ASTRA PROJECT

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Author(s):	Katja Kangas (LUKE) katja.kangas@luke.fi; Oili Tarvainen (LUKE) oili.tarvainen@luke.fi; Anne Tolvanen (LUKE) anne.tolvanen@luke.fi
Contributor(s)	

WP2. Environmental sustainability transition

Ongoing development

The Global Sustainable Development Report shows that for the first time since the adoption of Sustainable Development Goals (SDGs) the score has decreased from the previous year (Sachs et al. 2021). The COVID-19 pandemic is the principal reason, but climate change, the degradation of biodiversity and increasing inequality are also significantly influencing the development. There is a feedback, as unsustainable

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development that causes deforestation and biodiversity threats may also increase the likelihood of future pandemics (Brancalion et al. 2020).

The latest IPCC report shows that Climate change is advancing and it influences the ecosystems in multiple ways (IPCC 2021). Warming has led to a rise in natural disasters, including floods droughts, storms, and heat waves, and it is causing the of rising sea levels. Despite that climate change affects all regions on Earth the consequences differ among the regions. This causes different pressure on the people, livelihoods and infrastructure in the attempts to adapt and mitigate the climate change.

The large scale biodiversity degradation, named as sixth mass extinction, occurs largely due to the human activities and alterations of ecosystems (Ceballos et al. 2017). For example, more than 40% of mammal species have experienced severe population declines (Ceballos et al. 2017). The development is expected to have negative consequences on ecosystem functioning and services, and eventually be reflected to human civilization.

Human societies are dependent on biodiversity, which is the basis for the production of ecosystem services, i.e. various benefits that people obtain from nature (Diaz et al. 2006). Thus, people's wellbeing is dependent on natural environments. On the other hand, the closer they are linked to the direct production of ecosystem services the more vulnerable they are to the biodiversity loss and environmental degradation.

Inequality and vulnerability can be found both inside societies and at the global level. In the societies it can be seen for example as the quality of infrastructure and housing in the neighbourhood or different access to nature experiences and high-quality natural environments.

At the global level the inequality is enforced through the economic development of rich countries, which generates negative socioeconomic and environmental impacts in developing countries (Sachs et al. 2021). Aims to reach targets related to climate neutrality, biodiversity and the SDG targets may thereby undermine the ability of developing countries to reach theirs.

Sustainability transition requires the integration of the social work (SW) profession with the knowledge and means on environmental sustainability, as sustainable social foundation of human life can only develop in an inherent interdependence with the overall ecological boundaries in addition regenerative and distributive economy.

Challenges and approaches related to the environmental sustainability transition

The Social-ecological systems perspective of Transdisciplinary Sustainability Transition Research regards the delineation between social and natural systems as artificial and

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argues that human communities, including the economy and culture are embedded parts of the biosphere. WP2 deepens this understanding while demonstrating the interconnectivity between social challenges at the grassroots level of vulnerable communities and the environmental sustainability of the biosphere.

We frame the linkage between environmental sustainability transition and Social Work through five different challenges presented in Figure 1 by adopting the biodiversity-wellbeing framework of Diaz et al., which emphasize that human societies are dependent on nature and biodiversity via ecosystem services (2006, Fig. 1). Our level is the local level. We provide new research-based knowledge and new SW methods based on the usage of the natural and built environments, social inclusion and justice, sustainable models of housing and food policies, and also include the impacts of ecological degradation and instruments promoting ecological sustainability. The challenges are to be resolved by sustainable transition. Translucent themes to all five challenges of WP2 include eco-social approach (Närhi, 2004; Närhi & Matthies, 2016) and aim to improve social inclusion of vulnerable local communities in Europe with ecosocial innovations, i.e. practical grassroot level social, socio-cultural and employment projects with an ecological agenda (Matthies et al 2019).

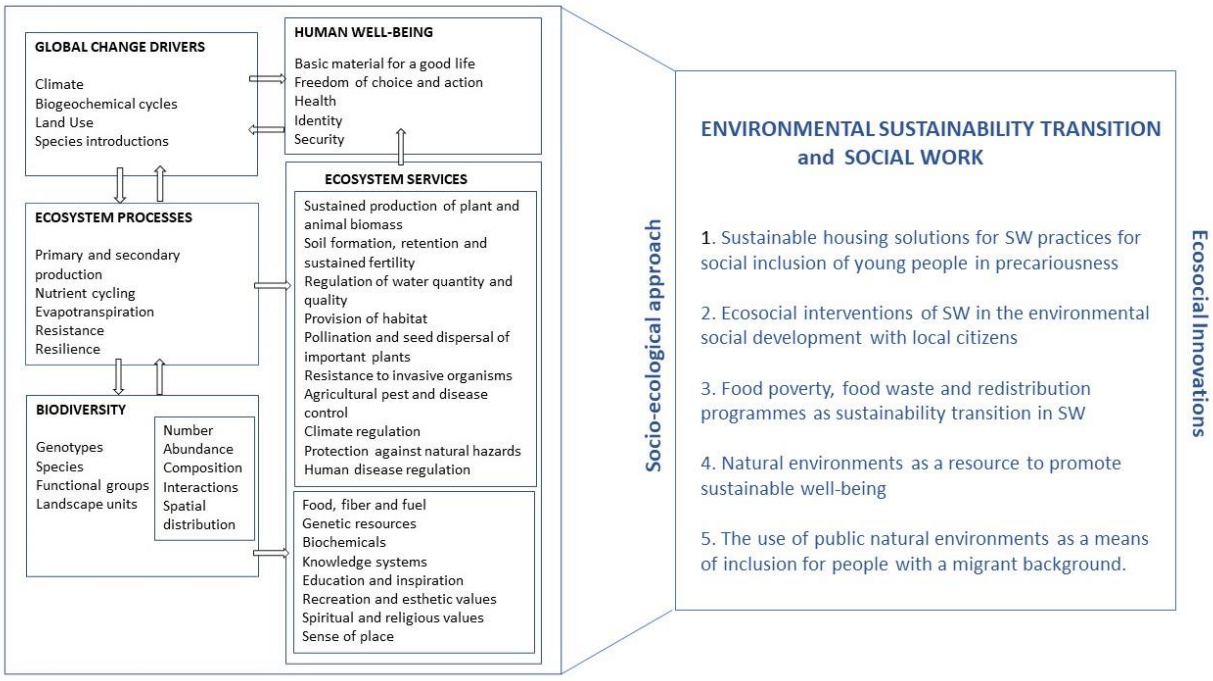

Fig.1. The theoretical-conceptual framework of WP2 including five challenges in the environmental sustainability transition and Social Work. Framed with the biodiversity-wellbeing framework modified from Diaz et al. (2005, 2006) and Millennium Ecosystem Assessment (2005).

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