The role of scenarios in fostering collective action for sustainable development: Lessons from central Romania

Marta Nieto-Romero [a,*], Andra Milcu [a], Julia Leventon [b], Friederike Mikulcak [a], Joern Fischer [a]

[a] Institute of Ecology, Faculty of Sustainability, Leuphana University Lueneburg, 21335 Lueneburg, Germany
[b] Institute of Environmental and Sustainability Communication, Faculty of Sustainability, Leuphana University, 21335 Lueneburg, Germany

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ABSTRACT

Scenario planning is increasingly used to help rural communities to navigate a transition towards sustainability. Although some benefits of scenario planning -e.g. awareness raising, information sharing, and visioning—are widely recognized and assessed, its final impact on prompting tangible actions by the community is usually overlooked. This study aims to fill this gap by assessing the opportunities and limitations of scenario planning in shaping a tangible agenda for sustainable development within a rural community. Based on previously elaborated scenarios for Transylvania (Central Romania), we interviewed 24 actors relevant to the development of the area in a second-stage process. Using a qualitative approach for data analysis, we explored the barriers for action as well as the trade-offs actors were willing to accept to collaborate with other groups to reach a common vision. We found that scenario planning was useful to articulate a shared development trajectory. Yet, actors perceived different barriers to act towards their preferred future. Likewise, the trade-offs the different actor groups accepted for collaboration differed. In view of our results, we developed a conceptual framework highlighting how information sharing and visioning alone are not enough to break through the barriers actors perceived to bring about change in a community. However, scenarios are useful to identify barriers and opportunities for collective action. In consequence, scenarios and elicited barriers for action can feed into the design of a longer-term agenda for sustainable development and necessary strategies. Framing scenario planning as input for second-stage participatory processes instead of a stand-alone exercise can thus help to increase the added value of scenario planning, and its return to the community altogether.

1. Introduction

Scenario planning has emerged as a means for consensus building in social-ecological systems where a number of stakeholders may have different priorities and expectations for the future. It is a potentially powerful participatory tool to raise awareness about key future uncertainties, to enhance discussion, and to build a shared vision among actors (Schwarz, 1991; Peterson et al., 2003; Henrichs et al., 2010). Scenario planning is a process, generally workshop-based, by which different narratives of how the future may unfold are built (Evans et al., 2006). It emerged in the late 1950s as a strategic planning tool, aiming at investigating policy alternatives and potential consequences (Bradfield et al., 2005). Since then, it has been applied in many different contexts, including the private sector (Van der Heijden, 2005), the public sector (EEA, 2009), global environmental assessments (e.g. IPCC, 2007; MA, 2005), and community-level environmental management (e.g. Patel et al., 2007; Daconto and Sherpa 2010; Evans et al., 2008). Although the benefits of raising awareness and sharing information have been recognized in numerous case studies (e.g. Daconto and Sherpa 2010; Oteros-Rozas and Martín-López 2013), and are frequently emphasized in policy analysis literature (Costa and Warnke, 2008; EEA, 2009; Volkery and Ribeiro, 2009), the contribution of scenario planning to foster tangible action has been largely unexplored (Wilson, 2000; Volkery and Ribeiro, 2009). In the context of community-level environmental applications,

* Corresponding author at: Centre for the Management of Agricultural and Environmental Risks—CEIGRAM/ Universidad Politécnica de Madrid; Senda del Rey 13, Ciudad Universitaria, Madrid 28040, Spain.
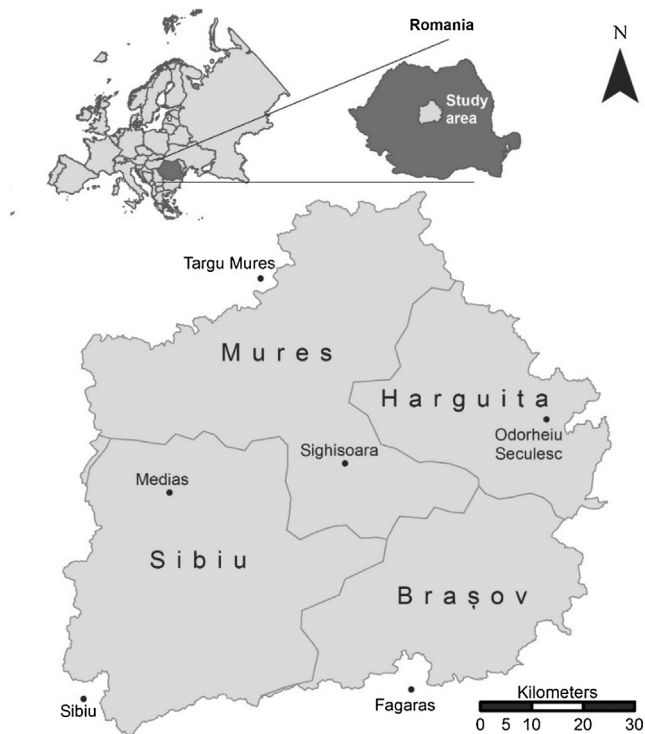E-mail address: marta.nieto@upm.es (M. Nieto-Romero).

Fig. 1. Study area in Central Romania indicating the borders of the four counties within it.

we argue that there is a gap in understanding what happens in a given social-ecological system after scenarios have been created.

Here, we aimed to understand the extent to which scenario planning might help to shape a tangible agenda for sustainable development in a traditional cultural landscape in Transylvania, Central Romania. Scenario planning has become popular in social-ecological research as a way to deal with uncertain future developments for a transition towards sustainability (e.g. Daconto and Sherpa, 2010; Palomo et al., 2011; Plieninger et al., 2013). It involves workshops by which diverse actors within a community identify the most influential and uncertain drivers of change and build (generally four) internally consistent narratives of plausible future developments (Henrichs et al., 2010; Plieninger et al., 2013). This process allows participants to create a common understanding of the functioning of the social-ecological system and a shared future vision among them (Volkery and Ribeiro, 2009; Bohensky et al., 2011), which can enhance engagement in actions towards a common goal (Selin and Chevez, 1995; Costanza, 1999; Albrechts, 2004; Gertler and Wolfe, 2004; Daconto and Sherpa, 2010; Wyborn, 2015). Linking scenarios to action demands going beyond the visioning process— which explores how the future may change—to explicitly identify and characterize who can bring about this change (Wangel, 2011). This, in turn, needs to encompass an assessment of the capacities of different actors to mobilize their vision into action (Wyborn, 2015), which is also important to assess who is benefiting from different scenarios and which effect this will have on existing power structures (Voß and Bornemann, 2009). Hence, in this study we focused on exploring the barriers actors perceive for taking action after completion of the visioning process as such. By doing so, we intended to explore both the potential and limitations of scenario planning to create tangible collective action.

We focused on the Saxon area of Romania. The traditionally managed landscape mosaic is considered one of the most biodiversity-rich regions in lowland Europe (ADEPT, 2011), and sustains numerous species that are threatened or extinct in other parts of Europe (e.g. Loos et al., 2014; Dorresteijn et al., 2013). At the same time, the region is one of the poorest in Europe in terms of financial resources, infrastructure, and education (Dinu, 2012; Fischer et al., 2012; Mikulcak et al., 2015). Traditional subsistence agriculture is economically unprofitable, increasingly leading to the abandonment or intensification of ecologically valuable areas (Fischer et al., 2012). In this context, sustainable development implies balancing sound socio-economic development and biodiversity conservation, thereby considering the preferences of different actors regarding their landscape. Given the existing diversity of stakeholders' views and their abilities to influence change, and the high uncertainty about the future (Mikulcak et al., 2013; Hanspach et al., 2014; Milcu et al., 2014), Central Romania is ideally suited for exploring the benefits and possible limitations of scenario planning.

In this study, we drew upon four scenarios previously developed for the study area using participatory processes (Hanspach et al., 2014). We initially assessed the extent to which the four scenarios were supported by different stakeholders (Objective 1). We then explored the barriers and opportunities perceived by actors in moving towards these scenarios (Objective 2). Barriers can include, among others, short-term concerns of actors such as low income levels (EEA, 2009; Ghişa et al., 2011), a lack of organizational capacity (Volkery and Ribeiro, 2009), political will (Evans et al., 2006; Volkery and Ribeiro, 2009), or governmental capacities (EEA, 2009). These barriers affect the capacity of individual actors to engage in action towards their vision thus shaping how different actors may influence negotiation processes and benefit from final outputs of scenarios (Patel et al., 2007; Reed et al., 2013). As a result, achieving or moving towards an agreed scenario cannot be an individual endeavor, but will require partnerships and collaborations among actors based on negotiation and compromise (Brown and Ashman, 1996; Sabatier, 1998; Folke et al., 2005; Fischer et al., 2012; Dyer et al., 2013; Mikulcak et al., 2013). Such negotiation, in turn, could increase the legitimacy of the scenarios as well as the capacity to move the social-ecological system in a desired direction (Patel et al., 2007; Dyer et al., 2013; Reed et al., 2013). For this reason, we also explored the compromises or trade-offs stakeholders would be willing to accept when collaborating with other actors to reach their vision (Objective 3).

In the following methods section, we outline how we explored the acceptance of the different scenarios, and the barriers and opportunities to reach the envisioned futures in our case study area. We present the differing beliefs across actors towards realizing their vision, which were framed as typologies of policy beliefs based on Sabatier's advocacy coalition framework (Sabatier, 1988, 1998). Our findings demonstrate that scenario planning by itself should be understood as merely the start of a prolonged process of change. Our results further support the rationale of scenario planning as a process to facilitate understanding between diverse stakeholders, and to highlight common ground to create a shared vision. However, as a stand-alone exercise, scenario planning is limited in its ability to prompt collective action. In consequence, it would rather need to be positioned in a much longer-term deliberative process including all relevant actors.

2. Materials and methods

2.1. Background and context

We focused on a traditional cultural landscape in Transylvania, Central Romania, which covered an area of 7440 km^2 and included