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Towards adaptive tourism areas? A complexity perspective to examine the conditions for adaptive capacity

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Tourism area development is affected by the competitive global tourism industry and the complex, multilevel dynamics of the contemporary network society. The strategic planning and governance challenge is stimulating tourism areas to become adaptive areas, being capable of responding to changing contexts in order to maintain or improve the performance of these areas as competitive tourism destinations. This article examines conditions for “adaptive tourism areas”. It does so on the basis of a complex adaptive system (CAS) perspective on tourism area development. The perspective is used to conceptualise tourism areas as complex and potentially adaptive systems, and to discuss how tourism area development can be understood as a multilevel, co-evolutionary and path dependent process. Furthermore, the CAS perspective is used to draw attention to the importance of a degree of diversity in terms of tourism products, experiences and firms. Encouraging a degree of diversity requires among other things interconnectivity among actors to ease communication and coordination, (policy) experimentation for niche-innovations, learning and reflexivity. The article ends with a discussion on the potential of, and constraints on, pursuing adaptive tourism areas from a strategic planning and governance point of view.

Keywords: complex adaptive system; tourism area; strategic planning; governance; diversity

1. Introduction

Many areas around the world are witnessing development processes that are designed to foster recreational and touristic demands (Bunce, 2008). This relates to the emergence of the “leisure economy” – a container concept used in Dutch planning practice to describe land uses and activities related to tourism, recreation, leisure, wellness and such amenity migration as ex-urban living and working (Hartman, Rauws, Beefink, & De Roo, 2011). Underlying driving forces include an increase of welfare, available income and free time, altering lifestyles and cultures, changing demographics and migration patterns, innovations in technology, transportation, mobility, communication, as well as shifts in governance and policy (Gillespie, 2007; Hall, 2008; Williams & Shaw, 2009). As a result, many people have an increasing capability to spend their resources on tourism and leisure-related activities, such as travel, recreation, sport and wellness.

The emerging leisure economy generates potentials for spatial and socio-economic development at local and regional levels. The potential of the leisure economy is widely

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recognised and it drives development processes in many places worldwide. It has evolved into an interconnected and competitive global economy (Urry, 2002, 2005). Because new tourism products and leisure activities are developed continually, visitors can select from an extensive variety of destinations and a dynamic set of experiences (Butler, 2011). As a result, competition for visitors takes place between individual businesses, regions and countries. Milne and Ateljevic (2001, p. 371) argue, therefore, that “it is essential to look carefully at how interactions between the global and the local shape development outcomes for individuals, households, communities and regions”. In the context of the dynamic and complex nature of processes driving tourism area development, this article emphasises the importance of “adaptive tourism areas”. Adaptive refers to the capacity to respond and adjust to market changes as a means to maintain or improve the performance of these areas as competitive tourism destinations (Axelrod & Cohen, 2000; Heylighen, 2008). This article draws attention to key conditions for encouraging the adaptive capacity of tourism areas. Moreover, it highlights that pursuing adaptive tourism areas comes with various governance issues. Developing adaptive capacity has the potential to contribute to a more sustainable tourism industry in terms of profit (e.g. attractiveness, competitiveness), planet (e.g. create more room for sustainable and eco-tourism, limit waste of resources associated with prior investment in tourism) and people (e.g. career opportunities, community-based tourism).

In order to uncover conditions for adaptive tourism areas, this article examines contributions to literature that use theories of complex adaptive systems (CASs) to analyse and manage the dynamics of areas or places. These include applications of CAS theories by tourism scholars to analyse tourism area development (Baggio, Scott, & Cooper, 2010; Farrell & Twining-Ward, 2004; McDonald, 2009; Russell & Faulkner, 1999). CAS theories are also a major theoretical framework for evolutionary economic geography (Brouder & Eriksson, 2013), which is recently gaining attention to better understand and analyse how tourism areas evolve over time (Brouder, 2014; Ma & Hassink, 2013). We also connect to scholars in the field of urban and regional planning and governance using CAS theories to manage dynamic areas (De Roo, Hillier, & Van Wezemael, 2012; Portugali, Meyer, Stolk, & Tan, 2012). Moreover, we examine literature on transition management (TM) and adaptive management (AM) which specifically elaborates on strategies for managing CASs (Foxon, Stringer, & Reed 2008; Van der Brugge & Van Raak, 2007; Voss & Bornemann, 2011).

Theories of CAS offer a set of concepts and elaborate on mechanisms that relate to the capacity of a complex system to adapt to its persistently changing contextual environment (Manson & O’Sullivan, 2006). These insights are used in this article to conceptualise tourism areas as complex systems that have the potential to be adaptive. Furthermore, literature on TM and AM is used to further elaborate on conditions for adaptive tourism areas and their implications for strategic planning and governance. In doing so, the purpose of the article is to contribute to a more sustainable, resilient development model that revolves around tourism areas retaining the capacity to adapt to persistently changing situations. The underlying idea is that adaptive capacity contributes to the ability of tourism areas to avoid negative and potentially large fluctuations in terms of local and regional development potential and competitiveness (Pastras & Bramwell, 2013).

This article consists of the following parts, wherein the argument is developed that adaptive capacity for tourism areas strongly relates to a degree of diversity in terms of tourism and leisure products, experiences and firms. In [Section 2](#), theories of CAS are used to conceptualise tourism areas as complex systems that have the potential to be adaptive. [Section 3](#) draws attention to the importance of a degree of diversity for the capacity

to adapt. [Section 4](#) examines TM and AM, highlighting that important conditions for maintaining a degree of diversity for the purpose of the capacity to adapt include inter-connectivity, interaction, (policy) experimentation and niche innovations, learning and reflexivity. [Section 5](#) reflects on governance issues that relate to pursuing adaptive tourism areas, on the basis of which conclusions are drawn in the final section.

2. A complexity theory perspective on adaptive tourism areas

The paper's introduction emphasised that tourism areas are dynamic, partly because these areas are embedded in a dynamic contextual environment. It highlighted how tourism area development is driven by multilevel and multi-actor processes (Milne & Ateljevic, 2001). The consequence for tourism area development is that on the one hand, global-to-local interactions present development opportunities at local and regional levels, and on the other hand, an urgency to respond and adapt in order to retain competitiveness (Urry, 2003). The capacity to adapt tourism areas to changing situations is, therefore, a crucial property to sustain spatial and socio-economic development. To identify conditions that encourage the adaptive capacity of tourism areas, we introduce a complex adaptive systems (CAS) perspective on tourism area development. This CAS perspective allows us to connect to literature about adaptive capacity and to further elaborate on conditions for adaptive tourism areas ([Sections 3 and 4](#)).

2.1. Conceptualising tourism areas as complex adaptive systems

Tourism areas can be understood as cohesive systems, as systems can be defined as elements, agents and their actions that are tied very closely to other elements, agents and their actions (Axelrod & Cohen, 2000). This system perspective is adopted by Ma and Hassink (2013), who argue that tourism areas consist of interrelated products, sectors and institutions and their mutual interactions. Brouder and Eriksson (2013, p.373) also see "multiple levels of agent interaction in the form of labour, firms, networks, technologies and institutions", and they regard tourism areas as a "bundle of many sources of evolutionary change". Similarly, Baggio et al. (2010), taking a network perspective, argue that tourism areas consist of interrelated stakeholders that jointly meet visitor needs and produce experiences that visitors consume. The actions of actors define system boundaries, but we must be aware that changes in actions may result in the renegotiation of these boundaries (Byrne, 2005; Cilliers, 2001).

Systems are considered complex when interactions between components result in circular cause-and-effect relations. This means that "change in the first component is fed back via its effects on the other components to the first component itself" (Heylighen, 2001, p.10). It is argued that tourism areas feature such complexity (Farrell & Twining-Ward, 2004; McDonald, 2009), which makes it difficult or even impossible to predict the exact outcomes of system dynamics in the future (Cilliers, 1998). Complexity suggests that one should be modest about aiming to fully control the development paths of places (Urry, 2003). As such, complexity inspires the pursuit of adaptive, incremental approaches to tourism area development to deal with changing circumstances and uncertainties, next to the more traditional large-scale blue-print plans and end-state projects.

When changing system components results in maintaining or improving the system's performance, it is called adaptation (Axelrod & Cohen, 2000). Entrepreneurs, firms and institutions that engage in tourism (area) development eventually all seek adaptation, aiming for competitive advantages and improved performances by adjusting or developing

new tourism products and experiences. In complexity sciences, the process of self-organisation is considered a key aspect of adaptation. Self-organisation concerns the ability of agents to change systems spontaneously without one single agent controlling the entire process (Heylighen, 2008). Self-organisation in the context of tourism areas can be related to the entrepreneurial behaviour of individuals, firms and institutions and their pursuit of the development of new, innovative products and experiences as a means to maintain or improve the performance of businesses as well as the tourism area of which these are a part. Adaptation in the context of tourism areas is, therefore, likely to include (multiple) public and private actors and to involve governance issues relating to room in policy frameworks, decision-making and power, or to top down versus bottom-up approaches.

2.2. A CAS perspective on tourism area development

Next to conceptualising tourism areas as complex and potentially adaptive systems, we can use theories of CAS to show how tourism area development can be understood as a multilevel, co-evolutionary and path-dependent process. These insights are useful to further elaborate on the adaptive capacity of tourism areas, as is explained below.

Multilevel implies that CASs are affected on the one hand by small-scale, micro-level developments and local characteristics and on the other hand by macro-scale trends and events (Byrne, 2000). Often local development is shaped by macro-scale changes e.g. in welfare, technology, policies or societal demand. But whereas, for instance, global awareness about sustainability is affecting tourism development plans and projects, how sustainability is incorporated still very much depends on the local context. Nevertheless, the structures and functions of places may fundamentally change when innovative micro-scale projects are amplified and grow out to larger transformative processes and affect wider (geographic) scales and higher (governance) levels (Hartman & De Roo, 2013; Kemp & Loorbach, 2006; Rauws & De Roo, 2011). This has occurred in many coastal areas. For instance, in the Mediterranean, where once small-scale and regionally oriented agricultural or fishing communities have gradually been transformed into large-scale international tourist destinations. The perspective that tourism area development is a multilevel process closely relates to the concept of co-evolution that describes the interactions between different systems.

Co-evolution means that adaptation in one system triggers adaptive responses in another and vice versa, and it occurs because systems constantly interact (Gerrits, 2012; Portugali et al., 2012). Tourism areas are nowadays connected in a global economic system, which drives processes of co-evolution between areas in order to retain competitiveness. Moreover, tourism area development is shaped by impacts that come from economic, ecological, socio-cultural, political-institutional and socio-technical systems (Farrell & Twining-Ward, 2004). For example, we are witnessing how tourism development is affected by the impacts of climate change and crises in financial systems. In contrast, tourism development may also affect these systems. It may perturb ecosystems or trigger supportive changes in systems of spatial planning when entrepreneurs introduce new products that require room in policy frameworks. In line, evolutionary economic geography uses co-evolution to refer to the interplay between firms, industries and institutions (Boschma & Martin, 2010). On the one hand, co-evolution implies that tourism areas are subjected to processes of evolutionary change, which impact on development paths in a rather autonomous manner. On the other hand, co-evolution implies the adaptation of, among other systems, systems of planning and governance. However, it can be

difficult to adapt systems due to path dependencies (see below). Hence, there is a need for active change management in relation to processes of evolutionary change.

Path dependency means that events and choices in the past shape future development paths (Bertolini, 2010). This is also the case for tourism areas as their evolution is shaped by factors such as pre-existing cultural, natural or human resources, adventurers' experience, locational advantage or the economic base (Ma & Hassink, 2013). Also, planning systems or institutional frameworks can influence development paths, being capable of favouring some plans and projects over others (Hartman & De Roo, 2013). These characteristics make systems path dependent. The past can be supportive, such as when it provides areas with cultural or built heritage or landscape qualities, but it can also inhibit tourism development. As a result of path dependency, some areas and systems adapt faster than others as well as evolve in different ways (Folke et al., 2010; Gunderson & Holling, 2002).

2.3. Are all tourism areas complex adaptive systems?

In the literature on tourism area development, there seems to be a growing consensus that tourism areas are more or less cohesive entities, being increasingly conceptualised as systems and networks. The adaptive capacity of tourism areas, however, can vary greatly. Some areas rejuvenate, while others reach a phase of stagnation or decline (cf. Butler, 1980). This relates to path dependencies, which can be a limiting factor but also an enabler. Moreover, in some areas firms and institutions are more able and willing to open up and respond to dynamics driven by the co-evolution and multilevel interaction between systems. Within this context, it is not the intention of this article to use the CAS perspective to argue that all tourism areas are CASs or must be seen as such. Instead, it is used to argue that adopting a complexity perspective may contribute to tourism areas becoming more adaptive areas, and hence contribute to a sustainable approach to tourism area development. In the context of sustainable tourism, the CAS perspective could for instance help to avoid decline and the loss of resources invested in tourism infrastructures as well as stimulate the pursuit of innovations by (young) entrepreneurs in promising niches such as eco-tourism, sustainable tourism and community-based tourism – as is discussed below in more detail. In the remainder of this article, the perspective is, therefore, used as follows: to conceptualise tourism areas as complex systems that have the potential to be adaptive. The next sections further examine conditions to encourage the adaptive capacity of tourism areas.

3. The importance of diversity for adaptation

The CAS perspective highlights several important aspects of tourism area development. First, tourism areas are caught up in a persistent state of becoming due to their interactions with other areas and systems (De Roo, 2010). Second, the complexity of interactions within and between systems makes development paths towards the future at least partly uncertain (Albrechts, 2006; De Roo & Silva, 2010; Healey, 2007). Third, structures and functions can be fundamentally transformed over time (Hartman & De Roo, 2013). In this context, the CAS perspective draws attention to the importance of adaptive capacity. Adaptive capacity is for a large part dependent on a diverse range of tourism firms, products and experiences. In essence, such diversity means more options to select from, and more chances of finding, development paths that result in maintaining or enhancing the performance of a tourism area. Duit, Galaza, Eckerberg, and Ebbesson (2010, p. 365)

argue that the perspective that “diversity is the most effective way to cope with complexity” is becoming a wide-spread notion in contemporary literature¹. Diversification and differentiation is also discussed in contributions to tourism area development, for instance for Cyprus, Valencia, Spain and highly specialised Mediterranean “Costas” (Buhalis, 2000; Sharpley, 2002).

Neglecting diversity may cause areas to become fixated on a particular development path and to lose dynamism (Carpenter & Brock, 2008; Hartman & De Roo, 2013; Hassink, 2010). Martin and Sunley (2006) see that some areas lose dynamism over time but that others are able to avoid this danger by reinventing themselves through the successive creation of new development paths (Garud & Karnøe, 2001; Martin & Sunley, 2010). In the absence of reinvention, however, the danger of a negative lock-in situation increases (Grabher 1993; Martin, 2010). Lock-ins emerges over time after a period of positive feedback: driven by increasing returns, the physical, organisational and institutional structures interlock to support a particular development path (Hartman & De Roo, 2013). Lock-ins become negative when new niche-innovations are not recognised, being only weak signals, and suppressed in favour of vested interests or activities that have proven themselves in the past (Bertolini, 2010; Geels, 2005). Areas become “victims of their earlier success” (Boschma & Lambooy, 1999, p. 416) when traditional spatial patterns, policies, strategies and institutional settings are rigidly retained, that once supported economic growth but do so no longer under changing contextual circumstances (Grabher, 1993; Hassink, 2010). This could result in highly specialised destinations that are fixated in a particular development path. This makes such regions less resilient to global as well as local perturbations (Simmie & Martin, 2010). For instance, Buhalis (2000) argues that this situation applies to the Mediterranean “Costas”.

Nevertheless, an overemphasis on diversity may also constrain tourism area development. Some types of tourism have a large impact on ecosystems and landscapes, can gentrify communities and may hamper, for instance, ecotourism or community-based tourism. Diversity may also be coupled with inefficiencies (Folke, Hahn, Olsson, & Norberg, 2005), including policy inconsistencies in marketing and branding campaigns, and high transaction costs for involving and coordinating large numbers of actors. Duit et al. (2010, p. 366) add that “it might be that a governance system consisting of large numbers of diverse semi-independent networks and organizations (...) will have, among them, a larger set of viable action alternatives. But it might also be the case that such a governance system, through its lack of coordination, fragmented communication, and limited stock of accumulated resources has a more constricted repertoire of action”. Hence, diversity can potentially limit the performance of a tourism area.

Elaborating on the importance of diversity, De Roo (2012) proposes a model that is also helpful for tourism area development (see Figure 1). The model clarifies that adaptive capacity involves diversity on the one hand and coherence on the other. These factors are further elaborated as follows. Diversity is important for competition and compatibility. Competition between businesses is relevant for tourism areas to encourage innovation, stimulate renewal and to become noticed by visitors. Compatibility implies that different tourism firms can co-exist because they offer different products, services or target different visitor groups. Moreover, due to diversity areas do not completely collapse in a case where some activities or businesses disappear. This makes areas more resilient, giving it time to restore its diversity. Coherence is important for complementarity and cohesion. Complementarity assumes that cooperation on the basis of mutual benefits may foster synergies, for instance by jointly offering arrangements of different types. Cohesion is important to avoid fragmentation and inefficiencies. This can be relevant to,

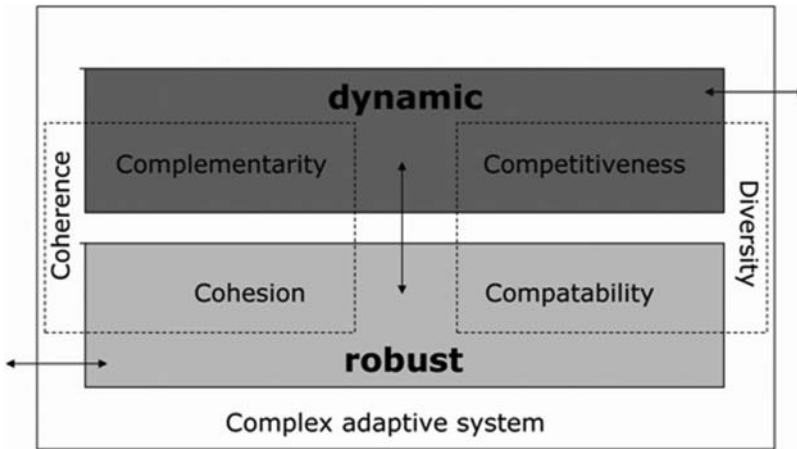


Figure 1. Aspects for adaptive capacity (source: De Roo, 2012, p. 168).

among other things, the marketing and branding of tourism areas instead of the marketing of individual businesses. Benur and Bramwell (2015) discuss a similar logic. On the one hand, they identify parallel diversification where there is no synergy, cooperation or complementary such as in the case of “geographically separate high quality resort enclaves” for well-off international tourists “located at a geographical distance from tourist areas for domestic tourists and less well-off international tourists” (Benur & Bramwell, 2015, p. 218). On the other hand, they identify integrative diversification where there are synergies and complementary linkages between (dis)similar firms, product and experiences, such as in the cases of connections between heritage tourism and coastal resort tourism, between mass tourism and ecotourism, and between tourism and local produce (e.g. wine) by means of routes (Benur & Bramwell, 2015).

De Roo (2012) concludes that finding a *degree of diversity* makes areas both robust and dynamic at the same time. A degree of diversity contributes robustness (Heylighen, 2008), because areas do not collapse when some products, businesses or organisations go bankrupt or are replaced. This enables tourism areas to endure perturbations stemming from economic crises, changes in demand, the enhanced competitiveness of other destinations, etc. A degree of diversity also fosters dynamics as it involves new niche-innovations and it allows for shifting between different development paths (Loorbach, 2007). However, as is discussed above, for tourism area development both neglect of the importance of diversity as well as an overemphasis on diversity may be counterproductive for adaptive capacity. Hence, a major challenge is *governing diversity*.

Finding a degree of diversity implies not merely facilitating tourism development but also supporting some plans and projects over others. To March (1991, p. 71), this goes to the heart of a fundamental tension between efforts seeking “variation, risk taking, experimentation, play, flexibility, discovery, innovation” and the opposite efforts of seeking choice, refinement and selection. March continues by stating that between these, there are efforts directed at “maintaining an appropriate balance...[which is] a primacy factor in system survival and prosperity” (March, 1991, p. 71). This means it is important to encourage diversity whilst at the same time have selection mechanisms in place to avoid the negative effects of an overemphasis on diversity.

4. Encouraging a degree of diversity: conditions for adaptive capacity

Whereas the previous section highlights that a degree of diversity is important for adaptive capacity, this section examines how such a degree of diversity can be achieved. Two major approaches that specifically put forward strategies to manage CASs are TM and AM. This section examines TM and AM, with a specific focus on identifying conditions that are important to encourage diversity for the purpose of stimulating the adaptive capacity of tourism areas.

4.1. Transition management (TM) on stimulating diversity

TM takes the position that development paths of complex systems cannot be completely enforced or commanded by one single agent (Rotmans, Kemp, & Van Asselt, 2001). It, therefore, emphasises the importance of collective efforts to progress. The focus of TM is hence on “enabling the processes that occur at different levels in a more systemic and evolutionary way, which leaves room for variation and selection mechanisms and innovation” (Kemp & Loorbach, 2006, p. 109). Central to this approach are niche-innovations. In the context of tourism area development, niche-innovations can be understood as new tourism products and experiences or leisure activities that captivate the interest of consumers. Niche-innovations are important for adaptation and bridging gaps between demand and supply, and they are generally geared towards improving systems’ performance (cf. Reed, 1999). As a strategy to foster niche-innovations, TM indicates that the following phases must be systematically revisited (Kemp & Loorbach, 2006; Loorbach, 2007; Rotmans & Loorbach, 2009):

- Promote the development of visions of the potential futures of tourism areas, such as visions about how to achieve a more sustainable tourism industry (Gössling et al., 2012). First, visions can act as attractors and trigger niche-innovations. Front-runners of industries or sectors are typically amongst the involved actors for their innovative ideas and potential impact on other entrepreneurs and decision-makers. Governments can support visioning by bringing actors together in regional innovation platforms or think tanks (Dewulf et al., 2009). Second, visions can inspire strategic plans and policies of governments. These are often introduced as selection mechanisms to support some plans and projects over others.
- Seek coalitions of actors to further operationalise visions and conceptualise niche-innovations in detail. This phase concerns the assessment of ideas and selection of a (potentially) viable set of niche-innovations. This approach could contribute to a diverse tourism area. For instance, as is discussed by Benur and Bramwell (2015), diversifying beach tourism to include outdoor and indoor water sports and spas or by connecting beach resorts with new tourism niches such as wildlife safaris and cultural tourism. The potential negative effects of lock-in situations should inspire actors to be open to initiatives that do not necessarily correspond to development paths of the past.
- Mobilise governance arrangements to initiate real-life projects and (temporary) experiments (Schot & Geels, 2008). The underlying idea is to test ideas and explore whether ideas have a real chance to become permanent or break through more widely. It requires entrepreneurs and firms to take investment risks and governments to provide room in policy frameworks.
- Develop feedback mechanism to monitor, evaluate and learn about the performance of niche-innovations. Institutions are needed to monitor and evaluate, such as for the (non-)appearance and disappearance of niches in relation to systems of economy and

governance. Networks are needed that connect firms and institutions to keep information flowing. In relation to stimulating niche-innovations, these mechanisms can reveal the need to adjust actor coalitions, and to update visions and agendas as a means to realise projects more effectively or to identify new niches.

TM shows that adaptation requires governance arrangements that consist of interacting and collaborating public and private actors and that are geared towards identifying and initiating niche-innovations (Rotmans et al., 2001; Schot & Geels, 2008). Governance arrangements are likely to differ from place to place and may lead to differences in effective actor coalitions and the improvement of destination performance (Baggio et al., 2010). Moreover, Voss and Bornemann (2011) rightly point out that uneven distributions of power and “nasty politics” (power struggles, tactical games) may strongly affect whether niche-innovations emerge. Elsewhere, it is also noted that niche-innovations break through more widely when e.g. sociocultural, economic, institutional systems interlock, but that they are inhibited when these frustrate each other (Martens & Rotmans, 2005; Ruhanen, 2013). In this context, revisiting the phases of TM serves multiple purposes, including the involvement of new actors, avoiding exclusion, or updating visions to incorporate new insights or deal with changed circumstances.

4.2. Adaptive management (AM) on stimulating diversity

AM also focuses on adaptation as a key property of systems to deal with changing circumstances that negatively perturb their performance (Gupta et al., 2010; Van der Brugge & Van Raak, 2007). To address adaptation, AM builds on the evolutionary process that includes diversity, competition and selection (Walker, Holling, Carpenter, & Kinzig, 2004). On the one hand, when there is diversity in a system, its overall performance remains generally the same when a few elements disappear. When there is a diverse range of tourism products, a tourism area is more likely to retain visitor flows and will not completely collapse when consumers lose interest in some tourism products or when some firms disappear. On the other hand, increasing diversity means more options to select from and more chances of enhancing system performance. A lack of diversity and dynamics may “trap” a system and reduce its adaptive capacity (Carpenter & Brock, 2008). Similar to TM, AM, therefore, emphasises the importance of (policy) experimentation and creating opportunities for self-organisation to foster niche-innovations and stimulate learning (Duit, 2012).

AM emphasises that increasing diversity to enable adaptation requires a high degree of interconnectivity within a system (Dietz, Ostrom, & Stern, 2003). Olsson et al. (2006, p. 19) stress the need for “polycentric institutional arrangements that are nested, quasi-autonomous decision-making units operating at multiple scales”. Within these arrangements, vertical linkages connect actors on different spatial scales or governance levels and support a balance between centralised and decentralised control. Horizontal linkages support experimentation and diversity by connecting public and private actors and institutions from different sectors and policy domains across a spatial scale or governance level (Folke et al., 2005). Intermediaries or bridging organisations fulfil the important role of establishing and maintaining these linkages (Dewulf et al., 2009). These networks and arrangements can be both formal and informal, and are important to build trust among actors, ease communication and coordination, foster exchange of views and stimulate effective collaboration.

4.3. Learning and reflexivity

Insights from AM and TM show that stimulating a degree of diversity may benefit from individual actors, organisations and public institutions engaging in, or fostering, self-organisation, niche-innovations and (policy) experimentation. These efforts serve the purpose of identifying opportunities as well as exploring boundaries for development (Argyris & Schön, 1978; Folke et al., 2005; Pahl-Wostl, 2009). In essence, this is a step-by-step process of collective learning. In a dynamic tourism industry, learning is important to identify the impacts of changes in visitor demand, new technologies, emerging destinations, niche-innovations, etc. On the basis of conceptualising tourism area development as a multilevel process, learning can be approached systematically. Different strategies can be applied to monitor and interpret trends and developments at different levels. At a macro-level, scanning the contextual environment is relevant for understanding macro-scale processes and the ways these affect the tourism industry in general and area development in particular (Geels, 2010). It can yield information about the impacts of climate change, technological innovations, economic crises or political instability on tourism area development. Analysing lifestyle changes and demographic dynamics may draw attention to emerging types of tourism and leisure activities and inspire new business concepts. At a meso level, comparative research can be used to identify emerging issues in other regions as well as solutions that have already been invented and applied elsewhere (Rauws & De Roo, 2011). At a micro-level, niche-innovations can act as “early warning signals”. These can help to identify early signs of adaptation and uncover promising (new) development paths (Ansoff, 1975).

Learning is a major contributor to reflexivity, which concerns the ability to “reflect on and confront not only the self-induced problems (...) but also the approaches, structures and systems that reproduce them” (Hendriks & Grin, 2007, p. 335). Reflexivity can make actors aware of path dependencies and routines within their practices which may cause negative lock-institutions. It may help actors to oversee that tourism areas do not become too specialised and uniform or too diverse and fragmented. Lissandrello and Grin (2011) emphasise that reflexivity should also address actor networks and governance systems. These should not become static entities, but should be open to new actors, perspectives, strategies or policies. Reorganising actor networks and redefining governance systems is a form of co-evolution, and it is needed to adapt to a dynamic environment (Duit et al., 2010, p. 367; Gunderson et al., 2006).

Collecting, interpreting and disseminating information for the purpose of learning and reflexivity is a major challenge. The tourism industry consists of many small and medium-size enterprises that often lack the time and resources to do so. Governance arrangements are, therefore, necessary that link and foster interaction between a range of individuals, firms, organisations and institutions on and between multiple governance levels and policy domains (Pahl-Wostl, 2009). Establishing arrangements and keeping information flowing requires that some actors take the initiative to establish connections and build trust, and therefore it involves leadership (Gunderson et al., 2006). Overall, it takes a rather comprehensive set of conditions to encourage adaptive capacity. Pursuing adaptive tourism areas, therefore, comes with potentials and constraints from the point of view of strategic (spatial) planning and governance.

5. Pursuing adaptive tourism areas and governance issues

The CAS perspective highlights that tourism areas can be seen as complex systems that have the potential to be adaptive. The advantages of pursuing adaptive tourism areas are multiple. It ensures that tourism area development involves a gradual, fluid development path instead of a dramatic process of collapse and recovery (Hassink, 2010). A degree of

diversity enhances the ability to deal with, and recover from, perturbations that negatively affect the performance of an area as a competitive tourism destination. The underlying idea is to proactively avoid lock-in situations instead of reactively having to respond when the damage has already been done. Moreover, an emphasis on renewal, innovation and self-organisation fosters the capacity to adapt to multilevel dynamics and benefit from emerging development opportunities. However, on the basis of the previous sections, various inhibiting governance issues can be identified.

First, pursuing adaptive tourism areas involves a shift in planning thought and practice. Planning authorities and destination management organisations need to adopt the perspective that development paths cannot be governed by means of command-and-control approaches. These need to acknowledge the importance of adaptive capacity and deal with the accompanying implications for planning and governance. Couclelis (2006, p. 1361) warns not to “underestimate the inertia of institutions, infrastructures, and social practices”. A shift could involve an institutional transition processes that may take decades because it is difficult to change organisational and institutional routines and cultures. Second, supporting interconnectivity and interaction among actors involves an extensive governance system. For instance, Dietz et al. (2003, p. 1910) state that “arrangements must be complex, redundant, and nested in many layers”. This could be costly to establish and difficult to coordinate. Third, Low, Ostrom, Simon, and Wilson (2002) argues that whether diversity arises or disappears depends on its benefits and costs to different actors. Actors are requested to acknowledge the benefits and mobilise resources, as stimulating diversity may require coordinated action or strategic planning (e.g. visioning, identifying niche-innovations, creating room in policy frameworks, using intermediaries and bridging organisations to link actors and create governance arrangements). Moreover, uneven distributions of power and “nasty politics” (power struggles, tactical games) can inhibit the emergence of niche-innovations and learning processes (Ruhanen, 2013; Voss & Bornemann, 2011). Fourth, policy experiments and niche-innovations that aim to enhance diversity may fail, produce negative effects, and generate resistance. This means that “safe-to-fail” approaches are needed to make actors more open and tolerant to failure (Ahern, 2011; Gunderson et al., 2006).

6. Conclusion and discussion

Adaptive capacity is increasingly important for tourism areas as these areas are embedded in a globally competitive economy and affected by the complex, multilevel dynamics of the contemporary network society. Tourism areas are, therefore, conceptualised in this article as complex systems that constantly interact with their contextual environment, being shaped by other regions as well as by events at different spatial scales and governance tiers. In this context, tourism areas are challenged to become adaptive tourism areas. Adaptive implies that tourism areas must be dynamic entities, always in a state of becoming, engaging in a persistent process of renewal and reorganisation to maintain or improve their performance. Encouraging adaptive capacity is closely linked to sustainable tourism development as it can result for instance in more room (in policies) for innovative forms of more sustainable forms of tourism, avoid decline, promote the (re)use of prior investments in tourism and offer career opportunities. In pursuit of adaptive tourism areas, the CAS perspective highlights that the following aspects are conditional:

- First, enhancing diversity. Consumers constantly change their demands and desires. Some tourism products become obsolete and potentially some businesses go bankrupt as a result. When there is a diverse range of tourism firms, products and experiences, there are more options to select from and more chances of finding

development paths that result in maintaining or enhancing the performance of a tourism area. Conditions for enhancing diversity include interconnectivity to ease communication and coordination, visioning to identify and select potential niche innovations, room in policies to foster experimentation, resources to initiate projects.

- Second, pursuing a degree of diversity. A low degree of diversity may result in monotonous places that lack resilience and are, therefore, relatively vulnerable in case of changing visitor demands. An overemphasis on diversity may, for instance, result in uncoordinated development, give rise to fragmentation, limit synergies or reduce visibility from an international tourist perspective.
- Third, governing a degree of diversity. Governing diversity means that within tourism areas, there is a degree of competition, cohesion, complementarity and compatibility between businesses and their products (Figure 1). A balance is relevant for making regions robust and flexible at the same time. Learning and reflexivity are conditions to observe and respond when tourism areas become too specialised and uniform or too diverse and fragmented.

The issues that relate to the pursuit of adaptive tourism areas highlight that perceiving and acting upon tourism areas as CASs is very much a governance and (political) decision-making issue. Alternatively stated, this means that we must be aware that multiple development paths are possible. Benur and Bramwell (2015), for instance, draw attention to five options for tourism area development that differ in terms of diversification (low/high) and intensification (low/high), ranging from concentrated mass tourism and concentrated niche tourism to diversified parallel/integrative mass and niche tourism. Moreover, we must also be aware that often there is a gap between what *should* be done and what *can* be done in a particular area when pursuing adaptive tourism areas. The availability of (human) resources is critical, as is the capacity of actors within a region to stimulate and (reflexively) organise diversity. This could broaden the discussion on adaptive capacity that mainly revolves around what should be done. It could open a discussion on adaptive *capability*: what can be done on the basis of place specific characteristics and the particular situation wherein it is embedded, and what to prioritise in order to gradually enhance its adaptive capacity over time.

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Note

1. Jacobs (1961) is well known for emphasising the importance of diversity. Other notions are also used to draw attention to diversity, such as requisite variety (Ashby, 1958; Jessop, 2003), redundancy (Low et al., 2002), variation (Axelrod & Cohen, 2000), institutional thickness (Amin & Thrift, 1994), polycentrism (Folke et al., 2005), smart specialisation (McCann & Ortega-Argilés, 2011), specialised diversification (Pike, Dawley, & Tomaney, 2010), pluripotency (Hartman et al., 2011), related and unrelated variety (Frenken, Van Oort, & Verburg, 2007).

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