



GRANULAR

SYNTHESIS REPORT ON THE MULTI- SPATIAL UNDERSTANDINGS OF RURAL DIVERSITY AND POLICY NOTIONS FRAMEWORK

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D2.1 SYNTHESIS REPORT ON THE MULTI-SPATIAL UNDERSTANDINGS OF RURAL DIVERSITY AND POLICY NOTIONS FRAMEWORK

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1. Executive Summary

This document presents a theoretical framework for contemporary rural differentiation tendencies. Building on different theoretical strands, it starts with a distinction between *absolute*-, *relative*-, *relational*-, and *circular spatial lenses* to characterize rural boundary-setting choices, issues and problems. A second analytical step interlinks multi-spatial theorizing with threefold spatial architectures: a theoretical framework that understands rural spaces' production, reproduction and transformation as the outcome of rural localities, formal rural representations and everyday rural lives. As three different but interdependent and interconnected co-producers of rural spaces, this threefold spatial architecture points, amongst others, to the significance of changing formal rural representations and rural functionalities in time, with a special eye for controversies around the rural as *spaces of production* and *spaces of consumption*. A third step extends the recognition of rural functional dynamics to scholars that focus on rural areas' multifunctionality in relation to the strengths and weaknesses of different manifestations of rural capital assets.

Together these different theoretical building blocks are subsequently blended into a framework that concentrates on the *productive*-, *residential*-, *environmental* and *recreational* functionalities of rural areas. This framework emphasizes that these four key functionalities are increasingly characterized by place-specific interaction patterns and balances or, conversely, dis-balances and trade-offs. Such functional dynamics need to be scrutinized and identified through multi-spatial analysis. It is further concluded that current attempts to develop multi-layer rural classification schemes increasingly intend to take rural functionality dynamics into account, going along with an expansion of formal rural representations through additional categories of rural areas.

The second part of this document relates the relevance of our theoretical deliberations to current EU policy notions, in particular rural functional areas, the action pillars and policy objectives of the Long Term Vision for Rural Areas (LTVRA's), with special attention to latter's references to rural resilience, rural wellbeing, and rural proofing. More generally, it concludes that these guiding policy notions face analytical problems and challenges when acknowledging multi-spatiality and multi-functionality as critical aspects of contemporary rural differentiation tendencies and processes.

Finally, the concluding section of this report will synthesize its overall findings in a set of design principles for a prototype Rural Diversity Compass as an alternative approach to characterize ongoing rural differentiation. This Compass will present an alternative by providing insight into the place-specific backgrounds, features and drivers of rural functionality dynamics; in doing so it aims to support rural policy making and rural proofing efforts at different levels while avoiding the pitfall of an ever expanding categorisation of formal rural representations. So, please keep in mind that the forthcoming document primarily aims to provide the theoretical foundation and substantiation for this other, more tangible objective of GRANULAR's Workpackage 2.

2. Introduction

GRANULAR's D2.1 starts with an introduction to the key characteristics of a multi-spatial lens as an overarching theoretical framework to analyse rural diversity. As will be argued throughout this report, a multi-spatial lens may contribute to a comprehensive understanding of contemporary rural differentiation tendencies. Our multi-spatial lens is inspired by recent scholarly thought on so-called boundary orientations, that is, different orientations towards defining the boundaries of rural spaces. It further builds on Lefebvre's three-fold spatial architecture based on a distinction between spaces of practice, spaces of representation and spaces of everyday life. This multi-spatial approach will be extended with multifunctionality as another key building block of GRANULAR's theorizing of rural diversity and differentiation and related to ongoing attempts to classify rural areas in ways that grasp significant dynamics and differentiation tendencies.

The second part of this report aligns this analytical framework with meaningful policy notions, with special attention paid to Rural Functional Areas, Rural Resilience and Rural Wellbeing. The latter two are important guiding principles for the European Union's Long Term Vision for Rural Areas (European Commission, 2021) and Rural Policy Proofing and have been attracting scholarly attention for a longer time. The first represents an emerging policy notion at EU level that is still in its theoretical infancy.

The concluding section synthesizes and summarizes the theoretical insights into design lessons for elaborating a proto-type Rural Diversity Compass, as anticipated in D2.2 as another principle deliverable of WP2 and in line with GRANULAR's overall objectives.

3. Multi-spatial theorizing of rural differentiation processes

3.1 Different Spatial Boundary Orientations

Jones and Woods (2013) outline the following three different notions of space that are applied in rural research:

Absolute spatial lens – Space is understood as a bounded territory in which different spaces and places are treated independently, and the local is understood as distinct from the global. Spatial determinism (i.e. the idea that social and economic outcomes are determined by where they are located) has some purchase. By focussing on rural-urban boundary setting, the notion of absolute space builds especially on descriptive and socio-cultural traditions to identify the distinctive essence of 'rural' and 'urban' environments and societies and to precisely categorise and delimit rural and urban spaces, especially where the absolute spaces of local government areas are used as the units for analysis and classification. Moreover, the logic of absolute space is reflected in approaches that explain the features of rural and urban economies and societies by their rural or urban locality, including attempts to distinguish 'rural localities' as functionally different from 'urban localities'. Although extensively critiqued, the influence of absolute space frequently persists in case study selection and research methodology by prioritizing absolute spatial lenses as units for comparative analysis in ways that insufficiently recognize the significance of other relevant spatial lenses.

Relative spatial lens– Space is understood as continual and connected, which may be divided into territories or localities, but where the boundaries of these units are fluid and contingent, different places are inter-connected, and the local is connected with the global. Places or spaces cannot be considered truly independent, but territories or localities can be regarded as connected containers for spatial analysis. A relative spatial lens focusses on rural-urban interconnections and interdependencies and emphasizes that the boundaries between the two are porous. It may cover work on population movement and commuting, multi-local living arrangements, use of commercial and public services, ecological networks of food provisioning, water supply, other eco-system services, waste disposal etc. In research from a relative space perspective, a functional area may be a commuting field a city-region, or a watershed or river catchment. Indeed, research to identify such functional areas for the purposes of research and governance is in itself an articulation of the notion of relative space, as also reflected in EU's recent attention for so-called Rural Function Areas (see paragraph 4.1). It enables to emphasize that the boundaries of functional areas are not discrete, that different boundaries may exist for different functionalities, and that these may partly overlap. Nonetheless, functional areas tend to be imagined on a two-dimensional plane, e.g. emanating out from a central city to the adjacent hinterland. Indeed, it is noteworthy that the majority of this type of research on rural-urban interactions has been conducted from an urban-centred perspective: either as case studies tracing and mapping rural linkages and relations of a single town or city or as more general analyses of rural inputs into urban economies. Studies that start with rural areas and trace relations outwards, commodity sales, commuting flows, temporary labour migration, tourist origins, energy, and water supplies, etc. – to what will commonly be multiple urban areas, are much less numerous. Accordingly, the balance of flow in rural-urban interactions may be misrepresented. One of the exemptions that may be mentioned is the rural web as elaborated within the European ETUDE project, which grants special attention to differentiating agrarian pathways that may contribute more or less positively to mutually reinforcing rural relations and rural quality of life (Milone and Ventura, 2010; Van der Ploeg and Marsden, 2008).

Figure 1: Boundary-led multi-spatiality

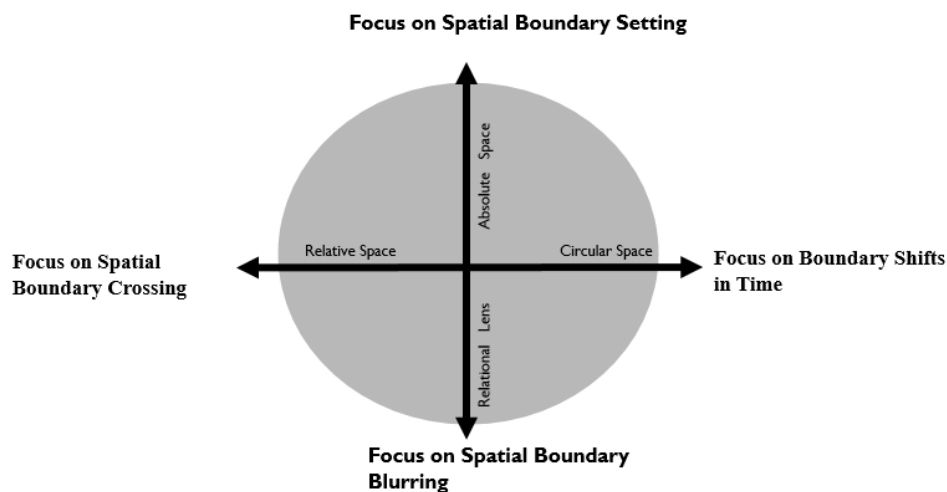


Figure 1 summarizes the principle differences in boundary orientations between these three spatial approaches. In addition, it presents the circular spatial lens as a fourth entrance point to capture and characterize contemporary rural differentiation processes and tendencies.

Relational spatial lens– Space understood as fluid and dynamic. Space does not just exist in 2-dimensional Cartesian form, as represented on the flat plane of a map, but can be twisted and compressed, such that points that are distant on a 2-dimensional place may be proximate in networks of information exchange or cultural affinity. For example, farmers in Tuscany might feel closer to Roman or German clients ordering Tuscan salami than farmers operating close to same metropolitan area¹. The same distant Roman/German clients are, hence, critical co-shapers of the Tuscan rural area. In theoretical terms: places or localities are not bounded, but are nodes or entanglements of social, economic, political, and cultural relations in networks of interaction and spaces of flow; and the local and the global are collapsed into each other. Places or spaces cannot be seen as independent but are inherently interconnected. As such, it recognizes that rural-urban interactions do not only occur between a city and its adjacent hinterland, but may connect geographically distant places in different parts of the world (i.e their topological space). For example, satellite communications and air travel may mean that a remote rural periphery is more intensely connected with a distant metropolis than with a supposed regional city to which road or rail connections are poor; patterns of migration may connect rural communities in Asia or Africa to European cities; and urban economies may be dependent on natural resources imported from distant rural mines or oil fields, more than on the resources of the immediate hinterland. These relations transgress not only the boundaries of local government territories but also of nation-states. It makes relational space a more elusive concept to grasp as it is difficult to represent graphically or to operationalise in practical research. In spite of these challenges – or because of them – relational space has been extensively debated and discussed in 21st-century rural studies (see e.g. Milbourne and Kitchen, 2014; Heley and Jones, 2013; Murdock, 2006)

Circular spatial lens- This fourth spatial lens shifts the analytical focus to rural-urban resource flows in time. As a spatial-temporal lens, it allows us to interlink rural dynamics with longer-term sustainability and climate change concerns. In addition to absolute (e.g. the rural as a repository of finite and infinite natural resources) and relative or relational spatial perspectives (e.g. rural-urban energy flows), a circular lens incorporates insights from sustainability studies with different disciplinary backgrounds, including scholarly attention for e.g. circular resource use hierarchies (e.g. Reike et al, 2022), necessary behavioural change and the necessity of low, no- or de-growth scenario's (e.g. Haworth, 2017; Jackson, 2009). Circular economy challenges may affect rural areas rather differently in terms of opportunities, limitations, practices and discourses, topics to which we will return later in this report. It is also important to notice that circular space may be associated with human resource flows that entail repeated rural-urban boundary crossings, as e.g. manifested in societal phenomena as seasonality, multi-locality, commuting, circular migration patterns, etc. All have place-specific rural socio-economic impacts (see e.g. Rahm et al 2021, in relation to circular migration). In paragraph 3.3. we will illustrate in more detail how circular spatial thinking may go along with rather different rural practices and imaginations based on contrasting circular farming ideas and pathways in the Netherlands.

3.2 Threefold Rural Spatial Architectures

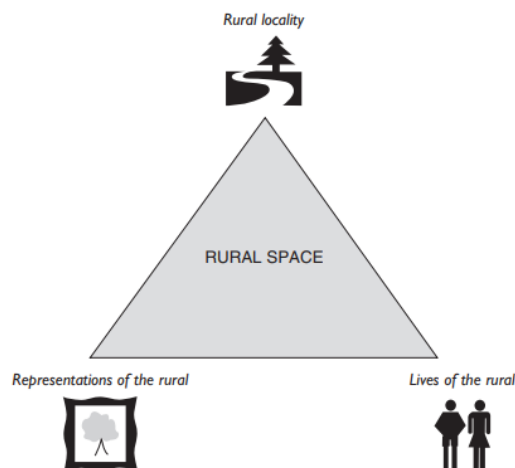
Thus far we concentrated on boundary orientations to explain the need for a multi-spatial understanding of contemporary rural dynamics. Other rural scholars associate multi-spatiality primarily with the production, reproduction and adaptation of rural space. Strongly drawing on ideas of French philosopher Henri Lefebvre, as outlined in his '*Production of Space*', Halfacree (2005), for instance, introduces a three-fold rural spatial architecture as illustrated in Figure 2.

¹ See for instance www.lavialla.com – a biodynamic farm producing local products mainly for the German and Dutch market; products may only be bought on the farm and online.

This scholarly focus on the ‘what and ‘how’ of (rural) spaces may be briefly summarized in the following points:

- Intra-rural differences can be enormous, and rural-urban similarities can be sharp;
- There is not one rural, but there are many rurals;
- The rural can conjure up as countryside, wilderness, outback, periphery, farm belt, village; hamlet, bush, peasant society, pastoral, garden, unincorporated territory, open space;
- The rural exists through structural, material processes and through representations;
- Investigation into rural space has to tease out the entanglements between structural and discursive practices and processes;
- A three-fold spatial architecture allows for a better understanding of the entanglements between the material, representative, and imaginative facets of rural space;
- These three spatial facets interconnect the key roles of markets (*spatial practices*), the state (*formal representations of space*), and civil society (*spaces of representations*);
- These three spatial facets may manifest themselves as congruent (i.e. coherence between the three elements), contradictory or disjoined (e.g. formal representations in conflict with spatial practices), or may hide contradictions with disruptive outcomes in terms of societal reproduction of the rural;

Figure 2: Threefold Spatial Architectures (Halfacree, 2005)







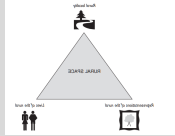
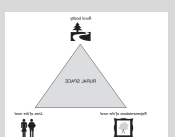
Halfacree’s theoretical framework complements the previously introduced boundary-led understanding of multi-spatiality in different ways. Firstly, it concentrates on how rural spaces are produced, reproduced and adapted through structuring elements as global capitalism, state interventions and civil society. Secondly, it allows us to pay attention to how rural functionalities change in time. Halfacree makes a distinction between the rural as *spaces of productivism* and *spaces of post-productivism*. The two notions illustrate the dynamic in the UK’s rural areas over the last decades of the 20th century, with rural functionalities changing from a primarily agro-centric understanding of *spaces of productivism*, to spaces of *post-productivism* characterized by residential, environmental and recreational functionalities.² Thirdly, Halfacree introduces different rural imaginaries. His ‘*Super-productivism*, and *Consuming idylls*’ concentrate on the implication of changing functionalities for the formal representation of rural areas and the everyday life of rural residents.

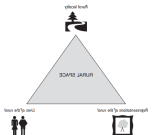
² Marsden (1999) made a similar distinction between the rural changing from a place of production to a place of consumption.

His *Effaced rurality* underlines that the distinctiveness of rural areas might be under threat within global capitalism by ‘*leaving rural space only as ghostly presence, experienced through folk memory, nostalgia, hearsay, etc.*’ (ibid, p.57). In other words, rural areas may lose their specific identity, , both in material and immaterial sense. Contrastingly, his *Radical Visions* introduce a rurality rooted in the ‘*social imaginary of every days life*’ capable of challenging the logic of capitalism, e.g. ‘*through decentralized and relatively self-sufficient living patterns or low impact development*’. Thus, a rurality that beholds a transformative capacity as a particular manifestation of rural resilience (see further section 3.2).

Halfacree’s threefold rural spatial architecture provides a complementary multi-spatial lens that helps us to grasp, unpack and characterize rural differentiation. With its attention to how the rural is produced, reproduced and adapted materially as immaterially, he acknowledges the significance of changing rural functionalities(losing, for instance, its agro-centric focus). Moreover, the analytical framework enables us to address critical questions about the distinctiveness of the rural, its transformative capacity and differentiation tendency, and hence, rural diversity. Table 1 briefly summarizes the principle features of Halfacree’s lens in relation to the boundary-led understanding of multi-spatiality.

Table 1: Summary of GRANULAR’s multiple spatial lenses

Absolute Space 	The Rural as (Distinctive) Stocks of Resources (human, natural, material, immaterial)
Relative Space 	The Rural as Resource Flows, Mobility Patterns and/or Value Production and Distribution Chains that cross Rural-Urban boundaries
Relational Space 	The Rural as (co-) shaped by other than Spatial Proximity Relations (e.g. Digital, Social, Cultural, Organisational or Cognitive Relations)
Circular Space 	The Rural as part of Spatial-Temporal Resource Dynamics facing Planetary Ecological Boundaries and knowing Leisure-, Life-Cycle- and/or Life-Style-dependent Mobility Patterns
Rural Localities 	The rural as distinctive spatial practices linked to either production or consumption through actions, flows, transfers, and interactions that ‘secrete’ specific material expressions and societal reproduction mechanisms (‘one of the productive permanences of capitalist spatiality’)
Formal representations 	Formal framing of the rural within global capitalism and its accompanying commodification and exchange value processes. Formal representations are conceived, abstract and expressed through ‘arcane signs, jargon, codifications and in things such as monuments, factors, housing, estates, workplaces, bureaucratic rules, etc.

<p>Lives of the Rural</p> 	<p>Everyday lives of the rural, inevitable incoherent and fractured, with individual and social elements in their cognitive interpretations, reflections 'tumults and passions of space as directly lived' and therefore thought to be more or less supportive to, or conversely, subversive for other spatial facets of the rural</p>
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3.3 Rural Functionality Interwovenness

As the foregoing concludes, a multi-spatial understanding of contemporary rural areas involves insights into rural functionality dynamics and entanglements. Wilson (2010), building on earlier scholarly debate on agriculture's multifunctionality, theorizes the 'quality' of rural space as the intersection between economic, social and environmental capital and concludes that a strong rural spatial quality will be achieved when all three capitals are equally well developed, with a characterization of well- and poorly developed economic, social and environmental capitals as summarized in Table 2.

Table 2: Wilson's understanding of strongly and weakly developed rural capital

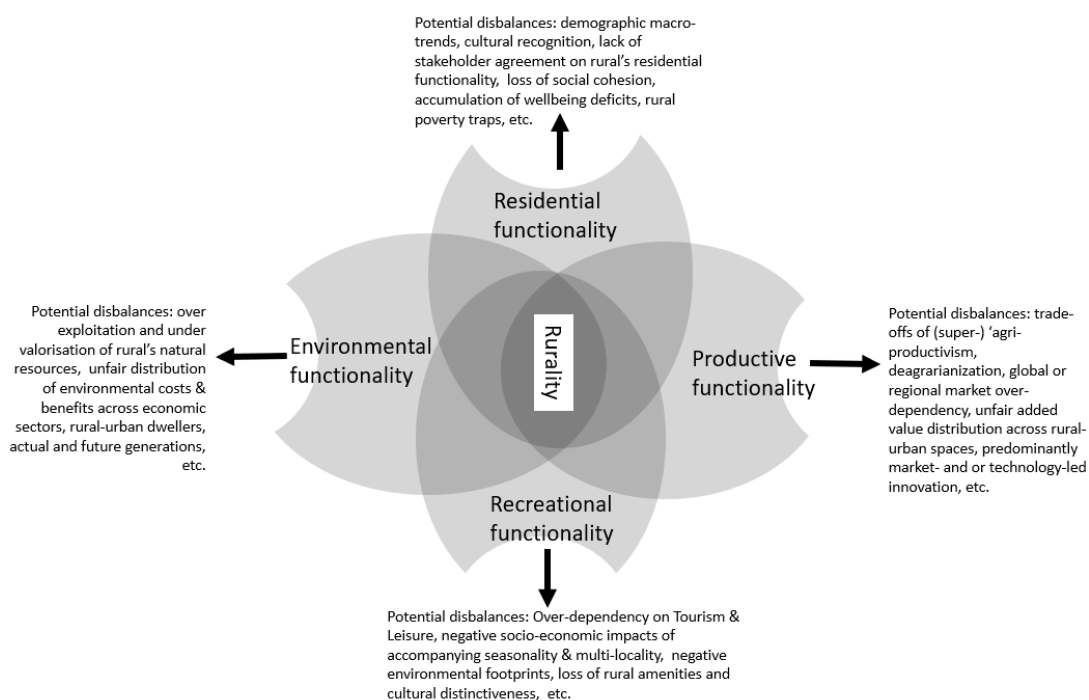
		<i>Strongly developed capital</i>	<i>Weakly developed capital</i>
Multifunctionality of rural communities	Economic capital	<ul style="list-style-type: none"> • Economic well-being • Diversified income streams (e.g. pluriactivity) • Low dependency on external funds (e.g. agricultural subsidies) • Multifunctional businesses • Integration into global capitalist system (?) • Happiness (?) • etc. 	<ul style="list-style-type: none"> • Poverty/debt • Over-dependency on agricultural production • Poor infrastructure • High dependency on external funding (e.g. subsidies; remittances from abroad) (?) • Communities as net importers of food • etc.
	Social capital	<ul style="list-style-type: none"> • Close interaction between rural people (tight-knit communities) • Availability of skills training and education • Good health and sanitation • Multifunctional services • Good communication between stakeholder groups • Female empowerment/empowerment of ethnic minorities in rural areas (?) • Open-minded communities (ability to accept change) • Good and transparent land ownership regulations (control over means of production) • Rural stakeholders in control of development trajectories • Strong governance structures at multiple geographical scales (democratic participation) • etc. 	<ul style="list-style-type: none"> • Outmigration of young people (greying of rural communities) • Service deserts • Lack of leadership • Lack of control over destiny of rural community • High death rates and low life expectancy • Poor communication between stakeholder groups • Female dependency/gender- or ethnically-based lack of self-determination • Weak land ownership patterns (e.g. high levels of tenant/dependent farmers) • General dissatisfaction with rural community pathways • Weak governance • etc.
	Environmental capital	<ul style="list-style-type: none"> • High levels of biodiversity • Good water quality and availability • Sustainable soil management • Predictable agricultural yields • Sustainable management of environmental resources in rural community • Multifunctional environmental resources • etc. 	<ul style="list-style-type: none"> • Soil degradation • Desertification • Salinization • Poor water quality and availability • Uncertainty over agricultural yields • etc.

GRANULAR builds on Wilson's basic idea of interlinking rural areas' qualities with multifunctionality. It does so by adapting his capital asset approach into a framework that distinguishes four key rural functionalities. In addition to productive, residential and environmental functionalities, it adds recreation as a fourth key functionality. Some may argue that recreation may be included in the productive functionality. However, given its particular boundary features in terms of seasonality, multilocality, and cultural proximity and blended character in terms of Halfacree's spaces of productivism and post-productivism it is important in our view to position recreation as a separate rural functionality

An analytical focus on rural functionalities matches GRANULAR's promise to reflect on and explore Rural Functional Areas (RFAs) as emerging EU policy notions (see further section 3.1). Moreover, it allows us to interlink our multi-spatial theorizing with the hypothesis that rural areas' quality or strength will be reflected in their capacity to integrate rural functionalities. This capacity may, however, face functional disbalances, or possible trade-offs between different functionalities, as exemplified by Figure 3.

When elaborating on a prototype of the Rural Diversity compass as anticipated in GRANULAR's D.2.2, we aim to address and unpack the nature, drivers and backgrounds of potential disbalances and possible trade-offs in more detail. For now, we conclude that GRANULAR's analytical framework interlinks multi-spatial theorizing of rural dynamics with a special eye for rural functionality interaction patterns, balances, disbalances, trade-offs, etc. The prototype Compass aspires to shed light on how, in specific rural settings, this will be reflected in weaker or stronger functionality performances, balances, integration capacity, etc.

Figure 3: Rurality as Functionality Balances & Disbalances



The Netherlands' co-evolving circular farming trajectories illustrates the analytical interconnectedness between multi-spatiality and multi-functionality. Table 3 summarizes their principle features. It shows that the multifunctionality of both agriculture and rural areas have become the subject of debate and controversy in the Netherlands. An emerging agro-ecological circular farming perspective aspires to re-territorialize food production and consumption by introducing short food chains as critical prerequisite for a return to multifunctional agricultural activities that contribute to sustainability performances, rural attractiveness and rural-urban synergies. A competing agro-industrial perspective advocates a spatial segregation of rural functions to benefit (high-tech and waste flow oriented) circular farming perspectives. This would provide better opportunities to maintain and safeguard agriculture's competitiveness in global food markets and – as frequently claimed- contribute to global food security and food affordability. In short, these two co-evolving circular farming futures mirror fundamentally different future farming imaginations and rural spatial architectures. That is: both trajectories differ in how they balance productive and consumptive functions, prioritize an integrated versus segregated use of rural land and profile everyday rural lives, including their attractiveness for alternative, more sustainable lifestyles. Whereas agro-ecological circular farming imaginations stand for multifunctionality at different scales (i.e. the farm and the rural), agro-industrial circular farming perspectives prioritize (food-related) productive functions over other functionalities and function segregation, at least at the micro-level of the farm. In short, such rural dynamics and controversies resonate with Halfacree's (2005) 'chaotic and incoherent' threefold rural spatial architectures, including conflicting spatial boundary orientations and different functional priority settings, as summarized in Table 3.

Table 3: A multi-spatial understanding of Dutch co-evolving Circular Farming Pathways (Source: Authors)

Agroecological Circular Farming	Agro-industrial Circular Farming
Strong Belief in Societal Benefits of Family-Farming	No Specific Attention to Societal Added Value of Family Farming
Agriculture by Nature Multifunctional	Agriculture Increasingly Monofunctional
Soil Management is a Key Element of Circularity	Circularity Gains Possible Through Soil Independent Farming (e.g. Vertical Farming)
As much as possible Circularity at Farm-level	Circularity Beyond Farm Level More Realistic and Feasible
Restore and Maximize Agriculture's Wider Eco-System Delivery Potential	Minimize Agriculture's Negative Environmental Impacts
Little Attention for Industrial Use of Biomass Potential	More attention for Industrial Use of Biomass Potential
Primarily oriented at Novel Forms of Territory-based Collaboration, Novel Rural Coalitions, Novel Producer-Consumer Relations and Novel Rural-Urban Partnerships	Primarily oriented at Novel Alliances Between Agriculture and other Industrial Sectors, Novel Innovation Approaches and Novel Technologies.

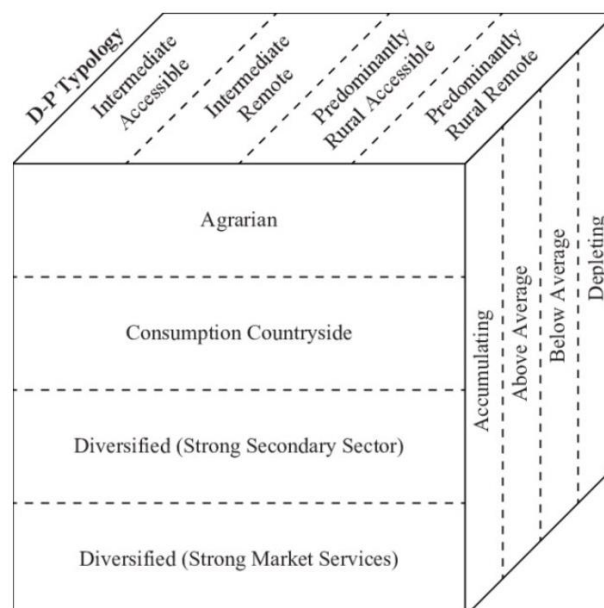
Territorial Focus on Rural-Urban Relations	Focus on Increasingly Dispersed and Diffuse Rural-Urban Interdependencies
Integration of rural functionalities	Segregation of rural functionalities
Rural everyday lives distinctive from and/or appealing alternatives for urban everyday lives	Rural everyday lives increasingly characterized by tensions and frictions, both internally as well as externally

3.4. Multi-layer Rural Classification Efforts

Rural areas multi-spatiality and multifunctionality, as two principle lenses to characterize ongoing spatial differentiation processes, make rural classification a challenging task. Politically, demands for more sophisticated attempts at rural classification may be a response to the marginalization of rural interests. In the UK, for instance, the government commissioned the definition of new classificatory schema (Office for National Statistics, 2011) for rural and urban space following a wave of protests by rural pressure groups in the late 1990s and early 2000s. Different schemes were then developed at levels relevant to England, Wales, and Scotland (Scottish Government, 2022).

At the EU level, policy interest in the comparative analysis of rural dynamics and evaluation of rural development programmes prompted the formulation of transnational typologies, initially primarily constructed from data generated for national purposes (Copus et al., 2008; Dax, 2014; De Beer et al., 2014; Eurostat, 2010). The well-known OECD typology uses population density – and thus the rural-urban continuum lens- to distinguish its categories of ‘predominantly rural regions’, ‘predominantly intermediate regions’ and ‘predominantly urban regions’. This typology has been modified by Eurostat, the Joint Research Centre (JRS), DG Regions and DG Agriculture and Rural Development. Together these EU institutions developed a new typology with grid cells as its base rather than Local Administrative Units (LAU), following a three-step procedure to classify areas (Eurostat, 2017):

Figure 4: The EDORA Cube

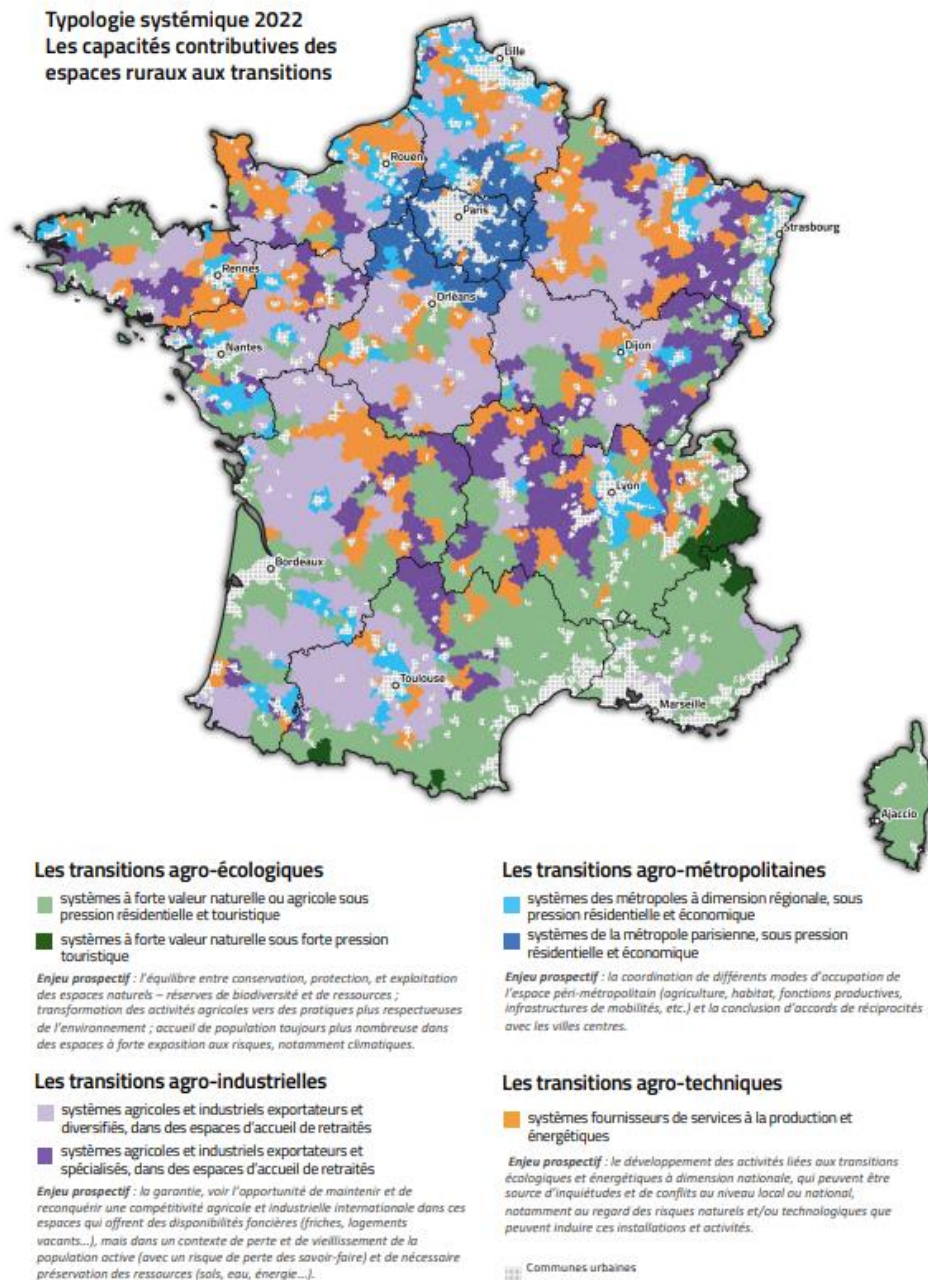


1. Clusters of urban grid cells are created with a minimum population density of 300 inhabitants per km² and a minimum population of 5,000. All cells outside these urban clusters are considered to be rural.
2. NUTS 3 regions of less than 500 km² are grouped with one or more adjacent regions. All NUTS 3 regions in a grouping are classified in the same way.
3. NUTS 3 regions or groupings of NUTS 3 regions are classified based on the share of population in rural grid cells into three categories: Predominantly rural (More than 50% of the total population in rural grid cells); Intermediate (Between 20% and 50% of the total population in rural grid cells); Predominantly urban (Less than 20% of the total population in rural grid cells).

The procedure for deriving the Eurostat (2017) approach reflects the influence of technological innovations that facilitate more refined and sophisticated data-sourcing models, including new GIS technologies and georeferenced and remotely sensed data (e.g. Muilu and Rusanen, 2004). Its accompanying multi-dimensional rural classification attempts reflect, in part, also more relative and relational-inspired spatial thinking. The ESPON EDORA project, for instance, introduced a rural classification derived from three meta-narratives: 'agri-centric rural', 'rural-urban relations' and 'the globalizing rural' (Copus et al, 2013). These meta-narratives formed the basis for a rural typology across the following dimensions: 'urban proximity', 'economic restructuring', and 'resource valorisation/depletion', each with four sub-categories. Their cross-tabulation resulted in the so-called EDORA Cube to visualize meaningful rural differentiation tendencies, drivers, and outcomes as a multi-layer classification attempt (see Figure 4).

Ongoing attempts to progress with multi-layer rural classifications may be further illustrated by the outcomes of a recent French study, 'Etude sur la diversité des ruralités' (Acadie, 2023). It approaches rural diversity from various angles, including *demographic change*, *economic functions*, *accessibility/attractivity/centrality*, *social dynamics and inequalities*, *population profiles*, and *housing characteristics*. It results in typologies under headings such as *residential ruralities*, *small polarities*, *productive ruralities*, and *touristic ruralities*, each with specific sub-typologies. In addition, the study launches a systemic typology across the following differentiation lines: *contributions of rural areas to environmental, energy, and food services*; *contributions of rural areas to the productive economy*; *contributions of rural areas to hosting and mobility*; and *contributions of the rural regions to transitions*. Figure 5 depicts this last classification approach, with sub-categories that underpin the relevance of the place-specificity of agrarian pathways and more or less prominently present metropolitan pressures.

Figure 5: Example of French ACADIE's multi-layered rural classification approach (Source: Acadie, 2023)



The multi-layer classification scheme of Acadie (2023) references GRANULAR's four key rural functionalities as introduced in section 3 and resonates a more relative and relational unpacking of contemporary rural differentiation tendencies. From a policy perspective its accompanying expansion of formal rural representations may be understood as a plea for more territory- and place-based rural policy making. Simultaneously, especially at higher policy levels as the EU, it raises the question of how to deal with its accompanying rapid expansion of formal rural representations. Hence, both the EDORA and Acadie method accumulate into dozens of formal rural categories. GRANULAR's D2.2 aims to tackle this question by elaborating and introducing a prototype Rural Diversity Compass as a possible alternative way forward. Ongoing multi-layer rural classification and its further prospects will be addressed in depth throughout WP4 activity. A detailed review of rural typology is provided in GRANULAR Deliverable D4.6 (Stjernberg *et al.*, 2023).

4. Unpacking EU Policy Notions

4.1 Rural Functional Areas

GRANULAR's theoretical framework aspires to contribute to place-based rural policy making. In the following sections we will interlink our analytical building blocks with different EU policy notions.

To start with the Rural Functional Areas (RFAs) notion: analytically it may be perceived as a rural response to its counterpart, or sister notion, Urban Functional Areas (UFAs) with a longer policy history. RFA shifts the attention towards the significance of rural spheres of influence or externalities. In that sense its recent embracing in European policy-making circles may be understood as emancipatory. Policy attention on UFAs, focusing on urban commuting patterns and service delivery characteristics, stands for theorizing from the urban outwards, recognizing the significance of contemporary rural-urban (functional) interdependencies.

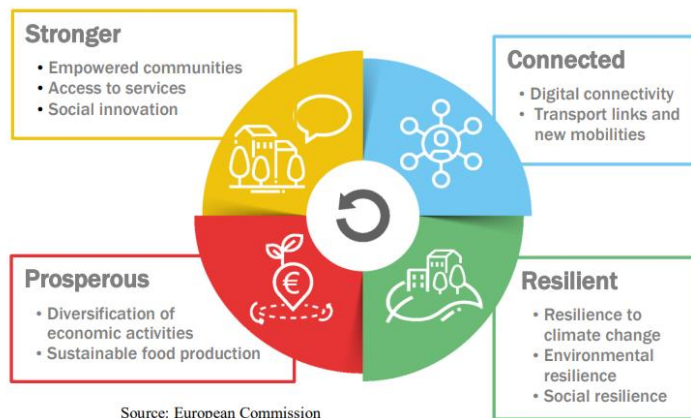
Following the same reasoning, it may have been expected that RFAs would address the next key question: which rural functionalities and externalities are relevant for urban futures? So far, the ongoing operationalization of RFAs remains far from such a mirror-image approach. EU's Joint Research Centre (JRC), for instance, defines RFAs in relation to basic services in rural areas outside UFAs, which is highly relevant in relation to basic service delivery in those rural areas. However, it defines RFAs narrowly, as it isolates rural areas' residential function from other functionalities. Contrastingly, GRANULAR's theoretical framework, connects basic service delivery - as part of rural areas' residential functionality- to rural's productive, environmental and recreational functionalities. It allows to consider these in their interwovenness with other rural proofing concerns and challenges (see paragraph 3.3).

4.2 LTVRA's Action Pillars

EU's Long-term Vision for Rural Areas (LTVRA), the outcome of intensive rural stakeholder consultation, distinguishes four principal policy action pillars: *prosperous*, *resilient*, *connected* and *strong* rural areas. These action pillars are subsequently elaborated in ten guiding policy objectives (see Figure 6).

Both action pillars and policy objectives may be associated with multi-spatial theorizing, e.g. through their references to connectivity, digital innovation and different functionalities: *stronger* with residential, *prosperous* with productive and recreational and *resilient* with environmental as well as residential functionalities. *Connectivity* may be perceived as a prerequisite for the three other principle pillars. Their associations with a set of concrete policy objectives, in turn, not only stress the significance of rural diversity but also mirror the broadness of contemporary rural representations and imaginations.

Figure 6: LTVRA' Policy Action Fields of EU's and their guiding rural policy objectives



I. **Attractive spaces, developed in harmonious territorial development**, unlocking their specific potential, making them places of opportunity and providing local solutions to help tackle the local effects of global challenges.

II. **Engaged in multi-level and place-based governance**, developing integrated strategies using collaborative and participatory approaches, benefitting from tailor-made policy mixes and interdependencies between urban and rural areas.

III. **Providers of food security, economic opportunities, goods and services for wider society**, such as bio-based materials and energy but also local, community-based high-quality products, renewable energy, retaining a fair share of the value generated.

IV. **Dynamic communities focusing on well-being**, including livelihoods, fairness, prosperity and quality of life, where all people live and work well together, with adequate capacity for mutual support.

V. **Inclusive communities** of inter-generational solidarity fairness and renewal, open to newcomers and fostering equal opportunities for all.

VI. **Flourishing sources of nature**, enhanced by and contributing to the objectives of the Green Deal, including climate neutrality, as well as sustainable management of natural resources.

VII. **Fully benefiting from digital innovation** with equal access to emerging technologies, widespread digital literacy and opportunities to acquire more advanced skills.

VIII. **Entrepreneurial, innovative and skilled** people, co-creating technological, ecological and social progress.

IX. **Lively places equipped with efficient, accessible and affordable public and private services**, including cross border services, providing tailored solutions (such as transport, education, training, health and care, including long-term care, social life and retail business).

X. **Places of diversity**, making the most out of their unique assets, talents and potential.

The LTVRA's references to rural resilience and rural wellbeing, as two key notions to guide future rural policymaking, deserve further attention. From a policy perspective resilience promises to emerge from a crisis stronger, as part of the ideological debate about the role of the state, civil society and the market in wider social ordering processes (Bristow, 2010). Bristow explains the growing popularity of the resilience notions in policy circles as follows: '*it appears timely in the context of the triple crunch of economic austerity, climate change and the onset of peak oil*' (ibid, p.10). Subsequently, it is noted that this popularity goes along with scientific controversy around its definition, key features and linkages with concepts such as adaptability, vulnerability, resistance, and competitiveness. Rural scholars relate resilience, particularly to sustainability concerns. Dahrnhofer (2010), for instance, argues that '*resilience thinking offers a vision of sustainability which is not reduced to unchanging stability*'.

Predominantly drawing on socio-ecological resilience literature (Franklin *et al.* 2011; King, 2008; Buikstra *et al.*, 2010), the dynamic nature of resilience is thought to manifest itself in shock resilience (the ability to ‘bounce back’) and transformative resilience (the ability to ‘bounce forward’). These two fundamentally different resilience components would interact within so-called ‘adaptive cycles’ of combined strategies of exploitation, absorption, adjustment, and transformation (Darnhofer, 2010). Transformative resilience is especially interlinked with 1) learning to live with change and uncertainty, 2) nurturing diversity in its various forms; 3) combining different types of knowledge and learning; and 4) creating opportunities for self-organization and cross-scale linkages.

In addition to these broader scholarly insights on its nature and principle features, GRANULAR will interlink rural resilience with earlier references to functional integration capacity, and consider rural resilience as the capacity to resist (i.e. ‘bouncing back’) or overcome (i.e. ‘bouncing forward’) functional (dis-) balancing. Or, more positively formulated, to explore and optimize functional (re-) integration opportunities to benefit rural and wider societal well-being. To be clear, such (re-) balancing and (re-) integration efforts may take different directions without a priori identifiable optimums. In general well-balanced rural functionalities may foster rural resilience. Yet, imbalances might not by definition entail threats for rural resilience. For instance, overrepresented environmental and recreational functionalities may help to preserve and strengthen rural distinctiveness in terms of complementarity of rural-urban functionalities in peri-urban settings. In more remote settings a similar imbalance may result in rural vulnerability due to the underperformance of productive and/or residential functionalities or growing sensitivity to environmental trade-offs (e.g. forest fires). There is, hence, no right balance of rural functionalities; what brings resilience might differentiate across geographical and relational positions, including functionality prioritizing, the ability to create coherence in threefold rural spatial architectures and shared understandings of rural boundary orientations (see again Table 3).

It brings us to wellbeing as another guiding principle for the policy objectives of the LTVRA’s. Here it is of major importance to note that emerging wider wellbeing assessment methods stress its multi-dimensionality (e.g. Planbureau voor de Leefomgeving, 2022). The wellbeing ‘here and now’ dimension largely overlaps with already longer existing ‘Quality of Life’ assessment methods, including the recognition of its subjective elements.³ The ‘here and now’ wellbeing dimension encompasses elements such as income, employment, education, health, safety, access to nature, housing, public services, etc. In turn, the ‘wellbeing from elsewhere’ dimension allows us to take rural-urban interdependencies on board, including the relevance of different expressions of rural-urban synergy to which we will return in the rural policy proofing section. Dutch wellbeing research, for instance, recently concluded that wellbeing is perceived as highest in regions with adjoining municipalities that differ most strongly across the rural-urban continuum. Thus, regions that join the best of two worlds – the green and other quality of life contributions of rural environments with the proximity of urban markets, employment opportunities, public services, etc. Finally, a third dimension, ‘wellbeing later’, enables us to emphasize that current human behaviour has implications for future generations, as reflected in human resource use patterns that exceed planetary boundaries.

In sum, a multi-dimensional understanding of wellbeing is complementary to previous theorizing of rural resilience. Whereas resilience has been primarily associated with the nature of functional representations and interactions, the wellbeing notions enable us to put their place- and community-specific outcomes and future prospects central stage. Analytically it allows us to underscore that wellbeing will be the outcome of complex rural-urban assemblages (e.g. Woods, 2016).

³ A subjectivity that resonates Halfacree’s attention for every day rural lives as part of threefold rural spatial architecture

Practically it allows us to bring to the fore that functional (re-) integration and (re-) balancing challenges might be subject of debate and discontent. For instance, the longstanding Dutch history of rural functional segregation through strictly delineated spaces for agriculture, nature, leisure, dwelling, etc. currently faces serious societal tensions, as e.g. manifested in recent farmers' protests against agri-environmental policy measures that aim to strengthen rural areas' environmental performances by restricting agri-industrial growth potential. As argued by Dutch rural scholars, the particular nature of these farmers' protests plays a rather curious and prominent role in the national emergence and growth of a broader populist policy movement (e.g. Van der Ploeg, 2022).

4.3. Rural Proofing

Rural proofing is a notion explicitly mentioned in GRANULAR's task description for WP2. To date, rural proofing has been primarily analysed in the UK and Irish Republic with rather critical reflections of policy scholars regarding its usefulness for policy practice. One essential point of criticism is that rural proofing approaches tend to ignore the huge diversity of rural areas and instead assumes a generalised rural disadvantage (Sherry and Shortall, 2019). Thus, rural proofing policy faces the challenge of going beyond the conventional binary and absolute distinction between urban and rural areas and to fully recognize the significance of tendencies of rural differentiation, in terms of needs as well as prospects. Thus, rural proofing policies should address topics as urban or regional biases in public funding allocation, tax-regulations or lack of responsiveness to typical rural needs, etc. It should explore the question of how the rural may, in different ways, contribute to, foster or stimulate rural-urban synergies as critical prerequisites for future wellbeing economies.

The H2020 ROBUST project (www.rural-urban.eu) studied rural-urban synergy prospects across the following dimensions: public infrastructure and services, food-centric proximity relations, circular economies, eco-system services and cultural connections. More generally, its outcomes underpin a suggestion that rural proofing policies might be about opposing and transforming hierarchical spatial thinking that prioritizes urban actors as principle change actors. It is further recognized that building rural-urban synergy might entail territorial as well as global orientations, as e.g. earlier indicated in Table 3 in relation to Dutch co-evolving circular farming futures, each having its particular ideas on how to combine and align multifunctional with circular resource use aspirations.

So far rural proofing has been mainly approached as an ex-ante evaluation tool. Similar to other ex-ante policy evaluations, such as for gender equality, it aims to adapt policymaking in its early life-cycle stage to prevent general policies unintendedly counteracting gender equality ambitions. Yet, results from such ex-ante evaluations have been often considered rather disappointing or even characterized as bureaucratic 'ticking the box' exercises (e.g. Sherry and Shortall, 2019; Atterton, 2008).

GRANULAR recognizes the shortcomings of ex-ante rural proofing efforts. Based on the foregoing theorizing of rural diversity and its accompanying reflections on policy notions such as wellbeing and resilience, it will approach rural proofing as a multi-level governance challenge. At the macro-level (e.g. EU) broader policy assessment criteria of spatial-, social- and climate justice are thought to be critical to take rural differentiation tendencies explicitly and seriously into account. It allows including plurality, diversity and participation as critical macro-level rural policy proofing challenges (e.g. Shucksmith *et al.*, 2021). It further enables the recognition of environmental injustice, such as uneven exposure to climate change impacts across countries, regions and communities. Socially, politically, and economically disadvantaged communities that minimally contributed to the climate crisis, for instance, might be affected the most by climate change, and climate change mitigation and adaptation policies might distribute costs and benefits unevenly across sectors and communities, reproducing existing (e.g. rural-urban) inequalities (Dolšák and Prakash, 2022).

The EU's CAP continues to face important challenges in that respect, as formulated in its Green Deal (European Commission, 2019) and Farm to Fork (European Commission, 2020) aspirations.

At meso-level (e.g. national, metropolitan areas) the CAP shows major shortcomings in terms of its ability to enhance and foster rural-urban synergy prospects, not only in relation to climate change mitigation but also other EU policy objectives as inclusive and smart growth. More generally, policy proofing that supports rural-urban synergies hinges on broader topics such as service delivery, -accessibility, mobility, connectivity, etc. that enable the maintenance or strengthening of interdependencies with mutual benefits. Again, a CAP-related example: rural policy proofing is also about adequate public funding and remuneration of the performance of eco-system service (ESS) delivery, and about progressing towards a better matching of rural ESS supply with urban ESS demands; a better match would support climate change mitigation, novel rural business models, novel social enterprises, etc. (e.g. Van Twuijver *et al.*, 2020)

At micro-level (e.g. LAUs or regions) community wellbeing might be most appropriate rural proofing assessment criteria. It puts the interests and concerns of (specific groups of) rural dwellers central stage, while concentrating on the 'here and now' dimension of wellbeing and acknowledging persistent and accumulated wellbeing deficits, particularly (but not exclusively) in peripheral rural regions. Recognizing the multi-faceted nature of such well-being deficits enables us to address a broad array of meaningful policy domains. Moreover, it may reveal how place-based policy integration cannot do without supportive meso- and macro-level rural policy proofing efforts, including explicit attention for distributive (in-) justices; philosophers have explored this with references to notions such as multiculturalism and rural-urban fairness (Herzog, 2023).

As a whole, a multi-level understanding of rural proofing policies underlines that rural proofing should do more than defend the particular interests and concerns of rural areas. Although obviously important, GRANULAR stresses the fact that rural policy proofing should also demonstrate and recognize the important contributions of rural areas to the (current and future) wellbeing of society at large (progress). It then covers a broader array of meaningful policy domains. This expectation will be further substantiated, illustrated and tested by GRANULAR's prototype Rural Diversity Compass, when unravelling the multiplicity of contemporary rural differentiation forces and their precipitation into what Halfacree calls 'manifold rurals'.

5. Design Lessons for Prototype Rural Diversity Compass

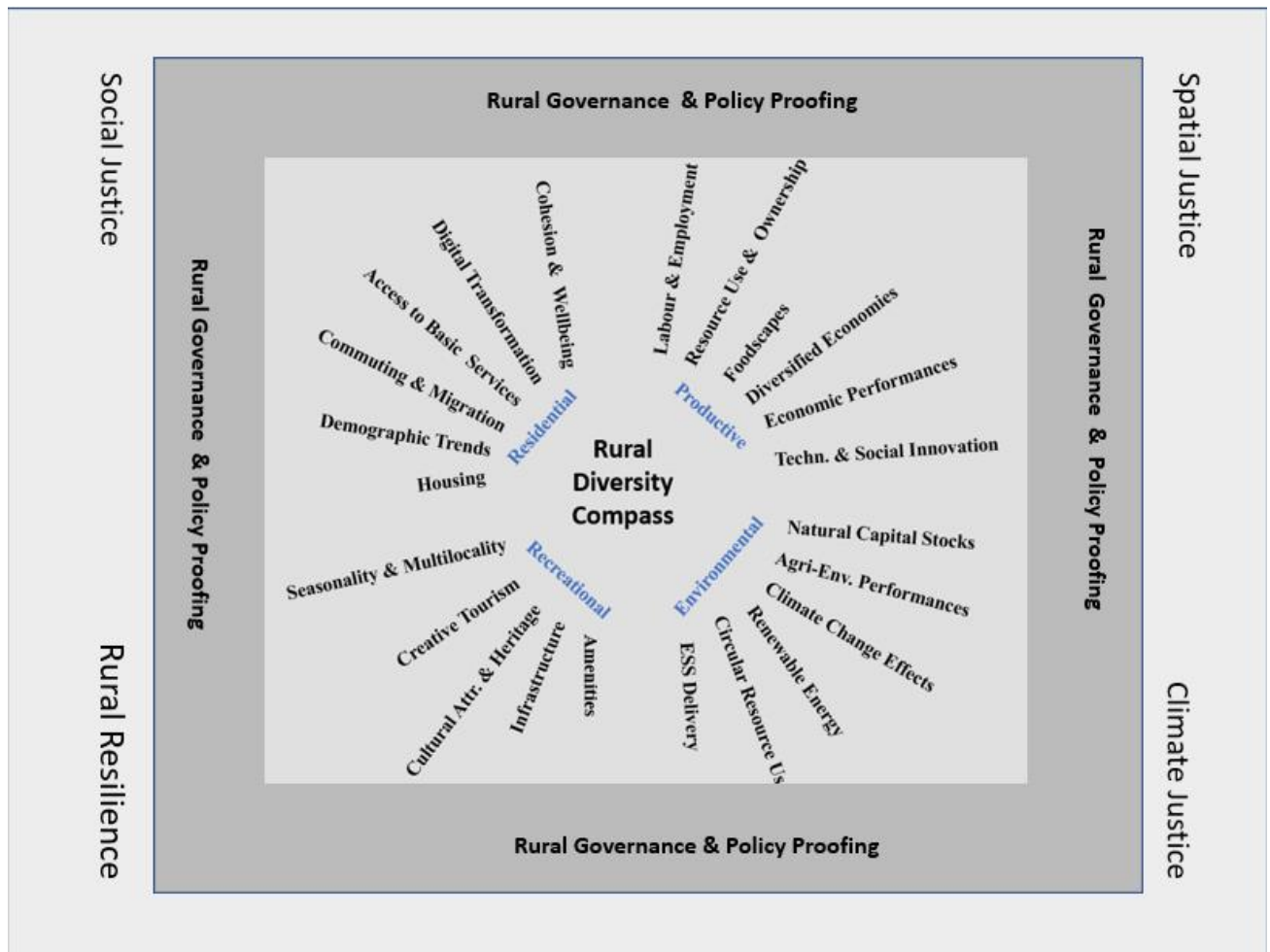
GRANULAR's Deliverable 2.1 aims to provide the theoretical and analytical building blocks for a proto-type Rural Diversity Compass. We conclude this report with a brief summary of the principle design lessons that may be derived from the foregoing theoretical reflections, followed by a first glimpse of this proto-type Rural Diversity Compass. Although still waiting for further checks, tests and refinement through forthcoming GRANULAR activity, the view presented in Figure 7 already incorporates multiple constructive comments of project partners and Advisory Board members after presenting an earlier version of the prototype Compass during a GRANULAR workshop held in June 2023.

Design lessons for GRANULAR's prototype Rural Diversity Compass:

1. Recognize the multi-spatiality of rural areas and make this the analytical starting point to characterizing contemporary rural differentiation processes; combining the insights generated by different rural boundary orientations with Halfacree's (2005) multi-spatial thinking allows us to understand the interconnectedness of the socio-economic, socio-political and socio-cultural dynamics of rural areas;
2. Build on this multi-spatial thinking to characterize the increasingly place-specific functionalities of rural areas, their interconnectedness, (im-) balances, representations, and imaginations as reflected also in emerging multi-layered rural classification approaches;
3. Acknowledge the merits of EU's Rural Functional Areas approach (i.e. insights into rural service delivery and accessibility outside Urban Functional Areas), and its limitations in terms of inability to grasp its interdependency with other functionalities of this specific set of rural areas;
4. Embrace EU's LTVRA's greater sensitivity for rural areas' inherent multifunctionality, and recognise that, to date, the LTVRA provides little insight into how to translate its principle action pillars and guiding principles into policy-making;
5. Emphasize that rural resilience - in addition to perseverance, adaptability, transformability, innovativeness, etc. - will manifest itself through place-specific functional (re-) integration and (re-) balancing capacity to the benefit of current and future wellbeing of rural areas and society at large;
6. Distinguish – next to 'wellbeing here and now' - also 'wellbeing from elsewhere' and 'wellbeing later' are critical wellbeing dimensions. Wellbeing from elsewhere allows us to account for place-specific manifestations of (potential) rural-urban synergies. Wellbeing later explicitly recognizes the temporal aspects (and pressures) of contemporary, for example, sustainability and climate change concerns. In combination, these three critical wellbeing dimensions comprise the key challenges for future rural governance and public policy making;
7. Understand rural proofing, in addition to ongoing ex-ante policy efforts, further as a tool to check for public policy's responsiveness to: 1) manifold rurals; 2) place-specific rural-urban synergy prospects and limitations and 3) place-specific functionality (re-) balancing and (re-) integration opportunities and limitations. More generally, it is crucial to associate rural proofing not only with rural wellbeing deficits but also with (actual and potential) positive contributions to societal wellbeing progress;

8. Combine and integrate the preceding design lessons into a tool that: 1) allows us to incorporate novel and traditional data-sourcing methods originating from different scales (e.g. grid level, LAUs, NUTS levels); 2) enables us to shed extra light on contemporary rural differentiation tendencies, drivers, and outcomes; and 3) may help orientate future multi-level rural governance and rural proofing efforts.

Figure 7: Prototype Rural Diversity Compass (September, 2023 version)



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