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A Telecoupling Lens to Study Global Sustainability Entanglements along Supply Chains: The Case of Dutch-Kenyan Rose Trade

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Abstract: During times of globalization, socioeconomic systems have become connected across the world through global supply chains. As a result, consumption and production locations have increasingly become spatially decoupled. This decoupling leads to complex entanglements of systems and sustainability challenges across distances -entanglements which can be conceptualized as telecouplings. Through telecouplings, people and environments across the world have become closely connected, bringing challenges as well as opportunities. Some argue that telecoupling dynamics started taking shape during times of colonization when resources were first traded across the world. An example of such a telecoupling is that of the rose. Every third rose sold in Europe is grown in Kenya and enters the European market through the Dutch flower auction system. Many Kenyan farms are Dutch-owned, closely entangling Kenya and the Netherlands through the trade of roses. Furthermore, the globalization of the flower industry and the resulting shift of production away from the Netherlands and towards Kenya has led to significant changes in the Dutch horticulture sector. However, the sustainability effects of this rose telecoupling is limited neither to the horticulture sector nor to the Netherlands and Kenya. Alongside the flow of roses between these countries come complex financial, knowledge-based, and regulatory flows. The rose telecoupling also creates spillover effects to other countries, such as Ethiopia, and other industries, such as Kenyan tourism. Therefore, telecoupling dynamics create complex entanglements that cut across sectors, environments, communities, and countries, which makes effectively governing and managing telecouplings and their sustainability implications challenging. Indeed, sustainability can no longer be studied in spatial and temporal isolation. This paper aims to map the rose telecoupling's complex environmental and social interactions to identify points of tension guiding sustainability-targeted interventions. Mapping these interactions will provide a more holistic understanding of the sustainability challenges involved in the Dutch-Kenyan rose trade. This interdisciplinary telecoupling approach reframes and integrates interdisciplinary knowledge about the rose trade between the Netherlands, Kenya, and beyond.

Keywords: Dutch-Kenyan rose trade, globalization, socio-ecological system, sustainability, telecoupling

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