

11 Outdoor recreation and nature's contribution to well-being in a pandemic situation - case Turku, Finland

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Urban green infrastructure provides a range of experiences for people and various health benefits that support human well-being. To increase urban resilience, exceptional situations, such as the COVID-19 pandemic, are important to learn from. This study aims to understand how the residents in Turku, a middle-sized city in Finland, perceived their outdoor recreation changed and how nature contributed to their subjective wellbeing during the early phases of the COVID-19. Sites of outdoor recreation and associated ecosystem service benefits were gathered through a map-based survey. In addition, the contribution of nature on subjective well-being and the changes in outdoor recreation behaviour were measured. Data was analysed through quantitative, qualitative and spatial methods. The results show that nearly half of the respondents increased outdoor recreation (41.8 %, n=589) and the majority of outdoor recreation sites (82.6 %) were visited more or as often as before the pandemic. The spatial analysis revealed that the most often visited recreation sites were near forests, semi-natural

areas and housing areas as well as relatively close to respondent's residence. Respondents had various reasons for changes in outdoor recreation behaviour. For some a shift to working remotely and changes in everyday routines led to spending time outdoors more often and for some spending less while others avoided recreation in crowded areas due to social distancing. The results also indicate that people's opportunities to adapt to the pandemic conditions differ greatly. The nature's contribution to subjective wellbeing during COVID-19 was important regardless of respondent's outdoor recreation behaviour. Our study highlights that urban planning should respond to different needs for outdoor recreation in order to widely, and in a just way, promote the well-being benefits of urban nature during a pandemic, and to increase the resilience of the city and its residents. Participatory mapping can capture the variety in resident's values and identify key recreation sites of multiple ecosystem service benefits. (41.8 %, n=589)