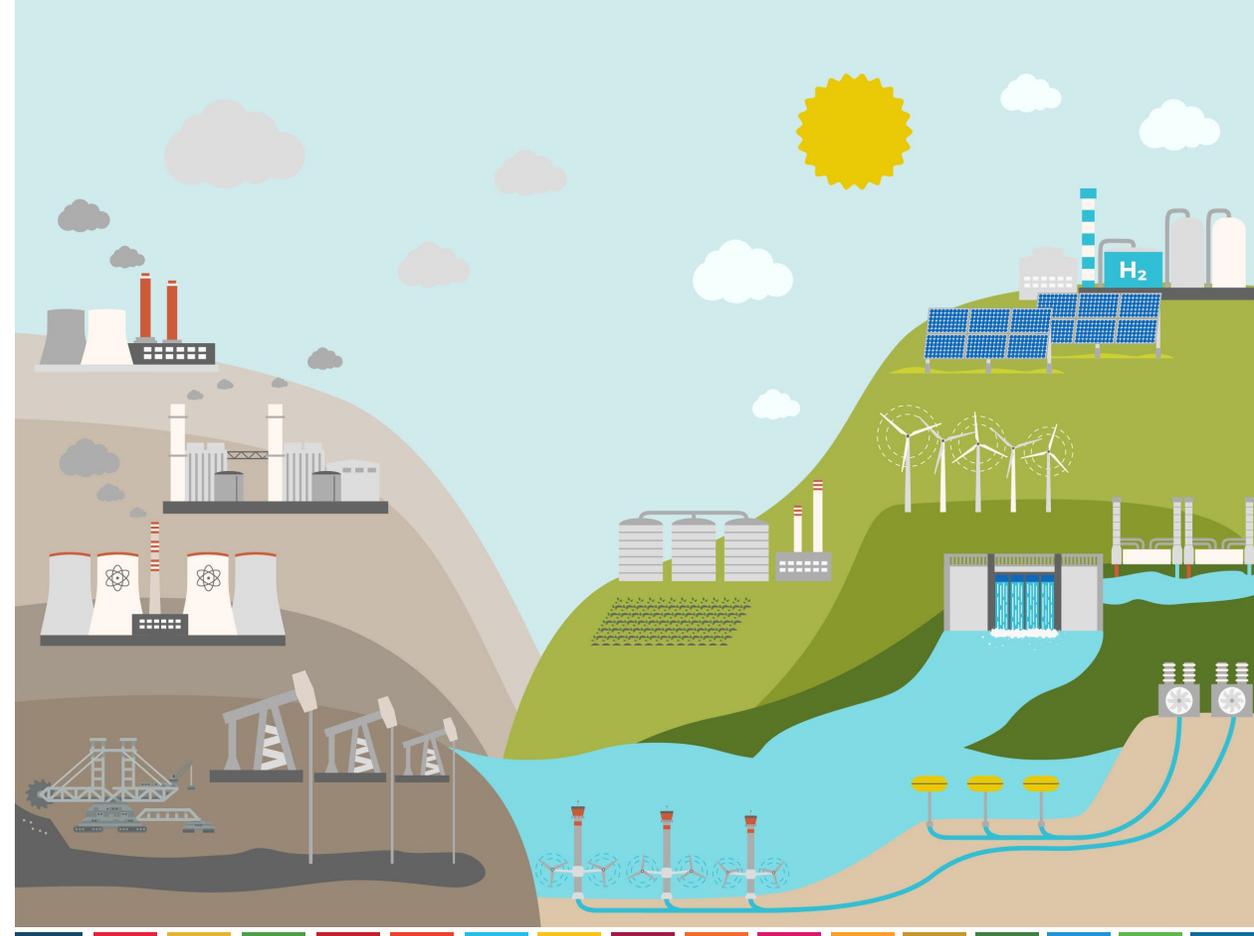


Development of the draft Supplemental Specifications for the Application of the United Nations Framework Classification for Resources to Groundwater Resources – Inclusion of the Public Consultation Feedback

UNFC for Groundwater resources ??

Peter van der Keur, Chair Groundwater Resources Working Group



RESOURCE MANAGEMENT WEEK

2024



UNECE



1. **Malis Absametov** (LLP Institute of Hydrogeology and Geoecology, **Kazakhstan**);
2. **Hashim Carey** (Geoscience **Australia**);
3. **Daniyar Chensizbaev** (LLP Institute of Hydrogeology and Geoecology, **Kazakhstan**);
4. **Henk Coetzee** (Council for Geoscience, **South Africa**);
5. **Narmina Garayeva** (Eilink R&D, **Azerbaijan**);
6. **Klaus Hinsby** (Geological Survey of Denmark and Greenland, GEUS, **Denmark**);
7. **Alan MacDonald** (British Geological Survey, **United Kingdom**);
8. **Lucio Martarelli** (ISPRA, **Italy**);
9. **Oleksii Netskyi** (State Commission of Ukraine on Mineral Resources , Dept. of Groundwater, **Ukraine**);
10. **Dan Palombi** (Alberta Energy Regulator, Alberta Geological Survey , **Canada**);
11. **Kevin Parks** (Stantec, **Canada**);
12. **Sergii Paiuk** (SCU, Dept. of Groundwater, **Ukraine**);
13. **Marco Petitta** (Sapienza University of Rome, Earth Sciences Department , **Italy**);
14. **Manzoor Qadir** (UNU-INWEH, **Canada/UN**);
15. **Teodóra Szócs** (Supervisory Authority for Regulatory Affairs, Geological Survey, Department of Hydrogeology, **Hungary**);
16. **Alexey Tudvachev** (SPbSU, Centre for Geology, **Russian Federation**);
17. **(Chair) Peter van der Keur** (Geological Survey of Denmark and Greenland, GEUS, **Denmark**);
18. **Natalia Vinograd** (SPbSU), Dept of Hydrogeology and Engineering Geology, **Russian Federation**);
19. **Magdalena Worsa-Kozak** (Wrocław University of Science and Technology; Faculty of Geoengineering, Mining and Geology, **Poland**).

Groundwater Resources Working Group

alphabetically



Application of UNFC to Groundwater Resources

At its ninth session, 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.)

UNFC and UNRMS

Establishment of Groundwater Resources Working Group

At its **tenth session**, 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.)

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.





The UNFC Supplemental Specifications for Groundwater Resources were open for public consultation from November 2023 to January 2024.

Comments were received from a broad range of experts and stakeholders for proposed use, including reconsidering the applicability of UNFC for groundwater resources, and if so, a revision and adaptation process of the specifications, in co-producing with stakeholders and the wider hydrological community

Public consultation

UNFC Supplemental Specifications for Groundwater Resources



Public consultation reviews (38 !) received from all continents:

ministries, governmental agencies, UN agencies, research institutes, universities, geological surveys, hydrogeological communities, private companies, individual persons

Including joint letter with major concerns on how UNFC can be applied to groundwater resources, signed by 118 persons originating from primarily the hydrogeological research community



Public consultation

UNFC Supplemental Specifications for Groundwater Resources

Draft UNFC Supplemental Specifications for Groundwater Resources

Public Comments

No	Date	Name and Affiliation	Comment
1	13-12-2023	International Groundwater Resources Assessment Centre	PDF
2	25-12-2023	Dr. Samuel Tetsopgang, Senior Lecturer of Geosciences, The University of Bamenda, Cameroon	PDF
3	28-12-2023	Ms. Oudi Kgomongwe and Ms. Deborah Mochotlhi, Water Information Integration Department of Water & Sanitation, Republic of South Africa	PDF
4	30-12-2023	Dr. Sally Salaah, Associate Professor, Water Pollution, Fresh water Division, National Institute of Oceanography and Fisheries (NIOF), Egypt	PDF
5	03-01-2024	Mr. Ziad Khayat, United Nations Economic and Social Commission for Western Asia	PDF
6	05-01-2024	Dr. Michelle Walvoord, Research Hydrologist, Earth System Processes Division, United States Geological Survey	PDF
7	09-01-2024	Dr. Mohammad Albeldawi, Ministry of Environment and Climate Change Comments, Qatar	PDF
8	10-01-2024	Regional Centre for Groundwater Management in Latin America and the Caribbean (CeReGAS), Uruguay	PDF
9	11-01-2024	Centro de Hidrogeología de la Universidad de Málaga (CEHIUMA), Spain	PDF
10	11-01-2024	State Commission on Mineral Resources of the Russian Federation (GKZ)	PDF
11	12-01-2024	Dr. Piet Kebuang Kenabatho, Botswana	PDF
12	12-01-2024	Ms. Cintia Nagy, Head of Department for International Relations, Ministry of Energy, Hungary	PDF
13	12-01-2024	State Commission of Ukraine on Mineral Resources, Ukraine	PDF
14	12-01-2024	Secretariat of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, serviced by UNECE	PDF
15	13-01-2024	Dr. Morufu Olalekan Raimi, Federal University Otuoke, Nigeria	PDF
16	13-01-2024	Dr. Patrick Lachassagne, Director - Laboratoire HydroSciences Montpellier, France	PDF

Comments received broadly categorized, **concerns on:**

- **Added value and applicability** of UNFC for groundwater resources
- **Groundwater should not be seen as commodity like oil, gas, minerals and UNFC is a commodity reporting system**
- **Groundwater as a public good**, private and economic good, common pool reserve, groundwater as **human right**
- **Transboundary aquifer management**, relation to **IWRM**
- **Groundwater – surface water interaction**, groundwater dependent **ES**, groundwater quality (**health aspects**)
- Groundwater as **renewable resource**, unlike minerals etc
- Groundwater **terminology used**, definitions
- Interrelation with groundwater management systems
- [...]
- Editorial specific comments

Scope of this presentation

UNFC Supplemental Specifications for Groundwater Resources



Economic Commission for Europe

Committee on Sustainable Energy

Expert Group on Resource Management

Fifteenth session

Geneva, 22-26 April 2024

Item 7 (b) (vii) of the provisional agenda

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

Applications: Groundwater resources

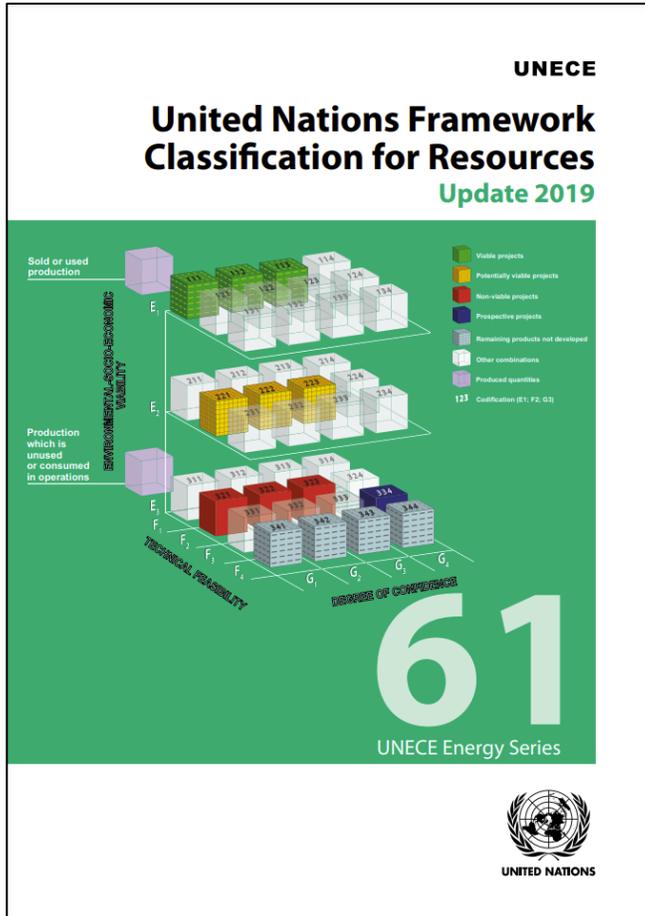
Development of the draft Supplemental Specifications for the Application of the United Nations Framework Classification for Resources to Groundwater Resources – Inclusion of the Public Consultation Feedback

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

Suggestions on **added value** and **applicability of UNFC for Groundwater Resources.**

This is **asked for by reviewers** during **The public consultation and dialogue meeting**

Present **possible roadmap** for **Revising and adapting** the supplemental Specifications for Groundwater Resources



UNFC is a classification and reporting tool:

The United Nations Framework Classification for Resources (UNFC) is a resource project-based and principles-based classification system for defining the environmental-socio-economic viability and technical feasibility of projects to develop resources (maturity of projects)

UNFC provides a consistent framework to describe the level of confidence of the future quantities produced by the project.

**But can it be used for groundwater resources ??
To be considered on background of public consultation**

UNFC for groundwater resources & IWRM ?

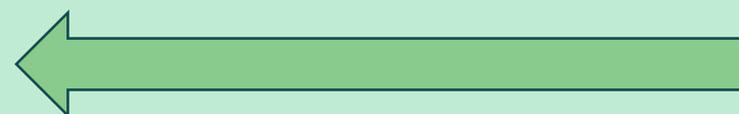
Integrated Framework

Classification and reporting Tool

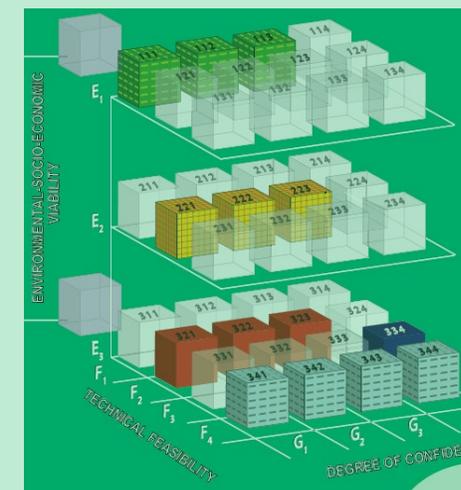


Policy frameworks

Informs on UNFC boundary conditions



Aggregated UNFC information



Operational tool for classification and reporting (for accounting)

Anticipated benefit of including groundwater resources in UNFC

UNFC for Groundwater Resources



A perceived benefit of the UNFC for Groundwater Resources classification and reporting 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).

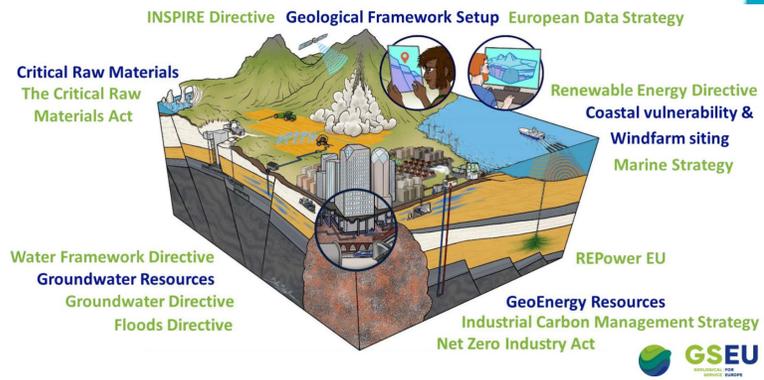


Anticipated benefit of including groundwater resources in UNFC

UNFC for Groundwater Resources



Should groundwater resources be excluded ??



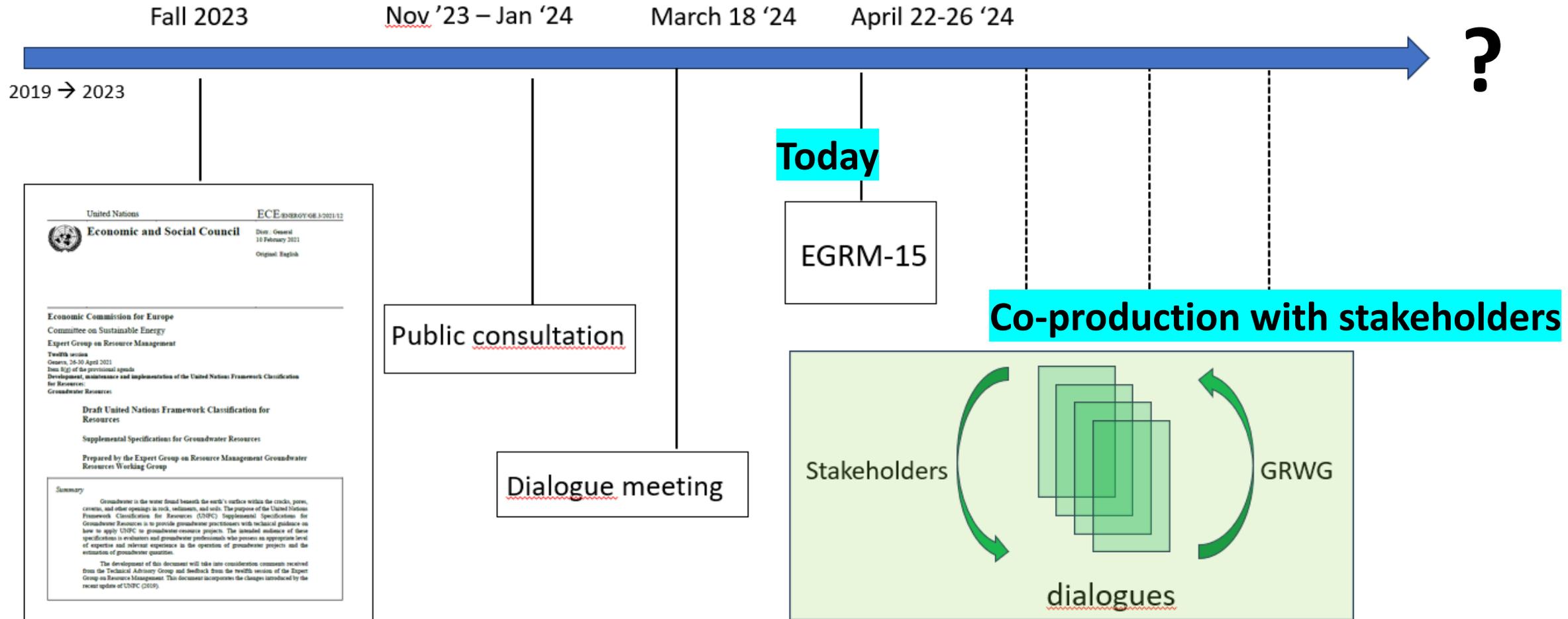
UNRMS
System for the integrated and sustainable management of resources

UNFC
Resource accounting based on maturity of projects

Inclusion of the Public Consultation feedback

UNFC for Groundwater Resources

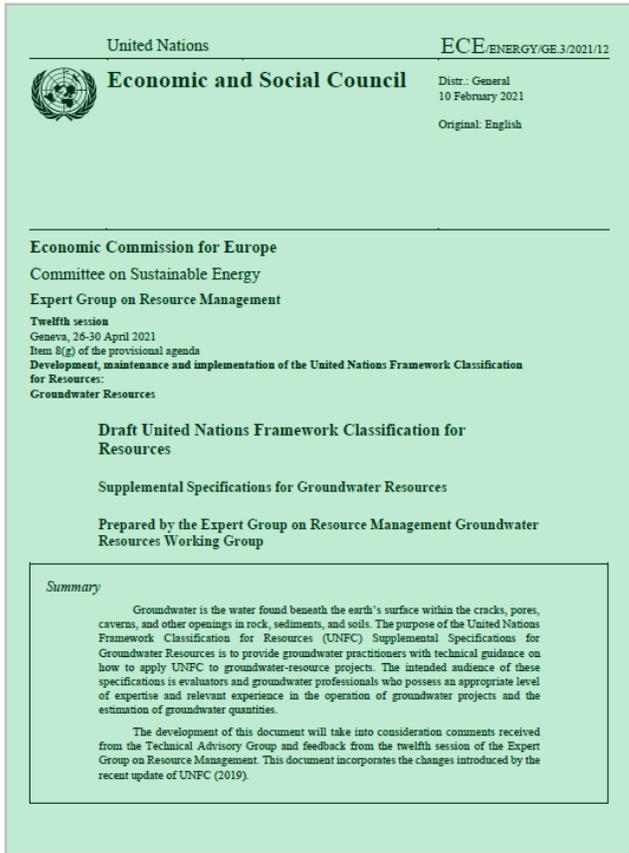
Revision and adaptation roadmap: co-producing the UNFC specifications for groundwater



UNECE

Revision & adaptation of supplemental specifications

Suggested workflow



Dialogues and **co-producing**



White papers, bridging Documents, use cases, guidelines

Dialogues and **co-producing**

Revision and adaptation





IAH Network (GRUCMN) – established at IAH2023 conference (Cape Town) to support work done by GRWG, including Developing case studies. IAH Network set to be included in **IAH UN-Engagement WG**

UN University Water Hub at U of Calgary – introductory meeting in May to introduce UNFC/UNRMS GRWG and expand dialogue, (in conjunction with UNU INWEH – Hamilton, Canada (also represented in GRWG)). The University of Calgary has become the world’s first United Nations University hub focused on water.

International Water Association (IWA) – follow-up to **Copenhagen workshop 2022** through groundwater community, adaptive water policy community after EGRM 15 (meeting today).

Alliance for Global Water Adaptation (AGWA) – initial conversations in 2022 and expressions of interest to communicate about our work in case UNFC-Groundwater sufficiently advanced.

Revision & adaptation of supplemental specifications

Further development of UNFC supplemental specifications for groundwater resources ???

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 **[and possibly adapted from input during this session]**.

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, **and possibly adapted from input during this session**, to revise and adapt the draft UNFC Supplemental Specifications for Groundwater Resources and/or propose any modifications.

ECE/ENERGY/GE.3/2024/7

THE VIEWS EXPRESSED ARE THOSE OF THE GROUNDWATER RESOURCES WORKING GROUP, HERE REPRESENTED BY THE WORKING GROUP CHAIR AND DO NOT NECESSARILY REFLECT THE VIEWS OF THE UNITED NATIONS.

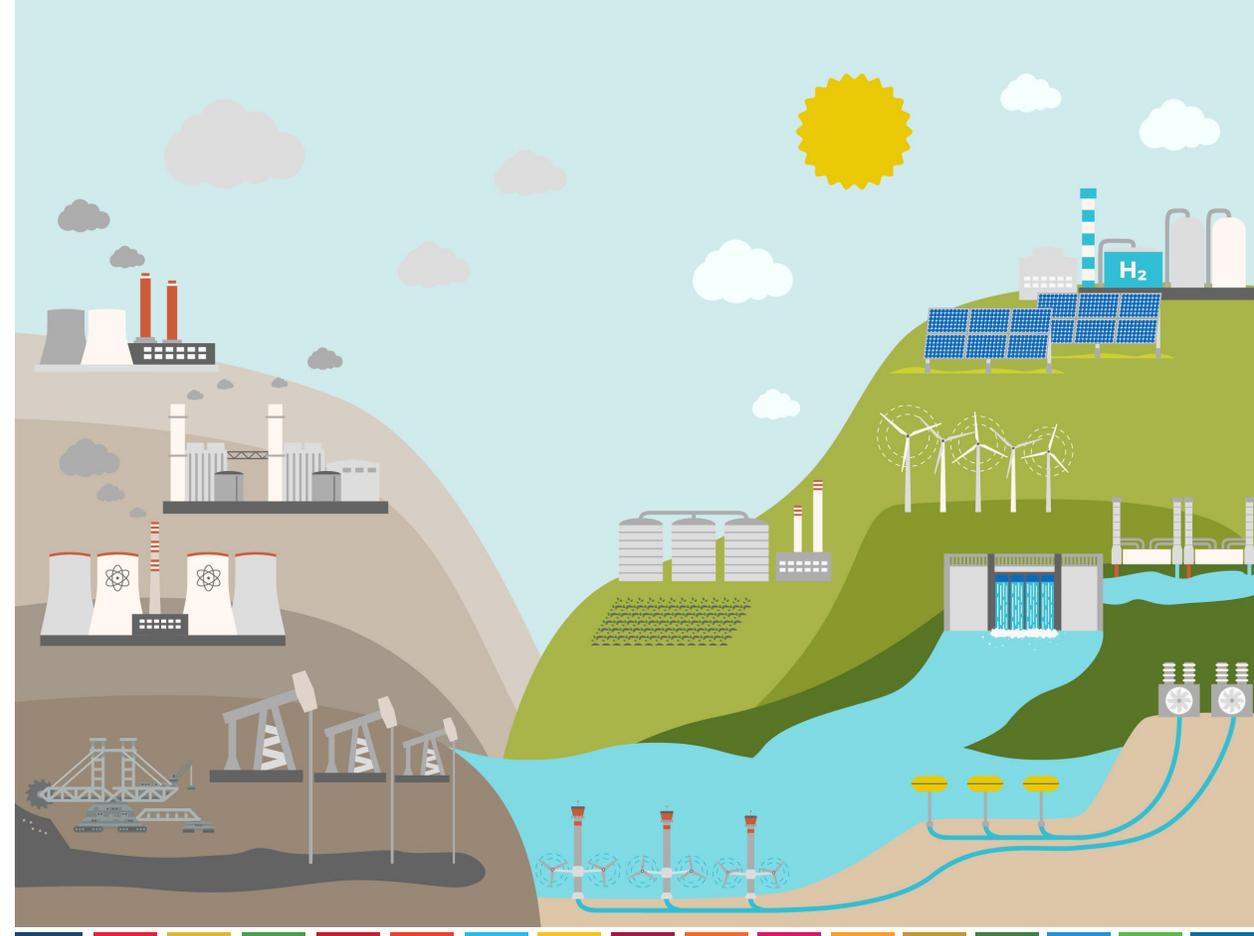
Thank you!

Peter van der Keur

Senior scientist, Geological Survey of Denmark and Greenland

UNECE

Date 25 | 04 | 2024, Geneva



RESOURCE MANAGEMENT WEEK 2024



UNECE