The Second B2B event in Jordan on Grazed woodlands stressed on the importance of innovations and sustainability

The National Agricultural Research Center (NARC), the Regional Forest Agency for Land and Environment of Sardinia (Fo.Re.S.T.A.S.) and the whole LIVINGAGRO Consortium hosted the **Second B2B event in Jordan on Grazed woodlands** at the Regency Palace Amman- Queen Aliaa Street, Amman – Jordan, on the 15th March 2023.

Experts and acclaimed speakers from Jordan, Italy and Greece met throughout the day and shared their experiences, addressing various issues and innovative solutions with farmers, entrepreneurs, local administrators, researchers, private companies, policy makers and multiple stakeholders interested in agroforestry issues in Jordan.

The aim of the day

The aim of the brokerage event was to increase the connections between research and enterprises, governance, associations and citizens to close the gap between innovators in the field of agroforestry and end-users. Following the Open Innovation approach the multi-directional flow of knowledge and innovations among different types of stakeholders was enhanced, building on the relationships built through the cross-border Living Laboratories in the last four years.

Welcome and introductory remarks

Dr. Salam Ayoub, Director of the Horticulture Research Directorate at the National Agricultural Research Center (NARC), delivered the welcoming speech on behalf of Dr. Nizar Haddad, Director General of NARC in Jordan, while Dr. Maurizio Malloci, Director of the Technical Service of FoReSTAS -Italy and project coordinator, presented an overview of FoReSTAS' ongoing efforts for cross-border cooperation with Mediterranean partner countries through several European funded projects.

Dr. Sara Maltoni, head of the Forestry Value Chains office at FoReSTAS, described the contribution of the LIVINGAGRO project for the development of agroforestry in Mediterranean countries, highlighting the LEADERS approach followed to set-up and manage the two Living Labs Multifunctional Olive Systems and Grazed Woodlands. On the other hand, Dr. Salam Ayoub from NARC, detailed the achievements of LIVINGAGRO activities in Jordan, stating that "Our objective is to introduce methods to protect the forest, restoration of the ecosystem and planting pastoral species for grazing".

Dr. Mauro Forteschi (FoReSTAS) then invited everyone involved with multifunctional olive systems (olive growing) and/or grazed woodlands to join the cross-border Living Laboratories by accessing the dedicated platform (https://livingagrolab.eu), in order to explore innovations in agroforestry through free online classes, newsletters, online discussion forums, and a series of other events and information sources.

Innovation pitches

The introductory remarks were followed by two sessions of innovation pitches, showcasing different ideas and categories of innovations (from social, to technical, to recovering and sharing of best practices).

Dr. Yahia Othman from the University of Jordan, discussed the benefits of consistent assessment of trees and soil health in Jordan and the implementation of sustainable agroforestry practices for improvement of soil organic carbon, soil nutrients and soil microbial abundance and activity.

Dr. Ahmad Al-Shraideh, chairman of the Environment Association for Human and Development – Jordan, presented the natural regeneration and wildlife conservation of Jordan's Birqesh forests, and the importance of monitoring the progressive developments and the sustainability of the cultural heritage of wild plants, as they are tools to restore balance and protect vital resources. Dr. Al-Shraideh proposed the establishment of a model reserve for wild, medicinal and aromatic plants to be used as an educational and touristic center within the framework of sustainable development of ecotourism in rural areas.

Dr. Khaled Abulaila, Director of Biodiversity at NARC – Jordan, defined the guidelines and best practices to avoid threats imposed by alien invasive species on forest ecosystems in Jordan, stressing that "compiling a list of Jordan's alien plant species is the first practical prevention measure and best practice to be designed to preclude the use of invasive taxa among alien plants in Jordan", which should be banned from planting.

Ms. Elham Al-Abaddi from Al-Balqa Innovation Institution – Jordan, described the ecosystem restoration in Arda district, Jordan, and its effects on the development of the grazed woodlands in the region, showcasing the innovation brought ahead by LIVINGAGRO in the cooperation of NARC with local associations to restore agroforestry systems.

Dr. Claudio Porqueddu, senior researcher at the Italian National Research Council (CNR), explained that the use of innovative legume-based mixtures aims at reducing inputs (fertilizers, fuels, chemical weeding) and increasing ecosystem services of grazed woodlands. Dr. Porqueddu detailed the benefits of implementing legume-based pastures, describing this procedure as an easier transition to the organic production regime with higher added value.

Dr. Antonello Franca, from the Italian National Research Council (CNR-ISPAAM), described the selection of shade tolerant species for under-sowing grazed woodlands to increase animal carrying capacity in Mediterranean climates. He highlighted the objectives of the European Agroforestry Project, mainly in assessing the adaptability and the factors responsible for a better adaptation of different legume-based pasture mixtures to shade, and also assessing the effects of isolated oak trees shading on soil seed bank and persistence of pasture species.

Professor Giuseppe Pulina from the University of Sassari - Italy, pointed out the purpose behind RangeSoft innovative ICT application to assess grazing carrying capacity in Mediterranean grazed woodlands. Prof. Pulina explained that the software makes it possible to optimize the use of grazing resources while safeguarding the pastoral value of sites without compromising animal performance, stating that the "optimal use of agroforestry resources is the key to sustainable agriculture and forestry".

Finally, **Eng. Yahya Abu Sini** from NARC – Jordan introduced the Permaculture project which offers an appropriate approach for food production in agroforestry systems, explaining that "Permaculture integrates land, resources, people and the environment through mutually beneficial synergies", aiming to achieve "resilient food security systems through extending permaculture design and technologies in the Jordan valley".

Open debate and Q&A

Following the event's schedule, attendees participated in open discussions through Q&As with experts and representatives of the LIVINGAGRO consortium, focusing on how to implement or further develop the innovations in their farms or research labs, and how to maintain the productivity of the system by using state-of-the-art scientific methods and innovations.

The Cross Border Living Laboratories for Agroforestry (LIVINGAGRO) project is co-funded by the European Union through the ENI CBC Med Programme 2014 – 2020 and implemented in Italy, Greece, Lebanon and Jordan. The project aims to support education, research and development, innovation, and technology transfer, including sharing of research results, by establishing two Living Labs, one for multifunctional olive systems (Living Lab 1) and the other for grazed woodlands (Living Lab 2).

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