

**French Academy of Agriculture & European Commission
Symposium**

Launch of the Global Soil Biodiversity Atlas in France

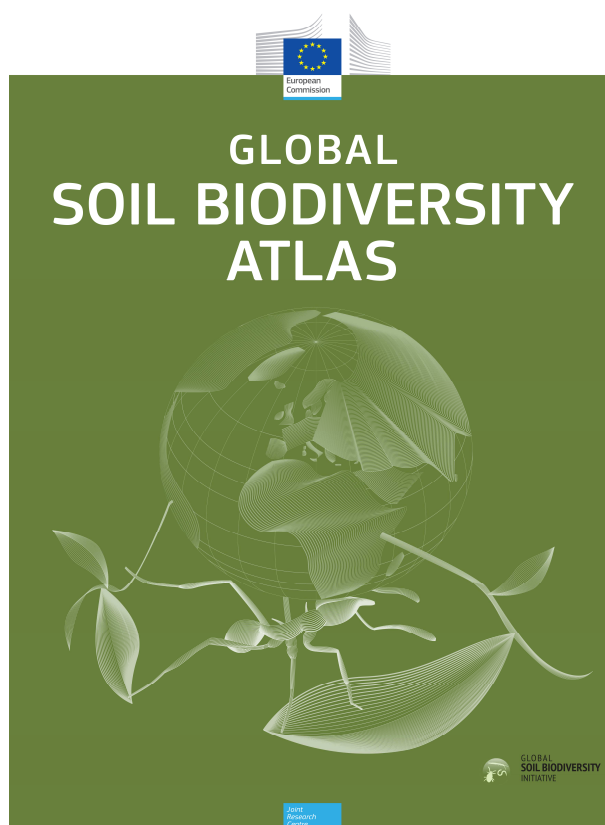
28 November 2016 – 9am30 to 5pm30

Organisators :

Jean-Luc Chotte IRD

Philippe Lemanceau INRA (French Academy of Agriculture)

Alberto Orgiazzi JRC, European Commission



Program

Abstracts and short biographies of the speakers

**Académie d'agriculture de France
www.academie-agriculture.fr**

18, rue de Bellechasse – 75007 – Paris – tel 01 47 05 10 37

General presentation

Soils are the living epidermis of the planet that supports the production of food and fiber, clean water and air, all contributing to human health. Soil organisms, ranging from microscopic bacteria and protists to earthworms, beetles and moles, work together to carry out vital tasks in natural and managed ecosystems that allow life on Earth. They are key drivers of nutrient transformations and cycling; their impact on decomposition and soil structure regulates soil organic matter dynamics, soil carbon storage and greenhouse gas emissions; the symbiotic interactions driven by mycorrhiza and nitrogen fixing bacteria enhance the magnitude and efficiency of nutrient acquisition; while biological control of pest and pathogens is provided by their natural predators and parasites thus contributing to plant and human health. Unfortunately, the extremely variegated communities that inhabit the soil are increasingly threatened by irresponsible uses of the land.

In response to the urgent challenges associated with the sustainable management of soils and the preservation of life within them, a swift collective action has been taking place among scientists of different disciplines, backgrounds and experiences. A first remarkable achievement towards this direction was the publication of the first-ever Global Soil Biodiversity Atlas. Released in May 2016, the Global Soil Biodiversity Atlas, a collaborative effort of the European Commission's Joint Research Centre and the Global Soil Biodiversity Initiative, presents the first overview of soil biodiversity for both managed and natural soils on a global scale. The Atlas is a significant international scientific effort with contributions from more than 120 experts from 26 different countries. The rapid advances in new technologies, such as molecular tools, and information and communication technologies, facilitated the collective effort that resulted in the Global Soil Biodiversity Atlas, but it would have still been incomplete without the global collaborations that fostered new syntheses and understanding of the importance of soil organisms across the globe.

The eight main chapters of the Atlas cover all aspects of soil biodiversity, from taxonomy, geographical distribution and ecosystem service to threats, interventions and policies related to soil biodiversity. The book was conceived to target not only general public and policy makers but also researchers and technicians. More than 800 images, more than 50 maps and hundreds of informative boxes drive the readers through an incredible journey into soil life. The Global Soil Biodiversity Atlas represents a starting point that will contribute to make people aware of the importance and beauty of organisms living in the soil and to help soil life to raise the attention and respect that it deserves.

The present symposium aims at launching in France this unprecedented Atlas. This will represent an opportunity to present European and world initiatives on soil biodiversity and to illustrate advances in knowledge, study strategy, monitoring of soil microbes and fauna in a variety of environments by European and World experts, some of them having contributing to the Atlas.

Chairmen : **Dominique Job**, directeur de recherche émérite au CNRS, Laboratoire mixte CNRS/Bayer CropScience, UMR CNRS 5240, Lyon ; Académie d'Agriculture (Sciences de la vie)

Daniel Tessier, directeur de recherche honoraire à l'INRA, Académie (interactions milieux-être vivants)

Program

- **9:45-10:00. Welcoming**
Gérard Tondron, Permanent Secretary of the Academy of Sciences.
- **10:00-10:15. Introduction**
Karmenu Vella, European Commission, Commissioner Environment, Maritime Affairs and Fisheries (pre-recorded video message)
- **10:15-10:30. Introduction du colloque**
Jean-Luc Chotte, Philippe Lemanceau, Alberto Orgiazzi, Symposium organizers

1 Atlas presentation

- **10:30-11:00.** *Presentation of the Global Soil Biodiversity Atlas*
Alberto Orgiazzi, Coordinator of the Atlas, JRC Ispra, European Commission

2 Progresses in the study strategies of soil biodiversity

- **11:00-11:30.** *Basic study and exploitation of soil microbiota following a metagenomics approach*
Pascal Simonet, CNRS Lyon, France
- **11:30-12:00.** *Development of metabarcoding for soil fauna*
Arjen de Groot, Wageningen University Research, The Netherlands
- **12:00-12:30.** *Data base management and bioinformatics*
Urmas Kõljalg, University of Tartu, Estonia

12:30-13:30 Free lunch

3 Biodiversity and soil functioning

- **13:30-14:00.** *Diversity and functions of soil macrofauna in West Africa: Case study of termites and ants in Cote d'Ivoire and Burkina Faso.*
Souleymane Konate, University Nangui Abrogoua, Cote d'Ivoire
- **14:00-14:30.** *Soil biodiversity and geochemical cycles*
Alain Brauman (IRD), Jean Trap (IRD), Claude Plassard (INRA), Jean-Luc Chotte (IRD), Eric Blanchart (IRD), Montpellier, France
- **14:30-15:00.** *Exploration of microbial biodiversity and functions in forest ecosystems: a focus on temperate regions*
Stéphane Uroz, INRA Nancy, France

4 Knowledge applications of soil biodiversity to sustainable soil management

- **15:00-15:30.** *Soil microbial diversity: national territory to farmers*
Lionel Ranjard, INRA, Dijon, France
- **15:30-16:00.** *Nematode biodiversity and bioindicators*
Cécile Villenave, ELISOL Environnement, Montpellier, France
- **16:00-16:30.** *Soil biodiversity and ecosystem services*
Patrick Lavelle, IRD, CIAT, Cali, Colombia

5 European & world initiatives of soil biodiversity characterization

- **15:45-16:15.** *FP7 large-scale European project EcoFINDERS*
Philippe Lemanceau, INRA, Dijon, France
- **16:15-16:45.** *Global Soil Biodiversity Initiative*
Wim van der Putten, NIOO, Wageningen, The Netherlands

4 Conclusions-prospects

- **16:45-17:00.** *Conclusions and prospects*
Philippe Lemanceau & Francis Martin, INRA, Dijon & Nancy

November 28th 2016

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A D E M E



Agence de l'Environnement
et de la Maîtrise de l'Energie

