

Understanding supportive networks for social-ecological innovation

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Introduction

Technologies and innovations have fuelled economic growth for centuries, but it is evident that they have also degraded the ecosystem services on which we all ultimately depend. At the same time, the challenges that social systems face on a global scale have also reached a scale where the consequences could become very serious. It has become increasingly clear that in the future, innovations must be developed and implemented so that they contribute to reinforce the resilience of ecological as well as social systems (Olsson & Galaz 2011).

The approach of social innovation highlights new cross-sector relationships, and bring active citizens and civil society organizations to the heart of the innovation process. For social-ecological innovation, this is just as important. Bridging the gap between citizens, researchers and policy makers is one of the most important challenges for sustainable development. Not least important is to link the social entrepreneurship process to institutional entrepreneurship in order to reconfigure governance structures (Westley et al 2011).

Today, much attention is directed towards streamlining and professionalizing the social innovation process, highlighting organizational and managerial tools. But less attention has been directed towards the innovation system or "ecosystem" (Pulford 2011) where social or social-ecological innovation takes place. If social-ecological innovation is based on different values, aims and approaches than "conventional" innovation, what facilities, competence and resources are necessary to strengthen this system?

In this paper, we turn our attention to the Biosphere Reserve Vänern Archipelago, and the process to develop a Biosphere Innovation System, focusing on social-ecological innovation, with the aim to reinforce social-ecological resilience. (Bergstrand, Björk & Molnar 2011). Challenges here include how to create interactive innovation spaces and keeping the social-ecological focus while scaling innovations. The project is in an early phase, and several project applications for the development of the Biosphere Innovation System have been submitted.

Social and social-ecological innovation

Increasingly, social innovation have become a contemporary buzzword. Recently is has also become an arena for policymaking at different levels. At the same time, there is also some disagreement of how the concept should be defined. One of the most widely quoted definitions argue that "Social innovations are innovations that are social in both their ends and their means... Specifically, we define social innovations as new ideas (products, services and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations. In other words they are innovations that are not only good for society but also enhance society's capacity to act." (BEPA 2010)

Social innovation will have different meanings and priorities in different political, social and cultural contexts. The need to embed social innovation in local communities is often regarded as the key to sustainability, which makes local knowledge decisive.

Social innovations can be developed and implemented in any sector of society and may take any organizational form. It can serve as a starting point for a social enterprise, but just as well be a part of local government, such as a new and more participatory governance approach. But cross-sector relationships, cross-disciplinary research and collaborative processes in general are important parts of the discourse and rhetoric of social innovation. In contrast to the "conventional" discourse of innovation, where innovation tends to be described as a linear process from (usually research-based) inventions to the introduction of commercial products or services in the marketplace, social innovation put active citizens and civil society organizations at the heart of the innovation process. Concepts such as "open innovation" and "democratic innovation" have been important sources of inspiration for the development of the social innovations discourse. (ex. Von Hippel 2005, Smith 2009)

When the concept of social innovation reached wider popularity, it was mainly in relation to addressing social issues: poverty, inequality, unemployment, segregation etc. However, it quickly became evident that many of the organizations active in the field of social innovation also considered ecological issues as relevant topics for social innovation processes. At the same time it can also be noted from a historical perspective, that many of the innovations that today contribute to environmental degradation are the results of attempts to combat social challenges. (Bornstein & Davis 2010) Thus, in order to emphasize the necessity of integrating social and ecological considerations in the innovation processes, the concept of social-ecological innovations may be helpful. (Olsson & Galaz 2011)

In the narrative of social innovation there is a clear hierarchy. Grass-root social innovations tackle local community challenges, new cross-sector partnerships work at a societal level and finally systemic social innovation, "the ultimate objective of

social innovation” (BEPA 2010), means innovation that change norms, governance structures etc. As a normative concept, systemic social innovation have been an important part of several social innovation development programmes. But few examples or case studies that underpin the concept or develop our understanding of how this process takes places have been published. However, a interesting approach might be to investigate examples where the social entrepreneurship process have been successfully linked to institutional entrepreneurship in order to reconfigure governance structures. (Westley et al 2011)

A 'BIOSPHERE INNOVATION SYSTEM' (BIS)

The Biosphere Reserve of Vänerskärgården and Kinekulle

Biosphere reserves are areas that are intended to demonstrate and develop models for balanced relationships between humans and nature. The history of Biosphere Reserves goes back to the "Biosphere Conference" that UNESCO organized in 1968, the first international conference with a focus on the use and conservation of natural resources. One of the results was that in 1970 the UNESCO "Man and the Biosphere" (MAB) Programme was launched. The concept of biosphere reserves was established in 1974 and the World Network of Biosphere Reserves (WNBR) in 1976.

Over the years the concept of biosphere reserves has developed. Much of the focus has shifted from conservation to the interaction with humans and society in terms of sustainable living, as sustainable development have become the leading concept in the international politics of development and the environment after the Rio conference in 1992. The Seville Strategy (1995) provided a new functional model of Biosphere reserve management, a complex cooperation of environmental and social scientists, conservation and development groups, representatives of government and local authorities and in the first place the local citizens.

Based on the Seville Strategy, UNESCO describes some of the main characteristics of Biosphere Reserves as:

- Sustainable development is fostered by local citizens, enterprises and organisations with often highly innovative and participative governance systems
- The development and establishment of a multi-stakeholder approach emphasising the involvement of local communities in management
- Demonstrating sound sustainable development practices and policies based on research and monitoring. (UNESCO/MAB)

The Biosphere Reserve of Vänerskärgården and Kinekulle include large areas considered to be of high landscape value from a biological, ecological and cultural

history perspective. The 278 600 ha area has a highly varied flora and fauna, and a permanent population of about 60 000 inhabitants.

Large parts of these areas are protected under national legislation with the aim to conserve the values for future generations. Protection also helps to safeguard biological diversity and to ensure that traditional knowledge is not forgotten, but passed on. The biological values are dependent on traditional land management practices, such as haymaking and pollarding. There are also areas of national interest for outdoor recreation, contributing to human health and well-being. The area is rich in cultural treasures. Traces of historic human activity exist alongside the modern culture of today. This mix of old cultural landscapes, areas with high biological conservation values, and modern communities makes the biosphere reserve valuable from a national perspective. The diversity of the area offers a great potential for making it a model for other parts of Sweden.

All three municipalities in the biosphere reserve, Götene, Lidköping and Mariestad, have adopted local environmental targets and programmes that ensure long-term sustainability for local activities. Rural areas dominate in the biosphere reserve and the population centres are surrounded by arable plains. This makes it possible to implement sustainable development in urban environments that are directly linked to, and have impact on, the surrounding rural areas.

The landscape values in the area provide a good base for the development of tourism. Sustainable ecotourism based on landscape values benefits both large tourist companies and small entrepreneurs. As an example, a number of entrepreneurs have focused on growing local produce, giving visitors a further experience from the area – i.e. taste. There is also a potential for developing new technologies for the processing of local food, energy recovery, alternative crops, and much more. The wide range of activities and stakeholders in the area forms an important part of the socio-economic development.

An innovation system for socio-ecological innovation

As mentioned before, If social-ecological innovation is based on different values, aims and approaches than "conventional" innovation, how should an alternative innovations system look like?

In The Biosphere Reserve of Vänerskärgrården and Kinekulle there is an ambition to develop a supportive network for social-ecological innovations that has been named "Biosphere Innovation System" (BIS). The driving force and vision behind BIS is to support the development of an innovation system that is both local – built by and for the actors in the Biosphere reserve – but also connected with actors in other Biosphere reserves in the Global network. The idea is that the BIS should enable transferability of methods, knowledge and innovations throughout the network and thus be able to have a global impact.

The BIS includes a set of common values that have the potential to grow and activities that strengthen the development of innovations based on an integrated approach to sustainability and enhance the capacity of social and ecological systems to produce goods and services. BIS is designed to enhance sustainability and increase the resilience of social and ecological systems within the Biosphere Reserve. The BIS implementation plan, conceived by the project group of The Biosphere Reserve of Vänerskärgrården and Kinekulle, is included below.

Implementation plan

- **To create a research and development environment that is attractive, where theory and practice is closely linked**

This part of the implementation is built on specialization in different functions, diversity of activities and collaboration. A research and development environment to study and illustrate some basic structures of the innovation system is needed for this to be successful. The efforts shall describe the Biosphere Reserve's assets related to such area's knowledge base, economic base, market size, social capital, quality of life, etc.

- **To establish a virtual HUB for biosphere entrepreneurs (HUB Big Lake)**

A virtual HUB prototype for biosphere entrepreneurs will be developed, tested and evaluated. The virtual HUB is initially a network organization. It is characterized by the fact that it is inclusive, non-formal and open. A virtual HUB is a flexible venue for entrepreneurs where they in their own home environment can communicate with each other and with other HUBs world-wide. In addition it provides an opportunity for citizens with innovative ideas to test them in a professional context ("open innovation"). HUB Big Lake is also a physical location for targeted events such as public seminars, exhibitions, etc.

Biosphere entrepreneurs driven by wanting to create a positive change in society are active in the HUB. Since biosphere entrepreneurship directly derives from a societal problem which is solved with innovation and business methods, business exists in order to create social benefit while requiring financial sustainability. The virtual HUB is a forum for creating new and strengthen existing businesses, and to explore innovative sustainable ways to utilize and enhance ecosystem services, which challenge the lack of knowledge about what a resilient society means.

- **To build financial systems that support existing and potential biosphere entrepreneurs**

Capital is an important activity for business development and regional growth. Successful entrepreneurship is not only closely linked to the availability of skilled labor and a functional (competitive) market, but also to capital markets and financial institutions. This also applies to Biosphere Innovation System. Venture capitalists, banks, funds and given the opportunity to invest in the innovation system fund, in the HUB and the entrepreneurs who are tied to the system. One of the main mandates of BIS is to in practice show that it is possible and profitable to invest in the utilization and enhancement of ecosystem services. The results, in the form of practical experiences will then be disseminated and implemented in other parts of the world.

- **Increase knowledge among policy makers and citizens**

This part of the innovation system is composed of an identity-raising effort with the goal of building a knowledge and learning platform for local policy makers and citizens. The aim is to strengthen the identity and to increase engagement around the importance of managing a biosphere reserve with unique values in a competitive content that attracts people. To achieve the goal of building a platform for decision makers, new knowledge is communicated by using different channels and technologies.

Research approach

As noted in the introduction, it has become increasingly clear that in the future, innovations must be developed and implemented so that they contribute to reinforce the resilience of ecological as well as social systems. While this knowledge has been widespread for several years, and fostered a number of research and development initiatives, including support for "green tech" or other supposedly sustainable innovations, the innovation systems have in general been very conservatively structured. Even for supposedly sustainable innovations, the general idea still seems to be that inventions from research (often at University) through the efforts of the innovation system makes their way to the marketplace, where they (if they are successful) contribute to economic growth.

The idea that innovations that contribute to social and ecological resilient communities need a different supportive network is therefore very attractive and interesting, and could become an important topic for research.

Building or supporting an innovation system or supportive network of this kind could be considered a social-ecological innovation in itself, and will most probably be a challenging experience for everybody involved. Not least because of the many contradictions of innovations – in order to get financial support for the set-up of such a concept you have to be innovative, but not too innovative. It must be somewhat familiar to those who make the decisions.

It can also be questioned to what extent the initiatives in the implementation plan are that much different from "conventional" innovation systems, to what extent they actually bridge between different groups and provide a more open, democratic and participatory innovation environment.

Several possible research perspectives could be envisioned for this project. One example could be to look at knowledge transfer and learning as important aspects of local support networks for innovation (ex. Estensoro 2012), but also to use the BIS-case empirically to investigate and develop more in-depth knowledge about social-ecological innovation. Obviously, most relevant would be to work closely together with the BIS project group, and the social-ecological innovators themselves, in order to investigate what facilities, competence and resources are necessary to support the development of social-ecological innovations.

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