

Review of

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CALL FOR PAPERS

Special issue “Land and water resources for agricultural activities: vulnerability and inequality issues”

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In many water-scarce areas, farmland and water may be considered as common goods and natural resources subject to intense ongoing anthropogenic and climatic pressures. These pressures could potentially result in crises, calling for a renewed management of farming systems.

Farmland and water are both submitted to various competitive uses with diverse social impacts: increasing urban sprawl tourist activities, highly labor-intensive agricultural activities, energy infrastructures (Napoléone & Melot, 2021; Munoz-Rojas et al., 2019). However, farmland and water are fundamental and limited resources, which induces major risks for agriculture and natural spaces. If we focus on the Mediterranean areas, water constraints are already critical and likely to increase dramatically in the coming years, giving rise to environmental and geopolitical tensions. Farmland is a resource under pressure as well: political choices concerning the allocation of rights have a direct impact on the organization of land systems and local communities. Governance mechanisms at the local and national level have to consider competing interests in rural areas (Perrin et al., 2018).

The scope of this special issue is to explore vulnerability and inequality dynamics challenging land and water as limited resources for farming and ecological systems. The objective is to address these challenges with a social sciences perspective in economics, sociology or geography on agricultural activities and the management of natural areas, with a special but non-limiting interest in the Mediterranean context. The expected articles may address these socio-economic challenges by considering public policies, collective actions, power relations and conflicts at the various scales of the farming systems (farm, landscape, region).

Proposals are expected to fill up knowledge gaps in the comprehensive understanding of these both dynamics of vulnerability and inequality. Approaches providing insights for an integrated understanding of land and water resources at a landscape scale will be particularly welcome. As an example, vulnerability issues of the irrigated agricultural sector still need to be more documented in a context of multiple risks or even potential collapse for the access to water resources (Petit et al., 2017). Traditional forms of farmland management

are also vulnerable in a context of heavy pressures for urbanization and intensification. These challenges have to be connected to inequality dynamics in the access to land and water as limited resources. A lower land and water availability may induce exclusionary processes, especially for small farmers with limited capacities in a context of increasing prices and heavy competitions with export-oriented agricultural holdings. At the scale of the agri-food system, this may also impact low-income consumers (Carter & Mesbah, 1993). These vulnerability and inequality dynamics call for the design of new rules for a sustainable land and water management (Chartres and Noble, 2015).

The special issue also seeks to understand how changes in the management of land use and water resources may be connected. Among others, the intensification of farming systems is a possible example of this interaction. The high fragmentation of land tenure patterns may induce intensification strategies requiring more water consumption (see Debolini et al., 2018 or Soulard et al., 2017 for Mediterranean areas). By contrast, resilient strategies to maintain collective forms of land and water management may be implemented in other contexts (Oteros-Rozas et al., 2013, Ragkos et al., 2020). These interactions between the management of land and water resource should be explored through the lens of socio-economic dimensions referring to farmers and landowners' strategies, coordination and conflicts between stakeholders and the implementation of public policies (Hassenforder & Barone, 2019, Bouleau 2017).

We suggest the following topics as possible perspectives among others:

- 1 - New land uses and tensions between different profiles of landowners or various productive processes in irrigated agriculture in water-scarce areas (from extensive systems on dryland to irrigated and intensive farms);
- 2 - Analysis of public policies for the management of water and land resources: investment, support measures, mitigation of environmental impacts and regulation;
- 3 - Innovations in the governance of land and water resources in agricultural systems;
- 4 - Scenarios for more sustainable agricultural models at territorial level

The first version of the paper should be submitted via the [RAFE website](#) by January 29th 2024 at the latest. It may be written in French or English. The publication is in any case in English. In the event of the first version of the paper being written in French, the translation of the final version is to be done by a native English speaker and will be at the authors' expense. All papers will be subject to a double evaluation. With each evaluation feedback, a team of two (a RAFE editor and a special issue's coordinator) will take the decision (rejection, minor revision, major revision, acceptance). Papers not accepted before the special issue publication, if eventually accepted, will be published in a later issue.

Manuscripts should not exceed 60,000 characters (including references). Further instructions for submissions are available on the [Review of Agricultural, food and Environmental Studies website](#).

References

- Bouleau, G. (2017). The greening of European water policy, experimental governance and policy learning. *Politique européenne*, 55, 36-59. <https://www.cairn-int.info/journal--2017-1-page-36.htm>.
- Carter, M.R. and D. Mesbah (1993). Can Land market reform mitigate the exclusionary aspects of rapid agro-export growth? *World Development* 21(7), 1085-1100. [https://doi.org/10.1016/0305-750X\(93\)90001-P](https://doi.org/10.1016/0305-750X(93)90001-P)
- Chartres, C.J. and A. Noble (2015). Sustainable intensification: overcoming land and water constraints on food production. *Food security* 7(2), 235-245. <https://doi.org/10.1007/s12571-015-0425-1>
- Debolini M., Marraccini E., Dubeuf J.P., Geijzendorffer I.R., Guerra C., Simon M., Targetti S., Napoléone C. (2018). Land and farming system dynamics and their drivers in the Mediterranean Basin. *Land Use Policy* 75, 702–710. <https://doi.org/10.1016/j.landusepol.2017.07.010>
- Hassenforder E., Barone S. (2019). Institutional arrangements for water governance, *International Journal of Water Resources Development*, 35(5), 783-807, <https://doi.org/10.1080/07900627.2018.1431526>
- Muñoz-Rojas J., Pinto-Correia T., Napoleone, C. (2019). Farm and land system dynamics in the Mediterranean: Integrating different spatial-temporal scales and management approaches, *Land Use Policy*, 88, 104082. <https://10.1016/j.landusepol.2019.104082>
- Napoléone, C., Melot, R. (2021). Farmland management and sustainable development in the Mediterranean: land use changes, public policies, and collective resources. *Reg Environ Change* 21, 31. <https://doi.org/10.1007/s10113-021-01748-4>
- Oteros-Rozas E., Ontillera-Sánchez R., Sanosa P., Gómez-Baggethun E., Reyes-García V., González J. (2013). Traditional ecological knowledge among transhumant pastoralists in Mediterranean Spain. *Ecol Soc* 18(3), 33. <https://doi.org/10.5751/es-05597-180333>
- Perrin C., Nougarede B., Sini L., Branduini P., Salvati L. (2018). Governance changes in peri-urban farmland protection following decentralisation: a comparison between Montpellier (France) and Rome (Italy). *Land Use Policy* 70, 535–546. <https://doi.org/10.1016/j.landusepol.2017.09.027>
- Petit, O., Kuper, M., López-Gunn, E., Rinaudo, J. D., Daoudi, A., Lejars, C. (2017). Can agricultural groundwater economies collapse? An inquiry into the pathways of four groundwater economies under threat. *Hydrogeology Journal* 25(6), 1549. <https://doi.org/10.1007/s10040-017-1567-3>
- Ragkos A., Koutsou S., Karatassiou M., Parissi Z.M. (2020). Scenarios of optimal organization of sheep and goat transhumance. *Reg Environ Chang* 20, 13. <https://doi.org/10.1007/s10113-020-01598-6>
- Soulard C.T., Valette E., Perrin C., Abrantes P.C., Anthopoulou T. et al. (2017). Peri-urban agro-ecosystems in the Mediterranean: diversity, dynamics, and drivers. *Reg Environ Chang* 18, 1–12. <https://doi.org/10.1007/s10113-017-1102-z>