The role and implementation of minerals safeguarding in land use planning policy in Austria

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Why is Austria an interesting case?

The Austrian case provides insights into the application of safeguarding:

- A decade-long existence of a national policy instrument for safeguarding (AMRP) streamlined into provincial and regional policy;
- ARMS and AMRP are guidelines (voluntary, non-binding)
- Austria decentralised system: responsibility for different policy issues is distributed between state (Mineral Resources), provinces (Länder, Land-Use Planning) → diverse formats of provincial and regional implementation approaches due to heterogeneous jurisdiction of the nine federal states (provinces) different degrees of uptake and implementation in land use planning (LUP) policy;

Celebrated as European best-practise example

- Innovative approach regarding the identification of ‘conflict-free’ mineral deposits (Carvalho et al 2021)
- Criticism regarding the implementation of the AMRS/AMRP
Embedding our research in the broader context

Broad discussion the role of mineral resources in sustainability transitions and responsible sourcing

- Energy transitions requires notable amount of mineral resources (e.g. Gregoir & van Acker 2021)
- Housing and Real Estate Sector experiences notable tensions (Gugerell & Netsch 2020)
- Expanding discourse on sustainability in mineral resource policy and responsible sourcing: distribution of benefits and burdens, discussions around tensions/confictual relations, greening the economy, ecological/resource justice (Hilson & Maconachie 2020, Haikola & Anshelm 2016, Macini and Nuss 2020,

Role of Land-Use Governance and Land-Use Planning

- Systematic assessments of potential land-use options that serve the demands and needs of communities while safeguarding natural resources - from a public interest perspective
- Competing demands and interests: managing scarcity and actors interests (including various mindsets and values)
- LUP systems (i.e. instruments and processes) are expected to balance such competing demands (e.g. nature protection, residential, agriculture (Gałaś, 2017; Hilson, 2002; Mitchell et al., 2004; Mitchell, 2016)) and integrate them into the socio-spatial context (Gustafsson and Scurrah, 2019; Roth and Howie, 2015).
Embedding our research in the broader context

Safeguarding from both an academic and practitioners point of view is becoming increasingly recognised

- whether, or to what extent, it is included in LUP policy, and whether it is streamlined at all levels of governance, is still not clear
- Significant body of knowledge to manage permitting (e.g. Dooley and Leddin, 2005; Tiess, 2011) & framework conditions for extraction and rehabilitation (e.g. Clausen and Mcallister, 2001; Dooley and Leddin, 2005; Everingham et al., 2013; Haikola and Anshelm, 2016; Sivek et al., 2019; Tost et al., 2018).

Academic discourse shows three distinct topics in mineral resource governance and LUP

(i) (integrated) modelling of decision support tools (e.g. for Strategic Environmental Assessments) that take into account different social, environmental and economic aspects (Lechner et al., 2017; Ustaoglu et al., 2018);
(ii) valuation of mineral resources for LUP decision making (EUROMINES, 2011, Carvahlo et al 2021);
(iii) linking or integrating mineral resources into LUP policies (Baker and Hendy, 2005; Roth and Howie, 2015; Wagner et al., 2006; Wrighton et al., 2014).

2 core approaches to conceptualise safeguarding

(i) protection/safeguarding of mineral deposits for future exploitation with appropriate measures (Gałaś, 2017; Henckens et al., 2016; Radwanek-Bąk and Nieć, 2015; Sivek et al., 2019),
(ii) avoidance of sterilisation, defined as the loss of access and the option to exploit a mineral deposit in the future (Pendock, 1984, Carvalho et al., 2019; Lopes et al., 2018; Wrighton et al., 2014)
Embedding our research in the broader context

Modest research output on policy goals transfer into policy instruments (e.g. LUP instruments)

• Safeguarding highlights as a concept in the agenda of public policy, eg. EU MS mining policies (e.g. CZ Mining Code: Sivek et al. (2019); PT LUP methodology for mineral resources: Carvalho et al. (2019); Lopes et al. (2018)

• Factors impeding safeguarding: (i) conflicting goals & instruments, (ii) lack of mechanism translating policy into practise

• Policies in multi-level governance settings require policy coherence (vertically) calibrations and consistency of tools, throughout sectors and levels of government to produce desired impacts

(Howlett, 2009; Rayner et al., 2017)

How policy Is translated to local implementation

Transfer on sub-division of policy: policy content, policy goals and instruments work and can work on different levels

(Dolowitz & Marsch 2000, Lenschow 2002)

Policy coherence: goals and agenda setting

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Translation into policy instruments

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n = 69 LUP policies
Examining policy content and goals: agenda setting on provincial and regional level

**Uptake of mineral resources as policy issue in land-use policy**

- Four prevalent goals in LU-Policy provincial and regional levels: securing access, safeguarding mineral deposits, protecting areas that are potentially important for the future, avoiding land-use conflicts
- 2 main approaches:
  - (i) safeguarding, avoiding sterilisation and protection of areas with specific physical characteristics;
  - (ii) spatial organisation to avoid or mitigate land-use conflicts

„(...) Mineral extraction is not a regional development topic per se; it is an important to-do, to actually further housing and infrastructure development (...) for regions – saying we are a ‘mineral raw-material region’ nobody will do that – its not an asset (...) “ (I8102:0101)

**Analysis of 69 LUP policies**
Examining policy content and goals: agenda setting on provincial and regional level

**Notable Differences between the 9 provinces**

- Manifestations of mineral resources in LU-policy, but lesser on the regional level
- More recently developed LU-policies are integrating mineral resources, safeguarding as policy goals (e.g. Styria, Lower Austria) > 2008/2010

Older regional/provincial LU-Policies are rarely considering mineral resources (e.g. Carinthia) → even when only weak manifestations, informal considerations do exist

**Agenda Setting plays a crucial role**

> “(...) we were too focused on technicalities, technical implementation – and we did not take advantage of the political momentum (...) that was our biggest mistake” (I0101:8102)
Examining policy content and goals: agenda setting on provincial and regional level

**Municipal Level** (data collection 2021, n=261 municipalities)
- Mineral resources play a very modest role compared to other policy issues, e.g. jobs, housing development
- Listed 10 policy priorities: only on spot 8/9 safeguarding mineral development
  Speculate: local level mineral resources have a comparatively weak profile in agenda setting compared to other policy issues and objectives (e.g. employment, residential development)
- Mineral deposits should be safeguarded (deposit, access): 40%

**Agenda Setting and Policy uptake is a start but not sufficient**
Important administrative and political (s.l.) practice
‘to land’ policy and implement it → policy instruments needed
Different types of LUP-instruments

Range of different operating principles of LUP (scale 1):
protection – prohibition
coercive-indicative

- protection of deposits to prohibition and combinations thereof
- E.g. zoning of suitability zones (regional level) for mineral extraction; or prohibition zones: no mineral extraction is possible

“negative” zoning, does actually not implement the ‘safeguarding’ system developed in the AMRP → stronger focus on mitigation of conflicts
Different types of LUP-instruments

Degree of spatialization (x-axis) (scale 2)
spatialized – non spatialized
explicit – implicit

- provinces indicate a preference for spatialised instruments (polygons) combining sectoral and integrated instruments on different scales.
- Spatialised zoning: polygons that outline priority zones (deposits) and suitability zones: indicate reasonable areas (e.g. geological quality) for safeguarding
- ‘Masked’ zoning: deposits are implemented in LUP, but are not visible on maps to avoid speculation and land grabbing
Different types of LUP-instruments

Degree of spatialization (x-axis) and the instruments’ mechanism (cooperation, coercion); (scale 3)
Spatialized – non spatialized
Coercive – non coercive

- Range from coercive regulatory tools – soft tools (guidelines)
- Guidelines: soft-version: provide more flexibility
- Criticism ‘showcase’-planning
- Flexibility, limited administrative capacity and reducing administrative work for choosing cooperative formats
- Regulatory Instruments: Administrative/political procedures are required, provide more planning security/reliability
Discussion and Lessons Learned

Soft Safeguarding Approach

• requires significant voluntary self-commitment of involved actors
• provides flexibility
• accounts for limited administrative capacity, and provides space for regional discretion of policy goals and contextualised regional/provincial agenda setting

Challenges:
• Cooperative, non-binding instruments demand sufficient willingness and capacity (technical, managerial) of the responsible public servants to maintain a trajectory towards the policy objectives

Strong/Coercive Safeguarding Approach

• non-coercive approaches might limit local willingness
• to push the agenda, due to low capacity, political back-up and support or enforcement of power to implement an agenda (Wu et al., 2018).

Challenges
• combination of spatialised polygons and coercive mechanisms are strongly prescriptive (i.e. prescribe the behaviour and possibilities of involved actors).
• strong coercive approaches provide less flexibility for ad-hoc decision making, adaption or changes, but the need to adhere to institutional procedures to implement changes
• provides more long-term and stable conditions for the private sector
Discussion and Lessons Learned

Agenda setting and the need to engage in the political discourse are important factors in establishing safeguarding goals in LUP policies and instruments

• Fragmented and modest implementation is outcome of insufficient consideration of political dimension and lack of communication (on-time) and ‘departmentalism’ (tensions)
• Policy uptake is challenging in decentralised systems, in particular diagonal policy implementation and alignment (concur with EPI studies e.g. Niedertscheider et al., 2018; Steurer and Clar, 2015)
• Call for stronger top-down regulations (Tiess, 2011, 2010; Vidovic and Solar, 2018) might be reasonable from a single policy silo – remains unclear how place based policy implementation and good-fit (Howlett, 2008) should be achieved with such an approach

Selection and combination of instruments is influenced by institutional needs
• Specific conditions and local discretion, depending on whether mineral resources have a strong or a weak profile –
• no ‘one fits-all’ instrument: the selection of instruments requires taking into consideration governance processes and LUP practises.
Outlook and next steps

New Policy: ‘Masterplan Rohstoffe 2030’
- New mineral resources strategy (on policy level) issued in 2021
- Policy level: strong industry focus

Policy Development Process
- Setback from the already existing level – in terms of vertical policy integration and horizontal policy alignment;

Implementation is unclear and has not been further elaborated - exciting in the coming years
- Studying policy uptake of frames
- Policy implementation – policy mix

Sustainable Management in the Extractive Industries
- Sustainability Transitions in Extractive Sector – Contribution of the Extractive Sector to Sustainability Transition, but also how transformative the sector is
- LUP as one priority area → poster by Dr. Besmiry Dyca.

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