



World Congress Silvo-Pastoral Systems 2016

Silvo-Pastoral Systems in a changing world: functions, management and people



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Theme

WG 6) Wild fires and natural hazards

Convenors:

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Topic contribution expected

Seasonally dry terrestrial ecosystems are fire prone, especially where plant productivity is high. Animal grazing has been shown to exert a control on fire spread and area burned in grasslands and grass-dominated woodlands but much less is known about fire-grazing interactions in silvo-pastoral systems. Also, the coexistence of grazing animals and trees poses particular fire management problems. This working group welcomes contributions on any wildland fire-related topic in relation to silvo-pastoral systems, namely on:

- *Fire behaviour and fire regime characteristics*
- *Wildfire effects on soils and vegetation*
- *Post-fire restoration*
- *Fire-adapted silviculture*
- *Prescribed burning and pastoral management*
- *Grazing and fire hazard mitigation*
- *System resilience to changing fire regimes*
- *Adaptive fire management*



Main conclusion of the Congress

The Congress was organized by the University of Évora (Portugal) and the University of Extremadura (Spain), with support from IUFRO. 300 researchers from 52 different nationalities, from all over the world, were present and shared their work and reflections.

These researchers gathered around a common research object, the multiple silvo-pastoral systems around the world. There were many different disciplines and disciplinary views. Participants engaged on debates on the analytical perspectives and methods, with a common guideline related with the contribution of the knowledge produced, for the improved management of the silvo-pastoral systems of the world, aiming for their sustainability and for reinforcing their multi-functionality for the current societal demands.

The conclusions of the Congress can be summarised as such:

The silvo-pastoral system at the centre: there is a remarkable interest from researchers from many disciplines, with highly diverse perspectives, which are aware and dedicated to a dialogue across regions and disciplines.

We know how to describe the system and there is a diverse and rich publication record on the silvo-pastoral system; but we need more data, providing hard evidence: mapping, defining and assessing trends – not only on land cover and production, but also more on management practices, models, and impacts.

- In order to enhance visibility and acknowledgment, we need to demonstrate the added value of silvo-pasture (animal welfare, weight gain, milk production, carbon footprint, etc) in many different regions, with convincing data from every region.
- There should be an increase in efforts to combine scales and enhance the territorial approach, so that we can understand the farm unit, which is at the same time the everyday decision unit, in its (spatial, ecological, social) context.
- Even if there is an interest from a variety of disciplines, and many gathered in the Congress, we need to bridge gaps between multiple approaches: biophysics-socio-economics, economics-social, as well as from silviculture experts to better to understand grazing, and pastoralism experts to better understand trees; this means considering complexity not only inside each disciplinary field and its evolution, but also bridging to others.
- Silvopastoral systems work well for many societal demands, but to respond to these multiple targets farmers need complex-integrative management schemes. There is need for more and new knowledge, and to focus this knowledge on integrative management models; this means to recognize the importance of systematic knowledge and the importance of integrating land managers concerns.



- Silvo-pastoral systems are highly diverse: progress in knowledge can only be translated into management if this knowledge acknowledges differentiation and the specific characteristics and conditions of each system.
- There is much knowledge gathered already on long term traditional extensive systems, and this should be mobilized also when creating innovative ecologically intensive systems.

Main conclusion WG 6 - Wild fires and natural hazards

The common thread was found to be the interaction between fire and grazing that characterizes the specific aspects of the biomass consumption and its associated ecological and social effects. This suggested the importance of further reflection on the modalities and on the prerogative regarding the use of fire and of grazing for the management of the silvo-pastoral systems.

Presentations highlighted the parallel between biomass consumption by either herbivores or fire (including as ecological proxies for decomposition) and their intimate associations with fundamental properties of the fire regime such as fire frequency and fire severity.