

Dear Colleagues,

we are pleased to inform you that the Call-for-Papers programme of the **European Geosciences Union (EGU) General Assembly 2010 (Wien, Austria, 02-07 May 2010)** is now open.

On behalf of the Programme Committee, we cordially invite you to submit abstracts to the session: "**Dehydrated and rewetted peatlands: hydrological, physical and chemical changes**" (Division **Soil System Sciences, Session SSS17**).

The deadline for the submission of abstracts is January 18, 2010.

The description of the Session can be found at <http://meetingorganizer.copernicus.org/EGU2010/sessionprogramme/SSS>, while information about EGU itself can be found at <http://www.egu.eu>.

Abstract Registration

During the abstract registration, an author can give his/her preference on whether a contribution should be a poster (choice "Poster") an oral presentation (choice "No preference", since there is no guarantee for oral presentations). Please note that an author is not allowed to submit more than one regular abstract and one solicited abstract with the choice "No preference". Of course, poster presentations are always welcome.

Please do not hesitate to contact us or the EGU Organizing Committee (egu2010@copernicus.org) if you have any questions.

We hope that we can stimulate your interest in Session SSS17, and we are looking forward to receive your contribution!

Kind regards.

Lech Zajdak (Convener); Teodoro Miano, Claudio Zaccone (Co-Conveners)

General Assembly of the European Geoscience Union (EGU)

<http://meetings.copernicus.org/egu2010>

Wien, Austria, 02-07 May 2010

Soil Systems Science Division (SSS)

Session SSS17

“Dehydrated and rewetted peatlands: hydrological, physical and chemical changes”

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Presentation

In many regions, current use of peatlands is connected with several environmental problems. If undisturbed, peatlands have been shown to be net sinks of CO₂ and net sources of CH₄ on a long term basis. However, drainage for forestry and agriculture and/or peat extraction cause an increase of the thickness of the aerobic layer, thus resulting, in turn, in an increase of the rate of organic matter decomposition, greenhouse gas (GHG) emissions, discharge of nutrients into surface waters, and reduction of biodiversity.

Wise use of water-regime management mitigates the processes of subsidence, which impact on soil degradation, disappearance of peat soil, reducing of water retention, changing soil ecology, eutrophication of ground and surface waters, and GHG emission; consequently, organic soil drainage practices should be estimated by an understanding of how the water table influences these processes.

Drying and wetting of peat soils lead to the soil volume changes. These dynamic transformations of swelling and shrinkage in these deposits have significant impact on both their physico-chemical properties, and the biogeochemistry of several major and trace elements, thus affecting either their role as sink/source of atmospheric carbon or their potential use as natural archives, respectively.