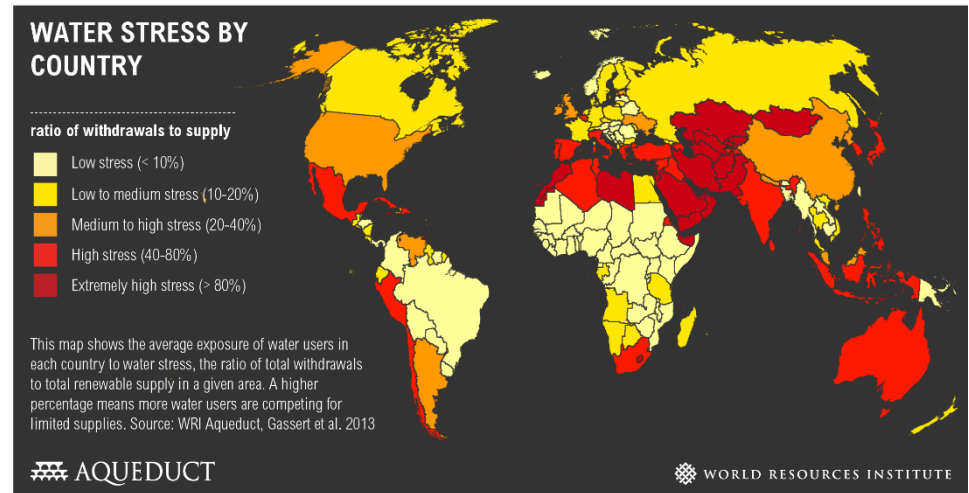


**MEG
(TUDJUK)
ELŐZNI A
VÍZVÁLSÁGOT (?)**

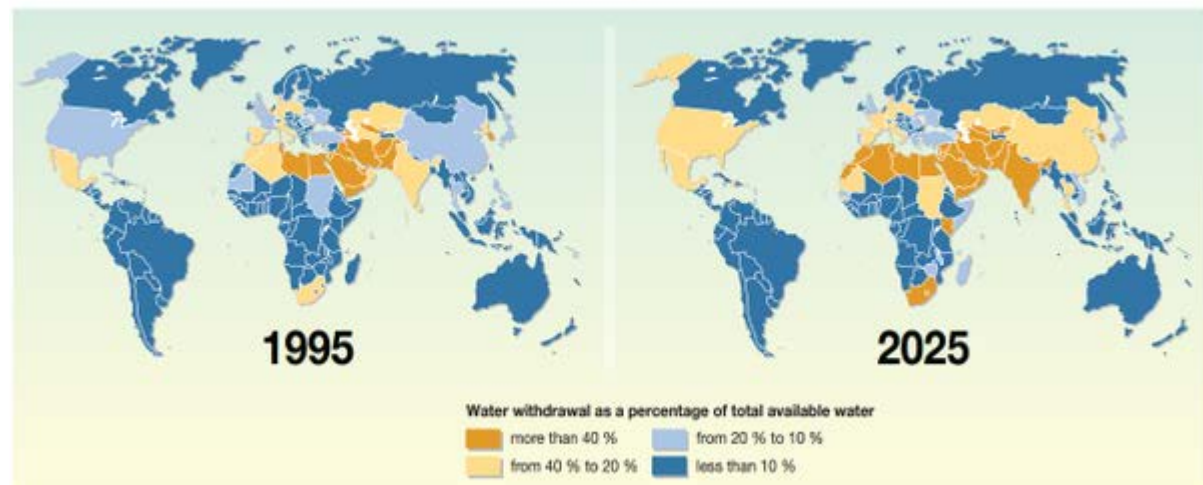
**Heincz Balázs
Főosztályvezető
Külgazdasági és Külügyminisztérium**

Globális (?) vízválság

- 2025-re 1,8 milliárd ember abszolút vízhiányos területen (fő/év < 500 m³)
- világ lakosságának 2/3-a vízhiányos területen
- 0,007% = 7,6 milliárd



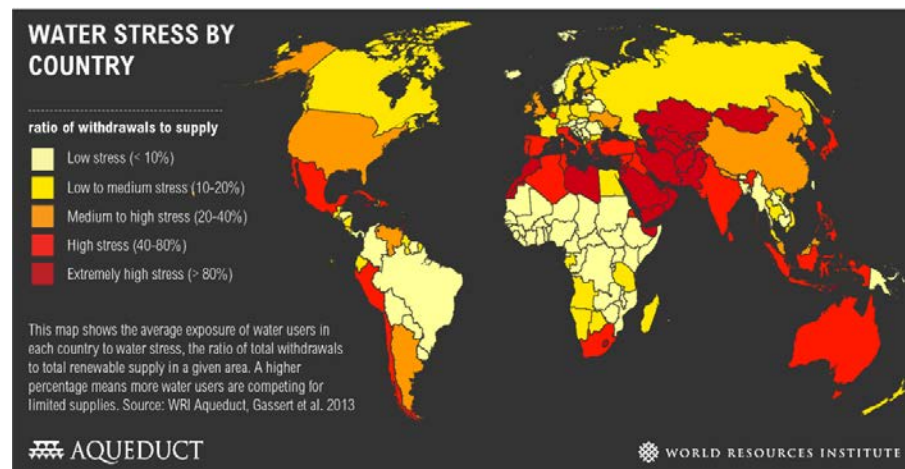
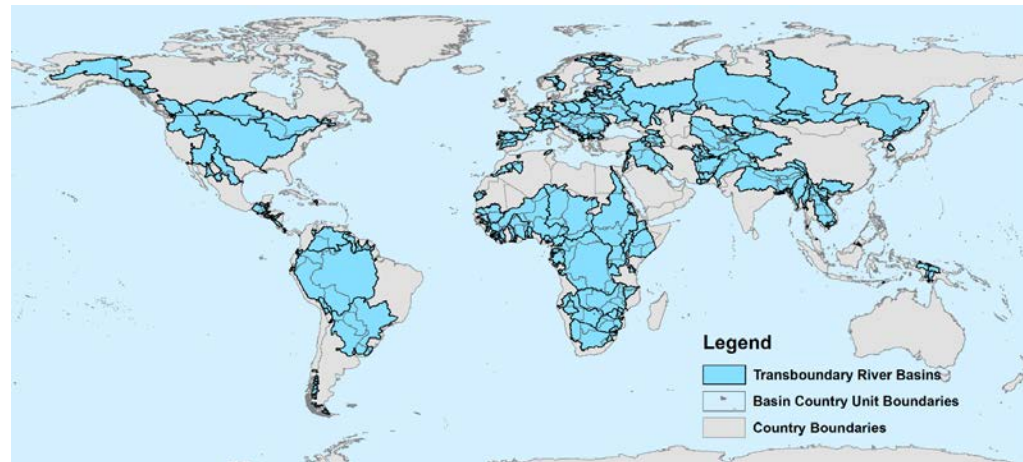
United Nations Environment Programme – Global water withdrawal projections



- mezőgazdaság a globális vízkivétel 70%-át adja, az öntözés 66%
- 2050-re 9,8 milliárdos lakosság, 70%-os növekedés az élelmiszerkeresletben
- 2/3-a városokban

Globális (?) vízválság

- 276 határon átnyúló folyómeder, melynek 60%-a nem rendelkezik semmilyen vízmegosztási rezsimmel
- világ lakosságának 40%-a már most osztott vízgyűjtő területeken él
- optimizmus: 1948 óta 37 vízzel kapcsolatos konfliktus, ezzel egyidejűleg 295 nemzetközi egyezmény megkötése (1820 – 450)



Kockázatok

Top 5 Global Risks in Terms of Likelihood

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1st	Asset price collapse	Asset price collapse	Asset price collapse	Storms and cyclones	Severe income disparity	Severe income disparity	Income disparity	Interstate conflict with regional consequences	Large-scale involuntary migration	Extreme weather events	Extreme weather events
2nd	Middle East instability	Slowing Chinese economy (<6%)	Slowing Chinese economy (<6%)	Flooding	Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather events	Extreme weather events	Extreme weather events	Large-scale involuntary migration	Natural disasters
3rd	Failed and failing states	Chronic disease	Chronic disease	Corruption	Rising greenhouse gas emissions	Rising greenhouse gas emissions	Unemployment and underemployment	Failure of national governance	Failure of climate-change mitigation and adaptation	Major natural disasters	Cyberattacks
4th	Oil and gas price spike	Global governance gaps	Fiscal crises	Biodiversity loss	Cyber attacks	Water supply crises	Climate change	State collapse or crisis	Interstate conflict with regional consequences	Large-scale terrorist attacks	Data fraud or theft
5th	Chronic disease, developed world	Retrenchment from globalization (emerging)	Global governance gaps	Climate change	Water supply crises	Mismanagement of population ageing	Cyber attacks	High structural unemployment or underemployment	Major natural catastrophes	Massive incident of data fraud/theft	Failure of climate-change mitigation and adaptation

Top 5 Global Risks in Terms of Impact

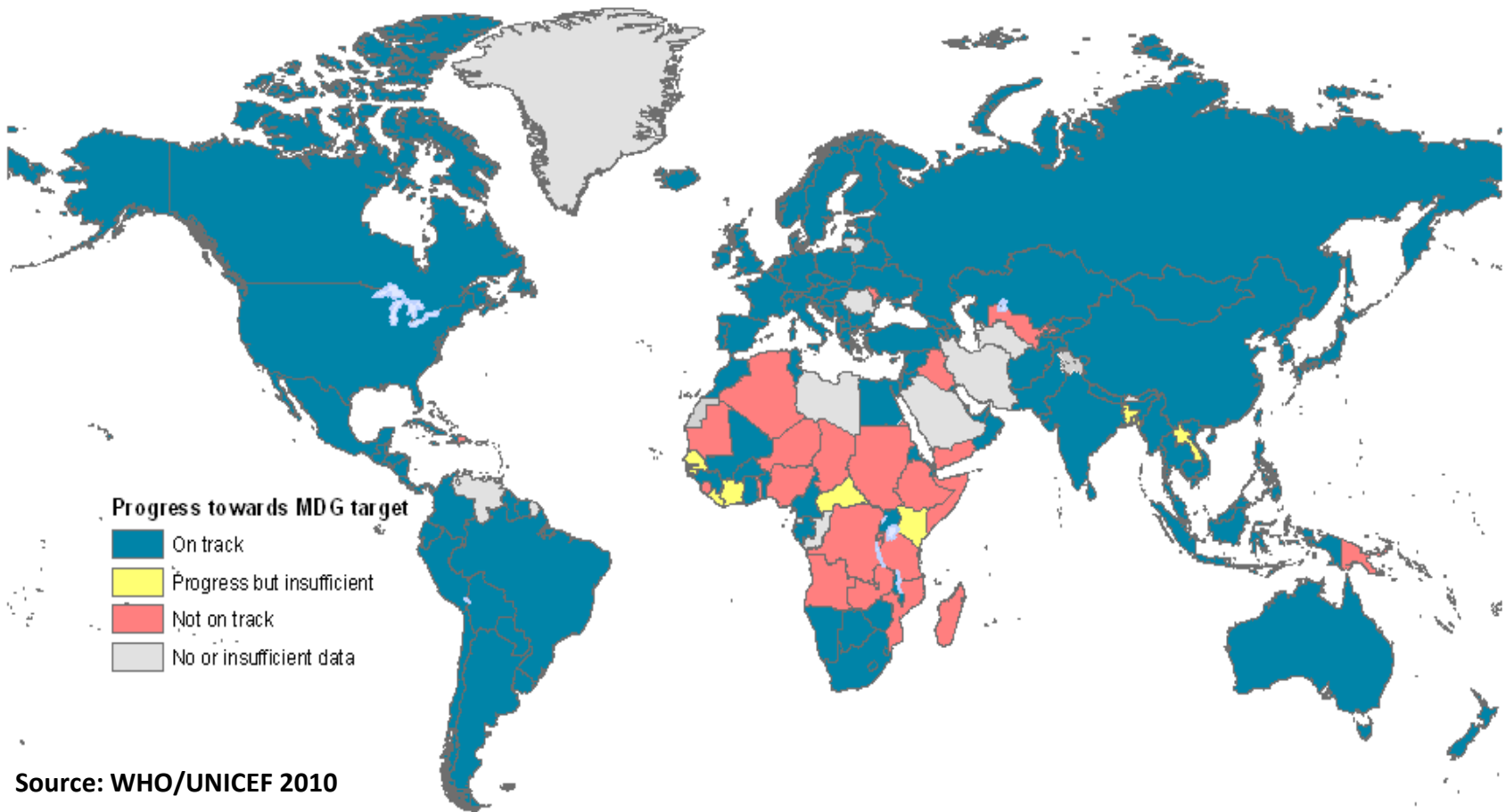
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1st	Asset price collapse	Asset price collapse	Asset price collapse	Fiscal crises	Major systemic financial failure	Major systemic financial failure	Fiscal crises	Water crises	Failure of climate-change mitigation and adaptation	Weapons of mass destruction	Weapons of mass destruction
2nd	Retrenchment from globalization (developed)	Retrenchment from globalization (developed)	Retrenchment from globalization (developed)	Climate change	Water supply crises	Water supply crises	Climate change	Rapid and massive spread of infectious diseases	Weapons of mass destruction	Extreme weather events	Extreme weather events
3rd	Slowing Chinese economy (<6%)	Oil and gas price spike	Oil price spikes	Geopolitical conflict	Food shortage crises	Chronic fiscal imbalances	Water crises	Weapons of mass destruction	Water crises	Water crises	Natural disasters
4th	Oil and gas price spike	Chronic disease	Chronic disease	Asset price collapse	Chronic fiscal imbalances	Diffusion of weapons of mass destruction	Unemployment and underemployment	Interstate conflict with regional consequences	Large-scale involuntary migration	Major natural disasters	Failure of climate-change mitigation and adaptation
5th	Pandemics	Fiscal crises	Fiscal crises	Extreme energy price volatility	Extreme volatility in energy and agriculture prices	Failure of climate-change mitigation and adaptation	Critical information infrastructure breakdown	Failure of climate-change mitigation and adaptation	Severe energy price shock	Failure of climate-change mitigation and adaptation	Water crises

■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

MDG (az ezredéves fejlesztési célok)

Vízellátás 2010: *MAJD NEM* a tervek szerint ...

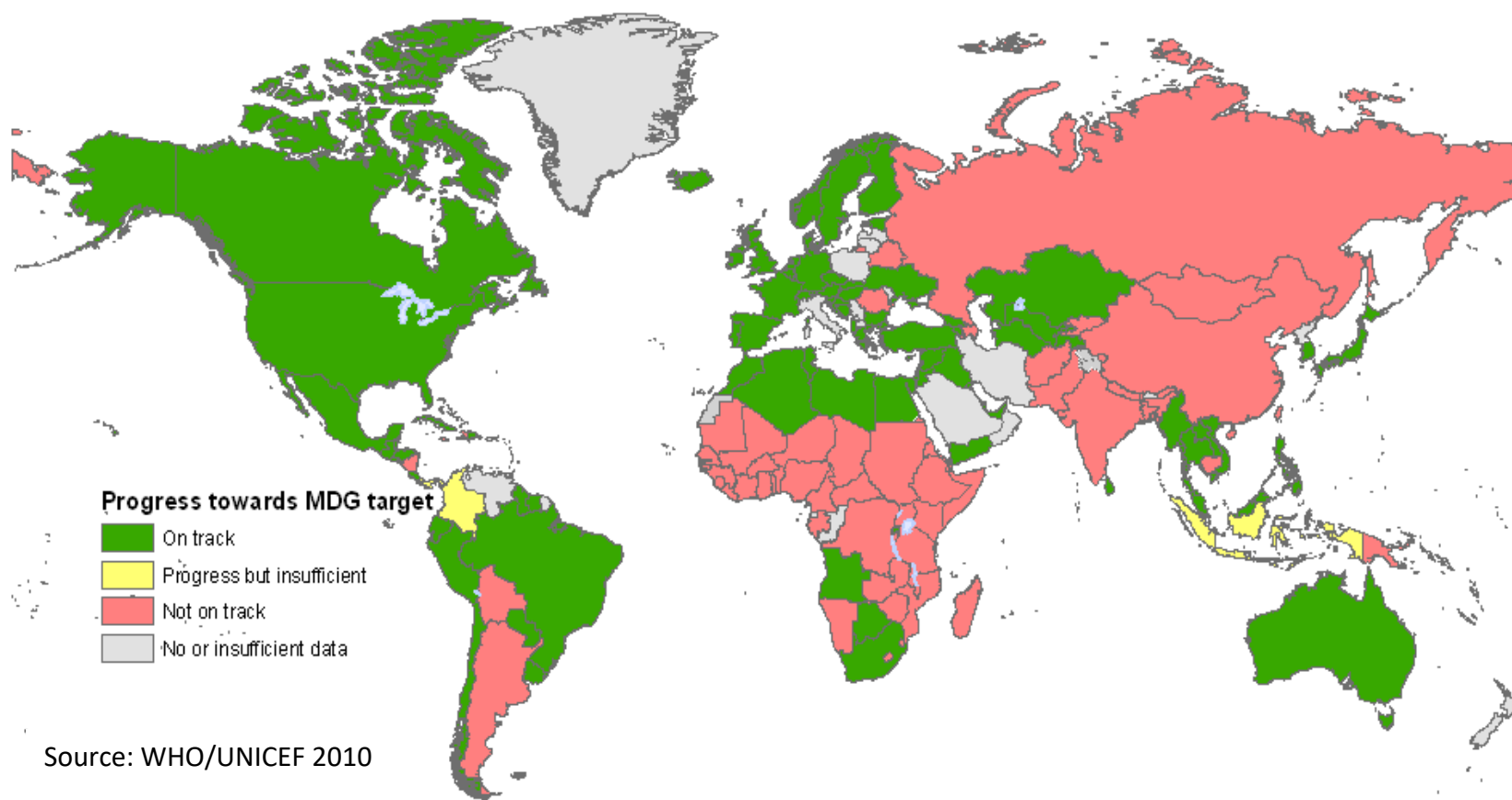
Drinking-water: except for Sub-Saharan Africa, most countries are on track to meet the MDG target



Source: WHO/UNICEF 2010

Szanitáció 2010: Távolabb a céltől ...

Sanitation: most countries in Sub-Saharan Africa and in Asia are not on track to meet the MDG target



Source: WHO/UNICEF 2010



GLOBAL TRENDS 2030:

ALTERNATIVE WORLDS

a publication of the National Intelligence Council

US National Intelligence Council (2012)



Four overarching megatrends will shape the world in 2030:

- Individual Empowerment.
- The Diffusion of Power.
- Demographic Patterns.
- The Growing Nexus among Food, Water, and Energy



US National Intelligence Council (2012)

GLOBAL TRENDS 2030:

ALTERNATIVE WORLDS

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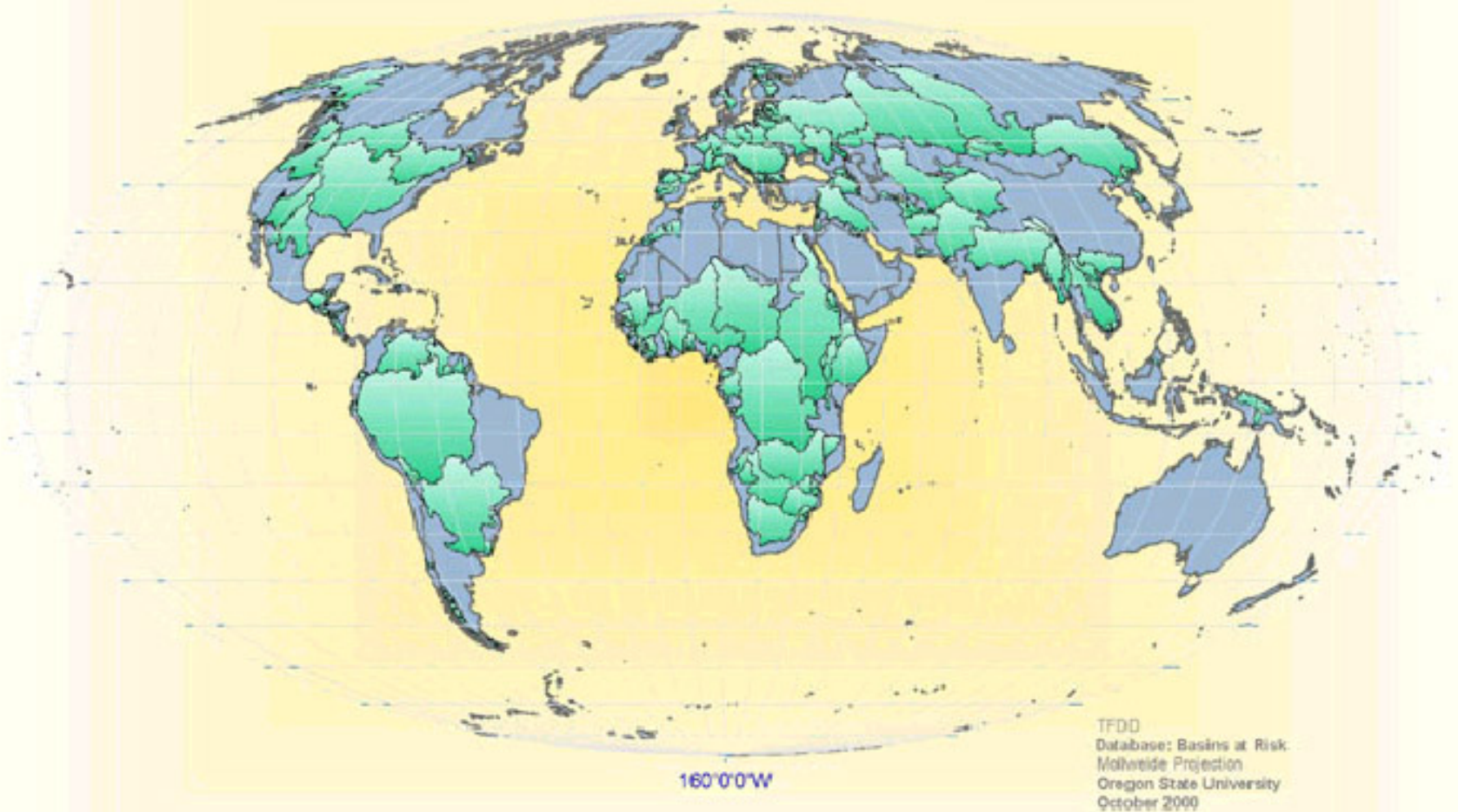


“Water may become a more significant contention than energy or minerals out to 2030 at both intrastate and interstate levels”



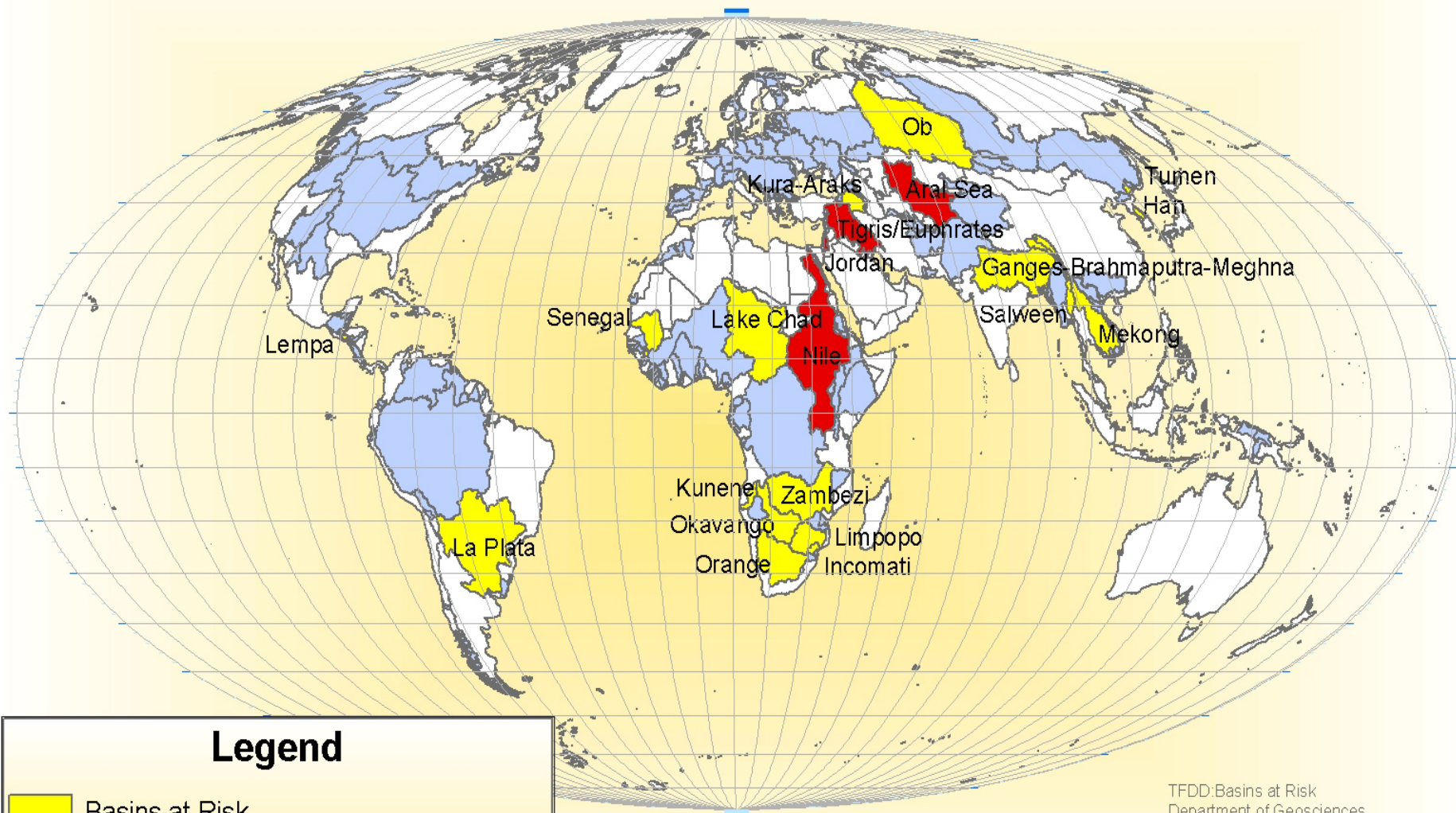
Nemzetközi vízgyűjtők

International Basins of the World



A népesség 40% osztott víztesteken él

Basins at Risk

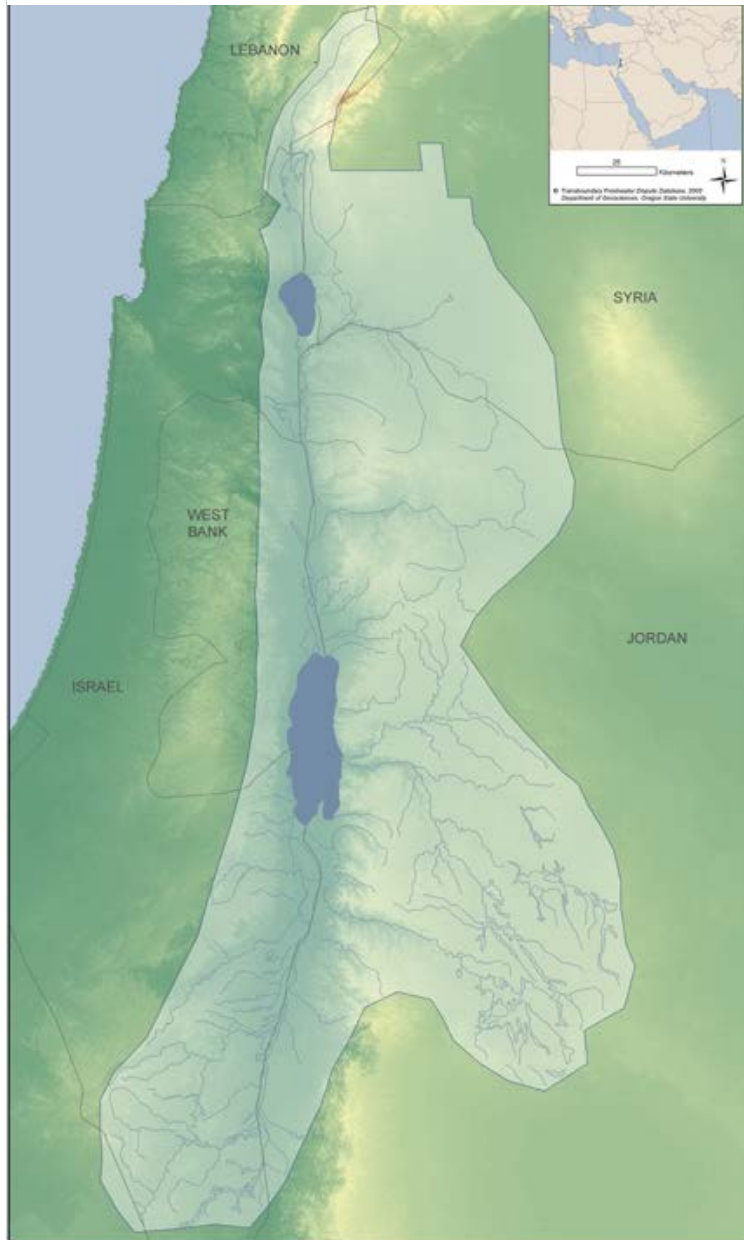


Legend

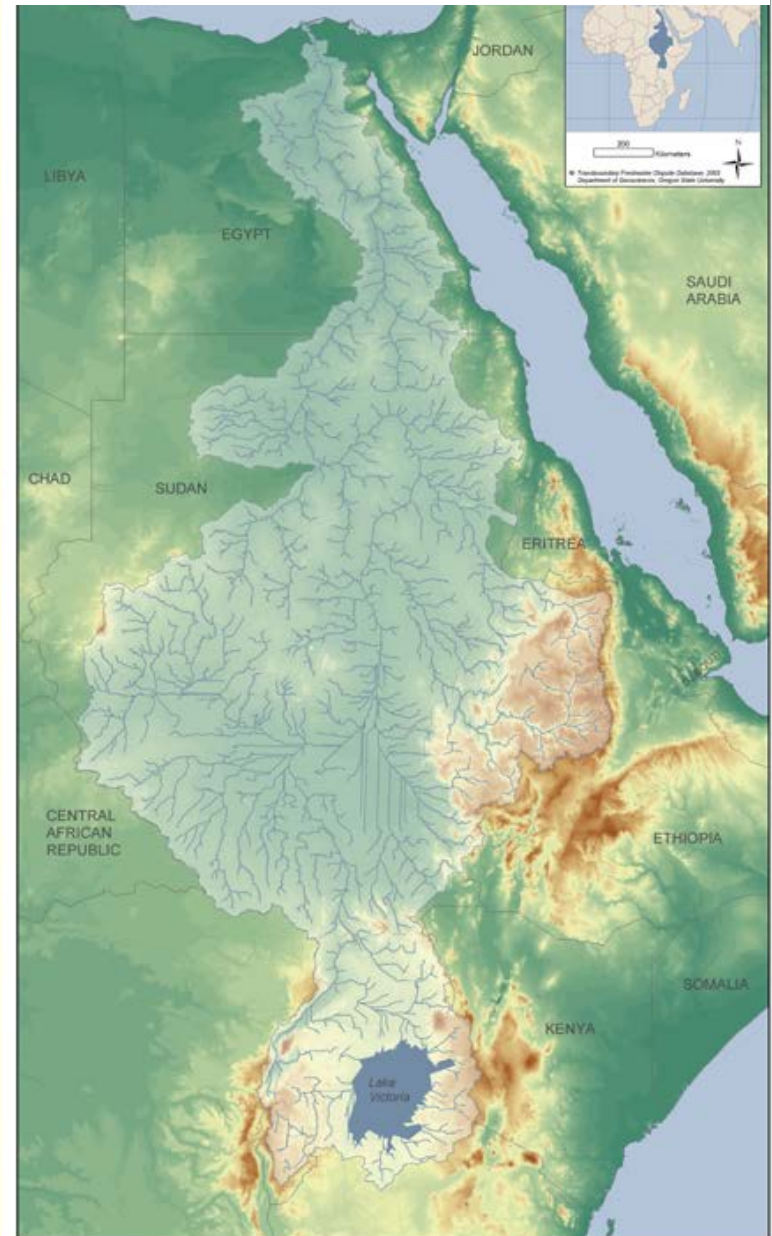
- Basins at Risk
- Political Boundaries
- International Basins
- Basins Currently in Dispute/Negotiations

TFDD: Basins at Risk
Department of Geosciences
Oregon State University
Cartography: Greg Fiske
June 2001

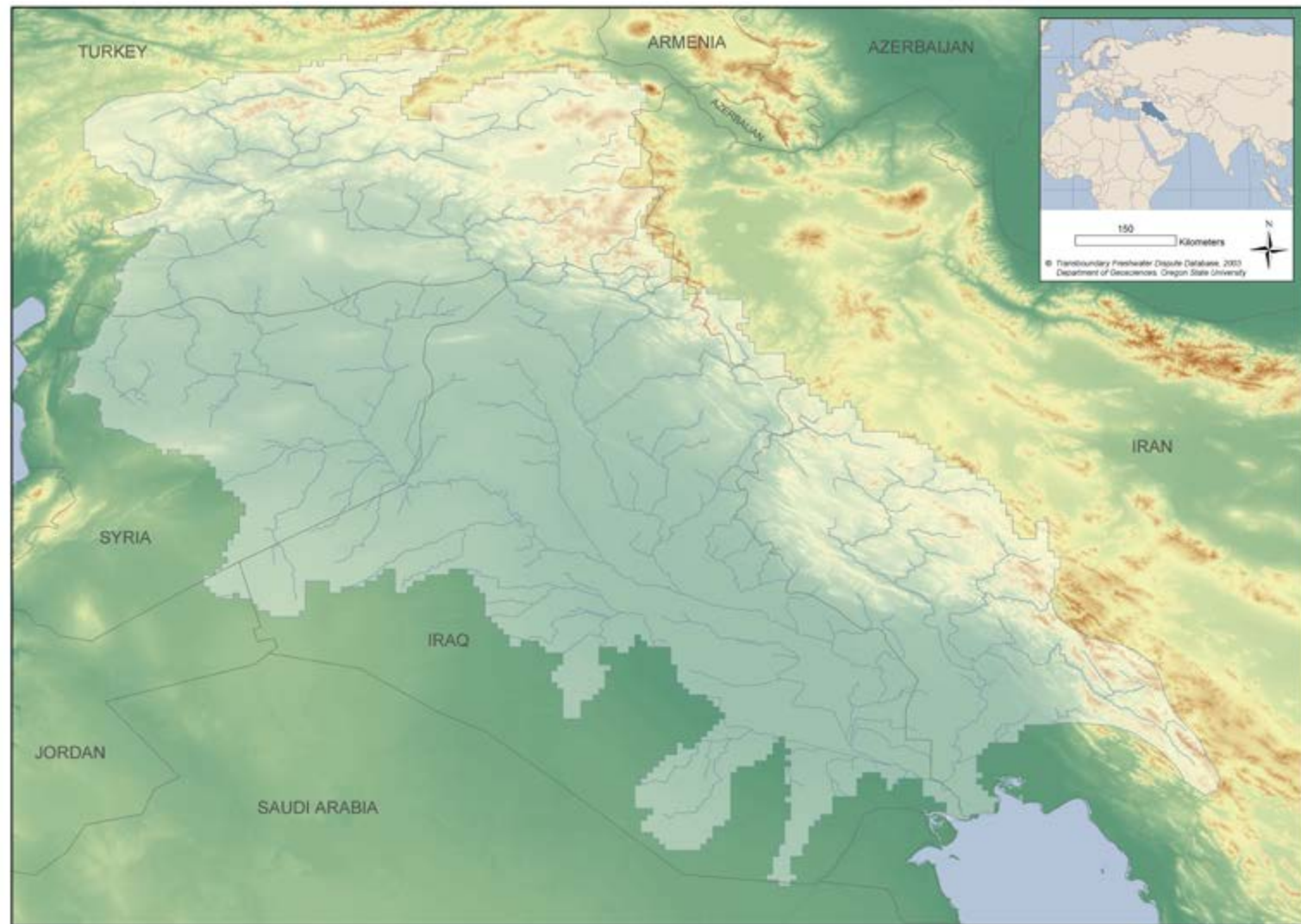
JORDÁN



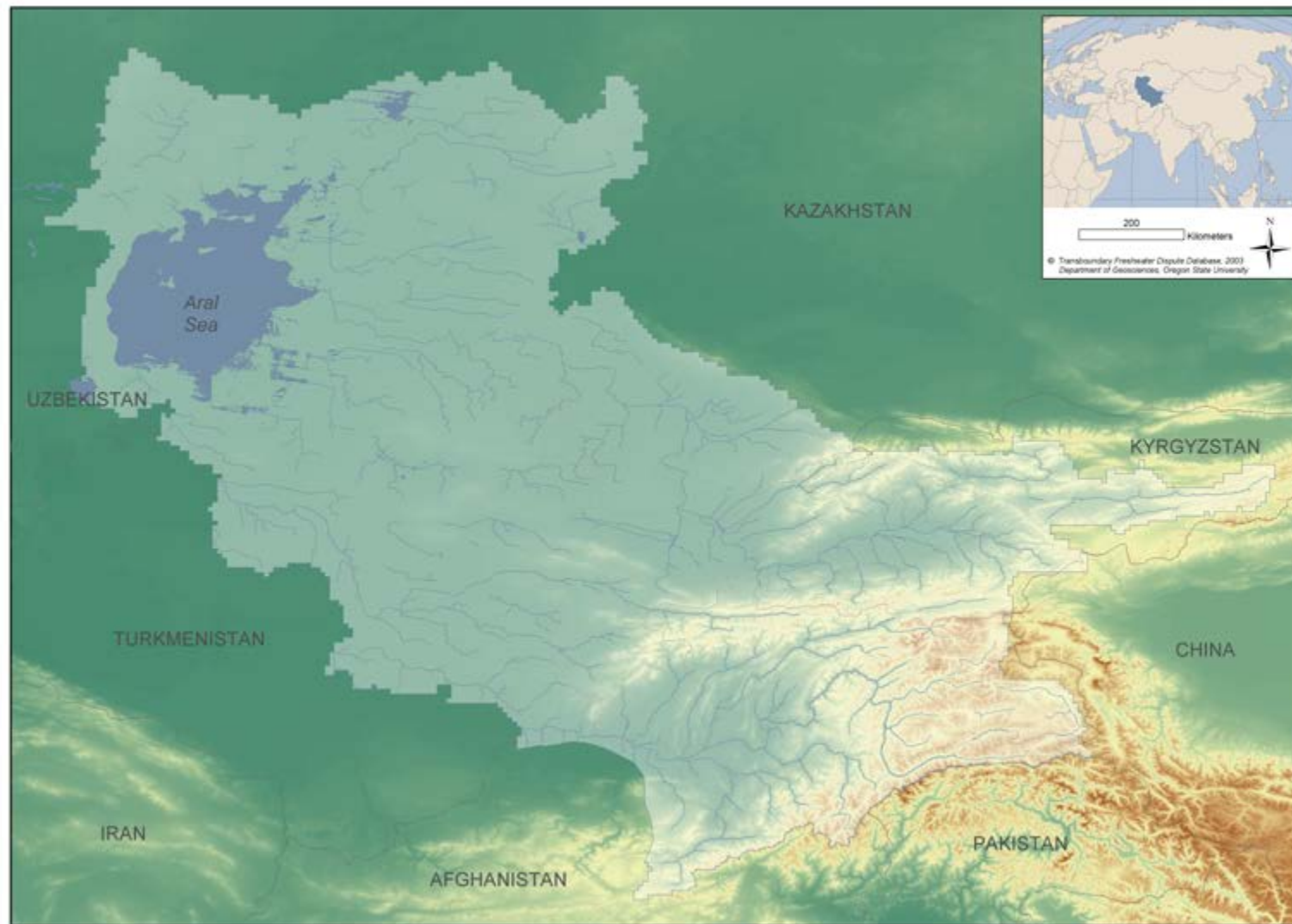
NILUS VÍZGYÜJTŐ



Tigris - Euphratesz vízgyűjtő



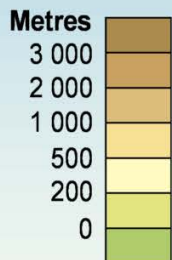
Az Aral-tó vízgyűtője



Water withdrawal and availability in the Aral Sea basin

Flow generation: water available in the country from rainfall and glacier melt

Water abstraction: withdrawal from surface water sources (rivers, canals and lakes)



km³ per year

60

50

40

30

20

10

0

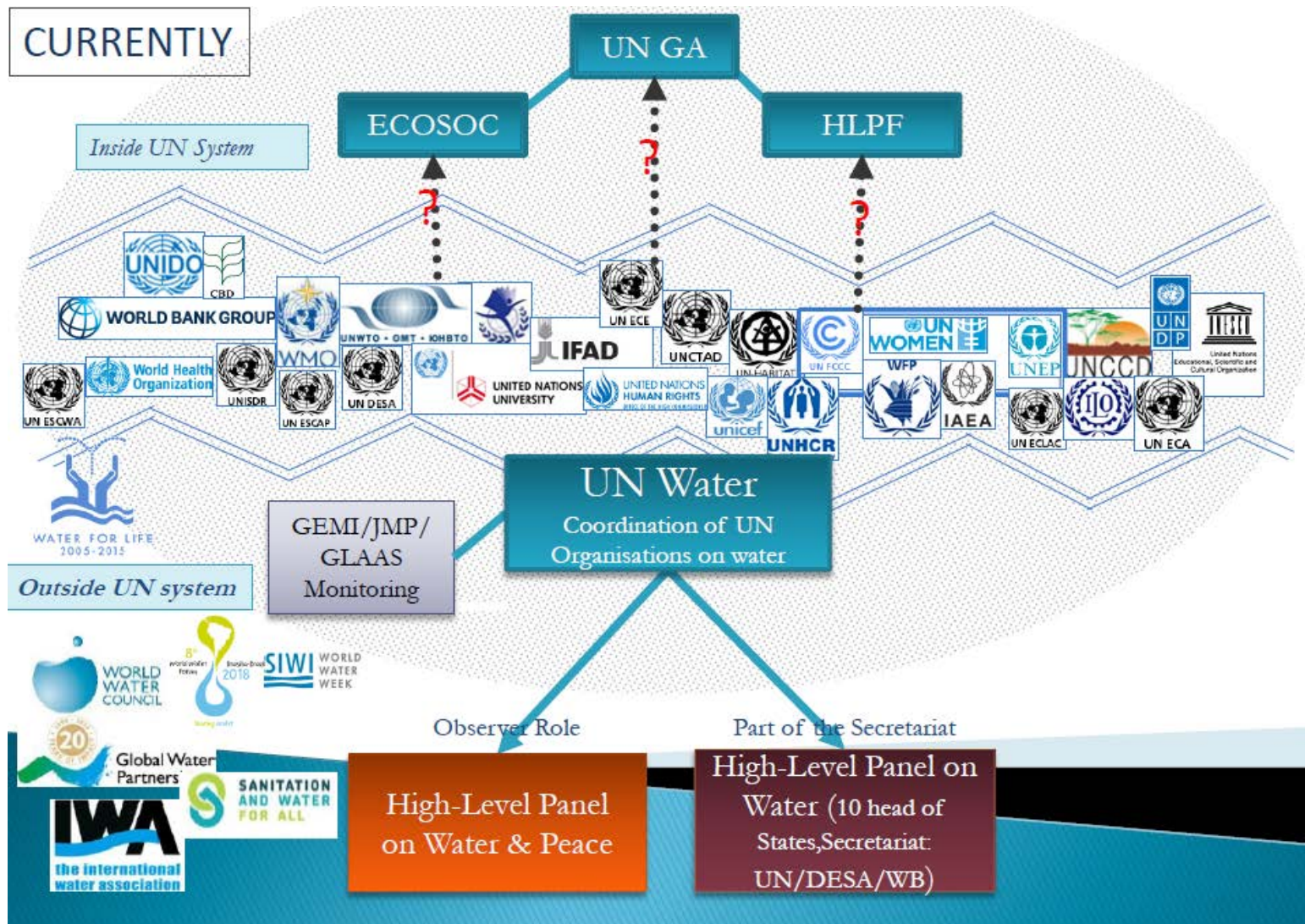


Source: Diagnostic Report on Water Resources in Central Asia, ICWC 2000.

THE MAP DOES NOT IMPLY THE EXPRESSION OF ANY OPINION ON THE PART OF THE AGENCIES CONCERNING THE LEGAL STATUS OF ANY COUNTRY, TERRITORY, CITY OR AREA OF ITS AUTHORITY, OR DELINEATION OF ITS FRONTIERS AND BOUNDARIES.

MAP BY VIKTOR NOVIKOV AND PHILIPPE REKACEWICZ - UNEP/GRID-ARENDAL - APRIL 2005





Válaszok és megoldások

- „A globális vízválság folyamatosan erősödik, amely növelheti a betegségeket, a bizonytalanságot és az államok összeomlását, alááshatja a gazdasági növekedést, és általában csökkentheti az országok azon képességét, hogy előmozdítsa az amerikai nemzeti érdekeket támogató prioritásokat.” (U.S. Government Global Water Strategy 2017)
- „A globális vízválság nem a vízkészletek rohamos fogyásából következő válság, hanem a vízpolitikai kormányzás válsága.” (Víz Világtanács, Gupta, stb.)

A VÍZ EDDIG AZ EGYÜTTMŰKÖDÉS FORRÁSA (VOLT ...?)

**“A víz a legfontosabb kérdés lesz,
amellyel a következő generáció
szembesülni fog.”**

Donald J. Trump

Köszönöm szépen a figyelmüket!