

## Foreword

The world's water resources are facing unprecedented pressures from population growth and economic development. Estimates indicate that, with current practices, the world will face a 40 per cent shortfall between forecast demand and available supply of water by 2030. Climate change is worsening the situation, making water availability more unpredictable and increasing the frequency and intensity of floods and droughts.

With growing water scarcity, determining who can use water, for what purposes, in what quantity and of what quality, where and when—in short, determining water allocation—represents a major challenge. In transboundary basins—where (potentially conflicting) interests of different water users overlap with (potentially conflicting) interests of different countries—the challenge is even greater and the political sensitivity high. Yet, sustainable transboundary water allocation is increasingly important and urgent, as 60 per cent of freshwater resources globally cross national boundaries.

History shows that transboundary water allocation arrangements can work for the benefit of the States involved, but only if they are well designed, jointly agreed, adaptable and effectively implemented. It was therefore decided to develop this Handbook under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), which is serviced by the United Nations Economic Commission for Europe (UNECE). The Handbook aims to promote a better understanding of the benefits and challenges of transboundary water allocation and guide interested States through the process of assessing the potential usefulness of water allocation in their shared basins, and support the establishment of such arrangements.

A rich intergovernmental process under the Water Convention produced the Handbook, which benefited from the participation of more than 100 countries, 70 international organizations and 20 river basin organizations, and the knowledge and practice of more than 50 experts. It is the first time that existing experience on transboundary water allocation at the global level is gathered and systematically analysed to distil criteria, good practices and solutions. And through this highly participative and multidisciplinary process, the Handbook has already contributed to a better understanding of the benefits and challenges of utilizing water allocation in transboundary water cooperation.

The Handbook, and the experiences it builds upon, send a strong message on the importance of transboundary cooperation and of adaptability. Indeed, while allocating water in transboundary basins is not a new practice, the looming water crisis, accelerated social, economic and technological developments, and climate variability and change call for new, flexible approaches in allocation, in order to future-proof water management. Moreover, more controversy and disagreement can be expected, and only transboundary cooperation can ensure sustainable, equitable and resilient solutions that can prevent and address conflicts and promote development and peace.

It is my hope that the Handbook will help build the capacity needed to address this complex issue and contribute to the sustainable management of our transboundary waters. The way we manage our precious shared freshwater resources will determine not only the achievement of Sustainable Development Goal 6 on clean water and sanitation but also progress across other Sustainable Development Goals.



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## Preface

The development of this Handbook on Water Allocation in a Transboundary Context has drawn significant interest, understandably. The basis for this Handbook originates from a global workshop on water allocation in transboundary basins, organized under the Water Convention in Geneva in 2017. Many delegates called for further activities to promote sustainable, equitable and resilient water allocation, including the development of a document for guiding related efforts. Recognizing this interest, the Water Convention's Programme of Work 2019–2021 included as an aim under Programme Area 3 to “support the development of equitable and sustainable transboundary arrangements on water allocation, and, to this end, increase understanding and knowledge of the criteria, mechanisms, tools and good practices for water allocation in transboundary basins and aquifers”. The Handbook is a major step towards this aim.

An Expert Group supported the development of the Handbook and its main messages. Composed of experts from all continents, from governments, river basin organizations (RBOs), academia, civil society and international organizations, it provided guidance on the structure, substantive content and illustrative case studies. Specific expertise gaps were then filled based on identified needs, which further served to strengthen balanced representation and the diversity of perspectives. “Members” of the Expert Group were participants specifically invited to make a nomination for/join the Expert Group in seeking to achieve a balanced composition and diversity of representation and having met a minimum set of criteria. “Guests” themselves requested to participate in the Expert Group and met the same minimum criteria. There was no distinction in terms of functional participation in the Expert Group. I wish to thank all participants of the Group.

The Expert Group met three times (Geneva, 21 October 2019, and Geneva (online) 30 and 31 March and 20 and 21 October 2020) and was regularly consulted in the development process for technical inputs, reviewing content and providing feedback. The Handbook's review and feedback milestones were aligned with the Convention's regular meetings, including the annual Working Group on Integrated Water Resources Management (WGIWRM), the Working Group on Monitoring and Assessment (WGMA) and the Task Force on the Water-Food-Energy-Ecosystems Nexus. A full draft was shared with the joint WGIWRM and WGMA meeting in April 2021 and the Convention's National Focal Points in English, French and Russian languages.

A number of regional events and sessions in transboundary water cooperation workshops have been held to discuss the Handbook, including relevant case studies, and gain inputs and feedback. A dedicated session on water allocation was held in the “Regional workshop: Enhancing transboundary water cooperation in the MENA region: progress, challenges and opportunities” on 3–4 March 2020 in Beirut, Lebanon. A virtual “Regional workshop on equitable and sustainable water allocation – Sharing experiences on transboundary water allocation and water scarcity” hosted by Hungary and focused on countries in the European Union, the Balkans, the Caucasus and Eastern Europe was held on 5–6 October 2020. A virtual online “Regional meeting on water allocation and environmental flow assessment in a transboundary context” (22–23 September 2020) was also held as part of a regional process implemented by the International Water Assessment Centre (IWAC) in Kazakhstan, covering 10 countries in and around Central Asia, with case studies and outcomes provided for the Handbook.

I trust this Handbook addresses a significant and burgeoning interest in the topic and will serve as a valuable resource and modular guide for those working on water allocation. Further activities and events to disseminate the Handbook and build capacity on water allocation in a transboundary context are envisaged in collaboration with regions, basins and States where there is interest to learn more, including workshops where allocation is considered as part of a suite of tools and approaches under the Convention, such as the water-food-energy-ecosystem nexus approach. We look forward to receiving readers' feedback on the Handbook and to working together to strengthen the practice of water allocation in a transboundary context so that shared waters can be more effectively managed.



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## Acronyms and abbreviations

<b>DCP</b>	drought contingency plan
<b>DPSIR</b>	Driving Forces–Pressures–State–Impact–Responses
<b>DSS</b>	decision support systems
<b>EIA</b>	environmental impact assessment
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>GWP</b>	Global Water Partnership
<b>IFTD</b>	International Freshwater Treaties Database
<b>IHP</b>	Intergovernmental Hydrological Programme
<b>IWRM</b>	integrated water resources management
<b>MCDA</b>	multi-criteria decision analysis
<b>MENA</b>	Middle East and North Africa
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>RBO</b>	river basin organization
<b>SDG</b>	Sustainable Development Goal
<b>SEA</b>	strategic environmental assessment
<b>UNECE</b>	United Nations Economic Commission for Europe
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>Water Convention</b>	Convention on the Protection and Use of Transboundary Watercourses and International Lakes
<b>Watercourses Convention</b>	Convention on the Law of Non-navigational Uses of International Watercourses