CITAB

Centre for the Research and Technology of Agro-Environmental and Biological Sciences

2026

ACTIVITY PLAN

https://www.citab.utad.pt/

CONTENTS

PRODUCTIVITY METRICS

Expected key performance indicators for 2026:

ITEM	***2026***
Publications	
SCOPUS Publications	**300**
Technical Publications	**20**
Books/Book Chapters	**20**
Communications	
Communications at international conferences	**250**
Communications at national conferences	**150**
Training	
Advanced training	**10**
Doctoral thesis	**15**
Master thesis	**50**
Patents	**1**

SUMMARY

The **CITAB 2026 Activity Plan** is fully aligned with European and international research and innovation priorities, contributing to the transition toward sustainable, resilient, and competitive agrarian and agroforestry systems. Operating under a new organisational structure that is fully functional as of 2026, CITAB delivers scientific excellence, capacity building, and impactful knowledge transfer to support evidence-based policymaking, innovation uptake, and societal well-being.

CITAB's activities directly address key funding priorities related to rural development, food safety and food security, circular bioeconomy, climate change mitigation and adaptation, and biodiversity protection. With a strong focus on rural and disadvantaged territories, CITAB promotes the valorisation of agrarian products and co-products, the reduction of resource inefficiencies, and the strengthening of value chains through innovation-driven and circular economy approaches.

Environmental sustainability is fully embedded in CITAB's strategy. The protection and restoration of agroforestry ecosystems, alongside the development of nature-based and climate-smart solutions, underpin all research and innovation activities. This integrated socio-economic and environmental approach ensures that CITAB's outputs contribute to long-term resilience, ecosystem services preservation, and climate neutrality objectives, in line with EU Green Deal ambitions.

CITAB's renewed organisational model adopts a circular, interdisciplinary, and challenge-oriented approach, designed to maximise scientific impact and innovation potential. By strengthening collaboration across research teams and with external stakeholders, CITAB accelerates the co-creation of solutions, facilitates technology transfer, and enhances the uptake of research results by industry, policymakers, and end users. All activities are underpinned by CITAB's core principles of internationalisation, interdisciplinarity, innovation, and stakeholder engagement.

Implementation of the 2026 strategy is structured around two complementary Research & Development groups:

R&D 1: Natural Resources, Biodiversity, and Climate Challenges, addressing ecosystem resilience, biodiversity conservation, climate adaptation and mitigation, and sustainable resource management;

R&D 2: Resilience and Valorisation of Agrarian Value Chains, focusing on competitiveness, value creation, circularity, food systems resilience, and rural innovation.

These R&D activities are supported by the Technology & Innovation (T&I) group:

T&I: Technological Innovation to Support Agrarian Systems, which ensures the development, validation, and deployment of innovative technologies, digital solutions, and decision-support tools.

Together, these integrated structures strengthen CITAB's capacity to deliver high-impact research, innovation readiness, and demonstrable societal and environmental benefits, contributing directly to European and global funding objectives related to sustainable agriculture, climate action, biodiversity, and rural development.

RESEARCH ACTIVITIES

R&D1 - Natural Resources, Biodiversity & Climate Challenges

GENERAL ACTIVITIES

R&D1 focuses on the interconnected dynamics of climate, water, soil, landscape management, and agroecology & biodiversity. The group's mission is to develop strategies that promote the sustainable management of natural resources, strengthen ecosystem services (ES), and support biodiversity conservation. These goals align closely with multiple Sustainable Development Goals (SDGs), contributing to resilient agrarian value chains and healthier ecosystems. R&D1 also maintains strong synergies with R&D2 and the T&I line, ensuring integrated scientific and technological progress across CITAB. Accordingly, the specific objectives of R&D1 are organised into the following thematic domains:

- **Climate research** will focus on quantifying climate variability and climate-change–induced impacts through advanced modelling frameworks, probabilistic projections, integrated impact assessments, and multi-hazard risk analyses. By characterising the biophysical and socio-ecological sensitivities of natural resources, agrarian value chains, and ecosystem functioning, this research will provide the analytical basis for evidence-driven adaptation strategies aimed at enhancing agroecosystem resilience and mitigating risks to environmental and human health.
- **Water resources research** will promote ecosystem health and strengthen ecosystem services (ES) by restoring ecological connectivity and reducing aquatic ecosystem fragmentation. Guided by Nature-based Solutions (NbS) principles, these actions will contribute to sustainable watershed management and enhance the system's capacity to absorb and recover from anthropogenic pressures and extreme events. The research will integrate EcoHealth frameworks with advanced ecotoxicological approaches to evaluate environmental stressors, biological responses, and multi-scale resilience within aquatic and riparian ecosystems.

- **Soil research** will advance improvements in soil health and quality by promoting resource conservation and enhancing soil fertility through the application of agroforestry-derived organic materials, beneficial microorganisms (including composting systems, biofertilizers, and biopesticides), and invertebrate-mediated processes such as vermicomposting. These approaches aim to optimise soil physicochemical properties, stimulate biological activity, and support sustainable agroecosystem functioning.
- **Sustainable landscape management** will develop strategies for biodiversity conservation and the valorisation of ecosystem services (ES), enhancing forest resilience to climate change and reducing fire risk. The work will incorporate Nature-based Solutions (NbS) as a core approach to designing multifunctional, adaptive landscape systems, while supporting the development of forest-based product portfolios that strengthen circular economy models and associated value chains.
- **Agroecology & biodiversity** will monitor agroecosystems, supported by strong stakeholder engagement, to assess functional biodiversity, strengthen ecosystem services (ES), and guide the restoration of degraded habitats. These activities aim to ensure the long-term sustainability of agricultural practices, forestry systems, and the management of natural ecosystems.

SPECIFIC ACTIVITIES

1. Climate Research

- Develop high-resolution climate projections and bias-corrected datasets to support environmental modelling.
- Implement multi-hazard risk analyses (heatwaves, droughts, compound extremes, fire-weather conditions).
- Produce predictive crop-growth and phenology models integrating thermal, multispectral, and drone-based remote sensing.
- Conduct AI-supported assessments of forest species health (e.g., stress detection in maritime pine or cork oak).

- Analyse climate impacts on agrarian value chains, including viticulture, fruit crops, and Mediterranean agroforestry systems.
- Support stakeholder decision-making through early-warning systems and climate-adaptation advisories.
- Contribute to ongoing strategic projects (e.g. Refood4North, WaterQB, VineAdapt2Climate, FutureCrops).

2. Water Resources Research

- Implement river connectivity restoration actions (e.g., removal or mitigation of small barriers, riparian rehabilitation).
- Assess pesticides, microplastics, pharmaceuticals, and emerging contaminants using zebrafish embryos and invertebrate bioassays.
- Use EcoHealth frameworks to evaluate interactions between environmental degradation and human health.
- Map aquatic ecosystem status with remote sensing and smartphone-based histological tools (e.g., SmartHisto).
- Develop water security analyses, including flood-risk mitigation, drought resilience, and payment for ecosystem services (PES) schemes.
- Analyse the impacts of ecosystem restoration through Nature-based solutions (NbS) on ecosystem health and ecosystem services, by restoring connectivity and reducing habitat fragmentation, thereby promoting the long-term health and resilience of natural resources.
- Promote stakeholder co-design to develop adaptive management plans and restoration actions that reflect local priorities and sustainability goals, to support decision-making.
- Contribute to ongoing strategic projects (e.g., Atlantida II, Refood4North, WaterQB, DNAquaIMG).

3. Sustainable Landscape Management

- Model forest resilience under climate change scenarios, including fire-risk forecasts, regeneration dynamics, and species distribution shifts.

- Integrate LiDAR, multispectral aerial data, and ground surveys to assess biomass, canopy structure, and post-disturbance recovery.
- Advance DNA - and image-based biodiversity tools (e.g., DNAqualMG, metabarcoding of forest and aquatic communities).
- Support landscape planning for Guimarães 2026 European Green Capital, focusing on ecological connectivity and adaptive design.
- Promote the valorisation of resin, sustainable beekeeping, and the development of forest-based product portfolios that support circular value chains.
- Advances in the understanding of the benefits of implementing fire-resilient landscape mosaics using NbS (e.g., green firebreaks, silvopastoral systems, fuel-discontinuity planning).

4. Agroecology, Biodiversity & Soil Research

- Improve soil health and fertility through agroforestry-derived organic amendments, beneficial microorganisms (composts, biofertilizers, biopesticides) and invertebrate-mediated processes (vermicomposting), supported by biophysical and biochemical soil indicators.
- Promote sustainable agroecosystem functioning by implementing agroecological practices that strengthen ecosystem services such as pollination, pest regulation, and soil regeneration.
- Development and presentation of the Vineyard and Wine Carbon Footprint Calculation Platform.
- Monitor functional biodiversity across trophic levels, using ecological indicator frameworks (e.g., bird species as indicators of catchment conditions), molecular tools (e.g., metabarcoding), and imaging technologies.
- Characterise crop and forest species responses to climate stress, including Mediterranean grape varieties, using physiological measurements, phenotyping, genetic analyses and remote sensing.
- Design and implement ecological restoration strategies for degraded agricultural, riparian and forested systems through NbS to enhance ecological connectivity and resilience.

- Promote stakeholder co-design to develop adaptive management plans and restoration actions that reflect local priorities.
- Integrate digital and sensor-based tools (e.g., Agriculture 4.0/5.0 platforms) to support monitoring and adaptive management of soils, agroecosystems, and restored habitats.
- Preparation of an Operational Group on Innovation and Digitalisation for Maritime Pine Natural Regeneration. Collaboration with a national partner network to design and implement a ModisPinaster simulator module, fostering collaborative innovation and effective knowledge transfer.

Transversal Activities Across All R&D1 Domains

- **Implementation of Nature-based Solutions (NbS)** to enhance climate adaptation, watershed resilience, soil conservation, and biodiversity recovery.
- **Integrated monitoring using digital, remote-sensing, and sensor-based tools** to support data-driven decision-making across climate, water, soil, and landscape research.
- **Cross-domain modelling and scenario analysis**, including climate projections, hydrological processes, fire risk, ecological resilience, and ecosystem services.
- **Stakeholder engagement and co-designed management strategies** with farmers, forest managers, municipalities, and regional actors to ensure practical territorial impact.
- **Capacity building, knowledge transfer, and dissemination**, through training, workshops, outreach events, and collaborative networks, to strengthen scientific and community competencies with stakeholders. Additionally, address skill gaps identified during group discussions within the CITAB community.

R&D2 - Resiliency & Valorisation of Agrarian Value Chains

GENERAL ACTIVITIES

The research strategy of the R&D2 group will continue to align with the FAO's vision, reinforcing the resilience of people, communities, and ecosystems and supporting the transition towards sustainable food and agricultural systems. In 2026, the group will strengthen its contribution to short- and long-term measures that address present and future multi-stakeholder needs, promoting competitiveness and income generation across Mediterranean agrarian value chains. The main objectives for 2026 are summarised as follows:

- **Develop innovative and environmentally sustainable pre- and post-harvest strategies to mitigate the negative impacts of (a)biotic stresses,** increase crop resilience to climate change, improve agri-food system health, and reduce vulnerability to pests and diseases (e.g. biostimulants, biofertilizers, biocides, beneficial insects, mycorrhization, UV-C, resistant genotypes, training systems).
- **Promote soil health** through the enhancement of organic matter, nutrient cycling, water-use efficiency, soil biota, and biodiversity, supported by regenerative agricultural practices such as crop rotation, intercropping, cover cropping, reduced tillage, bioremediation, biofumigation, and the valorisation of agro-industrial wastes.
- **Implement precision real-time monitoring technologies** to optimise water management, reduce pesticide use, and increase crop yield, quality, and sustainability.
- **Reduce ammonia and GHG emissions and increase carbon sequestration** through improved manure treatment, storage, and field application, and through the use of crops and agroforestry systems for nitrogen and carbon fixation.
- **Develop innovative, healthy, and safe foods** by enhancing nutritional and nutraceutical properties, promoting a circular economy through the valorisation of by-products and minimisation of agri-food wastes.

SPECIFIC ACTIVITIES

1. Plant Stress Physiology, Biostimulants, and Crop Resilience

- Phenotyping of crops for the selection and use of local and/or drought-tolerant varieties, combined with the application of biological solutions (biostimulants, biofertilizers, bioherbicides) to enhance crop protection and productivity.
- Evaluation of the role of biostimulants in improving plant performance under water deficit conditions, focusing on water-use efficiency, maintenance of physiological processes, and growth stability.
- Assessment of biostimulants and biofertilizers in promoting root system development (length, density, surface area) and improving water uptake in limited-moisture environments.
- Evaluation of the efficacy of biological solutions in mitigating drought-induced oxidative stress by enhancing antioxidant activity and preserving pigments and secondary metabolites.
- Screening and identification of regulatory genes associated with tolerance to water, heat, and salt stress.
- Root phenotyping in legumes to identify genotypes tolerant to abiotic stresses, particularly drought and salinity.
- Exploring metagenome diversity in cowpea to propose a new inoculant formula for abiotic stress mitigation.
- Development of alternative and sustainable strategies to reduce disease incidence in grapevines without causing physiological damage, thereby strengthening vineyard resilience.
- Valorisation of pruning wood by-products to enhance sustainability in the wine sector, reduce GHG emissions and plastic use, and promote a circular bioeconomy in viticulture.
- Integration of regenerative agriculture practices with digital monitoring tools to foster sustainable and resilient viticulture, treating the plant–soil system as a functional diagnostic and management unit.

2. Genomics, Metagenomics, and Plant–Microbe Interactions

- Identification and characterisation of defence genes differentially expressed in grapevine in response to new formulations of fungicides and elicitors.
- Identification and characterisation of genes involved in cherry fruit cracking, including those differentially expressed under pre-harvest environmental stress conditions.
- Assessment and identification of grapevine genotypes from ancient vineyards through genotyping and metagenome diversity studies.
- Evaluation of the impact of biological solutions on soil microbial biodiversity, functional groups, and overall agroecosystem health.

3. Soil Health, Regenerative Agriculture, and Circular Bioeconomy

- Biological assessment of agro-industry organic wastes and crop residues to enhance soil health, fertility, crop productivity, and biodiversity.
- Evaluation of the contribution of crop residue incorporation to soil organic matter enhancement, nutrient cycling, and plant productivity.
- Assessment of the effectiveness of litter additives in reducing ammonia emissions, minimising GHG emissions, and increasing carbon sequestration in manure-amended soils.
- Investigation of sustainable and circular strategies for the valorisation of pruning firewood, contributing to the reduction of emissions and plastic use in viticulture.
- Evaluation of the application of different innovative solutions for soil management on vineyards and olive groves and impacts on soil health parameters;
- Evaluation of the impact of different soil management strategies on soil biodiversity (functional groups) and vineyard performance (production, quality, physiology);
- Evaluation of the performance of different plant cover crops by quantifying soil cover rate, biomass production, and dry matter percentage, and investigation on how they influence the soil's physicochemical and biological characteristics;

- Agroecological strategies for sustainable and safe management of vineyards and olive groves;
- Biodiversity associated to vineyards in Douro vineyards and olive groves of Trás--os-Montes region.

4. Food Quality, Nutraceuticals, and Bioresource Valorisation

- Evaluation of the phytochemical and nutritional composition of local food products and the study of their biochemical impact at the cellular level, contributing to product valorisation.
- Use of biochemical tools to determine the nutraceutical potential of regional bioresources, by-products, and residues, supporting the development of healthier and more sustainable food products.

5. Crop Diversity and Minor Crop Resilience

- Exploration of crop genetic resources from diverse latitudes as potential new sources of agrobiodiversity, with a focus on species such as common beans from Brazil and pineapple from Angola.
- Evaluation of minor crops as resilient and sustainable contributors to plant-based protein supply.

T&I - Technological Innovation to Support Agrarian Systems

GENERAL ACTIVITIES

The Technology & Innovation (T&I) group is dedicated to the deployment and validation of advanced technologies to enhance the performance, sustainability, and resilience of agricultural and forestry systems. In line with CITAB's mission, T&I operates as a transversal and enabling unit, working in close coordination with R&D 1 (Natural Resources, Biodiversity, and Climate Challenges) and R&D 2 (Resilience and Valorisation of Agrarian Value Chains). This integrated approach fosters strong synergies between environmental and agrarian research, enabling the development of holistic, system-based solutions to address key challenges across agrarian value chains.

Through an interdisciplinary and challenge-oriented framework, T&I leverages cutting-edge technologies—including Internet of Things (IoT), remote sensing, artificial intelligence (AI), big data analytics, geospatial technologies, and image-based solutions—to support R&D 1 objectives related to natural resource management, biodiversity conservation, and climate adaptation and mitigation, as well as R&D 2 priorities focusing on crop protection, soil health, and the valorisation of agrarian products and by-products. These collaborations are designed to generate practical, scalable, and market-oriented solutions, increasing technology readiness levels (TRLs) and reinforcing innovation capacity and competitiveness within the agrarian sector.

T&I activities are fully aligned with CITAB's overarching goals of knowledge transfer, capacity building, and the delivery of cost-effective, environmentally sustainable solutions. The group plays a key role in strengthening agrarian value chains, enhancing the resilience of farming and forestry systems, and supporting rural, low-density, and economically vulnerable territories, while contributing to food security, resource efficiency, and environmental protection.

Within this framework, the **specific objectives** of the T&I group for the upcoming period are structured as follows:

- **Development of real-time monitoring technologies**

  Design and implement advanced sensor-based systems (IoT platforms, soil and climate sensors, and environmental monitoring tools) to enable continuous assessment of agronomic and environmental variables, improving production efficiency while reducing environmental impacts.

- **Innovation in smart irrigation systems**

  Develop intelligent irrigation solutions integrating soil moisture sensors, climate data, and weather forecasting, supported by machine learning and decision-support algorithms, to optimise water use efficiency and minimise resource losses.

- **Development and deployment of precision agriculture solutions**

  Advance AI-driven tools for the prediction of key agronomic parameters; apply geolocation and spatial technologies (GPS, GIS, UAVs/drones) for high-resolution crop mapping and performance monitoring; and integrate multi-source data (satellite imagery, UAVs, and in-field sensors) to support precision land and crop management.

- **Development of methods to characterise the mechanical behaviour of plant-based products**

  Establish and apply methodologies to assess the mechanical properties of products of vegetable origin, supporting the definition of optimised processing and treatment strategies, contributing to sustainable production systems and the reduction of post-harvest losses and food waste.

- **Development of digital twins for agrarian systems**

  Design and implement digital twin frameworks that integrate real-time data, modelling, and simulation tools to support strategic and operational decision-making, enhancing productivity, efficiency, and sustainability across agrarian value chains.

- **Technology transfer and collaboration with the private sector**

  Strengthen partnerships with companies, producer organisations, and other stakeholders to co-develop, test, and deploy technological solutions in real-world settings, accelerating innovation uptake and promoting the effective

transfer of technologies generated at CITAB to the agricultural and forestry sectors.

SPECIFIC ACTIVITIES

1. Environmental monitoring, soil and natural ecosystems

Advanced monitoring solutions for forests, natural ecosystems and agricultural systems will be developed, with a particular focus on soil degradation and erosion prevention and assessment. These activities will rely on remote sensing technologies, UAV platforms and in situ sensing, integrating RGB, multispectral and hyperspectral data to analyse vegetation cover, crop condition and soil dynamics, contributing to more sustainable and environmentally responsible agricultural practices.

Complementary studies on agricultural soil degradation, including olive groves, will be carried out through the integration of geophysical data, namely Ground-Penetrating Radar (GPR), with spectral information and other ancillary data sources, enabling a more comprehensive characterisation of soil degradation processes.

2. Advanced remote sensing and spectroscopy applied to agriculture and forestry

Activities will include systematic literature reviews on the application of hyperspectral sensors in forest studies, as well as experimental remote sensing studies for the detection of agricultural soil degradation using hyperspectral sensors mounted on UAV platforms.

Field spectroscopy will also be explored for the identification and classification of grapevine diseases, particularly downy mildew, based on spectral signatures associated with different stages of infection.

3. Climate modelling, agricultural zoning and adaptation strategies

High-resolution climate projections and a new multivariate agricultural zoning for Portugal will be produced, integrating bioclimatic indices and advanced uncertainty metrics. Based on crop modelling and local calibration, region-specific adaptation

strategies will be defined, providing practical guidance to stakeholders regarding cultivar selection, agronomic management practices and climate change adaptation measures.

4. Precision agriculture, smart viticulture and olive growing

The development and validation of yield estimation models for vineyards and olive orchards will be pursued using UAV-based multispectral imagery and satellite data. These approaches will be complemented by consolidated UAV methodologies for extracting geometric and biophysical parameters across different crop species.

In addition, satellite and field sensor data will be integrated to model soil water content in vineyards and olive groves, enabling large-scale estimation without the need for dense sensor deployment and supporting more efficient irrigation management.

5. Artificial intelligence, open data and automated classification

Activities will include the development of deep learning models for land use and land cover classification, with particular emphasis on permanent crops in mainland Portugal. Open datasets for grapevine disease classification will be created and shared to support collaborative research and enhance scientific reproducibility.

In parallel, biological observation systems incorporating artificial intelligence–based automatic classification models will continue to be developed, strengthening early detection capabilities and decision support tools.

6. Decision support systems, IoT and stakeholder-oriented services

The continued development of warning and notification systems for major pests and diseases affecting the Douro Demarcated Region will be ensured, in collaboration with regional and sectoral stakeholders.

IoT systems for precision viticulture applications will also be developed and integrated, contributing to data enrichment within decision support systems, particularly in the areas of grapevine phenology, smart irrigation and pest and disease management.

7. Technological innovation, knowledge transfer and collaboration with the private sector

Within the scope of technological innovation and knowledge transfer, preparation will be undertaken for the establishment of an Operational Group focused on innovation and digitalisation for maritime pine natural regeneration. This initiative will involve a national partner network and the design and implementation of a dedicated simulation module, fostering collaborative innovation, effective knowledge transfer and stronger links with the productive sector.

COOPERATION

Although CITAB's applied research plays a pivotal role in advancing national and regional agrarian value chains, the internationalisation of our research remains a top priority and will continue to be actively pursued. In 2026, CITAB will intensify efforts to strengthen its international presence by promoting scientific collaboration with global R&D units. This will include active engagement in European projects, such as Horizon Europe and PRIMA, as well as deeper integration into or consolidation of existing international research networks.

CITAB's position as a trusted research partner for private and public stakeholders and decision-makers will be further reinforced in 2026. Several new contracts with industry will be established, focusing on innovative solutions and applied research to address pressing challenges in agrarian systems. These collaborations will leverage the capabilities of CITAB's Specialised Laboratories (CITAB Labs). Partnerships with industry will remain a vital source of funding, facilitating the translation of research into practical, impactful applications.

CITAB's integration into the Associated Laboratory Inov4Agro has already strengthened its collaboration with researchers from GreenUPorto (University of Porto). This established partnership has generated significant synergies, driving advancements in agrarian research and fostering innovation across critical areas. Building on this strong foundation, CITAB remains committed to broadening the scope and impact of its research, unlocking new opportunities for internationalisation and interdisciplinary collaboration. Through this ongoing partnership, CITAB continues to play a pivotal role in capacity building, ensuring the effective transfer of knowledge and innovative practices to stakeholders and policymakers. Together, these efforts address pressing global challenges in sustainable agriculture and environmental management, contributing to the development of resilient and sustainable solutions tailored to the agrarian sector. By advancing these strategic initiatives, CITAB will further solidify its position as a leading centre for cutting-edge research, dedicated to promoting sustainability and resilience in agrarian systems, at both regional and global levels.

Several researchers participate in the CRUSOE network (the **Conference of Rectors of Universities and Polytechnic Institutes of Southwest Europe)**, a non-profit,

international association made up of the Universities of Galicia, Castilla-León, Asturias, Cantabria, the Northern Region and the Central Region of Portugal. CITAB members are particularly involved (namely, leading group lines) in the Working Group on Water and Sustainable Development and the Working Group on Ecological Transition and Global Change.

At the national level, R&D1 also contributes to the **Knowledge Network for Nature Restoration** for the development of the National Nature Restoration Plan.

DISSEMINATION, COMMUNICATION & OUTREACH

In 2026, CITAB will further strengthen its strategic commitment to the dissemination, communication, exploitation, and transfer of knowledge generated through its research and innovation activities. These efforts will target a broad and diverse audience, including the scientific community, public and private sector stakeholders, policymakers, civil society, and end users. Through sustained and structured dissemination actions, CITAB consolidates its role as a reference centre for knowledge exchange, innovation, and capacity building at national and international levels.

The activities planned for 2026 are designed to advance scientific knowledge in agriculture, forestry, and environmental sciences, while simultaneously accelerating the translation of research outcomes into practical, evidence-based solutions addressing key sustainability challenges. By combining targeted communication, stakeholder engagement, and innovation uptake initiatives, CITAB will contribute to the achievement of sustainable development goals, the resilience of agro-environmental systems, and the support of informed decision-making at multiple governance levels.

MAJOR EVENTS

- **CITAB Stakeholders Day**

  CITAB will organise a dedicated Stakeholders Day, including the "Stakeholders Committee," for open discussions on challenges and opportunities in agrarian research. This event aligns CITAB's research with private sector needs by fostering direct dialogue and collaboration. It also features lab visits, showcasing CITAB's facilities and projects. Members of the External Advisory Committee will also be invited to evaluate recent developments and provide strategic feedback.

- **Inov4Agro Open Day**

  Co-organised with GreenUPorto under the framework of the Associated Laboratory Inov4Agro, this event will highlight ongoing projects, activities, and

research lines. The focus will be on regionally relevant agrarian value chains, emphasising innovation and service provision.

- **"Today is the Day" Celebrations**

  CITAB will continue to promote thematic events aligned with International Days related to its core research areas (e.g. Water, Climate, Environment, Soil, Biodiversity, and Sustainability). Each event will feature a distinguished guest speaker, providing insights into critical global issues and fostering discussions among attendees.

RESEARCH AND KNOWLEDGE DISSEMINATION

- **"Harvesting Knowledge 2.0" Webinar Series**

  These presentations will take place every three months, with national and international speakers, to disseminate their research among colleagues and foster global collaboration.

- **Sustainable Agri-food Production Seminar Cycle**

  This monthly seminar series will provide final-stage PhD students, in their final research stages, with a platform to present their research outcomes to the scientific community. Discussions will culminate in awards for the two best presentations, supporting publication fees or conference participation.

- **Scholarship Researchers' Day**

  An event organised by CITAB's scholarship researchers to present their work, share experiences and foster collaboration across research lines, contributing to capacity building and integration within the Unit.

OUTREACH AND INTERNATIONALIZATION

- **Participation/Organisation of Thematic Sessions in "Ciência 2026"**

  CITAB will actively participate in this annual event organised by FCT, contributing to thematic sessions that align with its research priorities.

- **Organisation of International Meetings**

  These events will strengthen CITAB's internationalisation, reinforcing its international visibility, attracting leading researchers, and strengthening

collaborative networks addressing global agrarian and environmental challenges.

- **Engagement in "Ciência Viva" Activities**

  Throughout the year, CITAB will participate in activities throughout the year, promoting science literacy and public engagement through hands-on activities, demonstrations, and interactive sessions.

- **Participation in the European Researcher Night and Similar Events**

  These events will provide opportunities to engage with the public, showcasing CITAB's research and fostering science communication.

VISIBILITY AND COMMUNICATION

- **Outreach Activities in Schools**

  CITAB will implement initiatives in primary and secondary schools, alongside organising visits to the UTAD Campus, aiming to inspire the next generation of researchers.

- **Enhancement of the CITAB Website**

  The CITAB website will be updated and aligned with the new Strategic Programme, improving accessibility, clarity, and visibility of research activities, infrastructures, services, and societal impact.

- **Social Media Strengthening**

  CITAB will reinforce its presence on social media platforms to disseminate research highlights, project outcomes, events, and success stories, reaching both scientific and non-scientific audiences.

- **Media Engagement**

  CITAB will increase its interaction with national and regional media, including television, radio, digital platforms and newspapers, to enhance public awareness of its research activities, innovations, and societal impact.