



**ECCA 2019 | Lisbon | 28–31 May**  
**European Climate Change Adaptation conference**

**Authors:** Palka, Marlene; Hanger-Kopp, Susanne

**Title:** Integrated agricultural risk management to increase drought resilience: a farm level study in Austria

**Theme:**

6 - Climate risk management and resilience

**Sub-theme:**

6.1 - Risk management and systematic reduction of hazards in climate-sensitive sectors

**Keywords:** drought, agriculture

**Abstract of presentation:**

Objectives, methods, results and conclusions

Future climate projections forecast an increase both in frequency and severity of droughts with the agricultural sector particularly vulnerable to such extreme weather events. Measures available to primarily deal with drought, such as insurance and irrigation, are rather limited. However, a large number of agricultural practices may indirectly prevent, cope or mitigate droughts. For example, reduced soil management practices are low in operating costs, prevent surface run-off and at the same time maintain a soil structure facilitating an increased water holding capacity. Market futures might stabilize farm income and therefore allow for future planning e.g. to purchase irrigation equipment.

Farmers carry the most immediate burden and take a major role in drought risk management through their farming practices. Building agricultural drought resilience successfully requires a set of all available measures both at institutional and farm level, and -at least equally important- an elaborate integration of such. Therefore, a detailed understanding of factors influencing on-farm drought management is crucial for designing policies that further drought resilience. In this presentation, we explore farmers' decision spaces to understand synergies and trade-offs between different factors constraining their ability/willingness to integrate drought management at farm level.

To date, drought risk is no major concern for many high-income countries. Nevertheless, Austria has been and is expected to be increasingly affected by droughts. We conducted 40 semi-structured interviews with crop farmers to get an in-depth understanding of their perspective and illustrate the decision space farmers are operating within. Better than standardized methods, semi-structured interviews are suited to explore the details of choices. Such methods are particularly important for emerging policy issues which are insufficiently understood. The aim was to collect detailed individual narratives on risk management strategies, and underlying motivations and constraints.

For our analysis, we consider the farmers' decision space from a systems perspective in order to highlight risk as part of a broader resilience frame. We found that -from the farmers' point of view- this decision space for practical drought risk management is strongly constrained by external drivers, including private and public institutions, market mechanisms and public perception. We also found that this top-down bottom-up cooperation is most often missing. Hands-on knowledge preferably practiced at farm level might be influenced by counteracting regulations. For example, compulsory irrigation times constrain its applicability. At the same time, existing public/private support measures might not be utilized due to a lack of trust or information from the farmers' side.