118 experts, professionals and representatives joint comment letter to UNECE Sustainable Energy Division regarding:

Draft United Nations Framework Classification for Resources - Supplemental Groundwater Specifications

The United Nations Economic Commission for Europe (UNECE) Sustainable Energy Division has developed groundwater specifications for application to groundwater projects, as a supplement to the Mineral and Anthropogenic Resources (2022) Guidance. The present supplement purports to support Member States (Europe and beyond) in evaluating the viability and feasibility of groundwater resource projects. The specifications and approach documented in the draft Supplemental Groundwater Specifications have been issued by UNECE in a global call for comments and review.

This joint letter serves as a response to UNECE Sustainable Energy Division's call for comments from a group of concerned groundwater specialists, practitioners, and stakeholders, responding either in their own capacity, or on behalf of their organization (see the affiliations).

Fundamental concerns raised regarding the Groundwater Specifications

- 1. The specifications are not appropriate for groundwater resources. The major concern with the approach is its questionable applicability to groundwater resources when analysed in relation to the 2022 UNFC Guidance¹. Groundwater as a resource is not a commodity comparable to oil and mineral resources, which can be subjected to viability assessments for commercialization. Groundwater is inherently a common good, which serves fundamental human needs and ecosystem services. Economic returns from groundwater development can only be associated with the services that it provides, e.g. for public water supply, not for the resource, per se.
- The specifications are not clear on how they will properly account for central issues: 1. The common pool resource character of groundwater; 2. The human right to have access to water;
 The application of the specifications to non- or little renewable groundwater resources; 4. The role of groundwater as an ecosystem in itself, and its link to other systems, including surface water and terrestrial and aquatic ecosystems; 5. The multiplicity in groundwater contexts (hydrogeological, socioeconomic, and institutional) across the globe; 6. Groundwater quality; and 7. The dynamic impacts of unfolding climate change.
- 3. The approach to 'groundwater projects' is piecemeal and fragmentary. This will counteract and jeopardize the integrated, conjunctive and more systems-oriented water resources

¹ United Nations Economic Commission for Europe (2022). UNFC Guidance Europe. Guidance for the Application of the United Nations Framework Classification for Resources (UNFC) for Mineral and Anthropogenic Resources in Europe. <u>https://unece.org/sites/default/files/2022-</u>10/Revised UNFC Guidance Europe as of 19.0ctober.2022.pdf.

management approaches at a basin or aquifer scale, which have been widely accepted and adopted as common best practice.

- 4. When compared with the provisions of the UNECE Water Convention, the added value of the specifications is not obvious. There appears to be a serious risk of misunderstanding groundwater resources and systems, rather than providing improved approaches.
- 5. The groundwater specifications document is not coherent. The document has many terms and loose statements that are incorrectly defined/poorly substantiated. Even the definition of groundwater is not specified according to generally accepted hydrogeological definitions. It contains an unduly complex/unwieldy text, which would not serve its purpose well.

Furthermore, we regret that the UNECE Environment Division and the UNECE Secretariat of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) and the Protocol on Water and Health have not been involved in the decision making on the development of the classification and the preparation of the document.

It is the considered view of the signatories of this statement that the added value of the supplemental specifications is at best limited and at worst highly likely to cause confusion and incoherence in groundwater resources management. The supplemental groundwater specifications are not in line with the efforts made in the framework of the Agenda 2030 to tackle the complexity and magnitude of the water and sanitation challenges with an integrated human rights-based approach.

Proposed action

We acknowledge the efforts put into the development of the groundwater specifications. However, we, the undersigned, based on the above, recommend curtailing further development of the groundwater specifications. We also stress that we stand ready to support UNECE in its efforts to support sustainable groundwater management in the pursuit of the Sustainable Development Goals.

NAME	AFFILIATION
Aureli, Alice	Former UNESCO IHP Chief of Section Groundwater Sustainability and Water Cooperation (GSW). Senior advisor SADC Groundwater Management Institute (GMI)
Kukuric, Neno	Independent Consultant
Lachassagne, Patrick	President, International Association of Hydrogeologists (IAH) French Chapter
Puri, Shammy	Centre for Sustainable Solutions in Practical Hydrogeology
Villholth, Karen	Director, Water Cycle Innovation
Aguilera, Héctor	Researcher at the Geological and Mining Institute of Spain (IGME, CSIC)
Alcalá García, Francisco Javier	Senior Researcher, EEZA-CSIC
Andreo Navarro, Bartolomé	Past President IAH Spanish Chapter, Professor of Hydrogeology, University of Málaga
Antiguedad Auzmendi, Iñaki	Professor of Hydrogeology, University of the Basque Country
Arce Montejo, Manuel V.	Hydrogeologist, CEO & Co-founder h2i analytics S.L.
Arduino, Giuseppe	Invited professor at the UNESCO Chair on Ecohydrology at the University of Algarve (UAlg), Portugal and holder of the Groundwater Dependent Ecosystems and Ecohydrology course at the MAEH Erasmus Mundus. Former UNESCO-IHP head of the Ecohydrology, Water Quality and Water Education Section.

People signing in their representative, professional and/or personal capacity

Bachtouli, Sarra	Hydrogeologist/WEE Consulting manager
Barón Périz, Alfredo	Retired Hydrogeologists
Bouhlila, Rachida	Ing. Dr. Professor. National ENgineering School of Tunis, University Tunis El Manar
Capelo Medina, Juan	Hydrogeological modeling at AYTERRA
Carmona Pérez, José María	University Senior Lecturer (Hydrogeology). University of Barcelona
Carrasco Martín, Alejandro	PhD student at the University of Malaga (UMA)
Cassiraga, Eduardo	Professor of Hydrogeology, Technical University of Valencia
Castro Gámez, Antonio F.	Ch. Departament Hydrology C Mediterranean Andalusian
Criollo Manjarrez, Rotman A.	PhD Hydrogeologist and Geological Engineer, Mediterranean Institute for Advanced Studies (IMEDEA, UIB-CSIC)
de la Torre Martínez, Beatriz	Assistan Professor, Center of Hydrogeology of the University of Málaga
de los Cobos, Gabriel	GESDEC-OCEV, Canton of Geneva (Switzerland)
Dhaoui, Mohamed	Assistant Professor at Centre for Water Research and Technologies (Tunisia), President of "Association Tunisienne de Georessources"
Dodo, Abdelkader	Sahara and Sahel Observatory (OSS)
Durán Valsero, Juan José	Profesor de Investigación, IGME-CSIC
Eckstein, Gabriel	Professor of Law, Director, Energy, Environmental, & Natural Resources Systems Law Program, Texas A&M University School of Law, USA
El Mansouri, Bouabid	President, IAH Morocco Chapter (CM-AIH President). Labo. Natural Resources, Geoinformation & Modeling, University Ibn Tofail, Faculty of Sciences. Morocco
Elorza Tenreiro, Francisco Javier	Professor of Hydrogeology. Universidad Politecnica de Madrid
Espinosa Martínez, Sara	PhD Hydrogeologist and Geological Engineer, Cetaqua Andalucía
FARZA, Nejib	Consultant Information management systems for Water and Energy
Fernandez Garcia, Daniel	Vice Dean of the School of Civil Engineering at the Technical University of Catalonia, Professor of Hydrogeology
Fernández García, María	PhD in Architecture and Water Ethics. Architect and
Feliciana	Hydrogeologist Researcher (UPM)
Fernández Mejuto, Miguel	Head of Water Technologies Unit (Provincial Council of Alicante - Diputación de Alicante) & Hydrogeology Lecturer at Universidad de Alicante
García Aróstegui, José Luis	Senior Researcher at the Spanish Institute of Geology and Mining
García López, Santiago	Professor of Hydrogeology. University of Cádiz (UCA)
Ghouili, Nesrine	Postdoc researcher (UGPO-HE)
Gil Márquez, José Manuel	Assistant Professor, Center of Hydrogeology of the University of Málaga
Gimenez Garcia, Jordi	Head of section of the Groundwater Service of the Directorate General of Water Resources of the Balearic Government
Gómez Alday, Juan José	Associate Professor. University of Castilla-La Mancha (UCLM)
Gómez-Hernández, Jaime	Vice-President IAH Spanish Chapter, Professor of Hydrogeology, Technical University of Valencia
González de Aguilar Etchemendi, José Pablo	PhD student, University of Málaga (UMA)

González Fuentes, Sebastián	Hydrogeologist & Pre-Doctoral Researcher, Institute of
González Ramón, Antonio	Environmental Assessment and Water Research (IDAEA-CSIC) Senior Researcher at the Spanish Institute of Geology and Mining
Gran Esforzado, Meritxell	IGME-CSIC PhD Hydrogeologist, Project director at Amphos 21 Consulting
Guardiola Albert, Carolina	President IAH Spanish Chapter, Senior Researcher at the Spanish
	Institute of Geology and Mining
Guimerà, Jordi	Project Director Amphos 21, Spain
Gutierrez, Alexis	Certified hydrogeologist, France
Gutiérrez Paíno, Aroa	Teniente Alcalde, Responsable del área de obras, servicios, infraestructuras y medio ambiente en el Ayuntamiento de Soto del Barco
Hardberger, Amy	P.G., McCleskey Professor of Law. Director, Texas Tech Center for Water Law and Policy, Texas Tech School of Law, USA
Heredia Diaz, Javier	Senior Researcher at the Spanish Institute of Geology and Mining
Hernández Bravo, Juan	Head of Water Resources Unit (Provincial Council of Alicante -
Antonio	Diputación de Alicante)
Huerta Hurtado, Pedro	Assistant Professor, University of Salamanca
Iglesias Carrera, Mireia	Water Catalan Agency (ACA)
Izquierdo Labraca, Tatiana Jarraya-Horriche, Faten	Associate Professor Universidad Rey Juan Carlos Associate Professor at Centre for Water Research and Technogies
	(Tunisia), President of Tunisian Chapter of International Association of Hydrogeologists, Member of executive Committee of Association Eau et Développement (Tunisia), Member of Association Tunisienne de Géoressources (Tunisia), Member of International Association of Hydrogeologists
Jiménez Espinosa, Rosario	Professor of Hydrogeology. University of Jaén
Jiménez i Llobet, Mireia	Hydrogeologist and Geotechnical Engineer, Centre per a la Sostenibilitat Territorial
Jódar Bermúdez, Jorge	Researcher at the Spanish Institute of Geology and Mining
Jrad, Abir	Assistant Professor at Centre for Water Research and Technologies (Tunisia)
Juncosa Rivera, Ricardo	University Professor UDC
Jurado Elices, Anna	Tenured Scientist at the Institute of Environmental Assessment and Water Research (IDAEA-CSIC)
Kebede, Seifu	IAH Regional Vice President of Sub-Saharan Africa
Kenabatho, Piet	Professor, Univ. of Botswana
Koita ,Mahamadou Kouadio, Emmanuel	Hydrogéologue, Institut International d'Ingénierie de l'Eau et de l'Environnement Ouagadougou - Burkina Faso Hydrogéologue/Hydraulicien, Maître de conférences, Université Félix Houphouët Boigny, Côte d'Ivoire
Lopez Gunn, Elena	Strategic Director, Icatalist, Spain
Nacef Mohamed, Lotfi	Hydrogeologist, President of Association water and development (AED)
Manganelli, Alberto	Director Ejecutivo, CeReGAS, Montevideo - Uruguay
Martinez-Landa, Lurdes	Hydrogeology Group Researcher, Universitat Potilècnica de Catalunya (UPC)

Mbilou, Urbain Gampio	Formation Doctorale des Géosciences de la Faculté des Sciences et Techniques de l'université Marien NGOUABI. République du Congo.
Menció Domingo, Anna	Professor of Hydrogeology, Universitat de Girona (UdG)
Montero González, Esperanza	University Professor, Universidad Computense de Madrid
Montesinos, Salomon	Lecturer at UCLM, Spain
Moreno Merino, Luis	Científico Titular (Research Hydrologist) IGME-CSIC
Mosrati, Haykel	Head of the tariff and economic studies division at SONEDE
Mudarra Martínez, Matías	Lecturer. Center of Hydrogeology of the University of Málaga
NacefF, Mohamed Lotfi	Hydrogeologist, President of Association Water and Development (AED)
Naranjo Fernández, Nuria	Postdoctoral Researcher at Computense University of Madrid
Nieto López, José Manuel	PhD Hydrogeologist and Environmental Scientist, Cetaqua Andalucía
Nlend, Bertil	Vice-Chair of the IAHS Africa Regional Chapter, University of Douala, Cameroon.
Obami-Ondon, Harmel	Dr Harmel OBAMI-ONDON, Enseignant-chercheur, Spécialité: Hydrogéologie-Hydrologie-Environnement. Ecole Nationale Supérieure Polytechnique (ENSP) de l'Université Marien NGOUABI. République du Congo
Olías Alvarez, Manuel	Professor of Hydrogeology, University of Huelva
Ordens, Carlos, Miraldo	Sustainable Minerals Institute, University of Queensland, Brisbane, Australia
Ordóñez Alonso, Almudena	Professor, University of Oviedo
Puigserver Cuerda, Diana	Tenure-Track Lecturer, Hydrogeology, Barcelona University
Pujadas-Ferrar, Jordi	Senior Hydrogeologist JPF CONSULTORES
Rodrigo-Clavero, María-Elena	Assistant Professor of Hydrogeology, Technical University of Valencia
Rodrigo-Ilarri, Javier	Associate Professor, Universitat Politècnica de València (UPV)
Rodríguez Arévalo, Javier	Jefe del Área de Aplicaciones Isotópicas del Centro de Estudios y Experimentación de Obras Públicas (CEDEX)
Rodríguez Rodríguez, Miguel	Professor of Water Resources Management. University Pablo de Olavide (Seville)
Rodríguez-Escales, Paula	Lecturer, Universitat Politècnica de Catalunya (UPC)
Román Gessa Fernández,	Senior Staff Professional - Hydrogeologist at Geosyntec
Alberto	Consultants Ltd.
Saha, Dipankar	Former Member, Central Ground Water Board, Govt of India
Sahuquillo, Andrés	Profesor jubilado. Universidad Politécnica de Valencia (UPV)
Sampietro Lardiés, Diego	Senior Hydrogeologist at Amphos 21
Sánchez García, Damián	Senior Project Manager, Cetaqua Andalucía
Sánchez Gómez, Alejandro	PhD Student, University of Alcalá (UAH)
Sánchez Sánchez, Esther	Coordinadora Explotación Aguas Subterránbeas Canal de Isabel II, Madrid
Sastre Merlín, Antonio	Investigador Honorífico. Dpto. Geología, Geografía y Medio Ambiente (Universidad de Alcalá)
Sauramba, James	Executive Director, SADC-Groundwater Management Institute

Shamrukh, Mohamed	Professor, Minia University, Egypt
Sinreich, Michael	Chair Swiss National Chapter of International Association of Hydrogeologists IAH
Slama, Fairouz	Associate Professor at the National Engineering school of Tunis, Secretary of The Tunisian Chapter of International Association of Hydrogeologists and Member of executive Committee of Association Eau et Développement (Tunisia)
Soro, Dimitri	Lecturer-researcher at Félix Houphouët-Boigny University, Côte d'Ivoire
Stephan, Raya Marina	Water law expert, consultant / Deputy Editor in Chief Water International (IWRA)
Stevanović, Zoran	University Professor retired, Past-Chair of the IAH Karst Commission, Past-President of the Serbian Geological Society
Stevens, Larry	Director, Springs Stewardship Institute, Flagstaff, Arizona, USA
Tardieu, Eric	Secretary General of the International Network of Basin Organizations (INBO).
Teixidó Ullod, Maria Teresa	Senior PhD in Geophysics. Instituto Andaluz de Geofísica- Universidad de Granada (IAG-UGR) - Spain-
Thouin, Catherine	Former Vice-President, IAH French Chapter. Member of IAH-CFH. Member of French Water Partnership
Toro, Guglielmina	Hydrogéologue, vice-présidente du CFH-AIH et membre de l'AHSP
Valhondo Gonzalez, Cristina	Postdoctoral researcher IDAEA-CSIC
Vallecillo Plata, Miguel Ángel	Senior Hydrogeologist, ERM Iberia SAU
Vélez Nicolás, Mercedes	Profesora sustituta interina. Departamento de CC. de la Tierra. Universidad de Cádiz (UCA)
Vicente Lapuente, Risa	Profesora jubilada. Dpto. Geología, Geografía y Medio Ambiente. U A H
Vilarrasa, Victor	Tenured Scientist at the Spanish National Research Council (CSIC)
Villanueva Fernández, Andrés	Hydrogeologist, Tragsatec