The Urban and Regional Research Institute (URSI) of the Faculty of Spatial Sciences Research programme

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Context and positioning

The field of Urban and Regional Studies, or more broadly: Spatial Sciences, at the University of Groningen has a strong position and is well-embedded in a wider range of disciplines, such as social science and technology sciences. Its relevance is in addressing spatial aspects of the key societal challenges and emerging technological transitions of today. Generally speaking, spatial sciences in Groningen has a strong empirical orientation, and it focuses on individuals, communities and institutions in urban and regional contexts worldwide. We encourage innovation and the cross-fertilisation of insights drawn from demography, cultural geography, spatial planning, spatial design, environmental and infrastructure management, economic geography and real-estate studies. We collaborate with the four RUG Schools and disciplines across the University of Groningen involved in addressing technological and societal transitions. Our focus is on linking academic knowledge with intended action and impact in urban and regional contexts.

Research activity across the institute is underpinned by a clear commitment to inter- and transdisciplinarity, which forges innovative new directions for research. Specific interdisciplinary and cross-university opportunities for the institute have arisen with technology-, urban/rural-, development, mobilities-, health-, design-, community-, climate-, sustainability- and place-oriented themes. URSI houses a mutually complementary group of disciplines to meet the goal of enhancing well-being for all as envisioned by the sustainable development goals.

Ambition

Since its previous research programme, ('Towards Wellbeing and Spatial Transformation'), we integrated former research topic areas in an overall new research programme: 'TRACE'. TRACE is the acronym for *TRAnsformations, Communities and Environments*. The term TRACE has a spatial connotation: detecting traces of the past and present inscribed in urban and regional environments like cities, while also investigating, exploring, designing, and planning for the future. Our ambition is to create scientific and societal impact by undertaking cutting-edge research at the interface of *people, places, and planning* in rural and urban settings, especially at local and regional scales, in the Netherlands, Europe and globally. Our problem-driven multi- and transdisciplinary approach aims to tackle the following grand societal challenges:

1) Cities and regions are undergoing rapid change, due to climate change, demographic development and societal challenges. Adaptive infrastructures and strategies are needed to deal with changes and risks specifically related to mobility, urbanization, water and-related risks, energy resources, urban climate adaptation, and rural livability, and related citizen engagement. These strategies need to address *transformations in specific socio-spatial contexts*. The current way of production and consumption has resulted in societal and climate risks that affect people and places in different ways. The key question we address is how spatial transformations develop, how people can cope with them and which spatial interventions, planning strategies and pathways are effective to address the root causes of societal and climate risks and support resilient futures.

2) *Communities* and people face the challenge to deal with uncertainty, unpredictability and complexity in their urban or regional environments. They are facing a dynamic world, which is rapidly changing. These uncertainties in particular lead to spatial inequalities and an erosion of traditional institutions and arrangements, for example in housing, employment and in people's life courses. The key question here is how communities and individuals socially navigate in a dynamic world and how the places they live in support, wellbeing and equity, enabling them to anticipate future choices?

3) The meaning of, and thus the possibilities to attend to SDGs, differs highly by place. We address sustainability challenges in institutional, ecological, cultural, technological, political and economic *environments*. Sustainability issues in specific places have resulted in socio-spatial differences, specifically with regard to sustainable landscapes and rural-urban relations. Inspired by the SDGs the key question is: what are the causes of socio-spatial differences and conditions for place-based sustainable development on the local and regional scale?

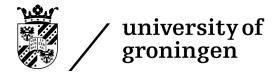## Research programme 2024-2028

1. Transformations: Spatial and institutional conditions and design

The aim is to understand and support transformations in their specific socio-spatial contexts. The urgency of human and environmental crises can no longer be disputed. It is widely recognised that decisive adaptive actions are required to avoid, or at least buffer, the negative effects of these crises on human societies and nature. We are facing societal challenges such as population growth and aging, energy transition, migration and mobilities, inequalities and climate change. People, governments and ecosystems have been adapting to live with insecurity, uncertainties, and risks. While incremental coping strategies provide short-term solutions, they may not be enough to reduce the risk of disasters and to protect people and places from greater risks. While technological development can support innovations, for example in the context of the energy transition, the impact of such innovations often unevenly benefits people and places. While demographic and societal change results in socio-spatial transformations of landscapes, populations, cities, and communities, we also need planned transformative change and governance. We investigate the long-term public, private, and civic spatial strategies and responses to societal risks and crises on different scales. Examples are research on infrastructure, water governance, urban climate adaptation, rural livability, citizen engagement and energy transition.

"We analyze institutional conditions for infrastructure to develop effective spatial solutions in collaboration with Rijkswaterstaat and other infrastructure partners"

Socio-spatial transformations include demographic, environmental, social, economic, technological, and institutional changes. We investigate socio-spatial transformations and a wide variety of their consequences, and aim to contribute to social and institutional innovations.

Research projects will focus on the conditions for such transformations and innovations from a critical perspective, for example the role of leadership, multi-stakeholder collaboration and partnerships, new institutional arrangements and the building of human capabilities, taking into account issues of justice, power, and equity to achieve more sustainable futures.

In this context, places are more relevant than ever. Structural processes affecting places, such as climate change, state decisions, technology development, or the functioning of markets, have a differentiating impact on how places are valued and actually shaped. Unlike place-less approaches, a place-based approach is sensitive to differences in contexts and the relations within and between places. Transformations – embedded in local institutional and cultural contexts – thus demand a place-based approach, recognising the agency of people within social

networks to shape a place according to their needs, ideas and demands. This results in spatial differences and a variety of local and regional strategies and responses. Furthermore, there is increasing recognition that we need place-based spatial planning and policies in order to secure meaningful and inclusive change, not leaving people and places behind. We investigate adaptive spatial policies and behaviour in the context of complex systems. The power of design can help to imagine new storylines and scenarios in dialogues between stakeholders.

Examples of research projects are local and regional living labs and design projects, demand-driven research in the Northern Netherlands in the context of the University of the North and place-based research on climate adaptation, health, (earthquake) risks and digital, visual and GIS tools in collaboration with the RUG Schools and stakeholders.

We focus on the ethical, social and political capacities and conditions for transformations, for instance by exploring flood resilience in European and Asian contexts or droughts on the African continent. We consider resilience from an evolutionary perspective as the ability of complex social-ecological systems to change, adapt, or transform in response to stresses and strains. Resilience thinking through a socio-ecological lens focuses on the interplay between ecosystems and humans, introducing principles such as self-(re)organisation, complexity planning, adaptive practices and policies, and learning.

> *"We explore concrete spatial and institutional opportunities for climate adaptation and energy transition in urban and rural areas, such as nature-based solutions for flood resilience, floating houses, reduction of energy poverty and conditions for resilient and resourceful communities"*

The key questions of this theme here are to understand the development of transformations, how people can cope with them and which spatial interventions, planning strategies and pathways are effective to become more resilient, addressing the root causes of societal and climate risks, shifting systems away from unsustainable, unjust, and unequal trajectories.

2. Communities: wellbeing, equity and resilience for people and places

The aim is to support wellbeing, equity and resilience for people and communities, based on the integration of demographic, economic, social-cultural, and spatial knowledge. Wellbeing includes the behaviour, networks, capabilities and experiences of individuals. Investigating this should be based not just on objective indicators of quality of life, but also more subjective measures. Understanding wellbeing enables us to project scenarios and to prepare for livable places and futures. Households, families and communities provide the lens to look at crucial aspects of wellbeing such as health, happiness, quality of life and housing, human rights, everyday mobility and migration, education, and labour opportunities.

The life course of people including personal, professional (work), mobility (travel) and residential (housing) aspects unfolds in time and space, imprinting traces and physical changes in places. Cultural norms and socio-economic inequalities have impacted the wellbeing and life courses of people in many social and spatial settings. We consider well-being specifically in the socio-spatial context and in terms of equity, human rights, and social justice.

"We explain mobility practices in later life in relation to well-being. This provides insights with regard to in- and outdoor movement of healthy and impaired older adults, for example in the Netherlands, United Kingdom and India"

Communities have different capacities to deal with change. We aim to understand inequalities between communities and between people with regard to access to, inclusion/exclusion from, or depletion of local resources. The term 'community' denotes communities of place – groups of local residents operating within a single space – and networked communities of interest, operating within one or multiple spaces. We also address problems of energy poverty, environmental injustice and food insecurity. These are just some of the consequences of the unsustainable patterns of living, production, and consumption, provoked by processes of globalisation and uneven development. Climate change adds further complexity and vulnerability to this picture. In this context we for example conduct research on islands, including life with and on water, and the vulnerability of coastal areas, such as our neighbouring Wadden Sea region as well as other cases around the world.

We critically assess the spatially unequal outcomes of various governance arrangements, such as 'top-down' policies versus more participative governance approaches and 'bottom-up' processes in which people and communities self-organise. We also analyse the rise of active citizenship, grassroots innovation, and collective action, where participants want to take matters in their ow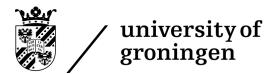n hands. Transformative capacities of civic, private, and public actors can support 'positive social tipping points' in processes of wider change, engaging people in public planning, governmental tasks and place-shaping, or in organising community spaces. Conditions for social networks and 'resourceful' communities, able to adapt to current and future challenges, are capacity-building, enabling governance and innovative entrepreneurship.

"We investigate the governance aspects of housing, inequalities between renting and ownership, affordable housing and prices, and the functioning of real estate markets"

"We investigate how to keep and attract younger people for work and living in rural areas, to increase livability of these (peripheral) areas and we monitor talent and employment in the region"

The impact of entrepreneurship is most prominent at the local level. Given the key role of the local context, we see large geographical differences in the intensity and characteristics of entrepreneurship, employment and talent development, also in its spatial impact. Our aim is to support places to become more livable, resilient, and inclusive for the benefit of all inhabitants. We consider local cultures, values, and appreciations of the living environment as essential for this. What communities collectively value and define as livable places, and how such places may enhance their wellbeing, is open for debate. Place attachment, capabilities, senses of ownership and responsibility play a role in such debates. Furthermore, we aim to improve the effectiveness of social impact assessment of planned interventions, community engagement processes, and livelihood restoration.

Processes of digitalization, globalization and aging influence people's daily lives, mobility, health, their social environment, networks, and opportunities for work. We investigate daily mobility and migration, conditions for skills and talent development, and lifelong learning. We also study issues related to global health and development, including reproductive health, child growth, and healthy aging.

The key question is to understand what leads to, and how we can support, wellbeing, equity and resilience for people and places.

3. Environments: Socio-spatial differences and sustainable development

The aim is to understand socio-spatial differences and support place-based sustainable development in environments on the urban and regional scale. Environments refers to ecological, economic, social-cultural, political and institutional contexts. A spatial perspective offers a framework to deal with societal and environmental challenges and dilemmas and to support sustainable development. Our understanding of sustainable development is inspired by, but not limited to the Sustainable Development Goals. Sustainability problems affect places in varied ways, resulting in place diversity. Examples are resource depletion, economic inequalities, environmental pollution, flood risks, and social exclusion. A spatial perspective is helpful to integrate sustainability aspects on different scales and to understand the interplay between different actors such as firms, governance actors, NGOs, knowledge institutes, and citizens. Sustainable development also requires a critical perspective on societal future trajectories, including debates on de-growth and post-growth in urban and regional contexts. We take into account not only the practical and political aspects of sustainability but also personal and cultural aspects, which refer to values, worldviews and mindsets that drive people's behaviour.

We investigate socio-spatial differences and conditions for sustainable development on the local and regional scale. Place-based sustainable development refers to the celebration and utilisation of perceived characteristics of a place as the basis of economic activity and land use, landscapes, and local livelihoods. Notions of place and space should be incorporated in debates on sustainability, exploring how attachments, activities, energies, and imaginations 'on the ground' have an impact on the environment, economy, and society in a more or less sustainable way. In this context, we investigate the functioning of the following topics in a socio-spatial setting, such as labour markets, housing, water, transport, and energy systems, sustainable landscapes, and rural-urban relations.

"We assess the social impact of local and regional projects and policies in the Netherlands and internationally, their impact on sustainability and the in- or exclusion of stakeholders in decision making"

Uncertainties about the future complicate urban and regional planning and policymaking in developing productive interventions, technological innovations and measures that result in sustainable outcomes. By projecting population change and investigating processes of spatial design, including the analysis and design of the physical environment and societal use, cities and regions can become more responsive and sustainable in dealing with foreseen and unforeseen change. Institutional design includes the analysis and adjustment of rules of conduct that mediate the behaviour of and interactions between public, private, and civic actors in shaping spatial configurations. For example, transport infrastructure faces fundamental sustainability challenges, which call for fundamental and practice-oriented research, emphasising the interaction between the transformation of physical networks and institutions.

With regard to the built environment, we aim to deepen our understanding of urban climate adaptation, adaptive planning, housing, and the functioning of real estate markets, characterized by inertia, imperfect information and bounded rationality. This also has consequences for the role of businesses, governance and spatial planning, to enable initiatives, social and technological innovation, new networks and arrangements.

Key questions refer to the causes of socio-spatial differences and conditions for sustainable development on the local and regional scale. What are (perceived) natural, economic, human and cultural characteristics of a place that can make it special and/or distinctive, and how may these be the focus of civic, public and private actors and activities, towards sustainable futures?

Research approaches and methods

The Urban and Regional Studies Institute distinguishes itself by using a wide variety of research approaches and methods. Our research approaches originate from demography, human geography and spatial planning. Distinct features of our spatial planning approaches are a focus on complexity and systems thinking, adaptive planning, multi-level and multi-actor governance, and strategic and instrumental interventions including design methods. Distinct features of our human geography approaches are the focus on economic and cultural geography, network analysis as well as the spatial analysis of landscapes and territories. Distinct features of our demography approaches are the prominence of the life-course approach and the capability approach as theoretical foundations, as well as a strong focus on social demography and population geography, in addition to analytical demography.

We involve communities and achieving societal impact via participatory methods. In our empirical research, we use spatial, quantitative and qualitative methods. Our quantitative approaches include population projections, statistical analysis of existing survey and register data, newly collected survey data and machine learning, capitalizing on innovative linkages between these sources.

Qualitative research encompasses evaluative, critical, comparative, ethnographic, textual, arts-based and participatory research approaches, and includes a broad repertoire of methods from social sciences such as case studies, (digital) ethnography, focus groups, creative methods and in-depth interviews. Spatial methods can bring together both qualitative and quantitative data sources and refer to for example Geographical Information Systems, agent-based modeling, visualisation of spatial interventions, walk-along interviews and varied forms of spatial mapping. Social network approaches are used in combination with activity spaces and as a framework for mixed methods, both qualitative and quantitative. We especially focus on spatial design as a research method to explore, visualise and imagine sustainable futures on varied scales and as a technology for dialogue. We contribute to the development of innovative ideas, possible models, instruments and actions, and creative solutions for society in urban and regional contexts, to navigate challenges related to people's wellbeing.

Output

Our research results in a variety of outputs including academic articles, professional reports, policy advice, spatial designs, key-note presentations for different audiences, knowledge dissemination and valorization to societal groups, stakeholders, the private sector and NGO's. We thus aim to provide tailor-made advice and insights for different societal users such as fellow academics, policy-makers, professional organisations and the public. Our aim is to support open science and to generate high academic as well as societal impact, integrating knowledge and insights from different spatial disciplines. A priority is creating societal impact in the Northern Netherlands in the context of the University of the North via the RUG Schools, living labs, campus development, collaboration with non-academic partners and participative research.