

Water Security: Water Reuse in a Circular Economy

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Presentation Objective and Overview

Objective:

- Provide context and overview of key concepts
 - *Water security, water reuse and circular economy* are very broad subject areas
 - This Webinar has the same theme as an upcoming UNESCO publication

Overview:

- Concept 'definitions'
- Things to keep in mind for discussion



Global Water Security Issues (GWSI) Series

- IWRA in association with the UNESCO International Centre for Water Security and Sustainable Management (i-WSSM):
 - Global Water Security Issues (GWSI) Series (2)
- Second GWSI Publication theme: Water reuse in a circular economy context
 - Today's presenters have chapters in the publication currently being produced for distribution
- First GWSI theme was: Water security and the sustainable development goals (available on-line at digitallibrary.un.org)



Water Security

- UNESCO i-WSSM Global Water Security Issues is one initiative to translate science into action for a sustainable future.
- UNESCO Intergovernmental Hydrological Programme (IHP) identifies water security as a key challenge for this century
 - Builds scientific knowledge for water resources management and governance; facilitates education and capacity building.
 - Hydrological and socio-economic research to develop tools to adapt to changing water availability.
- IWRA links science to policy for capacity building



Why Water Reuse?

- Not new – water cycles continuously on our planet
- Water reuse, reclaimed water, recycled wastewater
- Water reuse is a key strategy for water security
 - Increasing water demands, changing climate forcing water cycle changes
 - Essential to achieve the Sustainable Development Goals (SDGs)
 - *SDG 6, Availability and sustainable management of water and sanitation for all*
 - *SDG 11, Make cities and human settlements inclusive, safe, resilient and sustainable*
 - *SDG 12, Ensure sustainable consumption and production patterns*



Circular Economy

- *From* product-to-use-to-disposal and ‘waste streams’
 - Linear – resources in, wastes out
- *To* the use resources in a way that allows for their reuse
 - Circular – resource loops, interconnectedness of all resources
- Intrinsic connection of resources with environment
- Transition from linear to circular economy – possible but challenging



Challenges to Water Reuse

- Technological and scientific (e.g. treatment to match use)
- Policy, planning and governance (e.g. supply-side mentality)
- Capacities – human and institutional (e.g. process, budgets)
- Cultural – stakeholder engagement, embracing change

With climate change, water issues are global but solutions must be local/ regional to suit the watershed and/or aquifers



Things to keep in mind....

- Additional opportunities from water reuse
 - Recovery of other resources
 - Capacity development
 - Strategic planning
- Knowledge transfer and citizen engagement
- Scale(s) of actions – local, regional, global, watershed/aquifer





Thank you!

When available, the Global Water Security Issues (GWSI) publication on the theme Water Reuse in a Circular Economy will be promoted through the networks of IWRA, i-WSSM UNESCO and others

