WATER COOPERATION – SLIDE NOTES
"The role of science and technology in projects of peace"
IPU Roundtable on Water
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No notes, Slides 1-6

Slide 7: Note: "A World Challenge"
80% is virtual water – 162L/day direct use for drinking and washing and 4200 L/d virtual water through food beverages and clothing

Slide 8: "Global Risks"
WEF 2015 GLOBAL RISK REPORT http://reports.weforum.org/global-risks-2015/part-1-global-risks-2015/environment-high-concern-little-progress/#read

Slide 9: "Water, Energy and Food"
http://www.unwater.org/topics/water-food-and-energy-nexus/en/
There are many synergies and trade-offs between water and energy use and food production. Using water to irrigate crops might promote food production but it can also reduce river flows and hydropower potential. Growing bioenergy crops under irrigated agriculture can increase overall water withdrawals and jeopardize food security. Converting surface irrigation into high efficiency pressurized irrigation may save water but may also result in higher energy use. Recognizing these synergies and balancing these trade-offs is central to jointly ensuring water, energy and food security.
If water, energy and food security are to be simultaneously achieved, decision-makers, including those responsible for only a single sector, need to consider broader influences and cross-sectoral impacts. A nexus approach to sectoral management, through enhanced dialogue, collaboration and coordination, is needed to ensure that co-benefits and trade-offs are considered and that appropriate safeguards are put in place.

Slide 10: "International Commitments"
Picture: http://www.unwater.org/sdgs/a-dedicate
Millennium Development Goal 7: ensure environmental sustainability
Target 7C: By 2015, halve the proportion of people without sustainable access to safe drinking water and basic sanitation
The world has now met the MDG target relating to access to safe drinking-water. In 2012, 90% of the population used an improved source of drinking-water compared with 76% in 1990. Progress has however been uneven across different regions, between urban and rural areas, and between rich and poor.
With regard to basic sanitation, current rates of progress are too slow for the MDG target to be met globally. In 2012, 2.5 billion people did not have access to improved sanitation facilities, with 1 billion these people still practicing open defecation. The number of people living in urban areas without access to improved sanitation is increasing because of rapid growth in the size of urban populations.

Slide 13: SDG6 - Water

The table contains SDG 6 sub-targets and WaterLex related corresponding activities (actions).
UNEP-United Nations Environmental Programme
UNECE-United Nations Economic Commission for Europe
UNDP-United Nations Development Programme

Slide 15: Water Stress
http://www.wri.org/sites/default/files/uploads/water_stress_world_map_large.jpg
Using an ensemble of climate models and socioeconomic scenarios, WRI scored and ranked future water stress—a measure of competition and depletion of surface water—in 167 countries by 2020, 2030, and 2040.
Water Stress withdrawals / available flow.
Water stress measures total annual water withdrawals (municipal, industrial, and agricultural) expressed as a percentage of the total annual available blue water. Higher values indicate more competition among users.
Score Value [0-1) Low (<10%) [1-2) Low to medium (10-20%) [2-3) Medium to high (20-40%) [3-4) High (40-80%) [4-5] Extremely high (>80%)

Slide 16: Water Stress
Source: World Resources Institute (WRI) http://www.wri.org/blog/2015/08/ranking-world%E2%80%99s-most-water-stressed-countries-2040
Source: Water Stress Country Ranking technical note - http://www.wri.org/sites/default/files/aqueduct-water-stress-country-rankings-technical-note.pdf
Water stress is defined as the ratio between total water withdrawals and available renewable surface water at a sub-catchment level. Higher scores on the scale from 0 to 5 correspond to greater competition among water users relative to available surface water resources
Countries that rank nr. 1 have the highest score (5) in all subsectors (industry, domestic and agriculture)
CATEGORY SCORE RATIO OF WITHDRAWALS TO AVAILABLE WATER (PERCENT)
Low 0–1 <10
Low to medium 1–2 10–20
Medium to high 2–3 20–40
High 3–4 40–80
Extremely high 4–5 >80

Slide 19: World Response
http://www.unep.org/dew
Level of conflict resolution and durability
The Permanent Indus Water Commission, which oversees a treaty on water sharing and a mechanism for dispute resolution, survived and functioned during two major wars between India and Pakistan. (UNDP Human Development Report 2006)

Slide 19: Possible Vision
http://www.strategicforesight.com/publication_pdf/20795water-cooperature-sm.pdf
Developed the Blue Peace framework – structured way to provide process for using water as a source of regional cooperation and development rather than a source of potential crises.
Report was launched by HRH Prince Hassan bin Talal, then chairman of UN Sec General's Advisory Board on Water and Sanitation

Slide 22: Transboundary Water

UN Watercourses convention text available:
http://legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf

Jordan and Syria ratified the UN Watercourses Convention. Yemen signed it (without ratification). Iraq, Lebanon, Libya, Palestine and Qatar acceded to the UN Watercourses Convention. The UN Watercourses Convention is a global framework convention for transboundary water cooperation. It encourages cooperation by all concerned riparian states and encourages to enter into water agreements. It also foresees a dispute settlement process that promotes the peaceful settlement of disputes among riparian states.

-many benefits for the region's international rivers. The Convention has the potential to forge closer collaboration between states; lead to the harmonization of domestic legislation; create an atmosphere of trust and lead to improved relations; and contribute to the development and codification of international water law.

http://www.siwi.org/publications/transboundary-water-management-who-does-what-where-analysing-the-data-in-siwis-transboundary-water-management-database/

Slides 23-25: UNECE Water Courses

Source – short introduction to the Convention at
http://www.unece.org/fileadmin/DAM/env/water/publications/brochure/Convention_E_A4.pdf

UNECE Water Convention: this framework convention obliges Riparian states to enter into water agreements, thereby contributes to the strengthening of legal water frameworks and water cooperation in the European Region. It promotes regular cooperation among riparian states and offers an institutionalized framework to that end. Settlement of disputes via negotiation and cooperation Thanks to the opening up of the Convention, it is no longer a regional instrument, but all United Nations member states may join. The Secretariat provides capacity building and assistance during the accession process. The UNECE Convention has a Protocol on Water and Health facilitating the access to water and promoting health objectives at the same time.

UNECE Convention text: http://www.unece.org/env/water/

The Water Convention has played and continues to play a crucial role in the pan-European region in supporting the establishment and strengthening of cooperation. Most of the transboundary water agreements negotiated after the break up of the Soviet Union and of former Yugoslavia are modelled on the Convention. Among them are the 1994 Convention on Cooperation for the Protection and Sustainable Use of the River Danube and the 1999 Convention on the Protection of the Rhine. Other examples include the agreements on the rivers Sava, Meuse and Scheldt, on Lake Peipsi, as well as on Kazakh-Russian and Russian-Ukrainian transboundary waters. The Convention has also inspired agreements beyond the UNECE region.

The Water Convention has influenced the work of many joint bodies and prompted the establishment of several new ones. Examples include the commissions for the Oder and Sava Rivers, and for lakes Peipsi and Ohrid.

In Central Asia, the sharing of water resources between upstream and downstream countries is particularly problematic, generating tension and insecurity. The cooperation on the Chu and Talas Rivers shared by Kazakhstan and Kyrgyzstan is a remarkable example of progress towards finding mutually beneficial solutions. The two countries concluded an agreement in 2000 and inaugurated the ChuTalas Commission in 2006. The Commission is a mechanism for Kazakhstan and Kyrgyzstan to share responsibility for water infrastructure used by both countries. The Water Convention supported this

important step and continues to help the two riparian countries broaden their cooperation and improve the management of the Chu and Talas Rivers.

http://www.unece.org/fileadmin/DAM/env/water/publications/WAT_Benefits_of_Transboundary_Cooperation/ECE_MP.WAT_47_PolicyGuidanceNote_BenefitsCooperation_1522750_E_pdf_web.pdf

http://www.unece.org/fileadmin/DAM/env/water/publications/WAT_Benefits_of_Transboundary_Cooperation/ECE_MP.WAT_47_PolicyGuidanceNote_BenefitsCooperation_1522750_E_pdf_web.pdf

Slides 27-30: Water Cooperation Quotient:
Source: http://www.strategicforesight.com/publication_pdf/20795water-cooperature-sm.pdf
Explanation on scores: To quantify active water cooperation between nations, their active Water Cooperation Quotient (WCQ) has been developed. To this end, ten indicators have been used (e.g. agreement, commission, ministerial meetings, technical projects, environmental [protection and quality control etc.). These indicators are ranked and corresponding scores attributed. The lowest level of commitment has a score of 1 (the minimum is a cooperation agreement), the intermediate level of commitment scores 5 (that already includes quality control measures) and the highest level of commitment scores 10 (actual functioning of the cooperation mechanism). Total score is 55. Each cooperative mechanism gest scored under each indicator depending on if it exhibits the conditions mentioned above. The total score arrived at is converted to a percentage which represents its WCQ. WCQ = (total score 55/55) X 100. The higher WCQ the better it is.
Middle East: The pattern of strong correlation between water cooperation and peace, or absence of cooperation and risk of war, visible all over the world is most conspicuous in the Middle East. Turkey has water cooperation agreement with Georgia. It enjoys a constructive and friendly relationship with that country. It does not have water cooperation agreements with Greece, Syria, and Iraq. It faces risk of wars and tension with these countries. Turkey enjoyed cordial relationship with Israel until 2009. It was negotiating a water cooperation agreement with that country until then.
Israel and Jordan have a water cooperation agreement, which was upgraded in 2013 to enable higher outflow of water from Lake Tiberias to the Lower Jordan River. The two countries also have relative peace by regional standards. Israel does not have water cooperation agreements with Lebanon and Syria. There is often speculation of war with these countries.
The absence of cooperation in the sharing and management of water resources in the Middle East has affected security of people, nations and nature in the Middle East. The Dead Sea is shrinking and may die by the end of this century. The disappearance of a natural wonder will be a loss for the entire region and indeed for humanity. Barada River which has fostered the growth of civilization making Damascus one of the most ancient cities to survive for over 3000 years is diminishing at a fast pace. If the river disappears altogether, at risk would be a cradle of civilization.

Source: http://www.strategicforesight.com/publication_pdf/40595Blue%20Peace_Middle%20East.pdf
Florian will speak about the Blue Peace initiative more in depth during his presentation
SDC is promoting the Blue Peace initiative.
“The Blue Peace – Rethinking Middle East Water” examines present and future water security in the Middle East – Israel, the Palestinian Territories, Jordan, Lebanon, Syria, Iraq and Turkey. This report is a

part of a long term initiative steered by the Strategic Foresight Group (SFG) since 2008 in the Middle East in the water sector.
http://www.strategicforesight.com/publication_pdf/20795water-cooperature-sm.pdf

http://www.strategicforesight.com/publication_pdf/40595Blue%20Peace_Middle%20East.pdf
The concept of Circles of Cooperation has been crafted in the Middle East. HRH Prince Hassan bin Talal of Jordan proposed it at a high level plenary involving senior decision makers and opinion makers from several countries in the region in May 2010. The first such circle would include the northern countries - Turkey, Syria, Iraq, Lebanon and Jordan. The second circle would include Israel and the Palestinian Territories, eventually expanding to Jordan. Cooperation can be introduced in each circle separately. The two circles may choose to intersect, if and when they find the political context appropriate and feasible to do so. At a later stage, the two circles may be together or separately widened to include other countries in the Middle East. In this process, a beginning to construct building blocks of peace and hope can be made without delay.
This approach is based on the hypothesis that water and environment are critical to stability, resilience and progress of societies in the Middle East. It is aimed at developing a common political framework for the future, for sustainable management of water resources across several basins and not a negotiating platform for dividing water resources in any individual river basin or aquifer. This approach treats water as an instrument. It considers peace, human security and socio-economic development as the objectives.

Slides 30-36: Water and Jobs
http://unesdoc.unesco.org/images/0024/002440/244040e.pdf
http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/images/WWDR2016_ppt_script_FINAL_20March2016.pdf
Example of a case study using the S-ROI (Social Return on Investment) methodology, regarding the implementation of a WASH project related to water filters in Tanzania.
It highlights the value in monetary units of the different outcomes created by the projects (on the right), and of the costs to generate those outcomes (on the left). The economic impact is related to the direct creation of jobs, while the health benefits (the biggest benefits here) and the productive time saved are indirectly related to the support of jobs in the local economy. Forest protection might also support the creation of jobs at long term, through conservation or touristic activities. Project realized by South Pole Group and Valuing Nature
http://unesdoc.unesco.org/images/0024/002440/244040e.pdf