

Dr. Jonathan Bridge

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Speaker Biography:

Dr Jon Bridge is an Associate Professor in Environmental Geoscience at Sheffield Hallam University. He leads the MSc Environmental Management postgraduate degree courses and coordinates the Landscape Laboratory Research Group. From 2012-2017 he taught in the Centre for Engineering Sustainability at the University of Liverpool, prior to which he spent 9 years as a PhD and postdoctoral researcher in the Groundwater Protection and Restoration Group at The University of Sheffield. Dr Bridge has a track-record of research activity across the environmental geosciences. His early postdoctoral work was in soil- and waterborne pathogens and human health (invited paper in Bulletin of the World Health Organization, <http://doi.org/10.2471/blt.09.072512>), numerical and agent-based simulation of soil biogeochemical processes, and colloid transport and fate in porous media (e.g. <http://doi.org/10.1016/j.cis.2017.06.002>). He also has strong interests in catchment-scale water and contaminant dynamics, in particular in semi-arid catchments in the Middle East (Jordan, see <http://doi.org/10.5194/hess-20-4391-2016>). His most recent work has involved collaboration with a team of Syrian academics to collect the first regional baseline soil survey in North-West Syria since before the start of the Civil War in 2011 (<http://doi.org/10.1039/d2va00333c>).

Presentation Title:

Oral Presentation: Environmental Pollution, Agricultural Soils and Risks to Human Health During Ongoing Conflict in North-West Syria

Abstract:

More than a decade of ongoing conflict in North-West Syria has led to substantial and severe environmental consequences. Many of these are direct and obvious, resulting from military activity, informal settlement of land by displaced people, and the growth of informal or illegal industrial practices such as waste oil refining. However, the agricultural economy has experienced a near-total collapse in administration, regulatory enforcement, supply chains and farmer extension. Since 2021, our team has documented the impact on soil contamination across the region. Here, we present the latest data from a survey of farmers, agronomists and agricultural pharmacists which reveal complex patterns of understanding and willingness to recognise and respond to soil degradation driven by inappropriate and unregulated chemical use, application of untreated wastewater for irrigation, and the urgent need for food and livelihood in a context of increasing food insecurity, disease and threat to life. We present recommendations for NGOs and authorities in the region both for short-term mitigation and longer-term, post-conflict restoration of the soil environment in North-West Syria.