Preliminary investigation of greenhouse gas emissions from terraced and non-terraced fields in Malta

Kamal Zurba (1), Sandro Lanfranco (2), and Jörg Matschullat (1)
(1) Interdisciplinary Environmental Research Centre (IÖZ), TU Bergakademie Freiberg, Germany (kamalqz@yahoo.com), (2) Department of Biology, University of Malta, Malta (sandro.lanfranco@um.edu.mt)

Building terraced fields on slopes is one of the common land management techniques and commonly used in Malta. Besides improving land for agricultural use, effective erosion reduction is achieved. Yet, there is data scarcity about such land management in Malta in respect to related greenhouse gas (GHG) emissions and its effects on climate change. Data from terraced fields are lacking and data from arid and semi-arid regions are particularly scarce according to our review on greenhouse gas emissions from soils.

Preliminary results from a dynamic closed chamber system for soil degassing and ecosystem gas exchange (SEMACH-FG) in Malta will contribute to such emerging data and to better understand the impacts on soil geochemistry of such lands.