

Land-CRAFT annual report 2023

1. Annual highlights

The Pioneer Center for Landscape Research in Sustainable Agricultural Futures (Land-CRAFT) is now in its second year of operation, since launching in Jun-2022. In addition to the established collaboration between Aarhus University (AU) and the University of Copenhagen (UCPH), we have now finalized the collaboration agreements with our two international spokes: Karlsruhe Institute of Technology (KIT), Germany; and Colorado State University (CSU), USA. All partner institutions are represented in the Land-CRAFT Scientific Steering Committee (SSC), consisting of the Center Director, Co-PIs from AU and UCPH, one of the Theme Leaders and the international spokes. The SSC meets regularly, with weekly online meetings and bimonthly in-person meetings. Additionally, we now have the Land-CRAFT International Scientific Advisory Board in place with four outstanding researchers engaged in this role. The Theme Leader for the research area *Landscape Experimentation* has been hired, while the Center is in the hiring process of the other two Theme Leaders (in *Digital Landscape Analysis* and *Landscape Modelling Framework*), as well as scouting several other key staff members.

Land-CRAFT held its first annual retreat with 35 participants (core staff and key collaborators) in Oct-2023, which helped to develop the Center's identity. To further strengthen the connection initiated at the retreat, as well as bring together additional core staff, guests and national and international collaborators, the Center launched a fortnightly online seminar series, *Future Landscapes*, in Nov-2023, in collaboration with the Center for Sustainable Landscapes under Global Change (SustainScapes).

From the beginning, Land-CRAFT has been committed to creating a stimulating and supportive research environment for Danish and international scientists. Over the past year, we have hosted guest researchers and collaborators from China Agricultural University, the Technical University of Madrid, and Agroscope (Switzerland), as well as visiting MSc and PhD students from the University of Manchester, and Institut National de la Recherche Scientifique (Canada). In Nov-2023, an international workshop on the *revision of the Ammonia Guidance Document of the United Nations Economic Commission for Europe (UNECE)* at Aarhus University was organized by one of our visiting scientists. The event, sponsored by Land-CRAFT, was attended by 40 international scientists.

One of the key developments of the year has been the new location of the Land-CRAFT hub at AU. We moved in Nov-2023 to the permanent location, which has provided an ideal space for greater inter-workplace collaboration and cohesion. We have a fully equipped workshop and laboratory space which is being used, for example, to develop and test new sensors, to house equipment employed in measuring soil greenhouse gas (GHG) emissions in urban parks, as well as agricultural soils.

Land-CRAFT has been solidifying its role and commitment to international collaboration. Examples of this can be seen in our many publications and our collaboration on several project proposals for third party funding. A number of our proposals have been successful, including a project by DANIDA, Denmark's development cooperation, for exploring climate change effects on disease spreading and GHG emissions in pastoral regions in Kenya and Tanzania. We have also begun working on the Horizon Europe project, MARVIC, a collaboration of 16 partners from 12 countries, which is developing and testing a framework for Monitoring, Reporting and Verification (MRV) systems for assessing soil carbon stock exchanges and GHG emissions in agriculture. The Center is committed to building upon these solid foundations and recognition from national and international actors.