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# The emergence of a governance landscape for saline agriculture

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## Introduction, scope, and main objectives

Salinization is one of the main challenges of contemporary agriculture. Climate change with more persistent droughts and sea-level rise is expected to increase this challenge making it one of the most common land degradation processes (Ladeira, 2012). Research shows that one billion hectares of land are negatively affected by salinity, including more than 20 percent of all the irrigated arable land (Ghassemi *et al.*, 1995; Qadir *et al.*, 2014). At the same time, an increasingly complex institutional landscape has emerged across multiple issue areas of global environmental governance related to salinization (Negacz *et al.*, 2021). This can be seen in a myriad of public, private, and hybrid international institutions and initiatives coming together to address the issue of growing salinization through saline agriculture. At present, their actions are characterized by a lack of coordination (Vellinga *et al.*, 2021). Therefore, the aim of this paper is to describe the development of a governance landscape of cooperative initiatives for saline agriculture and to discuss how to harness their potential and orchestrate their efforts.

## Methodology

For the purpose of this study, we define cooperative initiatives as “(i) international and transnational institutions, which not only have the (ii) intention to guide policy and the behavior of their members or a broader community but also explicitly mention the (iii) common governance goal, accomplishable by (iv) significant governance functions” (Widerberg *et al.*, 2016: 13). Using a systematic approach, we create a database of cooperative initiatives for saline agriculture by applying semi-automated content analysis, internet snowballing, and expert interviews. To describe the evolving institutional landscape and make policy recommendations, we code characteristics of each initiative, including inter alia, their members, governance functions, focus areas, goals, and geographic coverage. We analyze the characteristics of these initiatives using descriptive statistics to illustrate the patterns across the sample. The data was collected from publicly available information on the websites of the initiatives.

## Results

The preliminary results show that there is an increase in the number of cooperative initiatives over time. The initiatives are often led by diversified sets of actors, varying per region. Their main governance functions focus on information sharing and networking as well as operational activities. The initiatives address both conventional crops and halophytes and are predominantly located in Europe, North Africa, and Asia.

## Discussion

We discuss these findings in relation to ongoing scholarly debates in global environmental governance on orchestration and polycentric governance. We compare the collaborative initiatives focusing on saline agriculture to other governance regimes such as climate, biodiversity, and oceans. Finally, we propose that the evolving governance landscape of collaborative initiatives for saline agriculture offers a window of opportunity for synergy effects between actions coordinated by the FAO and undertaken by international cooperative initiatives.

## Conclusions

Our findings suggest that saline agriculture is increasingly present on the policy agenda. Furthermore, the orchestration of this fragmented landscape provides a pathway to harness the potential of international initiatives for saline agriculture for addressing land degradation and food security.

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## References

**Ghassemi, F., Jakeman, A.J. & Nix, H.A.** 1995. Salinisation of land and water resources. Human causes, extent, management and case studies. Wallingford (United Kingdom), CAB International.

**Ladeiro, B.** 2012. Saline Agriculture in the 21st Century: Using Salt Contaminated Resources to Cope Food Requirements. *Journal of Botany*, 2012: e310705.

**Negacz, K., Bruning, B., & Vellinga, P.** 2021. Achieving Multiple Sustainable Development Goals through Saline Agriculture. In Negacz, K., Vellinga, P., Barrett-Lennard, E., Choukr-Allah, R. & Elzenga, T. *Future of Sustainable Agriculture in Saline Environments*, pp. 13–28. CRC Press.

**Negacz, K., Vellinga, P., Barrett-Lennard, E., Choukr-Allah, R. & Elzenga, T.** 2021. *Future of Sustainable Agriculture in Saline Environments*. Boca Raton, CRC Press. 541 pp.

**Qadir, M., Quill rou, E., Nangia, V., Murtaza, G., Singh, M., Thomas, R. j., Drechsel, P. et al.** 2014. Economics of salt-induced land degradation and restoration. *Natural Resources Forum*, 38(4): 282–295.

**Vellinga, P., Rahman, A., Wolthuis, B.W., Barrett-Lennard, E., Choukr-Allah, R., Elzenga, T., Kaus, A. et al.** 2021. Saline Agriculture: A Call to Action. In K. Negacz, P. Vellinga, E. Barrett-Lennard, R. Choukr-Allah & T. Elzenga, eds. *Future of Sustainable Agriculture in Saline Environments*, pp. 3–12. CRC Press.

**Widerberg, O.E., Pattberg, P.H. & Kristensen, K.E.G.** 2016. *Mapping the Institutional Architecture of Global Climate Change Governance V.2*. Institute for Environmental Studies/IVM.