



Defining sustainability? Insights from a small village in Bosnia and Herzegovina

Özge Can Dogmus · Jonas Ø. Nielsen

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Abstract The term “sustainability” is flexible as it needs to function in many different contexts and across many issues. At the same time, this flexibility makes it difficult to assess and easy to misuse. Over the last three decades, numerous sustainability assessment tools have been developed to better define the term. In this paper, we critically address these attempts and argue that the flexibility of the term is not solely problematic, but allow people to create their own sustainability imaginaries, by which we mean a society’s understanding of how environmental resources should be used. We show this through a case study, the Martin Brod village in Bosnia and Herzegovina, where, within a few years, the inhabitants changed their sustainability imaginaries in parallel with shifting external socio-economic conditions and expectations. We primarily applied qualitative research methods. Our results show that changing sustainability imaginaries was made possible due to the flexibility of the term which enabled otherwise disempowered local inhabitants to have agency. Consequently, a stricter definition of sustainability may have unintended consequences for people

struggling to maintain a political voice in settings such as Bosnia and Herzegovina.

Keywords Sustainability · Imaginaries · Integrative · Hydropower · Ecotourism · Sustainable development · Bosnia and Herzegovina

Introduction

Since the late 1980s, the use of the term sustainability has gained prominence and is applied extensively in international policy and research agendas despite being difficult to define and measure (Schröter et al. 2017). To address this, researchers and decision-makers increasingly argue that we need to come up with better definitions as well as objective operational principles, frameworks and tools (Miller 2007; UN 2007). A key aim of this exercise is to curb the term’s opaque nature, making sustainability assessment challenging (Bell and Morse 2018; Garrett and Latawiec 2015) and the misuse of the term possible, such as in the case of greenwashing, referring to the misapplication of the principles of environmental marketing to implement cosmetic changes legitimising unsustainable business activities (Brown et al. 1987; Hamann and Acutt 2003; Karna et al. 2001; Lyon and Montgomery 2015). However, such efforts have been criticised for reducing complexities into

Ö. C. Dogmus (✉) · J. Ø. Nielsen
IRI THESys, Humboldt-Universität zu Berlin, Unter den Linden 6, 10099 Berlin, Germany
e-mail: dogmusoc@hu-berlin.de

Ö. C. Dogmus · J. Ø. Nielsen
Geography Department, Humboldt-Universität zu Berlin,
Unter den Linden 6, 10099 Berlin, Germany

rather simple signals that attempt to measure the immeasurable (Bell and Morse 2018). Social values represented as numbers and concrete definitions, such as well-being, happiness, and fulfilment, have been shown to not capture the dynamic and complex nature of communities (Bell and Morse 2003). Despite these critiques, research on better defining and hence determine sustainability continues, exemplified by the development of sustainability indicators (e.g. Dahl 2012; Hicks et al. 2016; Li et al. 2019; Rasmussen et al. 2017).

While we acknowledge that there is an important rationale behind creating clearer definitions of sustainability to avoid the misuse of the term, we argue that doing so might remove options for people who are struggling to determine their own present and future. Concretely, we use the case of a small village, Martin Brod, in Bosnia and Herzegovina to argue this point. At the state level in Bosnia and Herzegovina, hydropower and ecotourism are put forward as two crucial sustainable development strategies (BiH 2011; Smajic 2019). Both of these strategies have played out in competition with each other in Martin Brod. This situation, we show, was used by the inhabitants to change their mind over time about which of the two strategies they found sustainable. A change of mind which was closely related to their understanding and use of the term sustainability as well as the socio-economic situation in the village. As such, our results align with an understanding of sustainability that emphasises the flexibility of the term and the inherent potential in this flexibility to foster transformative solutions, or, as put by Loorbach et al. (2011), “adopting a view on the transition to sustainability implies an integrative view of sustainability, which is capable of incorporating multiple domains, multiple levels of scale and spans a long-term”. To show this dynamism and complexity, we draw from the literature on imaginaries (e.g. Levy et al. 2013; Lotz-Sisitka 2010; Taylor 2004), specifically on sustainability imaginaries (Cidell 2017). Imaginaries are a society’s imaginative capacity to help make sense of the exterior world (Taylor 2004) which are various and transform over time (Cidell 2017; Taylor 2004).

The paper is organised as follows. First, we briefly review the literature on attempts to define and determine the sustainability term and the literature on sustainability imaginaries. Then, we present the empirical setting and methods used. Third, we move to

our results. These are presented in sub-sections covering (i) planned hydropower plants, (ii) opposition towards these projects, (iii) ecotourism and the failing promises of the Una National Park (UNP), and iv) a return to hydropower based on changing external conditions. In the discussion, we argue that from the inhabitants’ perspective, the flexibility of the term sustainability is crucial and we use this finding to reflect upon the push within sustainability research to define and determine the term. A conclusion wraps up the paper.

Theoretical background

Attempts to define and determine sustainability

The most well-known definition of sustainability is found in the Brundtland Report (WCED 1987) and in which it is the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This is a loose definition but making the term’s comprehensive definition is difficult due to its inherent flexibility, arising partly from its context-specific nature (Weaver 2006). Its context-dependency has resulted in a variety of versions of the sustainability definition (e.g. Heineberg 2010; Kuhlman and Farrington 2010; Parris and Leiserowitz 2005). This variety has been a cause of concern for scholars and decision-makers, and determining and categorising targets, indicators and frameworks crucial in identifying what exactly to sustain, for whom, when and why have been an on-going process (Garrett and Latawiec 2015; Pintér et al. 2012). Especially, after the UN’s Earth Summit in 1992, “a virtual explosion” (Robinson 2004, p. 374) of attempts to determine the sustainability concept by means of developing sustainability standards, certifications for products and services, and monitoring tools have been observed (Pintér et al. 2012).

To illustrate, one of these tools are sustainability indicators (Parris and Leiserowitz 2005). They are defined under each sustainable development goal individually (Hák et al. 2016; Schader et al. 2014). GDP per capita, ecotourism ratio in the total economic growth, and unemployment rate are, for instance, used to evaluate whether a country is successful in achieving economic growth and decent work for everyone whereas indicators such as share of renewable energy

in the total energy generated and accessibility to international financial flows in support of clean energy are used to assess whether access to clean energy for all is possible (National Research Council 2011). Indicators, in general, are claimed to be easy to understand, reliable, based on accessible data, and suitable for standing in for complex conditions which otherwise could not be measured directly (UNECE 2005). Next to being used to evaluate if we are moving toward a sustainable future (Kuhlman and Farrington 2010), they aim to be informative for decision-makers (Miller 2007) and to limit the space for the term's misuse arising from its context-dependency (Hák et al. 2016; Karna et al. 2001; Missimer et al. 2017). In other words, sustainability indicators are meant to be representational and to have qualities of performativity to be used to make sense and respond to different situations (Hale et al. 2019).

Yet, such attempts of determining the term have been criticised for not being suitable enough to represent the dynamic interaction between social and ecological systems (Bell and Morse 2008; Morse 2013) due to trying to find out the truth of sustainability and being static, mostly top-down, and expert-driven (Bell and Morse 2008; Morse 2013). Central to this critique is an understanding of nature and society as being in constant flux and hence ultimately unmeasurable (see Alrøe and Noe 2016; de Olde et al. 2018). Robinson (2004) argues that no single approach or definition should be considered the “truth” of sustainability,

rather it is more usefully thought of as approach or process of community-based thinking that indicates we need to integrate environmental, social and economic issues in a long-term perspective, while remaining open to fundamental differences about the way that is to be accomplished and even the ultimate purposes involved (p. 381).

Such critiques have led scientists to make sustainable assessment tools more integrative through, for example, engaging communities (Magee et al. 2013), yet problems still remain concerning the inherent drive in many of these attempts to reach a common and shared understanding of the term (Alrøe and Noe 2016; Schader et al. 2014). If boundaries are set to rigidly represent “ideal-typical worldviews”, the concept would very likely be too simplistic (Rigolot

2018, p. 21). It would also be hegemonic (see Ingold 2016) because it would not allow everyone to represent their voice, i.e. to have agency (Klugman 2014), which alone could be a tool for empowerment (Beaumont 2010). Agency has this capacity because when it is exercised by individuals and groups, it shapes social, political, and economic structures (Gammage et al. 2016), e.g. how sustainable decisions are made and exercised. Therefore, if the less powerful groups do not express their voice, they would lack agency, the legitimacy of the sustainability knowledge produced would be simplistic and hegemonic hence the integrative aspect of sustainability would be questionable (de Olde et al. 2018). Moreover, such clear boundaries, in addition to being too simplistic, can also be misused for political ends, resulting in polarised debates (Bell and Morse 2018), such as in the case of post-truth politics (see Higgins 2016; Lewandowsky et al. 2017). Thus, the flexibility of the sustainability term is maybe its strength and not weakness (Alrøe and Noe 2016; Parris and Kates 2003) bearing in mind that this flexibility makes the term integrative (Nielsen et al. 2019; Robinson 2004).

Sustainability imaginaries

Imaginaries are simply defined as a society's imaginative capacity to help make sense of the exterior world, i.e. as a template for thought and action (Hauer et al. 2018; Lotz-Sisitka 2010; Nielsen and Pedersen 2015; Taylor 2004). Thus, imaginaries both inform and transform experiences and visions of moral behaviour and social order (Smith and Tidwell 2016). They are “carried out, reinforced, and reinterpreted through everyday practices and institutions” (Cidell 2017, p. 171), which makes them open-ended and flexible (Nielsen and Pedersen 2015). Such traits of imaginaries allow people to transform (i.e. take up and improvise) their existing imaginaries into new viable forms (Taylor 2004) when there are changes in their political, economic (Jessop 2010), and/or ecological conditions (Levy et al. 2013).

As “[w]e are living in the age of diversity” (Vertovec 2012, p. 287), multiple imaginaries exist simultaneously that are almost always contested (Taylor 2004). To illustrate, Levy et al. (2013) identified four major climate imaginaries in the US which had an influence on the rise of clean energy in the country from the 1990s onwards until it stalled

around 2010. By being contested and dynamic, imaginaries can produce winners and losers (Davis and Burke 2011). Next to the multiplicity of imaginaries of one single case/situation, there are also various forms of imaginaries that are theorised by academics, such as social (e.g. Taylor 2004), sociological (e.g. Mills 1959.), sociotechnical (e.g. Jasanoff and Kim 2015), and spatial imaginaries (e.g. Watkins 2015). These are in addition to those imaginaries that highlight the perspective of the imagining subjects, such as migrant (e.g. Camacho 2008), queer (e.g. Tongson 2011), and middle-class (e.g. Reay 2007) imaginaries.

Drawing from this large literature, Cidell (2017) suggests a new form of imaginaries, namely sustainability imaginaries, “as a way to understand the contexts in which environmental decisions are made and new environments result”. She defines the sustainable imaginary as “a society’s understanding and vision of how resources are being used and should be used to ensure socio-environmental reproduction” (Cidell 2017, p. 170). While a sustainable imaginary is necessarily context-specific, considering the specific resources used by a specific group at a specific place in a specific time, it is, at the same time, in close relation with the broad sustainability definition (Cidell 2017). The latter is seen in Vaughter and Alsop (2017)’s work where they explore sustainability imaginaries within an institution that identifies four different sustainability imaginaries as, i.e. performance, governance, techno-efficiency, and community organising. In addition, the definition of the sustainability imaginaries is open-ended “since ‘sustainable’ implies a future temporal component” (Cidell 2017, p. 171). With reference to the example of Chicago’s green rooftops, she also shows that sustainable imaginaries transform over time in parallel with changing internal and external conditions (Cidell 2017).

Contextual settings

Sustainable development in Bosnia and Herzegovina

In post-war-Bosnia and Herzegovina, sustainable development has become an important strategy that is strongly supported by the World Bank and the European Union (EU) in the economic transition from

a socialist to a market-oriented economy (EU 2018; Pugh 2005; World Bank 2017). The World Bank and EU have, for example, given technical support in addition to policy advice for renewable energy generation—mainly hydropower, wind and solar power (BiH 2016; World Bank 2016). An example of this is seen in the National Renewable Action Plan of Bosnia and Herzegovina where the terms of renewable energy generation are defined according to the EU sustainable development directives (BiH 2016). In fact, Bosnia and Herzegovina is to a large extent forced to comply with sustainable development plans in order to become a member of the EU, something which is strongly desired (BiH 2015b; EUROSTAT 2019). That Bosnia and Herzegovina takes this seriously is seen in their revision of laws as well as the introduction of new ones to initiate this transition towards a market economy based in part on sustainable development (Tzifakis and Tsardanidis 2006). A good example is the Law on Renewable Energy Sources and Cogeneration in Federation of Bosnia and Herzegovina in which the use of renewable energy for transport, cooling and heating is promoted while the necessary regulatory framework for the technical infrastructure is also provided (FBiH 2013).

Hydropower plays an important role in the sustainable development strategy of Bosnia and Herzegovina (BiH 2011; Dogmus and Nielsen 2020). Within Bosnia and Herzegovina, Elektroprivreda BiH, a joint-stock company (90% public and 10% private), is in charge of electricity generation and distribution (EPBiH 2019). In addition, public–private partnership projects are highly encouraged especially in the hydropower sector (IRENA 2017) and there are over 300 hydropower plants currently planned in Bosnia and Herzegovina (Dogmus and Nielsen 2019; Riverwatch and EuroNatur 2018). Two of these are in the study village Martin Brod, one on the Una River (a small hydropower plant, 1.3 MW) and another is on the Unac River (a large hydropower plant, 72 MW). Hydropower generation is perceived as sustainable development in Bosnia and Herzegovina because of the country’s large technical hydropower potential (6110 MW; IRENA 2017) and familiarity with the sector since the time of Socialist Federal Republic of Yugoslavia (hereafter Yugoslavia; 1945–1992) (Chattopadhyay et al. 2017; EU 2017). A point clearly visible in the policies focusing on this sector.

In addition to renewable energy generation, promoting ecotourism (UN 2007) is another force driving sustainable development in Bosnia and Herzegovina (Smajic 2019). This is seen in projects such as the Project for Sustainable Regional Development through Eco-Tourism (IJCA 2009) and Ecotourism in Livanjsko and Surroundings (UNDP 2012). Ecotourism as a sustainable development strategy in Bosnia and Herzegovina is important as it generates income by attracting tourists interested in the richness of biodiversity and the diversity of cultural destinations found in Bosnia and Herzegovina (BiH 2015a; Smajic 2019). Consequently, ecotourism is advocated and supported all over the country and encouraged by the EU (Čolaković 2019). In particular, and as we shall see in our study village, national parks have been established to foster this sector.

Study area

Martin Brod village is within the Una-Sana Canton and is administratively under the rule of the Federation of Bosnia and Herzegovina (Fig. 1). The village is within the borders of the UNP that was established in 2008 and operationalised in 2011. The village belongs to the Municipality of Bihac and the population of Martin Brod is predominantly Serbian with some Croats and one Bosniak summer resident.

Before World War II (1939–1945), Martin Brod was famous for its watermills which used to be the main source of income in the village until the 1960s. The rivers Una and Unac, in addition to several connected creeks, flow through the village. There are numerous waterfalls in and around the village making the velocity of the water flow relatively high (Spahić et al. 2014). There is no scientific study for the exact number, yet the inhabitants interviewed claimed that the total number of waterfalls in the village was more than 100. In the 1970s, a mini-hydropower power plant (with 0.06 megawatts installed capacity) started to generate electricity for the village. This led to a local modernisation period, for instance, a movie theatre was established in the village. In addition, during the time of Yugoslavia, an international railway station in Martin Brod created employment opportunities. However, in 1992, the outbreak of the Bosnian War caused the residents to flee. After the war, less than half of the original inhabitants returned and those were mostly the elderly people. The primary reason

for this was the lack of employment opportunities in the village after the war as the railway station and the public utilities together with the mini-hydropower plant were permanently closed. During the immediate post-war era, renting rooms and providing food and service to fly-fishers became the main income sources in the village. However, in 2011, the UNP prohibited the release of non-native fish species into the rivers within the park's territory due to nature conservation policies.

According to the fieldwork results, the total number of permanent residents in Martin Brod was 76 in 2017. There were 38 permanent households. The average household size was 2. There were 11 residents under the age of 18; 41 between ages 18 and 64; and 24 above the age of 64. The average age was 52 and the distribution of males and females were equal. The education profile of the inhabitants was relatively high with 29 high-school and 11 university graduates.

Retirement payments constitute the only annual income source for 47.1% of the households. One household lives off farming, while the members of other households were seasonally employed in the UNP or *kafana* (the Bosniak/Serbian/Croatian name for the place which is a mix of a café, restaurant, and bar) in the village. Three *kafana*, two hotels, one fish farm, one primary school, one village medical clinic and the UNP created employment opportunities for 10 of the inhabitants and 6 of these were seasonal workers (employed only during the summer). The owner of the fish farm and almost all of the employees are from outside the village. 52.9% of the households' average monthly income was less than 400 BAM (\approx 205 Euro) whereas the minimum monthly wage is between 168–193 Euro in Federation of Bosnia and Herzegovina (Obradović et al. 2019). 29 out of 38 of the households did not have any savings. 77% of the households interviewed stated having economic difficulties mostly due to insufficient income, lack of employment opportunities, and political instability. There were seven inhabitants who had been looking for a job for more than a year.

This indicates that the socio-economic status of the inhabitants is low and this was also expressed when people were asked to scale the quality of life in the village from 1 (very bad) to 5 (very good). In the survey, 67.6% of the respondents scaled 3 (average) and below. 16 of the respondents believed that life would be better for them in another country giving

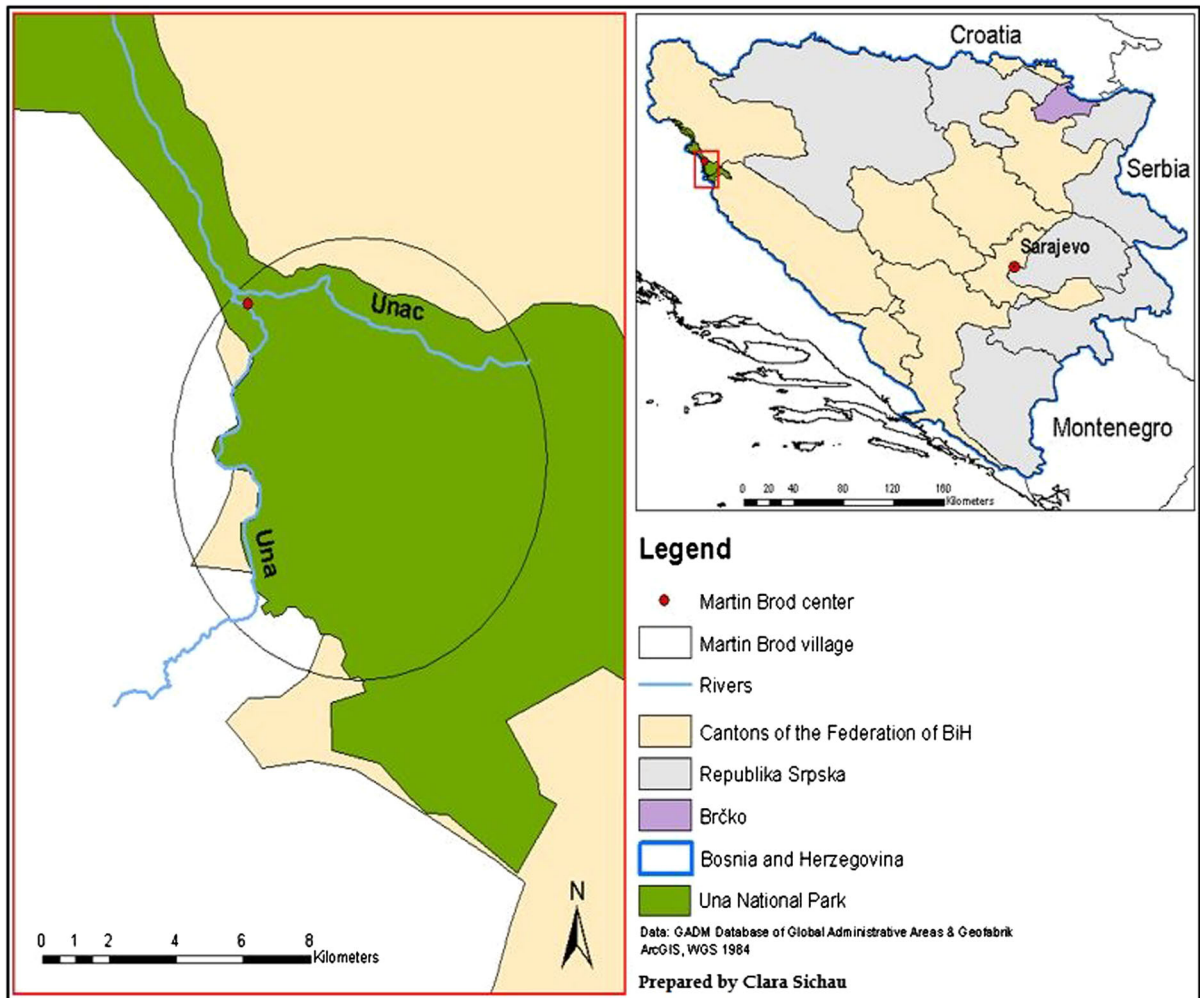


Fig. 1 The location of Martin Brod village

better employment opportunities there as an explanation. The majority of those who could not imagine themselves living somewhere else ($n = 18$) were elderly (over 65 years old). The main reasons for this were a close personal attachment to the village and its natural surrounding. Only 11 out of 35 respondents were optimistic about their future. This low level of optimism was largely related to mistrust of politicians and government officials and the challenges of various forms of corruption ($n = 20$).

Methods

This paper draws on primary and secondary data sources collected by the first author during fieldwork

carried out in Martin Brod village and the cities of Bihac, Banja Luka, Sarajevo, and Mostar in Bosnia and Herzegovina between July and October 2016 (3.5 months; Phase 1) and July–August, 2017 (1.5 months; Phase 2). Martin Brod was selected as the case study village as it was considered to be exemplary for how sustainable development strategies play out in Bosnia and Herzegovina.

Primary data was collected using methods such as semi-structured interviews, participant observation, informal talks, and household surveys which also included open-ended questions. 30 out of 65 semi-structured interviews were conducted with inhabitants of Martin Brod village, where the first author lived for the majority of the five months spent in Bosnia and Herzegovina. Since the number of summer residents

(21 households) doubles the population of the village, interviews were conducted with summer residents as well. The remaining 35 semi-structured interviews were conducted with bureaucrats, decision-makers, UNP staff, water concession commission heads, hydropower sector experts, donors, consultants, investors, and officials at development agencies, water agencies, international financial institutions, hydropower associations and civil society organizations. Because Martin Brod belongs to the Municipality of Bihać, therefore of the Una-Sana Canton in the Federation of Bosnia and Herzegovina, interviewed officials were generally selected from the following administrative hierarchy.

Two different types of sampling strategies have been used when selecting interview respondents in the village and for the rest of the respondents. In the village, snowball sampling, which indicates “a study sample through referrals made among people who share or know of others who possess some characteristics that are of research interest” (Biernacki and Waldorf, 1981, p. 141), was used. This was to collect data related to the recent past, when there was active opposition to hydropower plants in the village, and to understand the inhabitants’ opinions of hydropower plants and the national park. When snowballing, equal distribution of gender and age criteria was looked out. For participant recruitment in the village, permanent and temporary residents were listed carefully according to their household composition, gender and age range with the support of the village head. The majority of the interviews conducted with the local inhabitants took place during Phase 1. Purposive sampling was preferred for selecting other respondents, such as decisionmakers, civil society organisations, and public officers, considering that they “may have a unique, different or important perspective on the phenomenon in question” as well as to ensure their presence in the sample (Robinson 2014, p. 32). For participant recruitment, a specific respondent was selected to be interviewed or was approached to ask for a referral for another respondent who could fit the criteria. Most of those interviews were conducted during Phase 2. A list of respondents can be found in “Appendix”.

57 of the interviews were conducted in Bosnian, Serbian or Croatian with the assistance of two translators. Eight of them were conducted in English. Most interviews took between one and two hours and

were recorded by a voice recorder with the consent of the respondents. The rest were transcribed during and/or immediately after the interviews. In addition, 34 household surveys were conducted with the permanent residents of Martin Brod, providing almost a total coverage of the permanent households in the village (N = 38). Temporary households were not selected as survey participants due to the fact that their livelihoods were not dependent on village sources as they spend more than six months in a year outside of the village.

Secondary data was collected from official statistics, technical reports, government documents, civil society reports, historical documents, EU policy documents, the Bosnia and Herzegovina state, entity level and cantonal policies, newspaper articles, personal communications, and websites related to the hydropower sector. When necessary, if the text was in Bosnian/Serbian/Croatian, two research assistants translated them into English carefully. The reliance on translators implies that we might have lost or lacked the nuance of original meaning or significance. Because understanding the perception of the locals was the key aspect of this research, it is acknowledged that relying on translation, although carefully done, might possibly limit the direction of data analysis.

The qualitative data were analyzed using MAXQDA 2018, which allows systematizing, organizing, and analyzing non-numeric data in order to make connections between different components and aspects of the data collected (Flick 2014). Axial coding, i.e. linking categories of codes, was accomplished using this software. For instance, two main categories of themes, i.e. hydropower plant and national park, were identified. Patterns and relationships between codes were identified accordingly. The analytical induction method—namely classifying word and phrase repetitions and, based on this, developing hypotheses—was used for the analysis of the qualitative data. These hypotheses were subsequently checked with informants in the field (Emerson 1988). This allowed us to be able to identify the points where data was lacking and to update the list of potential respondents accordingly. In other words, triangulating the data in this way provided new insights that were checked in further interviews and in informal conversations with people encountered during the fieldwork. The quantitative data were analysed using IBM SPSS 22, which is used for statistical analysis. Simple program tools, such as

identifying frequency and mean or cross-tabbing, were used in order to analyse the statistical data.

Results

Hydropower projects in Martin Brod

In 1968, geological examinations were conducted in the Unac Canyon for a large hydropower project. The permeable soil type found in the canyon and the low water capacity of the Una River during the summer season were deemed unsuitable, making this project physically and economically infeasible (RES29). Despite this, Elektroprivreda BiH revived the large hydropower project in the village in 2011. A joint energy investment company won the tendered contract but were subsequently not permitted to conduct the necessary environmental or geological studies by the Bosnia and Herzegovina Ministry of Environment and Tourism. Martin Brod is located in a nature area protected by Bosnia and Herzegovina law (BiH 2013) and UNP law (BiH 2008) which prevents the constructing of large hydropower plants.

Initially, the villagers believed the project was going to happen as they had not been informed otherwise, nor been involved in its planning. When they realized in 2011 that the project would not materialize they were, however, not surprised. The inhabitants' experience with hydropower plants in the post-war area goes back to 1998. Indeed the same actor, Elektroprivreda BiH, had then also invited private investors to consider building a small hydropower plant. This project went dormant, also for reasons unknown to the inhabitants, and the failure of the new project was thus "expected" as it was sometimes put by our informants. Yet this project resurfaced on 17 December 2014, when a Russian investor, who was introduced to the inhabitants at a community meeting only by the first name, visited the village in order to discuss the project.

This meeting was facilitated by the UNP management, took place in the youth centre and included a large number of the inhabitants. When the UNP management was confronted about their role in this meeting, they claimed that the UNP was there only as a stakeholder and that they did not support the project. During the public participation meeting, that investor promised to employ 16 people permanently. However,

people were sceptical about this, mainly because local experts had said, including to us in interviews, that a small hydropower plant such as the one proposed does not require that many employees. Furthermore, scepticism concerned the fact that a public tender had not taken place prior to the arrival of 'the Russian,' as he was referred to in the village. Growing increasingly suspicious, the inhabitants, with the help of local journalists, found out that he had only one company which was registered as being worth only USD 5,500. The project was estimated to cost € 2.3 million. The local officials present at the meeting stated afterwards to local reporters that they had not been informed about the details of the project and the investor. In fact, it was only the monk at the village monastery and another local who claimed to have ever seen the project map, something that apparently was revealed at a presentation in Bihać in 2015. During the fieldwork, we were also told that the project had already been assigned to a local investor when the Russian had visited the village.

Opposition towards the hydropower projects

The lack of transparency was a major reason for the widespread opposition to the hydropower projects in the village but opposition also focused on environmental protection. It was commonly argued that hydropower plants were unsustainable or destructive. Several respondents, for instance, talked about the micro-climate impact of hydropower plants. One respondent explained, that hydropower plants create so much mist that the sky would be covered with a permanent layer of fog that would result in less sunlight for crops (RES28). In fact, the inhabitants were deeply concerned about 'touching' the river as they called it: "No one should touch Una" was a popular slogan repeated in interviews. "Wouldn't it be a shame to destroy this kind of nature?" was a rhetorical question often posed to us during fieldwork. To the inhabitants, the construction of hydropower plants represented a threat to the undisturbed natural surroundings of the village.

Indeed the concerns of the Martin Brod inhabitants were mainly in relation to the natural park and its natural beauty. To them, this beauty should not be destroyed by dams also because such destruction hindered the potential future economic benefits of the park. One respondent, for instance, put it as such: "It

would be better if this place stays as a natural park”. When asked why, he responded, “because then people can live on ecotourism; good for both the people and the nature” (RES26). On numerous occasions, the inhabitants explained how they had expectations of socio-economic and environmental benefits from the UNP, i.e. employment and income from tourism next to environmental managements that hydropower plants would endanger.

Many villagers attended protests against the hydro-power plants that were staged in front of the Biháč municipality building. Local and regional environmental activists and NGOs, in collaboration with some of the inhabitants, organised these protests and a petition campaign. The petition campaign targeted an annulment of the project and combined with other factors such as “the Russian”’s lack of capital and the UNP Law, it was successful. Two weeks after the largest protest, the municipality annulled the project. The main concern voiced at the demonstrations and in the petition mirrored what was said to us in interviews. The demonstration focused on environmental impacts, arguing that hydropower plants were unsustainable as they ruined both nature and economic opportunities.

The Una National Park fails to foster sustainable development

Before its establishment, the manager of the park project had promised that it would facilitate sustainable development in Martin Brod, meaning that economic activities would be based on environmental protection via the national park. Environmental management to preserve the natural beauty of Martin Brod, such as regular cleaning of the irrigation canals, the rivers and forest, maintaining the paths and roads, improving biodiversity, next to employment opportunities, such as rangers and an increased number of tourists, would generate income through accommodation and various other services for ecotourism. To many inhabitants, this all indeed represented sustainable development.

The hopes the inhabitants had for the national park as a source of sustainable development did, however, not materialize. From the perspective of environmental protection and management, the UNP had resulted in the protection of nature to some extent but it was not proper environmental management, in the eyes of the inhabitants. It was even argued that the management

of the environment was worse than before the UNP was established. The environmental services that the UNP had promised, such as clearing water channels and collecting the garbage, were simply not delivered. During fieldwork, it was often observed how inhabitants were cleaning their own water channels without the help of the UNP staff. Also, there were accumulations of garbage around the park. The inhabitants thus felt that instead of the park cleaning up for them, they were cleaning up for the park. The condition of the bike paths that had been established in Martin Brod as part of a touristic attraction was poor and other facilities were not looked after properly. It was observed that the picnic benches, for instance, were tied up by the village head with a rope in order to secure against autumn floods to take them away. When asked the village head whether it was not the responsibility of the UNP management, he said:

The UNP management believes that they support ecotourism only by locating benches here and there in Martin Brod. How many times I told them that the inhabitants were unhappy and unsatisfied about what the UNP calls “environmental management”. But the UNPs response to these complaints was that the locals should look after their own village as it was not the responsibility of the UNP.

Except for a few inhabitants, who were hired by the UNP or were expecting to be hired soon, all the inhabitants had complaints about the UNP’s bad environmental management program. When these complaints were shared with the UNP manager during an interview with him, he agreed that environmental management did not mean collecting garbage or supporting the locals for ecotourism. He was certain that he did enough by establishing the UNP that already attracted more tourists than before. However, as argued by the inhabitants, the number of tourists staying overnight did not increase. Thus, those who had reorganised and refurnished their places to accommodate overnight-tourists with bank loans were now having difficulties honouring these loans.

The inhabitants were frustrated with the fact that the UNP was making a profit, which was confirmed by the UNP manager, yet they have not experienced any “sustainable development” up until then. “There are only restrictions and we have no gain out of that”, a survey respondent summarised the reason for

frustration. High taxes and standards of accommodation, tours, and tour guides were often mentioned as concerns in this line by the inhabitants. High standards were particularly problematic as it made unregistered ecotourism business impossible which used to bring income for at least ten households during the summer season. Moreover, no official financial support for the establishment of officially licensed businesses was available making ecotourism practically impossible. The high standards and the need to officially registered businesses, the UNP policies, contrary to what was initially promised, limited other income opportunities for the inhabitants. For instance, the UNP prohibited fly-fishing within the vicinity of the village due to ecological concerns. This, according to the inhabitants, dramatically decreased the number of fly-fishers, resulting in less income for the village. This also had an influence on the inhabitants as many used to fish but now they could no longer do so. The employment of park rangers was another major concern for the inhabitants. It quickly became clear that the UNP was employing rangers who mostly did not reside in the village. The frustration over this was voiced by a local respondent in an interview that explained how the UNP employed people who were not residents of Martin Brod, even employing fewer people than written in the official budget “in order to syphon off the rest of the money” (SurveyRES4).

On top of all, the attitude of the UNP management was observed being top-down. The manager, during the two interviews conducted with him, claimed that he was the “manager of the inhabitants”, not only of the UNP, and that he stated that he knew what was the best for them. When he was confronted with the complaints of the inhabitants, he criticised them for having no vision. When explaining his future plans for Martin Brod, he said he had plans for charging from the entrance of the village.

Support for the hydropower projects

After losing hope regarding the sustainable developments promised by the UNP, the Martin Brod inhabitants started to consider hydropower plants as an alternative for development. Many inhabitants said that even if the hydropower plants might have some negative impacts they would not be as severe as the activists had claimed during the protests and petition campaign against hydropower construction in the

village. This point even triggered anger for many inhabitants towards activists who were now seen as having been ignorant of the socio-economic reality of the village. One respondent, who had been against building hydropower plants in the village in 2015, now said “I do not like when activists speak on behalf of us. I can decide on my own behalf. Activists make me really angry when they say they are against hydropower projects in Martin Brod without even asking our opinion” (RES12).

Interestingly, the discussions of the hydropower plants during this period emphasised that the environmental impacts of these projects were uncertain or low. The mini-hydropower plant was, for example, now argued to have zero negative environmental impact and to be environmentally friendly as it did not have any impact on climate or river flow. The level of support for the large hydropower project was more ambiguous, nevertheless, the proponents of hydropower plants claimed that the environmental impacts would be very low: “The large hydropower project is renewable but [if it is built] there will be some change in, for instance, flora and fauna. The level of water will decrease. I am not sure if it would have any major impact though” (RES27). Another respondent said “People are saying this would happen, that would happen. I don’t think there will be any impact [of the large hydropower plant]. People are afraid that the dam will break and it will cause floods but the amount of water is not enough for this to happen” (RES11). Support for the hydropower plants was also related to technology. It was believed by many villagers, including some previously against these projects, that there had been sufficient technological advances in the intervening years that hydropower plants could now be constructed and run in a sustainable manner, as it was often put. In general, the opinions of many locals changed about hydropower plants from being unsustainable to being sustainable. One interviewed local said, for instance, that it was ok for her to have one or more hydropower plants on the creek where she got her clean water. Claiming that hydropower plants do not have environmental impacts on this, she added “Martin Brod will preserve its natural beauty while we could generate our own electricity as it used to be in the old times. Thus, Martin Brod could stand on its own feet again” (RES44).

In addition to being environment-friendly, the inhabitants expected economic benefits from

hydropower projects. Using the mini-hydropower plant constructed in the 1970s that was operational until the war broke out as an example, proponents argued that Martin Brod was then more modern and economically more developed largely due to this hydropower plant. Thus, they argued that, if planned properly, hydropower plants could bring similar (or even more) benefits to them. The foreseen economic benefits of the projects were closely related to the possibility of being employed constructing and running dams and selling land affected by them. Moreover, several respondents claimed that a hydropower reservoir would create a “softer climate” meaning one that is milder and more attractive for tourists.

Indeed, almost all respondents agreed that they were ready to do whatever was necessary to return Martin Brod to its “good days” before the Bosnian War. One respondent clearly expressed this and exemplified at the same time how the failed UNP sustainable development promises and the support for hydropower were intimately connected in the village: “before, I was saying that they shouldn’t build hydropower plants in Martin Brod and that the UNP was a better option for sustainable development. But the UNP did not do any good for us. It did not do any good for the environment either” (RES34). This, in return, visibly influenced inhabitants’ positions towards hydropower plants and they began acting accordingly. One inhabitant running in a local election included these plans in his election campaign and promised that hydropower plants would bring environmentally and economically “sustainable development” to his fellow villagers. He argued that now it was time for Martin Brod’s inhabitants themselves to decide what is good for them, demonstrating the changing attitude towards the hydropower projects was a step in this direction. He was supported by the monk in the village who argued that the candidate was to be “the last train for Martin Brod”. He, along with other villagers interviewed, now claimed that these hydropower plants could contribute to the sustainable development of Bosnia and Herzegovina generating renewable energy and preserving the natural beauty of Martin Brod simultaneously.

Discussion

Increasing climate change concerns and environmental problems have driven scientists and decision-makers to pay more attention to the concept of sustainability especially over the last four decades (Schröter et al. 2017). The prominent international use of the concept of “sustainability” raises concerns with regard to its meaning, largely because the definition of sustainability is flexible, i.e. context-dependent, and it is often based on who defines, uses, or applies it (Bell and Morse 2018). Concerns among researchers and decision-makers regarding this flexibility are also related to how the term is easily misused (Hák et al. 2016; Kuhlman and Farrington 2010; Miller 2007). Various studies of greenwashing demonstrate this (e.g. Dahl 2010; Delmas and Burbano 2011; Laufer 2003). The development of sustainability indicators exemplifies the attempt to curb the opaque nature and subsequent flexibility of sustainability concept (Miller 2007; Pintér et al. 2012).

We acknowledge the importance of avoiding greenwashing and other misuses of the concept of sustainability but we argue, following other researchers (Bell and Morse 2003, 2008), that the movement towards determined definitions and measurements, that is seen in, for example, the development of sustainability indicators, can have negative consequences. It might simplify social values as numbers, or, attempt to measure and define the immeasurable (see also Dong and Hauschild 2017; Hák et al. 2016; Sala et al. 2015), but our major point is that determining the term limits not only the possibilities of the powerful for its misuse but also might restrict the potential for the less powerful to express themselves when the conditions change, i.e. to have agency. The flexibility of the term allows the less powerful group, our results show, to use the term to decide what is sustainable and what is not to them. Hence, if sustainability becomes strictly defined and if decisions are made according to this definition, there is little room for sustainability imaginaries. This, we argue, would limit the option especially for the less powerful to express their voice supported by reference to sustainability, leading, in turn, to disempowerment (Klugman 2014). Keeping the term sustainability flexible and integrative allows in other words changing sustainability imaginaries. Imaginaries that can be

adjusted according to changing conditions as was seen in our data.

Indeed, in Martin Brod, the locals redefined what projects were sustainable over a few years, and used this redefinition to mobilise support for the national park and against the hydropower plants, and vice versa. Initially, it was hoped that the park would bring sustainable development, but the park was later critiqued for not doing so. Hence, the hydropower plants that were previously seen as destroying the environment were now seen as providing renewable energy and sustainable development. This redefinition was closely related to the socio-economic situation in the village and, as such, the application of sustainability to projects otherwise deemed unsustainable by the villagers was a clear attempt by them to improve their economic situation.

In this way, the Martin Brod inhabitants' reference to and use of sustainability closely resembles the insights concerning imaginaries. Imaginaries are various (Taylor 2004). When the conditions changed concerning the park, for example, the sustainability imaginaries amongst the villagers transformed (Cidell 2017; Nielsen and Pedersen 2015). As such, the villagers judged the sustainability of the projects less in terms of predefined notions or frameworks, because at the level of the state, both of those projects were considered sustainable for Martin Brod, but rather on experienced situations. Indeed it was these, combined with expectations of the benefits of the projects, that shaped what they termed sustainable, namely that with a capacity to enhance their socio-economic conditions while being environment-friendly. While, at the level of the decisionmaking, both projects are sustainable, the flexibility of the term made it possible for the inhabitants to both experience the projects as sustainable or unsustainable as well as to mobilise support for and against these projects based on imaginaries.

Limiting and framing the meaning of sustainability, i.e. drawing a line in the sand between what is sustainable and what is not (Taylor 2004) or “squaring the circle” according to Robinson (2004), would therefore not necessarily make sense in Martin Brod or at least would not be advantageous to the inhabitants. It would also not be integrative as it would take away the inhabitants' ability to decide for themselves what sustainability is and should be. This is a point an increasing number of scholars and decision-makers support by attempting to involve local stakeholders

when developing local definitions and indicators of sustainability (e.g. Magee et al. 2013; Reed et al. 2008). Inclusion would here help overcome the problem of over-simplification and exclusion that overly narrow definitions might result in (Rigolot 2018). While attempting to answer what is to be sustained, when and why (Garrett and Latawiec 2015), the potential of an open-ended nature of sustainability imaginaries should therefore not be overlooked (Cidell 2017). Moreover, sustainability imaginaries are not only context-specific in terms of existing material conditions but are also temporal due to changing external conditions. Attempts to limit those imaginaries not only eliminate the representation of diversity but therefore also of temporality, a point clearly illustrated by our data.

Hence, the flexibility of the term sustainability is crucial for the inhabitants of Martin Brod and, potentially, elsewhere (e.g. Epstein and Buhovac 2010; Kleine and von Hauff 2009; Laws et al. 2004). It opens space for the representation of dynamic and contested sustainability imaginaries involving many people in the conversation “in a world in which there exist multiple conflicting values, moral positions and belief systems that speak to the issue of sustainability” (Robinson 2004). Moreover, this understanding is more in line with an understanding of sustainability as a dynamic and stochastic system (Hansen and Jones 1996, p. 200) and “[i]f sustainability is to mean anything, it must act as an integrating” rather than being an excluding concept (Robinson 2004, p. 378).

Conclusion

Sustainability is a widely used term, yet its meaning is vague. The slippery nature and diverse use of the term have been a hot topic among sustainability researchers for decades. Researchers concerned with the misuse of the term have tried to determine it using, for example, indicators. This has in turn been criticised by other researchers who claim that strict framings cannot be representative as society is dynamic and complex. In this paper, we acknowledge the concerns of the former group of researchers but we also question attempts to determine and define the term. Our case study showed that local disempowered stakeholders could benefit from the flexibility of the term which gives a voice to them in order to represent their changing sustainability

imaginaries hence allow them to have agency. We argued thus that determining the term limits the potential of local stakeholders to empower themselves. Caution regarding current attempts to better define and settle on what is sustainable and how to measure this is therefore raised and we suggest that the flexibility of the term “sustainability” is not always problematic but might even be beneficial in some circumstances. This was at least the case in the Martin Brod village in Bosnia and Herzegovina. Moreover, it is necessary to take into consideration consequences of all aspects of sustainability in a holistic way, i.e. geospatially, socially, economically, which emerge from the selected approach to sustainability, such as social sustainability, environmental sustainability, and economic sustainability.

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Appendix

See Table 1.

Table 1 The list of respondents

Number of interviews	Number of respondents	Respondents	Category
30	34	Martin Brod village inhabitants	Local
2	1	The Martin Brod village head	Decision maker and local
2	1	The Una National Park manager	Decision maker
1	1	A Slovenian kayaker, biologist, and activist	Activist
1	2	Rangers of the Una National Park	Decision maker and local
1	1	An IFC legal specialist on hydropower projects in Bosnia and Herzegovina	Financer
1	1	The <i>Kreditanstalt für Wiederaufbau</i> (Reconstruction Credit Institute) principal project manager on hydropower investments in Bosnia and Herzegovina	Financer
1	1	The Minister of Urban Planning and Environment of the Una-Sana Canton (USK)	Bureaucrat
1	1	An expert on hydropower investments in the USK Ministry of Urban Planning and Environment	Expert
1	3	The Minister of the Agriculture, Water Management and Forestry of the USK and two experts from the ministry	Bureaucrat
1	1	The director of an environmental consultancy company in Bihać	Consultant
1	1	The Mayor of Bihać municipality	Decision maker
1	1	A development expert in the Municipality of Bihać	Expert

Table 1 continued

Number of interviews	Number of respondents	Respondents	Category
1	1	A water concession expert in the USK Ministry of Agriculture, Water Management and Forestry	Expert
1	1	The owner of the fish farm in the Martin Brod village	Local investor (Water related)
1	1	The head of the Concession Commission of Bosnia and Herzegovina	Concession commissioner
1	1	An expert in the Concession Commission of RS	Concession commissioner and expert
1	1	An activist and the director of the Centre for Environment (a regional environmental NGO)	Activist
1	1	The director of the Hydro-engineering Institute Sarajevo	Consultant and expert
1	1	A bidding expert in an energy investment company	Investor and expert
1	1	An activist and a member of <i>Eko Akcija</i> (a regional environmental NGO)	Activist
1	1	The assistant minister in the Environment Department of the Federation of Bosnia and Herzegovina Ministry of Environment and Tourism	Bureaucrat
1	1	The assistant minister in the Energy Department of the Bosnia and Herzegovina Ministry of Foreign Trade and Economic Relations	Bureaucrat
1	1	An expert in the water sector in the Federation of Bosnia and Herzegovina Ministry of Agriculture, Water Management and Forestry	Expert and part of the decision-making mechanism
1	1	The head of the Environmental Permit Department of the Federation of Bosnia and Herzegovina Ministry of Environment and Tourism	Decision maker
1	1	An expert in the <i>Heinrich Böll Stiftung</i> (a German-based environmental NGO)	Activist
1	1	A volunteer, investor and the secretariat of the Association of Renewable Energy Producers in Bosnia and Herzegovina	Investor
1	1	An expert in the German Corporation for International Cooperation	Financer
1	1	An expert in the Elektroprivreda BiH	Expert and investor
1	2	Two experts in the USAID Environmental Impact Assessment Project	Donor and financer
1	3	The director and two experts in the Water Agency of the Sava River Basin	Water agency expert
1	1	The director of the Water Agency of the Adriatic Sea	Water agency expert
1	1	An expert in the Federation of Bosnia and Herzegovina Ministry of Energy, Mining and Industry	Expert and bureaucrat
1	1	The head of the Concession Commission of Federation of Bosnia and Herzegovina	Concession commissioner
65	73	Total	–

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