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Biosphere Reserves:
An "Enabling Space" for Communities

ABSTRACT

This article considers the challenge of socio-economic development within biosphere reserves (BRs). How to achieve compatibility between human activities in BRs has not been considered in detail. Part of the issue is methodological; BRs have common aims, but greatly differ in terms of their contextual elements. We identify a number of "spaces" that differentiate BRs and organisational solutions that can be consistent with social and natural "justice". Social capital, the supporting values and links that determine the ability of community members to cooperate is seen as critical across the spatial dimension of our framework. The paper also explores a practice-based approach to assess emerging development themes and policy intervention applied in Cat Ba Island, Vietnam.

KEY-WORDS

BIOSPHERE RESERVES; SOCIAL CAPITAL; SOCIAL ENTERPRISE; COMMUNITY DEVELOPMENT; OSTROM

1. Introduction

This article considers the challenge of socio-economic development within biosphere reserves (BRs). BRs have been designated by UNESCO since the 1970s and are located across the globe. The challenge of sustainability meets therefore a variety of cultures, histories, natural settings and forms of economic organisations. Albeit the need for compatibility between human activities and BRs has been invoked at several policy levels, solutions on how to achieve this outcome have not been considered in the same detail. Part of the issue is methodological, since BRs may have common aims, but greatly differ in terms of their contextual elements. As an answer, in this paper we identify a number of "spaces" or dimensions (without a pretence to be exhaustive) that differentiate BRs and the variety of organisational solutions that can be consistent with social and natural "justice". By natural justice, we mean solutions that do not hamper the delicate equilibrium of the BRs. Likewise, by social justice we refer to economic organising that reciprocate communities by reinvesting the surplus produced from using BRs and community resources.

Community development studies have emphasised the importance of involving communities not only in identifying priorities and development challenges, but also in managing organisational solutions (Ostrom, 1990). A pre-condition to community empowerment, in this sense, is social capital, or the supporting values and links that determine the ability of community members to cooperate. Promotion of social capital seems therefore a first step towards the creation of place-awareness (e.g. being aware of living within a BR and a specific community), leading to the endogenous determination of development strategies. To assess how this is done, the paper also explores the practice-based approach applied on Cat Ba Island, Vietnam. The analysis derives from a project undertaken by Assist Social Capital (ASC), a social enterprise based in Scotland.

To address the abovementioned issues, the paper first explains the nature of BRs as defined by UNESCO (Section 2). It then focuses on how specific types of social enterprises (community-based) are compatible with social and natural justice (Section 3). In Section 4, the challenges of managing local natural resources are emphasised using Ostrom's analysis of commons. Here we underline the role of recognising the diversity of contexts across BRs, and therefore of relying on multiple solutions. Light is shed on the importance of matching bottom-up answers, such as those based on community self-management, with broader policy frameworks. Section 5, then, presents the overall framework of analysis, and identifies the multifaceted "spatial" dimensions (physical, relational, policy, organisational), which may enable BRs communities to take ownership of their own needs, aims and solutions. Finally, in Section 6, the paper addresses a specific BR, Cat Ba in Vietnam. This case reflects the actions that Assist Social Capital (ASC) has taken to assess in particular the relational element of the spatiality framework, and the policy interventions implemented in the area.

At this introductory stage, it is worth explaining ASC's role in introducing a community-centred approach within the BRs debate. ASC is a community interest company (CIC) that works to bridge the gap between academic evidence of social capital and its practical application.

ASC's involvement in BRs began in 2011 when it was invited to introduce social enterprise and social capital as part of UNESCO's Man and the Biosphere (MAB) Programme in Sweden. ASC's input was based on the Scottish model of social enterprise, which the Scottish-based community interest company had previously worked on for a number of years. Two years later in 2013, ASC launched the *Social Enterprise & Biosphere Reserve Development Framework* (hereafter the SEBR Framework) at EuroMAB[1] 2013 in Canada and then the 7th South East Asia BR Network in the Philippines. The aim of the SEBR Framework is to "support BRs and their communities to become economically resilient while at the same time enhancing the natural environment in a manner that is appropriate to local strengths, resources and cultural characteristics" (ASC, 2013: 14).

At the meeting held in the Philippines in 2013, ASC learned about the highly participatory approach to engage stakeholders being implemented in the Cat Ba BR in its efforts to promote the values of BRs, using a method referred to as the SLIQ model (Systems thinking, Land/Seascape planning, Intersectoral coordination, Quality Economy). This approach was identified as a national example of good practice in combining conservation and development at the United Nations Conference on Sustainable Development (UNCSD) "Rio+20", held in June 2012 and as such, offered a specific situational context, to carry out a case study on how participatory solutions support the building of deliberative skills and social capital.
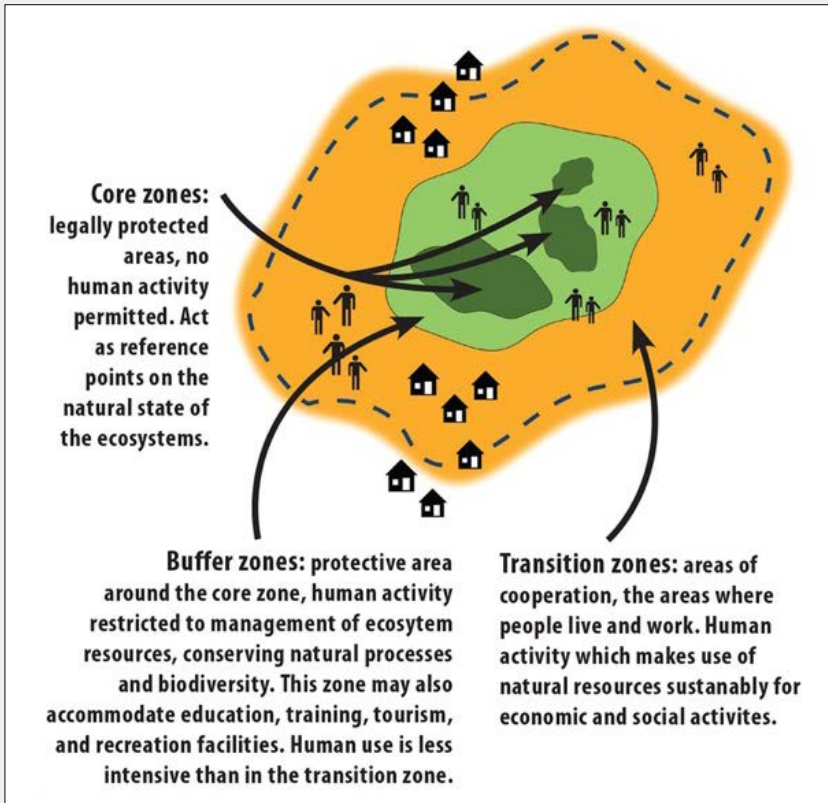
2. UNESCO designated biosphere reserves

At present, there is an increasing need to reconcile the natural environment with the economic and social development. Within this context and with a particular focus on preservation and conservation, UNESCO launched the Man and the Biosphere (MAB) Programme in 1971 (Ishwaran, Persic and Tri, 2008; Coetzer, Witkowski and Erasmus, 2014). The biosphere reserve (BR) concept emerged out of this framework for context-specific conservation in 1974 (Ishwaran, Persic and Tri, 2008), and two years later the World Network of Biosphere Reserves (WNBR) was born (Ishwaran, 2009).

The three main functions of a BR are (UNESCO, 1996; Ishwaran, Persic and Tri*, 2008; Coetzer Witkowski and Erasmus*, 2014):
- *Conservation*: preservation of ecosystems, landscape, species and genetic resources;
- Lo*gistic support*: support projects, research and monitoring, environmental education; and
- *Development*: foster sustainable economic and human development.

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1 EuroMAB is the largest and oldest of the MAB Regional Networks: 302 biosphere reserves in 36 countries. Meetings of the MAB National Committees and biosphere reserve coordinators of EuroMAB have taken place almost every two years since 1986. The Southeast Asian Biosphere Reserve Network (SeaBRnet) was created in 1998 and comprises Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, Philippines, Thailand and Vietnam.

Figure 1. Biosphere reserves – Three zones

Core zones: legally protected areas, no human activity permitted. Act as reference points on the natural state of the ecosystems.

Buffer zones: protective area around the core zone, human activity restricted to management of ecosytem resources, conserving natural processes and biodiversity. This zone may also accommodate education, training, tourism, and recreation facilities. Human use is less intensive than in the transition zone.

Transition zones: areas of cooperation, the areas where people live and work. Human activity which makes use of natural resources sustanably for economic and social activites.

Source: ASC (2013)

To translate the three roles into practice, the MAB Programme structured the zoning of the BRs into three: the core, buffer and transition zone (UNESCO, 1996; Ishwaran, 2009) (see Figure 1).

The MAB Programme aims for BRs to become "training grounds" to develop sustainable development principles translated into local contexts (Ishwaran, 2009: 3). This site-specific application of an international principle is reflected in the recent emphasis on BRs as Learning Laboratories for Sustainable Development (LLabs)[2] to address gaps in implementation (Ishwaran, Persic and Tri, 2008).

Understandably, there have been continuous challenges in the current 669 BRs, established in 120 countries worldwide (UNESCO, 2014) for implementing the UNESCO BR framework of the MAB Programme in the diverse local settings. Despite challenges, the adapted approach for BRs as LLabs provides an opportunity to learn from their own experiences, as well as each other's practices that, in turn, can enable and inform the BR management and other stakeholders

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2   LLabs addresse tourism development, ecological degradation and poverty in a systemic, participatory and collaborative cross-sectoral framework (Cfr. Nguyen, Bosch and Maani, 2010).

to develop improved and more balanced strategies and policies (Ishwaran, Persic and Tri, 2008).

After some 40 years in existence, the MAB Programme continues to be highly relevant to the current global challenges. On 25 September 2015, at the 70th anniversary of the UN in New York, Member States agreed on a new global Agenda for Sustainable Development. The meeting established 17 Sustainable Development Goals (SDGs) and 169 targets for 2030. In March 2016, the 4th World Congress of BRs held in Lima, Peru, set out a new vision for the MAB Programme for the decade 2016-2025, which mainstreams UNESCO BRs as "models for national/regional demonstration of sustainable development" within national and global agendas for the 2030 SDGs.

3. Social enterprise and biosphere reserves: A developmental approach

The first question to be addressed in response to the effort to deliver on BRs as "models of sustainable development" is what type of organisation shows features consistent with the development of BRs. Here we consider, amongst alternatives, social enterprise (SE).

SE is a fairly recent term and many types exist internationally and continue to evolve. However, the core principle that SEs should work for the common good, runs throughout and bridges variants on its definition. Broadly, SEs are businesses which have an explicit social and/or environmental aim and include in their statutory requirements a commitment to reinvest surplus to achieve this (Borzaga and Tortia, 2010 amongst others). In particular, because they tend to address unresolved community needs, SEs often originate from community publics and are collectively managed by them. More specifically, SEs are characterised by a variety of distinguishing factors, such as the ability to provide innovative services, use specific governance models and foster social capital (Sacchetti, 2016).

SEs are present in almost all economic sectors including manufacturing, tourism, recreational and professional services, agriculture, educational, health and social services. SEs are distinct from of non-profit organisations (NPOs) in that they strive to be independent of grants and donations. They aim to be economically self-sustainable whilst delivering and reinvesting their surpluses into the business to bring about social and environmental benefits for the wider community; and, at the same time, also providing space for the development of cooperative relations and increasing community ownership. Reinvestment in the community is a clear feature of SEs, albeit the debate— on whether SEs should be able to distribute at least part of the surplus—is still open (Galera and Borzaga, 2009). Italy i.e., has recently approved a law to allow more flexibility towards distribution of produced surplus, mostly to reward and attract financial resources. The aim, as a recent European Commission/OECD report emphasises, is not to use financial resources to increase scale and profits for investors, but—given the nature of SEs—to scale up their social impacts. This does not necessarily overlap with growing their size, and can occur via other strategies such as building collaborative partnerships and knowledge sharing (European Commission/OECD, 2016).

In Scotland, one of the most advanced ecosystem in terms of SE definition and support systems, the SE sector has put forward a voluntary code of practice that defines values and specific behaviours indicative of SEs (SE Code Steering Committee, 2013). SEs under this definition are bound to a sustainable, not-for-private-profit business model achieved through a 100 per cent asset lock, strive to be financially independent of grants and have primary objectives to achieve social and/or environmental benefit.

In his paper *Gifts and Exchanges*, Nobel Prize winner Kenneth Arrows claims, "truthfulness contributes in a very significant way to the efficiency of the economic system" (Arrow, 1972: 150). Arrows' paper argues that the commercial for-profit-distribution system can place "immense social costs on those least able to bear them—the poor, the sick, and the inept" (ibid.: 344), while the altruism of the gift system, as in the case of donation of blood, builds trust. Thus, the objective of profit for personal gain can lead to a conflict of interest where negative externalities (e.g. high carbon footprint) are a means to increase profit. The SE model aims at resolving this conflict by locking assets (revenue and capital) into the planning and objectives of the organisation, resulting in income generation being focused instead on the delivery of values based outcomes. An asset lock is complementary to other devices aimed at protecting the weakest stakeholders. These may be present in some forms of SE, such as the involvement of multiple groups of stakeholders in the governance bodies of the organisation, including the most vulnerable categories (Borzaga and Sacchetti, 2015).

Overall, the SE model is growing internationally and, the SE has not only asserted its ability to make an effective contribution to solving new social problems, it has also strengthened its position as a necessary institution for stable and sustainable economic growth, fairer income and wealth distribution, matching services to needs, increasing the value of economic activity serving social needs, correcting labour market imbalances and, in short, deepening and strengthening economic democracy" (Monzón and Chaves, 2012: 18).

However, why is SE relevant for BRs? As previously mentioned, BRs are Learning Laboratories for Sustainable Development (LLabs) (Ishwaran, Persic and Tri, 2008). BRs present a complementary objective to that of SEs and are therefore ideal sites for its implementation as a model of sustainable business. A close and complementary view to the idea of sustainable use of resources and socially oriented enterprise is social capital. The idea is part of the concepts used by development economists, sociologists, managers, and urban planners. It was developed by a plurality of scholars such as Granovetter (1983), Portes (2000), Putnam (2000), Woolcock (2001), to name just some. Woolcock (2001: 13), in particular suggests, "social capital refers to the norms and networks that facilitate collective action". Such norms have been associated with cooperation, trust, and reciprocity of behaviours. In this sense, a social capital approach contributes to understanding how specific types of SE can be instrumental to enhancing the potential for collective action, or actions that are supported by different community constituencies because they benefit the environment and society overall.

4. Biosphere reserves as a "common good"

SEs are clearly organisational solutions that encompass ideas of shared economic action of inclusion, communication and cooperation amongst multiple communities constituencies, not least to mediate, as in the case of BRs, between socio-economic and natural preservation needs. Institutional economists and political scientists have long studied how norms of cooperation and trust amongst individuals, groups and organisations are a pre-condition for the management of natural commons and their resilience. The approach builds on the theory of commons developed in great part by Elinor Ostrom (1990).

Specifically, Ostrom argued in favour of self-defined rules by which the community of users and beneficiaries understands the common advantages of cooperating and sharing their knowledge to define and enforce common rules for the use of common natural resources. These are natural resources with clearly identifiable borders, which, if left to opportunistic and short-term actions, run the risk of being destroyed. The implication of natural resource abuse is that the livelihood of communities that rely on the common is also compromised. The requirement is, therefore, to find rules of accessing and using the resources that support sustainability of both natural resources and human livelihood. The question, for Ostrom, was what rules would be the most appropriate.

From her work, we learn that there is not one best way that fits all situational contexts and that top-down approaches do not always produce the best results. Specifically, top-down approaches would represent a workable solution when: (i) local communities do not have any prior experience of self-management and participation; (ii) conflict is high; (iii) individuals are rational opportunists and do not acknowledge reciprocal interdependence in their decision-making (Sacchetti, 2015). Likewise, market solutions will not work if short-term profit maximisation does not produce also shared long-term benefits (Ostrom, 1990; Sacconi and Degli Antoni, 2008; Sacchetti, 2015). For example, the activities of organisations that do not share principles of social and natural justice and do not have representation of those interests in their governing bodies may be argued to have no incentives towards BR sustainability.

Besides top-down solutions and private market solution, the theory of commons identifies a "third way" to solve collective challenges, which relies on collective community management. In our case, self-management in BRs can be argued to require: binding agreements and awareness of environmental issues, collectively defined rules, rules on how to access natural resources and compliance with the rules (mediated through reciprocity). The requirements of community management are argued to be underpinned by trust, cooperation and reciprocity of behaviours, and that overall collective action can be best activated through mobilisation of multiple actors, including the weakest categories, and social capital.

Since each BR offers a specific situational context, the unilateral definition of rules from a super-national authority on how to access and use natural resources may have limited effects. It is not a desirable process either, because it limits the knowledge and experience utilised to standardised

models, reducing the validity of the cognitive framework used to address local needs. This is due to—where communitarian traditions are strong—disconnecting rules from the locality, from public participation and understanding is likely to generate "community failure" (Sacchetti and Campbell, 2014). Community management and participatory solutions, moreover, support the building of deliberative skills and social capital, and are more promptly respected and enforced by communities.

Community management, however, can benefit from being positioned in a broader framework. In the case of BRs, the UNESCO MAB Programme had the benefit of allowing the recognition of BRs. In the first place, the designation of a site as a BR can raise awareness amongst the local people, citizens and government authorities on environmental and development issues. Designation becomes a tool to activate debate and therefore multiple lines of connection which can enable the development of appropriate rules. Because of the three-zone scale of a BR defined in the MAB Programme (Figure 1), rule definition and implementation requires governance at system level, so that multiple actors across the three different zones can coordinate and align their activities. The objective here is to align behaviours and economic activity with the values of local livelihood while protecting natural resources.

What the UNESCO MAB approach did, was to provide a framework and rationale, whilst avoiding the imposition of a standard legal framework on BRs: each BR has its own system of governance to ensure it meets its functions and objectives. The reason is that it is believed that the management system of a BR needs to be open, evolving and adaptive in order for the local communities to better respond to external political, economic and social pressures, which would affect the ecological and cultural values of the area. The global remit of the MAB Programme means flexibility of the governance model is critical to its success, given the vast range of local contexts. In Vietnam i.e., BRs are 100 per cent core funded by the local government, while in other countries no public funding available.

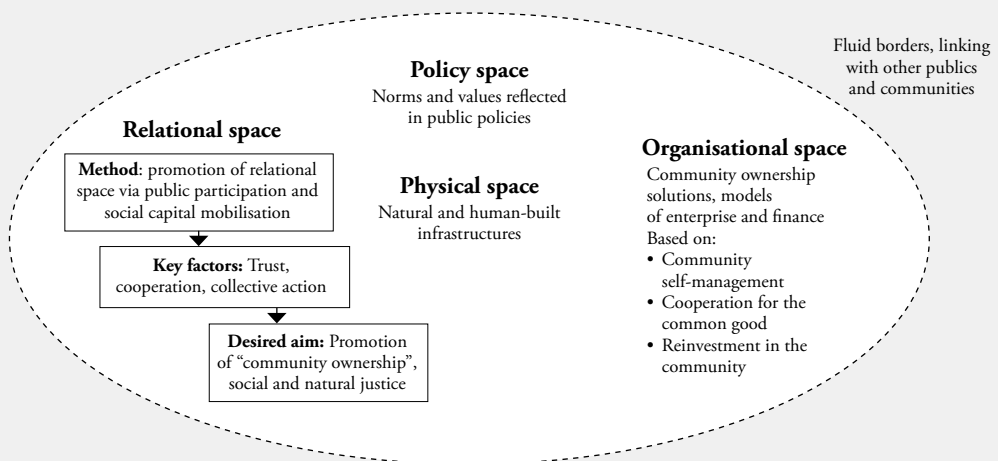## 5. The Enabling Space Framework

The challenge for BR management is to appreciate diversity of contexts and identify plural and flexible solutions (Ostrom, 1990). Social enterprises and community-based solutions more broadly have been argued to be possible avenues for addressing the needs of communities consistently with natural justice. The issue left to be addressed regards what elements should be taken into account for appreciating the contextual features of each BR and, on those features, design "appropriate" itineraries for community development. What can be considered as "appropriate"?

Sacchetti and Campbell (2014) suggest a model of "community ownership", which identifies the features enabling the promotion of participation and development within social organisations, as well as more broadly within and across communities. They compare this model with one of community failure, where development goals are defined by restricted groups and more broadly do not match the needs of publics and communities (Sacchetti and Sugden, 2010). Community

ownership identifies a model of development where socio-economic actions are based on pro-social values defined by cooperation, trust and networking, public-private collaborations, community reinvestment and finance, and the inclusive and creative spaces where publics can exert their voice and develop innovative activities. The expected outcomes are satisfaction of community needs and further reinforcement of founding values of cooperation, participation and responsibility. Differently, "community failure is a model biased towards self-oriented behaviours, consumerism, exclusive and constraining spaces where only specific interests are reflected, failing to meet community needs, and fostering inequality, mistrust and conflict" (Sacchetti and Campbell, 2014: 34-35).

Enabling communities in BRs, therefore, consistently points towards a community ownership model, leading to an appreciation of diversity of conditions and needs across communities. Acknowledging diversity requires expanding the analysis beyond the particularities of the territory, its morphology and natural elements. For Sacchetti and Campbell (2016) diversity of situational contexts is appreciated by integrating different but complementary levels of analysis, which are relevant to the creation of enabling spaces. Figure 2 summarises the approach. Note that the features of a multi-dimensional, enabling space are all interconnected, pointing to the fact that physical spatiality influences are in turn influenced by all the other dimensions. The same is true for each and every dimension depicted in Figure 2. Other developmental approaches use similar dimensions, i.e. the Community Capitals Framework developed by Flora, Flora and Fey (2004) and applied in Emery and Flora (2006). In their framework, they identify seven forms of capital interacting with each other (natural, cultural, human, social, political, financial, and built capital). With respect to existing approaches, our Enabling Space Framework take on community ownership differs because it sheds light on the need of cooperative and reciprocal solutions at all dimensional levels. In this regard, a community ownership approach is closer to Ostrom's analysis, which emphasises that cooperative solutions need to be consistent at multiple layers of governance.

Figure 2. Enabling Space Framework - Bridging together physical, relational, organisational and policy spaces.

Source: Sacchetti and Campbell (2016).

Each spatial dimension of the Enabling Space Framework is explained below.

Physical space. These are the elements of the situational context defined by the physical spatiality of a locality, and the socio-demographic and health features of the population. One of the first questions policy makers ask when approaching common resources is where to put boundaries on the map. In the case of BRs, the issue is to identify the three boundaries of the BR defined by the core, buffer and transition zones. Within the zones, physical space is made of natural resources and built spaces, including natural and cultural heritage sites and built infrastructures, all of which can provide services to communities and ensure long-term prosperity under sustainability use (Millennium Ecosystem Assessment, 2005).

Relational space. These are the elements of a situational context defined by the quality of relations amongst people, organisations, and groups located within the physical space, as well as beyond it. Relational spaces are defined by positive social capital, or by those relations that enable cooperation amongst multiple and diverse actors. Cooperative relations have been argued to be based on proximity of specific values, based on communication, mutual respect, and deliberation: what Sacchetti and Sugden (2009) call "mental proximity". Proximity of values, therefore, is not necessarily defined by co-existence within the same physical space, or spatial proximity (ibid.). Shared values and understanding based on inclusive principles contrast with spaces where relations are characterised by power unbalance. This would occur i.e., when the strategic direction of activities within the locality, or more specifically within the BR, are dominated by concentrated interests (Cowling et al., 2009). Mutual relations and shared values can be researched using social capital theory, for which inclusive, participatory and multi-stakeholder elements are central in enabling communities to become agents for sustainable development themselves (Roseland, 2000; Barnes-Mauthe et al., 2014). Based on literature, the four main pillars of social capital can be identified in:

- Shared understanding: describes common standards, expectations and beliefs which are based on common values and norms;
- Trust: describes the expectation that other members of the community will be honest and cooperative;
- Reciprocity: describes the people of the community will to support one another, to mutual exchange with the confidence that it will be returned in the future;
- Networks: describes how people and/or groups are linked through different types of ties: bonding (close strong ties within the community), bridging (horizontal ties across communities) and linking ties (vertical ties between communities with differing power and authority).

Organisational space. These are informal as well as organisational solutions and models of enterprise that build on social capital to create public engagement and participatory governance solutions. Consistently with the participatory nature of solutions, the assets generated by the activities, such as provision of innovative social services, relations, jobs, financial resources, cultural resources, knowledge, are shared with the community. At a system level, this identifies a re-investment model aimed at reinforcing the role of economic activities in acting for natural justice and diffused

community prosperity. Sacchetti and Tortia (2016) offer an overview of social responsibility across different organisational models.

Organisational space includes also supporting financial elements such as social impact investment. The rise and interest in social impact investment is strictly tied to the emergence and growing importance of SEs, as a reply to the social and environmental challenges of communities (Galera and Borzaga, 2009). Social investment is the provision of finance to address social needs with the expectation of a social, as well as financial, return. Unlike grants and donations, social investments are loans, used to create measurable social impact with the aim of the investment being paid back (OECD, 2015). Social investors attribute different values to the mix of social and financial returns they expect, i.e., it includes the offer of capital at rates of return that are lower than the market rate. In fact, it is argued that—besides the aims of the investment—a lower rate of return is a necessary condition to discriminate between standard for-profit loans and social impact investments (ibid.). Such a model is aimed at increasing scaling and financial resilience in SEs.

More broadly, at community level, organisational strategies can be more coherently focused on scaling social impact rather than organisational size by means of participatory and inclusive forms of networking and knowledge sharing (Sacchetti and Sugden, 2003; European Commission/OECD, 2016). Scaling social impact, in particular, supports linking social capital and brings the attention to the need of taking into account the interaction between multiple coexisting actors and their interests (Borzaga and Sacchetti, 2015).

Policy Space. A policy space reflects the ability of a community to transform its norms and values into policy aims, then formal rules and legal frameworks for governing the allocation and distribution of different resources. Likewise, it reflects the capacity of institutions to implement and monitor the implementation of such rules.

BRs function as the physical enabling space in this approach, however effective and resilient communities only emerge when relational, organisational and policy space align with the physical space. The SE model can be considered a tool within organisational space and facilitates cooperation for the common good, while reinvesting in the community. The success of this organisational space is dependent upon the strength or size of relational space. All elements must be in synergy in order to reach a sustainable and fully competent community.

The actual working of the approach calls for investigation on:
- The physical space elements of a BR;
- The policy space and management of the BR;
- The state of social capital within the BR;
- Tools for social capital mobilization and community engagement to build a shared understanding on BRs;
- How mobilization of social capital underpins livelihood and sustainability of BRs;
- Specific organisational solutions and enterprise models that are consistent with the development of community participation and BR sustainability.

We start our enquiry by describing the Cat Ba case, a UNESCO designated BR in Vietnam.

6. Cat Ba Biosphere Reserve, Haiphong City, Vietnam

6.1 Physical Space

Cat Ba Archipelago is one of the eight designated BRs in Vietnam. It has been part of the UNESCO MAB Programme since 2004. The Cat Ba BR Archipelago lies 150 kilometres southeast of Hanoi and is made up of 366 islands and islets covering an area of 26,241 hectares, 65 per cent (17,000 hectares) terrestrial and around 35 per cent (9,200 hectares) marine. Cat Ba BR is home to some 2,320 different types of fauna and flora. Sixty of those species are currently endangered. The BR is home to approximately 6,000 inhabitants whose main income streams are tourism, fisheries, agriculture, forestry and the provision of services. Unemployment rates within the wider Haiphong province are around four per cent. The BR is adjacent to Ha Long Bay UNESCO World Heritage Site[3], one of the seven new natural wonders of the world. Just 40 kilometres to the west of the Cat Ba BR is Haiphong City, with a population of around two million. Cat Ba BR hosts several globally important habitat types such as fringing coral reefs, mangrove forests, sea grass beds and tropical limestone forests that are under threat due to pressure from surrounding and visiting populations (UNESCO, 2007). The BR is also home to the Cat Ba langur (*Trachypithecus poliocephalus)* a critically endangered primate endemic to the BR.

6.2 Actions towards the creation of an enabling space at Cat Ba Biosphere Reserve

Interest in an approach that brings together social capital, natural justice, and community and social enterprise led to Assist Social Capital's (ASC) involvement in BRs, after the series of workshops "Sharing sustainable futures" held in Sweden in the framework of the EuroMAB 2011. The discussion revolved around the Scottish model of SE on which the Scottish-based Community Interest Company had previously worked. The *Social Enterprise & Biosphere Reserve Development Framework* (the SEBR Framework) emerged from the interest generated by the workshops, and became an essential tool to create bridges amongst communities located in different continents. ASC launched the SEBR Framework two years later at EuroMAB 2013 in Canada and presented it at the 7th and 8th meetings of the South East Asia BR Network in the Philippines in 2013 and 2014. The document provides a flexible framework for any BR wishing to move towards a regional approach to the green economy using the four factors highlighted in the SEBR Framework: support for social enterprise, public participation, social investment and sustainable public procurement.

The aim of the Framework was to "support BRs and their communities to become economically resilient while at the same time enhancing the natural environment in a manner that is appropriate to local strengths, resources and cultural characteristics" (ASC, 2013: 14). The result to be investigated

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3   See: http://whc.unesco.org/en/list/672.

in the future is whether this creates a lasting and sustainable environment for social innovation and sustainable economic development.

At the meeting in the Philippines in 2013, ASC learned about a highly participatory approach to engage stakeholders being implemented in Cat Ba BR in its efforts to promote the values of BRs, using a method referred to as the SLIQ model (Systems thinking, Land/Seascape planning, Intersectoral coordination, Quality Economy). Since 2007, Cat Ba BR has been using the SLIQ model in connection with local community professions (i.e. farming, fisheries, forestry and tourism), young people, school students and teachers as well as all seven village Community Learning Centres (CLCs)[4] on Cat Ba Island. The approach was identified as a national example of good practice in combining conservation and development at the United Nations Conference on Sustainable Development (UNCSD) "Rio+20" held in 2012, and as such offered ASC an excellent opportunity to carry out the case study.

Building on the awareness background of Cat Ba communities, ASC's project was based on three key objectives to help towards the overall goal of strengthening and promoting BRs as learning centres for environmental and human adaptability to climate change.

- Objective 1: A focus on the social capital and participation elements of the SEBR Framework to gather information on the extent of public awareness on climate change through CLCs experiences in CBBR. This provided information on how CBBR invested in social capital and how this helped to pave the way towards new opportunities, better communication, self-organisation and more resilient communities.

- Objective 2: Documented analysis of best practices on promoting sustainable livelihoods in the Cat Ba BR. The study reflects the cultural sensitivity and level of shared understanding of the aims of the MAB Programme.

- Objective 3: Recommendations to strengthen cooperation of the Asia-Pacific BR Network and for developing a knowledge-sharing platform on best practices (with support from the Scottish Government).

To achieve these objectives the following actions were undertaken. Firstly, fieldwork was carried out to gather general information. Following this, a questionnaire was developed to further investigate and assess social capital. The information gathered was then analysed, together with previous reports against a social capital matrix built on the SEBR Framework, which has social capital as the "connecting thread" running through it. This methodology was used to identify the activities carried out by the Cat Ba BR in the last few years and to assess these against social capital and social enterprise matrices.

The OECD definition of social capital was used, which defines social capital as "networks, together with shared norms, values and understanding which facilitate cooperation within and

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4   Community Learning Centres were developed in 1998 to deliver effective community-based non-formal education (Cf. UNESCO, 2008).

among groups" (OECD, 2001: 41). Social capital was seen as key to maximising a community's potential as it is assumed to enable stakeholders to become actors for sustainable development. The Cat Ba BR activities and projects were assessed against social capital and the three BR functions addressed through this activity (see Section 3.1). The social capital matrix developed by ASC enabled it to assess the success of the Cat Ba BR in creating social capital and to understand how this facilitated the delivery of the three key functions of a BR.

6.3 Relational space: Social capital within biosphere reserves

Here we present the method used by ASC to assess social capital, as well as the relation between policy actions and their outcomes in terms of social capital creation and environmental sustainability.

6.3.1 Stage 1 – Identifying emerging themes

The field visit carried out by ASC in December 2014 laid the foundation for a questionnaire to be developed to explore the views and opinions of the different stakeholders that were identified as key groups in the development of the BR. During the field visit, interviews were carried out with 14 local community members in three different communities, five leaders of the Local Communes and two Cat Ba BR staff. The results of these interviews indicated that there were very high levels of awareness of the BR and its actives at all levels. Both local citizens and the leaders of the Communes felt their opinions mattered in the development of the activities being delivered by the BR. It also became clear that Communes were aware that there were more needed to be done to support entrepreneurial activities, beyond the success of the business clubs (set up specifically for businesses, which have been granted use of the BR label). These results were latterly confirmed via the responses gained through the questionnaire, which was prepared in collaboration with Mr. Tuyen Le Thanh (Cat Ba BR staff) for the translation into Vietnamese and distributed to twelve interviewees in February 2015.

The questionnaire included a combination of open-ended questions, checklists, as well as rating and ranking questions. The questions aimed to collect information about BR engagement, the CLCs (Community Learning Centres), the local community and the local economy. The gender ratio within each stakeholder group was representative. The questionnaire (see table 1) addressed:
- The BR project (in terms of understanding, importance, benefits, challenges, participation);
- The Community Learning Centre (participation, understanding, challenges);
- The local community (trust, participation, power balances, priorities);
- Local businesses and economy (opportunities, power balance);
- Personal information (gender, age, community role, employment status, previous education).

Table 1. Selected questionnaire items

- Do you feel that you are well informed about the Cat Ba Biosphere Reserve project?

  ☐ **Yes**   ☐ **No**

- Do you feel that biosphere reserves are important?

  ☐ **Yes**   ☐ **No**

- Do you feel that you understand the meaning and implications of biosphere reserves?

  ☐ **Yes**   ☐ **No**

- Do you believe that a biosphere reserve and a national park are essentially the same?

  ☐ **Yes**   ☐ **No**

- Do you think the biosphere reserve is beneficial for:

	Yes	No
Cat Ba Island		
Vietnam		
Local communities		
Local businesses		

- What do you think are the main benefits of the Cat Ba Biosphere reserve?

- Are you more involved in the BR and community after getting involved with this project?

  ☐ **Yes**   ☐ **No**

- If yes, what is the reason?

  ☐ I know more people

  ☐ I trust people in the area more

  ☐ I want to change the area for the better

  ☐ I know I can influence decisions

  ☐ I share the commitment to safeguarding the biosphere reserve

  ☐ I believe I can access more opportunities

  ☐ I feel rewarded by working with others for a common goal

  ☐ I hope I can earn some money/ improve my financial situation out of involvement

  ☐ Other reason: (please specify)_____

- Do you use/visit the Community Learning Centres of the Cat Ba Biosphere Reserves?

  ☐ **Yes**   ☐ **No**

- What do you think is the role of the Community Learning Centres?

- What do you use the Community Learning Centres for?

- Do you feel that your knowledge about the Cat Ba biosphere reserve has improved through the Community Learning Centres?

  ☐ **Yes**   ☐ **No**

- In your experience, what are the strengths of Community Learning Centres?

- Do you feel that you have benefitted from working with the Community Learning Centres? /Biosphere reserve?

  ☐ **Yes**   ☐ **No**

- In your experiences, what are the weaknesses of the Community Learning Centres?

Each data source was considered (interviews, questionnaire) and then compared to others searching for similarities and differences. This was an inductive process, building on our data, merged with a deductive process through which we had previously identified general themes in the literature related to social capital. The results of the questionnaire and the views expressed were categorised into the main strengths/benefits and challenges/disadvantages of the Cat Ba BR as identified in the responses to the questionnaire of each of the three key stakeholder groups: three local communities, five businesses (members of the Cat Ba BR business clubs) and four Cat Ba BR staff. Table 2 exemplifies emerging themes.

One of the themes emerged regards the role of entrepreneurship in enlarging people opportunities. In particular, an entrepreneurial approach is perceived to bring more career opportunities (local community), as well as adding value to the local economy through the BR label (business club; Cat Ba BR team) providing a source of "pride" and fostering "social cohesion" (Cat Ba BR team).

Besides those strengths and benefits, emerging themes refer to certain challenges Cat Ba BR team is faced with. The Cat Ba BR team team points out that there are possible contrasts between conservation and development that need to be managed and balanced. Relating to that are social challenges whereby the community recognises their potential lack of experience and expertise to run businesses within the BR. Thus, there is the concern regarding the lack human and financial resources, especially, for community development (local community, CBBR team). With respect to business activities already taking place, marketing (local community; business club) and waste management, due to increasing tourism, (Cat Ba BR team team) appear to be of concern to the local stakeholders.

Table 2. Key stakeholder perspectives on the strengths and challenges of CBBR

Stakeholder	Strengths/Benefits	Challenges/Disadvantages
Local community Communes/ community associations	Cat Ba beautiful nature My commune has the best mangrove, forest on karst hill, caves Abundant seafood of finest special quality Unique local costal lifestyle of Vietnam More training and career opportunities BR brings long-term development goals for all, future-oriented	Island area with distant from mainland Inadequate support for community-based ecotourism Community lack of experiences and expertise in self-running businesses Few vocational trainings Inadequate marketing for BR businesses, especially community businesses Lack of funding for local community activities
Business club Companies within the BR who received the Cat Ba BR logo	Good for the long-term development for all Support building a of high quality service sector for local island A framework to appreciate and wise use of the area scenic landscape and pristine environment Brings more customers Make use of the logo reputation of the world BR to add value to businesses/	Still limited information and marketing on the BR businesses Connecting with international tour channels for high class tourism development in Cat Ba BR
Cat Ba BR staff team (BR coordinator and 3 support staff)	A model for sustainable development at a particular/practical landscape level Created added value through BR branding Fostering research in natural and social Creating pride of place and social cohesion Supporting international knowledge and expertise	A mosaic of complex stakeholders and interests Contain possible contrasts between conservation and development needs Climate change (Cat Ba BR is an island and marine site) Poverty and low rural labour productivity Unsustainable aquaculture farming Tourism waste treatment Lack of resources (human and fund) for research and community development

6.3.2 Stage 2 – Categorising activities

Given the very large list of activities put in place by Cat Ba BR team, the social capital matrix was developed to aggregate the different activities against social capital dimensions, with the aim of formulating further hypothesis on the impact of these activities. The matrix is summarised in Figure 3. These activities and the resulting social capital were then associated with the functions of BRs as determined by the UNESCO MAB Programme.

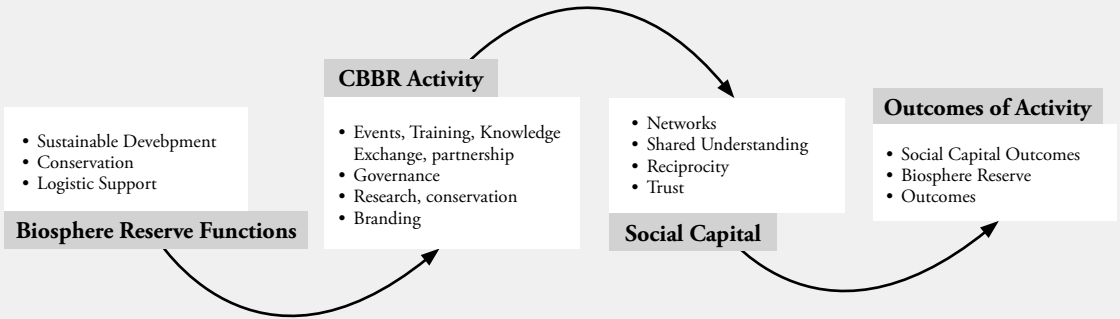**Figure 3. Synthesis of the social capital matrix**

Figure 3 summarises the social capital matrix, which combines the overarching Cat Ba BR activities and the outcomes they promote in terms of social capital and BR functions. Activities were coded according to the different social capital dimensions. In particular:

- *Networking activities* included, i.e. peers support with other international and national BRs, participation in networking events, use of systems thinking and multi-stakeholder management approach, involving representatives from all government levels, collaboration with research institutes.
- *Shared understanding activities* included partnerships with other BRs and organisations, integrating intersectoral coordination and other governance structures, attending training and knowledge exchange activities, developing the BR certification.
- *Reciprocity activities* included collaborations with national and international organisations, research activities, promoting community-based ecotourism, branding, involving communities in knowledge exchange.
- *Trust building activities* included the implementation of adaptive management, the inclusion of multiple stakeholders, active partnerships, and the overall systemic, participatory and cross-sectoral framework from which emerges a shared common agenda.

Figure 4. Showing the proportion of the Cat Ba BR activities for each element of social capital
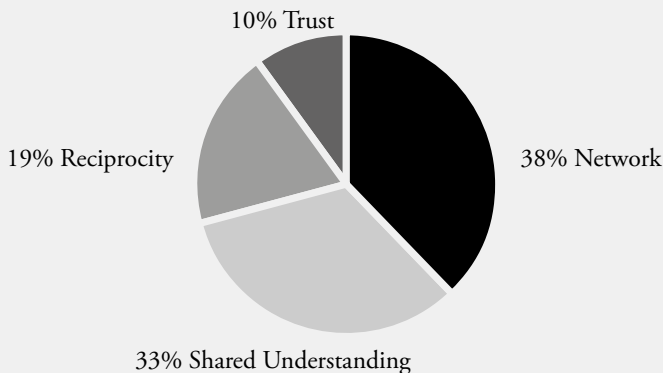
The coding sheds light on the distribution of activities and represents therefore a useful metrics to assess what areas of social capital were mostly affected by intervention. The majority of activities (seventy-one per cent) fall within networking and promoting shared understanding, with networking being the majority. However, activities which promote trust make up only ten per cent of all activities.

Within this context, the approach used seems to be a positive driver for development within the Cat Ba BR. This is reflected in the questionnaire results where all three stakeholder groups (local community, business club, Cat Ba BR team) identified the BR "framework" or "model" as a strength (see Table 2) as it provides a "long-term" development plan for all stakeholders which takes into account the island's unique landscape.

6.4 Organisational space: Social enterprise

The SLIQ approach, combined with the Cat Ba BR focus on conservation and green economic development, aligns with the value-based orientation and ideas of SEs, while providing organisational space for its support and development. The Cat Ba BR branding can be seen as another important element in the provision of organisational space for SE. The branding is eligible for businesses or institutions within the BR and include a company which makes fish sauce, a boat service for tourists and hotels and restaurants. The criteria of the Cat Ba BR label are key to its facilitation, promoting environmentally and culturally non-damaging products and services which, meet industry standards, are healthy and produced locally using local labour. The Cat Ba BR label provides an incentive for businesses based in the BR to strive to achieve these value-based ideas.

Currently, 18 business producing 20 different products and services have been authorised to hold the Cat Ba BR label. They have formed a business club. One example of a business that has registered successfully is a SE. Nha Viet JSC produce forest flower bee honey and has been certified since 2010. They have won a number of awards for the quality of their honey, which has brought to the Cat Ba BR positive national and international exposure, and highlighted the mutually beneficial interaction between a SE and the BR. Expansion of Nha Viet JSC has seen it working with 70 locals, generating an additional VND[5] 20-30 million to their annual income (around USD 870-1,320), increasing prosperity within the local economy in ways that are protective of the environment (Nguyen and Le Thanh, 2016).

The Cat Ba BR also has a social investment fund, which provides financial support and opportunities for sustainable development initiatives. The Sustainable Development Fund (SDF) was established by MAB Vietnam and Cat Ba BR in 2007. The aim of the SDF is to provide financial support innovation in sustainable development. To date, the SDF has received contributions from private businesses, the UNESCO Trust Fund and other stakeholders of around USD 66,000. The fund is used to award

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5   Vietnamese Dong.

individuals for outstanding contribution to the conservation and development of the BR, as well as for projects and programs which are in line with the BR objectives (Le Thanh, 2016). This allows the BR to build positive relationships with partners, while gaining financial autonomy and viability.

6.5 Policy space: biosphere reserve management and rule definition

The Government of Vietnam has established a national network for the eight Vietnamese BRs with the aim of supervising and connecting them. Vietnamese BRs are managed under the direct supervision of regional authorities together with input from local community committees. The aim of Vietnam approach was to understand how communities can sustainably use the resources within the BR and for both to thrive.

Analysis of Cat Ba BR social capital aids an understanding of the political space. Their linking ties vertical ties between communities with differing power and authority, involvement with representatives at all four government levels, international network events, regional and thematic BR network cooperation. Specific nationally and globally important projects—international funding— and intersectoral stakeholder engagement—are all elements which help build our understanding. Existing as it does within UNESCO MAB Programme, the Cat Ba BR is an example of taking the understanding of the BR to a systems level, facilitated by a super-national framework of principles and therefore of the SLIQ approach, since *"effective coordination of all biosphere reserve functions in all three zones is only feasible through active involvement of governance, management and professionals"* (Ishwaran, Persic and Tri, 2008: 118).

This combination of UNESCO MAB approach and locally developed rules is likely to be more successful in identifying the features of specific BRs, their resources and anthropic activities. Thus, the long-term effects of their interaction are assessed to ensure the resilience of the BR and the welfare of each specific community. We can conclude that successful management of BRs does not depend exclusively on top-down solutions, nor can it be confined to local management, especially in regions where there is poor social capital, opportunistic behaviours and short-termism, and little awareness of the connection between livelihood and environmental justice. The governance of a BR, across core, buffer, and transition zones, requires a mix of the two approaches, where self-determination of rules by local actors occurs within the broader UNESCO MAB approach.

7. Concluding comments

The UNESCO MAB Programme provides a framework and rationale for creating itineraries of awareness and endogenous development across communities. This paper has made two contributions.

First, it has provided a framework for appreciating diversity of situational contexts, as advocated by Ostrom. In fact, our Enabling Space Framework reflects the value of considering multiple types

of interacting spaces, i.e., evolving sets of material and immaterial conditions that can hamper or enable communities, their ownership of the development agenda, and their ability to move towards social and natural justice. In this sense, the Enabling Space Framework, in all its components, is an open analytical tool for capturing the complexity of interactions across different layers of economic organising and social interacting.

Secondly, the paper has suggested a method for identifying what communities in BRs deem as desirable. The method exemplified was applied by ASC and has worked towards the identification of emerging local development themes using a bottom-up approach. Moreover, the method has suggested a way to assess policy intervention aimed at fostering social capital and sustainability, exemplified by the social capital matrix.

While our paper contributes to existing literature by demonstrating how the social capital approach developed by ASC can map the linkages between the various levels of governance, more research is required on how relational and communicative preconditions can be built, and how features of a successful BR, such as trust, can be brought about. Our analysis of organisational spaces, such as those defined by social enterprises (SEs), goes towards this direction, since SE have been presented as possible ways to organise economic activities consistently with social and natural justice. They do so when reinvesting their surplus, as a way to create trust, reciprocating communities with the surplus produced by using BR resources. Likewise, the analysis of the policy space sheds light on the role of rule definition and implementation, which requires governance at system level, so that multiple actors engage across BR zones on the basis of shared values. In this sense, designation under the broader UNESCO MAB Programme becomes a tool to activate debate and connections, and to enable the development of appropriate rules and regulations to align behaviours and economic activity with the values of local livelihoods. The global remit of the MAB Programme favours community participation and flexibility of the governance models adopted, and is critical to the success of the programme given the vast range of local contexts.

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