Hello $[UD:FIRST_NAME|]$

EDITORIAL BY ELSA EDYNAK, CHAIR COORDINATOR

Wildfires: A growing threat to soil health



This July, our thoughts are especially with our partners who, like those in France, are facing a wave of wildfires of unprecedented intensity.

From southern Europe to Latin America, including the Maghreb, the summer of 2026 confirms a trend that the scientific community has been observing for several years: the increasing frequency and severity of wildfires due to the combined effects of climate change and human activities. France is facing a wildfire season of unprecedented scale, with major fires in the south of the country and water restrictions now in effect across much of the nation. Tunisia is experiencing an exceptional heat wave that is fueling a surge in wildfires, particularly in the forests of the northwest. Colombia, affected by the El Niño phenomenon, has several departments on critical alert, including Nariño, which has been severely impacted. Finally, Mexico is battling numerous active wildfires, exacerbated by drought and heat.

Globally, wildfires are becoming increasingly frequent and destructive due to the combined effects of climate change and human activities. While droughts and heat waves create conditions conducive to the spread of flames, more than 90% of wildfires in Europe are directly or indirectly caused by humans.

These events echo the webinar organized by the Chair last June to mark the World Day to Combat Drought and Desertification: fires also threaten the dendrochronological memory of trees, which serve as witnesses to past water crises.

This living memory is now directly threatened by increasingly intense fires, which destroy in a matter of hours natural archives that have been built up over several decades.

The consequences are not limited to forests and trees. Fire profoundly transforms the soil. At low intensities, it can temporarily enrich the soil with certain nutrients and promote the regeneration of certain species. Severe fires, however, destroy organic matter, disrupt carbon, nitrogen, and phosphorus cycles, reduce microbial biodiversity, and greatly increase the risk of erosion. Recent research even shows that fires disrupt the fundamental biochemical relationships that ensure soil function on a global scale.

This issue directly affects many of the UNESCO Chair's partner countries, from Brazil to Senegal, including Mexico, Colombia, Tunisia, and the Philippines. In these regions, fires linked to deforestation, agricultural burning, or extreme weather events compromise soil fertility, biodiversity, and food security. Preventing human-caused fires is therefore a major challenge for protecting soils, strengthening regional resilience, and preserving the resources needed for future generations.

- Elsa Edynak

HIGHLIGHT

Theresa Mannsbart, the first intern at the UNESCO Chair

We welcomed our very first intern from the UNESCO Chair "Soils, Biodiversity, and Future Generations," Theresa Mannsbart, for two months. Our international student from the UniLaSalle Rouen campus has just successfully completed her fourth year in the I-SAFE and Farming for the Future programs. She is now heading to Brazil to pursue her fifth year as part of a dual-degree program at ESALQ. An account of her inspiring experience at UniLaSalle and during her internship is available.

Read the article



ZOOM ON UQAT



"The challenges related to soil health and the recovery of organic waste extend far beyond national borders and require an international approach that brings together complementary expertise in the context of adapting to climate change. Collaboration between UniLaSalle and the Université du Québec en Abitibi-Témiscamingue has highlighted the value of comparing different soil and climate contexts to better understand soil functioning and develop innovative agroecological solutions. The experimental project "EXTAASE: Experiment on Species Mixing in Agricultural and Agroforestry Systems to Increase the Production of Ecosystem Services," led since 2022 by Vincent Poirier, a researcher at UQAT, serves as an open-air laboratory dedicated to the analysis of long-term carbon sequestration, biodiversity and pollinisation.

These themes, which lie at the heart of agroecological transitions, align directly with UniLaSalle's scientific priorities. These collaborations promote knowledge sharing, student and researcher mobility, and the development of joint scientific projects. By bringing together expertise in soil science, agroecology, agroclimatology, forestry, animal husbandry, organic waste management, and agroeconomics, these partnerships help us collectively address the challenges of agricultural sustainability and soil conservation." Nadia Laurent et Wassila Riah-Anglet, AGHYLE, UniLaSalle Rouen at UQAT, Québec, Canada.

CALL FOR SUBMISSIONS

Special Issue – "Biodegradable Polymers and Biocomposites in Compost and Soil" for February 2027.

A call for papers is currently open for the Special Issue "Biodegradable Polymers and Biocomposites in Compost and Soil" of the journal *Polymers*. This special issue welcomes research on the biodegradation of polymers and biocomposites in compost and soil, under aerobic or anaerobic conditions, as well as on their formulation, processing, and characterization. The call is open to the entire scientific community. The promotional flyer may also be shared with researchers who may be interested.

Infos and submissions

A BIG THANK YOU FOR YOUR PARTICIPATION!

The chair successfully organized these first two webinars: during Nature Day, featuring Andrés Cruz Hernandez and Patricia Villsana from Bajío University in Mexico (right), as well as John Cristian Fernandez Lizarazo from the Utopia Rural University Campus in Yopal, Colombia (left). Then, on the occasion of the World Day to Combat Drought and Desertification, we hosted Sahar Abidi from the Sylvo-Pastoral Institute of Tabarka in Tunisia. We look forward to seeing even more of you at our upcoming online events. Find all our webinars with English subtitles on ILIASS!



Check out our past webinars

PARTICIPATION IN THE SYMPOSIUM PLANT BIO PROTECH

7-9 JULY 2026 REIMS FRANCE

A natural remedy for downy mildew?



This study shows that a biocontrol agent derived from plant extracts effectively protects tomatoes against *Phytophthora infestans*, the pathogen that causes late blight in tomatoes, potatoes, and grapevines. Selective, with minimal impact on non-target microorganisms, and capable of briefly stimulating the plant's defenses, it opens up new possibilities for more sustainable agriculture. Presented by Adrien Gauthier, co-author and research professor at UniLaSalle.

Infos on Bio ProTech

A soil prebiotic to improve drought resistance



A study conducted by UniLaSalle and Gaïago shows that a prebiotic applied to the soil enhances corn's resistance to water stress. By stimulating beneficial microorganisms, it improves root development, soil biological activity, and microbial diversity around the plants. This approach could help maintain agricultural productivity in the face of droughts linked to climate change. Presented by Abdelrahman Alahmad, co-author and research professor at UniLaSalle.

INSPIRING ARTICLES

Biodegradable plastic for mulching farmland: a solution or a new problem?



Mulch films have transformed the daily lives of many farmers by making it easier to manage weeds and water. But when exposed to sunlight, moisture, and tillage, these plastics gradually break down into micro- and nanoplastics that accumulate in the soil. What happens to these invisible particles? Can biodegradable plastics truly limit this pollution? Jules Bellon, F. Bacoup, R. Gattin.

Read the article

Can we go back in time to better manage water in the future?



By studying the growth rings of Aleppo pines, researchers have reconstructed more than 130 years of flow history for the Medjerda, Tunisia's main river. This look into the past reveals that droughts and extreme floods are part of the basin's natural variability, but also highlights the recent intensification of hydrological contrasts. The findings provide valuable context for anticipating future water shortages and adapting resource management in the face of climate change. A fascinating read at the intersection of ecology, hydrology, and climate history. Presented by Sahar Abidi, a co-author, during the chair's latest webinar.

Read the article

NEWS

We hosted ESAK - Tunisia



In May 2026, the Chair was delighted to welcome its partners from the Kef Higher School of Agriculture (Tunisia): Professors Samia Ben Saïd and Mokhtar Mahouachi. With Ali Akrout—representative of the sister-region partnership between Seine-Maritime and the Kef region—in attendance, we outlined future joint projects. A pioneer in agroecological techniques for soil fertility, ESAK entrusted the National Institute of Field Crops (INGC) with disseminating these techniques to farmers, with remarkable results: the region now has numerous farms that have switched entirely to no-till farming. The Chair intends to promote this success on an international scale.

UniLaSalle is expanding its expertise in soil science with the renewal of the Biomes Industrial Chair



Gaïago, a leading soil revitalization company based in Saint-Malo, and UniLaSalle today officially announced the renewal of the "Biomechanisms for Soil Life and Plant Nutriprotection" (BIOMES) research and innovation chair. Since its launch in 2021, the research conducted has notably made it possible to characterize the modes of action of prebiotics and to develop approaches essential to a better understanding of the biological mechanisms of soils.

Read the article

NATURELLEMENT ROUEN - 20/22 NOVEMBER 2026

The UNESCO Chair will participate in the fifth edition of the "Naturellement" event in Rouen: "Biodiversity: Our Future," taking place November 20–22, 2026. This public event will introduce attendees to the diversity of life by exploring its evolution and the threats it faces, as well as its connections to our own existence. Open to everyone, the event will feature science cafés, city walks, lectures, roundtable discussions, film screenings followed by discussions, workshops for young audiences, booths, and photo exhibitions…



Infos about the event



SAVE THE DATE : World Soil Day, 1st Edition

The launch of the UNESCO Chair on "Soils, Biodiversity, and Future Generations" will take place on World Soil Day, **Friday, December 4**, 2026.

This international event will be dedicated to sharing knowledge about soils, both across generations and across regions.
Join us for the first edition of this landmark event organized by UniLaSalle and the UNESCO Chair in Rouen, France. Don't miss this major event. We look forward to seeing many of you there!

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