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# Dimensions of cultural sustainability—Local adaptation, adaptive capacity and social resilience

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Cultural sustainability relates to sustainable development. According to UNESCO “culture provides the necessary transformative dimension that ensures the sustainability of development processes.” Originally sustainable development was defined through three dimensions—ecological, economic and social dimension. Further, the social dimension has been understood in multiple ways often accentuating socio-economic assets of development rather than socio-cultural capacities. Eventually, there has been an increasing interest in defining cultural sustainability as a fourth pillar of sustainable development. While becoming aware of the contemporary supranational risks such as climate change, COVID 19-pandemia or escalating military conflicts, sustainable development can hardly be envisioned in terms of linear progress but rather considered with anticipation of eventual shocks, interruptions, and vulnerabilities related to development. In this perspective, cultural sustainability can be increasingly associated with identifying vulnerabilities and with envisioning attainable measures of adaptation. This article addresses the complex issue of defining cultural sustainability through lenses of social resilience and adaptive capacity at local level.

## KEYWORDS

cultural sustainability, local adaptation, adaptive capacity, social resilience, sustainability transition

## 1 Introduction

Cultural sustainability relates to sustainable development. According to UNESCO “culture provides the necessary transformative dimension that ensures the sustainability of development processes” (see UNESCO, 2019). Originally sustainable development was defined through three dimensions, namely ecological, economic and social dimension. Further, the social dimension has been understood in multiple ways often accentuating socio-economic assets of development rather than socio-cultural capacities. Eventually, there has been an increasing interest in defining cultural sustainability as a fourth pillar of sustainable development (e.g., Sabatini, 2019). The roots of this interest can be found in much earlier discussions proposing “cultural capital” as a specific kind of capital that entails versatile resources available for building sustainable development (Throsby, 1999, 2005). Moreover, the idea to include cultural sustainability as a fourth pillar of public planning for sustainable development was already proposed at the turn of the century (see Hawkes, 2001).

Despite of these early contributions, the importance of cultural sustainability still seems to be underestimated and not adequately recognized as an indispensable dynamic asset while creating social change toward sustainable development (Zheng et al., 2021). Hence, cultural sustainability is often understood as an unspecified driver in the grand explanations of societal transitions toward sustainable societies (Loach and Rowley, 2021). Overall, the original idea of social transitions in sustainable development is pursuing

development concerning ecological, economic and social targets in a balanced manner to harmonize sustainable outcomes across these three pillars without specifying culture as a targeted dimension of social change. Within this framework, cultural sustainability has been disregarded as a vaguely defined dimension of *social* sustainability. When one wishes to make the role of culture more visible in the transformative processes of social change—as implied e.g., by the UNESCO document cited above—it is pertinent to begin by clarifying the concept of culture in a meaningful way within the context of sustainable development.

*Firstly*, culture can be defined in terms of *values*. Hence, “culture refers to a set of shared values, beliefs, and norms through which people perceive, interpret, or respond to actions and environments” (Zheng et al., 2021). Further, a set of enduring values is often identified as worldview organizing human cognition, attitudes and action (see e.g., Gray, 2011; Głaz, 2017; Mifsud and Sammut, 2023). *Secondly*, the meaning of culture refers to the action of producing culture, namely cultural artifacts or other cultural production. This aspect includes also the great variety of cultural consumption. Culture in this second sense also refers to the organized participation of people in diverse activities with enclosed cultural meaning (e.g., Kangas et al., 2017; Zheng et al., 2021). This second meaning, especially, is often attached to the capacity of culture to produce creative industries and economic value aimed to increase wealth of societies and well-being of the people in these societies (Throsby, 2005). However, from the point of view of cultural sustainability it is topical to ask how these industries might open new paths for *transition* toward more sustainable life-styles—or do they contribute to this aim at all. Anyhow, there is an increasing confidence that culture has a remarkable *potential* in supporting societal change toward more sustainable everyday practices and styles of life. This is important, because over the recent decades, cultures—particularly in the first sense of representing prevailing values and norms—have often been recognized mainly as an obstacle inhibiting transformative changes toward more sustainable socio-economic development (see e.g., Macnaghten and Jacobs, 1997).

One major contribution in understanding how transition processes of development may contribute to cultural sustainability has been the *capability approach* proposed by Sen (1999) and Nussbaum (2011). Both authors envision social change closely in terms of human actors' values and “freedoms” to do things people value. The discussions on *human capability* clearly help to conceive elements of cultural sustainability (such as human dignity and creativity) as highly diversified and simultaneously embedded in a specified socio-cultural context. Therefore, the debate on human capabilities also contribute to the recognition of cultural identities, practices and ways of life manifesting the values of different social actors.

Further, cultural sustainability refers to the preservation and continuation of *cultural heritage* and *traditions* in a way that is consistent with the principles of sustainability. This includes the preservation of cultural sites, artifacts, and practices, as well as the maintenance of cultural knowledge and skills. Cultural sustainability also involves ensuring that the needs of future generations are taken into the consideration in the preservation and the use of cultural resources. This approach can lead to more inclusive and resilient communities and societies

(Fusté-Forné and Nguyen, 2018). Preserving local sites of cultural heritage often bring to the fore some tensions manifesting varied interests concerning conservation and development in specific places (Labadi, 2017). This article takes the standpoint of discussing preservation of cultural heritage in the framework of human capability/capacity and local adaptation aiming to increase socio-cultural sustainability.

When defining culture (and cultural sustainability) in the framework of sustainable development, still another fundamental trait is to understand the embeddedness of culture in a socio-spatial context (see Adger, 2003; Birkeland, 2008; Soini and Birkeland, 2014). Obviously, one can argue that there are some globally acknowledged cultural values or shared principles, such as human rights or human dignity (Nussbaum, 2011; Claassen, 2014; Vandenhole, 2020). However, when we take seriously the twofold definition of culture in the meaning phrased above, namely referring to both shared values *and* practical productions including patterns of cultural consumption, we immediately recognize the great *diversity* of (local) cultures. To understand in depth this diversity, it is important to connect and appraise cultures by recognizing their socio-spatial context.

Seeing social change through the lens of sustainable development, *ecological considerations* are inherently a core issue of cultural sustainability (see e.g., Soini and Dessein, 2016). Today, in the world of urgencies related to the environmental concerns, it is increasingly important to understand the diversity of culture within a framework of ecological and spatial sustainability. In general terms, cultures or human activity should not exceed the ecological limits of the (local) socio-spatial systems they depend on (Rockstrom et al., 2009; Martin et al., 2016; Green, 2021). Obviously, localizing cultures in specific socio-spatial systems is a very complicated issue regarding the multiple mobilities always emerging in the globalizing world (Urry, 2000; Adger et al., 2013). Nevertheless, the core idea of sustainable development is based on an idea of a duty to restore sustainability based on cultural and/or territorial ownership. Moreover, the international agreements within the UN framework concerning sustainable development, nature conservation and climate change are all based on an idea of defining a division of duties, rights and responsibilities among *territorial* states (see e.g., Vandenhole, 2020).

Toward the end of the 20th century the idea of sustainable development had gained much legitimacy in the entire world. Moreover, the idea was institutionalized through many important international agreements and was later specified through the designing of remarkable policy programs such as the Agenda 2030 launched in 2015. Since then the world has, unfortunately, faced increasing supranational risks such as augmenting impacts of climate change, COVID 19-pandemia and escalating military conflicts. While becoming aware of the contemporary risks, sustainable development can hardly be envisioned in terms of linear progress but rather considered with anticipation of eventual shocks, interruptions and acute vulnerabilities related to the contemporary development. In this perspective, cultural sustainability should, perhaps, be increasingly associated with identifying social, economic and ecological vulnerabilities, and with envisioning attainable measures of adaptation. Moreover, cultural sustainability may entail a specific role in building civic/cultural preparedness for confronting the present and future vulnerabilities.

Thus, one can argue that culture(s), at sub-national level, can provide for preparedness and adaptation, when facing supranational risks and their impacts, by using their own cultural perceptions, values and knowledge. This may add remarkably to the local resilience and, in this way, contribute to cultural sustainability in terms of establishing new cultural heritage, that may help even future generations to cope with contemporary risks and threats. However, referring to cultural heritage and historical sites, local resilience also includes the idea of resilience in the sense of communities bouncing back to restore historical values and not only to bounce forward to creating new artifacts and values (see also [Holtorf, 2018](#)).

[UNRISD \(2021\)](#) has recently proposed a *New Eco-Social Contract* in response to the augmenting supranational risks and increasing social vulnerabilities. A main purpose of this contract is to establish an outline for a societal transition enhancing sustainable development by guaranteeing human rights to vulnerable groups and, thus, reducing inequalities locally and globally. Again, only very general reference toward cultural values and to the diversity of culture is made in this discussion. This is problematic because it seems evident, that cultural values are surely involved while building social change on an idea of eco-social contract. The idea of an eco-social contract is clearly a value-laden perspective of transformation that implies changing in depth the relationship between humankind and nature so as to adjust present cultures within the limits of “safe operating space” of the planetary boundaries (see e.g., [Steffen et al., 2015](#)). Consequently, the pursuit of sustainable development implies establishing modern culture *firstly* on adaptation and current risk perception, *secondly* on enhanced governance of contemporary risks and *thirdly* on increasing adaptive capacity. With regards to the cultural sustainability this means promoting local and global resilience in response to the supranational risks, such as climate change, severely threatening the livelihood and everyday lives of people in very varied circumstances (see [Hvinden and Schoyen, 2022](#)).

This article consists of five parts. After closing this introduction some further reflections on the definition of cultural sustainability will be presented. Thereafter the third part will tackle more closely the issue of adaptive capacity, community and socio-cultural capital. The fourth part will connect the idea of local adaptive capacity to the discussion concerning community resilience and sustainability drivers of socio-cultural change. This concluding discussion aims to design some proposals concerning the governance for socio-cultural sustainability in local/societal transitions. The article ends with a conclusion addressing some consequential issues that could animate the integration of cultural sustainability with broader sustainable development strategies.

## 2 Adaptive capacity as cornerstone of cultural sustainability

### 2.1 Risk perception, mitigation, and adaptation

The present urgency in responding to environmental concerns and other major supranational risks obliges actors to acknowledge

that technological mitigation is not a sufficient strategy to alleviate major risks on human livelihood ([O'Brien and Selboe, 2015](#)). Instead we need to consider broader concepts of mitigation and adaptation and draw ingeniously on cultural capabilities available in each social context while designing feasible transitions toward more sustainable societies. Thus, it is important to acknowledge that each response to risk is mediated through culture. Secondly, we also need to observe and consider in what ways the contemporary risks may threaten present cultural values and assets. This entails both material values and immaterial values including perceived aspects of identity, community cohesion and the sense of place (see also [Adger et al., 2013](#)).

In climate change research the idea of qualified adaptation is not referring to passive adjustment to the deterioration of the environment. On the contrary, adaptation is preferably conceived in terms of *deliberate transformative action* aiming to meet targets of sustainable development (see e.g., [Bassett and Fogelman, 2013](#)). These targets are pursued through defining risk(s) and finding effective response. In modern societies risks are usually assessed through science based concepts and methods. However, while designing sustainability strategies, it is also important to assess social impacts of the risk on human livelihood and culture in dialogue with those concerned (see e.g., [Kaplan-Hallam and Bennett, 2018](#)). This is important because a traditional science based risk governance strategy does not sufficiently comply with *social sustainability* as it often disregards the cultural potential of traditional culture(s) and knowledge in responding to risk. Arguably, communities could use their traditional cultural assets not only to increase the legitimacy of reforms through general acceptance of the proposed policy but also by contributing to the *co-creation* of new policies of risk management. This can be done by benefiting of varieties of local initiatives and culturally inherited sustainable practices (see e.g., [Garcia, 2021](#); [Haustein and Lorson, 2023](#)). Effectively, it is crucial to identify those existing practices that could furnish sustainable development through identified assets of local cultural heritage and diversity.

### 2.2 Local cultures and sustainability strategies

It has been demonstrated by many studies that local cultures may possess multiple “autonomous” assets and capacities in managing risks of living environment, such as polluted water, drought or forest fire (e.g., [Thorn et al., 2015](#); [Rahman et al., 2021](#); [Juhola et al., 2022](#)). Vulnerability to a local environmental disaster can be found equal in scientific terms, yet the response by an individual or a community may differ a great deal ([Adger et al., 2013](#)). Therefore, it is important to evaluate *the adaptive capacity* from the point of view of local human resources. Further, this evaluation should take notice that the adaptive capacity of an individual or a community is constantly transforming, and therefore should be approached with emphasis on its dynamic character. From the policy point of view of cultural sustainability this remark refers to the need of *capacity building or learning society* (e.g., [Foster, 2002](#)) constantly adding to the capabilities

of supporting risk management in each socio-cultural and socio-spatial context.

In parallel with the definition by ecology and other natural sciences, *social sciences* define adaptive capacity in terms of the *ability of a socio-ecological system* to respond to risk, however, highlighting particularly the perspective of the ability of people, both individually and collectively, to anticipate, adapt and recover from the impacts of environmental change (e.g., Berkes and Jolly, 2002; Vallury et al., 2022). Local adaptation and adaptive capacity can, hence, be understood with regards to the specific circumstances of culture including all the material and non-material resources that can contribute to restoring or rebuilding the individual lives and the community. In this sense, *cultural sustainability* may refer both to the protection of the local cultural heritage *and* to the process of adapting local culture to the renovating transition(s) toward more sustainable practices and future. In this way, cultural sustainability gains an important position in balancing between continuity and development to suit local human resources and their capacity to grow.

One important aspect of any comprehensive policy design aiming to endorse adaptive capacity is to identify *vulnerabilities* of the socio-environmental or socio-spatial system. Basically, in addition to managing adequately ecological concerns, this implies envisioning the overall socio-spatial transition through innovations and new practices simultaneously reducing social vulnerability with means that will preferably reduce *social inequalities* rather than cause further social polarizations within the community (see also Kortetmäki and Huttunen, 2022). From the perspective of cultural sustainability adaptive transformations should, hence, be fair e.g., with regards to the distributive impacts of the transition on tangible cultural assets of the local people. Tangible assets can be understood tentatively in parallel with the “capabilities approach,” thus, aiming at transforming local circumstances in the way allowing people “to live a life they have reason to value” (Sen, 1999). Sen’s famous definition has inspired much debate on freedom, social equality and even cultural sustainability from the perspective of the development of an *individual* citizen. Yet, it is not evident what it means when—instead of the individual’s capability—we wish to consider the entity of the “tangible assets” (or the “capabilities”) possessed by an identifiable *community*. In the interest of the urgent need to deal with the environmental or other contemporary risks it is important to specify cultural sustainability even in terms *community assets* in addition to capabilities of individual citizens, and to consider in this way alternative developments through the lens of increasing adaptive capacity of a community.

In general, one crucial issue related to the adaptive capacity of communities has been the question of *social cohesion*. In broad terms, it has been assumed that the more cohesive the community the more solidly it can respond to an external threat (e.g., Jewett et al., 2021). Many would also agree with the argument: the more social equality in the society, the stronger capabilities there are to tackle even transboundary risks or contemporary “wicked problems” (e.g., Gough, 2013). Although both these assumptions need to be specified and tested against empirical evidence, the two arguments can be cited as influential premises in the context of debating the socio-cultural dimension of sustainability. Therefore, it is reasonable to ask how much and what kind of social cohesion is needed to create and animate local cultural sustainability that

would catalyze transformations toward sustainable development not only within the sphere of cultural productions but also within the sphere of cultural values and worldviews organizing the ways of life, technological progress and the legitimacy of regulation(s) toward sustainable development.

## 2.3 Social differentiation, vulnerable groups, and adaptive capacity

Even though the intensity and scope of social cohesion may serve as a remarkable potential for the community while raising its adaptive capacity, it is equally important to consider more closely the present tendencies of social differentiation within the community. Juhola et al. (2022) argue that the issue of social differentiation should be considered carefully, because social equality may even crumble in major societal transitions. Therefore, we need to identify social groups especially with regards to their potential or experienced vulnerability in social changes targeting sustainable development (Kortetmäki and Järvelä, 2021). Considering the differentiation of vulnerabilities across social groups, the “autonomous” adaptation in communities should be understood closely with regards to the everyday human needs and the feasibility of the quotidian practices amid rapid social change. Hence, while targeting social change inspired by the idea of people pursuing “to live a life they have reason to value,” the differentiated social positions and orientations of the individuals and communities make a basic perspective for people who wish to employ cultural assets for managing risk.

With regards to the socially differentiated assets possessed by people to manage risk, many groups have already been identified as vulnerable parties in their communities. In processes of social change, *social deprivation* has often been acknowledged at first as a *gender* issue (Demetriades and Esplen, 2008). However, later—when drawing more on the empirical evidence of case studies—the analysis has demonstrated even accumulated deprivation and/or highlighted the complex “intersectional” pattern of poverty and deprivation. Furthermore, it is argued that social differentiation and experienced injustice can inhibit the capacity of building “autonomous adaptation” among ethnic groups or other social minorities. Moreover, when space or place is also enclosed in the descriptions assessing vulnerability, one may distinguish social structures and entities where power relations in the community level should also be considered (see Kortetmäki and Huttunen, 2022). Basically, in these circumstances the *idea* of sustainable development in recognized local communities would imply an attempt to pursue an *inclusive process* within the course of local development where even social minorities can contribute to the social change based on their own cultural capabilities (see also Birkeland, 2008; Kong, 2009).

Considering accumulated vulnerabilities *indigenous people* make an important case exemplifying the complexities of cultural sustainability. Indigenous people often challenge modern transitions by their own local culture that does not comply with ideas of modern technology which tend to deny the sophistication of their local heritage. Consequently, non-Western knowledges and indigenous people risk of being further marginalized through



the mainstream “value culture” that perceives the rationality of the indigenous world view to be based on non-scientific beliefs, superstitions and myths (Blaser, 2004; Martinez, 2012). Nevertheless, it is evident that, globally, indigenous people have claims for preserving their culture that are legitimate from the minority right’s perspective (human rights and democracy) (e.g., Blackburn, 2009).

However, from the perspective of combining cultural sustainability with adaptive capacity, there is even more cultural potential that ought to be recognized in the local cultures of the indigenous communities. Namely, in the beginning of 21st century it has been more readily acknowledged that indigenous people may possess valuable local knowledge not only to increase cultural diversity but also to endow elements of practical knowledge that can genuinely contribute to reforming ways of life toward more frugal and serene patterns of consumption and sustainable livelihood. For example, in Latin America there has been over the years a lively debate and practical experimenting on “*buen vivir*,” a concept referring to the (changing) ways of life, and this debate is connected to practical policies drawing much from the everyday life of local indigenous people. Thinking in terms of adaptive capacity it is interesting to notice that Blaser (2004) refer to these capabilities of indigenous people as “life projects.” Hence, the question can be phrased as to how one may succeed in translating these life projects of minorities into community resources to increase the collective adaptive capacity and enhance cultural sustainability.

Still another aspect of social differentiation manifesting contemporary experiences of vulnerability in modern societies is connected to the *urban/ rural divide*. The trend of urbanization has been recognized as a global megatrend leading to regional differentiation that may have polarizing effect on livelihood and culture of local populations. Roughly, following the megatrend of rural-to-urban mobility, some mobile and well educated people acquire new options such as wealth and wellbeing while others with less skills and less capabilities may suffer of increasing marginalization in cities where they settle. This differentiation and potential segregation can be detected not only between individuals but also among communities and regions (see e.g., Fan, 2003). Therefore, it is important to consider carefully the prerequisites of cultural sustainability by regions and to anticipate collective adaptive capacity even from the point of view of *regional differentiation*. Through recognizing the sub-regional dynamics of differentiation, local actors may find inclusive strategies to challenge the marginalization that is often associated with the rural/urban divide and other spatial differentiation.

## 2.4 Toward cultural sustainability in adaptation strategies

Social differentiations may lead to political polarizations. Contemporary political polarizations can seriously harm sustainable development in local communities and sub-national regions, and may threaten the implementation of sustainable transition even in much larger scale. Recently, political polarization in relatively stable continents, particularly Europe, has been an

increasing concern and a major source of lost opportunities for endorsing sustainable development. Presently, the Russia-Ukraine war can be considered much more than a regional conflict as it limits seriously the concentration of efforts and cooperation in tackling supranational risks, such as climate change and loss of biodiversity, in Europe and beyond. In addition to the huge losses of human livelihood and health, the impact of the war on the environment in Ukraine has been described toxic in multiple ways (see Pereira et al., 2022).

As to the global political impact, the war in Europe and, also, the increasing tension between China and USA already tends to establish new priorities for territorial states to focus more on rearmament and war rather than saving the Planet (e.g., Kulacki, 2023). Obviously, this is a tremendous backlash for the evolutionary idea of sustainable development in general and with regards to the investment in cultural sustainability as well (see also SIPRI, 2022). However, in the middle of the ongoing growth of global insecurity, the pursuit of local cultural sustainability seems to gain even more importance when the everyday life and livelihood are threatened directly or indirectly by military conflicts. Moreover, cultural sustainability is also increasingly significant when thinking of the future generations who will need to find more peaceful solutions within the narrower limits of the planetary carrying capacity in near future.

To conclude this chapter, we may follow Jerneck’s (2018) example while she refers to the *trinity* of global justice introduced by Fraser (2009) as means to the overall adaptation to climate change by human societies. Hence, in the interest to tackle and adequately manage supranational risks at local level, simultaneously embracing cultural sustainability, we need to pay attention on “recognition, redistribution and representation.” More specifically this implies building a frame of reference for global justice which combines (1) the economic dimension of redistribution, (2) with the cultural one of recognition, and (3) the political one of representation. As a provisional conclusion, we may suggest that this trinity is a feasible outline for alleviating local vulnerabilities of a great variety and for bringing all the capable actors to the fore so that they can reach out for sustainable development representing the diversity and the specific capacities they locally possess. In the next chapter, we will look more closely to the interest, coherence and collective capability of the local community from the perspective of cultural sustainability.

## 3 Adaptive capacity, community, and local cultural sustainability

### 3.1 Translating cultural capital into cultural capability

The idea of cultural sustainability is often attached to the capacities of *bottom up* influence and civic participation in a specific socio-cultural context. For example, human capabilities for enhancing cultural sustainability can be associated predominantly either with the capacities of individuals in local premises or else with the community’s assets referring e.g., to social capital. Following the debate of adaptive capacity “community” is used here “to mean some definable aggregation of households, interconnected

in some way, and with a limited spatial extent” (see Smit and Wandel, 2006).

Overall, the *scale* of transformation or adaptation is an important matter in defining human action and adaptive capacity. When encouraging cultural sustainability through the idea of bottom up influence, local culture(s) and cultural capacity for adaptation are crucial resources. More specifically, local cultural capacity entails the essential human assets for responding to shocks or major transitions related to modern development and risk (Smit and Wandel, 2006, see also Nash et al., 2020). This chapter focuses on local actors and their available or emerging resources to contribute to cultural sustainability. In general, the power of advancing sustainable development in the local level depends decisively of the individual and collective capabilities of the local actors. Hence, with view to local adaptation and risk management, human adaptive capacity consists of values, skills and practices of the individuals but also of the competences the legitimate local institutions possess to manage contemporary risk on livelihood and cultural values (see e.g., Roy et al., 2022). While focusing on the dimension of cultural sustainability in specific communities it is indispensable to recognize the role of the *civil society* in building processes of social change (Edwards and Sen, 2000; see also Touraine, 1982; Powell, 2009). Consequently, the variety of local organizations, especially the NGOs, add remarkably to the cultural diversity and to the tangible assets that are obtainable in processes of social transformations toward sustainable communities.

*Cultural capital* has often served as a concept to embrace the entire variety of socio-cultural assets available at local level. As mentioned above cultural capital was already distinguished by Throsby (1999) more than 20 years ago as something especially valuable that can be attached to artifacts. Throsby argued that cultural capital comes *in addition to* the market value generated by the economic system. Obviously, there are other powerful intellectual traditions that conceive cultural capital in some other ways, e.g., by defining cultural/social capital primarily in terms of community networks or social class (e.g., Bourdieu, 1979; Putnam, 2000, see also Jeannotte, 2003). These definitions may be very relevant if one wishes to follow the debate concerning the scope and limits the concept of capital can offer for understanding varieties of cultural dispositions.

However, we are not interested here to go deeply into the scholarly debate between these different definitions of cultural capital and/or social capital. Instead, what seems to be highly relevant and interesting with regards to the cultural sustainability *as connected to* the local adaptive capacity, is to ask whether *cultural capability* would be even a more useful concept than cultural capital when defining cultural assets within a specified space, and simultaneously with regards to community action toward sustainable development. Arguably, the capability approach builds on the idea of maintaining a functional life of humankind in the middle of social changes (see e.g., Schlosberg et al., 2017). Consequently, it makes sense to ask how “communities,” with duties to protect and preserve environmental values in spaces they utilize and possess, could maintain a *functional life* as part of their increasing adaptive capacity and beyond the sheer individual interest and capability (Armitage, 2005).

In the contemporary world, the more we recognize augmented risk from the perspective of sustainable development in local communities, perceived e.g., as impacts of extreme weather or of an uncontrolled epidemic incident, the more we understand the value of networking and mutual help in local adaptation. Therefore, there seems to be an inherent dimension of cultural sustainability in the logic of enhancing local adaptive capacity through anticipating and managing risk. Moreover, managing risk in a local context should acknowledge both *time* and *space*. With regards to time sustainable solutions should not only learn from the past but also look beyond the present generation to meet needs of the next generation, and this certainly evokes a multifaceted call for cultural creativity. This is because it has been largely accepted as a human rights’ based principle and element of sustainability that cultural sustainability entails preserving the quality of natural environment for the next generation at least as valuable as it has been for our generation (see e.g., Weiss, 1992). However, as concerns the present *local policy processes* and its actors, it is still unclear who should represent the interest of the future generation(s). The issue is utterly complicated, yet, some proposals have been brought to the debate. For example, Byskov and Hyams (2022) suggest that those who already have lived in the degraded environment and therefore share experiences of real “community action” motivated by this issue would more likely have capabilities to express the needs of future generations in similar circumstances. Thus, building *emphatic attitudes* would be one of the important drivers for increasing cultural sustainability and adaptive capacity.

### 3.2 Designing local preparedness for enhancing cultural sustainability

Taking local space into consideration also leads to the necessity of considering the availability of *space-based facilities* for enhancing cultural sustainability. It is important to distinguish the assets and resources that are or can be controlled by the community itself and, on the other, those that avail only through negotiations with external partners (see e.g., Buttner, 1998). Hardly any community in the contemporary world can be culturally, economically or ecologically entirely self-sufficient in its efforts toward comprehensive sustainable development or risk management. Nevertheless, the interest in pursuing local cultural sustainability is increasing due to the higher emergencies in local risk management. Consequently, there is a more immediate call even for broader participation of all local actors in social transformation and adaptation. Some main reasons for this tendency can be listed. *Firstly*, the preparedness of individual citizens is needed to tackle immediate or foreseen local risk which may imply learning new practices in quotidian life. *Secondly*, to help the communities to adapt, the communities should design efficient *anticipatory* strategies relying on cultural capabilities that should be more than the sum of the individuals’ capabilities and preparedness. *Thirdly*, anticipating and managing risk should be combined not only with local institutional facilities but also with any multi-level governance facilities available. All these aspects of preparedness need to be built employing creative cultural capabilities over a long time to fit the cultural landscape and the socio-spatial context. In

general terms, we may understand this as a proposal to advance a *local learning society* (c.f. Ranson, 1994) that prepares itself to build the adaptive capacity and cultural sustainability on a community level.

Obviously, in modernizing (and globalizing) societies local cultures have been allowed some autonomy. This autonomy is often conceived and interpreted in a sub-regional context. Huggins and Thompson (2015) refer to this kind of relatively autonomous society as place-based community and culture. Huggins and Thompson understand by a place-based community an entity principally referring to “the social structure and features of group life within regions and localities.” They think communities can generally appear beyond the economic life of such places, although still in active relation with the economic community. Hence, much of the resourcefulness of the local communities in building local adaptive capacity has been based on this feature (see also Murtagh and Lane, 2022). While the risks on local livelihood and ways of life are increasing, the aspect of anticipation and *planned capacity* through inciting the emergence of cultural sustainability is gaining importance. For example, in the interest to understand better human capabilities of adaptive capacity it makes sense to revisit everyday practices of household consumption from the point of view of tangible sustainability transitions in place-based communities. To start with it is important to acknowledge the main elements of prevailing “cultures,” such as patterns of household consumption, as a baseline for risk perception and attempted transformation (c.f. Nash et al., 2020).

As to the perspective of *governance*, a place-based community and culture can be positioned in the context of urban or rural community government both having a greater or smaller degree of autonomy depending on the legislation of the territorial nation state. These administrative communities may deliberately establish pathways of “local sustainability governance” (see e.g., Edge and McAllister, 2009; George and Reed, 2017) to serve as “nests” for local initiatives of public policies that can take steps toward local sustainability, and work together with cultural networks sharing similar interest. In general, most place-based ideas and initiatives adding to the local adaptive capacity do not apply directly to some different socio-ecological circumstances (Smit and Wandel, 2006; see also Marks et al., 2022). Therefore, one can say that a local version of increased adaptive capacity is always to some extent unique, but nevertheless moldable if received willingly and further transformed for the purposes of another place-based community. Consequently, local cultural preparedness for social change and exchange with other communities is crucial and adds to the cultural creativity empowering the community to adopt new initiatives and reform not only for its local purposes but also for the purposes of cultural exchange between regions and localities. Therefore, in the framework of place-based diversity and multi-situated governance, cultural sustainability implies primarily an emerging contribution to the local adaptive capacity either in terms of creative functions/reforms on everyday life practices or as empowerment(s) through shared experiences in varieties of local cultural performances increasing—through cultural exchange—the capability to adapt even more widely across different spaces.

In general, *bottom up ideas* of transformation often emphasize the autonomous creation of adaptations. However, in order to multiply the transformatory impact of local actors in their pursuit

for cultural sustainability, it is important to analyze the way these actors get organized to mobilize their capabilities (see e.g., Rozmiarek et al., 2022). Do they have resort to some public/private organized channels of influence or do they simply reform their individual life styles in the interest to fit more adequately the criteria of the cultural sustainability. Or else, would they get organized with the aim of introducing some novel cultural productions representing their own conceptions of preferred cultural adaptation. All these alternatives refer to the multiplicity and diversity of the local projections, perhaps even to some *life projects* of adaptation, that can bring to the fore many new elements of cultural sustainability. Obviously, the simultaneous impact of adding to the overall sustainability is not always very clear and directly visible. Therefore, the communities need to build on mutual trust and solidarity even on a more general level to give a true chance to the civil society and its organized forms to have tangible long term effect through socio-cultural transformations toward more sustainable practices.

Finally, we need to remember that diversity implies differentiation, and that a place-based community should find a way to balance sustainability transformations in a way to guarantee free space for the different identities to thrive (Marks et al., 2022). In discussing climate justice there is a slogan proclaiming that in the implementation of a fair and legitimate climate policy “nobody should be left behind” (UNSCCEB, 2017). In search of endorsing cultural sustainability and adaptive capacity this idea can be promoted in any community level transformation process through endorsing widely social inclusion. Consequently, there should be a role for very varied actors in the community to orchestrate transformations toward a sustainable community aiming at high capacity of socio-cultural sustainability, adaptive capacity and risk management (see also Kortetmäki and Huttunen, 2022).

## 4 Cultural sustainability and local resilience

In the preceding chapter the main argument is developed by translating the concept of cultural capital into a more practice-oriented vision of *cultural capabilities* emerging in local transformational processes. In general, these processes may include important bottom up dynamics envisioning improved social resilience and adaptive capacity in a specific spatial and cultural context. In chapter 4, *local resilience* is introduced as a notion to define what “autonomous” communities can do to enhance adaptive capacity. It is important to conceive how and why (local) resilience can build up an overarching conceptual contribution expressing local adaptive capacity and its relevance within the framework of cultural sustainability in identified space-based communities.

### 4.1 Local culture, resilience and community

In recent debate on sustainability and social change the concept of *resilience* has been highlighted as a constituent element outlining our understanding concerning both global and



local transformations toward sustainable societies. As a scientific concept, resilience has a long history first in physical sciences and later in social sciences, a history that is not directly connected to the current debate on issues of sustainable development or cultural sustainability (Anholt et al., 2021). However, one can argue that the concept “resilience” has become increasingly relevant even with regards to the cultural sustainability through our emerging understanding of the mutual interdependence between cultural sustainability and adaptive capacity. This chapter discusses this interdependence by introducing firstly some reflections on the *definition* of the concept “resilience” and secondly by discussing some issues related to the local resilience and its potential in preserving *cultural heritage* while simultaneously catalyzing “sustainability transformations” (see Salomaa and Juhola, 2020). The chapter also aims to conclude on some implications concerning *participation* and local governance related to cultural sustainability and adaptive capacity in place-based communities.

Many researchers have recognized that the concept of resilience has gained much resonance in research debate on sustainable development during the 2010’s (see e.g., Keck and Sakdapolrak, 2013; Pratt, 2015). There are many reasons to this and it is, hence, difficult to give an exhaustive list of the reasons. However, one of the main reasons to explore resilience in social sciences seems to be the—globally—increasing concern related to the *overconsumption* of material resources and the consequent harmful impacts of consumption on the main dimensions of sustainability. Already, at the turn of the century socio-economic and socio-cultural vulnerabilities were considered historically alarming due to the recognition of the system level risk caused by overconsumption, that may lead to negative irreversible change in economy and society both globally and locally (e.g., Perrings, 2006). In this sense resilience refers, thus, to the renewal and reorganization of socio-ecological systems that would help tackle contemporary risk and vulnerabilities at all levels including local communities (Berkes et al., 2002).

In all, there are many collateral definitions or at least many different emphases and disciplinary approaches concerning the concept “resilience”. Consequently, resilience has often been embraced as an open concept (Davoudi et al., 2012; Anholt et al., 2021) meaning that it is welcoming further debate on (current and future) development widely across disciplinary boundaries. This has probably added much to the attractiveness of resilience as a concept. Indeed, the concept helps to invite partners from many disciplines to the debate on sustainability. Namely, and for a good start, all can understand a proposed core meaning of resilience referring to the “system” bouncing back to its original shape after an “external” shock. Also, non-academic partners representing various organizations—both public and private—can join and can readily understand this core meaning. However, there are not many further presumptions that can be easily shared throughout different fields or interest and expertise. For example, one would ask what is the “system” we are discussing about. Secondly, what is the shock or the risk we need to manage. And finally, in what way we may define a risk or a shock “external.” Furthermore, a major debate has been evoked with regards to development and change. Would resilience be more a conceptual choice for conservation or reform. Clearly, some put emphasis on “bouncing back” while others prefer to define resilience in terms of “bouncing forward” underlining

progressive transformation toward (cultural) sustainability (see e.g., Meerow and Stults, 2016; Holtorf, 2018).

Still another reason to value “resilience” as a concept somehow organizing the interdisciplinary and even transdisciplinary inquiries on sustainable development and cultural sustainability is that empirically this concept is open to inquiries on a great variety of scales. Global resilience refers to the planetary boundaries of development, and this is obviously a topical perspective in performing assessments on adaptive capacity in terms of a habitable planet (Li et al., 2021). Through the lens of the global climate policy and international biodiversity agreements, the territorial states are the main responsible actors. Therefore, one can distinguish “resilience” also as a nominator of the entity on which every nation should build their contribution toward the foreseeable sustainability transition(s) (see e.g., Falkner, 2016; Phang et al., 2020). However, in social sciences, the most conceivable merit of the concept resilience is perhaps related to the *subnational spaces*, that are identifiable as rural and/or urban regions. Further, we can refer to these spaces as “places” and “communities” encompassing actors striving to increase local adaptive capacity simultaneously contributing to cultural sustainability.

Resilience at community level is something we can further describe as “*community resilience*” (see Davoudi et al., 2012; Fabbri et al., 2020). The concept of “community resilience” could contribute much to our empirical methodologies when studying local cultural sustainability revitalized through the idea of adaptive capacity. Simultaneously, if we wish to empower communities to make good use of their prevailing assets in local sustainability transformations, we can endorse this idea by strengthening their relatively unique and autonomous “community resilience.” However, and similarly with the concept of “social capital,” (community) resilience has the down side of being suspect of contributing to neoliberalism through minimizing the responsibilities of the state at community level (see e.g., Joseph, 2013; Sage and Zebrowski, 2018). Therefore, while endorsing the idea of community resilience, it is also important to critically revisit the issue of the “autonomous community” in the framework of adequate multilevel governance and exchange advancing local cultural diversity and sustainable livelihood.

## 4.2 Local resilience and transformative stewardship

Indeed, the recent empirical literature in social sciences concerning “social resilience” consists mainly of unique case studies and/or comparative case studies on sub-national regions, localities and communities (e.g., Meerow and Stults, 2016; Martinez, 2021). These case studies usually highlight the relationship of the local people to the natural resources in many ways, which implies an important reference to the space based cultural diversity, and simultaneously emphasize the “sense of place” as a unique significance to the local people (see e.g., Krasny and Tidball, 2015). From the perspective of increasing local adaptive capacity and cultural sustainability, these case studies are often meant to show how culture can be understood through the *transformative stewardship* of places. This entails the question how could the

sense of place be translated into visions of social transformations toward “sustainable cultures” embedded in identified socio-spatial communities.

Hence, while aiming at consolidating sustainable development throughout different scales—communities should be enabled to mobilize *sustainability transformations* on their own initiative. In this way, local communities can manage the cultural diversity familiar to them and make it as an important element of the perceived community resilience. Therefore, from the perspective of adaptation to contemporary risk it is justifiable to strengthen the sense of place as a cultural understanding of a human habitat (e.g., [Fabbri et al., 2020](#)). In the interest of adding to local adaptive capacity and resilience it is also important to make sure that both cultural and material resources in the community are identified and valued by the inhabitants and the local institutions (for further consideration see e.g., [Barton et al., 2021](#)).

Accentuating the importance of a *duty based* relationship between place and cultural heritage might be recognized as self-evident, because place-based duties and stewardship of local environment and historical sites has been clearly included in local resilience *by tradition*. However, the multiplicity of global and local mobilities in modern societies imply that some external shocks are experienced by most place based communities. Therefore, it is not evident that the sense of place can be perceived as a constant and solid constituent for building cultural sustainability in the modern world. Consequently, during the present era of escalating insecurities, the issue of securing local resilience with specific and planned means has been increasingly on the agenda e.g., in cities experimenting actively on endorsing their adaptive capacity. For example, [Frantzeskaki et al. \(2018\)](#) contend that “urban living labs” can “connect a sense of change (transformation) with a sense of place by co-creating new narratives of place, by co-producing knowledge on new practices and new relations between people and place, and by allowing the co-design or (re)establishment of places with symbolic meaning.” In this way, the “living labs” can make a robust contribution to building local resilience, as they claim.

Moreover, from the point of view of *community autonomy*, it is important to remind that the actors of high expertise, such as the proposed living labs, hardly can “command” independently the processes of sustainability transformations. Therefore, we need a wide and versatile recognition of the inherited local culture(s), including political culture, that can provide a variety of channels and presentations shaping the transformations toward increased community resilience based on cultural diversity (c.f. [Soini and Birkeland, 2014](#); [Pisor et al., 2022](#)). Furthermore, depending on the local history, communities often have trust on the established *institutions* that usually entail not only an important legitimate share in directing local transformations but also present some complexities in their proper management (see e.g., [Salvador and Sancho, 2021](#)). Nevertheless, the urban living labs can constitute a major element in transformation by introducing novel local initiatives to be considered while institutionally planning and building community resilience.

To sum up, community resilience should perhaps be conceived more as a *process* than a standard or record to be established within a socio-spatial system. With regards to the cultural sustainability this means *firstly* that local heritage is a permanent and constituent element in building community resilience that needs to be qualified

through lenses of cultural sustainability time and again. *Secondly*, it is important to recognize the diversity of the social actors that can and should contribute to building local and/or community resilience. *Thirdly*, it is important to identify the channels, networks and the influential communicative settings where local policy making is feasible toward endorsing sustainability transformations. *Finally*, from the perspective of establishing patterns of effective governance, it is important to recognize the degree of autonomy of the community in relation to the “external” actors, whether public bodies or private organizations. Depending again of the institutional settings within the territorial states and wider international organization, the actors of the communities may find their initiatives either vividly supported or else in evident tension with social programs implemented from “above.” Hence, the social processes targeting both increased local adaptive capacity and community resilience need to be checked, from time to time, as to their implications on cultural sustainability. On a general level, a recommendable procedure is to evaluate how well do these implications match with the principles of “recognition, redistribution, and representation” ([Fraser, 2009](#)).

## 5 Discussion and conclusion

This paper has been written in the interest of understanding better how cultural sustainability, particularly at local level, could develop into a more robust and integral element of the societal responses for mitigating and adapting to the emerging risks and insecurities instigated by the environmental change and contemporary social development. In global perspective, the main emergencies hampering the prospect of sustainable development have been associated to (1) the global and local environmental concerns such as climate change and loss of biodiversity, (2) to the vulnerabilities of infrastructure such as shortages of safe water, energy supply etc., and (3) to the lack of social equality referring to gender, ethnicity, low income groups and even with regards to the future generations. In the 21st century it has been evident that attaining sustainable development goals (SDG) entails the need of effective implementation processes and transformations both across various sectors and across many levels of governance. Recently, one of the main challenges has been the “localization” of the implementation concerning the full range of the SDG targets.

It has been estimated that local governments are in crucial position in delivering for most of the SDG targets (see [Ortiz-Moya and Reggiani, 2023](#)). As such the mosaic of the many targets under the umbrella of 17 sustainable development goals defined by the Agenda 2030 is impressive. However, the implementation of the full range of the goals clearly implies difficult trade-offs between sectors and targets. Thinking of the localization of the implementation, it is therefore important to start by asking how can any actor with real power in local politics make sense of the full package of the targets, and then proceed, based on this understanding, to refining suitable operative strategy and tools for local purposes. Obviously, the challenge of making priorities in implementation does not apply only across horizontal “departments” but also in terms of multilevel governance referring, especially, to the dialogue between (national) states and local action/actors. Therefore, it makes sense to look for scholarly proposals that encapsulate the 17 goal areas

into fewer elements prepared and proposed for presenting a more operational outline e.g., by designing an overarching public policy and priorities for endorsing crucial social transformations toward local sustainable development.

Indeed, there may be many candidates for an adequate outline to crystallize the Agenda 2030 goals and targets in fewer sectors of implementation. The need for integration of implementation of sustainable development goals has been acknowledged and discussed widely (see e.g., LeBlanc, 2015; Tosun and Leininger, 2017; Bornemann and Weiland, 2021). To finish this article, one outline was chosen that has already been well-established in the literature and that seems to contribute effectively both to the debate on community resilience and adaptive capacity, and to condensing the multiple areas of implementation. Sachs et al. (2019) have proposed a modular scheme that can serve as a concise check-list assessing sustainable development. This check-list establishes in an articulate manner the main dimensions or sectors that need to be deeply transformed. The scheme includes six dimensions as follows:

- (1) Education, gender and inequality;
- (2) Health, wellbeing and demography;
- (3) Energy de-carbonization and sustainable industry;
- (4) Sustainable food, land, water, and oceans;
- (5) Sustainable cities and communities;
- (6) Digital revolution for sustainable development.

In their article, Sachs et al. (2019) further suggest that these six topics should be taken as the priority of investments. Further, they call for increasing the regulatory capacities in these fields simultaneously involving well-defined parts of working governments that can build partnerships between businesses and civil society. They also highlight the importance of scientific knowledge in designing and monitoring the designed transformations.

*Cultural sustainability* as such is not explicitly treated as part of the scheme. However, by way of conclusion, Sachs et al. (2019) suggest that the question of cultural sustainability should be raised in this context as a cross-sectional element *enabling* the growth of local adaptive capacity. Therefore, we may ask, while designing strategies and programs for each of the six topics, how can cultural production and diversity be profitable and add to the local resources when pursuing sustainability transition targets within and across each of the six topics of the scheme proposed. And, further, how can we even strengthen cultural sustainability through participation in the transformation processes. For example, in relation to the first module “education, gender and inequality”- this principle would mean involving locally women and any identified deprived social groups in the public policies of transformation to enrich the cultural diversity and to fortify democracy when monitoring change.

Indeed, according to the modular scheme there are six sectors to be implemented not only one by one but also through comprehensive management across the sectors. Hence, there is much to be done for reaching effective integration of (local/regional) cultural processes into the policy priorities as described above. Firstly, local powers need to set openly their priorities in each of the six areas and, also, give priorities to the

dimensions according to the local strengths and circumstances, e.g., it needs to be decided, whether to invest first mainly in sustainable food production or in sustainable industry in some other branches. Obviously, the prevailing structure of local industries and occupations give a major starting point in making these decisions. As to the cultural sustainability local heritage can make here a most significant contribution. However, while the processes of the real transformations are in focus, the community culture of local participation and stewardship are keys for understanding the existing opportunities for successful implementation that would lead to increased adaptive capacity in the community.

Moreover, aiming at contributing to the encompassing adaptive capacity, local actors need to get organized not only for delivering cultural productions and artifacts but also for finding channels of agency and legitimate networks for influencing sustainability transformations. In this way, they can contribute and confirm adaptive capacity and cultural sustainability more broadly in the community and even with regards to the needs of the future transformations and future generations. Indeed, increasing cultural sustainability as part of adaptive capacity is a long-term project. Consequently, it is difficult to evaluate any major or solid impact of this project instantly. Therefore, an important part of the cultural sustainability can be identified only gradually in the processes of transformation and participation. For example, it is important to document and evaluate how the processes of transformation contribute to the local heritage and cultural diversity. This is important in balancing change and continuity to ensure that local sustainable development is truly enriching local livelihood and wellness. Integrating the targets of cultural sustainability to the sustainability transformations would thus include a process of establishing and refining local adaptive capacity, and even of deepening the sense of place and culture.

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## Conflict of interest

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## References

- Adger, W. N. (2003). "Social aspects of adaptive capacity," in *Climate Change, Adaptive Capacity and Development*, eds J. B. Smith, R. J. T. Klein, and S. Huq (London: Imperial College Press), 29–49. doi: 10.1142/9781860945816\_0003
- Adger, W. N., Barnett, J., Brown, K., Marshall, N., and O'Brien, K. (2013). Cultural dimensions of climate change impacts and adaptation. *Nat. Clim. Change* 3, 112–117. doi: 10.1038/nclimate1666
- Anholt, R., van Dulleman, C., Santos de Carvalho, J., Rijbroek, J., Sieckelink, S., and Sloodman, M. W. (2021). "Understanding societal resilience," in *Multisystemic Resilience*, ed M. Ungar (Oxford: Oxford University Press), 551–564. doi: 10.1093/oso/9780190095888.003.0029
- Armitage, D. (2005). Adaptive capacity and community-based natural resource management. *Environ. Manage.* 35, 703–715. doi: 10.1007/s00267-004-0076-z
- Barton, J. R., Gutiérrez-Antinopai, F., and Escalona Ulloa, M. (2021). Adaptive capacity as local sustainable development: contextualizing and comparing risks and resilience in two Chilean regions. *Sustainability* 13, 4660. doi: 10.3390/su13094660
- Bassett, T. J., and Fogelman, C. (2013). Déjà vu or something new? The adaptation concept in the climate change literature. *Geoforum* 48, 42–53. doi: 10.1016/j.geoforum.2013.04.010
- Berkes, F., Colding, J., and Folke, C. (eds.) (2002). *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*. Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511541957
- Berkes, F., and Jolly, D. (2002). Adapting to climate change: social-ecological resilience in a Canadian western arctic community. *Conserv. Ecol.* 5, 2. doi: 10.5751/ES-00342-050218
- Birkeland, I. (2008). Cultural sustainability: industrialism, placelessness and the re-animation of Place. *Ethics Place Environ.* 11, 283–297. doi: 10.1080/13668790802559692
- Blackburn, C. (2009). Differentiating indigenous citizenship: seeking multiplicity in rights, identity, and sovereignty in Canada. *Am. Ethnol.* 36, 66–78. doi: 10.1111/j.1548-1425.2008.01103.x
- Blaser (2004). "Life projects: indigenous peoples' agency and development," in *The Way of Development: Indigenous Peoples, Life Projects and Globalization*, eds M. Blaser, H. A. Feit, and G. McRae (London: Zed Books), 26–44. doi: 10.5040/9781350220720.ch-002
- Bornemann, B., and Weiland, S. (2021). The UN 2030 agenda and the quest for policy integration: a literature review. *Politics Gov.* 9, 96–107. doi: 10.17645/pag.v9i1.3654
- Bourdieu, P. (1979). *La Distinction – Critique social du Jugement*. Paris: Les Éditions de Minuit.
- Buttimer, A. (1998). "Landscape and life: issues of scale and appropriateness," in *Regions: Cornerstones for Sustainable Development*, eds I. Gabriel, and M. Narodoslawsky (Graz: Austrian Network for Environmental Research).
- Byskov, M., and Hyams, K. (2022). Who should represent future generations in climate planning? *Ethics Int. Aff.* 36, 199–214. doi: 10.1017/S0892679422000168
- Claassen, R. (2014). "Human dignity in the capability approach," in *The Cambridge Handbook of Human Dignity: Interdisciplinary Perspectives*, eds M. Düwell, J. Braarvig, R. Brownsword, and D. Mieth (Cambridge: Cambridge University Press), 240–249. doi: 10.1017/CBO9780511979033.030
- Davoudi, S., Shaw, K., and Haider, L. G. (2012). Resilience: a bridging concept or a dead end? *Plann. Theory Pract.* 13, 299–333. doi: 10.1080/14649357.2012.677124
- Demetriades, J., and Esplen, E. (2008). The gender dimensions of poverty and climate change adaptation. *IDS Bull.* 39, 24–31. doi: 10.1111/j.1759-5436.2008.tb00473.x
- Edge, S., and McAllister, M. L. (2009). Place-based local governance and sustainable communities: lessons from Canadian biosphere reserves. *J. Environ. Plann. Manag.* 52, 279–295. doi: 10.1080/09640560802703058
- Edwards, M., and Sen, G. (2000). NGO'S, social change and the transformation of human relationships: a 21st century civic agenda. *Third World Q.* 21, 605–616. doi: 10.1080/713701069
- Fabbricatti, K., Boissenin, L., and Citoni, M. (2020). Heritage community resilience: towards new approaches for urban resilience and sustainability. *City Territ. Archit.* 7, 17. doi: 10.1186/s40410-020-00126-7
- Falkner, R. (2016). The Paris agreement and the new logic of international climate politics. *Int. Aff.* 92, 1107–1125. doi: 10.1111/1468-2346.12708
- Foster, J. (2002). Sustainability, Higher education and the learning society. *Environ. Educ. Res.* 8, 35–41. ISSN 1469-5871 doi: 10.1080/13504620120109637
- Frantzeskaki, N., van Steenberghe, F., and Stedman, R. C. (2018). Sense of place and experimentation in urban sustainability transitions: the Resilience Lab in Carnisse, Rotterdam, The Netherlands. *Sustain. Sci.* 13, 1045–1059. doi: 10.1007/s11625-018-0562-5
- Fraser, N. (2009). *Scales of Justice: Reimagining Political Space in a Globalizing World*. New York, NY: Columbia University Press.
- Fan, C. C. (2003). Rural-urban migration and gender division of labor in transitional China. *Int. J. Urban Reg. Res.* 27, 24–47. doi: 10.1111/1468-2427.00429
- Fusté-Forné, F., and Nguyen, T. (2018). Communities of practice, identity and tourism: evidence on cultural heritage preservation in world heritage sites. *Almatourism* 9, 1–22. doi: 10.6092/issn.2036-5195/8205
- Garcia, B. M. (2021). Integrating culture in post-crisis urban recovery: reflections on the power of cultural heritage to deal with crisis. *Int. J. Disaster Risk Reduct.* 60. doi: 10.1016/j.ijdrr.2021.102277
- George, C., and Reed, M. G. (2017). Operationalising just sustainability: towards a model for place-based governance. *Local Environ.* 22, 1105–1123. doi: 10.1080/13549839.2015.1101059
- Glaz, A. (2017). Worldview as cultural cognition. *Lang. Mind Cult. Soc.* 1, 34–50.
- Gough, I. (2013). Climate change, social policy, and global governance. *J. Int. Comp. Soc. Policy* 29, 185–203. doi: 10.1080/21699763.2013.852128
- Gray, A. J. (2011). Worldviews. *Int. Psychiatry* 8, 58–60. doi: 10.1192/S1749367600002563
- Green, F. (2021). Ecological limits: science, justice, policy, and the good life. *Philos. Compass* 16, E12740. doi: 10.1111/phc3.12740
- Haustein, E., and Lorson, P. C. (2023). Co-creation and co-production in municipal risk governance – a case study of citizen participation in a German city. *Public Manag. Rev.* 25, 376–403. doi: 10.1080/14719037.2021.1972704
- Hawkes, J. (2001). *The Fourth Pillar of Sustainability: Culture's Essential Role in Public Planning*. Champaign, IL: Common Ground.
- Holtorf, C. (2018). Embracing change: how cultural resilience is increased through cultural heritage. *World Archaeol.* 50, 639–650. doi: 10.1080/00438243.2018.1510340
- Huggins, R., and Thompson, P. (2015). Culture and place-based development: a socio-economic analysis. *Reg. Stud.* 49, 130–159. doi: 10.1080/00343404.2014.889817
- Hvinden, B., and Schoyen, M. A. (2022). "Social policy research and climate change," in *Social Policy in Changing European Societies, Chapter 15*, eds K. Nelson, R. Nieuwenhuis, and M. A. Yerkes (London: Edward Elgar Publishing), 236–250. doi: 10.4337/9781802201710.00024
- Jeannotte, M. S. (2003). Singing alone? The contribution of cultural capital to social cohesion and sustainable communities. *Int. J. Cult. Policy* 9, 35–49. doi: 10.1080/1028663032000089507
- Jerneck, A. (2018). What about gender in climate change? Twelve feminist lessons from development. *Sustainability* 10, 627. doi: 10.3390/su10030627
- Jewett, R. L., Mah, S. M., Howell, N., and Larsen, M. M. (2021). Social cohesion and community resilience during COVID-19 and pandemics: a rapid scoping review to inform the United Nations Research roadmap for COVID-19 recovery. *Int. J. Health Serv.* 51, 325–336. doi: 10.1177/0020731421997092
- Joseph, J. (2013). Resilience as embedded neoliberalism: a governmentality approach. *Resilience* 1, 38–52. doi: 10.1080/21693293.2013.765741
- Juhola, S. K., Käyhkö, J., Heikkinen, M., Neset, T.-S., and Tuhkanen, H. (2022). Governance and everyday adaptations? Examining the disconnect between planned and autonomous adaptation through justice outcomes. *Ecol. Soc.* 27. doi: 10.5751/ES-13664-270441
- Kangas, A., Duxbury, N., and De Beukelaer, C. (2017). Introduction: cultural policies for sustainable development. *Int. J. Cult. Policy* 23, 129–132. doi: 10.1080/10286632.2017.1280790
- Kaplan-Hallam, M., and Bennett, N. J. (2018). Adaptive social impact management for conservation and environmental management. *Conserv. Biol.* 32, 304–314. doi: 10.1111/cobi.12985



- Keck, M., and Sakdapolrak, P. (2013). What is social resilience? Lessons learned and ways forward. *Erdkunde* 67, 5–19. doi: 10.3112/erdkunde.2013.01.02
- Kong, L. (2009). Making sustainable creative/cultural space in Shanghai and Singapore. *Geogr. Rev.* 99, 1–22. doi: 10.1111/j.1931-0846.2009.tb00415.x
- Kortetmäki, T., and Huttunen, S. (2022). Responsibilities for just transition to low-carbon societies: a role-based framework. *Environ. Polit.* 32, 249–270. doi: 10.1080/09644016.2022.2064690
- Kortetmäki, T., and Järvelä, M. (2021). Social vulnerability to climate policies: building a matrix to assess policy impacts on well-being. *Environ. Sci. Policy* 123, 220–228. doi: 10.1016/j.envsci.2021.05.018
- Krasny, M., and Tidball, K. G. (2015). *Civic ecology: Adaptation and Transformation from the Ground up*. Cambridge, MA: The MIT Press. doi: 10.7551/mitpress/9780262028653.001.0001
- Kulacki, G. (2023). US-China relations and nuclear weapons in Northeast Asia. *J. Peace Nucl. Disarm.* 6, 123–135. doi: 10.1080/25751654.2023.2182155
- Labadi, S. (2017). “UNESCO, world heritage, and sustainable development: international discourses and local impacts,” in *Collision or Collaboration*, eds P. G. Gould, and A. K. Pyburn (Berlin: Springer), 45–60. doi: 10.1007/978-3-319-44515-1\_4
- LeBlanc, D. (2015). Towards integration at last? The sustainable development goals as a network of targets. *Sustain. Dev.* 23, 176–187. doi: 10.1002/sd.1582
- Li, M., Wiedmann, T., Fang, K., and Hadjikakou, M. (2021). The role of planetary boundaries in assessing absolute environmental sustainability across scales. *Environ. Int.* 152, 106475. doi: 10.1016/j.envint.2021.106475
- Loach, K., and Rowley, J. (2021). Cultural sustainability: a perspective from independent libraries in the United Kingdom and the United States. *J. Librariansh. Inf. Sci.* 54, 80–94. doi: 10.1177/0961000621992824
- Macnaghten, P., and Jacobs, M. (1997). Public identification with sustainable development. Investigating cultural barriers to participation. *Glob. Environ. Change* 7, 5–24. doi: 10.1016/S0959-3780(96)00023-4
- Marks, D., Bayrak, M. M., Jahangir, S., Hening, D., and Barile, D. (2022). Towards a cultural lens for adaptation pathways to climate change. *Reg. Environ. Change* 22, 22. doi: 10.1007/s10113-022-01884-5
- Martin, J. L., Maris, V., and Simberloff, D. S. (2016). The need to respect nature and its limits challenges society and conservation science. *Proc. Natl. Acad. Sci. USA.* 113, 6105–6112. doi: 10.1073/pnas.1525003113
- Martinez, G. (ed.). (2021). *Culture and Climate Resilience. Palgrave Studies in Climate Resilient Societies*. Cham: Palgrave Macmillan. doi: 10.1007/978-3-030-58403-0
- Martinez, J. M. A. (2012). Indigenous peoples’ struggles for autonomy: the case of the U’wa people. *Diplomat Int. Canada* 12, 109–122.
- Meerow, S., and Stults, M. (2016). Comparing conceptualizations of urban climate resilience in theory and practice. *Sustainability* 8, 701. doi: 10.3390/su8070701
- Mifsud, R., and Sammut, G. (2023). Worldviews and the role of social values that underlie them. *PLoS ONE* 18, e0288451. doi: 10.1371/journal.pone.0288451
- Murtagh, E., and Lane, M. (2022). “Putting the ‘place’ in place-based climate action: insights from climate adaptation initiatives across Scotland,” in *Addressing the Climate Crisis*, eds C. Howarth, M. Lane, and A. Slevin (Cham: Palgrave Macmillan), 15–25. doi: 10.1007/978-3-030-79739-3\_2
- Nash, N., Whitmarsh, L., Capstick, S., Gouveia, V., de Carvalho Rodrigues Araújo, R., Dos Santos, M., et al. (2020). Local climate change cultures: climate-relevant discursive practices in three emerging economies. *Clim. Change* 163, 63–82. doi: 10.1007/s10584-019-02477-8
- Nussbaum, M. C. (2011). *Creating Capabilities: The Human Development Approach*. Cambridge: Harvard University Press. doi: 10.4159/harvard.9780674061200
- O’Brien, K., and Selboe, E. (2015). “Social transformation: the real adaptive challenge,” in *The Adaptive Challenge of Climate Change*, eds K. O’Brien and E. Selboe (Cambridge: Cambridge University Press), 311–324. doi: 10.1017/CBO9781139149389
- Ortiz-Moya, F., and Reggiani, M. (2023). Contributions of the voluntary local review process to policy integration: evidence from frontrunner cities. *NPJ Urban Sustain.* 3, 22. doi: 10.1038/s42949-023-00101-4
- Pereira, P., Bašić, F., Bogunovic, I., and Barcelo, D. (2022). Russian-Ukrainian war impacts the total environment. *Sci. Total Environ.* 837, 155865. doi: 10.1016/j.scitotenv.2022.155865
- Perrings, C. (2006). Resilience and sustainable development. *Environ. Dev. Econ.* 11, 417–427. doi: 10.1017/S1355770X06003020
- Phang, S. C., Failler, P., and Bridgewater, P. (2020). Addressing the implementation challenge of the global biodiversity framework. *Biodivers. Conserv.* 29, 3061–3066. doi: 10.1007/s10531-020-02009-2
- Pisor, A. C., Basurto, X., Douglass, K. G., Mach, K. J., Ready, E., Tylanakis, J. A., et al. (2022). Effective climate change adaptation means supporting community autonomy. *Nat. Clim. Change* 12, 213–215. doi: 10.1038/s41558-022-01303-x
- Powell, F. (2009). Civil society, social policy and participatory democracy: past, present and future. *Soc. Policy Soc.* 8, 49–58. doi: 10.1017/S1474746408004570
- Pratt, A. C. (2015). Resilience, locality and the cultural economy. *City Cult. Soc.* 6, 61–67. doi: 10.1016/j.ccs.2014.11.001
- Putnam, R. D. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York, NY: Simon & Schuster. doi: 10.1145/358916.361990
- Rahman, H. M. T., Albizua, A., and Soubry, B. Tourangeau, W. (2021). A framework for using autonomous adaptation as a leverage point in sustainable climate adaptation. *Clim. Risk Manag.* 34, 100376. doi: 10.1016/j.crm.2021.100376
- Ranson, S. (1994). *Towards the Learning Society*. London: Cassell.
- Rockstrom, J., Steffen, W., Noone, K., Persson, A., Chapin III, F. S., Lambin, E. F. et al. (2009). A safe operating space for humanity: identifying and quantifying planetary boundaries that must not be transgressed could help prevent human activities from causing unacceptable environmental change, argue Johan Rockstrom and colleagues. *Nature* 461, 472–475. doi: 10.1038/461472a
- Roy, S., Tandukar, S., and Bhattarai, U. (2022). Gender, climate change adaptation, and cultural sustainability: insights from Bangladesh. *Front. Clim.* 4, 841488. doi: 10.3389/fclim.2022.841488
- Rozmiarek, M., Nowacki, K., Malchrowicz-Mosko, E., and Dacko-Pikiewicz, Z. (2022). Eco-initiatives in municipal cultural institutions as examples of activities for sustainable development: a case study of Poznan. *Sustainability* 14, 682. doi: 10.3390/su14020682
- Sabatini, F. (2019). Culture as fourth pillar of sustainable development: perspectives for integration, paradigms of action. *Eur. J. Sustain. Dev.* 8, 31. doi: 10.14207/ejsd.2019.v8n3p31
- Sachs, J. D., Schmidt-Traub, G., Mazzucato, M., Messner, D., Nakicenovic, N., and Rockström, J. (2019). Six transformations to achieve the sustainable development goals. *Nat. Sustain.* 2, 805–814. doi: 10.1038/s41893-019-0352-9
- Sage, D., and Zebrowski, C. (2018). *Organising Community Resilience: An Examination of the Forms of Sociality Promoted in Community Resilience Programmes*. Loughborough University. Available online at: <https://hdl.handle.net/2134/32039> (accessed December 05, 2023).
- Salomaa, A., and Juhola, S. (2020). How to assess sustainability transformations: a review. *Glob. Sustain.* 3, e24. doi: 10.1017/sus.2020.17
- Salvador, M., and Sancho, D. (2021). The role of local government in the drive for sustainable development public policies. An analytical framework based on institutional capacities. *Sustainability* 13, 5978. doi: 10.3390/su13115978
- Schlosberg, D., Collins, L. B., and Niemeyer, S. (2017). Adaptation policy and community discourse: risk, vulnerability, and just transformation. *Environ. Polit.* 26, 413–437. doi: 10.1080/09644016.2017.1287628
- Sen, A. (1999). *Development as Freedom*. New York, NY: Knopf.
- SIPRI (2022). *Environment of Peace: Security in a New Era of Risk*. Stockholm: SIPRI.
- Smit, B., and Wandel, J. (2006). Adaptation, adaptive capacity and vulnerability. *Glob. Environ. Change* 16, 282–292. doi: 10.1016/j.gloenvcha.2006.03.008
- Soini, K., and Birkeland, I. (2014). Exploring the scientific discourse on cultural sustainability. *Geoforum* 51, 213–223. doi: 10.1016/j.geoforum.2013.12.001
- Soini, K., and Dessein, J. (2016). Culture-sustainability relation: towards a conceptual framework. *Sustainability* 8, 167. doi: 10.3390/su8020167
- Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., et al. (2015). Planetary boundaries: guiding human development on a changing planet. *Science* 347, 6219. doi: 10.1126/science.1259855
- Thorn, J., Thornton, T. F., and Helfgott, A. (2015). Autonomous adaptation to global environmental change in peri-urban settlements: evidence of a growing culture of innovation and revitalisation in Mathare Valley slums, Nairobi. *Glob. Environ. Change* 31, 121–131. doi: 10.1016/j.gloenvcha.2014.12.009
- Throsby, D. (1999). Cultural capital. *J. Cult. Econ.* 23, 3–12. doi: 10.1023/A:1007543313370
- Throsby, D. (2005). *On the Sustainability of Cultural Capital*. Sydney, NSW: Macquarie Economics Research Papers.
- Tosun, J., and Leininger, J. (2017). Governing the interlinkages between the sustainable development goals: approaches to attain policy integration. *Global Chall.* 1, 1700036. doi: 10.1002/gch.201700036
- Touraine, A. (1982). *Triumph or Downfall of Civil Society, Humanities in Review*, Vol. 1. Cambridge: Cambridge University Press, 219–220.
- UNESCO (2019). *Culture and Sustainable Development, Powering Culture across Public Policies*. Available online at: <https://www.unesco.org/en/sustainable-development/culture> (accessed December 05, 2023).
- UNRISD (2021). *New Eco-Social Contract, Issue Brief 11, March 2021*. Geneva: UNRISD.
- UNSCB (2017). *Leaving No One Behind: Equality and Non-discrimination at the Heart of Sustainable Development. The United Nations System Shared Framework for Action*. New York, BY: United Nations. Available online at: [https://unscb.org/sites/default/files/imported\\_files/CEB%20equality%20-framework-A4-web-rev3.pdf](https://unscb.org/sites/default/files/imported_files/CEB%20equality%20-framework-A4-web-rev3.pdf) (accessed December 05, 2023).

- Urry, J. (2000). *Sociology Beyond Societies: Mobilities for the Twenty-first Century*. London: Routledge.
- Vallury, S., Smith, A. P., Chaffin, B. C., Nesbitt, H. K., Lohani, S., Gulab, S., et al. (2022). Adaptive capacity beyond the household: a systematic review of empirical social-ecological research. *Environ. Res. Lett.* 17, 063001. doi: 10.1088/1748-9326/ac68fb
- Vandenhoe, W. (2020). "Towards a division of labour for sustainable development: extraterritorial human rights obligations," in *Sustainable Development Goals and Human Rights. Interdisciplinary Studies in Human Rights*, vol 5, eds M. Kaltenborn, M. Krajewski, and H. Kuhn (Cham: Springer), 221–236. doi: 10.1007/978-3-030-30469-0\_13
- Weiss, E. B. (1992). In fairness to future generations and sustainable development. *Am. Univ. Int. Law Rev.* 8, 19–26.
- Zheng, X., Wang, R., Hoekstra, A. Y., Krol, M. S., Zhang, Y., Guo, K., et al. (2021). Consideration of culture is vital if we are to achieve the sustainable development goals. *One Earth* 4, 307–319. doi: 10.1016/j.oneear.2021.01.012