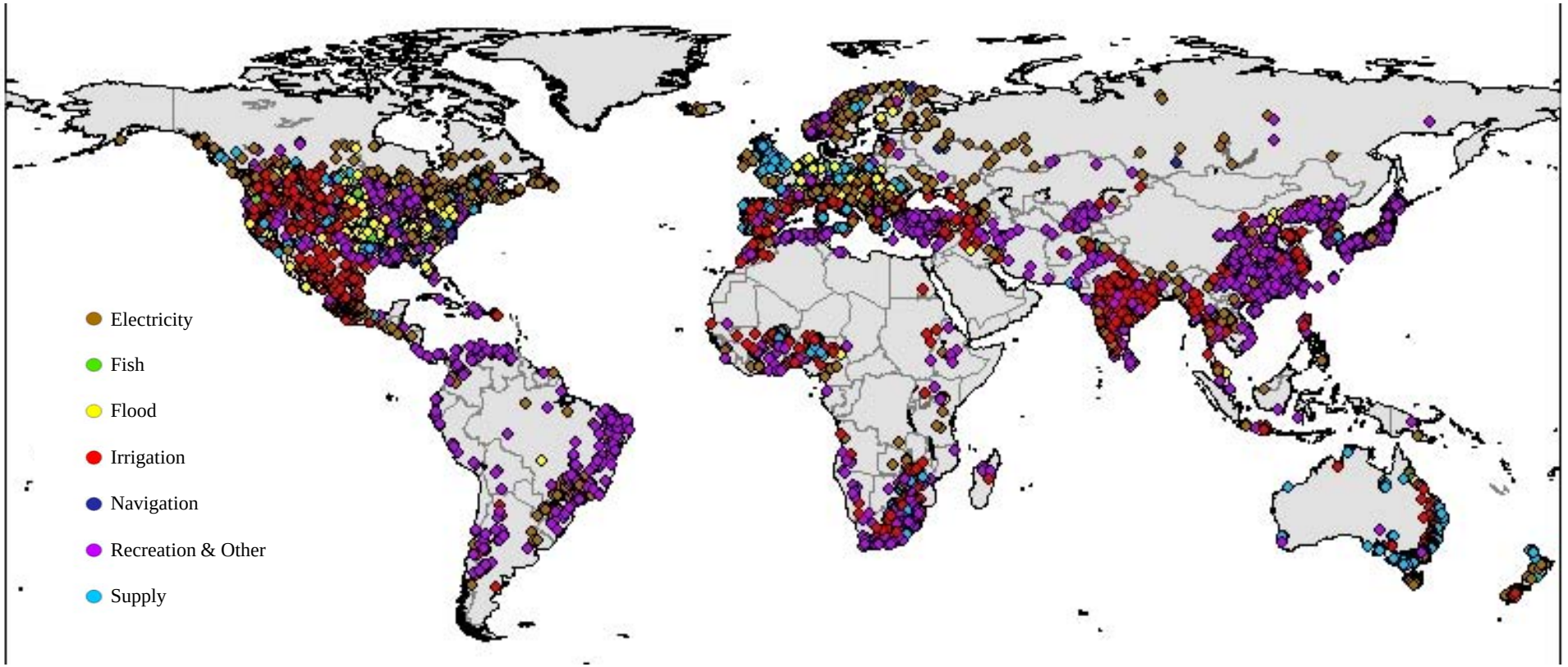


$$r_a = \begin{cases} R & R \dfrac{R - R}{R_{max} - R} \\ R \leq R & \dfrac{R - R}{R - R_{min}} \end{cases}$$

HydroSHEDS [2009]



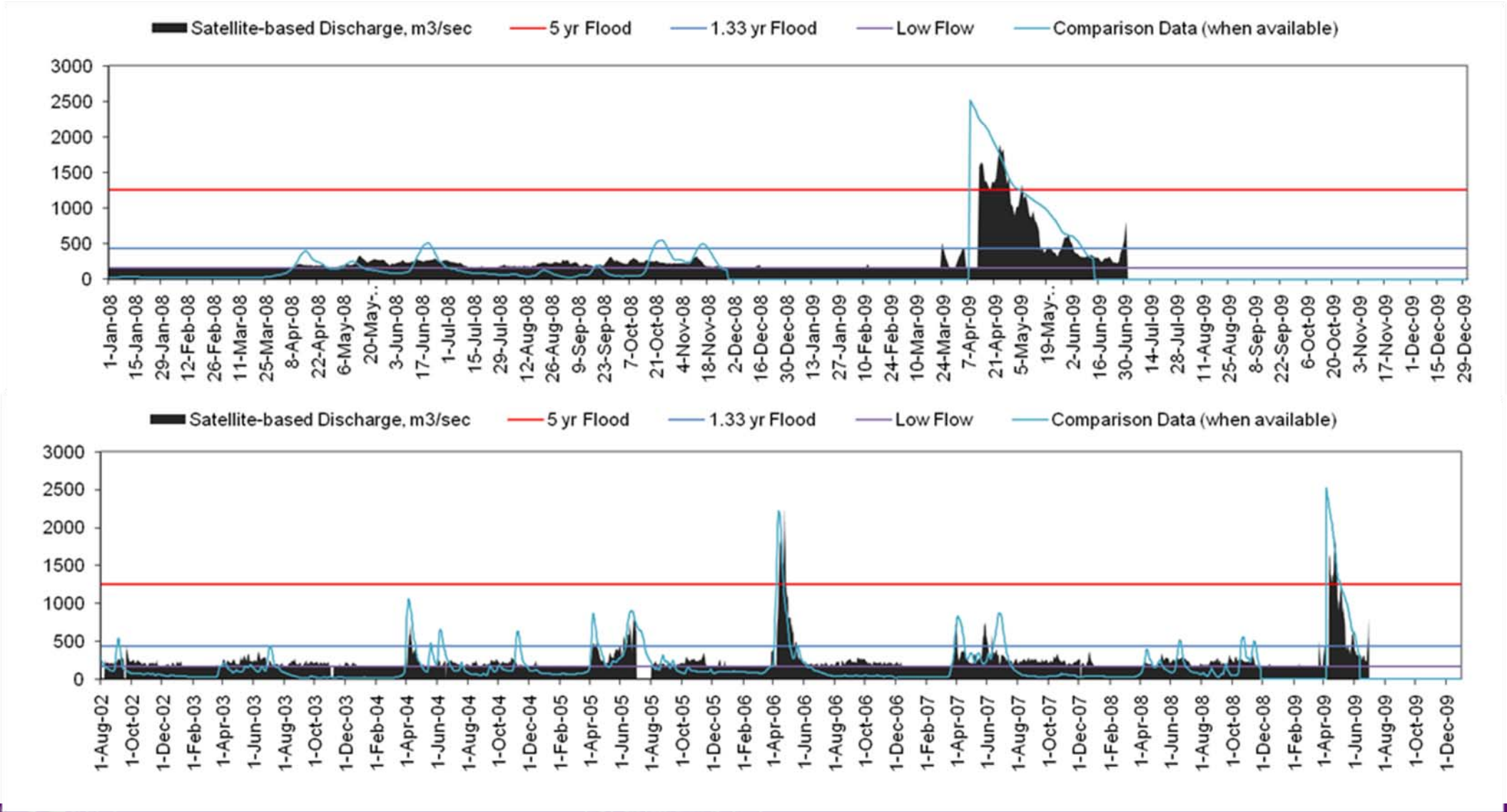
6883 Global Dams



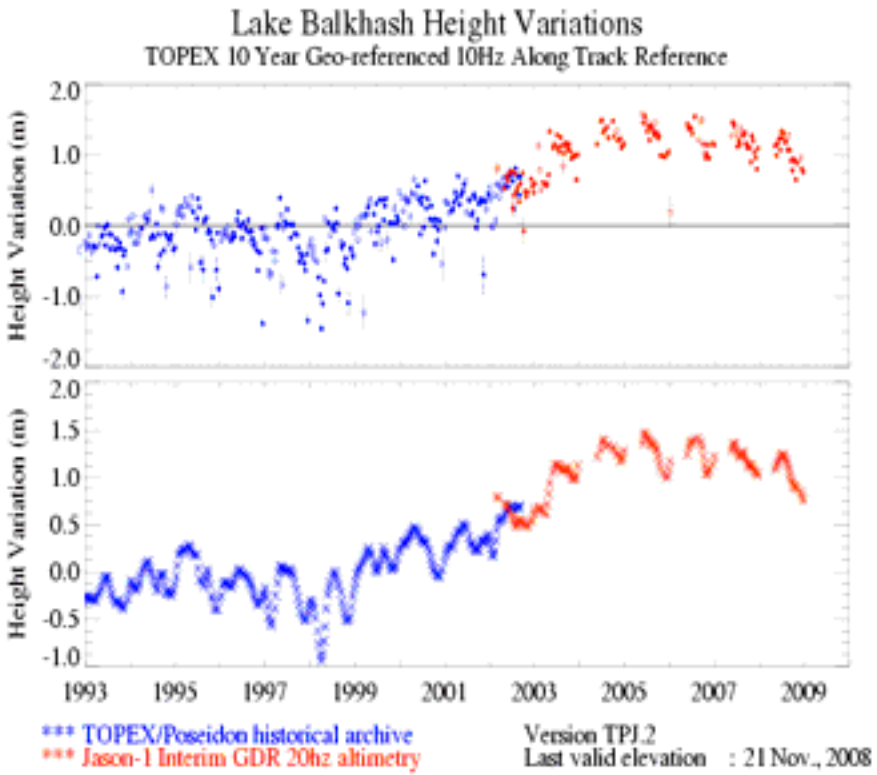
Co-registered Reservoirs

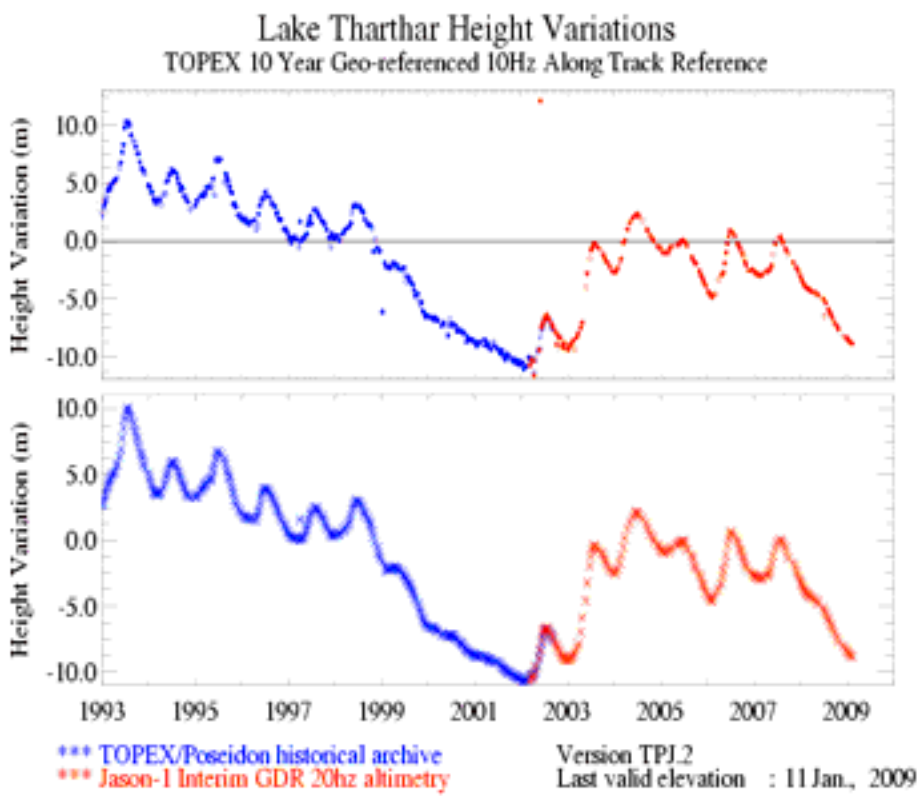
Locating Dams

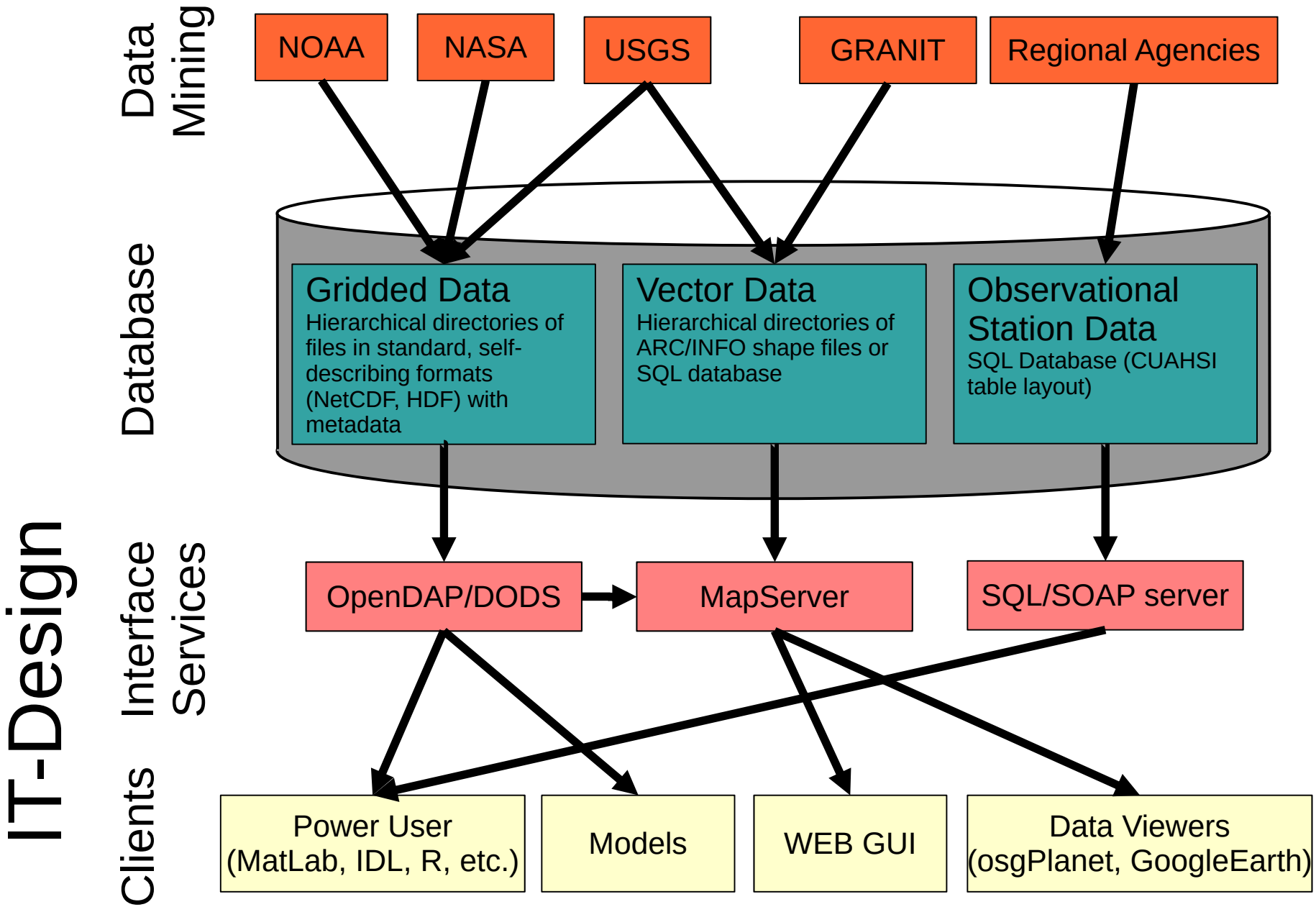
Pembina (North River), North Dakota



Lake Monitoring






IT-Design
Data Mining
Database
Interface Services
Clients
NOAA
NASA
USGS
GRANIT
Regional Agencies
Gridded Data
Hierarchical directories of files in standard, self-describing formats (NetCDF, HDF) with metadata
Vector Data
Hierarchical directories of ARC/INFO shape files or SQL database
Observational Station Data
SQL Database (CUAHSI table layout)
OpenDAP/DODS
MapServer
SQL/SOAP server
Power User (MatLab, IDL, R, etc.)
Models
WEB GUI
Data Viewers (osgPlanet, GoogleEarth)