

# WATER COOPERATION

The role of science and technology in projects of peace

IPU ROUNDTABLE ON WATER

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Inter-Parliamentary Union  
For democracy. For everyone.



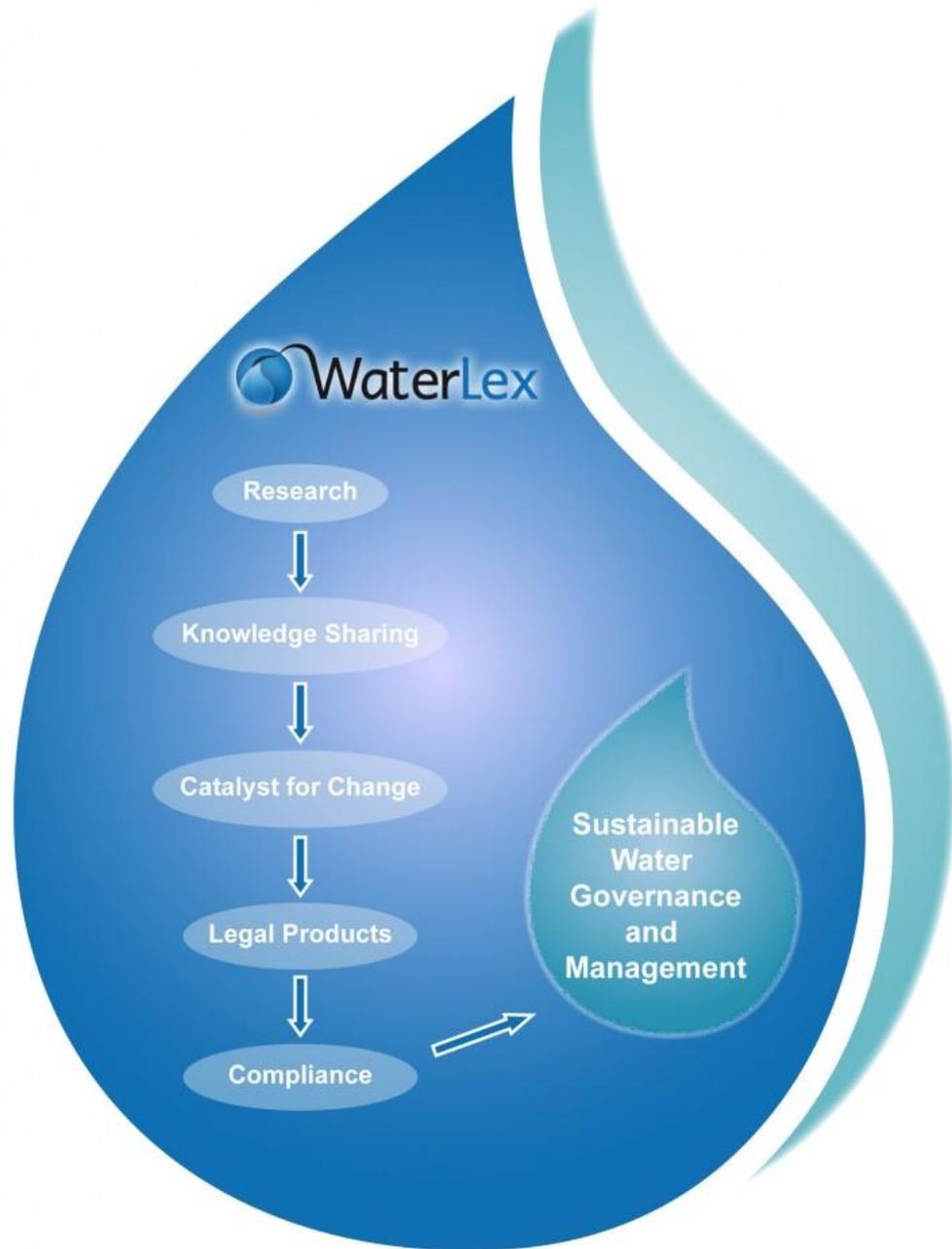
# AGENDA

1. Introduction to WaterLex
2. Introduction to water and sanitation challenges
3. Water cooperation
4. Water cooperation in the Middle East
5. Water and jobs
6. Conclusions



# INTRODUCTION TO WATERLEX





- **Legal Research** and inclusive water governance mappings
- Tools and training materials for **Knowledge Sharing**
- Develop new **Legal and Policy Frameworks**, support the strengthening of Law Enforcement and Compliance
- Ultimate goal: **Sustainable Water Governance** through **Sustainable Water Management**



# OUR IDENTITY

<b>IDENTITY</b>	<ul style="list-style-type: none"><li>• International public-interest development organization</li><li>• Neutrality, non-discrimination</li><li>• Largely government funded</li></ul>
<b>OBJECTIVE</b>	<ul style="list-style-type: none"><li>• Assisting key stakeholders in the attainment of sustainable water governance through sustainable water management</li></ul>
<b>PARTNERS</b>	<ul style="list-style-type: none"><li>• Academics at 15 universities;</li><li>• Global Water Partnership;</li><li>• UN-Water; UNDP Cap-Net, GWS; UNEP GWI; UNECE; UN ECOSOC;</li><li>• Swiss Water Partnership; NGOs (e.g., IUCN, Freshwater Action Network)</li></ul>



# INTRODUCTION TO WATER AND SANITATION CHALLENGES



# A WORLD CHALLENGE

- “By 2035, world energy consumption will increase by 35% leading to an increase of 85% in water consumption” (IEA)
- “In 2025, 2/3 of world countries will be facing hydric stress “ (World Bank)
- “Switzerland imports 11 billion litres of water per year” – it’s water footprint (SDC)
- “Biggest business risk” (WEF 2015)



# GLOBAL RISKS (World Economic Forum)

- 3 of the top 10 risks in terms of impact over the **next 10 years** are environmental risks: **water crises listed as having the greatest potential impact**
- Global water requirements are projected to be pushed beyond sustainable water supplies by 40% by 2030.

The nexus of **food, water, energy and climate change**: identified as **one of four overarching mega trends** that will shape the world in 2030



# WATER, ENERGY AND FOOD ARE INEXTRICABLY LINKED

## WATER

**Water is needed:**

- to produce agricultural products,
- along the entire agro- food supply chain
- for energy production (e.g. nuclear energy-cooling process)

## ENERGY

**Energy is required to produce and distribute water and food:**

e.g. to pump water from groundwater or surface water,  
to power tractors and irrigation machinery,  
to process and transport agricultural goods

## AGRICULTURE

- **Agriculture is the largest user of water = 70% of total withdrawal**
- **Food production and supply chain = 30% of total global energy use**



# INTERNATIONAL COMMITMENTS

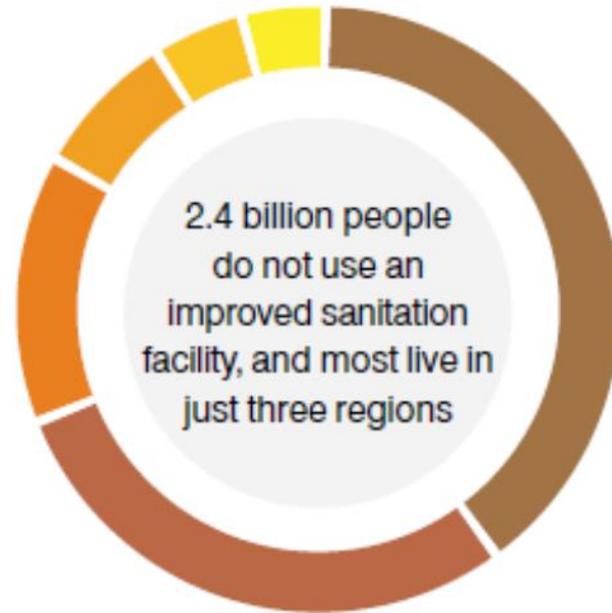
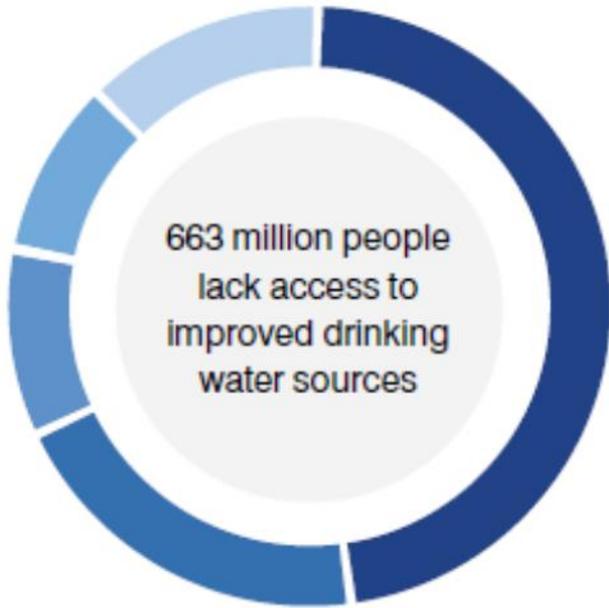
## MILLENNIUM DEVELOPMENT GOALS (MDG)

**To halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation**

- MDG target for drinking water was met in 2010
- The world missed the MDG target on sanitation by almost 700 million people



# REALITIES



- SUB-SAHARAN AFRICA, 319
- SOUTHERN ASIA, 134
- EASTERN ASIA, 65
- SOUTH-EASTERN ASIA, 6
- OTHER REGIONS, 84

- SOUTHERN ASIA, 953
- SUB-SAHARAN AFRICA, 695
- EASTERN ASIA, 337
- SOUTH-EASTERN ASIA, 176
- LATIN AMERICA AND THE CARIBBEAN, 106
- OTHER REGIONS, 98



# NEW SUSTAINABILITY AGENDA



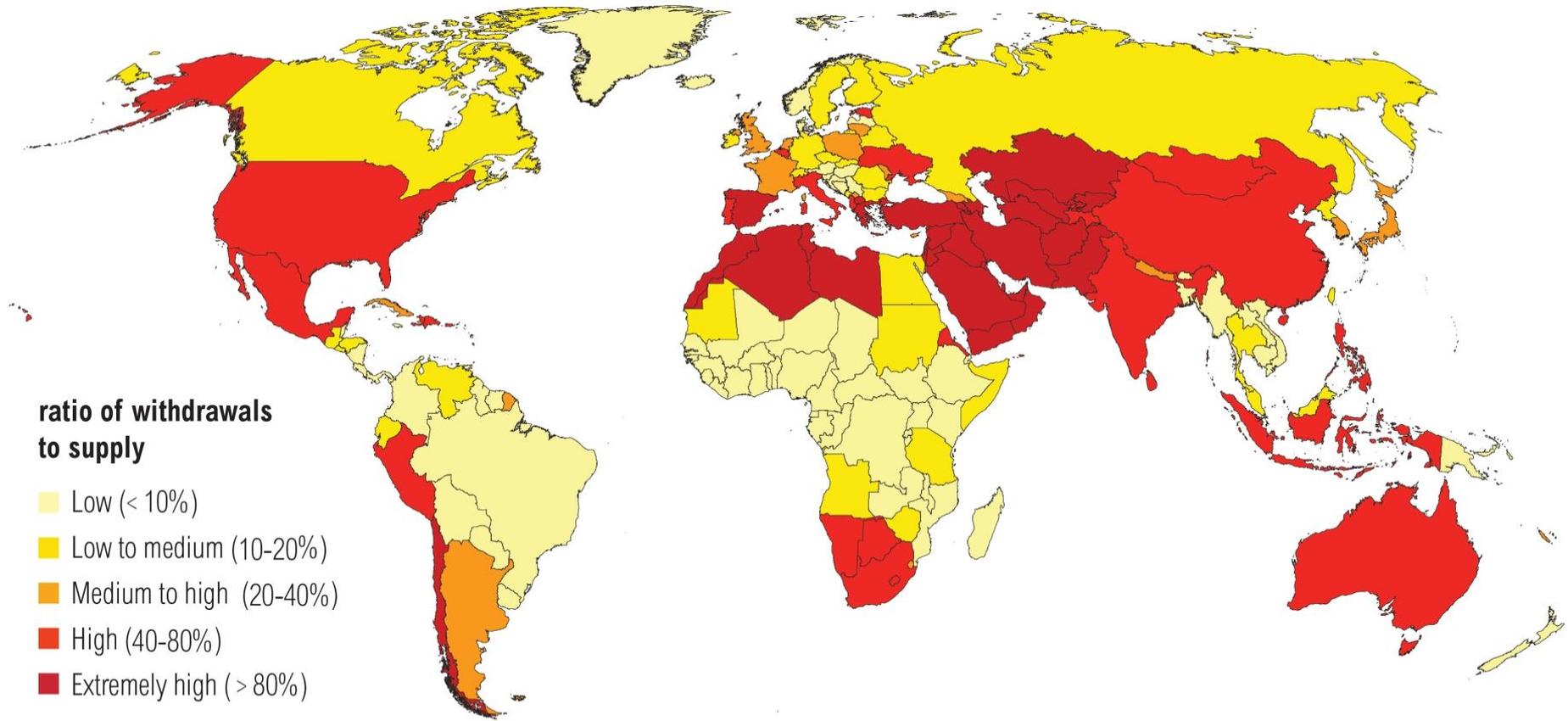
Goal Number	SDG WATER AND SANITATION GOAL	EXAMPLES OF WHAT WE HAVE BEEN DOING
6.1 and 6.2	<b>Achieve universal and equitable access to safe and affordable drinking water and sanitation</b>	Country mapping in Uganda to identify gaps in access to water and sanitation
6.3	<b>Improve water quality, including reducing untreated wastewater and increasing recycling</b>	WaterLex-UNEP publication on wastewater good practices
6.4	<b>Increase water-use efficiency</b>	UNDP-CAPNET WaterLex training manual on IWRM
6.5	<b>Implement integrated water resources management (IWRM), including through transboundary cooperation</b>	WaterLex online training for river basin management Transboundary water cooperation (in the framework of UNECE Water Convention)
6.6	<b>Protect and restore water-related ecosystems</b>	Review of large-scale water infrastructure projects
6.a	<b>Expand international cooperation and capacity-building support to developing countries</b>	Multi-stakeholder capacity building activities on regional and national basis
6.b	<b>Support and strengthen the participation of local communities</b>	Capacity building activity to civil society and local community representatives in Bulgaria



# WATER COOPERATION



# Water Stress by Country: 2040



ratio of withdrawals  
to supply

- Low (< 10%)
- Low to medium (10-20%)
- Medium to high (20-40%)
- High (40-80%)
- Extremely high (> 80%)

**NOTE:** Projections are based on a business-as-usual scenario using SSP2 and RCP8.5.

For more: [ow.ly/RiWop](https://ow.ly/RiWop)

# TOP 33 WATER-STRESSED COUNTRIES: 2040

14 of the world's 33 most water-stressed countries are in the Middle East and North Africa region (MENA)

RANK:

1. Bahrain
1. Kuwait
1. Qatar
1. United Arab Emirates
1. Palestine
8. Israel
9. Saudi Arabia
10. Oman
11. Lebanon
13. Iran
14. Jordan
16. Yemen
21. Iraq
25. Syria

Top 8 extremely stressed score 5.0 80% withdrawals to available water



*“ Water scarcity threatens economic and social gains... And it is a potent fuel for wars and conflict”.*

UN Secretary-General Ban Ki-moon  
World Water Day 2013

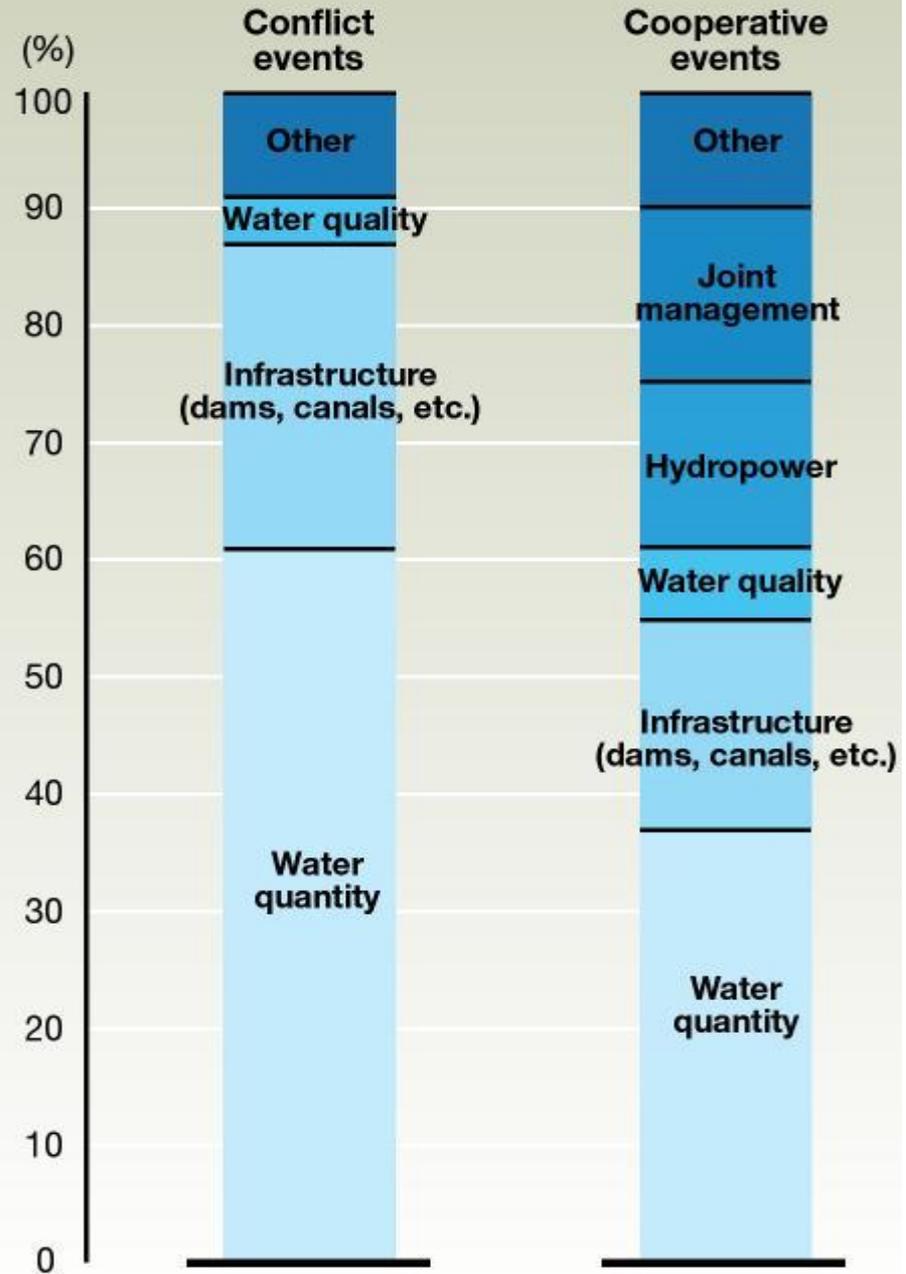


# A WORLD RESPONSE

“There have been only 37 cases of reported violence between states over water - 30 of them in the Middle East.

Over the same period more than 200 water treaties were negotiated between countries.”

Source: Oregon State University study covering 50 years range (1946-2006)



Source: Wolf 2006.

# A POSSIBLE VISION

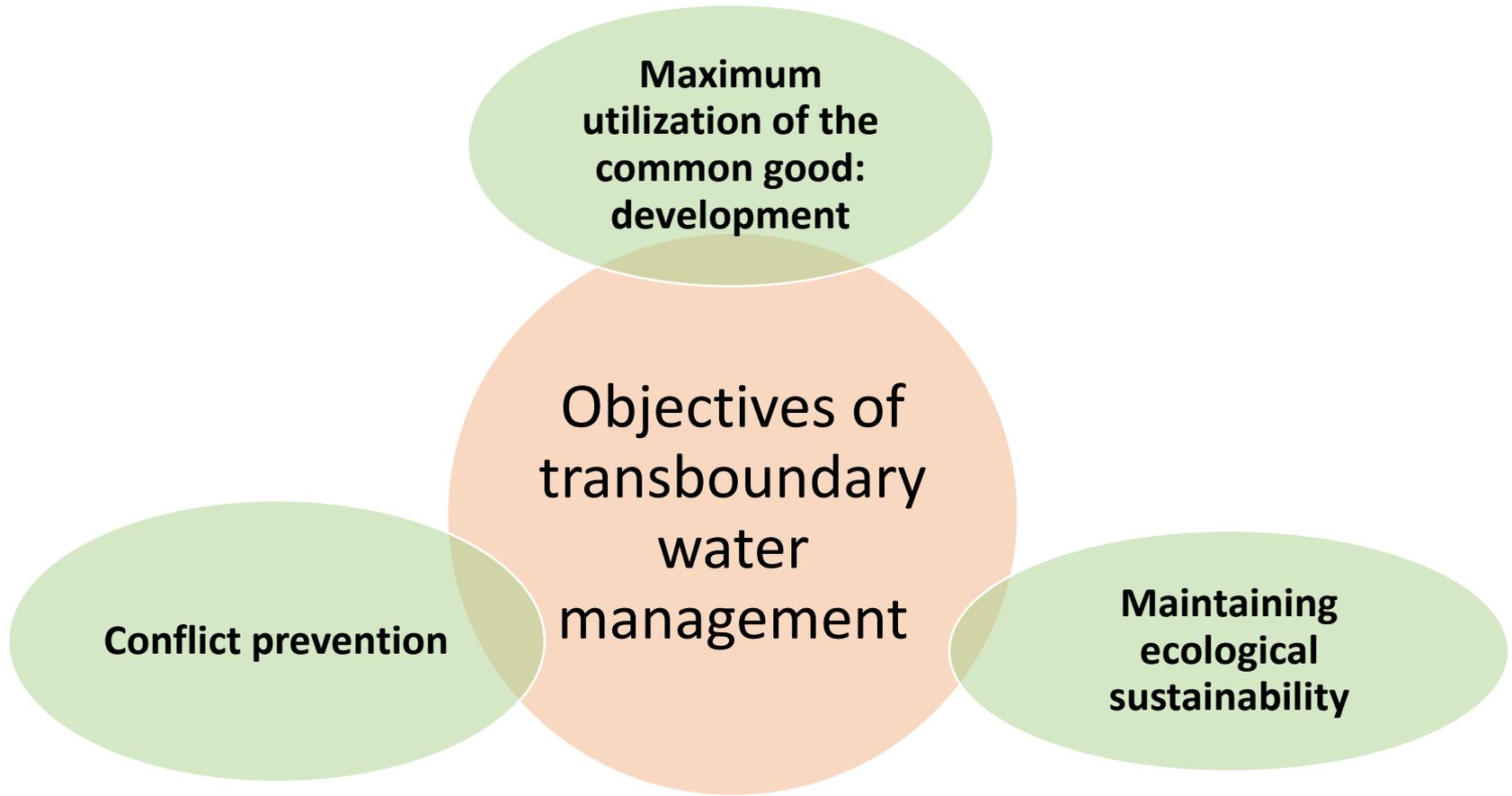
“Any two countries engaged in active water cooperation do not go to war for any other reason”

“Active water cooperation between countries reduces the risk of war”

(SFG, Water Cooperation Quotient - 2015)



# OBJECTIVES OF TRANSBOUNDARY WATER COOPERATION



# POTENTIAL BENEFITS OF TRANSBOUNDARY WATER COOPERATION

Origin of benefits	Benefits for economic activities	Benefits beyond economic activities
<b>Improved water management</b>	<b>Economic benefits</b> <ul style="list-style-type: none"> <li>• Expended activity and productivity in economic sectors</li> <li>• Reduced cost of carrying out productive activities</li> <li>• Reduced economic impacts of water-related hazards</li> </ul>	<b>Social and environmental benefits</b> <ul style="list-style-type: none"> <li>• Health impacts from improved water quality</li> <li>• Employment and reduced poverty</li> <li>• Improved access to services</li> <li>• Increased ecological integrity, reduced biodiversity loss</li> <li>• Improved scientific knowledge on water</li> </ul>
<b>Enhanced trust</b>	<b>Regional Economic cooperation benefits</b> <ul style="list-style-type: none"> <li>• Development of regional markets for goods, services and labour</li> <li>• Increase in cross-border investments</li> <li>• Development of transnational infrastructure networks</li> </ul>	<b>Peace and security benefits</b> <ul style="list-style-type: none"> <li>• Increased geopolitical stability, strengthened diplomatic relations</li> <li>• Reduced risk and avoided cost of conflict, savings from reduced military spending</li> <li>• New opportunities from increased trust (e.g. joint initiatives, investments etc.)</li> </ul>

# MECHANISM FOR TRANSBOUNDARY WATER COOPERATION

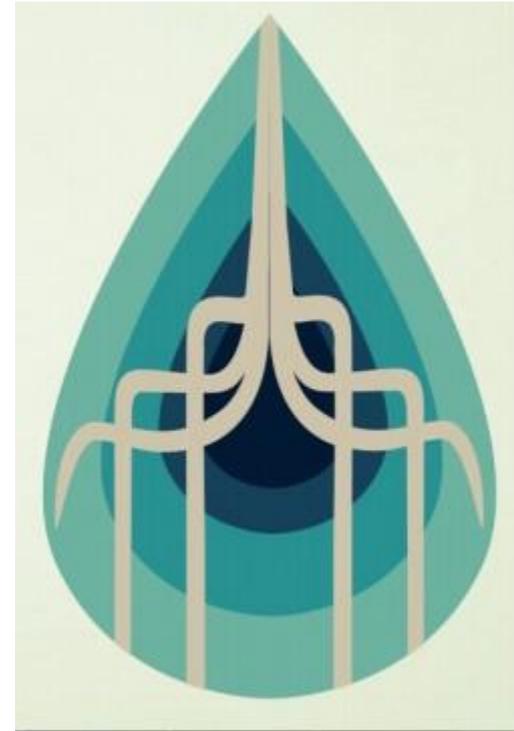
## UN WATERCOURSE CONVENTION

(1997, entered into force in 2014)

*Convention on the Law of the Non-Navigational Uses of International Watercourses*

Global framework for utilization, development, management, protection of international watercourses,

- Promotes transboundary cooperation
- Encourages watercourse agreements between riparian States
- Obligation of not to cause significant harm
- Regular exchange of information
- Peaceful settlement of disputes



# UNECE WATER CONVENTION (1992)

*Convention on the Protection and Use of Transboundary Watercourses and International Lakes*

- Initially a European Convention, but **open to non-European UN States** since 2013
- Aim: to protect and ensure the quantity, quality and sustainable use of transboundary water resources by **facilitating cooperation**
- It provides an **intergovernmental platform** for transboundary water cooperation
- Contributes to **conflict prevention, peace and security**
- Serves as a **model for transboundary cooperation** in the region and elsewhere

**Examples:** Danube River Protection Convention, important role after the break up of the former Yugoslavia - reference for new agreements

## 3 PILLARS OF THE CONVENTION

1. Prevent, control and reduce transboundary impact
2. Use transboundary waters in a reasonable and equitable way, ensure their sustainable management
3. Cooperate via agreements

## OBLIGATIONS OF RIPARIAN STATES

- Enter into water agreements
- Establish joint bodies to cooperate on water management issues (e.g. water quality, joint monitoring, exchange of information etc.)



# REGIONAL EXAMPLE: Promoting peace and security through transboundary water cooperation mechanisms in Lake Chad

The case of Lake Chad demonstrates: strong **linkages and interdependencies between technical water resources management tasks** and broader challenges of regional or even international **security**

**Lake Chad Basin Commission** (1964):  
Cameroon, Chad, Niger and Nigeria, later joined by Central African Republic and Libya:

- cooperate on water to enhance economic development
- promote regional integration, peace and security, sustainable and equitable management of the Lake Chad Basin, preserve its ecosystems.

Challenges in water management:

- Some of bilateral and regional conflicts are directly related to water resources and the lake.
- Resource scarcity, poverty, fragility
- Armed ethnic groups, warlords or terrorists destabilizing the region

Commission decided (2012) to reactivate the **Multinational Joint Security Force** in the Lake Chad Basin to ensure security :

- mandated to patrol the Lake Chad region and conduct military operations against arms dealers and suspected terrorists.



# REGIONAL EXAMPLE: Water-for-peace deals in the Teesta Basin

**Teesta Basin:** shared by India and Bangladesh, home to nearly 30 million people.

- They discuss management of the Teesta River through the **Joint River Commission** (1972) to facilitate joint efforts in the management of all 54 shared rivers.
- India and Bangladesh entered into an ad hoc agreement (1983) over the Teesta, but were unable to implement it.
- They reached a new draft agreement (2010) on water allocation – which was opposed by the State Government of West Bengal (India).
- Most vital benefit from the Teesta Basin negotiations: the informal trade-off between the Indian and Bangladeshi Governments, which essentially represents a **water-for-peace deal**.
- The Indian Government (upper riparian State), has agreed to a water-sharing agreement in exchange for the Bangladeshi Government's cooperation in addressing some of India's security concerns (violent extremist groups operating from Bangladesh).
- Once Teesta treaty is signed: range of potential economic, social and environmental benefits
- Transboundary water cooperation between Bangladesh and India could lead to broader bilateral security that could potentially expand to Bhutan, China and Nepal.



# WATER COOPERATION IN THE MIDDLE EAST





Water Cooperation Quotient (WCQ)

Higher % relates to higher cooperation



# ACTIVE WATER COOPERATION

Country	Cooperation Details	Active Water Cooperation
Turkey	Bilateral Commission bet Turkey-Georgia, Joint Technical Committee bet Iraq-Syria-Turkey on ET Basin	80.08 with Georgia, 1.82 with ET Basin, 0.00 with Greece
Lebanon	Bilateral agreement between Lebanon and Syria	7.28 with Syria, 0.00 with Israel
Syria	Bilateral agreement between Lebanon and Syria, Yarmuk coop between Jordan-Syria, Joint Technical Committee bet Iraq-Syria-Turkey on ET Basin	7.28 with Lebanon and Jordan, 1.82 with ET Basin, 0.00 with Israel
Israel	Bilateral treaty bet Israel and Jordan, JWC bet Israel-PA	60.06 with Jordan, 10.92 with Palestine, 0.00 with Syria and Lebanon
Jordan	Bilateral treaty bet Israel and Jordan, Yarmuk coop between Jordan-Syria	60.06 with Israel, 7.28 with Syria
Palestine	JWC bet Israel-PA	10.92 with Israel
Iran	Helmand Delta Commission, Iran-Turkmenistan (Attrak), Shatt Al Arab, Astara Chay Basin	58.24 with Afghanistan, 49.14 with Turkmenistan, 1.82 with Iraq, 0.00 with Azerbaijan
Iraq	Joint Technical Committee bet Iraq-Syria-Turkey on ET Basin, Shatt Al Arab	1.82 with ET Basin, 1.82 with Iran

# “THE BLUE PEACE – RETHINKING MIDDLE EAST WATER”



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

- Water can also transform into an instrument of peace and cooperation
- There is a cause and effect relationship between water and peace
- While peace is needed for cooperation in water, a collaborative and sustainable approach to water management can build peace

## INNOVATIVE APPROACH:

- Recommendations for short, medium and long term
- New opportunities for resolving water related conflicts
- Collaborative solutions for sustainable regional water management



# RECOMMENDATIONS

	SHORT TERM INTRA CIRCLE	MEDIUM TERM INTRA CIRCLE	LONG TERM INTRA CIRCLE	LONG TERM INTER CIRCLE
<b>BLUE PEACE</b>	<ul style="list-style-type: none"> <li>• Cooperation Council in the Northern Circle</li> <li>• Decentralised water management in the Palestine Territories</li> <li>• Confidence building initiatives between Israel and PA</li> <li>• Demand management</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated River Basin Management in the Northern Circle</li> <li>• Cooperation in Euphrates-Tigris Basin</li> </ul>	<ul style="list-style-type: none"> <li>• Joint Desalination Plants</li> <li>• Red-Dead Sea Canal</li> </ul>	<ul style="list-style-type: none"> <li>• Turkish National Water for Jordan Valley</li> <li>• Lake Kinneret (Tiberias) as Regional Commons</li> </ul>
<b>WATERLEX</b>	<ul style="list-style-type: none"> <li>• Country mapping</li> <li>• Legal advice</li> <li>• Capacity building to water governance stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthened enabling environment</li> <li>• Supporting water enterprises</li> </ul>		

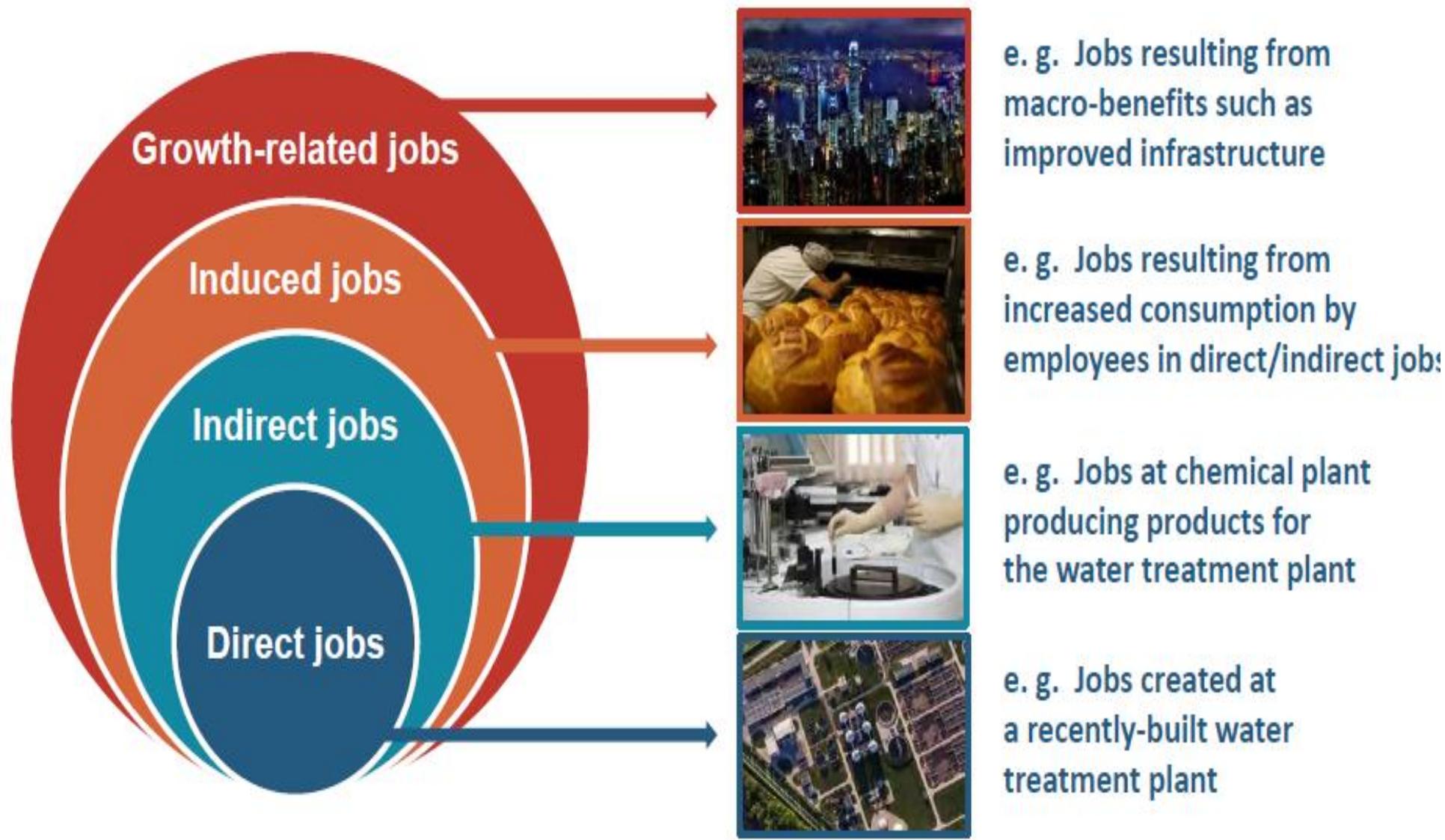


# WATER AND JOBS





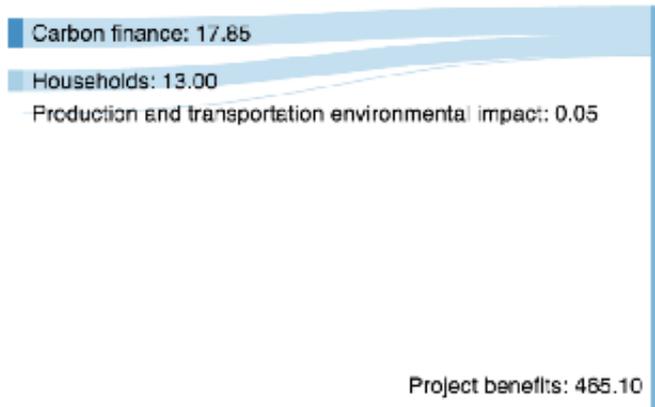
# CREATING AND SUSTAINING 'WATER JOBS' ENHANCES THE MULTIPLIER EFFECT



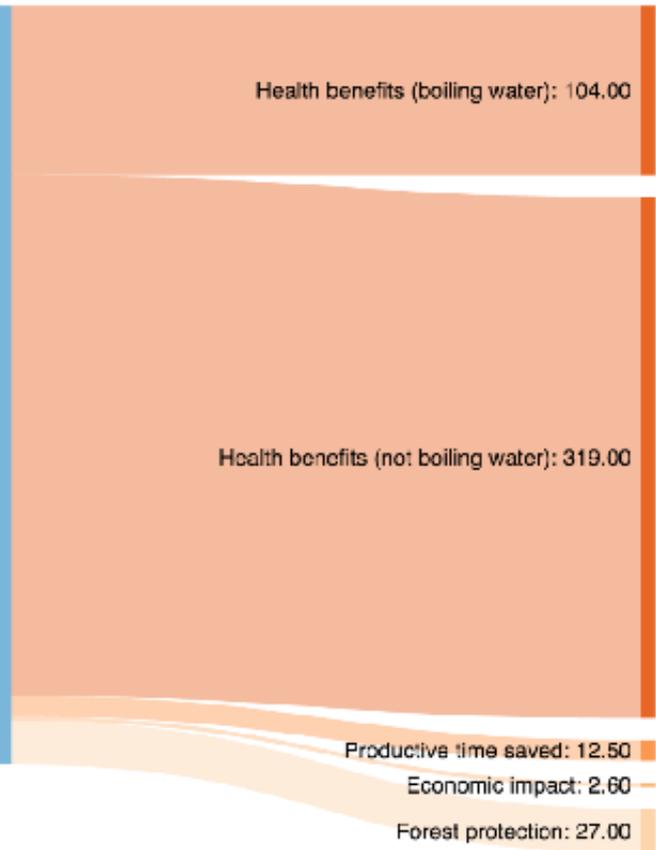
# ADDITIONAL BENEFITS

S-ROI – social return on investment  
 e.g. WASH project related to water filters, Tanzania

## Costs



## Benefits





**Coop SROI**

**1:25**



**(net) Societal value**

**452**

USD PPP/carbon credit

All values in USD PPP (2014), for one carbon credit.

# MIDDLE EAST

- High water scarcity - employment in many sectors is water sensitive.
- **Highest youth unemployment (23%) in the world** (UNESCWA, 2013a)
- Intermittent access to safe drinking water (LAS/UNESCWA/ ACWUA, 2015), dependency on desalinated water, high non-revenue water (NRW) losses, insufficient wastewater treatment (UNESCWA, 2013b).
- **Big potential growth for jobs** in the water supply and sanitation sector
- **Investments in water use efficiency and conservation present politically palatable avenues for governments**



# CONCLUSIONS

- Water can transform into an instrument of peace and cooperation
- “Active water cooperation between countries reduces the risk of war”
- Transboundary water cooperation has security-related benefits, but also economic, environmental and health benefits
- Good examples of water cooperation
- Investing in water is investing in jobs, youth in particular
- Big potential growth for jobs in the water and sanitation sector in the Middle East



# HOW CAN WE HELP?

- **Assessment** of water governance frameworks to identify potential gaps (country mappings)
- Providing **legal advice and policy recommendations** to address identified gaps concerning sustainable water governance
- Assisting in **enhancing the enabling water governance framework** at national level and at transboundary level
- Assisting in creating the enabling frameworks for implementation and monitoring of the water related **Sustainable Development Goal**
- **Strengthening the capacity** of water governance actors (e.g. Parliamentarians, Governments, water operators, local communities)



# How has this session given ideas for new initiatives in water governance/management in your country?

Please write your answer on the post-it notes – answers will be collated into a slide to share later in the day

e.g.

- Has your country ratified the [UN Water Course Convention](#)?
- Initiate national level consultation on the [SDG water goals](#)?
- Does your [current legal framework](#) need improvement to support [water and jobs](#) and small water entrepreneurs?
- Who could benefit from [capacity building](#) in your country?, i.e. parliamentarians, government officials, water operators, local communities



# Thank you for your attention

**WATER**  
A Human Right

Sanitation  
River basin  
Cooperation  
Governance  
Shaping  
Sustainable  
Working together  
Resource  
People  
Nature  
Solidarity  
Legislation  
Solutions  
Frameworks

