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## Economic Commission for Europe

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### Expert Group on Resource Management

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**Decision support: Development and deployment of the United Nations Framework Classification for Resources:**

**Applications: Groundwater resources**

## **Development of the draft Supplemental Specifications for the Application of the United Nations Framework Classification for Resources to Groundwater Resources – Inclusion of the Public Consultation Feedback**

**Prepared by the Groundwater Resources Working Group of the Expert Group on Resource Management**



## I. Aim of this document

1. This document describes (i) the anticipated complementarity of the United Nations Framework Classification for Resources (UNFC) for groundwater resources for project level classification, accounting and reporting to existing aquifer scale based sustainable integrated water resources management, including shared (transboundary) connected surface and groundwater resources, for implementation of the Sustainable Development Goals (SDGs), for consideration of the Water-Energy-Food-Ecosystem Nexus (WEFE Nexus) and potential competing uses of other subsurface resources; and (ii) a roadmap to, in close collaboration with the reviewers/commenters and the hydrogeological community at large, address the anticipated added value and applicability of UNFC for groundwater resources based on the comments received from the public consultation on the Draft UNFC Supplemental Specifications for Groundwater Resources.<sup>1</sup>

## II. Complementarity of UNFC for groundwater resources

2. UNFC is designed to apply to all resource projects to enhance sustainable resource management and make informed decisions. The UNFC generic specifications harmonize resource projects and quantity reporting across diverse resource types where each resource has its community of professionals with its own definitions and standards. The purpose of the UNFC Supplemental Specifications for Groundwater Resources document is to provide groundwater practitioners with technical guidance on applying UNFC to groundwater resource projects also considering groundwater quality aspects and competing subsurface uses.

3. UNFC classification and reporting is meant to complement groundwater-resource inventories and integrated management plans. It aims to provide a granular perspective on groundwater projects at operational level through on-the-ground classification and accounting data that can be aggregated to supplement assessments of current impacts on resource inventories and the security of groundwater supply. This anticipated complementarity should also work the other way: UNFC groundwater-project classifications will need to be informed by and take into consideration common-pool resource aspects of aquifers, transboundary-aquifer restrictions, environmental flow requirements, and access to water by all sectors of society as well as groundwater dependent ecosystems both in the present and under future land-use and climate scenarios.

4. The UNFC for Groundwater Resources classification, accounting and reporting therefore is expected to contribute to matching policy with a focus on water as a common pool resource and access to water as a fundamental human right with the actual implementation of water supply projects and public services to achieve these objectives. The inclusion of “socially necessary groundwater projects” in the Specifications is meant to ensure that these special and unique aspects of groundwater constitute a primary driver in this implementation of UNFC in this respect.

5. Application of UNFC to Groundwater Resources is anticipated to reduce miscommunication in terms of sharing information, in particular across jurisdictional boundaries, due to diverging classification, accounting and reporting methods on bilateral and multilateral water matters which can lead to over exploitation or general mismanagement of water resources. State or non-State actors utilizing different systems and methods of categorizing can lead to misunderstandings and human-errors that can have devastating effects on the environment and society (e.g. salinization, flooding, drought and loss of biodiversity). UNFC provides a common classification system that can diminish the chances of miscommunication when it comes to data sharing. By providing a system of categorizing that can be adopted internationally or bridged to, an anticipated added value of UNFC for Groundwater Resources would be to lower the likelihood of transboundary water sources

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<sup>1</sup> <https://unece.org/draft-unfc-supplemental-specifications-groundwater-resources> and <https://unece.org/draft-unfc-supplemental-specifications-groundwater-resources-0>

being overexploited or mismanaged due to misunderstandings in terms of bilateral or multi-lateral management of water sources or water-related project management.

6. A perceived added benefit of the UNFC for Groundwater Resources classification and accounting is the integration of groundwater resources in UNFC along with other subsurface resources to ensure a common implementation and understanding of sustainable and integrated resource management to support sustainable exploitation of resources and (subsurface) spatial planning, especially in areas with competing uses of subsurface resources. This includes consideration of the intricate links within the Water-Energy-Food-Ecosystem Nexus (WEFE Nexus). Groundwater experts and practitioners need to be able to share knowledge with a range of actors involved in other projects addressing the SDG targets and impacting groundwater and vice versa. The UNFC for Groundwater Resources contribution is therefore thought to provide added value and applicability in ensuring integrated management of different types of resources and water, particularly in areas where these resources constrain development. Use of water resources is expected to intensify in the future due to increasing freshwater needs for economic and social development.

7. The adoption of UNFC for groundwater resources would offer the possibility to quantify the renewable amount of groundwater resources while maintaining or achieving its good quality status, its actual utilization rate and the viability of specific projects, including commercial, public and strategic groundwater uses.

### **III. Proposed process for revision of the draft UNFC Supplemental Specifications for Groundwater Resources based on comments received through the public consultation**

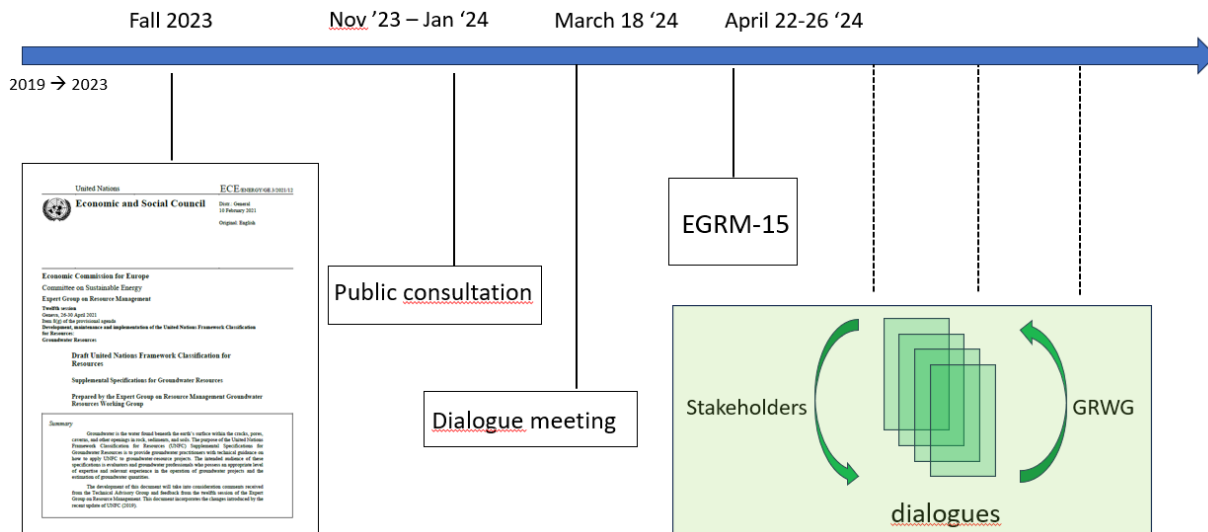
8. The draft UNFC Supplemental Specifications for Groundwater Resources were issued for public consultation from November 2023 to January 2024. Comments were received from a broad range of experts and stakeholders for use under a revision and adaptation process of the specifications, in collaboration with stakeholders and the larger hydrological community, including anticipated co-writing, if necessary, of relevant sections of the supplemental specifications document. Therefore, as part of this process there is a need for a larger public outreach that will be conducted through dialogues, workshops, conferences, and other channels to ensure active participation from all interested parties. The first step in this process was a public dialogue meeting on 18 March 2024 to which all reviewers of the public consultation were invited. The meeting was well attended and stressed the need for a revision and adaptation and a common understanding of the draft UNFC Supplemental Specifications for Groundwater Resources document, as well as the need or otherwise for it. The proposed revision and adaptation process, including active involvement of stakeholders is depicted in the figure.

9. At its ninth session (2018), the Expert Group on Resource Management “noted the continued interest in applying UNFC to coal mine methane (CMM) and groundwater and requested the Bureau to consider placing this on the agenda for discussion at the tenth session. The Expert Group recommended that, subject to volunteers and extrabudgetary funds being identified, the Bureau explore the applicability of UNFC to other resources such as CMM and groundwater and that any findings be reported to the tenth session.” (ECE/ENERGY/GE.3/2018/2, paras 82 and 83.)

10. At its tenth session (2019), the Expert Group on Resource Management “noted the establishment of the Groundwater Working Group and requested that it start work on development of specifications for application of UNFC and UNRMS to groundwater and provide an update to the eleventh session.” (ECE/ENERGY/GE.3/2019/2, para 95.)

11. Work to apply UNFC to groundwater resources is included in the UNECE member State-approved Work Plans of the Expert Group on Resource Management for 2018-2019, 2020-2021, 2022-2023 and 2024-2025.

### Proposed process for revision and adaptation of the draft UNFC Supplemental Specifications for Groundwater Resources



*Note:* GRWG stands for Groundwater Resources Working Group.  
 EGRM stands for Expert Group on Resource Management.

12. The proposed revision and adaptation process or roadmap (Figure I) shows the timeline from the establishment of the Groundwater Resources Working Group in 2019 at which time the Working Group was tasked with the development of specifications for the application of UNFC and the United Nations Resource Management System (UNRMS) to groundwater (ECE/ENERGY/GE.3/2019/2); the submission of the draft Specifications document in October 2023 and the subsequent public consultation until 15 January 2024; and the stakeholder dialogue meeting on 18 March 2024.

13. A crucial element of the revision and adaptation roadmap is the continued and intensified dialogue with the larger hydrogeological and user community, including water managers at all levels, and includes an anticipated active involvement of stakeholders in revising, adapting and co-writing of relevant sections while considering the option of preparing white papers with in-depth descriptions and well elaborated documentation of how the draft UNFC Supplemental Specifications for Groundwater Resources document addresses issues on added value and applicability, brought up in the public consultation process and the first dialogue meeting. It is also anticipated that the revision and adaptation process and continued dialogue will include the need and format for bridging documents and links to other water resources management frameworks, environmental accounting and generally agreed hydrogeological terminology. Finally, anticipating a revised and adapted specifications document as a result of the process suggested in this section, initial options for use cases, guideline documents and training material for testing and further development of the revised and adapted draft Supplemental Specifications document will be evaluated and discussed within the wider hydrogeological community.

14. Some of the comments received during the previously mentioned Public Consultation and the stakeholder dialogue meeting on 18 March 2024 question the relevance and need for this work by the Expert Group. The Groundwater Working Group seeks confirmation from the Expert Group at its fifteenth session (April 2024) that this work should continue as proposed.

15. Should the Expert Group be of the view that the work should continue, the Expert Group is invited to review and agree to the process proposed in this document to clarify, revise and adapt the draft UNFC Supplemental Specifications for Groundwater Resources and/or propose any modifications.