

Theme 3: Land and water use

Sport and outdoor recreation through the lens of land and water use – Ecological effects and spatial planning options

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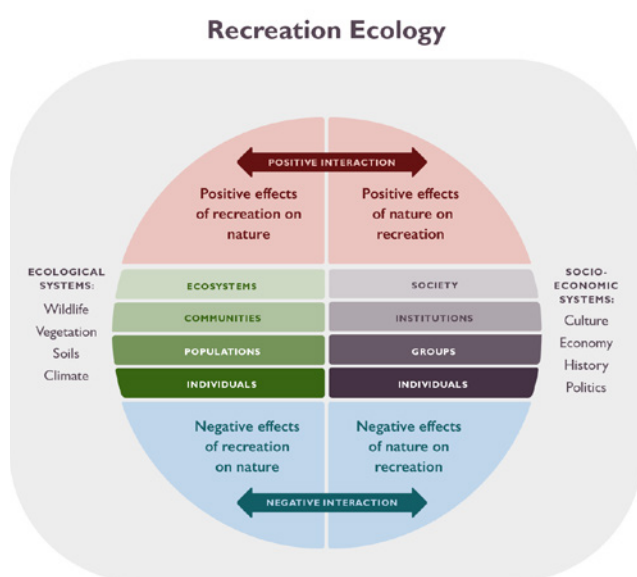
Learning groups: National group (9 practitioners, 3 researchers), coastal landscape (9 practitioners, 3 researchers), mountain landscape (6 practitioners, 4 researchers), and urban landscape (10 practitioners, 3 researchers).

Two underlying questions specified the challenge tackled in theme 3: *How do sports and outdoor facilities and activities affect land and water environments in different landscapes? How can the environmental impact be managed in relation to the need for accessibility and shared use of land and water environments in different landscapes?* Most of the work has been carried out in three area specific contexts; peri-urban, mountains and coastal, to deliver relevant results for key stakeholders and practitioners in different landscape types. This work has been complemented by, and linked to, work on the national level. Four learning groups have been matching these contexts. The theme work has been coordinated through monthly meetings for all researchers involved. The main contribution from the theme is highlighting how weak or non-existent considerations of outdoor recreation and sports in spatial planning is, which is reflected in a lack of consistent and appropriate strategies, organisation, processes, and tools for enhancing a more environmentally friendly use of land and water. As an outcome, there is a joint article in progress, investigating how outdoor recreation and sports with specific

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attention to environmental impacts, have been addressed in local and regional spatial planning. Another important contribution is that the researchers have developed a scientific foundation for comprehensively assess relations between land- and water environments and sports and outdoor recreation, drawing on recreation ecology and related fields. The resultant model can be applied to planning and management practice, and it has provided the theoretical framework for a recently granted EU-project on visitor management. Through knowledge co-creation processes, together with local, regional and national stakeholders, promising ways forward has been presented and to some degree also tested. In collaboration with Naturkartan (The OutdoorMap), a digital guide to the Swedish outdoors with 300 000 app users, a Q&A function has been developed to study the interaction between visitors and recreational area managers. This provides geo-referenced (place, trail, area) information with feedback loops (like, share, report) between managers and users. It provides a tool for managers to better inform, interpret, announce, and understand visitors that supports more environmentally friendly behavior among recreationists. Results from this work will provide a backdrop for research in phase 2 on the use of digital data to improve sustainable visitor management in nature areas.



Framework for human – nature interaction in recreation. Modified by S.Wall-Reinius from Miller et al. 2022, <https://doi.org/10.1016/j.jort.2021.100455>, and Lischka et al., 2018, <https://doi.org/10.1016/j.biocon.2018.06.020>

The mountain node

In the mountain node, focus has been to review existing research, identify knowledge needs and to improve processes and working methods in land use planning with a focus on environmental impacts from outdoor recreation and sports and goal conflicts in the Swedish mountains, particularly in the Jämtland mountains. In

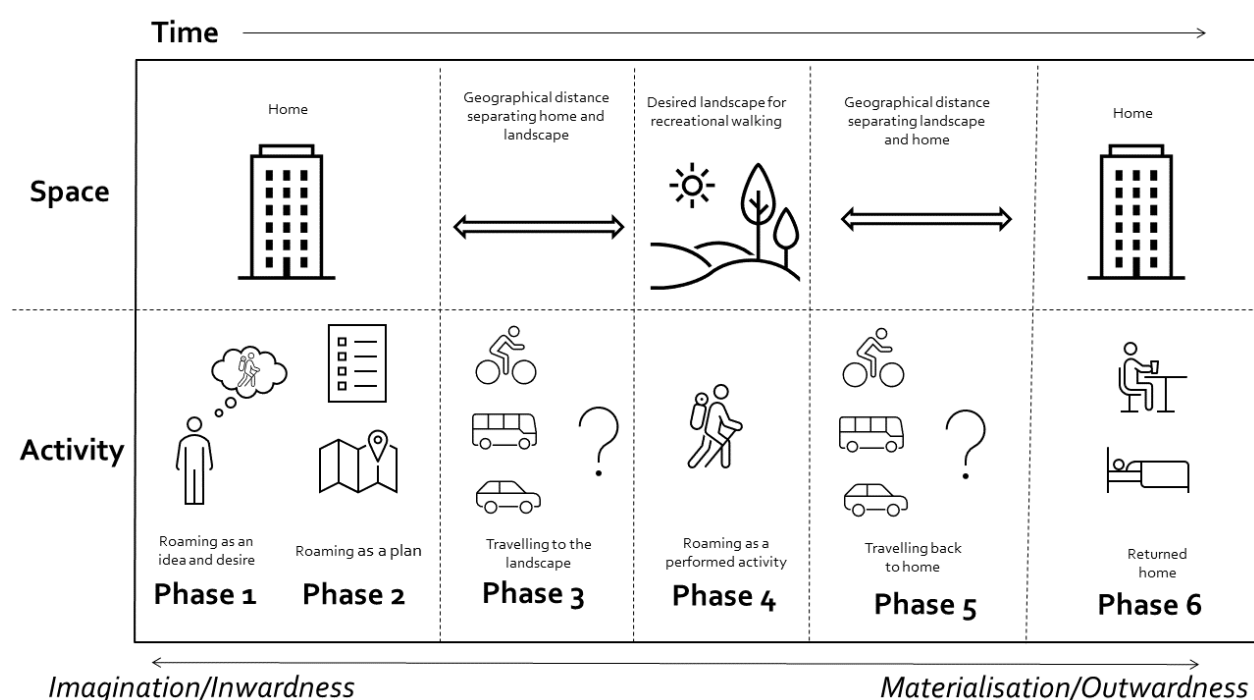
this work, the researchers have worked closely with the learning group. A research overview, focusing on recreational impacts on land, water, plants and animals has been carried out and this report has proved to be valuable for, in particular, the County Administration Board (CAB) as knowledge base in managerial work on nature protection (e.g. regulation of Vålådalen Nature Reserve). Other key activities have included investigation of visitors' experiences of environmental impacts and exploring success factors, and solutions in the management of motorized activities. Several other research activities concern how socio-ecological impacts on nature are perceived and handled among actors in nature-based events and organized outdoor activities. This has been done in collaboration with theme 5. The research has contributed to how challenges can be handled and solved; new insights reveal that the CAB, event participants, and event managers tend to view the events as isolated occurrences, failing to connect them to the broader context of spatial planning and of tourism and recreation strategies in the region. Consequently, these actors do not recognize impacts as integral to sustainable development, leading them to disclaim responsibility for behavioural or managerial changes. Together with the CAB and other actors, we have identified areas of improvement in working methods and in the permit processes for events. The mountain node has also investigated if and how recreational impacts are described and managed in spatial planning at municipal and regional levels, concluding that the fragmented organisation and unclear division of responsibilities in

relation to outdoor recreation makes it challenging to get a comprehensive picture of the consequences, and to collaborate around management.

The peri-urban node

The peri-urban node has focused on how rapid urban densification changes urban-rural relations, with focus on sports and outdoor recreation, using the peri-urban Stockholm as a case. The learning group, including researchers, has designed and used a multi-step knowledge co-creation process to develop a method for improving how sports and outdoor recreation is handled in planning and practical management of complex and multifunctional, co-governed landscapes. A publication on the insights the process has provided about how to support diverse constellations of actors in jointly identifying pathways for promoting and sustainably manage multiple landscape functions is in progress. The next step is to test and further develop the method by pilot studies in different contexts of multifunctional landscapes. An outcome of the co-creation processes in Stockholm and a clear indication of the importance of continuous science-policy exchange, is that participating in the dialogues and collaboration in the peri-urban learning group, is listed as one important measure in the action plan for outdoor recreation developed by the Stockholm CAB. Furthermore, the node has provided a written knowledge overview of the status of the field recreation ecology, based on scientific literature and Swedish governmental reports, which has been presented and discussed with a large variety of stakeholders.

Phases of space and activity of an outdoor recreation walk.





Residents' perceptions of peri-urban green spaces (their content as well as planning and management) are an important focus, where the node explores different methods for understanding these relationships, e.g. through mental mapping. Several minor case studies have been performed, addressing for example the role of nature in peri-urban sports and outdoor recreation in protected areas, and biodiversity positive recreation management, using golf courses as an example.

The coastal node

The coastal node has studied both the inclusion of outdoor recreation in spatial planning and conservation planning in coastal near areas, and recreational walking as a project both planning, transport and performance. These studies are somewhat delayed since the assigned researcher quit and had to be replaced. The work is now in progress and studies of planning documents from five municipalities on the West Coast have been conducted, together with interviews with employees from municipalities, CAB and Väst kuststiftelsen. Preliminary analysis shows that there is a lack of collaboration regarding outdoor recreation between different actors, not the least on the municipal level. There is also an important question emerging regarding what role outdoor recreation plays in planning on different levels. A post-doctoral researcher is also currently working on a paper about the role of outdoor recreation in the creation of a nature reserve on the islands of Marstrand, through studying the documentation of the processes behind the nature reserve. This paper will also be submitted in spring 2024.

As for walking, there is an ongoing PhD study, carried out in collaboration with theme 2, on peri-urban

outdoor recreation, addressing the environmental paradox of outdoor recreation – situations when greenhouse gas generating and/or energy-intensive vehicles are used for reaching recreational landscapes for a desired nature-contact during one's leisure time. Two sets of interviews have been carried out, focusing on recreational walks. The results highlight that to find sustainable solutions, people's single-day recreational walks should be seen as one among many projects in everyday life, including preparation, planning and travelling. These results have been communicated to actors and is also used in a co-creation project on communicating biodiversity, funded by the Region of Västra Götaland. A monograph is in progress.

The national learning group

The national learning group has brought together key actors for discussing how to steer towards sustainable use of land and water for outdoor life. Through a systematic transdisciplinary work on scenarios on the prospects regarding the use of land and water for sports and outdoor activities in Sweden, including measures and proposals to steer towards sustainable land and water use a report has been published, that provide a basis for strategic discussions and development with various social actors in sports, outdoor recreation, nature conservation and physical planning. The results have been communicated through various events. One example of concrete outcome is that the city of Gothenburg has used the report in the follow-up of their outdoor recreation program. A scientific paper on the process and its results is in progress.