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Gilt für Studien aus der Programmlinie Forschung

A) Projektdaten

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B) Projektübersicht

1 Executive Summary

TRANSREAL explored the potential of *transformative realism*, a strategy that links short-term concerns for a secure, good, and sustainable life with long-term, ambitious objectives to achieve climate targets and stay within planetary boundaries. TRANSREAL aimed at understanding and shaping framework conditions - be it infrastructures, laws, institutions, or discourses - to enable climate-friendly living, assuming, based on the APCC-Special Report on "Structures for climate-friendly living", that existing framework conditions hinder climate-friendly living, especially due to an ineffective multi-level governance system, unsustainable settlement structures and car dependency. Based on social science climate research and in close cooperation with local stakeholders and experts the project investigated two research fields: Firstly, TRANSREAL explored the potential of transformative realism for effective climate action by investigating how to design climate actions that effectively contribute to socio-ecological transformations. Secondly, TRANSREAL aimed at co-designing concrete transformative climate actions (TCAs) by investigating in two rural case study regions in Austria concrete TCAs of climate-friendly land use that contribute to satisfying environmental and existential needs.

Three internal research papers plus a published SRE discussion paper were written, one by each project partner (WU, EAA, Degrowth Vienna), reflecting the respective approaches. Moreover, a *Knowledge Alliance for social-ecological Transformation* **(KAT)** was initiated by organising two KAT meetings, which gave voice to transformation-prone experts in the field of settlement structures in Austria (WP1). Two transdisciplinary research processes in rural micro-regions (in St. Johann and Pöllau) used qualitative methods of document analysis, visioning and expert workshops, and field research to produce two Green Papers suggesting local TCAs, both elaborated in close cooperation with regional stakeholders (WP2). Knowledge integration and dissemination resulted in one policy brief, one policy paper, four journal articles, two book contributions, participation in five scientific conferences, and various dissemination products and activities (WP3). Project management was organized by WU, supported by EAA and DV (WP4).

The project produced results that are relevant for science as well as policymaking. To distinguish TCAs from other climate actions a common understanding of TCAs was elaborated and operationalized in five criteria: (1) Climate policies should overcome the dualistic framing of social versus ecological problems by prioritising pragmatic climate actions that have short-term co-benefits for satisfying basic needs. A focus on provisioning foundational infrastructures, services, and goods increases the feasibility of desired actions. (2) Climate policy can become transformative if efficiency-enhancing measures of market- and technology are subordinated to sufficiency measures that avoid harmful forms of consumption and production. In short, actions are transformative if sufficiency becomes the guiding principle of climate actions, trumping efficiency. (3) Climate policy can become widely acceptable by overcoming eco-reductionist instruments in favour of eco-social ones that integrate "less and more" with special concern for equity and justice. Feasibility of effective climate actions, like limiting soil sealing or combatting car-dependency, is increased by actions that create social co-benefits

to environmentally necessary actions. (4) Portfolios of measures should be guided by a corridor-oriented policy approach to ensure essential provisioning for all (floors) while limiting excess production and consumption (ceilings). (5) Climate policy should shift focus from voluntary behavioural changes to collective action, harnessing governance models that link top-down with bottom-up approaches and mobilise unconventional multi-actor alliances. The results for decision makers and local stakeholders in the field of settlement structures in rural areas offer practical recommendations how to implement sufficiency measures by means of innovative multi-level governance models.

The project reinforced the necessity of changing framework conditions to enable climate-friendly living and the need of linking pragmatic and radical agency. Assuming that neither pragmatic nor radical climate measures alone facilitate a social-ecological transformation, as-well-as solutions are needed and have to be implemented by multiple actors at diverse levels. This is in line with preliminary assessment results in AAR2 (Second Austrian Assessment Report in Climate Change), which identifies two climate-friendly pathways: one that aims at radicalizing mainstream climate policies, and one that aims at offering pragmatic tools to increase the socio-cultural and politico-economic feasibility of sufficiency policies.

In co-designing policy recommendations, TRANSREAL stressed cooperation with local stakeholders in the rural micro-regions, which led to prioritizing pragmatic first steps. The advantage of this approach was that the project proposals continue being discussed and implemented in the micro-regions and by national policymaking: In St. Johann, the municipality's building committee discussed the green paper, and a citizens' initiative aims at mobilizing 'invisible living space'. The green paper on transformation management and the policy paper on transformation agencies are currently discussed by regional and national stakeholders and decision-makers (Regionalmanagement Oststeiermark, ÖROK, Federal Ministry of Agriculture, Forestry, Regions and Water Management, Ministry of Climate Action). The criteria of TCAs might thus inspire future design of regional policy programs and guidelines, such as the LEADER program.

2 Kurzfassung

TRANSREAL untersuchte das Potenzial eines transformativen Realismus, einer Strategie, die brennende kurzfristige Anliegen eines sicheren, guten und nachhaltigen Lebens mit dem langfristigen Ziel der Einhaltung der Klimaziele verbindet. Das Projekt basiert auf zwei Leitgedanken: Erstens, ausgehend von der Annahme, dass weder pragmatische noch radikale Klimamaßnahmen allein in der Lage sind, zu einer sozial-ökologischen Transformation beizutragen, soll das Potenzial von Sowohl-als-auch-Lösungen erforscht werden, indem radikale mit pragmatischen Maßnahmen kombiniert werden. Zweitens baut TRANSREAL auf den Grundlagen des APCC-Sonderberichts "Strukturen für ein klimafreundliches Leben" auf, dessen zentrale politische Empfehlung lautet: Um ein klimafreundliches Leben zu ermöglichen, müssen angemessene Rahmenbedingungen geschaffen werden, seien es Infrastrukturen, Gesetze, Institutionen und Diskurse. Derzeit behindern die bestehenden Rahmenbedingungen ein klimafreundliches Leben, insbesondere durch nicht nachhaltige Siedlungsstrukturen, Autoabhängigkeit und ein ineffektives Mehrebenen-Governance-System.

Ziel von TRANSREAL war die Entwicklung und Vertiefung eines gemeinsamen Verständnisses von transformativen Klimamaßnahmen (TCAs) in ländlichen Mikroregionen im Bereich der Siedlungsstrukturen. Die Grundlage bildeten der Stand der Klimaforschung und enge Zusammenarbeit mit lokalen AkteurInnen und ExpertInnen.

Zur Operationalisierung dieser Leitideen wurden Kriterien für TCAs erarbeitet: TCAs müssen auf Suffizienz abzielen, indem sie kurzfristigen ökosozialen Zusatznutzen (*Co-Benefits*) für die Befriedigung von Grundbedürfnissen schaffen sowie kollektives Handeln unterstützen, das *top-linked* und *bottom-linked* Governance-Modelle nutzt. Es wurden drei interne Forschungspapiere sowie ein veröffentlichtes SRE-Diskussionspapier verfasst, wobei das Forschungspapier jedes Projektpartners (WU, EAA, Degrowth Vienna) dessen spezifischen Ansatz widerspiegelt. Darüber hinaus wurde eine neuartige Wissensallianz für sozial-ökologische Transformation (KAT) initiiert, indem in zwei Arbeitstreffen österreichische ExpertInnen aus den Bereichen der Klimapolitik und der Regionalpolitik in das Projekt einbezogen wurden (AP1). Zwei transdisziplinäre Forschungsprozesse in ländlichen Mikroregionen (regio3 mit St. Johann in Tirol und Oststeirisches Kernland mit Pöllau) nutzten qualitative Methoden wie Dokumentenanalyse, Visions- und Expertenworkshops sowie Feldforschung, um in enger Zusammenarbeit mit regionalen Stakeholdern zwei Grünbücher mit Vorschlägen für lokale TCAs zu erarbeiten (AP2). Die Wissensintegration und -verbreitung resultierte in einem Policy Brief, einem Policy Paper, vier wissenschaftlichen Artikeln, zwei Buchbeiträgen, der Teilnahme an fünf wissenschaftlichen Konferenzen sowie verschiedenen Disseminationsprodukten und -aktivitäten (WP3).

Das Projekt lieferte wissenschaftliche und politikrelevante Ergebnisse. Zentrale wissenschaftliche Erkenntnisse sind: (1) Die Klimapolitik sollte die dualistische Rahmung von sozialen versus ökologischen Problemen überwinden, indem sie pragmatischen Klimamaßnahmen Vorrang einräumt, die kurzfristige Nebeneffekte für die Befriedigung grundlegender Bedürfnisse erbringen. Eine Konzentration auf die Bereitstellung grundlegender Infrastrukturen, Dienstleistungen und Güter erhöht die Umsetzbarkeit von erwünschten Maßnahmen. (2) Klimapolitik kann

transformativ werden, wenn effizienzsteigernde Maßnahmen von Markt und Technik Suffizienzmaßnahmen untergeordnet werden, die schädliche Konsum- und Produktionsformen vermeiden. Kurz gesagt, Maßnahmen sind transformativ, wenn Suffizienz zum Leitprinzip des Klimahandelns und der Effizienz übergeordnet wird. (3) Klimapolitik kann breite Akzeptanz finden, wenn ökologisch-reduktionistische Instrumente zugunsten ökosozialer Instrumente überwunden werden, die "weniger und mehr" unter besonderer Berücksichtigung von Gleichheit und Gerechtigkeit integrieren. Die Durchführbarkeit wirksamer Klimamaßnahmen, wie die Begrenzung der Bodenversiegelung oder die Überwindung der Autoabhängigkeit, wird durch Maßnahmen erhöht, die einen sozialen Zusatznutzen zu den ökologisch notwendigen Maßnahmen schaffen. (4) Die Maßnahmenportfolios sollten sich an einem korridororientierten Politikansatz orientieren, um die Grundversorgung für alle zu gewährleisten (Untergrenzen) und gleichzeitig Überproduktion und Überverbrauch zu begrenzen (Obergrenzen). (5) Die Klimapolitik sollte den Schwerpunkt von freiwilligen Verhaltensänderungen auf kollektives Handeln verlagern und dabei Governance-Modelle nutzen, die Top-down- mit Bottom-up-Ansätzen verknüpfen und unkonventionelle Allianzen zwischen unterschiedlichen Akteuren mobilisieren. Die Ergebnisse für Entscheidungstragende und lokale Stakeholder wurden in Grünbüchern und Policy Briefs veröffentlicht, die Empfehlungen zur Umsetzung von Suffizienzmaßnahmen durch innovative Mehrebenen-Governance-Modelle geben.

Das Projekt hat die Bedeutung der beiden Leitgedanken von TRANSREAL unterstrichen: die Notwendigkeit, die Rahmenbedingungen zu verändern, um ein klimafreundliches Leben zu ermöglichen, und die Notwendigkeit, pragmatisches und radikales Handeln miteinander zu verbinden. TRANSREAL hat bestätigt, dass weder pragmatische noch radikale Klimamaßnahmen allein zu einer sozial-ökologischen Transformation beitragen, sondern dass Sowohl-als-auch-Lösungen erforderlich sind, die von vielen Akteuren auf unterschiedlichen Ebenen umgesetzt werden müssen. Dies deckt sich mit den vorläufigen Bewertungsergebnissen des AAR2 (Zweiter Österreichischer Sachstandsbericht zum Klimawandel), der zwei klimafreundliche Pfade identifiziert: einen, der auf eine Radikalisierung der Mainstream-Klimapolitik abzielt, und einen, der pragmatische Instrumente einsetzt, um die soziokulturelle und politisch-ökonomische Durchführbarkeit von Degrowth-Maßnahmen zu erhöhen.

Bei der kollaborativen Entwicklung von Politikempfehlungen legte das Projektdesign in TRANSREAL Wert auf die Zusammenarbeit mit lokalen Akteuren in den ländlichen Mikroregionen. Dies führte dazu, dass pragmatische erste Schritte priorisiert wurden. Der Vorteil dieses Ansatzes war, dass die Umsetzungsvorschläge in den Mikroregionen und in der nationalen Politikgestaltung weiter diskutiert werden: In St. Johann behandelte der Bauausschuss der Gemeinde das Grünbuch, und eine Bürgerinitiative möchte den "unsichtbaren Wohnraum" mobilisieren. Das Grünbuch zum Transformationsmanagement und das Strategiepapier zu Transformationsagenturen werden derzeit von regionalen und nationalen Stakeholdern und Entscheidungstragenden (Regionalmanagement Oststeiermark, ÖROK, Bundesministerium für Land- und Forstwirtschaft, Regionen und Wasserwirtschaft, Klimaministerium) diskutiert. Die Kriterien von TCAs könnten daher die zukünftige Gestaltung von regionalpolitischen Programmen und Richtlinien, wie z.B. das LEADER-Programm, inspirieren.

3 Hintergrund und Zielsetzung

Background

In 2019-2020, the world witnessed unprecedented popular support for immediate and transformative action on climate change, from Fridays for Future (FFF) to the adoption of a European Green Deal (EGD). In combatting the consequence of the COVID-19 pandemic, diverse recovery plans called for a sustainability transition to close the emission gap by designing a better, climate-friendly future. Also, the EU has agreed on a post-COVID-19 recovery financing mechanism that puts a strong emphasis on greening the economy. While the COVID-19 crisis triggered radical change in an ad-hoc and chaotic way, the challenge remains of how to achieve necessary societal changes in response to the climate crisis not by disaster, but by design?

Two different approaches to this challenge prevail. First, international political agreements, such as the Paris Agreement and the SDGs, as well as climate targets of the EU and the Austrian government have set ambitious goals for achieving climate neutrality and sustainable development. However, these agreements are yet failing to deliver adequate action due to their focus on incremental change and "low hanging fruits". Second, civil society actors, among them often young activists, politicize unsustainable ways of living and producing 'at the cost of others'. They problematize previously uncontested policy objectives like economic (green) growth and consumerism, thereby urging for a radical system change to enable a 'good life for all'. Degrowth, for example, calls for a radical downscaling of the economy in line with human needs and ecological boundaries, ensuring societal well-being, equality, and justice.

Objectives

The project TRANSREAL 'TRANSformative REALism for effective climate action', aimed at exploring the potential of what we defined as 'transformative realism'. It is a strategy that links short-term objectives for secure and good living with long-term concerns to stay within planetary boundaries. Transformative realism captures the paradoxical concurrence between pragmatic responses to diverse short-term challenges (from unemployment to soil erosion) and the necessity of radical long-term change that tackles the systemic causes of climate change and of the resultant vulnerabilities from its impacts. The project thus addressed the question how climate change can be linked to systemic changes, which necessitates closing the gap between (widely shared) ambitions and (all too often) missing implementation.

Unsustainable land use, with growing urban sprawl, excessive land take and irreversible soil consumption, and a car-centred mobility system with forced mobility patterns are key drivers of climate change and biodiversity loss, and at the same time root causes of vulnerabilities to climate change and of exposure to climate risks. TRANSREAL investigated the "socioeconomics of climate-neutral land use", understood as the utilization of land and the regulation and planning of land use in ways that enable the climate-neutral configuration of socioeconomic practices and human activities, which are decisively shaped by the structure of land use. Empirical research thus focussed on unsustainable settlement structures, which are tied to issues such as land take, soil sealing, scattered settlement development, affordable housing and town revitalization - all key challenges of

sustainable regional development and simultaneously drivers of GHG emissions and climate vulnerabilities.

Table 1: Overview of objectives and research questions of TRANSREAL

Objectives	Research questions
Exploring the potential of transformative realism for effective climate action	How can climate actions be designed to effectively contribute to socio-ecological transformation?
Co-designing concrete TCAs for climate-friendly land use in rural areas	What are concrete TCAs of climate-friendly land use that contribute to satisfying environmental and existential needs in two rural case study regions in Austria?

4 Projektinhalt und Ergebnisse

Research paper 1: Framework paper 'Transformative Climate Actions' (WU)

Paper 1 is published as a SRE-Discussion Paper. It defines TCAs as climate actions that are desirable, effective, and feasible. Desirability, effectiveness, and feasibility are three elements of climate actions that are constitutive for them to become transformative. To being able to judge whether and in how far climate actions are transformative, six characteristics have been identified: TCAs aspire to (1) broaden climate targets to social-ecological goals; (2) shape framework conditions for climate-friendly living to transform forms of life; (3) link pragmatic and radical actions; (4) ensure basic provisioning and limit overconsumption; (5) prioritise avoiding harm; and (6) operate on multiple levels. Paper 1 investigates TCAs with methodological implications for further research to understand and promote TCAs. Local knowledge is crucial to identify problems as well as potential solutions, as locals often know best which actions are feasible. Due to the importance of contexts, case studies are a privileged method to analyse TCAs. For policymaking, transdisciplinary research that cooperates with multiple local and non-local stakeholders might contribute to understanding and implementing TCAs. These insights are crucial for WP2.

Research Paper 2: Review and mapping of policies and actions with transformative potential in the field of settlement development in Austria (EAA)

The mapping of policies and actions to counteract the main barriers to climate-friendly settlement development, i.e. land take, soil consumption and urban sprawl, resulted in a comprehensive repository of altogether 154 distinct instruments or measures, clustered into 23 strategic bundles of actions (table 3). The action portfolio comprises a broad range of types and categories of policy interventions, measures, and instruments, ranging from implemented (partly or in a rudimentary way) to proposed, from 'hard' (e.g., regulatory, binding, mandatory) to 'soft' (informal, non-binding, voluntary, governance-oriented), and from financial (fiscal, incentives, market-oriented) to non-monetary (supportive governance framework, informational) forms of actions. All actions identified and selected in the stocktaking are compiled in a structured matrix, which includes descriptions of their goals and intervention logic, literature references as well as practice examples, implementation experiences, and expert judgments of

effectiveness and feasibility aspects, as far as available. The matrix allows categorizing policies and actions according to criteria such as types of instruments, status of implementation, legally binding effects, and responsible levels of governance, planning and implementation. As regards allocation of actions to policy fields and legal-administrative spheres, the majority of measures relate to spatial planning and planning legislation (at state, regional and local levels), but the portfolio also covers spatially relevant sector planning, instruments under substantive laws and private law, fundamental information prerequisites for land use planning, accompanying measures, and process-and governance-oriented measures.

Within the project implementation process, the inventory of policies and actions with transformative potential for developing climate-friendly settlement structures has fulfilled multiple purposes: i) it has delivered substantial inputs to presentations and handouts at stakeholder workshops in both case study regions, thus providing a basis for participatory local research processes; ii) the action portfolio was at the center of the 1st KAT expert workshop on TCAs in the policy field of settlement development; iii) the policy review has informed elaboration of other research papers, the SRE discussion paper, the policy brief on TCAs and journal paper publications, e.g. by enriching them with concrete policy options; iv) it served as a knowledge base to support development of the two Green Papers.

In order to support follow-up implementation processes of the pilot projects proposed in the Green Papers, the action repository has been shared with key stakeholders in both case study areas and is thus available for assembling region-specific and context-sensitive bundles of transformative measures, e.g. as part of the implementation design of a regional transformation management in the East-Styrian LEADER region.

Table 2: Overview of strategic bundles of actions with prioritization by experts (bundles in bold letters)

no	Strategic action bundles	no	Strategic action bundles
1	**Binding quantitative targets for land-saving and country-wide implementation strategy**	13	Planning of building development and density regulations for inward-orientated (re-) densification
2	Mandatory prioritisation of strategic goals for economical land use	**14**	**Vacancies: management and activation**
3	**Building land quotas, tradeable land use certificates**	**15**	**Brownfield recycling (land circular economy)**
4	Re-organisation of the distribution of competences in spatial planning	**16**	**Reducing new construction by increasing the utilisation density of existing buildings**
5	**Strengthening of regional spatial planning by specifying land-saving objectives and restrictive requirements**	17	Development of village and city centres
6	**Settlement boundaries**	18	Aligning housing subsidies with compact, land- and energy-saving construction forms
7	**Green zones, priority zones, suitability zones, precautionary areas**	19	Regulation of land use by shopping centres, trading companies and commercial operations
8	Demand-orientated instead of supply-orientated zoning of building land	**20**	**Secondary residences and leisure homes**
9	**Compensatory measures for interventions in the open landscape**	21	Re-organising financial constitution (fiscal equalisation system, municipality tax, real estate tax)
10	**Building land mobilisation (zoned, but undeveloped building land): Contractual spatial planning and active soil policy**	22	Reviewing and adjusting provisions for economical land use in specific substantive laws and spatially relevant sector policies
11	**Settlement centres for inward-orientated development and re-densification**	23	Information, communication, cooperation, governance
12	**Effective local spatial planning: local development concepts and zoning planning**		

Research paper 3: Review of international scientific degrowth literature on climate actions to enable settlement structures for climate-friendly living (DV)

After a first round of coding, it became clear that the majority of papers lacks a systemic perspective and are not embedded within a broader transformative/systemic framework and perspective. The majority of papers is therefore quite far away from the TRANSREAL understanding of TCAs. This made

most of the selected papers too broad to draw conclusions relevant for the academic debate in general and for informing the TRANSREAL project in particular. Due to a lack of relevance of the preliminary results, the paper remains at this stage as an internal discussion paper rather than being turned into a scientific publication. The results of the systematic literature review confirm that there is a lack of literature on climate actions for climate-friendly settlement structures. A great share of the literature does not embed the analyzed actions within a broader framework acknowledging the need for systemic change, which makes it hard to derive the transformative potential of the respective actions. Apart from highlighting the research gap the TRANSREAL project is attempting to fill, the literature review can hardly be used to actively inform the development of TCAs – apart from the fact that a systemic view and theoretical embedding of small-scale research may boost the utility of the research and raise the likelihood for it to trigger actual change. It thus greatly highlights the need for more systemic approaches to researching climate actions in the field of settlement structures. This is why the deliverable provides an overview on scientific literature in the field of postgrowth / degrowth and spatial planning in the form of a discussion paper, published in the 2024 yearbook of spatial planning by the Technical University of Vienna.

Workshops of the Knowledge Alliance for social-ecological Transformation (KAT)

First KAT Workshop: The first KAT workshop on 22nd March 2023 at WU essentially confirmed the strong relevance of the proposed characteristics of TCAs, as developed by the project, and the underlying hypotheses of TRANSREAL. The working groups on TCAs contributed to enriching and sharpening the compiled portfolio of actions, and deepened the understanding of the transformative potentials of measures in different regional contexts. In all working groups, the following climate actions compiled by research paper 2 were considered particularly urgent: a) Settlement centres for inward-orientated development and re-densification, b) Planning of building development and density regulations; c) Monitoring, management and activation of vacancies; d) Increasing the utilisation density of existing buildings. Participants assigned the vast majority of selected actions (17 out of 23) to the TCA category 'Expanding climate policy targets', followed by 'Avoiding emissions and adverse climate impacts' (12 out of 23). This means that, according to workshop participants, actions for reducing land consumption and urban sprawl contribute decisively to social and ecological goals and, although they are mostly not designed nor framed as climate actions, contribute to GHG emission reduction and/or to increasing climate resilience. At the same time, there was broad agreement that the proposed measures have to a large extent been known for decades. This indicates that inaction is not due to a lack of knowledge, but rather to a lack of political feasibility due to a lack of political will, a missing sense of urgency, and various other, e.g. legal, implementation barriers. Interestingly, across all groups the participants proposed significantly more radical than pragmatic measures, with the TCA category 'Ensuring basic provisioning and limiting overconsumption' clearly dominating the self-defined measures. This hints to a 'blind spot' in current climate discourse with respect to issues of climate justice, distribution and fairness. Post-processing of the inputs received in the 1st KAT resulted in enhancing research paper 2 and inspiring the Green Papers.

Second KAT Workshop: The content of the two Green Papers was presented to the 25 participants. The proposed climate actions to establish a regional transformation management in the LEADER region 'Oststeirisches Kernland' and the proposal of a housing agency for the municipality of St. Johann in Tirol were discussed in small groups. Participants strongly endorsed both policy proposals and provided crucial inputs for enhancing both their feasibility and effectiveness. Results were fed into the ongoing co-production process with regional stakeholders.

Conducting local participatory research processes in rural case study areas (WP2)

Qualitative case study research results: Although socio-economic characteristics differ, both regions are faced with climate-relevant challenges closely related to unsustainable patterns of settlement structures. Both regions struggle with high levels of land consumption and soil sealing, which has strongly contributed to shaping settlement structures that hinder in different ways climate-friendly forms of living, especially as regards the mobility and the housing system.

In *St. Johann* in the *Tyrolean micro-region*, a high and increasing level of land consumption meets upon natural limits of the Alpine region with respect to the usability of land for settlement purposes. This turns land into an increasingly scarce and precious resource. Strong building pressure on land is due to a steadily growing population, high demand for commercial sites, tourist infrastructures, holiday homes, and private room rentals. The increase in buildings exceeds by far the growth in population, indicating poor land use efficiency for housing. Remarkably, the respective district has the highest share of secondary (i.e. non-permanent) residences in entire Austria. The strong demand for secondary residences, driven by attractiveness for tourism, a trend towards multi-local forms of living and revenue-seeking investment behaviour, shortens availability of building plots and fuels land speculation. Therefore, plot prices are among the highest in Austria. High real estate and rental prices have caused a lack of affordable housing for permanent residents, resulting in increasing out-migration especially of young people.

The *East Styrian region* with *Pöllau* is faced with climate-damaging interdependencies between splintered settlement structures and an emission-intense mobility system dependent on motorized private transport. Pöllau and most other municipalities in the region are characterized by decentralized settlement development, low density of residential areas, and high shares of single- and two-family houses in residential buildings. This results in inflated per capita values of land consumption and soil sealing, which exceed the Austrian average by 88% and 65% respectively. Despite declining population, urban sprawl and new building activities are incentivized by an overshooting supply of affordable building plots, which is due to combination of structural causes: i) high municipal stocks of yet undeveloped building plots, often located in unfavourable decentral locations; ii) supply-oriented local spatial planning practices, having caused the strongest increase in newly zoned building plots at Austria-wide scale in recent years; and iii) very low building lot prices, which are available at a fraction of the price in St. Johann and advertised as a locational advantage. Dispersed settlement structures with low density correlate with poor provision of public transport infrastructure, indicated by a basic public transport access index far below the Austrian average, and have created pronounced dependency of residents on

private car traffic. As car-centred mobility meets upon a high share of outbound and long-distance commuters in the working population, the mobility system is responsible for almost 40 % of all GHG emissions in the LEADER region and also the main source of GHG emissions in Pöllau. Overall, the region appears to be locked in a climate-damaging pathway, where splintered settlement structures, forced mobility needs, and a car-centred mobility system reinforce each other, causing high levels of GHG emissions, land consumption, and subsequent economic, ecological, and social costs, including mobility poverty.

Local transdisciplinary research and co-design processes: To answer the research question 'What are possible concrete TCAs in the socioeconomics of climate-friendly land use in two rural case study regions in Austria?', we conducted workshops for participatory problem scoping and for visioning in both micro-regions. Unsustainable patterns of settlement development, such as high rates of land consumption and soil sealing, urban sprawl, high individual motorized mobility shares, partly very high shares of secondary residences, high real estate prices, lack of affordable housing, and consequential outmigration of younger people, were identified as problems shared by both case study municipalities. In the visioning workshops, local stakeholders and young people conveyed their visions about climate friendly living conditions. They emphasized measures referring to mobility, housing, and energy production, while agriculture and food — usually associated with rural areas — were not mentioned, apart from gardens for ‚self-provisioning'. Some suggestions were revolutionary and utopian, such as 'property is no longer important', but in most cases, proposed changes in framework conditions were compatible with those proposed in climate research: more public transport, support for car sharing, no new buildings, denser construction, and the expansion of wind power and solar energy. Some significant differences between the two regions include: i) While stopping new constructions on undeveloped building plots was mentioned in both regions, discussions in St. Johann focused on re-densification and in Pöllau on renovations; ii) In St. Johann, young people heavily criticized the high share of holiday homes, while in Pöllau, discussions focused on vacant business premises in the town centre. iii) Young people in St. Johann were critical of existing framework conditions, particularly regarding non-existing affordable housing and the excessive focus on tourism, whereas in Pöllau young people did not problematize framework conditions that impact negatively on their personal lives.

The ideas for measures for future climate-friendly living that were put forward in St. Johann covered more land ownership by the municipality, the greening of a public unused area, the expansion of public transport and support for active mobility. In Pöllau, proposals included the activation of vacancies, the mobilization of building plots, changes to funding schemes for the building sector and promoting the regional will for climate actions. In St. Johann, most proposed measures related to mobility, a policy field in which St. Johann encounters rather favorable conditions. In contrast, Pöllau's mobility issue was not mentioned at all in the workshop, although it is a key inhibiting framework condition for climate-friendly living. It might be that the most urgent areas of action remain blind spots, making it difficult to even imagine potential changes.

Co-design of proposals for transformative climate actions – 'Green Papers' (*published*): Based on the synopsis of empirical case study research findings and the visions co-produced by local transdisciplinary research activities, we applied

the theory-based characteristics of TCAs to the development of concrete proposals for TCAs in the case study areas. The co-creation of the respective 'Green Papers' was organized in an effort-sharing way with a clear division of tasks. Embedded in structured interactions (written feedback loops, online meetings, ad-hoc consultations), the research team took the lead drafting role, while core groups of committed stakeholders reviewed, commented, and gave inputs, which partly included involvement of municipal decision makers. Orientated towards striking the necessary balance between pragmatic and radical action, the resulting Green Papers put forward first, but crucial incremental steps with ambitious and more radical horizons. Both Green Papers include a roadmap with proposals for concrete first implementation steps.

The *Green Paper of the Tyrolean case study region* on *"How Less is Better for Everyone – Climate Friendly Living in St. Johann"* exemplifies the importance of sufficiency with respect to housing shortage, land use demands for housing, and soil sealing in the municipality. The green paper explains the relevance of sufficiency for tackling these problems by proposing a housing agency dedicated to the activation of unused rooms in flats and houses ('invisible living space'), 'classic' vacancies, and rooms in holiday homes. Thanks to the LEADER management, the Green Paper was presented to the municipality's building committee. At the same time and due to the urgency of the topic, a group of citizens in St. Johann set up a foundation dedicated to problematize invisible living space, thereby, turning the knowledge produced in the project into a useful input for local civic initiatives of exploring feasible and effective climate actions.

The *Green Paper for the Styrian LEADER region* on *"Innovative Governance of Climate-Friendly Regional Development"* elaborates a concrete proposal for empowering and transitioning the regional LEADER organisation into an institutionalised change agent for regional transformation management. It is a proposal for stronger regional coordination in voicing regional concerns for transformation vis-à-vis the Austrian multi-level governance system. The Green Paper responds to the unsatisfied demand, as articulated by local stakeholders, for a regional entity with the mandate to strengthen regional formation of will and to initiate transformative processes towards changing structural framework conditions. Such transformative multi-level governance is especially required with regard to the priority field of the region in need of climate action: the emission-intense, car-dependent mobility system caused by dispersed settlements structures. Changing non-sustainable mobility provisioning systems, overcoming growth-oriented spatial planning practices, and developing inwards-compacted, revitalised, mixed-use settlements with short distances and reduced mobility needs overstrains, however, the competencies and capacities of rural municipalities, and it pushes existing regional governance structures to their limits. Changing traffic-producing settlement structures requires collective agency, coordinated action across municipalities, and support from the multilevel governance system, including political decisions at higher-ranking state level, e.g. for changing planning regulations, enacting fiscal instruments, or financing infrastructure for public transport and active mobility. The policy proposal opts for embedding the transformation agency into the existing institutional landscape by developing further the LEADER governance model of Local Action Groups (LAG) and its field-tested concept of 'community-led local development (CLLD). Endowing an existing governance body with a more ambitious mandate and new roles, instead of creating a new institution outside of existing structures, means

prioritizing functions over structures and favours a pragmatic over a more radical, but hardly feasible approach.

The proposal involves mandating the LEADER management to represent long-term, cross-generational regional interests, be it with respect to climate mitigation and adaptation or in favour of public welfare infrastructures. Such an empowered regional agency would be in charge of promoting regional change processes with an emphasis on linking climate mitigation and adaptation to improving regional eco-social policies and to providing foundational infrastructures, services, and goods (e.g., improved local retailing or customized public transports). Main tasks of a regional transformation management could comprise: i) stressing the urgency of the issue and strengthening the regional will to be climate-friendly (agenda setting, thematic ownership, strategic leadership); ii) organising and facilitating participatory development of a regional transformation agenda; and iii) proactively planning, steering, and supporting transformative projects and measures, bundled into goal-oriented policy mixes of pragmatic and radical measures along planned transformation pathways (implementation design, management, readjustment). A first step with significant leverage could be to revise the criteria for selection of publicly funded projects according to their transformation potential.

The management of the East-Styrian LEADER region is committed to implementing a pilot project based on the Green Paper, possibly in the frame of an EU co-funded rural innovation project. At higher-ranking governance level, the regional development agency for East Styria has already tested application of elements of the proposal, including in the frame of workshops with external participants.

Knowledge integration and dissemination (WP3)

WP3 undertook methodical triangulation, integrating knowledge gained by the various strains of research activities, and interdisciplinary analysis of transformative realism in the socioeconomics of climate-neutral land use from multiple perspectives. It monitored the multilevel scientific work, facilitating efficient workflows and assuring analytical consistency throughout all research activities. Designed as synthesis work package orientated on achieving science and policy impacts, WP3 has delivered a range of scientific and policy-relevant publications and dissemination products.

Policy brief 'Transformative climate actions' (*published*): In parallel to development of the framework paper and the SRE discussion paper on TCAs, and based on inputs gained from peer reviews and stakeholder feedback, we produced several versions of a thesis paper that summarizes the characteristics of TCAs in popular language. The final version has been published online as a 2-page policy brief and widely disseminated.

Policy paper 'Regional transformation agencies – innovative multilevel governance for climate-friendly structures in Austrian regions' (*published*): Based on the strongly positive reception by Austrian climate and regional policy experts, we expanded the scope of the Green Paper for the East-Styrian case study region and developed a transferable concept for transformative regional multi-level governance. The model is connectible to various existing governance structures under different, Austria-wide funding programmes for climate action and regional development. Addressed to policy-makers and funding bodies at federal level, the policy paper proposes the establishment of mission-

oriented regional transformation agencies, i.e. institutionalized governance actors that are mandated to shape in a goal-oriented and coordinated way regional change processes ('transformation by design'). As supra-municipal, bipartisan, and intermediary agencies, they take ownership in addressing key obstacles to transformation: the lack of regional will and capacity for collective transformative action. Establishing transformation agencies seeks to change the framework conditions of regional governance systems, as a precondition for transforming material and immaterial structures for climate-friendly living and working in the region. Regional transformation agencies shall make it possible to overcome existing system deficits, break through disadvantageous path dependencies, align the forces of different actors towards a common goal and at the same time provide the necessary capacities and skills for more transformative policies.

The characteristics of TCAs developed by TRANSREAL provide guidelines for the governance design and functional requirements of transformation agencies and represent qualitative benchmarks for its work. The concrete institutional design needs to be sensitive to the given political-institutional context in the region, the thematic priority issues requiring transformation, and existing power-related conjunctures. The forms of institutional embedding are thus subject to governance experimentation, and a certain level of diversity would appear superior to isomorph forms of implementation. Empowering existing governance structures with new roles, functions and modes of working may have primacy over creating new structures, but far-reaching operational independency of such regional transformation actors is, in any case, crucial to success.

The paper outlines the potential bandwidth of roles and functional requirements that regional transformation agencies may ideally fulfil:

- Ownership of transformation processes: strategic leadership with focus on thematic transformation fields of regional urgency; cross-sectional topics cutting across established policy fields, funding priorities and actor groups ('silos') are particularly suitable.
- Regional climate advocacy: representing long-term, inter-generational public interests in climate-friendly development; mandate to review the compliance of (publicly funded) measures with the regional transformation agenda, which may include a requirement to consider objections in municipal councils.
- Regional transformation agenda: strengthening and formulating the regional will for climate change-related transformation; building regional political commitment, e.g. through partnerships based on regional transformation contracts; facilitating development of a regional transformation agenda, which gives ambitious directionality to all project interventions and funding decisions, through participatory or deliberative processes.
- Implementation design: collaborative compilation of transformative portfolios of projects, actions, and interventions; combining pragmatic and radical measures to integrated policy mixes along planned transformation pathways with ambitious horizons (instead of traditional focus on single projects); preference for sufficiency-oriented actions; adequate consideration of eco-social goals, basic existential needs, and social security.
- Implementation management: organizing, steering and supporting the implementation process in proactive ways; vertical and horizontal coordination;

combining bottom-linked and top-linked governance mechanisms to utilize scope for action at and across different levels.

- Building of regional transformation alliances: organizing broad, heterogeneous, and unconventional multi-actor alliances; mobilising actors across different socio-cultural milieus and from outside of established structures; linking climate actions to everyday existential needs and the foundational economy to achieve broad social acceptance.
- Monitoring and evaluation: tracking and evaluating progress, learning, and revision of transformation agenda and action portfolios ('reflexive governance').

Discussion paper 'Postgrowth in spatial planning – core elements and search for traces in Austria'. Contribution to the Yearbook Spatial Planning (*accepted*): The working paper analyses relevant literature on Postgrowth/Degrowth and spatial planning vis-a-vis the context that while Austrian spatial planning strives for sustainable spatial development, empirical findings show that it has failed in recent years. A still prevailing growth paradigm promotes economic growth, and an absolute decoupling of environmental and resource consumption has hardly been achieved. The discussion paper summarizes the fundamental arguments of the growth critique and emphasizes the necessity of post-growth planning approaches in spatial planning. Through a comprehensive review of relevant literature, five core elements of post-growth-oriented spatial planning are presented, which are basically consistent with TRANSREAL's general characteristics of TCAs: Firstly, spatial planning should be oriented towards social-ecological goals. Secondly, a central social-ecological goal for spatial planning is a sufficiency-oriented use of land, taking into account aspects of distributive justice. Thirdly, neither a sole focus on small-scale niche projects nor on abstract macroeconomic proposals is sufficient; instead, post-growth spatial planning requires planning at multiple levels with the involvement of civil society actors in particular. Fourthly, forms of provisioning oriented towards the common good, particularly in areas of spatial planning, can enable both basic services that are accessible to all and the careful use of natural resources, thus ensuring minimum social standards while taking ecological limits into account. Fifthly, emancipatory decision-making processes are essential in order to promote open negotiation processes and thus enable the collective shaping of a socio-ecological transformation. Based on these core elements, the paper discusses the fact that, despite the conceptual examination of growth limits and resource conservation, growth-oriented tendencies are still recognizable in Austrian planning practice. Finally, alternative ways of resolving conflicting objectives are presented. In line with the core messages of the TRANSREAL project, this literature review concludes that rather than there being a 'master plan' for the necessary societal transformation emphasized in the post-growth discourse, the tension between radical ambitions and small-scale proposals can be reduced through 'strategic pluralism'.

Journal article 'Conceptualizing transformative climate actions: learnings from and for sufficiency research.' *Submitted* to 'Climate Policy': This article (re)conceptualises TCAs by examining the emerging literature on sufficiency. In so doing, it first applies abductive reasoning to investigate key challenges for TCAs and subsequently turns to retroductive reasoning to explore necessary characteristics of climate actions to successfully address these challenges. Based on that, it highlights six policy-relevant characteristics of TCAs.

They (i) transform forms of life and provisioning systems, (ii) subordinate efficiency to sufficiency, (iii) empower collective agency, (iv) combine top- and bottom-linked approaches at all levels, (v) ensure essential provisioning for all while limiting excess production and consumption, and (vi) build power-sensitive alliances based on everyday interests. For each characteristic, we demonstrate possible forms of implementation in climate policies using examples from the field of mobility.

Book chapter 'Transdisciplinarity to promote transformative climate actions - Evidence from Austrian rural areas' *(accepted)*: This contribution to the forthcoming book 'Rural Geographies in Transitions' gives a detailed account on the transdisciplinary approach used in the project. The article introduces the research design, describes the challenges in relation to climate-friendly living in the two regions and their main municipalities and outlines the three phases of the local co-design process - problem identification, co-production of solution-oriented knowledge and embedding of co-produced knowledge. Finally, it subjects the findings to a (self-)critical reflection.

Journal article 'Approaches to climate-friendly living in rural areas: evidence of two Austrian municipalities'. Austrian Journal of Agricultural Economics and Rural Studies *(accepted)*: To answer the question of how to give incentives to climate-friendly living in rural municipalities, the article employs a comparison of the socio-economic profiles of both case study municipalities to derive their critical climate-related challenges. To examine how different framework conditions have been influencing the climate measures taken by the municipalities, the self-reported actions on their websites are analysed. According to website documentation, St. Johann i.T. is pursuing a green growth path focusing on technical solutions, while in Pöllau the preservation of natural resources are highlighted. In both cases, critical climate-related challenges are barely addressed.

Journal article 'Attitudes towards the environment and climate: a comparison of rural and urban areas'. Sozialwissenschaftliche Rundschau *(accepted)*: The article explores differences in attitudes towards the environmental and climate crisis between different generations by comparing rural and urban areas. According to the analysis of Austrian data of the International Social Survey Programme (ISSP), both urban and rural populations see the climate crisis as a threat to the same extent. However, residents in rural areas are more willing to accept compromises and also rate their own responsibility more highly. They also show a greater trust in the potential of science and business to "solve" the climate crises.

5 Schlussfolgerungen und Empfehlungen

TRANSREAL responded to essential conclusions of the preceding APCC Special Report on 'Structures for climate-friendly living' (APCC 2022), applied for the first time its pivotal demand for necessary changes of framework conditions to rural areas, and conducted successful steps to setting the need for climate-related and social-ecological transformation of structures for everyday living (incl. infrastructures, settlement structures, regulations) onto local agendas. The project has created novel knowledge and contributed to advancing Austrian transformation research by blending and integrating strains of research that were

up to then rather decoupled: climate research, social-ecological transformation research, including from degrowth and postgrowth realms, foundational economy, regional (planning) and sufficiency research. Therewith, TRANSREAL has taken up the learning from the pre-project GOAL that climate policies would gain in effectiveness if systematically connected to socio-economic challenges of municipalities. It implemented GOAL's recommendation that transformative climate policies require stronger integration of climate research with social science-based transformation studies. Findings and policy proposals of TRANSREAL are currently being incorporated into the transformation pathways of the forthcoming 2nd Austrian Assessment Report on Climate Change (AAR2), which already demonstrates the scientific impact of the project. By producing three peer-reviewed scientific publications focusing on transformation in rural areas, the project has substantially contributed to filling an existing research gap, which is of particular relevance for climate policies in Austria with its pre-dominant share of smaller municipalities in rural and peripheral regions.

First and foremost, the project has generated a deeper and better understanding of characteristics and requirements necessary for TCAs. This influences the structuring of the chapter on "Transformation Pathways" in AAR2 (Second Austrian Assessment Report on Climate Change), which will be published in 2025. The literature assessment confirms the TRANSREAL result that TCAs have to be desired, effective, and feasible. The research in TRANSREAL has contributed to an increasing consensus about the effectiveness of climate actions, be it efficiency- or sufficiency-enhancing measures. It has strengthened awareness that what is desired strongly depends on contexts, but also implies linking social and environmental objectives and strengthening provisioning systems to satisfy basic needs, including housing and mobility. The key challenge, identified in the literature as well as in TRANSREAL, refers to feasibility.

Furthermore, based on a (self-)critical reflection of the transdisciplinary research process, we have identified several key lessons that may be relevant for future research activities and for TCAs especially in rural areas in general:

- First, the cooperation between researchers and stakeholders led to *useful results for both groups*. For the researchers of the project team, cooperation permitted access to regional decision makers and selected members of the regional population, thereby, gaining a better understanding of regional framework conditions for TCAs. Due to requests from regional stakeholders young people were given a central role in the project. With respect to stakeholders with experience in shaping framework conditions, especially the LEADER-managers, but also other regional experts, e.g., climate adaptation managers and local politicians, their positive response to the Green Papers shows the relevance of the produced knowledge. The national knowledge alliance has allowed upscaling insights for regional climate policies to regional and national decision makers, including the coordinators of Austria's LEADER managers that are currently evaluating how to mainstream proposed transformative actions.
- Second, the project illustrates the advantages of *treating local and regional actors on equal footing*, looking for consent and making dialogue the basis of a specific respectful, ethical and engaged form of cooperation. In this setting, researchers try to empower stakeholders with relevant knowledge and avoid to simply extract data like 'vampires' and then disappearing. Together with key stakeholders we were able to identify problems of existing framework

conditions, define adequate forms of participation and propose solutions based on a clear division of labour and spaces for exchange and communication. Therefore, the project valorized distinct forms of knowledge, competences, interests, roles, and communication practices. At the same time, research results had to be framed in a way acceptable for current political decision makers, e.g., the municipal council. This resulted in a research process that privileged pragmatic first steps, while sidelining more radical measures in the local workshops.

- Third, the project also shows the limits of a transdisciplinary approach with respect to *the possibility of problematizing, not to mention overcoming uneven power relations*. Ambitions to change framework conditions like infrastructures, laws or planning regulations, need supportive public decision makers. Therefore, the involvement of regional stakeholders was crucial for the success of the project. We opted for cooperation with local professionals from LEADER managements with experience in local power relations as well as in organizing change processes. In Pöllau, there were also close contacts with the mayor. As a consequence, the project team was dependent on how these gatekeepers managed the local power game and which regional stakeholders and young persons could be motivated to participate. This is reflected in the different composition of the workshops: In St. Johann participants had predominantly a civil society background, while in Pöllau they were members of the municipal council. This led to different priorities on which framework condition TCAs should focus.
- Fourth, the cooperation with stakeholders *sharpened the understanding of potentials to change framework conditions* and to implement TCAs in rural areas. The selected regions, one more prosperous, the other one more peripheral, present different challenges in the climate-relevant policy fields of mobility and land consumption: excessive land consumption in the Tyrolean growth region and strong car dependency due to scattered settlement structures in the peripheral Styrian region. The respective socio-economic contexts of the two regions were decisive for the focus of the Green Papers and Policy Paper. In both regions, the proposed climate actions suggest changes in framework conditions that contribute to both, enabling climate-friendly living and contributing to short-term improvements in the everyday life of the local population: The proposed housing agency in St. Johann would tackle housing shortage, especially for young people, by mobilising 'invisible living space'. The proposed Styrian transformation agency would deal with the lack of regional commitment to overcome the peripheral position of the region by coordinating transformations that affect resident's everyday life. The chosen policy foci were in full agreement not only with local preferences, but also with the most recent research results in climate research. Therefore, they can potentially be transferred to regions with similar framework conditions.
- Fifth, the cooperation also *sharpened the understanding of barriers*. A decisive barrier for transformative actions is that critical civil society is weaker in rural areas than in cities. No activists that resist existing framework conditions (e.g. Last Generation) or raise awareness on unsustainable practices and structures (e.g. Fridays for Future and degrowth movement) participated. This reinforced the above-mentioned neglect of system-changing topics in the local workshops. This problematizes the widespread hope in the transformative potential of social movements, especially in rural areas, and complicates

attempts to link pragmatic first steps to profound long-term changes. We have to admit that in TRANSREAL, pragmatism remained predominant.

- Sixth, contrary to media visibility, the young generation in rural areas is at least no less environmentally and climate conscious than that in the city. Our difficulty in the TRANSREAL project in motivating young people in rural areas to participate in transformative climate measures must therefore be due to other circumstances. In this context, the Covid-19 pandemic is probably a significant indicator. It has also prevented us from being on site as planned, and due to lockdowns youth centres also lost contact with young people during this time.

Already during the project runtime, partner EAA has used project results for informing ongoing adaptation policy processes at national level by feeding into the revision of the National Climate Adaptation Strategy and Action Plan (BMK 2024), which has been adopted by the Council of Ministers on 3rd April 2024 (cf. section 2.2.6). The new strategy document references publications by TRANSREAL, includes for the first time a section on the transformation of economy and society, and capitalizes on project results by outlining future pathways for integrating climate and social policies and for promoting future-proof forms of living. Results of the review of policies and actions for climate-friendly settlement development (M1.2) have been incorporated into recommendations for action for spatial planning, in particular regarding the bundle of implementation steps for action 13.5.1 'Reducing further land take, soil sealing and urban sprawl, taking into account natural soil functions'. In its role as policy support structure for the Ministry of Climate Action (BMK) and policy advisor for the climate coordination officers of the state governments, EAA will continue these activities and is in a privileged position to further disseminate and capitalize on TRANSREAL results for country-wide national and subnational policy-making and implementation initiatives on climate adaptation, in order to increase their transformative potentials. This includes the coordinating roles of EAA as service platform and technical clearinghouse mechanism of the climate adaptation model regions under the KLAR! Programme, in the Austrian climate adaptation network of professionals at regional levels (KWAN), in the training programmes for municipal adaptation advisors and for auditors of the 'Natural hazard and climate change preparedness check' for municipalities' as well as the forthcoming next monitoring, evaluation and revision cycle of the National Adaptation Strategy. Through intra-institutional knowledge transfer, EAA is currently trying to make available and prepare the knowledge generated by TRANSREAL for the Agency's expert teams on climate mitigation and societal change. As member of the Alpine Climate Board of the Alpine Convention, the EAA project team leader is already feeding insights gained from TRANSREAL into ongoing transnational implementation activities related to the Alpine Convention's Climate Action Plan 2.0.

The two Green Papers have already sparked follow-up activities and generated impacts beyond the level of the case study regions. The TCAs proposed for promoting sufficiency in terms of housing space and land use in St. Johann in Tyrol have been taken up by political municipal bodies and gained the support from local civil society, thus increasing likelihood of further implementation. The Green Paper for the East-Styrian region on transitioning the regional LEADER organisation toward regional transformation management has gained significant attention in the entire Austrian LEADER community and is currently fertilizing the discourse on reforming governance models and approaches of the LEADER program within the

Austrian LEADER forum. Project partners will continue to support these processes in their respective roles.

The Policy Paper on 'regional transformation agencies' has already met upon remarkable interest and resonance by Austria's regional development expert and consultancy community, a running project on regional transformative innovations by the Austrian Conference on Spatial Planning (ÖROK), and by policy experts of the Chamber of Labor. Most importantly, the research team (A. Novy, W. Lexer) was invited by the Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML) to present the proposal for regional transformation agencies, to exchange about its implementation potentials, and to give policy advice on a more transformative design of the national funding programs on regional policy. Strengthening transformative orientation of EU co-funded programs under ELER, EFRE, ESF and, in particular, LEADER, obviously has enormous potential for leverage effects. A half-day meeting with the Ministry's heads of departments on regional policy on potentials and options for implementation took place on 9th April 2024. Partner EAA, in collaboration with WU, has been invited by the Ministry to review and revise the funding criteria for a possible project call on rural innovation systems, which may be used to test implementation of regional transformation agencies at the scale of pilot projects. Preparations for a meeting with high-level policy makers of the Ministry of Climate Action (BMK) and the Climate and Energy Fund are currently ongoing, with a view to jointly exploring options for application in the frame of model regions for adaptation (KLAR!) and mitigation (KEM), implementation-oriented funding schemes of the Climate Fund (e.g., ACRP-I), and ongoing efforts to strengthen coordination with the LEADER programme. These activities have good potential to lead to follow-up processes.

C) Projektdetails

6 Methodik

Reviews and analysis of literature (WP1)

Research Paper 1: Framework paper on transformative climate actions (WU).
Elaborating criteria for TCAs was an iterative, transdisciplinary learning process, leading to several revisions of the respective policy brief as well as a profound reformulation of the SRE-Discussion Paper on "Transformative Climate Actions" before its submission to peer-reviewed publication. Starting from the knowledge gap of how to link desired, effective, and feasible climate actions, a first draft of elements and criteria for TCAs was based on a broad literature review and discussed in local workshops, yielding vivid and positive resonance by both the research and the practitioner's communities and leading to further revisions before publishing the policy brief. The discussion paper was revised and further developed into a submission to the journal *Climate Policy* by applying abductive reasoning to specify the key challenges for TCAs and retroductive reasoning to substantiate their necessary characteristics.

Research Paper 2: Review and mapping of policies and actions with transformative potential in the field of settlement development in Austria (EAA).
Already in the exploratory interviews during project preparation, unsustainable land use for settlement activities, including their climate-damaging interdependencies with a car-centered and emission-intense mobility system, has been identified both as a priority field of climate action and as a main source of current socioeconomic and social-ecological challenges in both case study regions. This resonates with the key finding of the APCC Special Report SKL (2022) that current Austrian settlement structures inhibit climate-friendly and climate-resilient living. In a series of research team meetings, we identified two closely interconnected main barriers for achieving climate-friendly settlement structures: i) excessive levels of land consumption and soil sealing, and ii) dispersed, outward-oriented settlement development (urban sprawl).

For internal research paper 2, we thus conducted a comprehensive literature review and a structured mapping of policies and actions to reduce land consumption and soil sealing and to counteract urban sprawl in Austria. 'Policies and actions' relate to all means (e.g., policy interventions, measures, instruments, activities, initiatives) directed at, and (potentially) effective in, reducing land consumption/soil sealing and avoiding dispersed, splintered settlement development, thus contributing in a crucial way to development of climate-friendly settlement structures. Focusing on policy interventions at and across multiple levels that are at least partly (i.e., in specific federal states) in place, planned, recommended, or discussed, we reviewed policy documents, policy-related studies, grey literature, and expert opinion reports at the nexus of spatial development, spatial planning and climate policies. In order to compile a structured inventory of measures, about 60 source documents were screened, reviewed and evaluated, including in particular sources from the fields of spatial development policy, spatial planning, climate mitigation and adaptation, and

SDGs. Selection criteria focused on measures that are new, innovative, point beyond the status quo, transgress business-as-usual, and have a high potential for effectiveness vis-à-vis minimum levels of feasibility. We developed a structured matrix as a tool for mapping and analysis. It organizes policies and actions in a workable two-level hierarchy: i) action strategies (strategic bundles of measures), and ii) distinct instruments or measures. For each measure, the mapping required a description of the intervention logic and characterization according to a range of pre-defined categories (such as type of measure, state of implementation, legally binding effects, allocation to levels of governance, planning and implementation), plus an appraisal of existing implementation experiences, if available.

Research paper 3: Review of international scientific degrowth literature on climate actions to enable settlement structures for climate-friendly living (DV).

Research paper 3 documents a systematic literature review to identify the state-of-the-art in scientific literature on 'Climate actions to enable settlement structures for climate-friendly living'. It served as a research paper for internal use with the goal to create an inventory of literature to feed into the discussion paper on post-growth spatial planning, among others. For this purpose, our SCOPUS search was restricted to journal articles in German and English language that were published in the years 2017-2022. To be considered relevant, journal articles had to fulfill three main criteria that serve as proxies for climate-friendly living: They must a) comprehensively cover issues concerning spatial/settlement structures, b) focus on climate change/the natural environment/ecology, and c) be critical of the status quo, i.e. assume that current structures do not enable climate-friendly living (framing: crisis, good life, governance, degrowth, systemic change, etc.). Moreover, only papers mentioning actions in a broad sense, either already existing or discussed as proposals, were considered for the analysis.

Summarized, we performed the following activities:

- Identifying 155 out of 2.607 screened journal papers as relevant literature.
- Developing and applying of a partly inductively, partly deductively derived coding system.
- Informing inputs and discussions at stakeholder workshops through knowledge gained through the systematic literature review.
- The results of the literature review did not only highlight the research gap TRANSREAL is attempting to fill, but also underlined the relevance of deliverable M3.3 and laid the grounds for the respective discussion paper on post-growth and spatial planning.

Transdisciplinary research activities (WP1, WP2)

We opted for a transdisciplinary approach to foster cooperation of different actors and their respective knowledge, enabling integrative, participatory, and problem- and solution-oriented climate research. The TRANSREAL project team was composed of researchers from a university (Vienna University of Economics and Business, WU), a public agency (Environment Agency Austria, EAA), and research-activists from an NGO (Degrowth Vienna), which created already an internal diversity of forms of knowledge, encompassing academics, professionals, and activists.

The dialogue of researchers and stakeholders was organized in two forms – locally with local stakeholders and citizens and nationally in an emerging knowledge

alliance at the interface of climate and regional policies. The close dialogue and constant feedback loops were essential from the outset in order to jointly frame the research objects and the research design, opening spaces to incorporate concerns and knowledge from regional stakeholders. We acknowledged the context-specific complexity of climate actions, as integrating practical knowledge is of crucial importance to produce 'socially robust knowledge that is applicable in a specific context and socially accepted. The joint knowledge production between researchers and stakeholders was organized in three phases: Problem identification and establishing a common research objective (phase 1), followed by co-producing solution-oriented and transferable knowledge (phase 2), and transdisciplinary reintegration (phase 3).

Table 3: Overview of the transdisciplinary research process

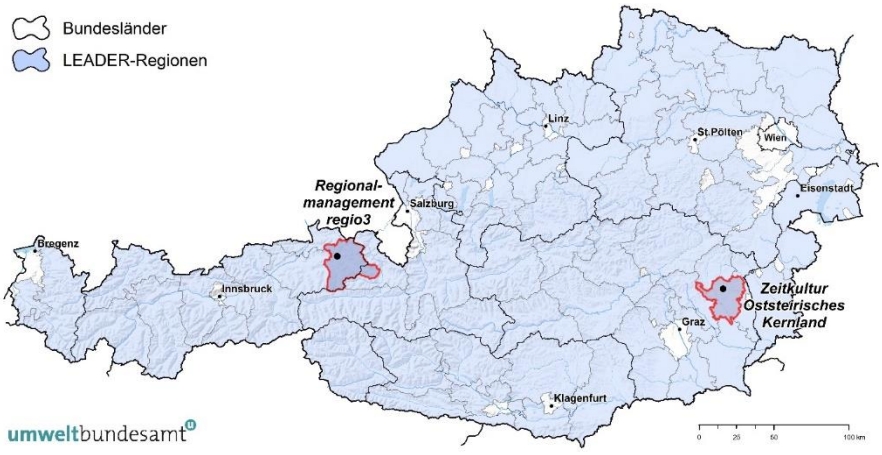
Activities	Stakeholders	Aim
Phase 1 – Problem Identification		
Informal interviews during the application process	LEADER management	Establishing field access, gaining commitment
Two exploratory co-design meetings (online) during application process	LEADER management and additional stakeholders	First scoping of problems and list of potential topics
Phase 2 - Co-production of solution-oriented knowledge		
Co-design meetings (online and in-situ) in both regions	LEADER management	Clarification on project goals and establishing consensus on the thematic research focus
Visioning workshops	Young people (16-29) and regional stakeholders	Co-designing visions for climate-friendly settlement structures
First KAT-Workshop	Researchers, sectoral experts, professionals, research activists	Feedback on the policy brief on TCAs
Phase 3 - Embedding of co-produced knowledge		
Drafting of Green Papers and several online-feedback rounds	LEADER management, regional stakeholders	Proposals for TCAs in the case study regions
Second KAT-Workshop	Researchers, sectoral experts, professionals, research activists	Feedback on Green Papers
Discussion in the municipal building committee (Tyrol) and in the ministry	Local politicians,	Feedback on Green Papers by political representatives

Local transdisciplinary research and co-design processes (WP2): To explore the potential for TCAs in rural areas, we worked in two case study regions with focus municipalities for in-depth research. To ensure openness to innovative climate actions, we chose two LEADER regions that are known for their comparatively ambitious climate policies: the LEADER region 'Regionalmanagement regio3' in Tyrol, with the municipality of St. Johann, and the LEADER region 'Zeitkultur Oststeirisches Kernland' in Styria, with the municipality of Pöllau (figure 1). Both municipalities belong to a climate change adaption model

region (KLAR!), and until 2019 St. Johann was part of a climate and energy model region (KEM), while Pöllau still is.

Already during the project application phase, LEADER-managers in the two regions were contacted to facilitate field access. Two virtual workshops were organized—one in each region. In Tyrol, the LEADER management was our sole institutional interlocutor, while in Styria, the LEADER management, the mayor of Pöllau and a climate adaption model region manager participated. These local key actors were asked to specify the greatest challenges for the region in general and for implementing framework conditions that enable and facilitate climate-friendly living. These virtual exchanges resulted in a jointly decided research focus on issues concerning the socioeconomic implications of settlement structures, housing, and mobility. This included ecological objectives like avoiding soil sealing as well as socioeconomic objectives like affordability and access. Furthermore, both regions expressed their interest in exploring ways to empower young people, as they were so far underrepresented in local participation processes.

Figure 1: Location of the case study regions within the Austrian environment of LEADER regions



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***Visioning workshops**:* These workshops aimed at co-designing visions for climate-friendly settlement structures. In a series of internal project meetings, the participatory research design was discussed and developed. Two groups of actors were targeted: regional stakeholders with knowledge on changing framework conditions and young people (age 16 to 29).

As the workshops took place on 18th/19th November 2022 and 3rd/4th February 2023, the Covid-19-pandemic probably reduced the willingness to participate. In both case study regions, the youth group and the stakeholder group each consisted of four to five people. Workshops started with an input on the necessity of changing framework conditions for climate-friendly living. Then participants, divided in a youth and an adult group, were asked to envision climate-friendly living conditions in their region by 2040. On the second day, young people and regional stakeholders formed two mixed groups to discuss and find agreement on three measures for future climate-friendly living in their municipality.

***KAT Workshops (WP1)**:* The KAT workshops aimed at facilitating multi-level co-production of knowledge for TCAs by giving voice to transformation-prone actors and at creating a durable Knowledge Alliance for socio-ecological Transformation (KAT). Within the project design, the KAT events fulfilled the specific role of reflecting on interim results of the local transdisciplinary research processes and enriched local research with inputs from higher-level policy perspectives, thus facilitating feedback loops. This connected transdisciplinary processes at local, regional, and national levels. Two KAT workshops with dynamic facilitation were conducted in Vienna.

The *first KAT workshop* attracted about 30 participants, which were composed of selected experts from science, (public) administration, spatial planning, regional development, and research scholar activists. In the first part, the characteristics of TCAs developed by TRANSREAL were presented and discussed. In the second part, working groups were formed on three core transformation fields that emerged from the first local stakeholder workshops: i) town centre revitalisation, ii) vacancies and brownfield sites, and iii) climate-friendly, affordable housing. Each topic was discussed against the backgrounds of a prosperous region with growth dynamics (St. Johann in Tyrol) and a peripheral region with shrinkage dynamics (Pöllau). The goal was to select and compile bundles of measures that are suitable to deliver TCAs within the given thematic and regional context. To facilitate the discussions, the working groups were provided with the action portfolios mapped by the policy review for research paper 2.

The *second KAT-Workshop* was attended by 25 participants. The event was dedicated to i) discussing challenges and strategies for transformation in the specific context of rural regions and vis-à-vis the existing regional governance landscapes, and to ii) presenting the policy proposals for TCAs developed for both case study regions and gathering feedback on the Green Papers. The discussions in the workshop centered on supportive and hindering factors for implementing TCAs in general, and those proposed in the Green Papers and policy brief in particular.

Qualitative field research (WP2): Based on the extended case study method (Buroway, 1998), we collected statistical data on demographic development, economic sectors, and housing, conducted a comprehensive document analysis, investigated stakeholder networks, and analysed the websites of municipalities within the case study regions. A particular focus was on spatial development concepts and spatial planning instruments, covering all planning levels from state level to local spatial planning at municipal level. Moreover, we identified and described relevant goals, contents, and measures of the new LEADER strategies, existing climate- and energy-related policies (e.g., state-level adaptation strategies, concepts of climate and energy model region, concepts of climate adaptation model regions) as well as relevant governance structures, processes and activities dealing with climate and energy issues. Findings are compiled and documented in two case study analysis reports (for project-internal use). Our knowledge of the case study areas has also been enriched by targeted onsite field research (participation in a local LA21 event in Pöllau 2022; attendance of the mobility festival "St. Johann MOBIL" in May 2023).

Statistical analysis of ISSP 2020 (International Social Survey Programme) (WP 3). The Austrian data from the ISSP 2020, which includes a focus on environmental and climate issues, was used to better understand the population's

attitude towards climate measures in general. The evaluation focussed on the comparison between urban and rural areas (rural areas, small- and medium towns, big cities) and between young and old (up to 30 years, 31-60 years, 61 years and more) in relation to environmental and climate issues.

7 Arbeits- und Zeitplan

Table 4: Final work and time schedule

TRANSREAL – Project Workflow Plan	**2021**	**2022**				**2023**				**2024**	
Work Packages (WPs) & Milestones (M)	**12**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**1**	**2**
WP1: Facilitating multi-level transdisciplinary co-production of knowledge	x	x	x	x	x	x	x	x			
Research paper (M1.1)	x	x	x								
Research paper (M1.2)	x	x	x	x	x	x					
Research paper (M1.3)	x	x	x	x	x	x					
KAT-meetings (M1.4, M1.7)						x		x			
SRE-Discussion Paper (M1.5)					x						
WP2: Conducting local participatory research processes in rural case study areas		x	x	x	x	x	x	x	x		
Regional workshops (M2.1, M2.2)		x	x	x	x	x					
Final case study report for each region (M2.3)		x	x	x							
Green Papers (M2.4)							x	x	x		
WP3: Knowledge integration and dissemination	x	x	x	x	x	x	x	x	x	x	x
Research team meetings (M3.51a-h)	x	x	x	x	x	x	x	x	x	x	x
Policy briefs (M3.1, M3.2)				x						x	x
Discussion paper (M3.3)									x	x	x
Journal paper manuscripts (M3.4)									x	x	x
Dissemination and knowledge transfer (M3.6)			x	x	x	x	x	x	x	x	x
WP4: Project management	x	x	x	x	x	x	x	x	x	x	x
Three consortium meetings (M4.1)	x			x		x					
Interim Report & Final Report (M4.2)					x						x

8 Publikationen und Disseminierungsaktivitäten

Wissenschaftliche und politikrelevante Publikationen und Produkte

- Novy, A. & Barlow, N. (2022): Transformative Climate Actions. SRE – Discussion Papers Nr. 05, Wirtschaftsuniversität Wien. [M1.1, M1.5] https://research.wu.ac.at/en/publications/transformative-climate-actions
- Lexer, W., Buschmann, D., Seuss, K. & Neumann, J. (2023): Internal research paper: Review and mapping of policies and actions with transformative potential in the field of settlement development in Austria [M1.2]
- Müller, H.L. & von Maltzahn, L. (2023): Internal research paper: Climate actions to enable settlement structures for climate-friendly living. Systematic review of international scientific degrowth literature [M1.3]
- Novy, A. & Kroismayr, S. (2023): Green Paper St. Johann in Tirol: „Wie weniger besser für alle ist – Klimafreundlich leben in St. Johann". [M2.4] https://www.klimawandelanpassung.at/fileadmin/inhalte/kwa/pdf/transreal/2_greenpaper_st.johann_online.pdf
- Lexer, W., Stickler, T. & Buschmann, D. (2023): Green Paper LEADER Oststeirisches Kernland: Innovative Governance von klimafreundlicher Regionalentwicklung: Weiterentwicklung von LEADER zum regionalen Transformationsmanagement. [M2.4] https://www.klimawandelanpassung.at/fileadmin/inhalte/kwa/pdf/transreal/1_green_paper_ost-steiermark_15-02-2024_v2.0_public.pdf
- Novy, A., Kroismayr, S., Barlow, N., Stroissnig, U., Lexer, W., Buschmann, D., Stickler, T., von Maltzahn, L. & Müller, H.L. (2024): Transformative Climate Actions. Policy Brief. Third Edition. [M3.1] https://www.klimawandelanpassung.at/fileadmin/inhalte/kwa/pdf/transreal/policy_brief_tcas_barrierfrei_update.pdf
- Lexer, W. & Novy, A. (2024): Regionale Transformationsagenturen. Innovative Mehrebenen-Governance für klimafreundliche Strukturen in österreichischen Regionen. Policy Paper. [M3.2] https://www.klimawandelanpassung.at/fileadmin/inhalte/kwa/pdf/transreal/3_policy-paper_regionale_transformationsagenturen_29-02-2024_v2.0_public.pdf
- Müller, H. L., Kalhorn, A.F. & Getzner, M. (forthcoming): Postwachstum in der Raumplanung – Kernelemente und Spurensuche in Österreich. Jahrbuch für Raumplanung. [M3.3]

- Kroismayr, S., Novy, A. & Lexer, W. (forthcoming): Zugänge zu einem klimafreundlichen Leben im ländlichen Raum: Zwei österreichische Gemeinden im Vergleich. Austrian Journal of Agricultural Economics and Rural Studies (accepted) [M3.4]
- Kroismayr, S., Novy, A. (forthcoming): Transdisciplinarity to promote transformative climate actions – Evidence from Austrian rural areas. In: Grabski, U., Greinke, L., Mose, I. und Steinführer, A. (Eds) Rural Geographies in Transition. Münster: LIT-Verlag (accepted) [M3.4]
- Kroismayr, S. (forthcoming): Einstellungen zu Umwelt und Klima: Ländlicher und städtischer Raum im Vergleich. Sozialwissenschaftliche Rundschau, 64 (2) (accepted) [M3.4]
- Bärnthaler, R., Aigner, E., Barlow, N. & Novy, A. (forthcoming): Conceptualizing transformative climate actions: learnings from and for sufficiency research. Submitted to Climate Policy on 25th March 2024 [M3.4]

Wissenschaftliche Vorträge und Veranstaltungen (Konferenzbeiträge, Workshops)

- Novy, A. et al. (2022): TRANSREAL – Transformative realism for effective climate action. Poster presentation and proceedings at the22nd Austrian Climate Day [Klimatag] 2022, 21st April 2022, TU Vienna. Proceedings of the 22nd Austrian Climate Day: 150-151. https://ccca.ac.at/fileadmin/00_DokumenteHauptmenue/03_Aktivitaeten/Klimatag/Klimatag2022/Poster/ACRP22_14_TRANSREAL_Novy.pdf
- Novy, A.; Barlow, N. & Fankhauser, J. (2023): Transformative Climate Actions. Presentation at the WU Department of Socioeconomics Workshop "Socio-economics in changing world: Perspectives on Transformation", 2nd-3rd March 2023, WU Vienna.
- Lexer, W.; Novy, A.; Barlow, N. & Buschmann, D. (2023): Transformative climate actions in the policy field of settlement structures. Abstract accepted at the European Climate Change Adaptation Conference (ECCA) 2023, 19th – 21st June 2023, Dublin, Ireland.
- Stickler, T. (2023 Methodological challenges of a transformative research design. 3rd RuralGeo2023 Conference, 27th June 2023, Groningen, Netherlands.
- Kroismayr, S. & Stickler, T. (2023): Wie gelingt die sozial-ökologische Transformation am Land? – Ein Vergleich zwischen einer ‚urbanen' und einer

‚ruralen' Landgemeinde". Kongress der Österreichischen Gesellschaft für Soziologie (ÖGS) 2023, 3rd July 2023, Vienna.

- Von Maltzahn, L. & Müller, H.L. (2023): Transformative Climate Actions (TCAs), the foundational economy and the property question. Session at the 6th Foundational Economy Conference, 14th September 2023, TU Vienna. https://www.tuwien.at/index.php?eID=dumpFile&t=f&f=183041&token=d003d089941279333fd90b8b1cab628c2311cc52
- Novy, A. (2023): Introduction to transformative climate actions. Session "Transformative Climate Actions (TCAs), the foundational economy and the property question", at the 6th Foundational Economy Conference, 14th September 2023, TU Vienna.

Politikrelevante Präsentationen

- Lexer, W. (2022): „Klima, Flächenverbrauch , Siedlungsentwicklung". Input presentation at stakeholder workshop, 18th September 2022, St. Johann in Tyrol.
- Lexer, W. (2023): „Klima, Flächenverbrauch , Siedlungsentwicklung". Input presentation at stakeholder workshop, 3rd February 2023, Pöllau.
- Novy, A. (2023): "Transformative Klimamaßnahmen – aber wie?" First KAT-Workshop, 22nd March 2023, WU Vienna. https://www.wu.ac.at/fileadmin/wu/d/i/mlgd/Downloads/Vortrag_Transformative_Klimama%C3%9Fnahmen_Andreas_Novy_final.pdf
- Novy, A. (2023): "Strategien für Transformation im ländlichen Raum". Second KAT-Workshop, 27th September 2023, WU Vienna.
- Kroismayr, S. (2023): „Green Paper St. Johann in Tirol". Input presentation at second KAT-Workshop, 27th September 2023, WU Vienna.
- Lexer, W. (2023): „Green Paper Oststeirisches Kernland". Input presentation at second KAT-Workshop, 27th September 2023, WU Vienna.
- Presentation of L. v. Maltzahn at the Jour fix of Community for Change, 14th March 2023, Vienna.
- Presentation of H. L. Müller and L. von Maltzahn at Klimafrühstück nonconform, 30th November 2023, Vienna.
- Lexer, W. (2024): TRANSREAL – Transformative realism for effective climate action. Presentation of key project results. Institutional expert exchange meeting, Environment Agency Austria, 5th March 2024, Vienna.

- Novy, A. (2024): "Ansatzpunkte zur Umsetzung transformativer Klimamaßnahmen". Praxisbeirat „Kompetenzzentrum Alltagsökonomie", 22nd January 2024, TU Vienna.
- Novy, A. & Lexer, W. (2024): „TRANSREAL – Projektergebnisse und Politikempfehlung zu ‚Regionalen Transformationsagenturen'". Federal Ministry for Agriculture, Forestry, Regions and Water Management (BML), 9th April 2024, Vienna.

Stakeholder-Interaktionsformate

- Exploratory co-design workshop during project application process, LEADER region 'regio3', 14th December 2020, virtual.
- Exploratory co-design workshop during project application process, LEADER region 'Oststeirisches Kernland', 22nd January 2021, virtual.
- Workshop for participatory problem scoping and planning of co-design process, LEADER region 'regio3', St. Johann in Tyrol, 3rd February 2022, virtual.
- Workshop for participatory problem scoping and planning of co-design process, LEADER region 'Oststeirisches Kernland', Pöllau, 29th of March 2022, Gasthof Hubmann in Pöllau.
- Public kick-off event of LA21 process in Pöllau, 'Neue Ideen für Pöllau', 6th May 2022, Schloss Pöllau.
- Visioning workshop „Klimafreundliches Leben in St. Johann", 18th November – 19th November 2022, @homebase St. Johann in Tyrol.
- Visioning workshop "Klimafreundliches Leben in Pöllau", 3rd February 2023 - 4th February 2023, Pöllau, Schloss Pöllau.
- 1st KAT-Workshop „Transformative Klimamaßnahmen – aber wie?", 22nd March 2023, WU Wien.
- 2nd KAT-Workshop „Ansatzpunkte zur Umsetzung transformativer Klimamaßnahmen", 27th September 2023, WU Wien.
- Stakeholder meetings for co-production of the Green Paper for St. Johann in Tyrol: 6th April 2023; 23rd May 2023; 13th June 2023; 13th July 2023; all: online.
- Meeting for co-production of Green Papers with stakeholders of both case study regions, 2nd May 2023, online.

- Stakeholder meetings and consultations for co-production of the Green Paper for LEADER region 'Oststeirisches Kernland': July 2023 – January 2024, online and phone conferences.
- Expert exchange meeting for institutional knowledge transfer and dissemination, Environment Agency Austria, 5th March 2024.
- Meeting with national policy makers for knowledge transfer, dissemination and policy-uptake, 9th April 2024, Federal Ministry for Agriculture, Forestry, Regions and Water Management (BML).

Diskussionen mit ExpertInnen und ForschungsaktivistInnen

- Expert*innengespräch „Wirtschaft im Grätzl", 1st December 2022, Rochusgasse, Vienna. https://landstrasse.gruene.at/news/allgemein/expertinnen-gespraeche/
- Degrowth reading circle, "Degrowth & Strategy – how to bring about social-ecological transformation".
- Expert workshop "Planning for Climate Change", organized by the International Karl Polanyi Society and funded by the Rosa Luxemburg Foundation, 22nd May 2024, WU Vienna.

Weitere Disseminationsprodukte und –aktivitäten (Websites, Audios, Mailings, Handouts)

- TRANSREAL project summary and downloads of project results at the national climate adaptation information portal "Klimawandelanpassung in Österreich". Operated by the Environment Agency Austria on behalf of the Climate and Energy Fund and the Federal Ministry of Climate Action (BMK): https://www.klimawandelanpassung.at/forschung/transreal
- TRANSREAL project webpage at the website of the Institute for Multilevel Governance and Development, WU Vienna: https://www.wu.ac.at/mlgd/home/transformation/transreal-transformative-realism-for-effective-climate-action/
- Introduction of the TRANSREAL project in the 44th STRN newsletter, June 2022. https://transitionsnetwork.org/wp-content/uploads/2022/07/44th-Newsletter-June-2022.pdf
- Audio file of presentation by Andreas Novy at the first KAT-Workshop. https://www.wu.ac.at/fileadmin/wu/d/i/mlgd/Downloads/Vortrag_Transformative_Klimama%C3%9Fnahmen_Andreas_Novy.mp3

- Policy brief ‘Transformative climate actions’ (M3.1): circulated in the Austrian network of climate coordination officers of the state governments; broadly distributed to expert and policy-making communities.
- Structured inventory of policies and actions with transformative potential in the field of settlement development in Austria (M1.2): distributed as handout and by email to participants and stakeholder networks in both case study regions; distributed to stakeholders in the LEADER Region ‘Oststeirisches Kernland’ as supplementary material to the Green Paper; distributed to participants as handout at the 2nd KAT workshop.
- Presentations held at all stakeholder workshops in case study regions and at both KAT workshops (M1.4, M1.7, M2.1, M2.2): distributed as handouts and by email to participants, stakeholders and their affiliated networks
- Green Papers for both case study regions (M2.3): distributed by email to stakeholders and their networks in both regions.
- Policy paper on ‘Regional transformation agencies’ (M3.2): shared by email with expert and policy making communities from climate research, climate policy, and regional policy in Austria.

Diese Projektbeschreibung wurde von der Fördernehmerin/dem Fördernehmer erstellt. Für die Richtigkeit, Vollständigkeit und Aktualität der Inhalte sowie die barrierefreie Gestaltung der Projektbeschreibung, übernimmt der Klima- und Energiefonds keine Haftung.

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