



Assessing the Resilience of Food Systems for Implementing the SDGs in Austria

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Introduction

- In Austria, the **UniNETZ project** aims to contribute to the implementation of the United Nations' Sustainable Development Goals (SDGs) (UN 2015; UniNETZ 2019)
 - includes a global and national **transformation of the food systems** (WHO 2017, Willett et al. 2019)
- Resilience approach mentioned as promising to deal with change or crisis (Schlüter et al. 2015)
 - **Stockholm Resilience Centre (SRC)**: Seven principles to build resilience in socio-ecological systems
- UniNETZ project** published a report with **catalogue of options** for achieving the SDGs
 - **resilience mentioned** as a fundamental principle

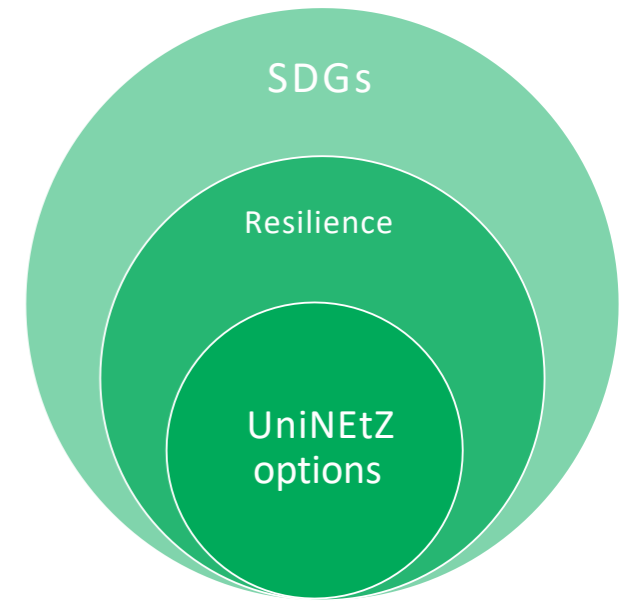


Figure 1: The relevant frameworks and concepts for analysing the UniNETZ options report, using the resilience principles

Aim & Research Questions

Aim: How can **resilience** in the context of **food systems** contribute to **achieving the SDGs in Austria**?

Research questions:

- RQ1** What is the **current state of food systems** in Austria?
- RQ2** How is the concept of **resilience** pictured within the **UniNETZ option report** regarding agricultural (primary) production and food consumption?

Material & Methods

- Literature review** on the food system and resilience concept
- Mapping and evaluating** the Austrian food system (Hasnain et al., 2020; Wood et al. 2019)
- Qualitative content analysis** of the **21 options** in the UniNETZ option report focusing on agricultural (primary) production and consumption (Kuckartz & Rädiker 2022)

Findings I

RQ1 State of Austrian food system:

- Primary Production:** decline in farms, **fewer but bigger farms, small structured (23,5 ha), 22.4 % organic farms** (BML, 2022)
 - Consumption: **41 % of adults overweight or obese** (Rust, 2017)
 - Imbalance in primary production and consumption measures**
- **Food system approach** allowed to **identify trade-offs and synergies** along the **value chain & between actors**

RQ2 How is the concept of resilience pictured within the UniNETZ option report?

- UniNETZ options** offer comprehensive range of measures & **cover the principles** of the resilience framework (Figure 2)
- **options lack** in-depth qualitative analyses and **tangible measures** to enable resilient transformation

Findings II

Figure 2:

The application of the seven principles of resilience in the UniNETZ options highlighted by colour.

Red: insufficient, **yellow:** partly insufficient, **green:** sufficient representation

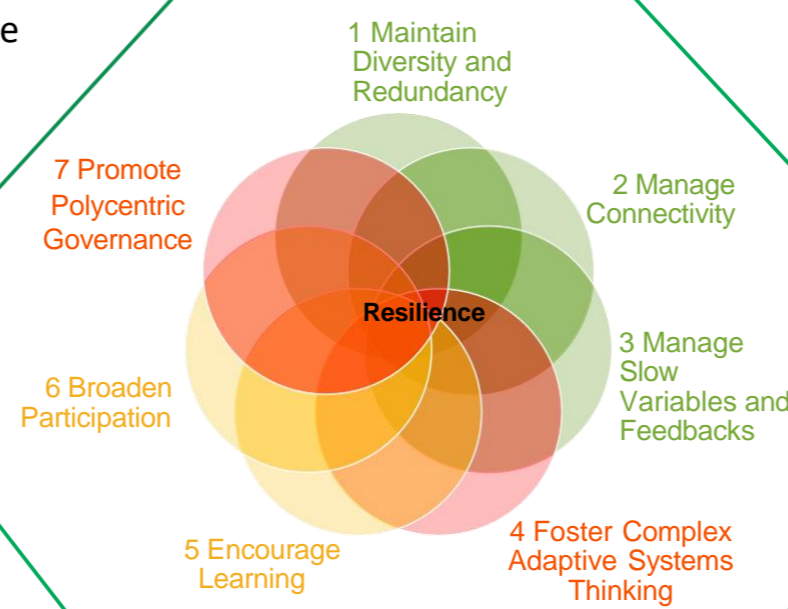


Figure 2

© based on Simonsen et al., 2015

Table 1: SDG Targets and UniNETZ options: Synergies and Trade-offs

Evaluation T	SDG 2.4	SDG 01	SDG 02	SDG 03	SDG 04	SDG 05	SDG 06	SDG 07	SDG 08	SDG 09	SDG 10	SDG 11	SDG 12	SDG 13	SDG 14	SDG 15	SDG 16	SDG 17
1	3																	
2	2																	
3	3																	
4	3																	
5	k.E.	3	n	2														
6	3	n	2															
7	2	n	1															
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Legend

- Scale form **-3 to +3**: negative to positive impact
- k.E.** means no expertise in the evaluation team
- Boxes** represent the included options for the research

Conclusions

- UniNETZ options** should be **expanded** e.g.:
 - **Continuous learning**: Include all society members in life-long learning processes
 - **Coherent policy-making**: inter-ministerial working groups
- Food system approach** promising for evaluating how activities result in **synergies and trade-offs** (Ingram 2020)
- Important to define resilience** context specific (Helfgott 2018)
- Several resilience principles require **further research** to make them **applicable in practice** → find **indicators**
- Research on processing, storage and retail** missing → tackling the **power dynamics** within the food system

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