

ENVIRONMENTAL GEOLOGY AND WASTE MANAGEMENT SESSION

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Geological knowledge is an essential tool not only for understanding the causes of environmental problems, but also for preparing societies for a healthy, safe, and sustainable future. Inspired by the motto, "Understanding the Earth is not enough; we must make the knowledge we generate about the Earth an integral part of how we envision the future of societies," the Environmental Geology and Waste Management Session of the 79th Geological Congress of Türkiye aims to address environmental geology and waste management in the context of ecosystem protection, responsible resource use, and societal benefit. The session will examine interactions between the geological environment and human activities; soil and water contamination; the transport and accumulation of contaminants; waste containment from a geological and geotechnical point of view; geogenic contaminants; the environmental impacts of mining and industrial activities; and the investigation and remediation of contaminated sites. Other principal topics will include hazardous waste management; the selection of geologically, geotechnically, and hydrogeologically suitable sites for waste disposal facilities; waste containment barrier design; the environmental impacts of leachate; waste reuse; and opportunities for recovery from secondary resources. The session will also address microplastics and emerging contaminants, the effects of climate change on contaminant mobility and waste management infrastructure, environmental monitoring, and applications of geographic information systems and modelling. The extensive accumulation of plastics and microplastics observed along the Mediterranean coast from Adana to Fethiye in 2026 has once again demonstrated that land-based waste can be transported over large areas by rivers and ocean currents. This situation highlights the importance of addressing waste management through an integrated approach spanning river basins and coastal areas, preventing pollution at its source, and ensuring effective environmental oversight. The Environmental Geology and Waste Management Session aims to support the integration of scientific findings into planning and decision-making processes, strengthen interdisciplinary cooperation, and facilitate the sharing of practical solutions. Within this framework, the session seeks to bring geological knowledge together with a sense of public responsibility to reduce environmental risks, uphold environmental justice, and protect the right to life of future generations.