Resiliency Measures and Capacity Building in climate change conditions and growing vulnerable countries

5th December 2016

Water Eco-Security 2015

ready for the resource revolution

What is the situation to-day ?
What will happen with climate change ?
What to do ?

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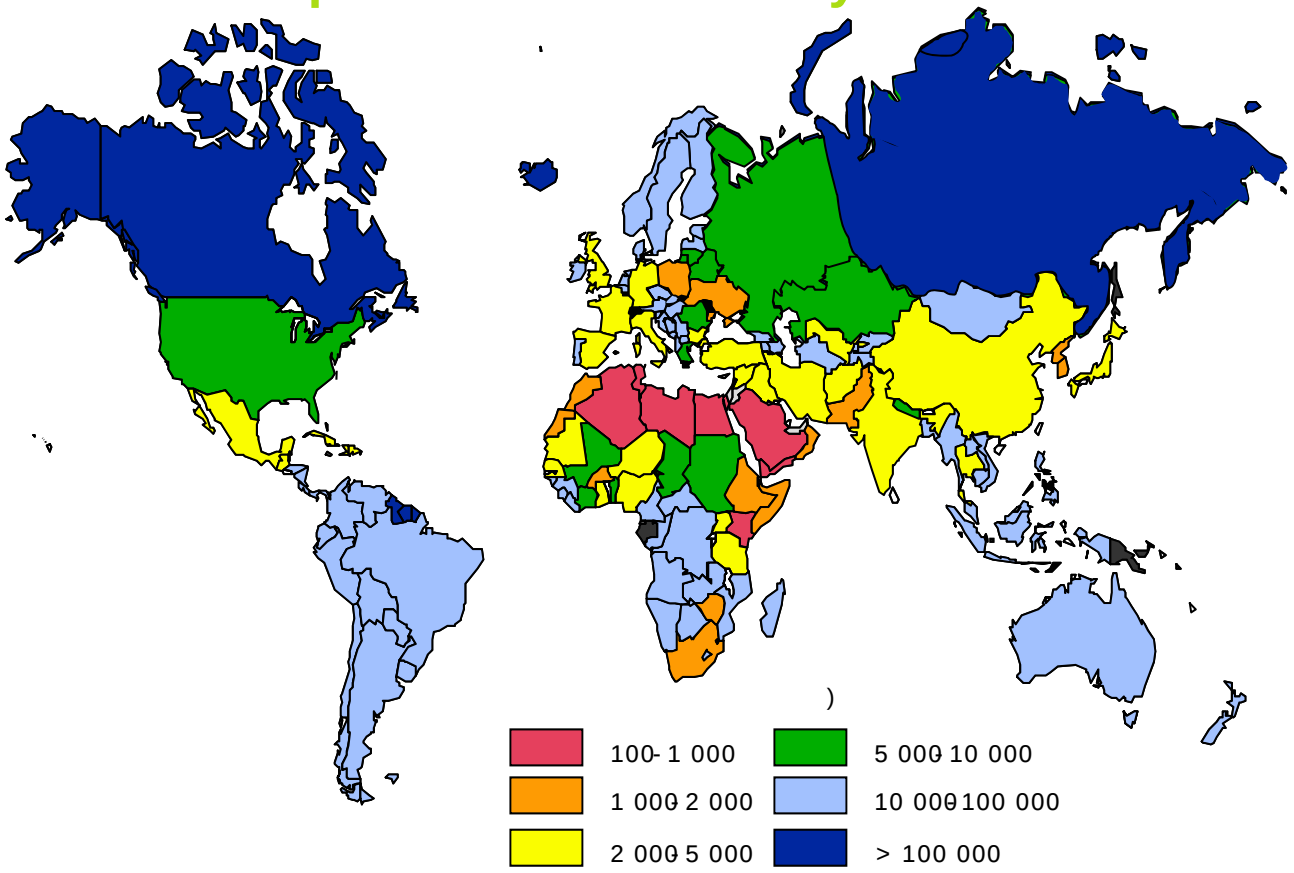
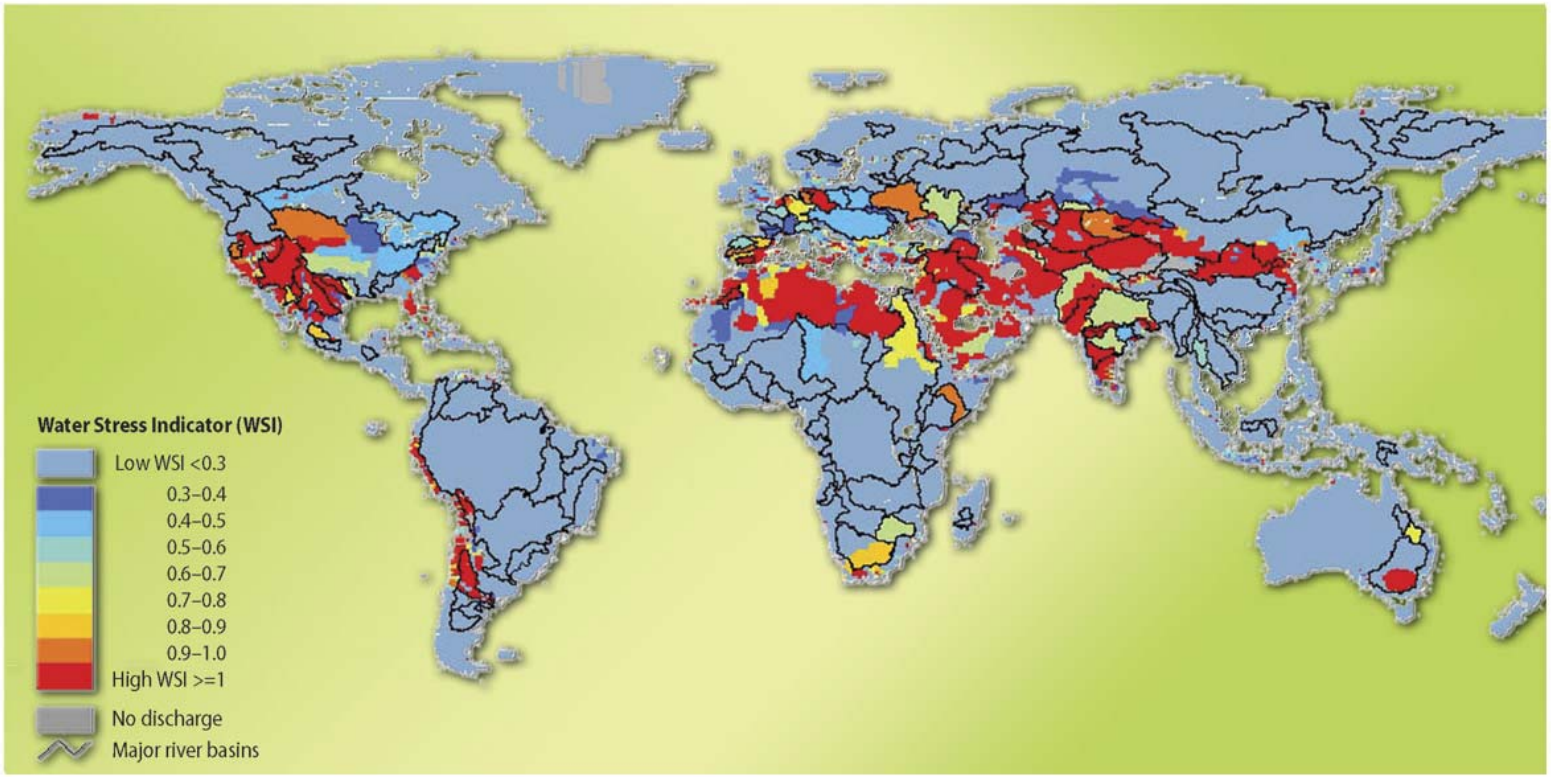
Renewable resources per habitant in m3/h/y



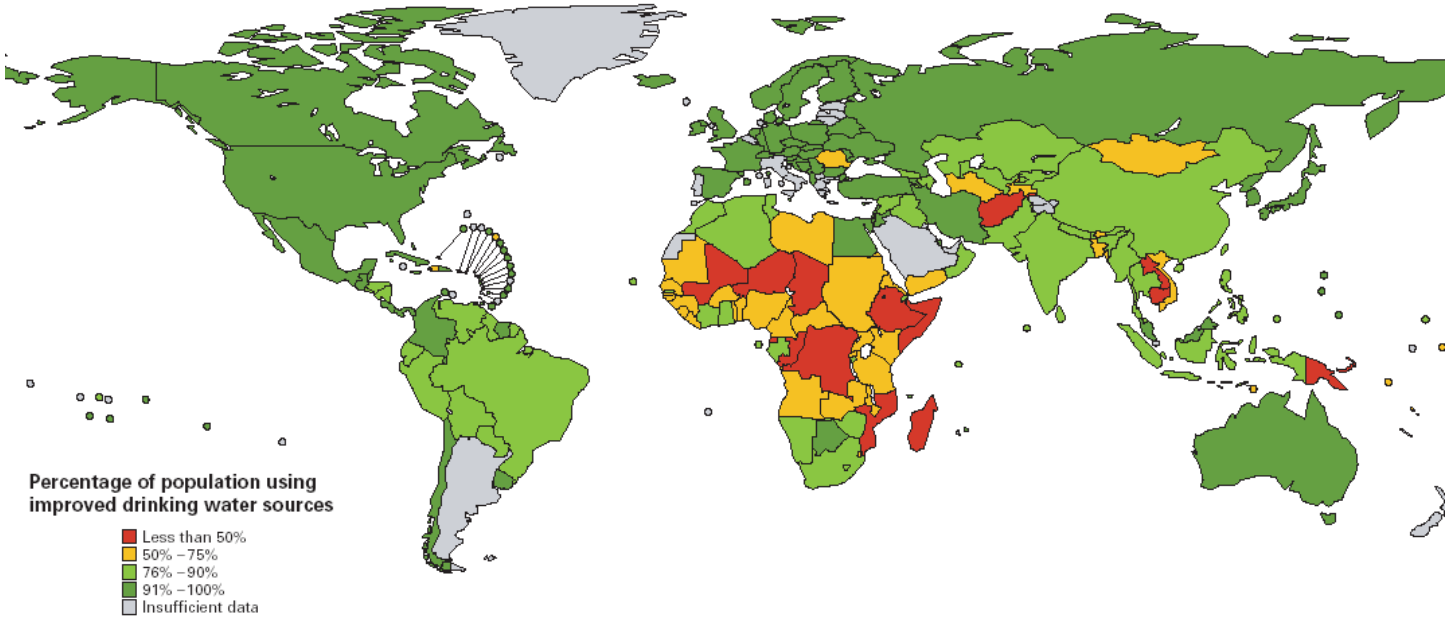
Another way is to measure the water stress indicator



Source: IWMI, WRI, Kassel University,

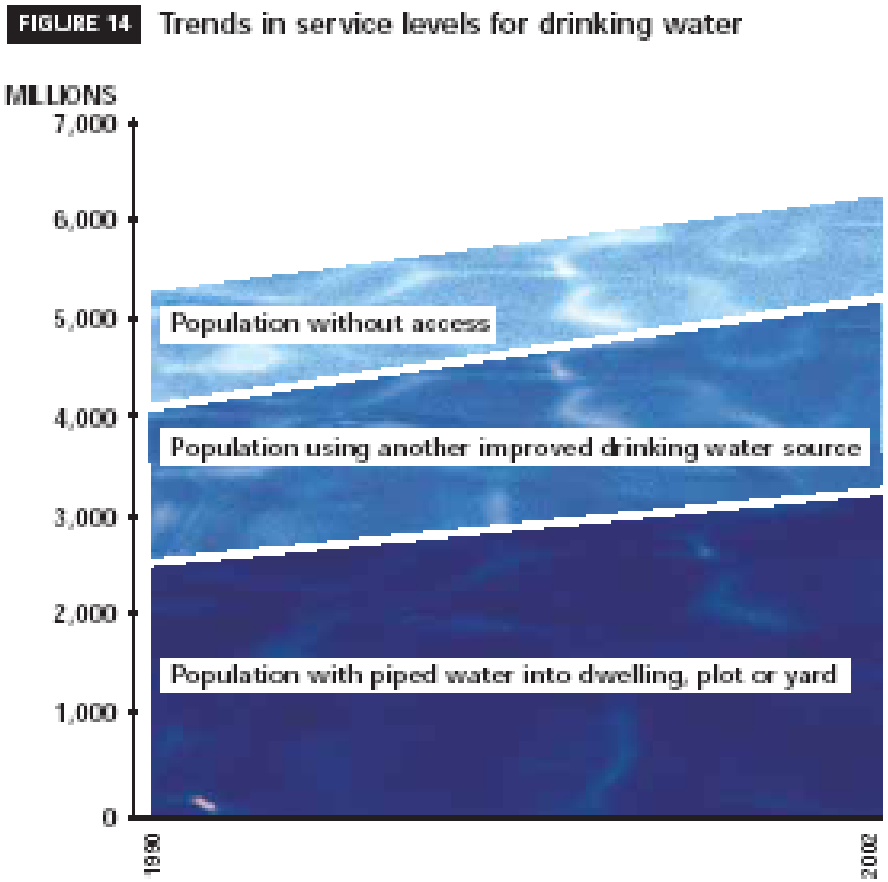
Lack of access to water

FIGURE 1 Coverage with improved drinking water sources in 2002

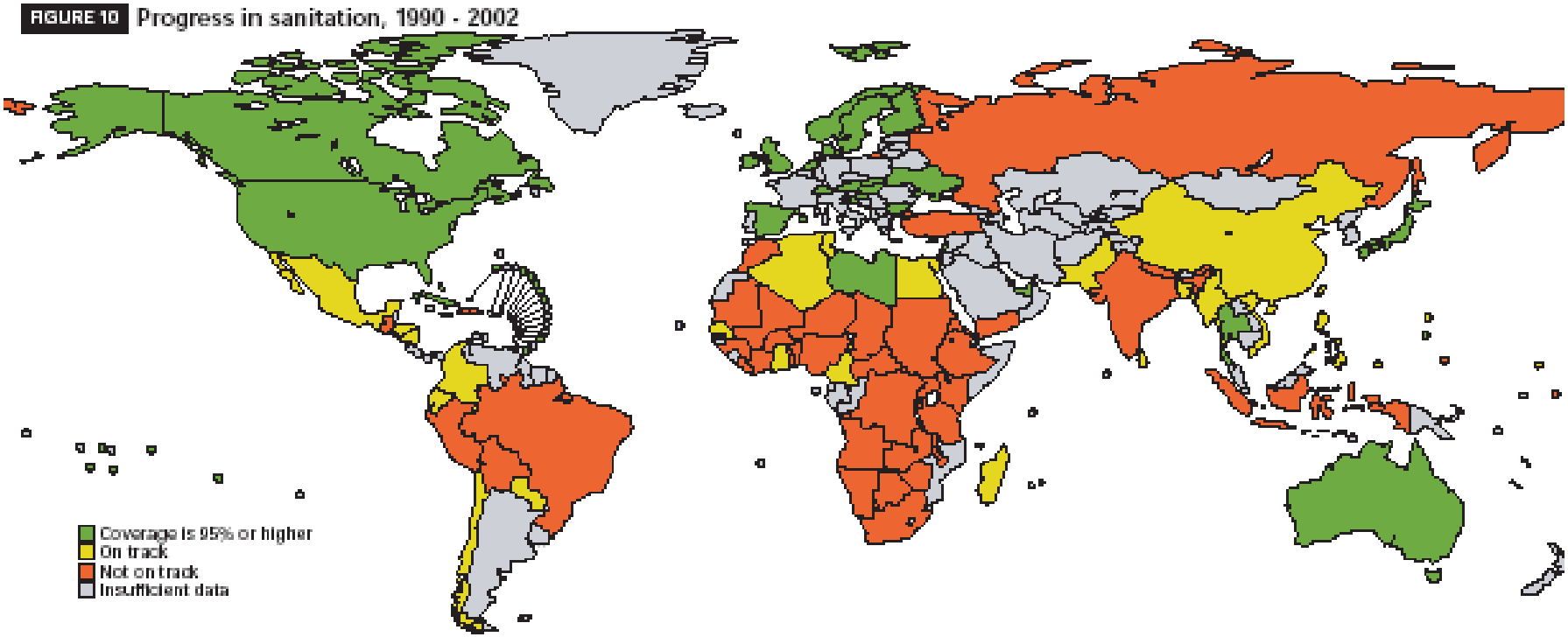


lack of access to water is not obligatory linked to lack of water resources

- **Tension is often a question of quality and not only quantity**
- **1 to 2 billions people are without good access to water because of lack of investments and governance, rather than water resources.**



Countries with poor level of waste water services are linked to level of global low income



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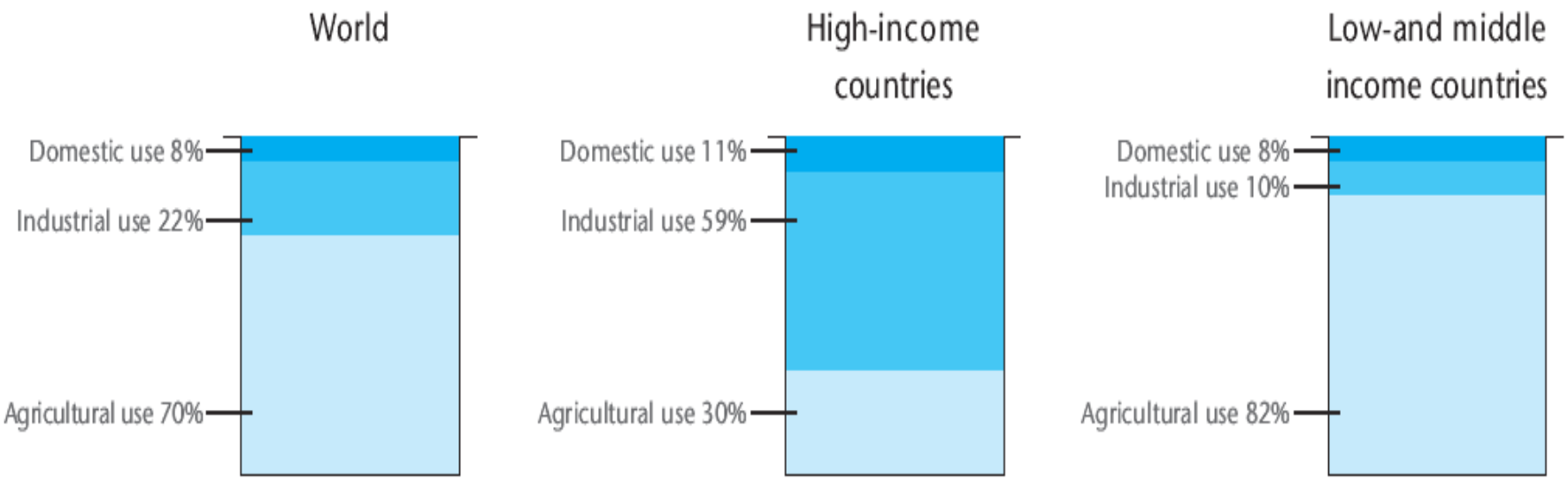
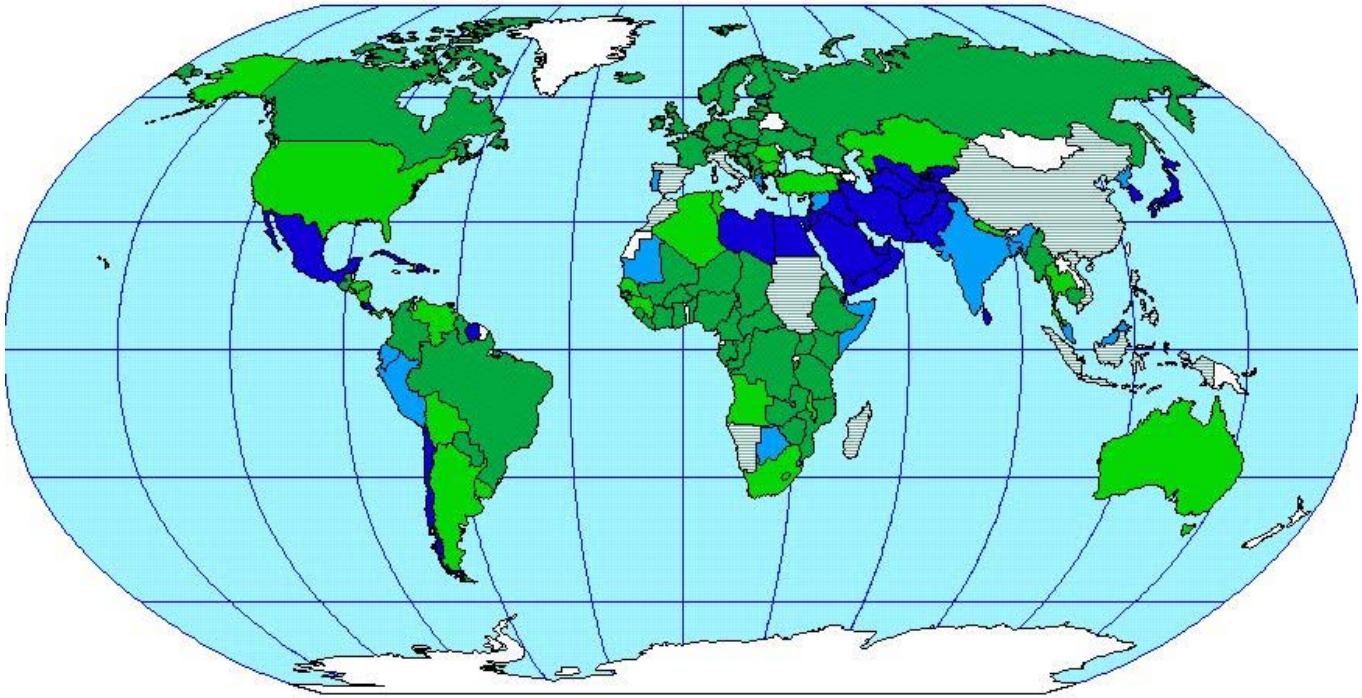
Water use: part of the sectors in regard to economical level



Ref. 5: Water for People, Water for Life, the United Nations World Water Development Report, UNESCO, 2003, http://unesdoc.unesco.org/images/0012/001295/129556e.pdf

Dependence in regard to green water and blue water for agriculture



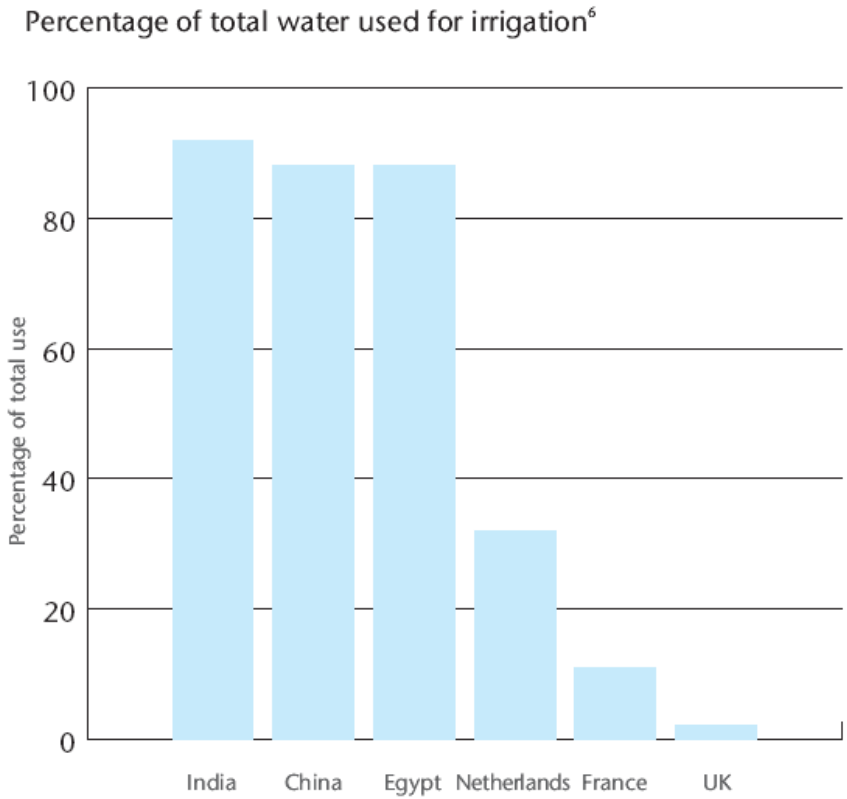
Source: Rockstsrom et al, 2003, Water Productivity in Agriculture

Blue water usage

Agriculture is from far the first user of blue water

The evolution of the demand will be linked to:

- Demography
- Alimentary diet types
- Agricultural pratices and
- Climate



Ref. 6: "Global Water Crisis, the Major Issue of the 21st Century", Saeijs, H.F.L. & van Berkel, M.J., European Water Pollution Control. 1995. Vol. 5.4 pp 26-40; cited by Corporate Water Policies, Dec. 2003

75 % of the world's poor & food insecure people rely on agriculture & natural resources for their livelihoods

FAO estimates that **world food production must rise 60% to keep pace with demographic change. #ClimateChange puts this at risk.**

According to @IPPC, crop yield declines of 10-25% may be widespread by 2050 due to #ClimateChange

The objective of 2 degrees is a political one (IPPC)

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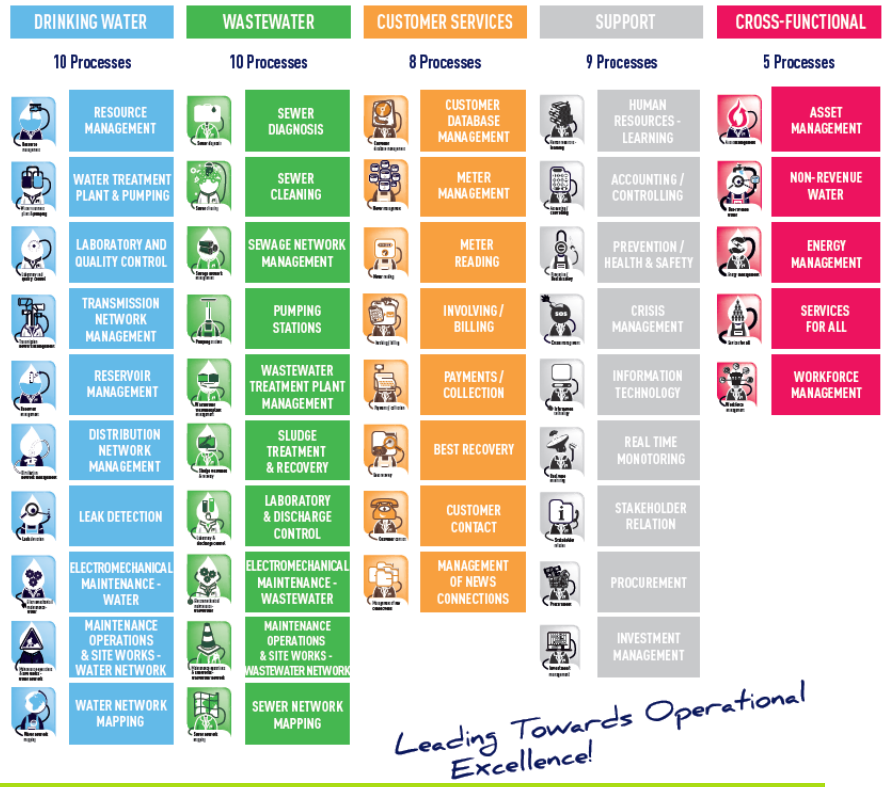
Know-how transfer & Training center our experience: Wikti

WIKTI® in the world : 20 countries using WIKTI®

Know-how transfer & Training center (Wikti)

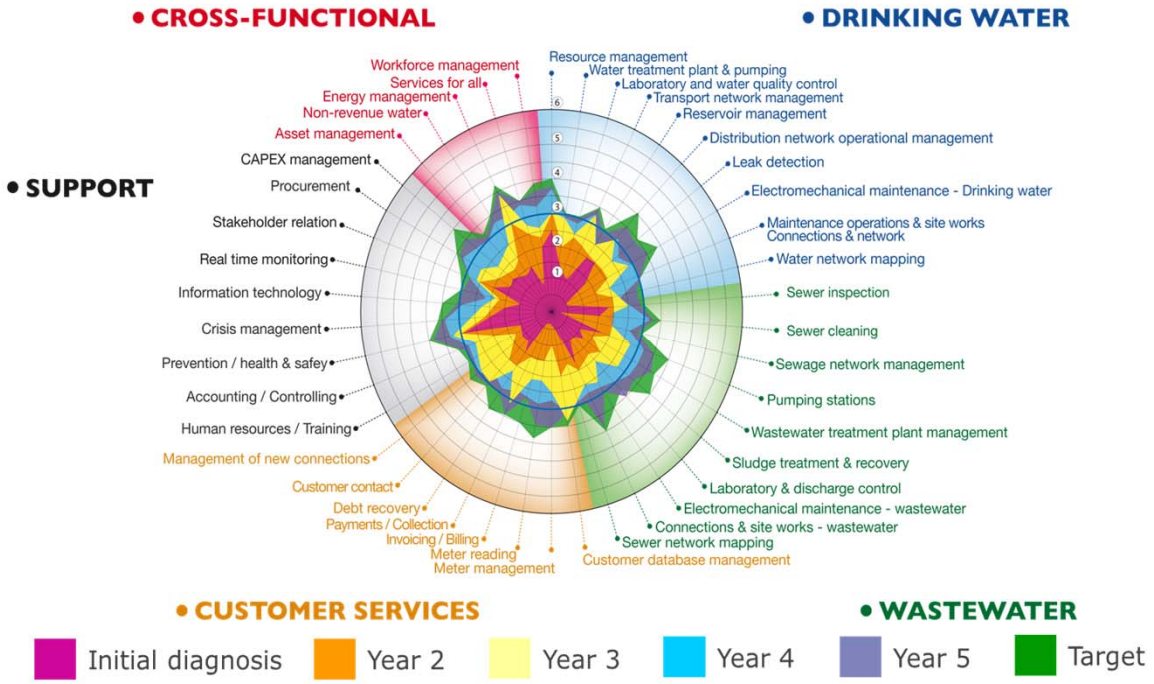
42 processes updated in 2015



Water activity is divided in 5 business lines comprising 42 BUSINESS PROCESSES

Know-how transfer & Training center (Wikti)

Process evolution global vision



Global actions at level of the country,

Structural on the resources:

1. **storage / transfers**
2. **non conventional water** :

- Direct or indirect Reuse
- Desalination
- Aquifer recharge
- Irrigation optimization

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Knowledge transfer

Local policies for the demand management

Water agencies for the demand management

- **Adaptation of the agricultural practices**
- **Industrial awareness**
- **Reasonable domestic use (100 l/m3/d ?)**

Water tariffs
NRW strong policies (metering)
Domestic equipment

Example : @Casablanca , the water efficiency of LYDEC have lead to 25 millions m^3/y , equivalent to the demand of a morocco town of 800 000 habitants

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Example : @Casablanca millions m^3/y , equivalent habitants

Knowledge transfer

Who can help ?

INBO: Paris Pact on water and adaptation to climate change in the basins of rivers, lakes and aquifers

UN: UNESCO and the SDG's objectives

Global water partnership

World water Council

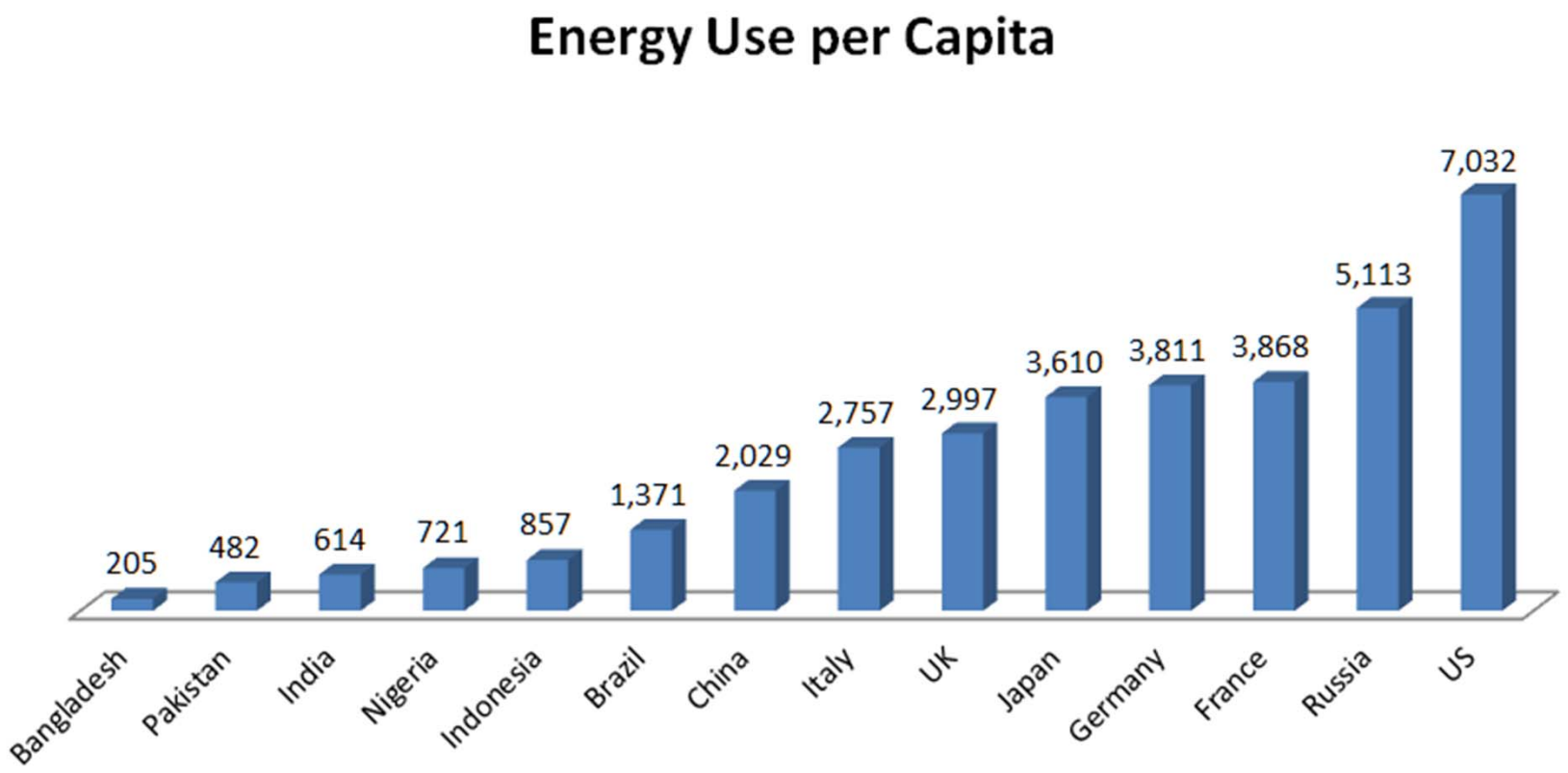
IWA and IHA

IFI's

NGO's …

How to have a clear message and efficient action?

Energy and water …..



Time to move the awareness on the “real” battle of water

It is a global battle with many actors

They are not well connected

Let us to grow our voice in COP 22 !!!

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