Newsletter

January 17th 2025
Castricum, The Netherlands
Newsletter 2025-Q1

Dear readers,

With this newsletter we like to inform you about our day to day business, current projects, performance characteristics of our products and new product development. Enjoy reading!

Day to day business

SWAPlog-1

SWI

Please contact us at info@swapinstruments.com, if you are interested in our products.

Since the foundation of SWAP instruments in 2020, **sales** of our soil Redox probes continue to **increase**. In 2024 we obtained the **FCC mark**, which meant that we could also start selling our digital soil Redox probes in North America. Well, we have experienced that. The **demand** for our **SDI-12 probes increased** sharply.

For 2025, we have some interesting **innovative products** coming up:

✓ **The SWAPlog-1**: a solar powered single port data logger for our SDI probes (all D-type probes)
✓ **SWI calibration feature**: a calibration function will be added to the Android app of our SWAP Wireless Interface.
✓**Long-lasting reference electrode**: in 2024 we already reduced the maintenance frequency of our reference electrode by adding a microporous polyethylene ring to the electrode. In 2025 we will add a new feature that will reduce the maintenance frequency even further.

We look forward to an exciting year in which we will be happy to help you achieve **success** with your **ORP research**!

Ecosearch: our distributor in Italy

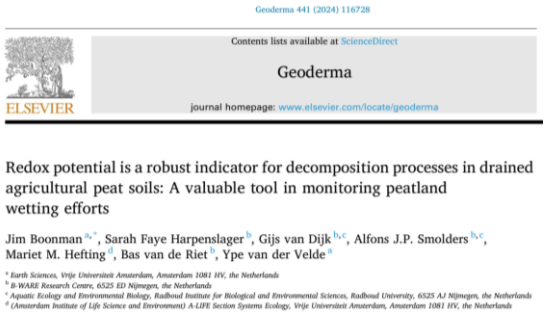
Feel free to contact our distributors if you are interested in our products and located in the territory of one of our distributors.

In 2024 we welcomed **Ecosearch** as our **distributor** in **Italy**. Ecosearch started its activity in 1995, with the aim of importing, assembling and assisting state-of-the-art instruments in the **agricultural** and **environmenta**l **research** sectors in Italy. It is a family business with **highly skilled** and **dedicated professionals**. We are very pleased being represented by Ecoseach in Italy.

We currently work with the following official **distributors**:

EcoMind in China
C&H in South Korea
Daiki in Japan: info@daiki.co.jp
Edaphic in Australia / New Zealand:
SDEC in France:
Ecosearch in Italy:

Scientific article


Geoderma 441 (2024) 116728

Contents lists available at ScienceDirect

Geoderma

journal homepage: www.elsevier.com/locate/geoderma

Redox potential is a robust indicator for decomposition processes in drained agricultural peat soils: A valuable tool in monitoring peatland wetting efforts

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This study was financed by NOBV

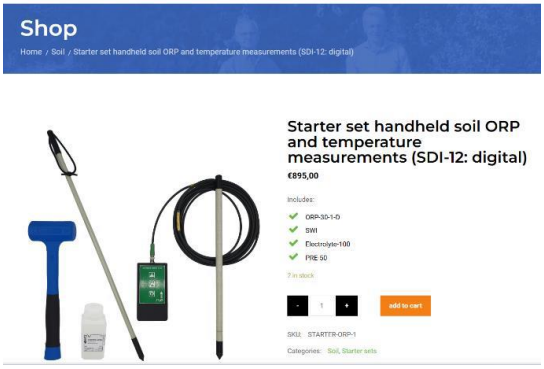
Please contact us at info@swapinstruments.com, if you would like to discuss the added value of our products for your research.

Although peatlands cover merely 3% of the global land surface, they store over 20% of the world's organic carbon (Friedlingstein *et al.*, 2022, Leifeld and Menichetti, 2018; Yu *et al.*, 2010). Almost 14 % of the global carbon storage in peat soils is threatened by degradation due to drainage (Leifeld and Menichetti, 2018). **Peat decomposition** is **responsible for ~2%** of **global annual anthropogenic greenhouse gas emissions** (Conchedda and Tubiello, 2020, Friedlingstein *et al.*, 2020).

In 2024, Boonman *et al.* (2024) published a scientific article in which they determined if **continuous** Eh (**ORP**) **measurements** are an **effective tool** to **monitor metabolic peat decomposition processes** and **quantify** the **effects** of **wetting efforts** on these processes. In this study the Eh (ORP) is continuously measured with soil ORP probes from our predecessor company PaleoTerra.

Boonman *et al.* (2024) concluded that **field Eh (ORP) measurements effectively identify the prevalence of specific metabolic processes** in agricultural peat. In addition, Eh measurements helped quantifying the effects on peatland wetting efforts to **optimize peatland preservation**.

Webshop discount



Feel free to contact us at info@swapinstruments.com for questions about our webshop.

Be prepared for the fieldwork season!
Buy your soil ORP probes in time! We offer **probes for** both **handheld** and **long-term monitoring** applications. Our ORP probes are being used in various applications, including;

1) soil quality monitoring to optimise crop production.
2) wetland research to study redox processes under varying tidal conditions.
3) field and pot experiments under field and laboratory conditions to study the decay of organic matter and pollutants.
4) the immobilisation of metals in industrial waste.

From January to March 31st 2025 we offer a **discount** of **5%** on your first **webshop purchase**. Use the following code in the checkout of our webshop: CFJQZ3GZ Thanks for choosing SWAP instruments!

References

Boonman *et al.* (2024). https://doi.org/10.1016/j.geoderma.2023.116728
Conchedda and Tubiello (2020) ESSD - Drainage of organic soils and GHG emissions: validation with country data
Friedlingstein *et al.* (2022). 10.5194/essd-12-3269-2020
Leifeld and Menichetti (2018). 10.1038/s41467-018-03406-6
Yu *et al.* (2010). 10.1029/2010GL043584

If you are interested in our products or if you would like to receive some additional information, please contact us at info@swapinstruments.com or visit our website www.swapinstruments.com.

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