

Before and After Designated Unesco Biosphere Reserve Cu Lao Cham-Hoi An, Vietnam: A New Culture of Local People

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Abstract

The MAB programme is an intergovernmental scientific programme that aims to establish a scientific basis for enhancing the relationship between people and their environments. It combines the natural and social sciences with a view to improving human livelihoods and safeguarding natural and managed ecosystems, thus promoting innovative approaches to economic development that are socially and culturally appropriate and environmentally sustainable. Vietnam national network of UNESCO biosphere reserves comprises 11 sites. The vision of MAB is a world where people are conscious of their common future and their interactions with the planet, and act collectively and responsibly to build thriving societies in harmony within the biosphere. As a culture, it changes on mental thinking and practical applications, including conservation effectiveness, eco-tourism and socio-economic development, and logistically scientific research. Some experiences are shared, and some lessons learned are also discussed. It refers to various aspects as awareness knowledge, conservation innovation, social economic development and scientific research application. This is to find a respond to the question of how changes between before and after designating the UNESCO biosphere reserve.

Keywords

MAB programme, Cu Lao Cham-Hoi An, biosphere reserve, Marine Protected Area, Vietnam

Introduction

Designated in 2009, the UNESCO03 Cu Lao Cham-Hoi An (CLC-HA) biosphere reserve is located in the central coast of Vietnam, housing a very high diversity of corals and important seagrass habitats. These serve as productive nursery

grounds that drive the activity of an associated fishing community. It has been changed significantly by contributing to City's master plan or socioeconomic development and conservational effectiveness or sustainable development of Hoi An City. The UNESCO CLC-HA biosphere reserve was designated in 2009 with outstanding value of linking between nature and culture, the nature is a core zone of Cu Lao Cham Marine Protected Area (MPA), established in 2001. It is a natural protected area as a core zone of the biosphere reserve, and the UNESCO cultural heritage of Hoi An ancient City designated in 1999 is a buffer zone and transition zone of the biosphere reserve. It became a modality of sustainable development of the country and in the world. As a biosphere reserve, It is 'a learning place for sustainable development'. It is for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. This is a place that provide local solutions to global challenges. The site promotes solutions reconciling the conservation of biodiversity with its sustainable use. For clearing how it has been changed between before and after designated the biosphere reserve, we used the method of innovation histories by interviewing key people and local workshops convinced of all local stakeholders for discussion to share experiences and lessons learned from the event.

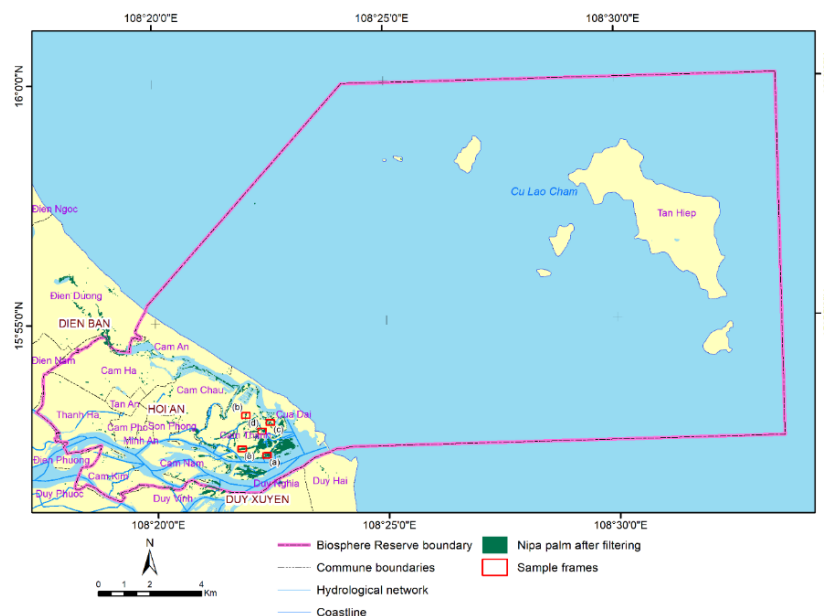


Fig 1. The map showing the location of UNESCO CLC-HA biosphere reserve, Vietnam

Methodology and Methods

The Innovation Histories method is used for recording and reflecting on innovation process. The innovation refers to the process of new institutional arrangements being introduced and developed to improve marine management in UNESCO Man and Biosphere Reserves (MABs) and parks. This could refer, for example, to the development of new management arrangements (e.g., marine spatial planning/zoning in the biosphere reserve). People who participated in the innovation process will construct a detailed written and visual account based on their memories and available documents. The preparation of the history stimulates discussion, reflection and learning among stakeholders.

The method aims to enable those that were involved to reflect on their own actions and experiences, how these linked to those of others, and how to use their experiences to improve the performance of marine parks and biosphere reserves in

Enabling rural innovation is one of the primary goals of research and development agencies throughout the developing world. To achieve this goal, we need to understand how innovation happens; yet innovation histories are rarely written down. The innovation history method allows those involved in the process to reflect and use their experiences to improve future performance. Comparing and contrasting several innovation histories can also help to identify factors and approaches that lead to success, and those that may need improving.

Innovation histories have two purposes. Firstly, they allow the people concerned to reflect on their actions, how these are linked to the actions of others and how better results might be achieved in the future. Secondly, they allow external parties to learn, either by studying an individual case or by comparing experiences across several cases. Innovation histories are constructed by a core group consisting of a facilitator, an analyst, a journalist (i.e., someone with good interviewing and writing skills) and at least one knowledgeable person from each of the stakeholder organizations. One person can fulfil more than one role. Others may contribute through interviews and by providing feedback on drafts. The process of innovation is both driven and thwarted by individual Innovation histories can easily reveal successes, but they can also highlight conflicts, mistakes and other sensitive issues. People learn best when they feel safe enough to be candid. The core group should help create the right conditions by circulating the idea that the most innovative and successful organizations are those that can learn from what is working and what is not. Assurances should be given that quotes and interpretations will be properly verified with individuals before internal or external distribution.

We used two sets of concepts to guide data gathering and analysis. The first set comes from a model of the innovation process called the Learning Selection model (Cross et al., 2004; Douthwaite, 2002; Fortnam, 2017). An understanding of these concepts helps those involved to see innovation as an evolutionary process that is driven by experiential learning cycles. The experimentation and learning leads to the generation of novelty, followed by its selection and promulgation. In the process, technologies become 'fitter', i.e., they perform better. The way this evolutionary learning selection process plays out is highly influenced by people's social networks (Krebs and Holley, 2004; Kleiner and Roth, 1997; Schiffer, 2007; Whitney and Trosten-Bloom, 2010; Trosten-Bloom et al., 2003; Bennett et al., 2018; Bennett, 2018). In our experience, there are three main reasons for creating an innovation history: a) to learn from experience and draw lessons for programme improvement; b) to produce public relations materials; and c) to carry out research on innovation processes for publication. Stakeholder expectations, including those surrounding authorship, need to be clarified at the outset. Expectations may change during the process, yet the method can remain relevant. For example, an institution may choose to create an innovation history for a successful project in order to raise the project's profile, but the process may reveal that things are not going as well as expected. In this instance, the priority changes from record an apparent 'success' with view to replicating it elsewhere, to identifying problem areas and improving project activities (Chaigneau and Brown, 2016; Cohen et al., 2019a). An addition, Innovation histories provide causal explanations for two outputs: a) an innovation timeline that sequentially lists the key events (and any effects on the relationships between stakeholders); and b) actor network matrices and maps that show the links between stakeholders. Both outputs develop and change as the process unfolds. A start-up workshop involving participatory group work is a good way to construct the first drafts of the timeline and network matrices and maps. When the workshop deals with more than one innovation history, learning from similar experiences will be enhanced. The workshop should also train participants from the main stakeholder groups on the innovation history method, clarify expectations, identify key people to interview and identify existing literature. After constructing the timelines and social/actors network maps, the participants then construct actor matrices for two or more instances in the innovation history to capture the dynamics of changing partnerships. They elect a core group to manage the process and this core group may wish to employ a professional writer to carry out the

interviews (one-to-one or group) or the participants can interview each other (Dawson et al., 2018; Douthwaite and Ashby, 2005; Gill et al., 2019).

The learning history is written up by the first event identified on the timeline. The text is then split into three columns. The right-hand column contains quotes or paraphrases interviewees' comments. The left-hand column contains text that: a) Recorded events to explain why a particular quote was chosen; The middle column b) Stone mark year presents key information about particular quotes and their context. The innovation history is used as catalyst for change with discussion surrounding the innovation history culminates in a second workshop. The workshop of 25 people from local different stakeholders. The final document shares experiences, emerging understanding and conclusions with an external audience (Schiffer, 2007; Trosten-Bloom et al., 2003; Bennett et al., 2018; Chaigneau and Brown, 2016)

Findings and Discussion

The innovation histories process records and explains a timeline of key events in the innovation's history. Key events can include for example: important decisions, important meetings, actions and activities, changes in relationships, when something new was learned, problems and challenges, and when something unexpected happened (Cohen et al., 2019b). As presented in the timeline of Table 1, in 2001 Ms. Thuy and her colleagues in directorate of the MPA has initiated an idea of reducing the plastic pollution in ocean, called zero plastic. This initiative has applied for all managers, local people and tourists. The good practices have approached the integration of designation of UNESCO CLC-HA biosphere reserve in 2009. Plastic pollution is often most noticeable at the coast, where the tides of waste despoil the shoreline. Studies have estimated that there are 5.25 trillion plastic particles, weighing approximately 269,000 tons, on the surface of the oceans. More than 90% of plastic produced worldwide has not been recycled, ending instead in rivers and waterways and finally in the oceans. Every year, more than 9 million tons of plastic end up in the world's oceans. In the oceans, plastic poses a global threat to biodiversity. Marine animals such as whales, dolphins, seabirds and turtles often mistake plastic debris as food sources, such as jellyfish and seaweed, leading to reduced feeding behaviors, internal injuries and death. Animals are also often entangled in plastic packaging and netting, in a phenomenon known as "ghost fishing", leading to suffocation and drowning. New research is also emerging on the potential long-term impacts of micro- and nano-plastic particles in the food chain, travelling up the food chain in concentrations potentially harmful for human health. Micro-plastic has been detected in commercial seafood and drinking water and has the potential to impact human food security and safety. A single piece of plastic can take over 500 years to degrade – clearly this is not a problem that will go away by itself. There is momentum from governments, the private sector and citizens to find solutions to stem the plastic tide. Countries that refuse to deal with their own waste problems are passing the buck, which is largely why we are in a catastrophic waste situation worldwide. This is a transnational environmental problem that must be addressed with transnational solutions. To kick start regional cooperation, UNESCO Bangkok has launched a plastic initiative seeking solutions for waste management in Asia-Pacific through innovation and education, funding and testing innovative potential solutions offered in proposals from young people from the region. Youth are the future of environmental stewardship and behavioral change is needed for both top-down government policy and from bottom-up through community education and involvement. UNESCO's network of 152 global Biosphere Reserves can provide novel testing environments in which innovative solutions can be implemented with the input of local communities. In particular, the initiative seeks to build cooperative efforts including complementary programs in educational institutions as well as mutually reinforcing government policy across Asian countries. We need the implementation at every level of society,

including not only policy-makers but businesses and consumers as well (Dawson et al., 2018; Douthwaite and Ashby, 2005).

Tourism issues: As designated in 2009, the number of tourists including domestic and overseas has increased 20 times, resulting in increased job opportunities by changing from single job/ fishery to diverse services including tourism guides, boat transportation and small business. Before the designation, fishers were jobless when natural disasters happened, now they are alternative with tourism services and hungers have been reduced from 6% in 2009 to zero percent in 2015. However, the negative environmental impacts of tourism are substantial. They include the depletion of local natural resources for food consumption as well as pollution and waste problems. Tourism often puts pressure on natural resources through over-consumption, often in places where resources are already scarce. Tourism puts enormous stress on local land use, and can lead to soil erosion, increased pollution, natural habitat loss, and more pressure on endangered species. These effects can gradually destroy the environmental resources on which tourism itself depends. Tourism contributes to more than 5 percent of global greenhouse gas emissions, with transportation accounting for 90 percent of this. By 2030, a 25% increase in CO₂-emissions from tourism compared to 2016 is expected.

Stakeholders workshop: The first draft of the timeline can be constructed at a workshop. Participants from each stakeholder group: (i) post key events onto a timeline; (ii) discuss who the event involved; (iii) who were the winners and losers resulting from an event; (iv) discuss which are the most important events, and (v) reflect on important themes and lessons learned that they want to investigate further. The participants decide upon who needs to be interviewed and what literature is available to give further detail and explanation about the timeline. The development of the timeline also identifies people to interview that were not in attendance at the workshop. Interviews are held with a selection of participants at the workshop and those identified as important but not in attendance. The interviews involve a discussion of the timeline developed at the workshop. The interviewer asks for (i) the identification of new events to add to the timeline; (ii) and more information about the events. Questions that can be asked to prompt discussion when a new event is added, include: Why was the event important? Who was involved? Why were they involved? How did they contribute or participate? What were the results? Who disagreed with, opposed or lost out? Lastly, the interviewee is asked what, in their opinion, are the top 3 most important events and why; this will help us to find key turning points or factors in the innovation history.

Write-up the learning history: The information collected from the workshops and interviews can be written up in a learning history. An event in the timeline is introduced. After this, the text is split into two or three columns. In the right column, interesting quotes and paraphrases from interviewees about the event are recorded. In the left column, the reflections of the core team are recorded, including: (i) why a particular quote was chosen; (ii) the meaning of what was said; (iii) the larger perspective, e.g., what it tells us about the factors that support or block the implementation of the marine planning approach. The same format is repeated for the next events.

Table 1. Major stone-marks (timeline) in conservation and development of The UNESCO CLC-HA biosphere reserve

Recorded events	Year of events	Involved stakeholders' comments
Increasing the number of tourism	In year of designating the UNESCO CLC-HA biosphere reserve, 2009, number of tourists increase 20 times or around 20,000 tourists per year.	The designation of UNESCO biosphere reserve is as a brand of marketing to promote the tourism destination with ecotourism and traditional cultures maintained.
Job opportunities	2009, transformation from one job of fishing to multiple jobs tourism-services- trades. Fishing job ratio from 54.4% in 2008 to 74.18% in 2017.	The transformation of creating new jobs to sustain the livelihood and incomes, especially to reduce the pressure on fishing.
Zero of hungers	In the village Tam Hiep/core zone of UNESCO biosphere reserve, hunger is zero in 2015, compared with 6% in 2009	Before the designation the poor households depend on fishing as one vital job, one livelihood, causing the poor to poorer and annual need of substantial from the Government.
Initiating the zero of plastic bags	Since 2012, the zero of plastic bags has been applied to MPA and the UNESCO biosphere reserve, including all of tourists and local people	The initiation of the zero of plastic bags to reduce the marine pollution. This initiative is practiced in many sites of the country.

The system thinking should be applied to the World Network of Biosphere Reserve (WNBR) including the UNESCO CLC-HA biosphere reserve. It composes of various parts of connecting and connected each other's, including natural and social things. Accepting that a leverage point of any system can motivate the system to move forward. In our case, the designation of UNESCO CLC-HA biosphere reserve is exactly a leverage point of the biosphere reserve. As human efforts, the site has institutional settings of good policy and governance to ease implement of protecting habitats and species including nursing grounds to sustain the fisheries and other sea-products related. The biological sciences have been transformed since embryology has shown the immense influence of the past on the evolution of living beings; and the historical sciences will not undergo a less change when this conception has become more widespread. As yet it is not sufficiently general, and many statesmen are still no further advanced than the theorists of the last century, who believed that a society could break off with its past and be entirely recast on lines suggested solely by the light of reason. Traditions represent the ideas, the needs, and the sentiments of the past. They are the synthesis of the race, and weigh upon us with immense force.

The designated UNESCO biosphere reserve is a creative culture by stating that conservation for development and development for conservation. A people are an organism created by the past, and, like every other organism, it can only be modified by slow hereditary accumulations. It is tradition that guides men, and more especially so when they are in a crowd. The changes they can affect in their traditions with any ease, merely bear, as I have often repeated, upon names and outward forms. This circumstance is not to be regretted. Neither a national genius nor civilization would be possible without traditions. In consequence man's two great concerns since he has existed have been to create a network of traditions which he afterwards endeavor to destroy when their beneficial effects have worn themselves out. Civilization is impossible without traditions, and progress impossible without the destruction of those traditions. The difficulty, and it is an immense difficulty, is to find a proper equilibrium between stability and variability.

The UNESCO biosphere reserve bring a new thinking for local people. Changing attitudes and behaviors towards those who are different from ourselves involves much more than raising cognitive awareness, which we know does not by itself change actions. An understanding of our own culture, a deep exploration of our personal and cultural values, and the experiential development of respect and compassion for the rights of others, translated into positive action, are also required. This means that the process of teaching and learning intercultural understanding are just as important, if not more so, than its content. (UNESCO, 2010)

Biosphere Reserves involve local communities and all interested stakeholders in planning and management. Each Biosphere Reserve is intended to fulfill basic functions, which are complementary and mutually reinforcing. They integrate three main “functions”: 1) conservation function - to contribute to the conservation of landscapes, ecosystems, species and genetic variation; 2) development function - to foster economic and human development which is socio-culturally and ecologically sustainable; and 3) logistic function - to support for demonstration projects, environmental education and training, research and monitoring related to local, regional, national and global issues of conservation and sustainable development.

Stakeholders include all right holders at all levels of society and may have various levels of affiliation to the MAB Programme. It would be impossible to explicitly name all relevant groups here, but they encompass landowners, land users, Indigenous peoples and local communities, civil society organizations, National MAB Committees, biosphere reserve managers, governmental authorities at all levels, private companies, and intergovernmental and international organizations. The term stakeholders typically refer to both rights holders (an array of rights and an array of holders of such rights), as well as certain interested parties who should be taken into consideration to varying degrees when considering governance and decision-making.

A biosphere reserve is a tool to advance the well-being of human beings and nature; it is not merely a title or a synonym for nature conservation. A biosphere reserve should benefit people as well as the environment. Local communities and other key actors should therefore have a clear understanding of why they want to create a biosphere reserve, how they will utilize the biosphere reserve concept in their everyday lives, how they will benefit, and how they will eventually contribute to the goals of the MAB Programme and UNESCO. Local communities especially should have a say in the process, notably regarding the choice to designate their area a reserve and what they aim to achieve once the site has been designated. The term ‘local communities’ refers not only to stakeholders such as farmers’ representatives, local politicians, chiefs and so on – it includes everybody living and working in the territory. Biosphere reserves are sometimes created through a top-down process, but bottom-up processes are preferred. In some cases, a combination of top-down and bottom-up approaches is needed to secure buy-in from a wide range of institutions, as well as to create opportunities for sustainability innovation in terms of governance. Crucially, all stakeholders should participate collaboratively in drafting, approving and supporting the vision for the biosphere reserve. An important role of the core group is to disseminate findings in their respective organizations. External dissemination (e.g., through workshops, journal papers and briefing notes) is crucial to influence policy and planning processes that foster rural innovation. This step should be planned and budgeted at the beginning of the project.

Conclusion

The designation of UNESCO CLC-HA biosphere reserve is as leverage point for local system, it promotes a change of thinking and practices. A significant change after compare with before the designation year. It would be measured by a simple and measurable method of innovation histories. The Innovation Histories method is used for recording and reflecting on innovation process. The innovation refers to the process of new institutional arrangements being introduced and developed to improve marine management in UNESCO Man and Biosphere Reserves (MABs) and Marine Protected Area (MPAs). From the above discussion it should be clear that innovation histories method is an ideal which is not difficult to achieve. Very few countries and societies have come close to achieving good approach. However, to ensure sustainable human development, actions must be taken to work towards this ideal with the aim of making it a reality.

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