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Nota di contenuto	Introduction -- Unconventional water resources as a response to global water scarcity and contribution to food, ecosystems, and sustainable development -- Rain enhancement through cloud seeding (Ali Abshaev, Hail Suppression Research Center, Nalchik, Russia) -- Fog water harvesting (Jamila Bargach, Dar Si Hmad Project, Sidi Ifni, Morocco) -- Micro-catchment rainwater harvesting (Theib Oweis, International Center for Agricultural Research in Dry Areas, ICARDA, Jordan) -- Offshore water (Mark Person, New Mexico Institute of Mining and Technology, USA) -- Onshore deep groundwater (Mark Person, New Mexico Institute of Mining and Technology, USA) -- Municipal wastewater (Birguy Lamizana, United Nations Environment Programme, UNEP, Nairobi, Kenya) -- Agricultural drainage water (J.D. Oster, University of California, Riverside, USA) -- Water transportation through icebergs towing (Nicholas Sloane, Resolve Marine Group, South Africa) -- Ballast water held in tanks and cargo holds of ships (Marlos De

Souza, FAO) -- Desalinated water (Nikolay Voutchkov, Desalination Technologies Research Institute, Saline Water Conversion Corporation, SWCC, Jubail, Saudi Arabia) -- Governance, policies, and institutional and human capacity (Renée Martin-Nagle, A Ripple Effect PLC, Ebensburg, Pennsylvania, USA) -- Social and environmental tradeoffs (TBC) -- Economics and innovative financing mechanisms in a circular economy (Francesc Hernández-Sancho, University of Valencia, Spain; Edeltraud Guenther, UNU-FLORES) -- Way forward to harness the potential of unconventional water resources.

Sommario/riassunto

The world is faced with a growing number of complex and interconnected challenges. Water is among the top 5 global risks in terms of impacts, which would be far reaching beyond socio-economic challenges, impacting livelihoods and wellbeing of the people. As freshwater resources and population densities are unevenly distributed across the world, some regions and countries are already water scarce. Water scarcity is expected to intensify in regions like the Middle East and North Africa (MENA), which has 6% of the global population, but only 1% of the world's freshwater resources. Climate change adds to this complexity as it is leading to rainfall uncertainty and extended droughts periods, mostly in arid areas. Increasing water scarcity is now recognized as a major cause of conflict, social unrest and migration and at the same time water is increasingly considered as an instrument for international cooperation to achieve sustainable development. Tapping and assessing sustainably every available option in water-scarce areas is needed as pressure continues to build on limited water resources. The stark fact is that conventional water provisioning approaches relying on snowfall, rainfall and river runoff are not enough to meet growing freshwater demand in water-scarce areas. Water-scarce countries need a radical re-think of water resource planning and management that includes the creative exploitation of a growing set of viable but unconventional water resources for food production, livelihoods, ecosystems, climate change adaption, and sustainable development. Unconventional water resources are generated as a by-product of specialized processes; need suitable pre-use treatment; require pertinent on-farm management when used for irrigation; or result from a special technology to collect/access water.
